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Green Monarch B1 2016 Limited and Green Monarch B2 2016 Limited

QUEENSMERE SHOPPING CENTRE, SLOUGH CENTRAL

Transport Assessment

JUNE 2022

PUBLIC

Green Monarch B1 2016 Limited and Green Monarch B2 2016 Limited

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Transport Assessment

TYPE OF DOCUMENT (VERSION) PUBLIC

PROJECT NO. 70060763

DATE: JUNE 2022

Green Monarch B1 2016 Limited and Green Monarch B2 2016 Limited

QUEENSMERE SHOPPING CENTRE, SLOUGH CENTRAL

Transport Assessment

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PUBLIC

QUALITY CONTROL

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	DRAFT	FINAL	FINAL	
Date		October 2021	June 2022	
Prepared by	LB	LB	LB	
Signature				
Checked by	AT	AT	AT	
Signature				
Authorised by	DMcD	DMcD	DMcD	
Signature				
Project number	70060763	70060763	70060763	
File reference	\\uk.wspgroup.com\central data\Projects\700607xx\70060763 - Slough Town Centre\03 WIP\TP Transport Planning\05 Reports\18 Post Planning Submission\220520_QM OPA_Transport Assessment.doc			

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APPENDICES

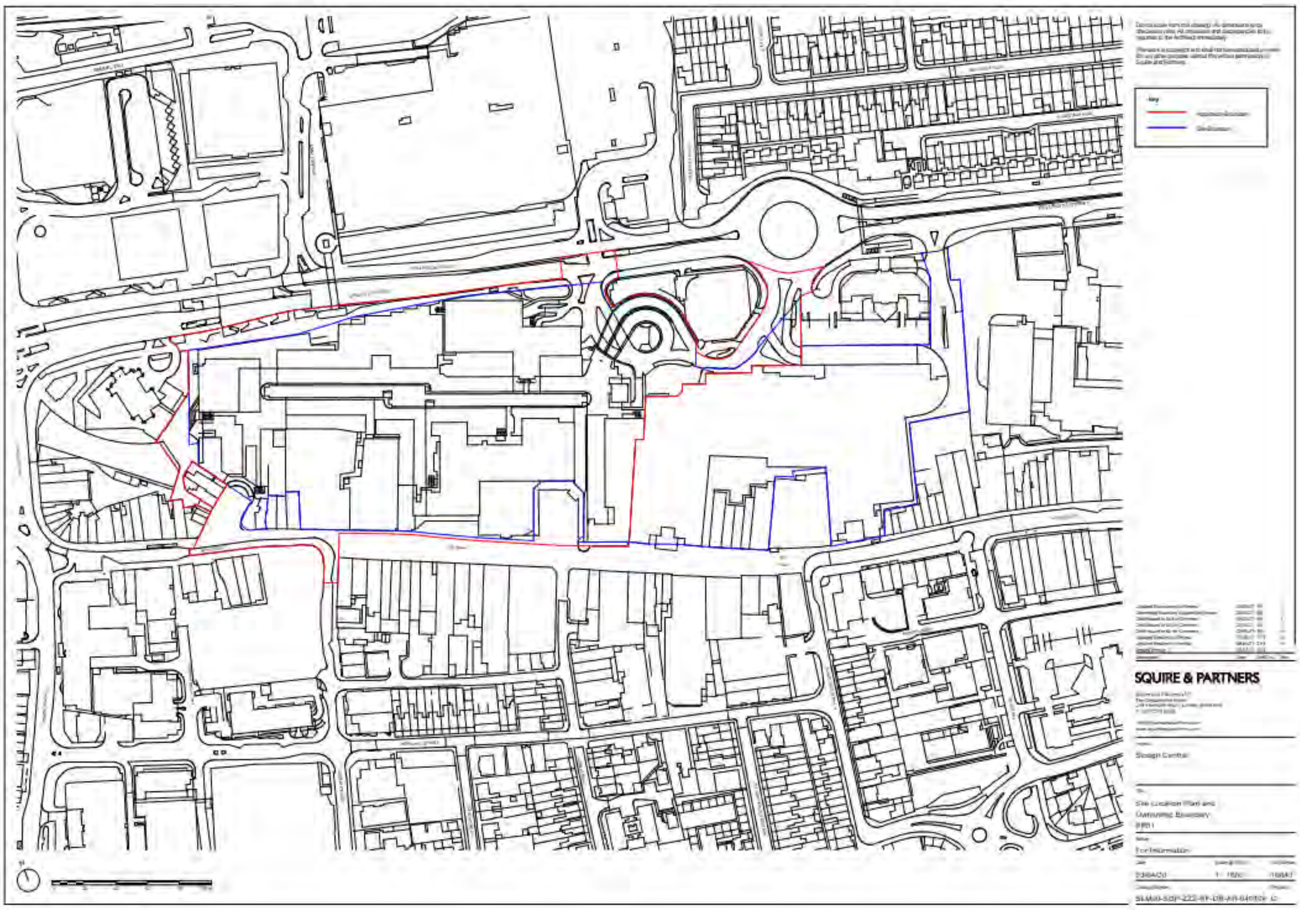
1 INTRODUCTION

1.1 PREFACE

1.1.1. WSP has been appointed by Green Monarch B1 2016 Limited and Green Monarch B2 2016 Limited to prepare a Transport Assessment (TA) and provide transport and highway advice to support an outline planning application for proposals to redevelop the Queensmere Shopping Centre, hereafter referred to as 'the Site'.

1.1.2. The Site sits at the heart of Slough Town Centre and has been identified for significant regeneration as set out within the Slough Core Strategy Development Plan Document (DPD) 2006-2026 and supported by other local documents including the Site Allocations DPD. **Figure 1-1** shows the Site location.

Figure 1-1 - Site Location



1.2 EXISTING SITE

1.2.1. The Site currently contains retail outlets, restaurants, cinema, gym, office use, and residential units. The Observatory Shopping Centre (OBS) bounds the Site to the east and accommodates similar uses. The Site is bound by the A4 Wellington Street to the north; by High Street to the south; and by the Curve Slough cultural centre and St Ethelbert's Church to the west. The Site is located 200m to the south of Slough rail station.

1.2.2. The Site has two existing vehicle accesses via the A4 Wellington Street: the roundabout known locally as the HTC roundabout and a left-in, left out access to the Queensmere shopping centre car park as shown in **Figure 1-1**.

1.2.3. **Table 1-1** outlines the land use and quantum of development on the existing Site.

Table 1-1 – Existing Land Use and Quantum of Existing Development on Site

Land Use	GEA (sqm)	GEA (sqft)
Retail (E)	47,783	514,331
Office (E)	6,458	69,513
Residential (C3)	2,124 (28 Units)	22,863 (28 Units)
Cinema (Sui Generis)	6,870	73,948
Pub/ Bar/ Hot food take away (Sui Generis)	2,797	30,107
Total	**66,032**	**710,762**

1.3 DEVELOPMENT PROPOSALS SUMMARY

1.3.1. The description of the Development, as set out in the planning application, is as follows:

> *"Outline application (with all matters reserved) for the demolition of buildings and the phased redevelopment of the Site to provide a mixed-use scheme comprising residential floorspace (C3 use and provision for C2 use); flexible town centre uses floor space (Use Class E and Use Class F), provision for office floorspace (Use Class E (g) (i)), supporting Sui Generis town centre uses (including a range of the following uses: pubs, wine bars, hot food takeaway), Sui Generis leisure uses (provision for a cinema or live music venue); provision for the creation of basements, car and cycle parking (including provision for a Multi-Storey Car Park); site wide landscaping, new public realm including provision of a new town square and public spaces and associated servicing, associated infrastructure, energy generation requirements and highways works."*

1.3.2. The Development comprises the following Development Zones (DZ):

- Development Zone WS (E & W) - Wellington Street (East & West)
- Development Zone Highway 1
- Development Zone Highway A
- Development Zone Highway B
- Development Zone 1 & 2
- Development Zone 3
- Development Zone 4
- Development Zone 5
- Development Zone 6
- Development Zone 6A.

1.3.3. These DZs are shown on Parameter Plans PPDZ1 & 2 (A) through to PPDZHB. In addition to these DZ Parameter Plans, there are three other plans submitted for approval.

- PP01 - Site Location Plan and Ownership Boundary
- PP02 - Red line Plan showing DZ boundaries

- PP03 - Building Demolition Plan
- Site Highways and Movement Plan
- Sitewide Public Realm, Public Spaces and Private Amenity Plan
- Sitewide Town Centre Uses Plan
- Sitewide Composite Plan
- Sitewide Character Areas Plan

1.3.4. The Development Specification Document (DSD) is also submitted for approval which describes the Development and the flexibility sought in the QM OPA. The DSD also includes schedules of land uses and floorspaces ranges and flexibility sought on a Development Zone basis.

1.3.5. In addition, to the Parameter Plans, PA2 and the DSD, a series of key design principles are set out as Mandatory Rules for approval in the Design Codes. Together the Parameter Plans, PA2, DSD and Mandatory Rules within the Design Codes provide a framework that informs and controls all future reserved matters applications for each Development Zone.

1.3.6. The QM OPA is submitted with all matters reserved. The DSD sets out an overview of what those matters are and what information is submitted for approval as part of the QM OPA, and what matters will be detailed at the RMA stage.

1.3.7. In respect of access, the QM OPA does seek approval for the points of access to/from the highway network into the Site, but that the detailed access arrangements together with the location and configuration of internal vehicular circulation reserved for determination at a reserved matter stage.

1.3.8. The Proposed Development Quantum and flexibility sought is described in further detail in Chapter 5 of this report.

1.4 PRE-APPLICATION DISCUSSIONS

1.4.1. A number of pre-application meetings took place with Slough Borough Council (SBC) during the design of the Development Proposals. This included the submission of a Transport Scoping Note (April 2020) and TA Scoping Addendum (August 2021) to SBC. These documents outlined the methodology used to estimate the trip generation and assess impact, as presented in the TA. The key correspondence and technical / scoping reports prepared throughout the pre-application process are provided in **Appendix A**.

1.5 REPORT STRUCTURE

1.5.1. This TA has been prepared to accompany the outline planning application and considers the highway and transport planning implications of the Queensmere outline planning application proposals. It considers the connectivity of the Site, local transport infrastructure and the impact of the forecast trip generation on the local transport network.

1.5.2. The remainder of this TA is structured as follows:

- Chapter 1 – Introduction
- Chapter 2 – Planning Policy and Guidance
- Chapter 3 – Existing Transport Conditions
- Chapter 4 – Existing Site
- Chapter 5 – Development Proposals
- Chapter 6 – Trip Generation

- Chapter 7 – Effect of the Development
- Chapter 8 – Effect on the Local Highway Network
- Chapter 9 – Junction Modelling Assessment
- Chapter 10 – Mitigation and Transport Strategy
- Chapter 11 – Summary and Conclusion

2 PLANNING POLICY AND GUIDANCE

2.1 INTRODUCTION

2.1.1. Key transport policy and guidance have been reviewed in this chapter to provide context for assessment of the Development Proposals.

2.2 NATIONAL POLICY AND GUIDANCE

NATIONAL PLANNING POLICY FRAMEWORK (2021)

2.2.1. The National Planning Policy Framework (NPPF) was revised in July 2021 and includes minor clarification to the version published in 2019.

2.2.2. The purpose of the planning system is to contribute to the achievement of sustainable development. At a very high level, the objective of sustainable development can be summarised as meeting the needs of the present without compromising the ability of future generations to meet their own needs.

2.2.3. Achieving sustainable development means that the planning system has three overarching objectives, which are interdependent and need to be pursued in mutually supportive ways (so that opportunities can be taken to secure net gains across each of the different objectives):

- *"An economic objective – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;*
- *A social objective – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering a well-designed and safe built environment, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being; and*
- *An environmental objective – to contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy".*

2.2.4. Transport matters should be considered from the earliest stages of plan-making and development proposals, so that:

- "*The potential impacts of development on transport networks can be addressed;*
- *Opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;*
- *Opportunities to promote walking, cycling and public transport use are identified and pursued;*
- *The environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and*
- *Patterns of movement, streets, parking and other transport considerations are integral to the design of schemes, and contribute to making high quality places. The planning system should actively manage patterns of growth in support of these objectives. Significant development*

should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making."

2.2.5. Planning policies should:

- "*Support an appropriate mix of uses across an area, and within larger scale sites, to minimise the number and length of journeys needed for employment, shopping, leisure, education and other activities;*
- *Be prepared with the active involvement of local highway authorities, other transport infrastructure providers and operators and neighbouring councils, so that strategies and investments for supporting sustainable transport and development patterns are aligned;*
- *Identify and protect, where there is robust evidence, sites and routes which could be critical in developing infrastructure to widen transport choice and realise opportunities for large scale development;*
- *Provide for high quality walking and cycling networks and supporting facilities such as cycle parking (drawing on Local Cycling and Walking Infrastructure Plans); and*
- *Provide for any large-scale transport facilities that need to be located in the area, and the infrastructure and wider development required to support their operation, expansion and contribution to the wider economy. In doing so they should take into account whether such development is likely to be a nationally significant infrastructure project and any relevant national policy statements.*

2.2.6. If setting local parking standards for residential and non-residential development, policies should take into account: a) the accessibility of the development; b) the type, mix and use of development; c) the availability of and opportunities for public transport; d) local car ownership levels; and e) the need to ensure an adequate provision of spaces for charging plug-in and other ultra-low emission vehicles.

2.2.7. Maximum parking standards for residential and non-residential development should only be set where there is a clear and compelling justification that they are necessary for managing the local road network, or for optimising the density of development in city and town centres and other locations that are well served by public transport. In town centres, local authorities should seek to improve the quality of parking so that it is convenient, safe and secure, alongside measures to promote accessibility for pedestrians and cyclists".

Applications for development should:

- "*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;*
- *Address the needs of people with disabilities and reduced mobility in relation to all modes of transport;*
- *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;*
- *Allow for the efficient delivery of goods, and access by service and emergency vehicles; and*

- *Be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations."*

NATIONAL PLANNING PRACTICE GUIDANCE (FEBRUARY 2019)

2.2.8. The National Planning Practice Guidance was published in 2012 and revised in 2019, offering updated and revised guidance on planning where necessary.

2.2.9. The online version allows stakeholders to be altered in real time when future amendments to individual policies are made, thereby ensuring that the most up-to-date guidance documents are available. The NPPG provides additional guidance to supplement the planning policies contained in the NPPF.

2.2.10. The NPPG provides clarity on the role, function and structure of the Transport Assessments:

"Transport Assessments and Statements are ways of assessing the potential transport impacts of developments and they may propose mitigation measures to promote sustainable development. Where that mitigation relates to matters that can be addressed by management measures, the mitigation may inform the preparation of Travel Plans."

2.2.1. Transport Assessments and Statements can positively contribute to:

- *Encouraging sustainable travel.*
- *Lessening traffic generation and its detrimental impacts.*
- *Reducing carbon emissions and climate impacts.*
- *Creating accessible, connected, inclusive communities.*
- *Improving health outcomes and quality of life.*
- *Improving road safety.*
- *Reducing the need for new development to increase existing road capacity or provide new roads.*

2.2.2. They support national planning policy which sets out that planning should actively manage patterns of growth in order to make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable.

2.3 REGIONAL AND LOCAL POLICY

SLOUGH LOCAL TRANSPORT PLAN 2011-2026

2.3.1. The Local Transport Plan details Slough's long-term strategy for transport. This is the third Local Transport Plan (LTP3) and covers 2011-2026.

2.3.2. The priorities of LTP3 are:

- environment - to reduce carbon emissions, protect heritage and habitats, and adapt to a changing climate
- economy and skills – to make sure Slough remains a competitive place to do business as well as to facilitate development for new jobs and housing
- community cohesion – to improve access to opportunities such as jobs and education, and reduce social exclusion

- health and wellbeing – to encourage people to be fitter and healthier through walking and cycling, and to improve air quality and local neighbourhoods
- safer communities – to reduce the number of road accidents and to tackle anti-social behaviour and crime.

2.3.3. In Chapter 3 – Vision & Objectives the document provides specific objectives that the council wants to achieve from a transport perspective. These include:

- to make sustainable transport options accessible to all;
- to enhance social inclusion and regeneration of deprived areas;
- to protect and improve personal health;
- to minimise the noise generated by the transport network, and its impacts;
- to achieve better links between neighbourhoods and access to the natural environment;
- to improve the journey experience of transport users across Slough's transport networks;
- to reduce the number of traffic accidents involving death or injury;
- to minimise the opportunity for crime, anti-social behaviour and terrorism and maximise personal safety on the transport network;
- to reduce transport's CO_2 emissions and make the transport network resilient to the effects of climate change;
- to mitigate the effects of travel and the transport system on the natural environment, heritage and landscape;
- ensure that the transport system helps Slough sustain its economic competitiveness and retain its position as an economic hub of the South East; and
- to facilitate the development of new housing in accordance with the LDF.

2.3.4. The chapter also provides nine transport outcomes to ensure efficient use of transport and that negative impacts on travel are minimised. These outcomes are outlined below.

- less unnecessary movement of people and goods;
- stop/start traffic conditions are minimised are journey times are more reliable for all modes, including freight;
- travel by sustainable modes is more attractive than travel by private car;
- an integrated, high quality, public transport network is operating;
- there is better public transport connectivity to jobs and services within Slough and beyond, especially to/from deprived areas;
- public transport services are more accessible to disadvantaged people;
- safer roads, walking and cycling and public transport;
- there are reduced impacts of travel on our communities; and
- there are reduced impacts of travel on our natural environment and heritage.

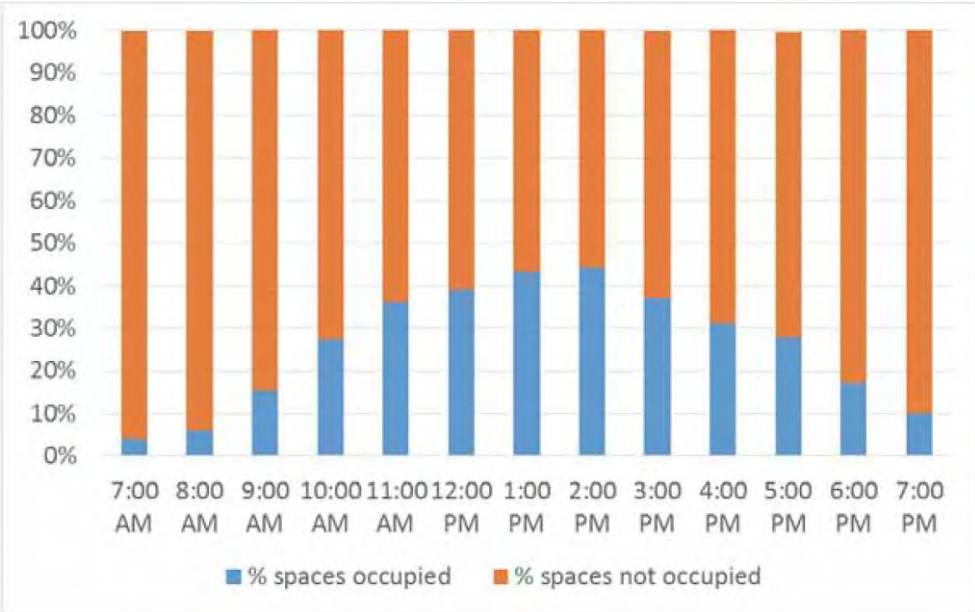
SLOUGH LOCAL TRANSPORT PLAN 3 - SUPPLEMENTARY STRATEGY DOCUMENT: PARKING STRATEGY (2016)

2.3.5. This document sets out a parking strategy for Slough Borough Council (SBC). It draws on the national policy context and Slough's overarching transport objectives and is informed by a review of progress made in implementing the Slough Local Transport Plan 2006-2011. It replaces the Parking Strategy adopted in September 2004 and sets out the strategy for the next 15-year period (starting from 2016).

2.3.6. The document provides information on the level of parking demand and spare capacity within the Queensmere and Observatory multi-storey car parks. It states that "the current evidence is that on the whole there is significantly greater supply of parking available in the town centre than parking demand". The document presents parking accumulation surveys that were undertaken in 2014 within the two car parks. The results indicated that the peak parking demand was approximately 55%. This indicates that there is a high number of car parking spaces within the town centre which are not used. The results of the surveys are illustrated below in **Figure 2-1** and **Figure 2-2**.

Figure 2-1 – Parking Demand at Queensmere and Observatory Car Parks – Saturday 5th July 2014

Figure 2-2 – Parking Demand at Queensmere and Observatory Car Parks – Tuesday 8th July 2014



2.3.7. At this stage, the document does not provide car parking standards as these are currently being prepared by SBC. However, during pre-application discussion with SBC, it was agreed to provide the following car parking for the Development Proposals:

- Residential - 0.3 car parking spaces per residential unit; and
- Office – 1 car parking space per 100 sqm (Gross External Area)

SLOUGH LOCAL DEVELOPMENT FRAMEWORK CORE STRATEGY 2006 - 2026

2.3.8. The Core Strategy Development Plan Document contains the spatial vision, objectives and strategic policy for the Borough. It includes policies to guide development in housing, retail, leisure, employment and community facilities, as well as protection of the natural and historic environment. It was adopted on 16th December 2008.

2.3.9. Core Policy 7 – Transport of the document states that "*All new development should reinforce the principles of the transport strategy as set out in the council's Local Transport Plan and Spatial Strategy, which seek to ensure that new development is sustainable and is located in the most accessible locations, thereby reducing the need to travel*". It further states that "*Development proposals will, either individually or collectively, have to make appropriate provisions for*:

- *Reducing the need to travel;*
- *Widening travel choices and making travel by sustainable means of transport more attractive than the private car;*
- *Improving road safety; and*
- *Improving air quality and reducing the impact of travel upon the environment, in particular climate change".*

2.3.10. The proposals are in line with the above policy as they will provide a scheme with a low parking ratio of 0.3 per residential unit. This is expected to influence Site users' travel behaviour away from private vehicles and towards active and sustainable forms of transport.

2.3.11. One of the targets in line with this policy is to ensure that there is no increase in car parking within employment generating development. The proposals are in line with this policy as car-parking is only proposed to be provided for residential uses and office accommodation.

2.3.12. To implement this policy "All major trip generating developments will be required to submit a Transport Assessment which will identify proposed mitigation measures". This TA has been prepared to provide an assessment of the trips generated by the proposals and measures to mitigate any impacts.

SLOUGH LOCAL PLAN (ADOPTED MARCH 2004) - SAVED POLICIES

2.3.13. The Local Plan Saved Policies are planning policy documents that give detailed guidance on a wide range of issues, including design, transport, housing, retail sites, building extensions, local nature conservation and green space. The policies were adopted in 2004. As the planning process changes over time, some are no longer in use. Those that remain in use are referred to as 'saved'.

2.3.14. Policy T2 (Parking Restraint) states that "*No increase in the total number of car parking spaces on-site will be permitted within commercial redevelopment schemes. Additional on-site car parking provision will only be required where this is needed to overcome road safety problems, protect the amenities and operational requirements of adjoining users, and ensure that access can be obtained for deliveries and emergency vehicles. Residential development will be required to provide a level of parking appropriate to its location and which will overcome road safety problems, protect the amenities of adjoining residents, and not result in an adverse visual impact upon the environment*".

2.3.15. Policy T8 (Cycling Network and Facilities) states that "Permission will not be granted for proposals which do not include suitable cycle access to and through the Site and cycle parking racks and other facilities for cyclists as an integral part of the development". The proposals are in line with this policy as they will include cycle parking and create new routes through the Site for cyclists.

SLOUGH BOROUGH COUNCIL EMERGING LOCAL PLAN 2016-2026

2.3.16. The Council's new Local Plan will set out how to guide development in Slough through to 2036. The plan will contain policies to guide business and residential development to meet the needs of Slough's expanding population.

2.3.17. The new Local Plan will update the existing Core Strategy, Site Allocations, and Local Plan Saved Policies. The emerging Local Plan aims to address some of the key challenges facing Slough. In particular:

- Meeting the need for new homes;
- Continuing to provide for locally and nationally important businesses;
- How to make the most of the Heathrow Expansion; and
- How to tackle congestion on Slough's roads.

2.3.18. Publication and examination of the new Local Plan is planned for the end of 2022 and early 2023.

3 EXISTING TRANSPORT CONDITIONS

3.1 INTRODUCTION

3.1.1. This section presents a review of the existing transport network, including public transport accessibility and active travel routes.

3.2 PEDESTRIAN ACCESSIBILITY

3.2.1. The National Travel Survey 2015 (released in September 2016) notes that walking is the most frequent mode of travel used for short distance trips within 1 mile (1.6km). Infrastructure that supports efficient travel on foot therefore promotes walking as a viable alternative to short car trips. The pedestrian infrastructure within the vicinity of the Site and the local area is well established and provides continuous footways, footpaths, and pedestrian crossing points. These generally provide opportunities for pedestrians to access local amenities.

3.2.2. The Site is bound by the A4 Wellington Street to the north which provides good footways on the northern and southern sides of the carriageway. The footways on the A4 Wellington Street are linked by the provision of signalised crossing facilities provided at regular intervals. The pedestrian crossings provide connection from the Site to the north towards local amenities such as the Tesco supermarket or Slough rail station (via Brunel Way). Most crossing points on the A4 Wellington Street are toucan, which enable both pedestrians and cyclists to cross the road, and are located at the junctions with Queensmere Road, Brunel Way; and the B416 William Street.

3.2.3. The footways along the A4 Wellington Street also provide east-west connections. To the east, the footways lead to a Sainsbury's which is located within a 600m walking distance (an 8-minute walk based on a walking speed of 80m/min).

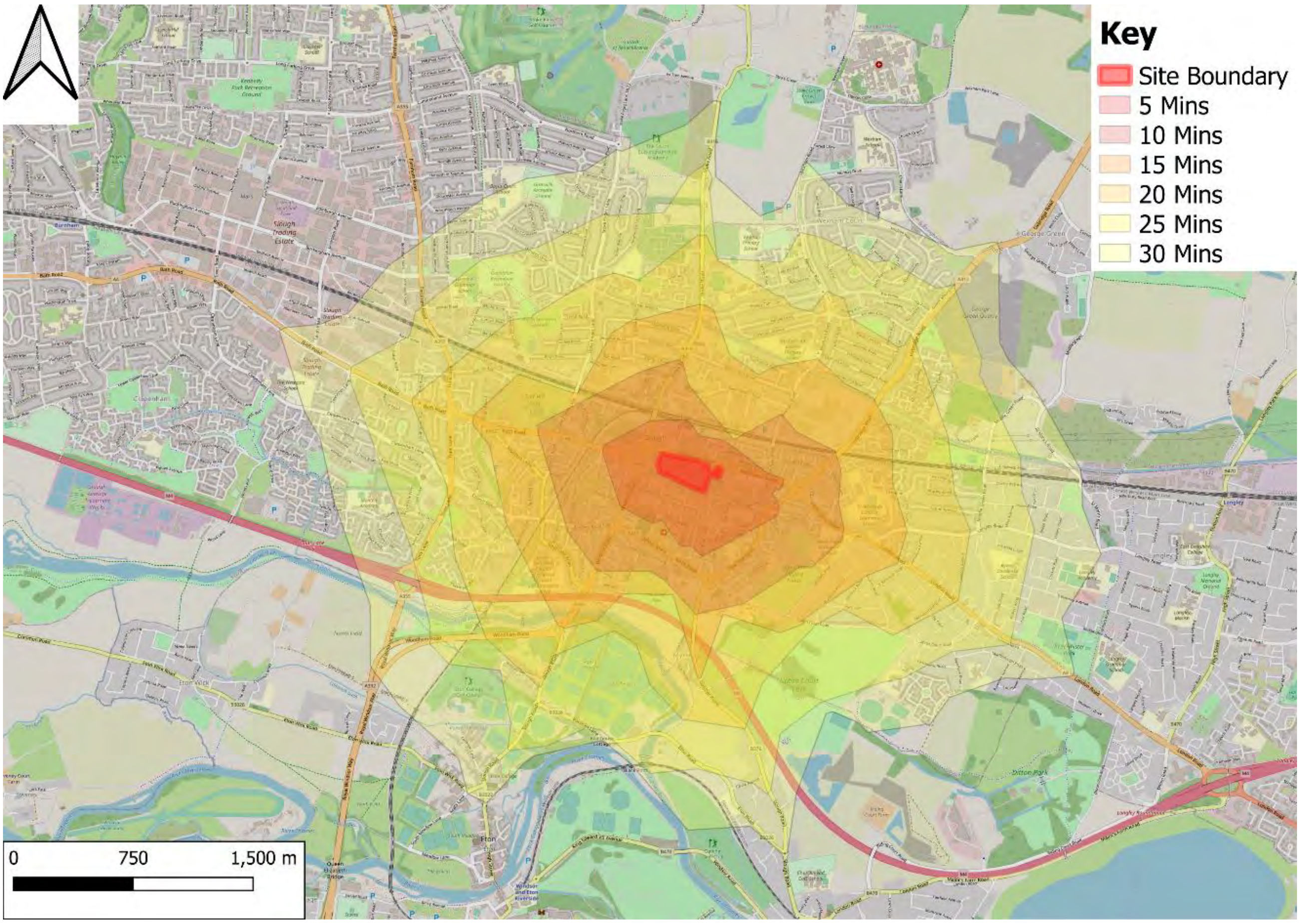
3.2.4. Brunel Way extends northbound from the junction with the A4 Wellington Street, providing a route to Slough rail station. Brunel Way has footways on both sides of the road, with a pedestrian crossing on Brunel Way at the junction with the A4 Wellington Street.

3.2.5. High Street bounds the Site to the south. The High Street is pedestrianised between the junctions with Church Street and Alpha Street North. The west section of the High Street, between Windsor Road and Church Street, prohibits access to general traffic, with access only permitted for buses, taxis, motorcycles, and cycles. The High Street is highly permeable and provides east-west connection through the town centre and access to retail facilities, restaurants, cafes and other facilities. A number of local roads branch out southbound from the High Street and facilitate access to more local amenities to the south, including Upton Hospital.

3.2.6. The aforementioned roads provide lighting columns at regular intervals which ensure well-lit conditions at night for pedestrians.

3.2.7. **Figure 3-1** shows walking isochrones at 5-minute intervals, up to 30 minutes, from the Site.

Figure 3-1 - Pedestrian Isochrone Map



3.3 CYCLE ACCESSIBILITY

3.3.1. It is typically considered that cycling also has the potential to substitute for short car trips, particularly those journeys less than five kilometres in length. However, many people will cycle considerable distances depending on the weather, time of day, level of fitness, convenience, and real or perceived safety.

3.3.2. As illustrated in **Figure 3-2**, Slough town centre benefits from a good level of cycle connectivity and has a mix of shared pedestrian and cycle routes, dedicated cycle lanes and shared bus and cycle lanes.

3.3.3. The A4 Wellington Street, the north boundary of the Site, currently provides an east-west connection via shared pedestrian and cycle routes; and toucan crossings. The A4 Wellington Street also provides connections to shared pedestrian and cycle routes on Brunel Way, offering connection to Slough rail station. The station provides cycle parking for up to 120 bicycles and has docking stations for Slough's Cycle Hire Scheme which has a capacity of 30 bicycles.

3.3.4. Wexham Road to the east of the Site provides a north-south connection for cyclists via a mix of cycle lanes to the north and shared pedestrian and cycle links to the south. Wexham Road forms part of the National Cycle Network, connecting Lascelles Road to the south, and onto National Cycle Route 61.

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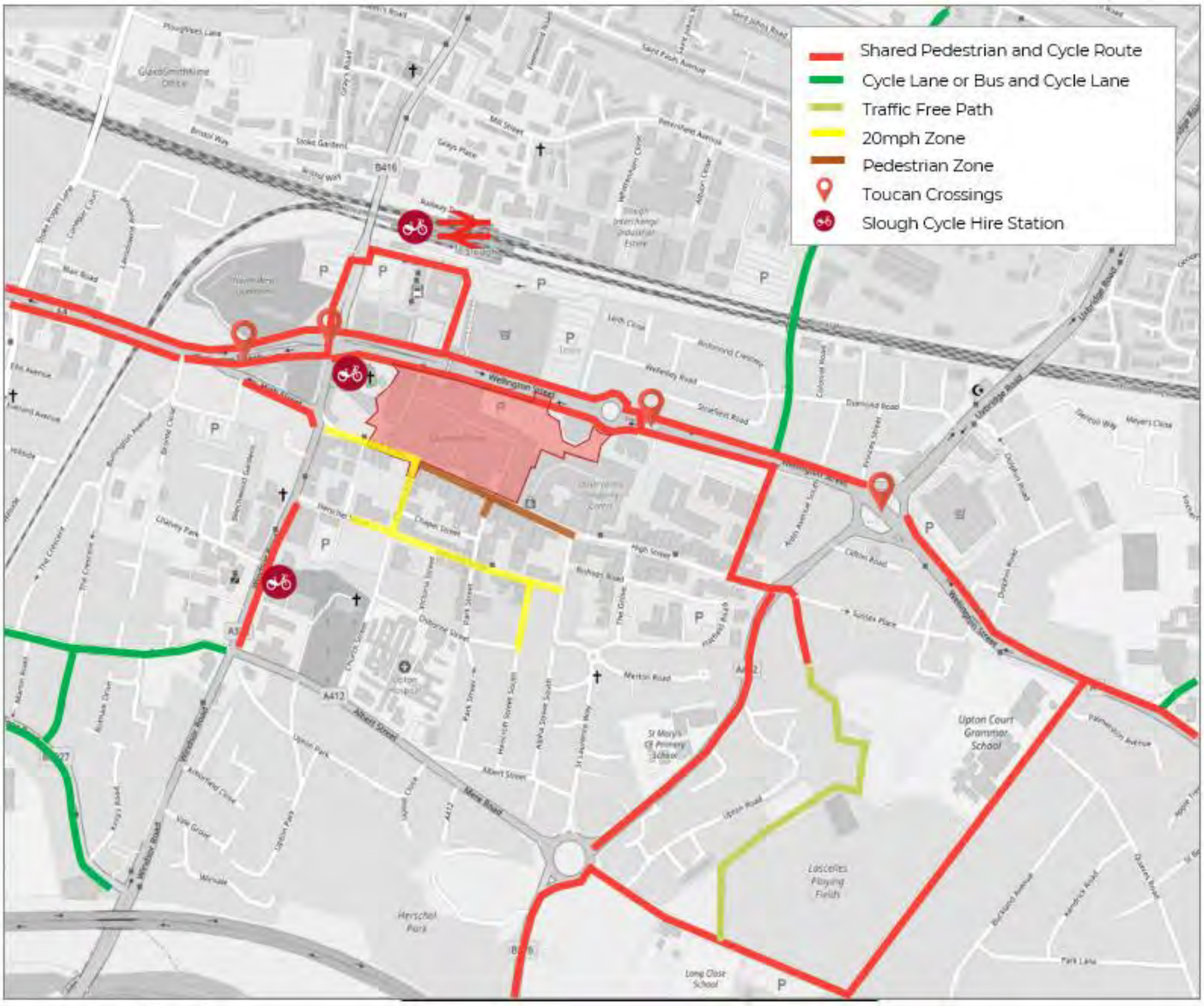
Figure 3-2 - Slough Town Centre Local Cycle Facilities

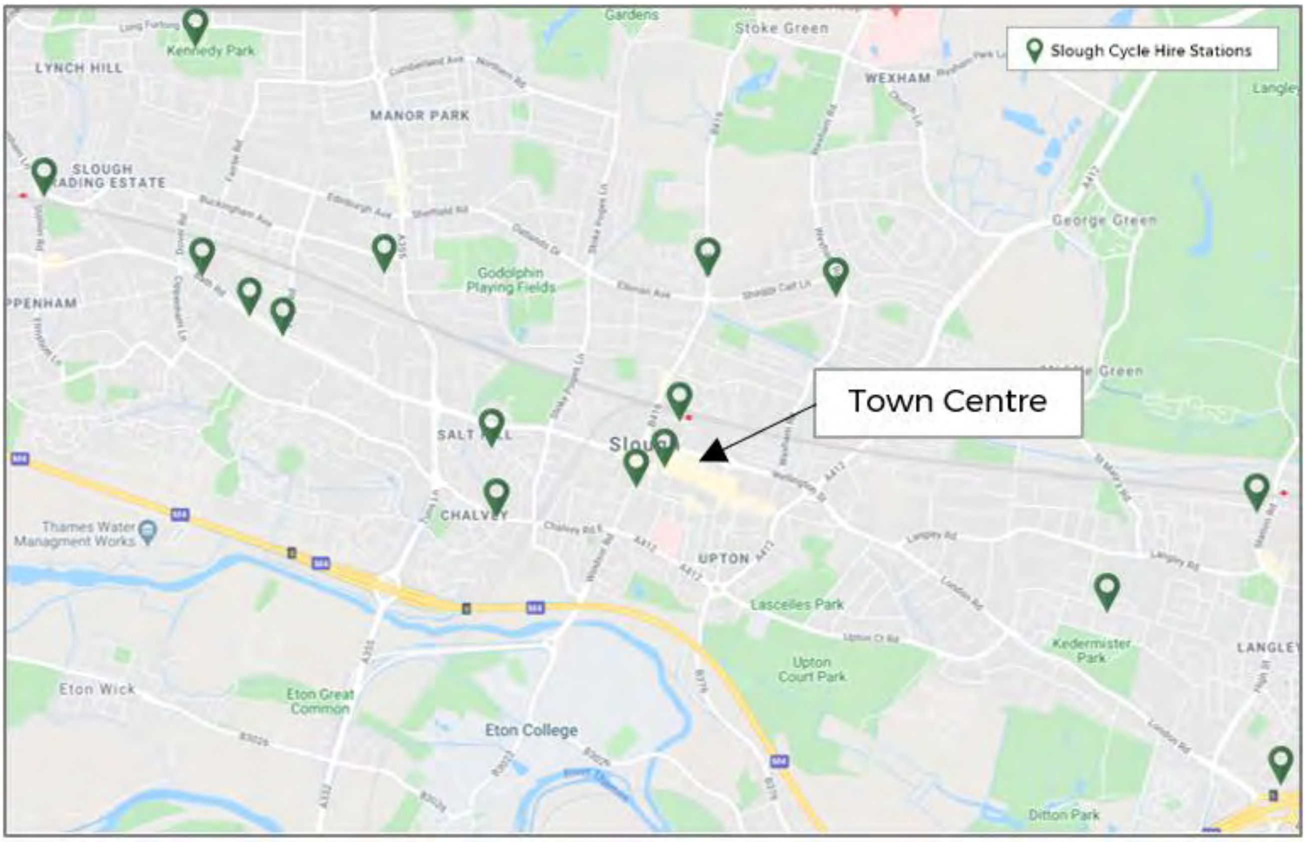


3.3.5. SBC offer a cycle hire scheme specific to the Borough with a total of 17 cycle-hire locations accessible on a pay as you go, weekly, monthly or annual basis. Users can register, check out a bike and return it to any dock within Slough. The cycle hire facility provides an effective means of cycle connection from Slough town centre to the Trading Estate to the west and as well as some of the wider locations outside of the town centre.

3.3.6. The nearest cycle hire stations are shown on **Figure 3-3** and include:

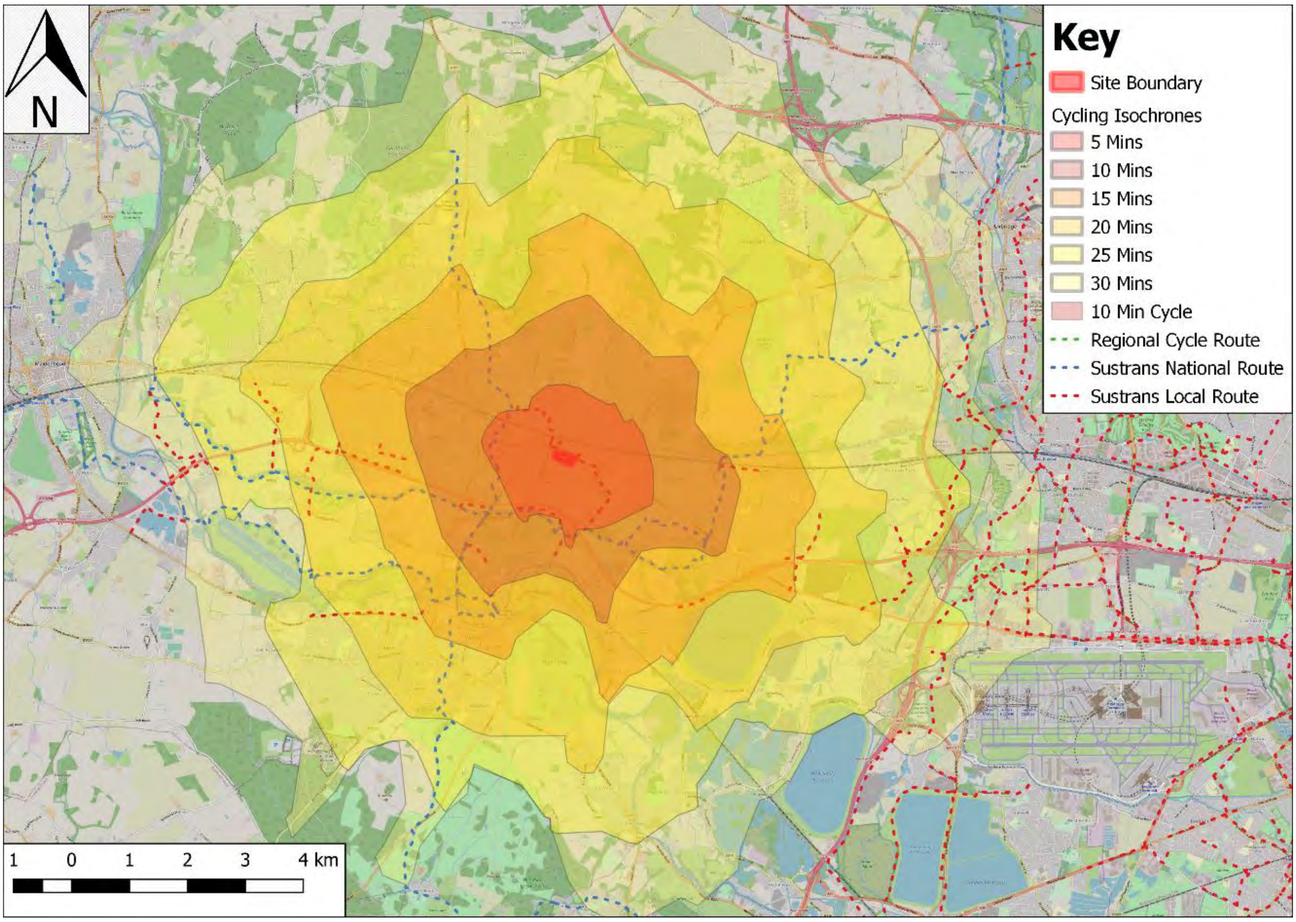
- Slough train station – 30 bikes
- The Curve – 12 bikes
- Windsor Road – 8 bikes

Figure 3-3 - Slough Town Centre Cycle Hire Locations



3.3.7. Figure 3-4 illustrates cycling journey times from the Site, demonstrating accessibility for up to 30-minute journey time from the Site in 5-minute intervals. Figure 3-4 shows the Site can be accessed from a far as Woodburn Green to the north, West Drayton to the east, Cranbourne and Maidens Green to the south and Maidenhead to the west.

Figure 3-4 - Cycle Isochrone

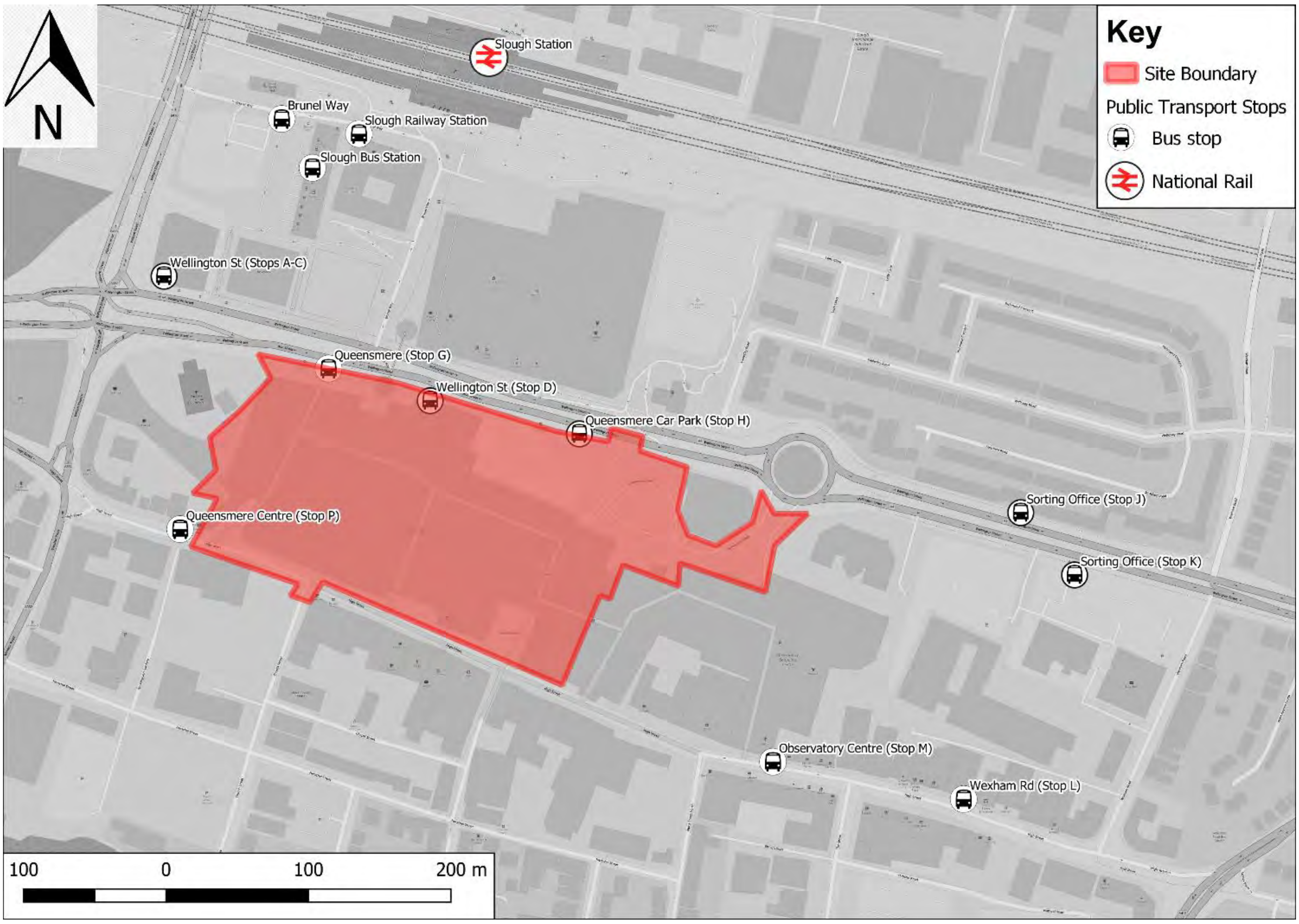


3.4 PUBLIC TRANSPORT ACCESSIBILITY

3.4.1. This section summarises public transport routes and frequency of services.

3.4.2. **Figure 3-5** shows the public transport services operating in the vicinity of the Site.

Figure 3-5 - Local Public Transport Facilities



BUS

3.4.3. The Site is approximately 250m south of Slough bus station, which is located on Brunel Way. Slough bus station provides access to the vast majority of bus routes operating across Slough. **Figure 3-6** shows the Slough bus route map for the area.

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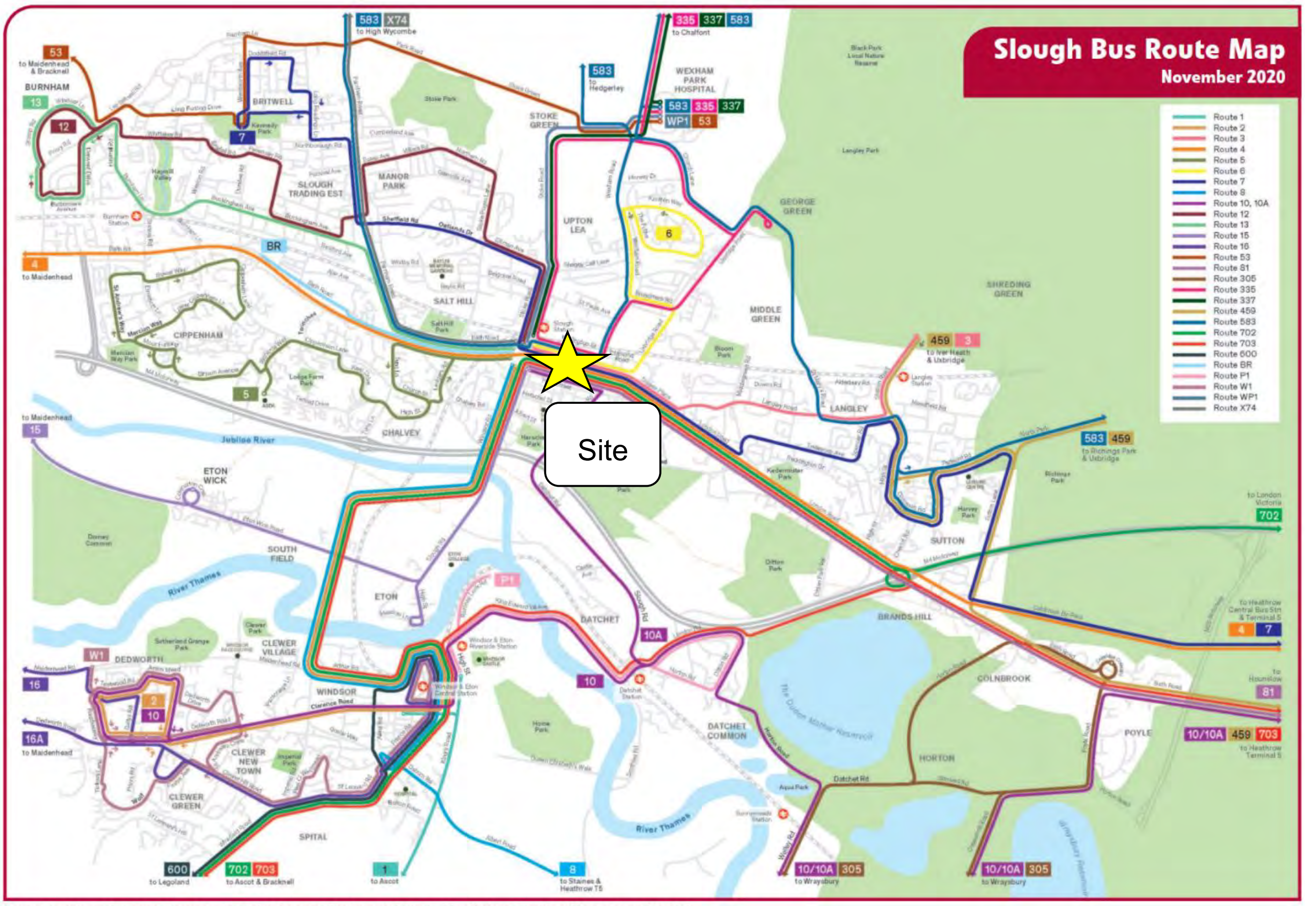
Figure 3-6 - Slough Bus Route Map



Based on the Ordnance Survey map with the permission of the Controller of her Majesty's Stationery Office (C) Crown copyright 2008. Licence no. 100019446

3.4.4. A summary of the bus services available within walking distance from the Site is provided in

3.4.5. Table 3-1.

Table 3-1 – Bus Services Accessible from the Site

Stop	Line	Direction	AM pea hour Freq.	PM peak hour Freq.
Slough Bus Station	2	Slough Bus Station - Dedworth	1	1
	3	Slough Bus Station - Uxbridge	2	2
	4	Maidenhead - Heathrow	2	2
	5	Slough Bus Station - Cippenham	2	2
	7	Britwell - Heathrow	3	4
	337	Slough Bus Station - Old Amersham	1	0
	8/8A	Slough Bus Station - Heathrow	2	2
	15	Slough Bus Station - Heathrow	1	1
	81	Slough Bus Station – Hounslow Bus Station	6	5

	X74	Slough Bus Station – High Wycombe Bus Station	2	2
	702/703	Bracknell – Legoland	2	2
Slough Brunel Way	12	Slough - Burnham	0	2
	13	Slough - Burnham	2	0
	WP1	Slough - Wexham Park Hospital	4	4
Slough Wellington Street	3	Slough Bus Station - Uxbridge	2	2
	4	Maidenhead - Heathrow	2	2
	6	Slough Bus Station – The Frith	1	1
	7	Britwell - Heathrow	3	4
	12	Slough - Burnham	0	2
	15	Slough Bus Station - Heathrow	1	1
	81	Slough Bus Station – Hounslow Bus Station	6	5
	83	Hedgerley - Langley	1	0
	702/703	Bracknell – Legoland	2	2
Total			**48**	**48**

SLOUGH MASS RAPID TRANSIT

3.4.6. The A4 forms the spine of a 12km strategic public transport corridor that links Maidenhead, Slough, and Heathrow. The Slough Mass Rapid Transit (SMaRT) scheme aims to improve this corridor by undertaking road widening in order to facilitate dedicated bus lanes along the A4.

3.4.7. By widening the A4 at key points, and by utilising service roads as bus lanes, SMaRT aims to provide a bus service that is quicker, more frequent, and more reliable. In addition, by reducing congestion along this strategic route, SMaRT also aims to improve the journeys of the 20,000 vehicles that use the A4 Bath Road every day.

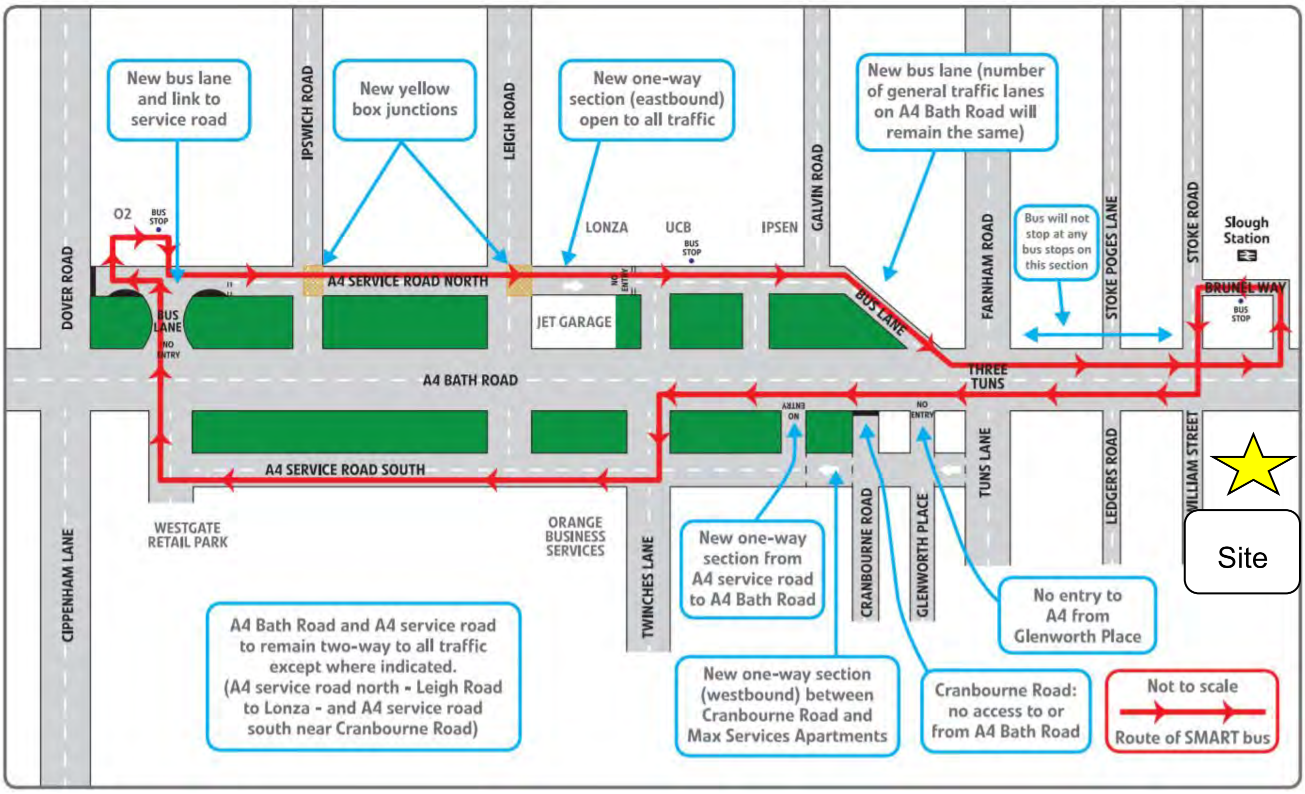
3.4.8. SBC completed Phase 1 of the Slough Mass Rapid Transit scheme from Dover Road to High Street Langley in 2017. The scheme has since delivered a more frequent, quicker and more reliable bus service for bus commuters travelling along the A4 Bath Road.

3.4.9. Phase 2 is still being planned, however would extend from High Street Langley to the eastern borough boundary and Heathrow. The Phase 2 scheme would encourage use of sustainable transport for commuters travelling between Slough Trading Estate, Slough train station, Langley and Heathrow airport. Phase 2 aims to improve journey times, reduce congestion, enhance transport interchanges and support regeneration in Slough.

3.4.10. As referenced in Table 8-2, the SMaRT is included within SBC's forecast traffic model.

3.4.11. Phase 1 of the SMaRT is shown in **Figure 3-7**.

Figure 3-7 – SMaRT Phase 1



NATIONAL RAIL

3.4.12. Great Western Railway and TfL Rail operate services through Slough rail station, with connections running frequently to London (London Paddington) and other destinations including Windsor & Eton Central, Reading and Didcot Parkway. A summary of the rail services from Slough rail station are provided in **Table 3-2**.

Table 3-2 – Rail Services Accessible from the Site

Destination	AM peak hour Freq.	PM peak hour Freq.
London Paddington	6	7
Reading	3	2
Windsor & Eton Central	3	2
Oxford	1	0
Didcot Parkway	2	0
Total	**15**	**11**

ELIZABETH LINE

3.4.13. Slough rail station will provide access to Elizabeth Line services which will extend across London from east to west, extending to Reading in the west, and Shenfield and Abbey Wood in the east. The Elizabeth Line will also provide direct services to Heathrow Airport. The section of the Elizabeth Line between Reading and London Paddington is currently operational, with the remainder of the line across London up to Shenfield and Abbey Wood completed in 2022.

3.4.14. The Elizabeth Line will provide an additional train every five minutes during peak times. Journey times along the new line will be as follows:

- Slough to Heathrow Central: 15 mins
- Slough to Reading: 22 mins
- Slough to Tottenham Court Road: 32 mins
- Slough to Canary Wharf: 46 mins
- Slough to Abbey Wood: 58 mins
- Slough to Shenfield: 81 mins

Figure 3-8 – Elizabeth Line map

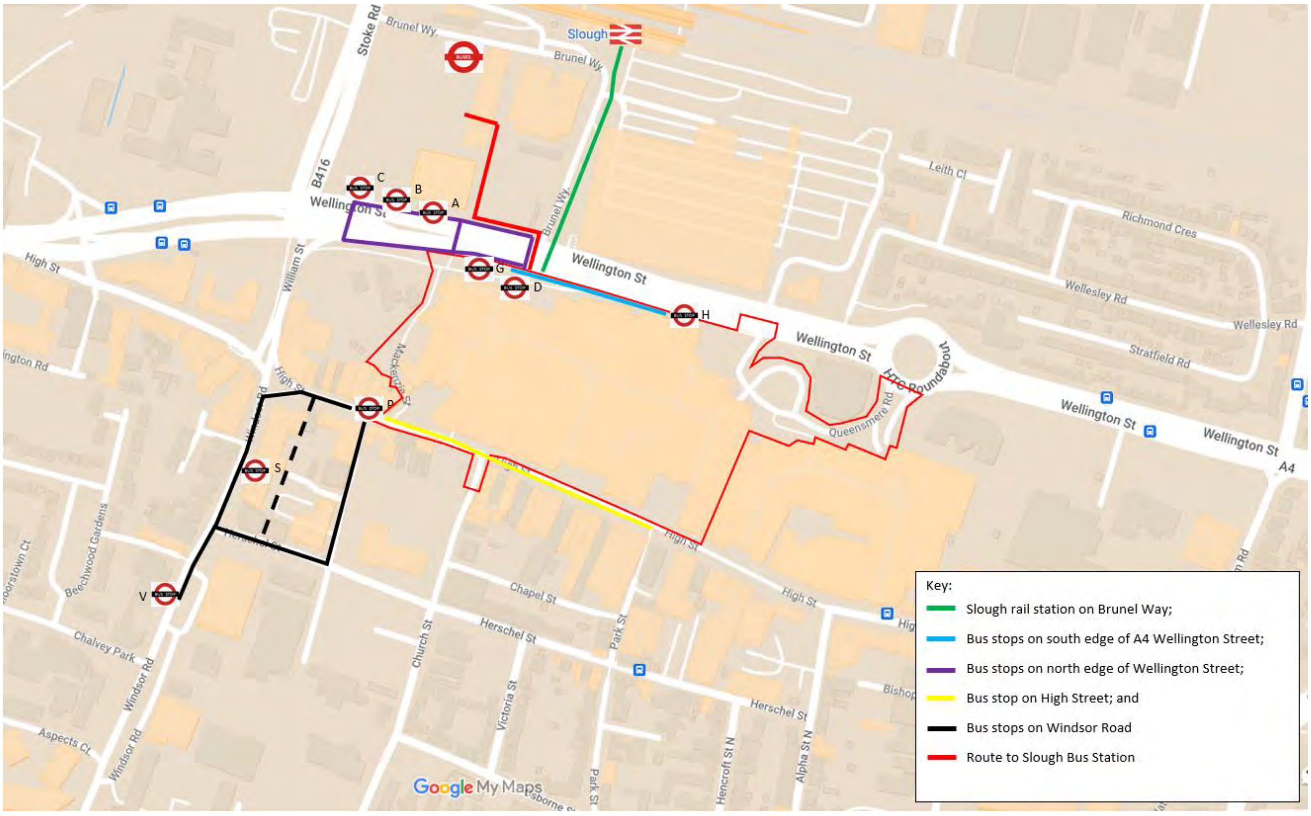
ACCESS TO PUBLIC TRANSPORT

3.4.15. This section considers the following public transport origin / destinations and the routes to these facilities to and from the Site:

- Slough rail station on Brunel Way;]
- Slough bus station between Brunel Way and Stoke Road;
- Bus stops on south edge of A4 Wellington Street;
- Bus stops on north edge of Wellington Street;
- Bus stop on High Street; and
- Bus stops on Windsor Road.

3.4.16. The existing routes to local public transport facilities are shown in **Figure 3-9**.

Figure 3-9 – Existing Routes to Public Transport Facilities



3.4.17. The north edge of the Site is located approximately 300m south of Slough Rail Station, therefore is within a reasonable walking distance. There are existing pedestrian crossing points at the junction between Wellington Street and Brunel Way to facilitate safe and direct crossing points across the A4. Brunel Way has generous footway widths on both side of the carriageway, providing a pleasant and safe route for pedestrians between the Site and the station.

3.4.18. The north edge of the Site is within a 250m walking distance of Slough Bus Station. There are existing pedestrian crossing points at the junction between Brunel Way, and a second on the alignment of Mackenzie Street, to facilitate safe and direct crossing points across the A4. From the north edge of the A4, there is a pedestrian only route which leads directly to the bus station.

3.4.19. The bus stops on the south edge of Wellington Street are easily accessible to the Site. Pedestrians would be able to access the bus stops on the south edge of Wellington Street directly from the Site.

3.4.20. The bus stops on the north side of Wellington Street would be accessed via the use of one of three signal-controlled pedestrian crossing points: one at the junction with William Street; a second on the alignment of Mackenzie Street, and a third on the alignment of Brunel Way. Each of these three crossing points on Wellington Street would provide a safe route to the bus stops on the north side of Wellington Street, bus stops A, B and C. Wellington Street provides excellent footway widths on both sides of the road for pedestrians, in addition to the three signalised crossing points, therefore the bus stops on the north side of Wellington Street would be considered easily accessible from the Site.

3.4.21. The bus stop on the High Street is located next to the Site, west of the junction with Mackenzie Street. The route between the Site and bus stop P on the High Street is considered accessible.

3.4.22. The bus stops on to the south of the Site, on Windsor Road, are approximately 400m walking distance from the Site. The bus stops on Windsor Road, stops S and V, can be accessed via the High Street and Windsor Road route, however there is the option to use Church Street, Buckingham Gardens and Herschel Street, particularly when accessing bus stop V which is further south. Pedestrians would only need to cross the High Street to access bus stop S, which is a low traffic road with good footway widths. Buckingham Gardens is pedestrianised at the north, at the junction with the High Street, and does provide a continuous footway along the west edge of the road, however there are several vehicle access points which do not make the route as desirable as other options. Church Street has footways on both side of the carriageway, however again vehicle access points disrupt the continuous footway route. Herschel Street has footways on both sides of the road and there are signalised pedestrian crossing points at the junction with Windsor Road providing an opportunity for pedestrians to cross here when accessing bus stop V.

3.4.23. Overall, the routes between the Site and the adjacent public transport facilities are very good.

3.5 PUBLIC TRANSPORT FACILITIES AUDIT

3.5.1. This section includes an audit of the existing public transport facilities, provides further information on how the new development will link to these facilities, and what improvements are required to accommodate the additional passengers.

SLOUGH RAIL STATION AUDIT

3.5.2. An audit of the Slough Rail Station has been undertaken to understand the existing facilities available. The results are presented in **Table 3-3**.

Table 3-3 – Slough Rail Station Audit

Area	Item	Description
Brunel Way station concourse	Ticket office / TVMs	Ticket office and TVMs in Brunel Way station building.
	Ticket gates	5 ticket gates (4 standard and 1 WAG)
	Passenger Information	Yes
	Toilets	No
	Help Points	No
Railway Terrace station entrance	Ticket office / TVMs	Ticket office and TVMs in Railway Terrace station building.
	Ticket gates	2 ticket gates (1 standard and 1 WAG)
	Passenger Information	Yes
	Toilets	No
	Help Points	No
Platforms	Step free access	Yes, to all platforms. There are six platforms and two station access points, Brunel Way and Railway Terrace. All platforms have step free access via the footbridges and passenger lifts.
	Passenger Information	Yes
	Toilets	Platform 2and 5. The National key toilets are operated by a RADAR key. The RADAR key is available from station staff upon request. The toilet on platform 5 is an accessible WC with baby changing facilities.
	Waiting Rooms	Provided on platforms 3 / 4 and 5.
Access	Help Points	Yes
	Bus	Yes, on platforms 2, and 3 / 4 Bus stops on Brunel Way, and nearby Slough bus station.
	Cycle	Cycle routes on A4 and Brunel Way, with cycle parking and Cycle Hire available.
	Car	Pick-up and drop-off areas available on Brunel Way and Railway Terrace.
	Taxi	Taxis operate in the main station forecourt, accessed via Brunel Way.
	Cycle hire	Yes
Parking	Car parking	540 spaces across four adjacent car parks, including accessible parking.

	Cycle parking	120 long-stay secured and sheltered spaces located next to platform 5. Sheffield stands also on platform 5 and at front of station (Brunel Way)

3.5.3. Slough Rail Station has received a high level of investment over the last ten years, which include improvements to the south forecourt, a new platform footbridge and lifts to provide step-free access; and upgrades to the general station facilities.

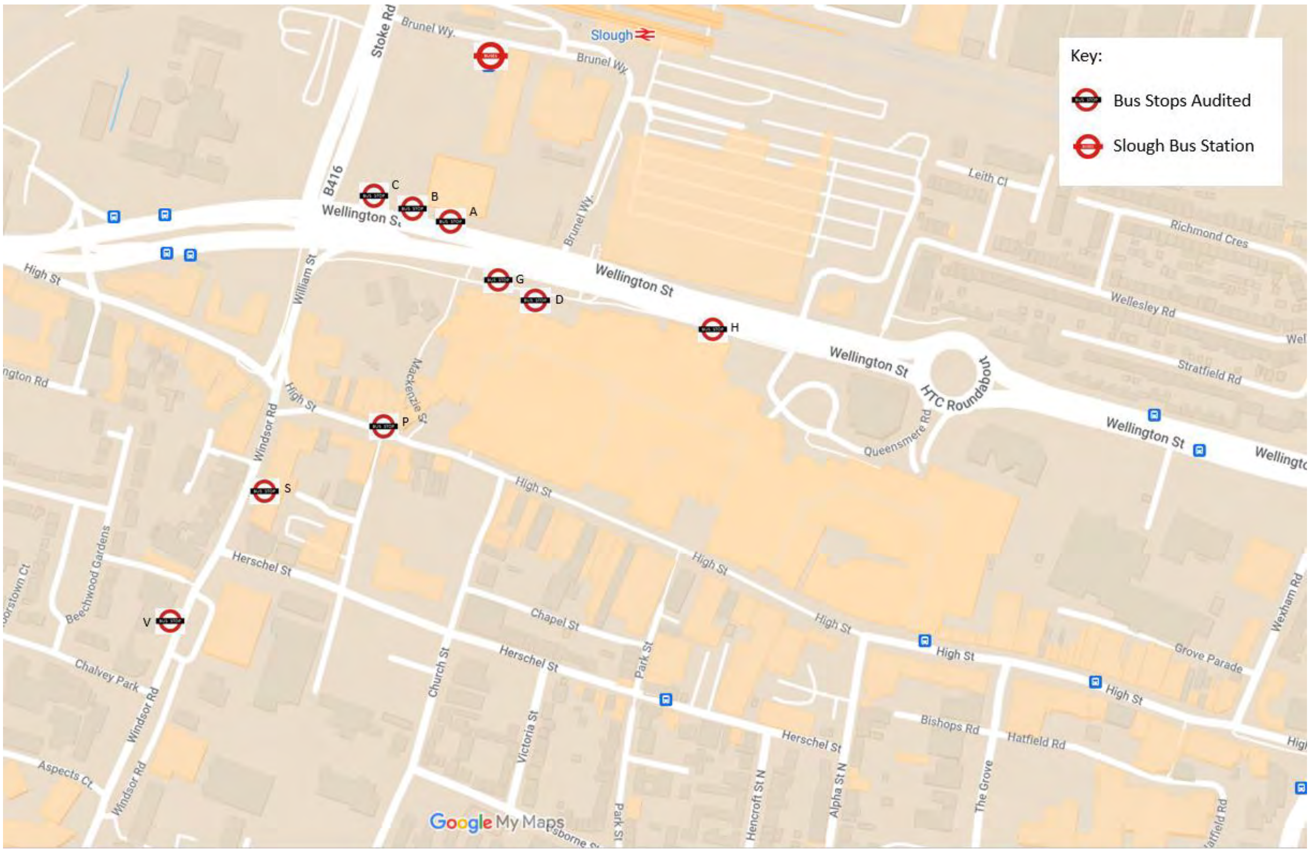
3.5.4. There are proposals to improve the north forecourt too, funded by the Thames Valley Berkshire Local Enterprise Partnership, which are part of wider plans to improve the experience for people using sustainable travel modes to access the station. The improvements will bring the north forecourt up to a standard comparable to the southern side.

BUS STOPS AUDIT

3.5.5. The nine bus stops included in the audit are as follows, with their locations shown in **Figure 3-10**.

- Queensmere (stop G)
- Wellington Street (stop D)
- Queensmere car park (stop H)
- Queensmere centre (stop P)
- Wellington Street (stop A)
- Wellington Street (stop B)
- Wellington Street (stop C)
- Landmark Place (stop S)
- Landmark Place (stop V)

Figure 3-10 – Bus Stops included in Audit



3.5.6. A main consideration of the audit of the above-listed stops is to understand if the bus stops provide adequate accessibility to all passengers, in particular those with limited mobility (including those that use wheelchairs, mobility scooters, and buggies).

3.5.7. It should be noted Slough Bus Station is within a 250m walking distance of the north edge of the Site, however the bus station is not included within the audit. The bus station is a new facility and provides excellent waiting facilities and passenger information, therefore is included in the scope of the audit. The bus station provides access to over 30 bus routes which cover slough and wider destinations.

3.5.8. The audit has been undertaken in-line with the items for consideration provided in the Transport for London (TfL) Accessible Bus Stop Design Guidance, 2017. The following key criteria has been used to determine the quality of a bus stop:

- The presence of a bus passenger shelter to protect people from extremes of weather with lighting to help them feel more secure. Seating is provided to assist mobility impaired passengers that do not use wheelchairs, such as ambulant disabled and older passengers.
- The presence of information including timetables and maps.
- Accessibility – Kerb heights greater than 100mm allow for easier access to buses by ambulant people and people with pushchairs.
- Road markings – a clearway (thick solid yellow line) (Traffic Signs Regulations and General Directions (TSRGD) 1025.1) or double yellow lines used to enforce no stopping by other vehicles. Each bus stop should have a clearway or double yellow lines along the length of the bus stop

cage. The clearway, in conjunction with the relevant upright sign (TSRGD Schedule 7, Part 6, Clause 1), allows for the enforcement of no stopping restrictions.

- Access free of impediments – A visual check of the area around the bus stop, including the surrounding pavement has been undertaken, to ensure that the bus will be able to deploy its ramp so that wheelchair users and people with prams can access the ramp. This is important in preventing visually impaired people walking into obstacles when boarding and alighting the bus.

3.5.9. A visit to each bus stop Site was undertaken on 30 March 2022. The weather was fair, with the footway / highway surfaces dry. Traffic conditions were moderate, but free flowing. During the Site visit, observations were recorded following a pre-prepared checklist of bus stop assessment criteria.

Queensmere (stop G)

3.5.10. This bus stop serves route 6 and is located in the westbound lane of the A4 Wellington Street, east of the junction with William Street.

Figure 3-11 – Queensmere Stop G on A4 Wellington Street (Westbound)

3.5.11. **Table 3-4** provides the audit results.

Table 3-4 – Audit Results for Queensmere Stop G

Criteria	Definition / Description	Comments
Location / Reference Number and services which use stop	Details of the bus stop being audited	Stop G is located on A4 Wellington Street on westbound lane
Road markings	Road markings for enforcement of no-stopping restrictions.	No clearway. Double yellow lines within a bus lane.
Kerb > 100mm	Allows bus to deploy ramp	Yes
Access free of impediments	A visual check to confirm that ramp users would have sufficient space to get on / off the bus ramp, once it has been deployed	Yes
Security (including lighting)	Details of infrastructure present	Yes
Bus stop post and flag	Details of infrastructure present	Yes (flag attached to shelter)
Surface markings for buses	Details of infrastructure present	No
Bus passenger shelter and seating	Shelters should be provided where there is space	Yes
Utilities access	i.e. presence of covers / boxes in the boarding / alighting zones	n/a
Information (including timetables and maps)	Details of infrastructure present	Yes. Real time information.
Drainage	Potential for 'ponding' of water in the waiting area	No visible issues regarding drainage
Pedestrian footway	Use of kerb space should be minimised. Street furniture which prevents passengers boarding / alighting should be removed	The bus stop is surrounded by raised planting, however this does not impact boarding and alighting.
Height and type of kerb	The minimum height for an accessible stop is 100mm. The maximum recommended height is 150mm	Within range.
Adequacy of waiting area	General observations	Overall very good.
Space for bus to straighten	Allow the bus to line up within 200mm of and parallel with the kerb	Yes
Approach and exit paths for buses	Driver and waiting passengers should be clearly visible to each other	Yes
Connectivity with footway	Adequate footway width should be available	Yes
Convenience for passengers	Stops should be close local facilities, key junctions, interchanges and crossing	Yes, well positioned

3.5.12. Overall, the bus stop is considered **very good**.

Wellington Street (stop D)

3.5.13. This bus stop serves route 83 and is located in the westbound lane of the A4 Wellington Street, east of the junction with William Street.

Figure 3-12 – Wellington Street Stop D on A4 Wellington Street (Westbound)

3.5.14. **Table 3-5** provides the audit results.

Table 3-5 – Audit Results for Wellington Street Stop D

Criteria	Definition / Description	Comments
Location / Reference Number and services which use stop	Details of the bus stop being audited	Stop D is located on Wellington Street on westbound lanes.
Road markings	Road markings for enforcement of no-stopping restrictions.	No clearway. Double yellow lines within a bus lane.
Kerb > 100mm	Allows bus to deploy ramp	Yes
Access free of impediments	A visual check to confirm that ramp users would have sufficient space to get on / off the bus ramp, once it has been deployed	Yes
Security (including lighting)	Details of infrastructure present	Yes
Bus stop post and flag	Details of infrastructure present	Yes (flag attached to shelter)
Surface markings for buses	Details of infrastructure present	No

Bus passenger shelter and seating	Shelters should be provided where there is space	Yes
Utilities access	i.e. presence of covers / boxes in the boarding / alighting zones	n/a
Information (including timetables and maps)	Details of infrastructure present	Yes.
Drainage	Potential for 'ponding' of water in the waiting area	No visible issues regarding drainage
Pedestrian footway	Use of kerb space should be minimised. Street furniture which prevents passengers boarding / alighting should be removed	The bus stop is surrounded by raised planting, however this does not impact boarding and alighting.
Height and type of kerb	The minimum height for an accessible stop is 100mm. The maximum recommended height is 150mm	Within range.
Adequacy of waiting area	General observations	Overall very good.
Space for bus to straighten	Allow the bus to line up within 200mm of and parallel with the kerb	Yes
Approach and exit paths for buses	Driver and waiting passengers should be clearly visible to each other	Yes
Connectivity with footway	Adequate footway width should be available	Yes
Convenience for passengers	Stops should be close local facilities, key junctions, interchanges and crossing	Yes, well positioned

3.5.15. Overall, the bus stop is considered **very good**, however does not provide real time bus information.

Queensmere car park (stop H) – westbound

3.5.16. This bus stop serves routes 3, 4, 7, 81, 83, 702 and 703 and is located in the westbound lane of the A4 Wellington Street, west of the junction with Queensmere Road.

Figure 3-13 – Queensmere Car Park Stop H on A4 Wellington Street (Westbound)

3.5.17. **Table 3-6** provides the audit results.

Table 3-6 – Audit Results for Queensmere Car Park Stop H

Criteria	Definition / Description	Comments
Location / Reference Number and services which use stop	Details of the bus stop being audited	Stop H is located on Wellington Street on the westbound lanes, west of the junction with Queensmere Road.
Road markings	Road markings for enforcement of no-stopping restrictions.	No clearway. Bus cage and within a bus lane.
Kerb > 100mm	Allows bus to deploy ramp	Yes
Access free of impediments	A visual check to confirm that ramp users would have sufficient space to get on / off the bus ramp, once it has been deployed	Yes
Security (including lighting)	Details of infrastructure present	Yes
Bus stop post and flag	Details of infrastructure present	Yes (flag attached to shelter)
Surface markings for buses	Details of infrastructure present	Yes, 'Bus Stop' in carriageway.
Bus passenger shelter and seating	Shelters should be provided where there is space	Yes, two bus shelters provided.

Utilities access	i.e. presence of covers / boxes in the boarding / alighting zones	n/a
Information (including timetables and maps)	Details of infrastructure present	Yes
Drainage	Potential for 'ponding' of water in the waiting area	No visible issues regarding drainage
Pedestrian footway	Use of kerb space should be minimised. Street furniture which prevents passengers boarding / alighting should be removed.	No issues.
Height and type of kerb	The minimum height for an accessible stop is 100mm. The maximum recommended height is 150mm	Within range.
Adequacy of waiting area	General observations	Overall very good.
Space for bus to straighten	Allow the bus to line up within 200mm of and parallel with the kerb	Yes
Approach and exit paths for buses	Driver and waiting passengers should be clearly visible to each other	Yes
Connectivity with footway	Adequate footway width should be available	Yes
Convenience for passengers	Stops should be close local facilities, key junctions, interchanges and crossing	Yes, well positioned

3.5.18. Overall, the bus stop is considered **very good**.

Queensmere centre (stop P)

3.5.19. This stop serves route 81 and is located on the one-way eastbound section of High Street, east of the junction with William Street.

Figure 3-14 – Queensmere Centre Stop P on High Street

3.5.20. **Table 3-7** provides the audit results.

Table 3-7 – Audit Results for Queensmere Centre Stop P

Criteria	Definition / Description	Comments
Location / Reference Number and services which use stop	Details of the bus stop being audited	Stop P is located on the High Street, east of the junction with William Street.
Road markings	Road markings for enforcement of no-stopping restrictions.	A clearway and a bus cage are shown in the carriageway.
Kerb > 100mm	Allows bus to deploy ramp	Yes
Access free of impediments	A visual check to confirm that ramp users would have sufficient space to get on / off the bus ramp, once it has been deployed	Yes
Security (including lighting)	Details of infrastructure present	Yes
Bus stop post and flag	Details of infrastructure present	Yes (and flag post and a flag attached to a shelter)
Surface markings for buses	Details of infrastructure present	Yes, ‘Bus Stop’ in carriageway.

Bus passenger shelter and seating	Shelters should be provided where there is space	Yes, two bus shelters provided, with seating.
Utilities access	i.e. presence of covers / boxes in the boarding / alighting zones	n/a
Information (including timetables and maps)	Details of infrastructure present	Yes
Drainage	Potential for 'ponding' of water in the waiting area	No visible issues regarding drainage
Pedestrian footway	Use of kerb space should be minimised. Street furniture which prevents passengers boarding / alighting should be removed.	No issues.
Height and type of kerb	The minimum height for an accessible stop is 100mm. The maximum recommended height is 150mm	Within range.
Adequacy of waiting area	General observations	Overall very good.
Space for bus to straighten	Allow the bus to line up within 200mm of and parallel with the kerb	Yes
Approach and exit paths for buses	Driver and waiting passengers should be clearly visible to each other	Yes
Connectivity with footway	Adequate footway width should be available	Yes
Convenience for passengers	Stops should be close local facilities, key junctions, interchanges and crossing	Yes, well positioned

3.5.21. Overall, the bus stop is considered **very good.**

Wellington Street (stop A)

3.5.22. This bus stop serves route 7 and is located on the eastbound lane of the A4 Wellington Street, east of the junction with William Street.

Figure 3-15 – Wellington Street Stop A on A4 Wellington Street

3.5.23. **Table 3-8** provides the audit results.

Table 3-8 – Audit Results for Wellington Street Stop A

Criteria	Definition / Description	Comments
Location / Reference Number and services which use stop	Details of the bus stop being audited	Stop A is located on Wellington Street, east of the junction with William Street.
Road markings	Road markings for enforcement of no-stopping restrictions.	A clearway and a bus cage are shown in the carriageway.
Kerb > 100mm	Allows bus to deploy ramp	Yes
Access free of impediments	A visual check to confirm that ramp users would have sufficient space to get on / off the bus ramp, once it has been deployed	Yes
Security (including lighting)	Details of infrastructure present	Yes
Bus stop post and flag	Details of infrastructure present	Yes (flag attached to a shelter)
Surface markings for buses	Details of infrastructure present	Yes, 'Bus Stop' in carriageway.
Bus passenger shelter and seating	Shelters should be provided where there is space	Yes, bus shelter provided, with seating.

Utilities access	i.e. presence of covers / boxes in the boarding / alighting zones	n/a
Information (including timetables and maps)	Details of infrastructure present	Yes, plus real time information
Drainage	Potential for 'ponding' of water in the waiting area	No visible issues regarding drainage
Pedestrian footway	Use of kerb space should be minimised. Street furniture which prevents passengers boarding / alighting should be removed.	No issues.
Height and type of kerb	The minimum height for an accessible stop is 100mm. The maximum recommended height is 150mm	Within range.
Adequacy of waiting area	General observations	Overall very good.
Space for bus to straighten	Allow the bus to line up within 200mm of and parallel with the kerb	Yes
Approach and exit paths for buses	Driver and waiting passengers should be clearly visible to each other	Yes. Exit taper is short but adequate.
Connectivity with footway	Adequate footway width should be available	Yes
Convenience for passengers	Stops should be close local facilities, key junctions, interchanges and crossing	Yes, well positioned

3.5.24. Overall, the bus stop is considered **very good**.

Wellington Street (stop B)

3.5.25. This bus stop serves route 4 and is located on the eastbound lane of the A4 Wellington Street, east of the junction with William Street.

Figure 3-16 – Wellington Street Stop B on A4 Wellington Street

3.5.26. **Table 3-9** provides the audit results.

Table 3-9 – Audit Results for Wellington Street Stop B

Criteria	Definition / Description	Comments
Location / Reference Number and services which use stop	Details of the bus stop being audited	Stop B is located on Wellington Street, east of the junction with William Street.
Road markings	Road markings for enforcement of no-stopping restrictions.	A clearway and a bus cage are shown in the carriageway.
Kerb > 100mm	Allows bus to deploy ramp	Yes
Access free of impediments	A visual check to confirm that ramp users would have sufficient space to get on / off the bus ramp, once it has been deployed	Yes
Security (including lighting)	Details of infrastructure present	Yes
Bus stop post and flag	Details of infrastructure present	Yes (flag attached to a shelter)
Surface markings for buses	Details of infrastructure present	Yes, 'Bus Stop' in carriageway.

Bus passenger shelter and seating	Shelters should be provided where there is space	Yes, bus shelter provided, with seating.
Utilities access	i.e. presence of covers / boxes in the boarding / alighting zones	n/a
Information (including timetables and maps)	Details of infrastructure present	Yes, plus real time information
Drainage	Potential for 'ponding' of water in the waiting area	No visible issues regarding drainage
Pedestrian footway	Use of kerb space should be minimised. Street furniture which prevents passengers boarding / alighting should be removed.	No issues.
Height and type of kerb	The minimum height for an accessible stop is 100mm. The maximum recommended height is 150mm	Within range.
Adequacy of waiting area	General observations	Overall very good.
Space for bus to straighten	Allow the bus to line up within 200mm of and parallel with the kerb	Yes
Approach and exit paths for buses	Driver and waiting passengers should be clearly visible to each other	Yes.
Connectivity with footway	Adequate footway width should be available	Yes
Convenience for passengers	Stops should be close local facilities, key junctions, interchanges and crossing	Yes, well positioned

3.5.27. Overall, the bus stop is considered **very good**.

Wellington Street (stop C)

3.5.28. This bus stop serves route 83, 702 and 703, and is located on the eastbound lane of the A4 Wellington Street, east of the junction with William Street.

Figure 3-17 – Wellington Street Stop C on A4 Wellington Street

3.5.29. **Table 3-10** provides the audit results.

Table 3-10 – Audit Results for Wellington Street Stop C

Criteria	Definition / Description	Comments
Location / Reference Number and services which use stop	Details of the bus stop being audited	Stop C is located on Wellington Street, east of the junction with William Street.
Road markings	Road markings for enforcement of no-stopping restrictions.	A clearway and a bus cage are shown in the carriageway.
Kerb > 100mm	Allows bus to deploy ramp	Yes
Access free of impediments	A visual check to confirm that ramp users would have sufficient space to get on / off the bus ramp, once it has been deployed	Yes
Security (including lighting)	Details of infrastructure present	Yes
Bus stop post and flag	Details of infrastructure present	Yes (flag attached to a shelter)
Surface markings for buses	Details of infrastructure present	Yes, 'Bus Stop' in carriageway.
Bus passenger shelter and seating	Shelters should be provided where there is space	Yes, bus shelter provided, with seating.

Utilities access	i.e. presence of covers / boxes in the boarding / alighting zones	n/a
Information (including timetables and maps)	Details of infrastructure present	Yes, plus real time information
Drainage	Potential for 'ponding' of water in the waiting area	No visible issues regarding drainage
Pedestrian footway	Use of kerb space should be minimised. Street furniture which prevents passengers boarding / alighting should be removed.	No issues.
Height and type of kerb	The minimum height for an accessible stop is 100mm. The maximum recommended height is 150mm	Within range.
Adequacy of waiting area	General observations	Overall very good.
Space for bus to straighten	Allow the bus to line up within 200mm of and parallel with the kerb	Yes
Approach and exit paths for buses	Driver and waiting passengers should be clearly visible to each other	Yes.
Connectivity with footway	Adequate footway width should be available	Yes
Convenience for passengers	Stops should be close local facilities, key junctions, interchanges and crossing	Yes, well positioned

3.5.30. Overall, the bus stop is considered **very good**.

Landmark Place (stop S) – southbound 2, 6, 8, 8A, 15, 63, 68, 702, 703

3.5.31. This stop serves routes 2, 6, 8, 8A, 15, 63, 68, 702 and 703, and is located on the southbound lane of Windsor Road, south of the junction with High Street.

Figure 3-18 – Landmark Place Stop S on Windsor Road

3.5.32. **Table 3-11** provides the audit results.

Table 3-11 – Audit Results for Landmark Place Stop S

Criteria	Definition / Description	Comments
Location / Reference Number and services which use stop	Details of the bus stop being audited	Stop S is located on Windsor Road, south of the junction with High Street.
Road markings	Road markings for enforcement of no-stopping restrictions.	A clearway and a bus cage are shown in the carriageway.
Kerb > 100mm	Allows bus to deploy ramp	Yes
Access free of impediments	A visual check to confirm that ramp users would have sufficient space to get on / off the bus ramp, once it has been deployed	Yes
Security (including lighting)	Details of infrastructure present	Yes
Bus stop post and flag	Details of infrastructure present	Yes (flag attached to a shelter)
Surface markings for buses	Details of infrastructure present	Yes, 'Bus Stop' in carriageway.

Bus passenger shelter and seating	Shelters should be provided where there is space	Yes, bus shelter provided, with seating.
Utilities access	i.e. presence of covers / boxes in the boarding / alighting zones	n/a
Information (including timetables and maps)	Details of infrastructure present	Yes
Drainage	Potential for 'ponding' of water in the waiting area	No visible issues regarding drainage
Pedestrian footway	Use of kerb space should be minimised. Street furniture which prevents passengers boarding / alighting should be removed.	No issues.
Height and type of kerb	The minimum height for an accessible stop is 100mm. The maximum recommended height is 150mm	Within range.
Adequacy of waiting area	General observations	Overall very good.
Space for bus to straighten	Allow the bus to line up within 200mm of and parallel with the kerb	Yes
Approach and exit paths for buses	Driver and waiting passengers should be clearly visible to each other	Yes.
Connectivity with footway	Adequate footway width should be available	Yes
Convenience for passengers	Stops should be close local facilities, key junctions, interchanges and crossing	Yes, well positioned

3.5.33. Overall, the bus stop can be categorised as **very good**.

Landmark Place (stop V) – northbound 6, 8, 8A, 63, 68 702, 703

3.5.34. This stop serves routes 6, 8, 8A, 63, 68, 702 and 703, and is located on the northbound lane of Windsor Road, south of the junction with High Street.

Figure 3-19 – Landmark Place Stop V on Windsor Road

3.5.35. **Table 3-12** provides the audit results.

Table 3-12 – Audit Results for Landmark Place Stop V

Criteria	Definition / Description	Comments
Location / Reference Number and services which use stop	Details of the bus stop being audited	Stop V is located on Windsor Road, south of the junction with High Street.
Road markings	Road markings for enforcement of no-stopping restrictions.	A clearway and a bus cage are shown in the carriageway.
Kerb > 100mm	Allows bus to deploy ramp	Yes
Access free of impediments	A visual check to confirm that ramp users would have sufficient space to get on / off the bus ramp, once it has been deployed	Yes
Security (including lighting)	Details of infrastructure present	Yes
Bus stop post and flag	Details of infrastructure present	Yes (flag attached to a shelter)
Surface markings for buses	Details of infrastructure present	Yes, 'Bus Stop' in carriageway.
Bus passenger shelter and seating	Shelters should be provided where there is space	Yes, bus shelter provided, with seating.
Utilities access	i.e. presence of covers / boxes in the boarding / alighting zones	n/a

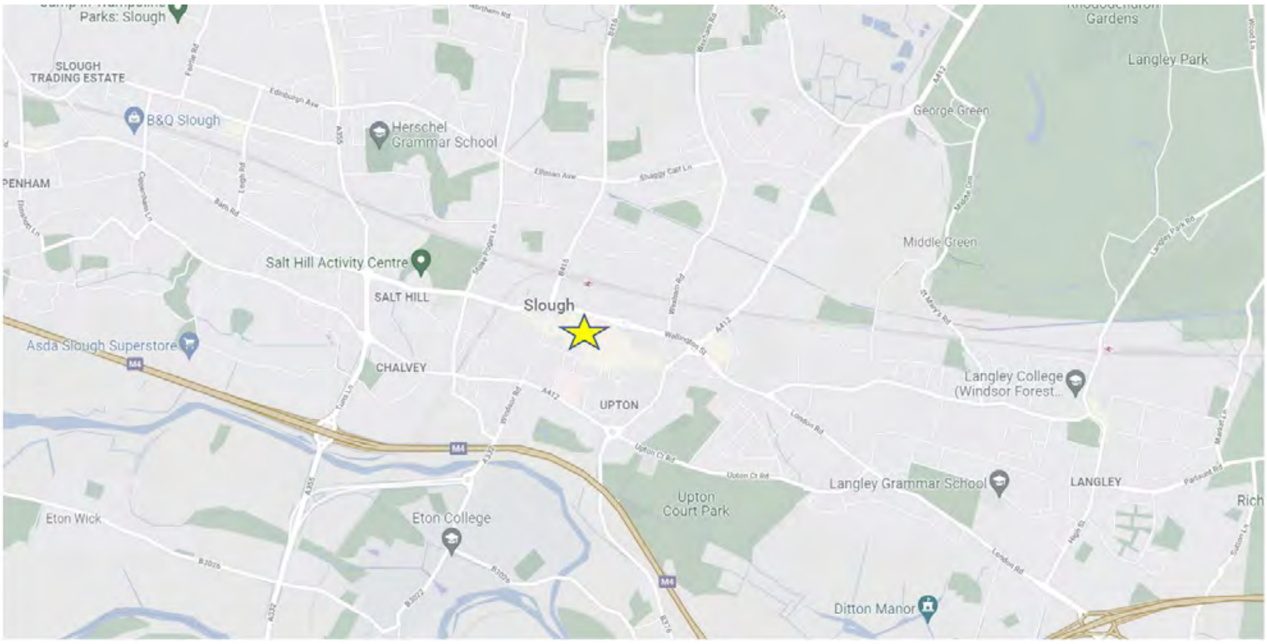
Information (including timetables and maps)	Details of infrastructure present	Yes
Drainage	Potential for 'ponding' of water in the waiting area	No visible issues regarding drainage
Pedestrian footway	Use of kerb space should be minimised. Street furniture which prevents passengers boarding / alighting should be removed.	No issues.
Height and type of kerb	The minimum height for an accessible stop is 100mm. The maximum recommended height is 150mm	Within range.
Adequacy of waiting area	General observations	Overall very good.
Space for bus to straighten	Allow the bus to line up within 200mm of and parallel with the kerb	Yes
Approach and exit paths for buses	Driver and waiting passengers should be clearly visible to each other	Yes.
Connectivity with footway	Adequate footway width should be available	Yes
Convenience for passengers	Stops should be close local facilities, key junctions, interchanges and crossing	Yes, well positioned

3.5.36. Overall, the bus stop is considered **very good**.

3.6 LOCAL AND STRATEGIC HIGHWAY NETWORK

3.6.1. The Site is well connected to the strategic road network, with local links and junctions providing connections towards major regional and national routes. An overview of the highway network is provided in **Figure 3-20**.

Figure 3-20 – Highway Network



3.6.2. The A4 Wellington Street bounds the Site to the north and extends to the east towards Langley and connects with the M4 at Junction 5, and to the west, the route extends through other areas in Slough such as Salt Hill, Slough Trading Estate and Cippenham and then continues towards Maidenhead.

3.6.3. The A4 connects with a number of routes along its length which facilitate connection to the wider strategic network. These include the A412, the A332, the B416, and the B3026 which provide north-south connections through Slough. Additionally, the A4 connects with the A355 Tuns Lane to the west of the Site which links with the M4 at Junction 6.

3.6.4. The High Street bounds the Site to the south. At its western end, the High Street provides a 'bus gate' which prohibits access for general traffic and only permits access to buses, taxis motorcycles and cycles. This is enforced with the presence of retractable bollards. This is illustrated in **Figure 3-21**. To note, this section of the High Street is one-way eastbound only for vehicles.

Figure 3-21 – Bus gate on the High Street

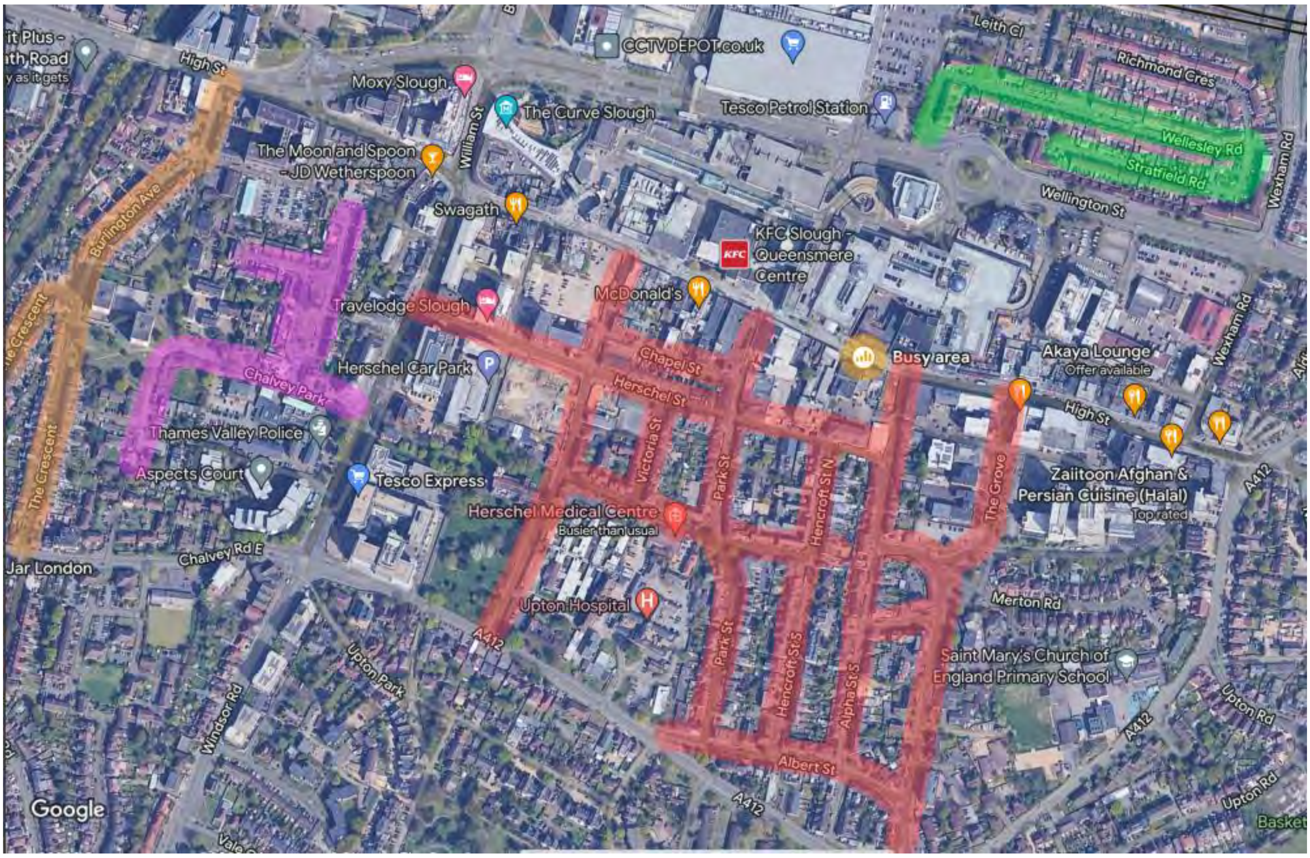
3.6.5. The remaining sections of the High Street are largely made up of double yellow lines with double kerbside blips indicating no loading at any time. There are some facilities for blue badge holders, taxi ranks and loading vehicles.

3.7 LOCAL PARKING CONDITIONS

3.7.1. **Figure 3-22** below illustrates the roads within the vicinity of the Site which are within a Controlled Parking Zone.

- Purple – CPZ A
- Red – CPZ B
- Orange – CPZ L
- Green – CPZ M

Figure 3-22 – Local CPZs



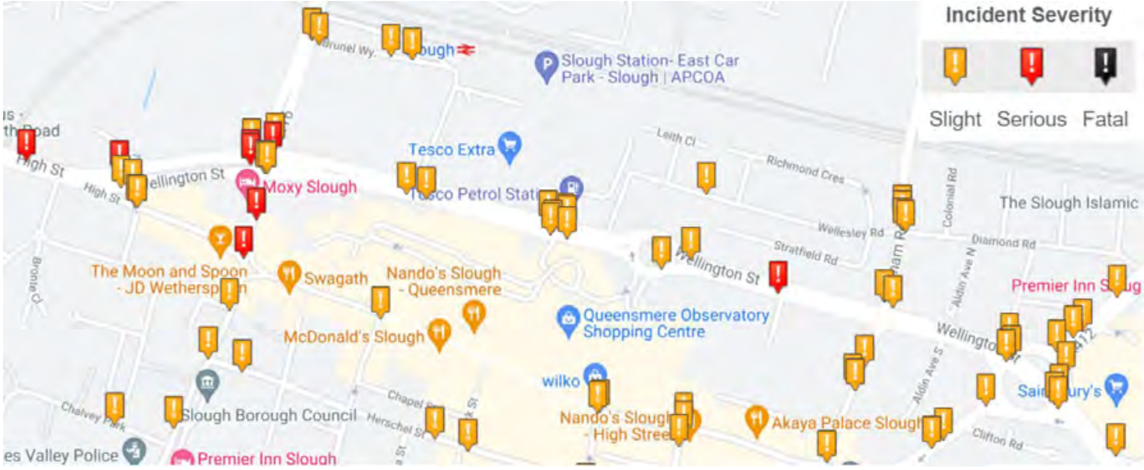
3.7.2. In these areas only residents are allowed to park at any time or parking is for residents between 9am – 5pm. There are a few P&D bays but these are for 1hr only with the aim to dissuade commuters / shoppers from parking in these areas.

3.8 PERSONAL INJURY ACCIDENT DATA

3.8.1. Road traffic collision data for the area in the vicinity of the Site has been obtained from Crashmap which provides an account of all incidents in the most recent three-year period.

3.8.2. The data recorded a total of 67 collisions over the three-year period, of which eight were classified as serious collisions and the remaining as slight in severity. None of the collisions resulted in fatal injuries. The collisions are illustrated below and their details are provided in **Appendix B**.

Figure 3-23 – Collisions in the local area



3.8.3. The collision 'hotspots' in the local area are expected to be the junction between the A4, the High Street and William Street and the junction between the A4 and the A12. These experienced 13 and 11 accidents over the three-year period, respectively. This represents an average of 3-4 collisions per year at the two junctions which is considered to be low.

3.8.4. Overall, the assessment of the collision data indicates that the collision 'hotspots' will experience a low number of accidents over a typical year. Additionally, there were no fatal collisions recorded over the three-year period which indicates that the Site and local area do not present causes for concern from a safety perspective.

4 EXISTING SITE

4.1 INTRODUCTION

4.1.1. This chapter summarises the existing Site including access arrangements, parking provision and service vehicle access arrangements.

4.2 EXISTING USES

4.2.1. The QM Site is located within Slough town centre and comprises a number of buildings within the red line boundary, including:

- The Queensmere Shopping Centre (with associated multi-storey car park)
- Wellington House and Duke House
- 141 High Street
- 143 High Street
- 145 High Street
- 165 High Street

4.2.2. The Site extends to approximately 4.82 ha and through the mix of buildings currently on the Site, it provides a range of retail, residential, leisure and office facilities.

4.2.3. The Site is bound by the A4 Wellington Street to the north; by High Street to the south; and by the Curve Slough cultural centre and St Ethelbert's Church to the west.

4.2.4. The Site comprises retail outlets, restaurants, cinema, gym, office use, and residential units. The OBS to the east and accommodates similar uses.

4.2.5. **Table 4-1** outlines the land use and quantum of development on the existing Site.

Table 4-1 – Existing Land Use and Quantum of Existing Development on Site

Land Use	GEA (sqm)	GEA (sqft)
Retail (E)	47,783	514,331
Office (E)	6,458	69,513
Residential (C3)	2,124 (28 Units)	22,863 (28 Units)
Cinema (Sui Generis)	6,870	73,948
Pub/ Bar/ Hot food take away (Sui Generis)	2,797	30,107
Total	**66,032**	**710,762**

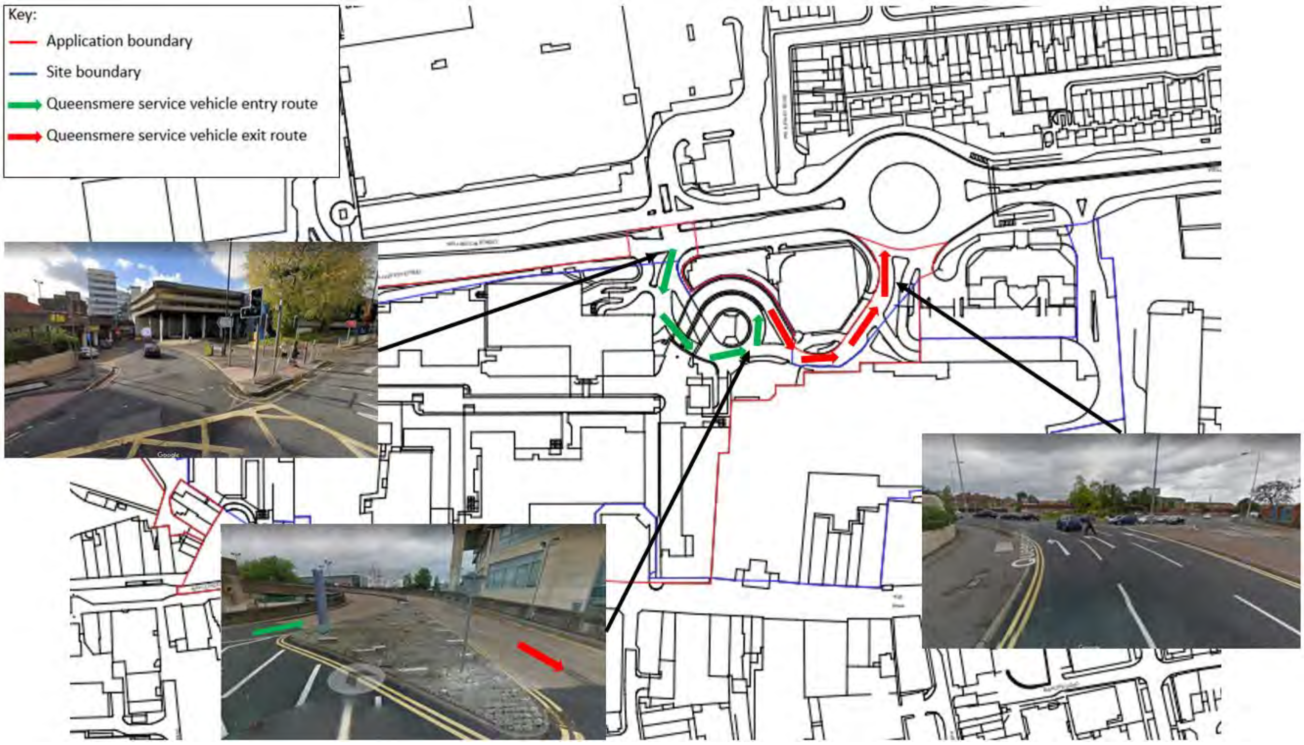
4.3 VEHICULAR ACCESS AND SERVICING ARRANGEMENTS

4.3.1. The Site has two existing vehicle accesses, all via the A4 Wellington Street: the roundabout known locally as the HTC roundabout, which provides access to the OBS car park; and a left-in, left out access to the Queensmere shopping centre car park.

4.3.2. These two accesses are linked by Queensmere Road. Queensmere Road is currently one-way southbound, with the road looping through the Site, past the south edge of the HTC building, to form the south arm of the HTC roundabout junction. Queensmere Road currently provides three exit lanes from the Site and an entry lane to the OBS car park at the junction with the HTC roundabout.

4.3.3. The service vehicles currently enter the Site via the signal junction between the A4 Wellington Street and Queensmere Road. The main service yard is on the roof of the Queensmere Shopping Centre, which is accessed via ramps on Queensmere Road. The service vehicles exit the Site onto Queensmere Road, via the HTC roundabout. The route for service vehicles, via Queensmere Road, is shown in **Figure 4-1**.

Figure 4-1 - Existing Servicing Arrangement



4.4 PARKING

4.4.1. The Site currently provides a total of 575 car parking spaces within its multi-storey car park. Not all of these spaces are in public use. There are also 830 car parking spaces provided within the OBS, to the east of the Site.

4.4.2. There are a number of nearby public car parks in Slough town centre which are operated by SBC and also presumably used by visitors to the current uses on the Site. These are summarised below:

- Buckingham Gardens car park - 47 standard spaces, 6 disabled spaces, 5 motorcycle spaces;
- Herschel car park - 448 standard spaces, 8 disabled spaces, 2 motorcycle spaces;
- The Grove car park - 40 standard spaces, 3 disabled spaces, 2 motorcycle spaces; and
- Hatfield car park - 571 standard spaces, 10 disabled spaces, 1 motorcycle spaces.

5 DEVELOPMENT PROPOSALS

5.1 INTRODUCTION

5.1.1. This chapter summarises the Development Proposals. The Development is defined by those documents submitted to SBC for approval, namely: the Parameter Plans including Site Location Plan and Ownership Boundary (PP01), Red Line Plan showing DZ Boundaries (PP02), Building Demolition Plan (PP03), Site Wide Schedule of Floorspace (PA2), Design Code (mandatory elements only), Development Specification Document (DSD) and Sitewide Plans submitted for approval. Together with the description of flexibility sought within the QM OPA as set out in this section and the DSD, these form the basis of the QM OPA.

5.1.2. The QM OPA is submitted with all matters reserved. The DSD sets out an overview of what those matters are and what information is submitted for approval as part of the QM OPA, and what matters will be detailed at the RMA stage.

5.1.3. In respect of Access, the QM OPA does seek approval for the points of access to/from the highway network into the Site, but that the detailed access arrangements together with the location and configuration of internal vehicular circulation reserved for determination at a reserved matter stage.

5.2 DEVELOPMENT PROPOSALS

5.2.1. As previously stated, the QM OPA is comprised of a series of individual Development Zones, each of which is subject to maximum parameters identified on associated Parameter Plans. For each Development Zone, Parameter Plans set Maximum Building Heights, together with a Maximum Building Footprint. This creates a maximum envelope for each Development Zone within which a building or buildings could be delivered (“Development Block(s)”).

5.2.2. A Schedule of Floorspace (**PA2**) sets out a Site wide maximum limit for each of the land uses proposed in the QM OPA provided in **ES Volume 2: Figures**. In addition to this Site wide maximum floorspace limit, the Development Specification Document (“DSD”) provides a range (minimum and maximum limits) for the different land uses that might be delivered in each Development Zone.

5.2.3. DZ1&2 are shown on a combined Parameter Plan, with a combined floorspace allowance in the DSD, and is likely to contain four individual Development Blocks. All other Development Zones provide for one or possibly multiple Development Blocks. Where an individual Development Zone contains more than one Development Block the maximum floorspace limits in this DSD relate to the Development Zone as a whole, rather than an individual Development Block and so could be drawn down across those Development Blocks.

5.2.4. The maximum parameters of all of the Development Zones, and the maximum amounts of floorspace set out for each Development Zone in the DSD could not all be built out in full due to the Site wide limitation of floor area in PA2, for which approval is sought. The QM OPA therefore seeks flexibility to draw from the Site wide Schedule of Floorspace (PA2) to provide a range of land uses across the different Development Zones, such that the location and type of certain land uses to be delivered across the different Development Zones remains flexible at the outline application stage.

5.2.5. The precise quantum of each land use to be delivered per Development Zone will be secured at Reserved Matters Application stage on a phased/Development Zone basis and will need to be in accordance with the PA2 schedule and Development Zone floorspace schedules in the DSD.

5.2.6. In addition, to the Parameter Plans, PA2 and the DSD, a series of key design principles are set out as Mandatory Rules for approval in the Design Codes. Together the Parameter Plans, PA2, DSD and Mandatory Rules within the Design Codes provide a framework that informs and controls all future reserved matters applications for each Development Zone.

5.2.7. These parameters, the PA2 Site wide schedule of floorspace and the proposed flexibility as set out in this chapter establish the principles of the Development Proposals and have been considered as part of this TA.

5.2.8. The Site wide schedule of floorspace (PA2) indicates the ranges of floorspace for the various land uses. The QM OPA seeks flexibility as to how these land uses are allocated across the Site and to individual Development Zones. The flexibility sought per land uses is as set out below:

Table 5-1 – Sitewide Floorspace and flexibility sought

Proposed Use	Floorspace Ranges for Approval (PA2)	Description / Explanation of Flexibility
Residential (Use Class C3 / C2)	0 – 140,800 sqm	**Residential Uses** - Residential uses are permitted within Development Blocks in DZ1&2, DZ3, DZ4, DZ5 and DZ6. Flexibility is sought for 0 - 20% of residential units, Sitewide, to be within Use Class C2 if the demand within the town centre exists (0% reflects a scenario within which no Use Class C2 floorspace is delivered). A proportion of affordable housing will be provided by the Development Proposals.
Office (Use Class E(g)(i))	0 – 40,000 sqm	**Office Use -** Flexibility is sought on Development Blocks in DZ1&2 and DZ4, between office and/or residential use of the above ground floors, excluding any mezzanine levels. This flexibility is proposed to be mutually exclusive between residential or office use within each individual Development Blocks in DZ1&2. That means that above ground floor in DZ1&2, excluding any mezzanine level, the land use is proposed to be either office or residential use (save that other uses from the floorspace tables might also be integrated at upper levels with either office or residential). The individual Development Blocks within DZ1&2 can each be considered separately. In DZ4, the use of the above ground floors, excluding any mezzanine level, is not mutually exclusive between office and residential uses. That means Development Blocks in DZ4 can operate independently within a Development Zone as to whether they are in office or residential use or mix on the upper floors, provided they accord with the floorspace ranges for that DZ

Proposed Use	Floorspace Ranges for Approval (PA2)	Description / Explanation of Flexibility
		as set out in the DSD and the overall limit on floorspace as set out in the PA2 schedule. Office entrances may also be provided at ground level.
Use Class E (excluding office) and F excluding primary and secondary schools, indoor or outdoor swimming pool or skating rink)	5,500 – 12,000[1] sqm	**Use Class E (excluding office uses) & F (excluding primary and secondary schools, indoor or outdoor swimming pool or skating rink)** – Flexibility is proposed for a range of floorspace within Use Class E (excluding the office floorspace which is set out separately) and F (excluding primary and secondary schools, indoor or outdoor swimming pool or skating rink) between a minimum and maximum range. The location for these uses is not being fixed in the QM OPA, as the application allows for a range to be provided within each Development Zone; but fixed within a site wide overall maximum floorspace restriction in PA2. Whilst it is anticipated that these uses will be spread across the different Development Zones, the QM OPA allows for flexibility in their location. It should be noted that Use Class E (excluding office uses) and F (excluding primary and secondary schools, indoor or outdoor swimming pool or skating rink) are included within the definition of Town Centre Uses in the DSD, and on the Parameter Plans which set out details of frontages which must exceed 51% (or 75% in some circumstances) of these defined Town Centre Uses. At the RMA stages there may be a situation where Use Class E (excluding office uses) and F excluding primary and secondary schools, indoor or outdoor swimming pool or skating rink) may need to extend to the first floor. In these situations, the RMA will justify the use of the upper floor for the Town Centre Use and ensure that it is consistent with the approved Schedule of Floorspace (PA2) and the approved floorspace ranges for each DZ. Whilst the maximum floorspace cap for Class E & Class F uses is stated as 12,000 sqm (GEA) and the maximum floorspace cap for

[1] Whilst the maximum floorspace cap for Class E & Class F uses is stated as 12,000 sqm (GEA) and the maximum floorspace cap for Sui Generis uses is stated as 3,750 sqm (GEA), we propose to limit the combined maximum floorspace cap across both Class E & F and Sui Generis uses to 12,000 sqm (GEA).

Proposed Use	Floorspace Ranges for Approval (PA2)	Description / Explanation of Flexibility
		Sui Generis uses is stated as 3,750 sqm (GEA), we propose to limit the combined maximum floorspace cap across both Class E & F and Sui Generis uses to 12,000 sqm (GEA).
Live music venue / cinema (Sui Generis)	0 – 1,500[1] sqm	**Sui Generis uses** – The QM OPA recognises that Sui Generis uses fall outside of a Use Class in the Use Classes Order and therefore are individually specified. The QM OPA does not propose to allocate specific locations for the identified Sui Generis uses. Instead, the PA2 schedule sets out the site wide floorspace limit on these uses. The Development Specification Document sets out the floorspace ranges for each Development Zone. In a number of these Development Zones is an allocation for specified Sui Generis Uses. These specified sui generis uses are grouped into two categories each of which is subject to a maximum floorspace limit: • Sui Generis town centre uses (pubs, wine bars and hot food take away); and • Sui Generis (live music venue/ cinema). Between 0 – 1,500 sqm (Sui Generis) of floorspace could come forward as a live music venue or a cinema. Flexibility is sought for either use/or neither use being provided on Site. Flexibility on location is sought across a number of DZ's. If either use does come forward, all the floorspace would come forward in the same DZ. Whilst the maximum floorspace cap for Class E & Class F uses is stated as 12,000 sqm (GEA) and the maximum floorspace cap for Sui Generis uses is stated as 3,750 sqm (GEA), we propose to limit the combined maximum floorspace cap across both Class E & F and Sui Generis uses to 12,000 sqm (GEA).
Pub / Bar / Hot food takeaway (Sui Generis)	0 – 2,250[1]sqm	**Sui Generis uses** – The QM OPA recognises that Sui Generis uses fall outside of a Use Class in the Use Classes Order and therefore are individually specified. The QM OPA does not propose to allocate specific locations for the identified Sui Generis uses. Instead, the PA2 schedule sets out the Site wide floorspace limit on these uses. The Development Specification Document sets out the floorspace ranges for each Development Zone. These include an allocation for specified Sui Generis Uses. These specified sui generis uses are grouped into two categories each of which is subject to a maximum floorspace limit: • Sui Generis town centre uses (pubs, bars and hot food take away); and

Proposed Use	Floorspace Ranges for Approval (PA2)	Description / Explanation of Flexibility
		• Sui Generis (live music venue/ cinema). Between 0 – 2,250 sqm of floorspace could come forward for use as a bar, pub or hot food takeaway. This category of floorspace includes the ability to deliver uses: as a public house, wine bar or drinking establishment, as a drinking establishment with expanded food provision, and as a hot food takeaway for the sale of hot food where consumption of that food is mostly undertaken off premises. Flexibility is sought for the quantum of its provision and the location across a number of DZs. Whilst the maximum floorspace cap for Class E & Class F uses is stated as 12,000 sqm (GEA) and the maximum floorspace cap for Sui Generis uses is stated as 3,750 sqm (GEA), we propose to limit the combined maximum floorspace cap across both Class E & F and Sui Generis uses to 12,000 sqm (GEA)..
Car parking	685 spaces	**Car Parking** – Flexibility is sought as to the location of residential and office car parking site wide. DZ3, 4, 5 and 6 include an option for residential car parking requirements to be accommodated on site, either as level(s) of sandwich parking or basement parking or a mix of the two. Car parking for DZ1&2 could be incorporated within the allowance set out for DZ3 or DZ4 depending on which Development Zones comprise the first phase of development. Flexibility is also sought for residential car parking to be provided as a MSCP on DZ6. Should the flexible option of office use be progressed on DZ4, its car parking will be provided in a MSCP on DZ6.
Basement/ ancillary space	0 – 24,355 sqm	**Basement Areas** – Flexibility is also sought in the QM OPA on the potential to provide basement areas *(as set out in PP(C) for the relevant Development Zones)*, with the potential to include car parking, cycle parking, plant, and supporting infrastructure within these spaces. For DZ3, 4, 5 and 6 the QM OPA applies for up to 100% of the maximum building footprint coverage to be a below ground basement. For Development Block DZ1 flexibility is sought for up to 20% of the maximum building footprint be a below ground basement. For Development Blocks DZ2a, DZ2b and DZ2c flexibility is sought for up to 50% of the maximum building footprint be a below ground basement for each Development Block. The QM OPA confirms that the basement would be no more than 5m below the indicative finished floor level.

5.3 CONSIDERATION OF SCENARIOS

Flexibility between Office and Residential Uses

5.3.1. As shown in **Table 5-1** above, flexibility is being sought between the provision of residential and office accommodation across the Development. As a result, two scenarios have been defined as detailed in **Table 5-2** and Table 5-3:

- Maximum Residential; and
- Maximum Office

Table 5-2: Maximum Residential

Land use	Floorspace
Residential	1,600 units
Office	0 sqm
Use Class E (excluding office uses), F (excluding primary and secondary schools, indoor or outdoor swimming pool or skating rink), Sui Generis (Pubs, Bars, Hot Food Take Away) and Sui Generis Leisure (Live Music/Cinema)	12,000[2] sqm of which 1,500sqm is Sui Generis Leisure (Live Music/Cinema) and 2,250sm is Sui Generis (Pubs, Bars, Hot Food Take Away)

Table 5-3: Maximum Office

Land use	Floorspace
Residential	950 units
Office	40,000 sqm
Use Class E (excluding office uses), F (excluding primary and secondary schools, indoor or outdoor swimming pool or skating rink), Sui Generis (Pubs, Bars, Hot Food Take Away) and Sui Generis Leisure (Live Music/Cinema)	12,000[2] sqm of which 1,500sqm is Sui Generis Leisure (Live Music/Cinema) and 2,250sm is Sui Generis (Pubs, Bars, Hot Food Take Away)

5.3.2. On the basis of trip generation rates and professional judgement, it has been concluded that the Maximum Office scenario, as set out above, would result in the worst case position in terms of transport impact. However, both the Maximum Office and Maximum Residential scenarios have been assessed with regard to the traffic impact assessments.

5.3.3. In respect of Access, the QM OPA does seek approval for the points of access to/from the highway network into the Site, but that the detailed access arrangements together with the location and configuration of internal vehicular circulation reserved for determination at a reserved matter stage.

[2] Whilst the maximum floorspace cap for Class E & Class F uses is stated as 12,000 sqm (GEA) and the maximum floorspace cap for Sui Generis uses is stated as 3,750 sqm (GEA), we propose to limit the combined maximum floorspace cap across both Class E & F and Sui Generis uses to 12,000 sqm (GEA).

5.3.4. An Illustrative Scheme has been prepared for the Site. The Illustrative Scheme reflects one example of how the Site could be redeveloped within the parameters of development being applied for as part of the QM OPA. The Illustrative Scheme does not reflect the only solution. As such this Illustrative Scheme is not being fixed and is not submitted for approval.

5.3.5. The Illustrative Scheme provides an indication of the internal vehicle, pedestrian and cycle circulation within the Site boundary. The Illustrative Scheme provides details of potential car parking areas and access points to car parking and service areas. The Illustrative Scheme also provides an indication of potential loading bays.

5.3.6. The Illustrative Scheme has been used to inform the preparation of the Indicative Delivery and Servicing Strategy, which seeks to demonstrate a potential solution for delivery and servicing which would work within the QM OPA Parameter Plans.

5.3.7. This Illustrative Scheme has been used to inform the potential internal vehicle arrangements and street layouts. As previously set out, the detail of these will be agreed at the RMA stages.

5.4 INDICATIVE INTERNAL VEHICLE ACCESS AND STREET LAYOUT

5.4.1. The Site is currently accessed by vehicles via two points on the A4 Wellington Street, the first at the signalised junction with Queensmere Road, and the second at the HTC roundabout junction. The existing signalised junction between the A4 Wellington Street and Queensmere Road is approximately 110m to the west of the HTC roundabout, and provides a left-in / left-out only traffic signal arrangement.

5.4.2. Queensmere Road is currently one-way southbound, with the road looping through the Site, past the south edge of the HTC building, to form the south arm of the HTC roundabout junction. Queensmere Road currently provides three exit lanes from the Site and an entry lane to the OBS car park at the junction with the HTC roundabout.

5.4.3. As previously set out, the QM OPA is an outline application with all matters reserved. In respect of Access, the QM OPA does seek approval for the points of access to/from the highway network into the Site, but that the detailed access arrangements together with the location and configuration of internal vehicular circulation reserved for determination at a reserved matter stage.

5.4.4. The Illustrative Scheme seeks to rearrange the southern arm of HTC roundabout to provide a two-way route for traffic in and out of the Site, whilst preserving the current access arrangements for the OBS car park.

5.4.5. Vehicular access to the Site via the signal junction between the A4 Wellington Street and Queensmere Road will be retained, providing a left-in and left out only arrangement as existing. Additionally, Queensmere Road, which is currently adopted highway, is proposed to will become a two-way route in the Illustrative Scheme.

5.4.6. The indicative new access arrangements from the HTC roundabout and the A4 Wellington Street are shown in **Figure 5-1**.

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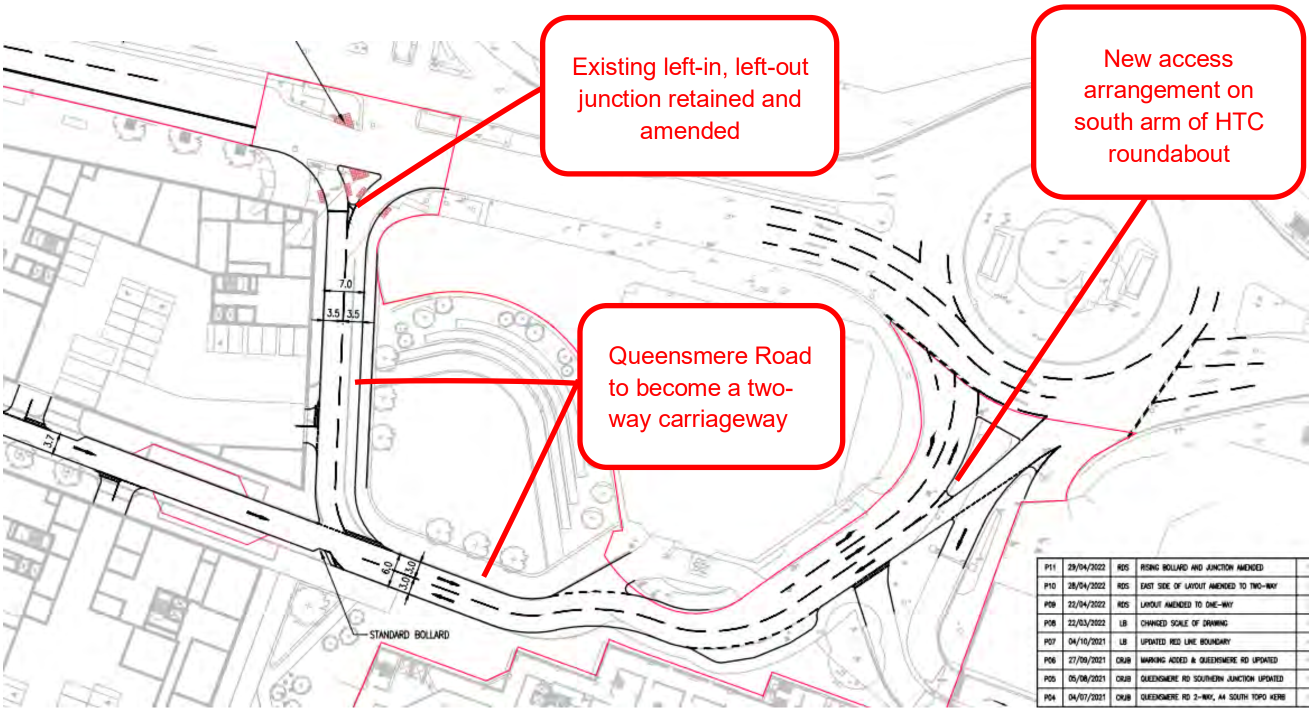
Figure 5-1 - Indicative Proposed Site access arrangements via HTC roundabout and A4 / Queensmere Road junction

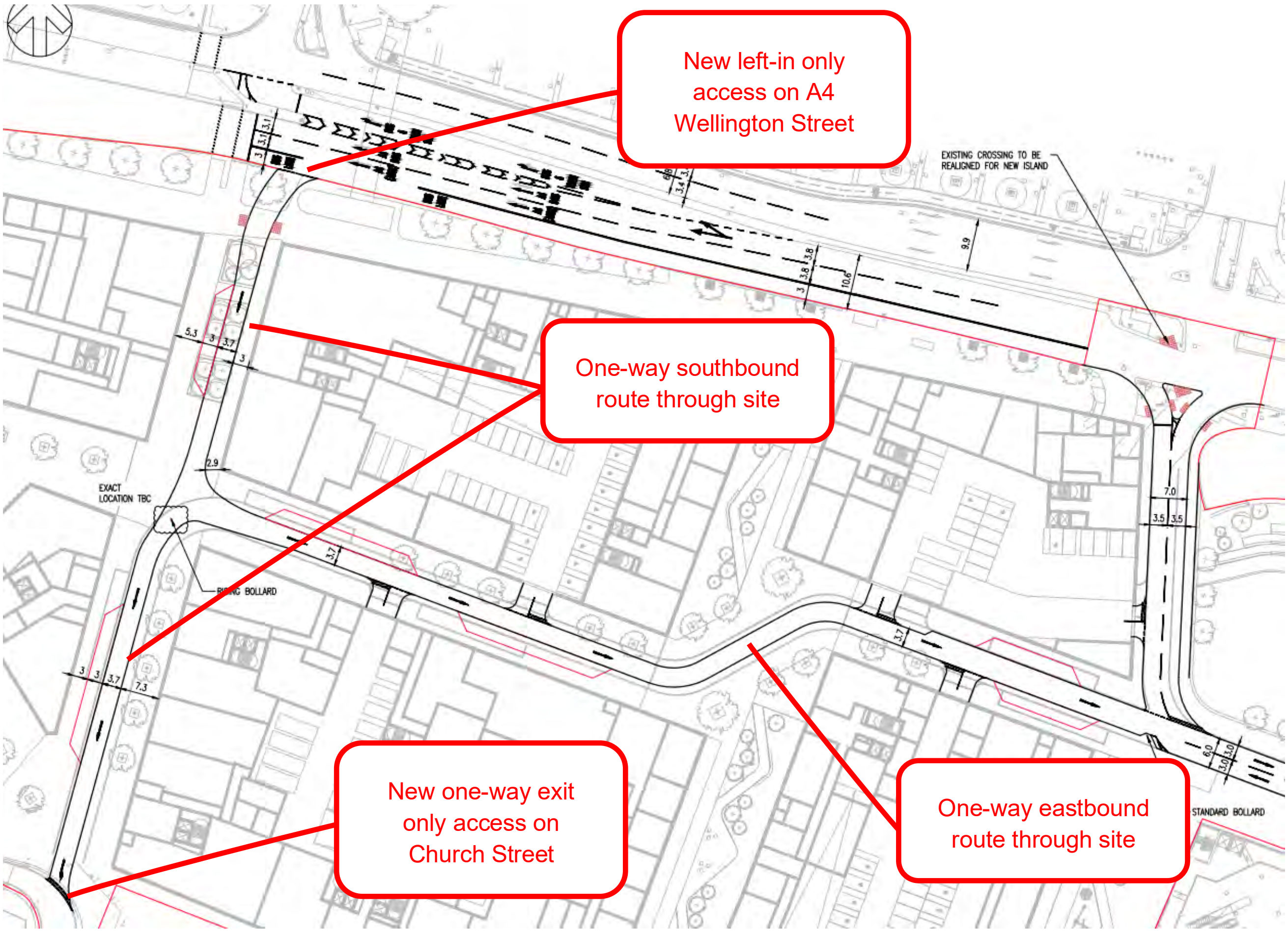


5.4.7. The Illustrative Scheme includes a new entry only vehicle access on the A4 Wellington Street, opposite the junction with Brunel Way. The new entry only access shown in the Illustrative Scheme would be a left-in only junction from the A4 Wellington Street, and would provide a one-way entry route for all vehicles accessing the Site.

5.4.8. The Illustrative Scheme also includes a new vehicle access point at the junction between the High Street and Church Street. The proposed vehicle access will be exit only for all delivery vehicles accessing buildings in DZ2.

5.4.9. The QM OPA seeks approval for the points of access to the highway network shown on the Illustrative Scheme, but the detailed access arrangements, together with the location and configuration of internal vehicular circulation, is reserved for determination at a reserved matter stage. The new vehicle access points shown as part of the Illustrative Scheme are shown in **Figure 5-2**.

Figure 5-2 - New Vehicle Access Points shown in Illustrative Scheme



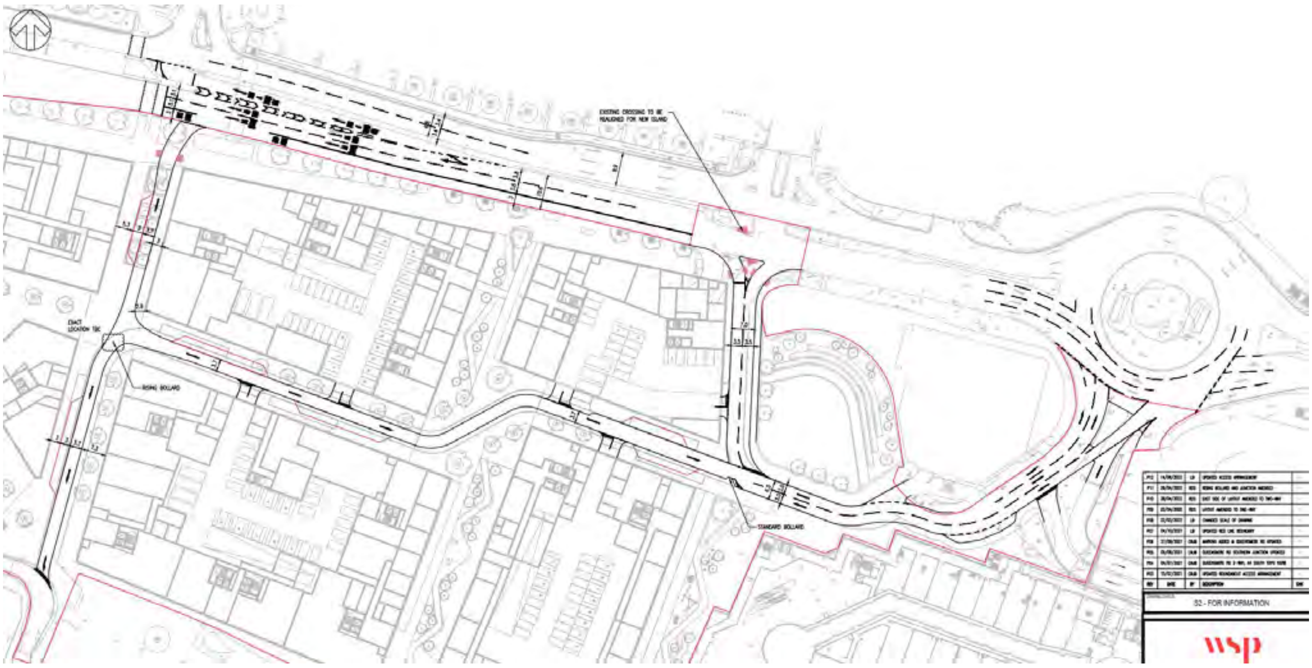
5.4.10. Vehicles accessing DZ1, DZ3, DZ4, DZ5 and DZ6 will enter the Site via the left-in only access on the A4 Wellington Street, driving southbound between DZ1 and DZ4. The vehicles would then turn left around the corner, heading eastwards along the one-way Spine Road (east) to access the DZs ad would exit the Site via the HTC roundabout junction.

5.4.11. Vehicles accessing DZ2a, will enter the Site via the new left-in only access on the A4 Wellington Street, driving southbound between DZ1 and DZ4. If permitted, through the use of a suitable access control arrangement, the vehicles would then continue south along the one-way Spine Road (south) and exit the Site via a new exit only point at the south edge of the Site, at the junction with Church Street and High Street.

5.4.12. The delivery and servicing vehicles accessing DZ2b and 2c would use new loading pad on the north edge of the High Street, west of the junction with Church Street. The new loading pad on the north edge of the High Street is accessed via the junction between William Street and High Street.

5.4.13. **Figure 5-3** shows the proposed one-way eastbound route through the Site.

Figure 5-3 - Proposed road through the Site



5.4.14. The Indicative Delivery and Servicing Strategy sets out that the majority of service and delivery vehicle loading / unloading will take place within the curtilage of each Development Zone. However, the Illustrative Scheme also includes loading pads along the edge of the new one-way eastbound only route for delivery and servicing activity. This is further described in the 'Indicative Delivery and Servicing' section.

5.4.15. The proposals will provide a highly permeable scheme and will enhance connectivity across the Site. Footways will be provided on both sides of the new street, between the HTC roundabout and the High Street access.

5.4.16. The vehicle access points on the A4 Wellington Street will also provide footways on both sides of the carriageway. Additionally, the Illustrative Scheme has been designed to provide landscaped areas with pedestrian routes between each Development Zone. These will provide north-south pedestrian connections between the A4 Wellington Street and High Street. Furthermore, the Illustrative Scheme include a new Town Square at the western end of the Site, between Development Zones 1 and 2, and a new Urban Park to the west of the HTC building.

5.5 CAR PARKING

5.5.1. It has been agreed during pre-application discussions with SBC to apply the following car parking provision:

- Residential - 0.3 car parking spaces per residential unit; and
- Office – 1 car parking space per 100 sqm GEA

5.5.2. The parking ratios listed above would be applied to the proposed residential and office uses. The residential car parking would include a 5% provision for accessible parking, within the total parking provision of 0.3 spaces per unit, for people with reduced mobility. Of the total residential car parking provision, 20% will comprise Electric Vehicle Charging Points (EVCP).

5.5.3. As set out above, flexibility is sought as to the location of residential and office car parking Site wide. DZ3, 4, 5 and 6 include an option for residential car parking requirements to be accommodated on Site, either as sandwich parking or basement parking or a mix of the two. Car parking for DZ1&2 could be incorporated within the allowance set out for DZ3 or DZ4 depending on which Development Zones form the first phase of development. Flexibility is also sought for residential car parking to be provided as a MSCP on DZ6. Should the flexible option of office use be progressed on DZ4, its car parking will be provided in a MSCP on DZ6.

5.6 CYCLE PARKING

5.6.1. A long-stay cycle parking ratio of one space per residential unit has been discussed with SBC at pre-application stage.

5.6.2. The Illustrative Scheme indicates that residential long-stay cycle stores will be provided at ground floor, and for some Development Zones on first floor, in the form of two-tiered cycle racks. Short stay cycle parking for visitors is also proposed.

5.7 DELIVERY AND SERVICING

5.7.1. The Indicative Delivery and Servicing Strategy proposes that each Development Zone is to be serviced individually, with each Development Zone operating as a stand-alone entity from a delivery and servicing perspective.

5.7.2. **Figure 5-4** and **Figure 5-5** shows the indicative delivery and servicing vehicle access strategy for the residential and commercial uses respectively, which is explained further in the following paragraphs.

Figure 5-4 – Indicative Residential Delivery and Servicing Strategy

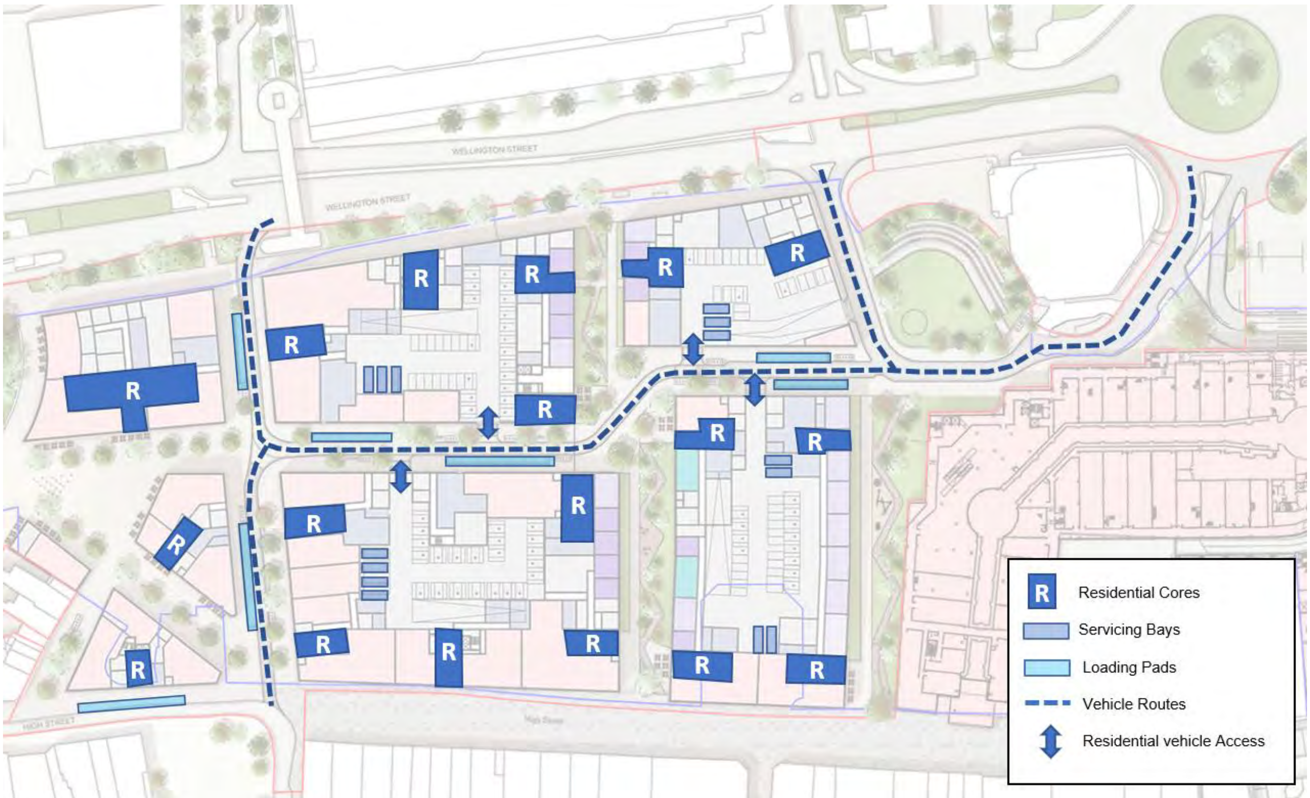
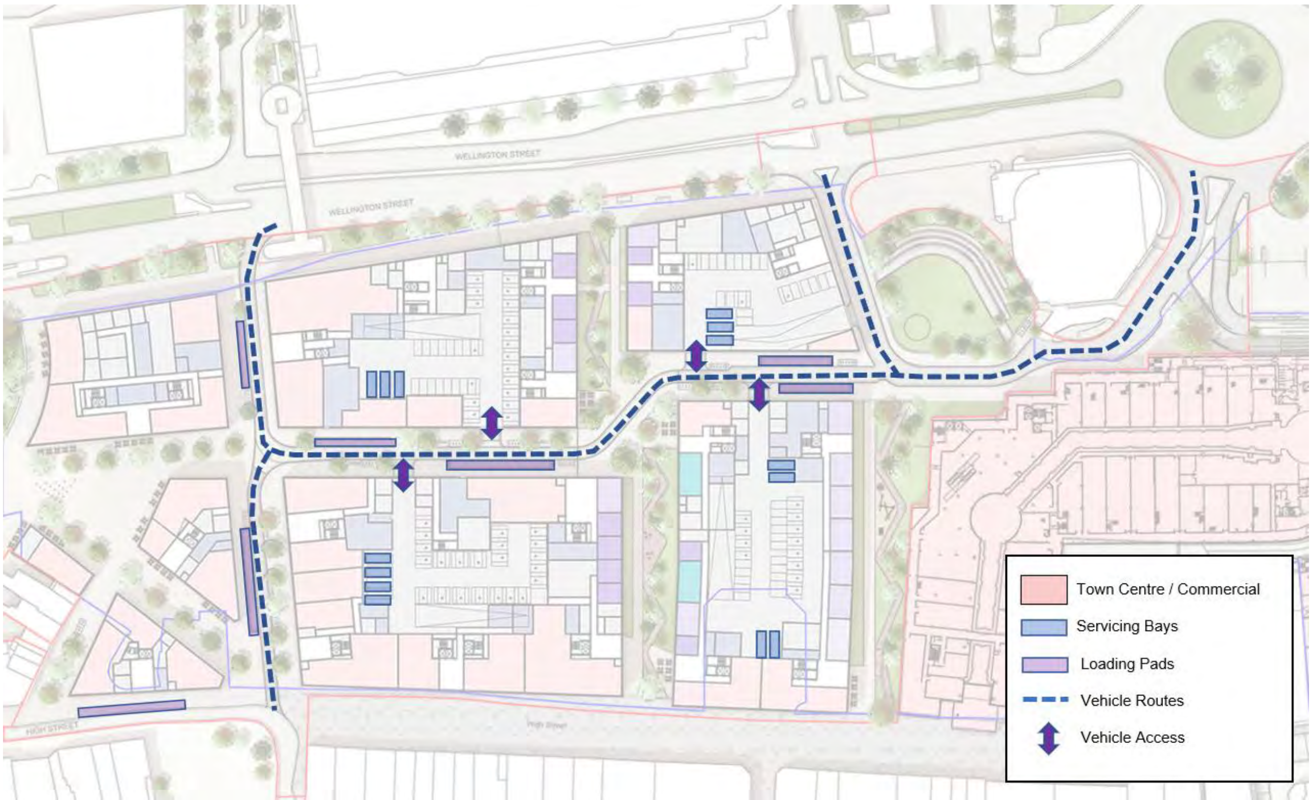


Figure 5-5 – Indicative Commercial Delivery and Servicing Strategy



5.7.3. With the exception of Development Zones 1 & 2 on the west edge of the Site, each Development Zone will provide internal ground floor loading areas for smaller / medium-sized vans (i.e. up to a 7.5T box van) to undertake deliveries to the proposed residential units and commercial uses within the Development Zone.

5.7.4. With regard to larger deliveries i.e. 10m HGVs and waste collection vehicles, which need to access the Development Zones, these will use the proposed loading pads provided on either edge of the one-way carriageway of the new streets through the Site. The loading pads will be used by HGVs and waste collection vehicles accessing both the residential units and the commercial uses. However, the loading pads could also be used by smaller vans accessing the commercial units, where the loading pad would be close to the commercial frontage.

5.7.5. All delivery and servicing vehicles would enter the Site via the new left-in entry only access on the A4 Wellington Street and exit via the HTC roundabout, with the exception of vehicles accessing buildings in Development Zone 2, which would exit via the new exit only and controlled access on to Church Street..

5.7.6. Development Zones 1 & 2 will not have internal car parks, therefore all delivery and servicing for these Development Zones will be on-street via adjacent loading pads. As set out above, vehicles accessing Development Zone 1 will enter the Site via the new left-in entry only access on the A4 Wellington Street and exit via the HTC roundabout. Vehicles accessing Development Zone 2 will enter the Site via the new left-in entry only access on the A4 Wellington Street and exit via the new exit only access on Church Street.

5.7.7. Development Zone 2 includes three Development Blocks, 2a will be accessed via a loading pad on the one-way section of the internal road. Development Block 2b will be accessed via a loading pad on the High Street, therefore vehicles would not enter onto the Site, instead accessing the Development Block 2b loading pad via William Street. Development Block 2c can either be serviced from the loading pad on the High Street or from the loading pad via William Street.

5.7.8. The loading pads on Queensmere Road and the loading bays within each DZ have been tested with swept path analysis. These drawings are provided in **Appendix C**.

5.8 INDICATIVE PROPOSED WORKS TO THE PUBLIC HIGHWAY

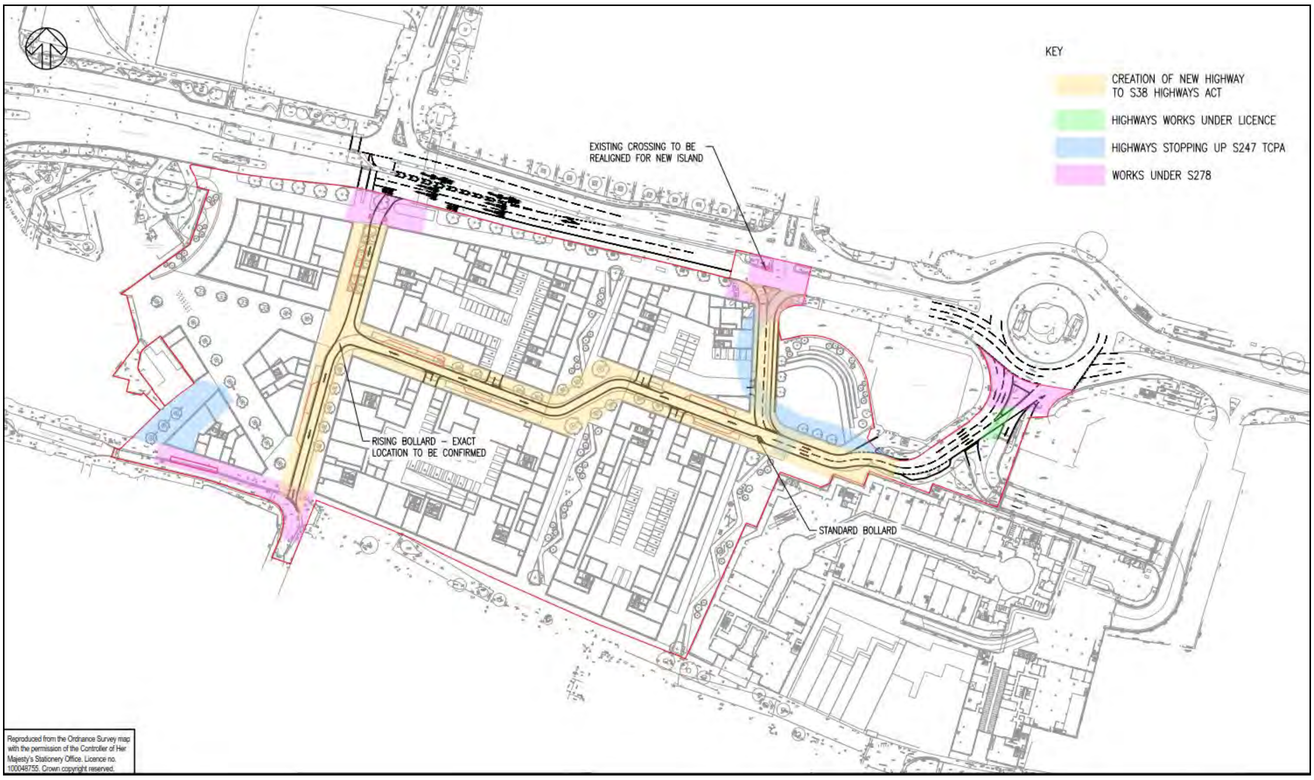
5.8.1. The Development Proposals will require works to the public highway which will include:

- Areas of new public highway
- Street improvement schemes under highway works licence
- Highway stopping up likely under s247 Town and Country Planning Act
- Works under s278
- Changes to TROs

5.8.2. It should be noted that, for this QM OPA, the internal highway layout and the specific design related to the connections with the wider highway network are not presented for approval. The details relating to these will be defined during the Reserved Matters stage or via the S278 process.

5.8.3. **Figure 5-6** shows the areas where the above items would be applicable. Note although Brunel Way does not form part of the current QM outline planning application, it is the intention of SBC that this area is improved for pedestrian accessibility.

Figure 5-6 – Anticipated Works to the Public Highway



5.8.4. The intention would be for the new streets on-Site (the vehicle routes) to be adopted as public highway, the areas shaded in yellow in **Figure 5-6**. This includes the new one-way eastbound only street which would run between new entry only access on the A4 Wellington Street and Queensmere Road, and the new one-way exit only route and access at the junction with High Street and Church Street. In addition, the re-aligned Queensmere Road, between the signalised junction with the A4 Wellington Street, and the new street, will also be adopted.

5.8.5. The Illustrative Scheme would include stopping up areas of public highway under s247 of the Town and Country Planning Act. These areas are primarily along the current Queensmere Road route, where the proposed Queensmere Road will be re-aligned, and on MacKenzie Street, in the south west corner of the Site, the areas shaded blue in Figure 5-6.

5.8.6. The proposed new Site access at the junction between High Street and Church Street will require amendments to the kerb and highway arrangement, as will proposals for the junction between the A4 Wellington Street and Queensmere Road. These highway works will be undertaken via a s278 Agreement for works in the public highway and are shown as the areas shaded pink in **Figure 5-6**.

5.8.7. The Illustrative Scheme shows a loading pad in the footway on the north edge of the High Street carriageway, south of the proposed Development Block 2b. Access to the proposed loading pad would be via William Street and High Street, however this route is currently available for buses, taxis, motorcycles and cycles only, with all other traffic prohibited. It is assumed possible amendments to the Traffic Regulation Order on this section of High Street will be required, subject to further discussion with SBC at the Highway Authority.

5.9 SUSTAINABLE TRAVEL STRATEGY

5.9.1. The Illustrative Scheme will encourage sustainable travel through the following measures:

- Creating an accessible and connected Site with a pedestrian friendly environment;
- Creating an improved north-south link with Slough Rail Station;
- Widening travel choices by making Active Travel modes and Public Transport modes more attractive than the private car;
- Car parking restraint; and
- Significantly increasing cycle parking provision on the Site.

ACCESSIBLE AND CONNECTED SITE

5.9.2. The key master planning principles that guided the development of the Illustrative Scheme include:

- Provision of a new strengthened connection to/ from the train station and existing High Street;
- Provision of a new 'Town Square' that is a destination for local residents, visitors and employees at the heart of the Town Centre adjacent to The Curve and Church of Our Lady Immaculate and St Ethelberts;
- Respect and 'key into' existing context;
- Provision of high quality and generous public realm;
- Re-mapping of historic routes; and
- Stitching of proposed new streetscape into existing wider urban grain.

5.9.3. The rationale that underpins the transport proposals for Slough Central has been based on the concept of a high-density mixed-use development located in a highly accessible area. The approach has been to ensure that the development can work in and take advantage of these very high accessibility levels present in the Centre of Slough, whilst providing sufficient flexibility to support emerging longer-term transport proposals. In essence this approach has been based around the following:

- Placing the development in the heart of the Town Centre.
- Working with key stakeholders to integrate with wider interchange and public realm proposals, including the Brunel Way improvement scheme, being promoted by SBC. These proposals will provide a series of high quality streets and public areas and will help to strengthen connections to the Station area and High Street.

5.9.4. Improvements to north-south connections are particularly important, with the north-south routes providing improved pedestrian access between the High Street, and other town centre destinations, and public transport facilities to the north, including bus stops on Wellington Street and Slough rail station.

5.9.5. In addition, the Illustrative Scheme layout is making provision for future use of surrounding sites, particularly development to the north of the A4 Wellington Street. The Illustrative Scheme layout makes provision for three north-south routes for pedestrians which align with Brunel Way for the station, the Tesco plot for future development, and Queensmere Road, which will greatly enhance access to public transport for users of the new Site, and the wider town centre in general.

PARKING

5.9.6. The development is located in a highly accessible area and, as such, the proposals will provide car parking for the residential element at a ratio of up to 0.3 spaces per unit and up to 1 space per

100sqm (GEA) of commercial space. This is expected to influence travel behaviour away from private vehicles and towards active and sustainable forms of transport.

5.9.7. The proposed commercial parking provision is in-line with this policy to ensure that there is no increase in car parking within employment generating development. The proposals are in line with this policy as car-parking is only proposed to be provided for residential uses and office accommodation.

5.9.8. A cycle parking ratio of one space per residential unit has been agreed with SBC at pre-application stage. Cycle stores will be provided at ground floor, and for some Development Zones on first floor, in the form of two-tiered cycle racks. Cycle parking will include long-stay parking for residents and staff; and short stay visitor parking within the public realm adjacent to building entrances and active frontages.

PUBLIC TRANSPORT IMPROVEMENTS

Slough Mass Rapid Transit (SMaRT)

5.9.9. The Slough Mass Rapid Transit (SMaRT) scheme along the A4 corridor will improve bus services, making them quicker, more frequent, and more reliable.

5.9.10. Slough Borough Council completed Phase 1 of the Slough Mass Rapid Transit scheme from Dover Road to High Street Langley in 2017. The scheme has since delivered a more frequent, quicker and more reliable bus service for bus commuters travelling along the A4 Bath Road.

5.9.11. Phase 2 is still being planned, however would extend from High Street Langley to the eastern borough boundary and Heathrow. The Phase 2 scheme would encourage use of sustainable transport for commuters travelling between Slough Trading Estate, Slough train station, Langley and Heathrow airport. Phase 2 aims to improve journey times, reduce congestion, enhance transport interchanges and support regeneration in Slough.

5.9.12. The Queensmere OPA Site will benefit from Phase 2 of SMaRT, with the route passing along the north edge of the Site, providing an excellent service for residents and visitors to the Site, as well as improving public transport access to the wider town centre area.

Elizabeth Line

5.9.13. Slough rail station will provide access to Elizabeth Line services which will extend across London from east to west, extending to Reading in the west, and Shenfield and Abbey Wood in the east. The Elizabeth Line will also provide direct services to Heathrow Airport. The section of the Elizabeth Line between Reading and London Paddington is currently operational, with the remainder of the line across London up to Shenfield and Abbey Wood completed in 2022.

5.9.14. The Site is within approximately 300m south of the Slough Rail Station, therefore will be within a reasonable walking distance of the new Elizabeth Line services.

6 TRIP GENERATION

6.1 INTRODUCTION

6.1.1. This section will outline the trip generation forecast for the Development Proposals and will compare it to an 'existing conditions' scenario, in order to understand the net impact of the proposals.

6.1.2. As the main proposed uses are residential and office, the development peak times for trips are expected to be weekday AM and PM peak hours, which would coincide with the network peak hours. Therefore, the trip generation estimates will be for weekday AM and PM network peak hours only.

6.1.3. It is considered that the reduction of retail floor area associated with the proposals will generate a net reduction in trips during retail development peak hours, i.e. evenings and weekends. Therefore, forecast trip generation assessment will focus on the weekday AM and PM net additional trips only.

6.1.4. The trip generation estimates for the existing and proposed uses have been agreed with SBC during the pre-application scoping process. A comprehensive documentation of the scoping process for the Transport Assessment is included in **Appendix A** of this report.

6.2 BASELINE TRAVEL DEMAND

Existing Retail

6.2.1. Retail trips for the existing Site have been estimated based on similar sites to better understand the net impact of the Development Proposals.

6.2.2. It is acknowledged the existing retail use on the Site is not trading at full capacity. This has been accounted for when assessing the existing conditions to ensure that the existing Site is represented accurately.

6.2.3. Retail trips have been forecast by using observed data from other comparable retail centres. The first step in forecasting the retail trip generation is to identify the expected number of annual visitors to the shopping centres, based on observed data.

6.2.4. **Table 6-1** outlines the number of annual trips surveyed at three retail locations, which include Westfield London; The Whitgift Centre in Croydon; and Brent Cross Shopping Centre. For the purposes of forecasting existing retail trips at the Site an average of the Whitgift Centre and Brent Cross trips has been used to derive annual visitors for the Site. Westfield London has been excluded due to its higher volume of annual trips.

Table 6-1 – Total Annual Visitors Arrival Trips for Selected Retail Sites

Site	Annual Trips (arrivals)	Floor Area GEA (sqft)	Trip Rates (annual trips per 1m sqft floor area GEA)
Whitgift Centre, Croydon	19.1M	1.3msqft	14.6m
Brent Cross	-	-	16.0M*
Average:			15.3M
Westfield London	27.0M	1.5M sqft	18.0M**

**Westfield – Project Star Transport Assessment 2003*
***Westfield Shopping towns – Daily footfall Counts 2011*

6.2.5. Daily trip profiles were observed for the Westfield London site over a one-week period and are presented in **Table 6-2**. Saturday was observed as the busiest day of the week and Thursday was the busiest weekday (Friday has not been considered a weekday as it typically displays a profile that resembles weekend days), which would be regarded as typical for most shopping centre sites. It is proposed to apply the Westfield London daily trip profile, which is regarded as standard to most shopping centres, to the Site to provide an existing trip baseline scenario.

6.2.6. **Table 6-2** shows the daily profiles along with the estimated daily arrivals for the existing retail use at the Site, based on an existing retail floor area of 47,783sqm GEA. The calculation also includes an occupancy factor of 78% to account for the existing retail use not trading at full capacity.

Table 6-2 – Westfield London Site Daily Trip Profile

Day	Retail Profile	Estimated Existing Daily Arrivals at Queensmere site
Monday	12.3%	14,519
Tuesday	12.3%	14,519
Wednesday	12.5%	14,755
Thursday	13.5%	15,935
Friday	14.6%	17,234
Saturday	20.5%	24,198
Sunday	14.2%	16,762

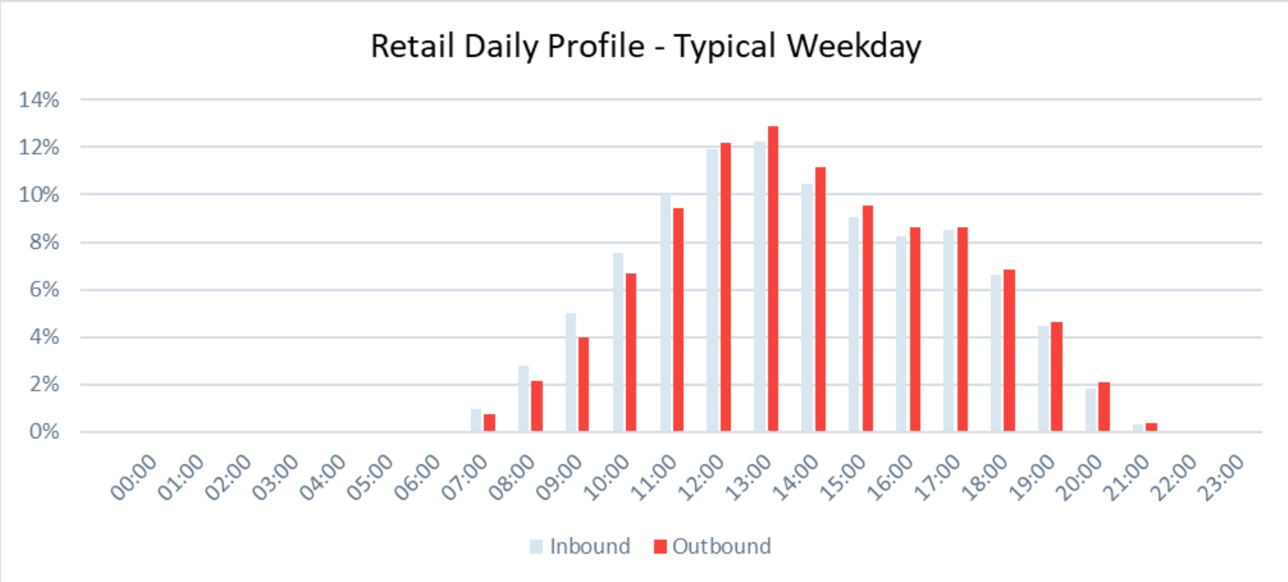
Note: Summation errors due to rounding

6.2.7. The Thursday daily trip profile presented above has been used to estimate the trip generation associated with the existing retail over a typical day. As agreed at scoping, the hourly profiles to estimate AM and PM trip generation have been obtained from the Eden Walk shopping centre, located in Kingston upon Thames. **Table 6-3** shows the observed AM and PM peak hour inbound and outbound trip profiles from Eden Walk with **Figure 6-1** showing the trip profile over the whole day.

Table 6-3 – Retail Profiles – Typical Weekday for Eden Walk

Time	Inbound	Outbound
AM peak hour (0800-0900)	2.8%	2.2%
PM peak hour (1700-1800)	8.5%	8.6%

Figure 6-1 – Retail Daily Profile - Typical Weekday



6.2.8. The AM and PM peak hour weekday trip profile has been applied to the existing retail floor areas at the Site to provide a baseline retail trip generation, as shown in **Table 6-4**.

Table 6-4 – Existing Retail Total Person Trip Generation

Time	In	Out	Total
Thursday AM peak hour (0800-0900)	446	344	789
Thursday PM peak hour (1700-1800)	1,354	1,378	2,733

6.2.9. The total person trips outlined in **Table 6-4** have been assigned to a mode of travel, as shown in **Table 6-5**. The mode of travel is based on the Westfield retail modal share.

Table 6-5 – Existing Retail Trips by Mode of Travel

Mode	Modal Split	AM Peak hour (0800-0900)			PM Peak hour (1700-1800)		
		In	Out	Total	In	Out	Total
Train	20%	89	68	157	270	274	544
Bus	39%	173	134	307	527	536	1,063
Taxi	0%	0	0	1	1	1	3

Motorcycle	0%	1	1	2	4	4	8
Car Driver	23%	100	77	178	305	310	615
Car/ Van Passenger	11%	47	36	84	144	146	290
Bicycle	0%	2	1	3	5	6	11
On Foot	7%	33	25	58	99	101	199
Total	**100%**	446	344	789	1,354	1,378	2,733

6.2.10. As shown in **Table 6-5**, the existing shopping centre generates 789 and 2,733 two-way total person trips during the weekday AM and PM peak hour, respectively.

6.2.11. With regard to the car mode share shown in **Table 6-5**, the estimate is based upon the mode share from Westfield shopping centre which comprises a car mode share of 23%. By comparison, the Eden Walk centre has a car-driver mode share of 51%. If the Eden Walk mode share were to be applied to the baseline trip generation, then this would result in a car-driver trip generation that is substantially higher than the one estimated above. This would result in a significantly lower net difference between the baseline and the proposals. Therefore, the use of the Westfield data represents a robust appraisal of transport impacts, as the applicant has been conservative in the calculation of the baseline trip generation.

6.2.12. WSP have also reviewed SMMM17 output data, provided by Atkins on behalf of SBC, and have been able to extract the predicted mode share for the existing Queensmere Shopping Centre from the model. This is summarised below.

	SMMM17 Mode Share for Queensmere Zone			
	AM Peak Hr		PM Peak Hr	
	% Car	% PT	% Car	% PT
Two Way Generation	33%	67%	24%	76%

6.2.13. As can be seen from the table above, during the evening peak (the busiest time period), the model predicts a car-driver mode share of 24% (associated with the existing Queensmere Shopping Centre), which matches well with the Westfield mode share proportions.

6.2.14. It should therefore be concluded that no further analysis be required and that the Westfield mode share proportions be accepted.

Existing Office

6.2.15. The existing Site includes 6,458sqm GEA of office floorspace. The trip generation associated with the existing office floorspace has been forecast using surveys from the TRICS database. TRICS survey data has been selected applying the criteria below. The sites selected can be found in **Table 6-6**.

- Land use – Employment - Office
- Weekday surveys
- Location – All England
- Floor Area – 2500+

Table 6-6 – TRICS Office Sites

SBC PLANNING
RECEIVED : 24.06.2022

Reference	Description	Location	Survey	Floor Area sqm
CN-02-A-03	OFFICES	CAMDEN	06/12/2017	26639
EX-02-A-03	OFFICES	ESSEX	23/10/2013	45000
GM-02-A-07	OFFICES	GREATER MANCHESTER	19/10/2011	4200
GM-02-A-08	OFFICES	GREATER MANCHESTER	26/09/2016	3960

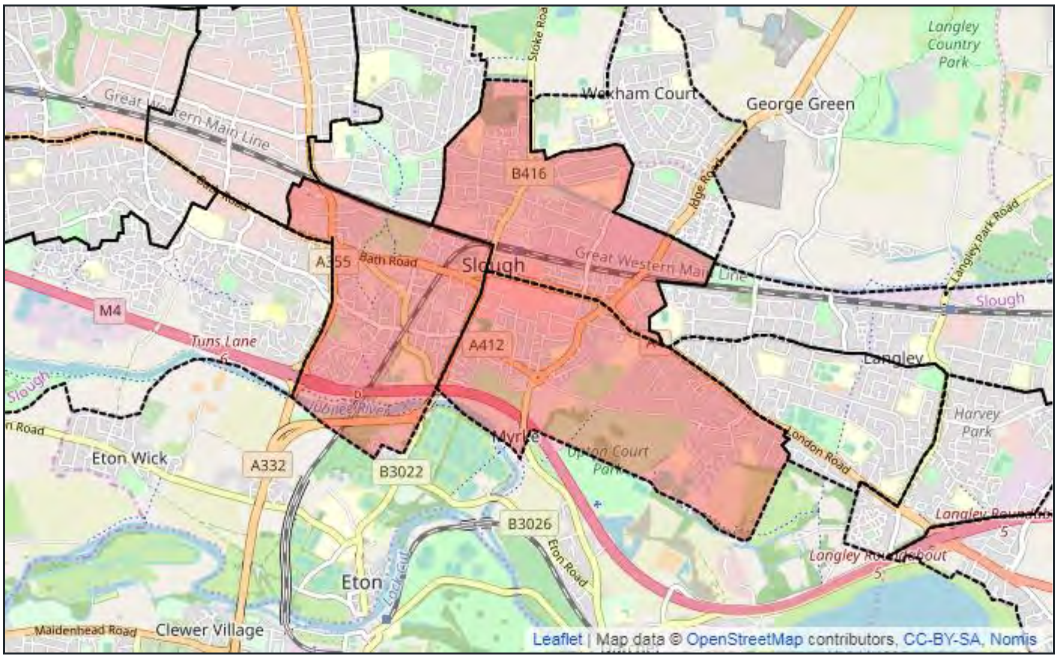
6.2.16. Two sites have been removed during the selection process due to their unusual employee density. The TRICS output, showing the weighted average total person trip rates from the sites selected, is provided as **Appendix D**. The total person trip rates and total person trips estimated for the existing office use, for the AM and PM peak hours, are shown in **Table 6-7**.

Table 6-7 – Existing Office Total Person Trip Generation

Office use (6,458 sqm)	AM Peak hour (0800-0900)			PM Peak hour (1700-1800)		
	In	Out	Total	In	Out	Total
Total Person Trip Rate per 100sqm	1.946	0.154	2.10	0.1	1.805	1.905
Total Person Trip Generation	126	10	136	6	117	123

6.2.17. The 2011 Census data has been used to disaggregate the office total person trips by mode. The data set used is 'location of usual residence and place work by method of travel to work (MTW) – Workplace population' for the middle super output area (MSOA) Slough 007, 009 and 011, as shown in **Figure 6-2**.

Figure 6-2 - Slough Town Centre MSOA



6.2.18. The mode share from the 2011 Census for Method of Travel to Work data, for the workforce travelling to the MSOA, shown in **Figure 6-2**, is provided in **Table 6-8**.

Table 6-8 – 2011 Census for Method of Travel to Work

Mode of Travel	Mode Share
	Raw Data
Train	8%
Bus	6%
Taxi	0%
Motorcycle	1%
Car/ Van Driver	67%
Car/ Van Passenger	5%
Bicycle	2%
On Foot	10%
Total	**100%**

6.2.19. The estimated travel demand, by mode of travel, for the existing office use, based on an existing floor area of 6,458sqm GEA, is shown in **Table 6-9**.

Table 6-9 – Existing Office Trips by Mode of Travel

Mode	AM Peak hour (0800-0900)			PM Peak hour (1700-1800)		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Train	10	1	11	1	10	10
Bus	8	1	8	0	7	8
Taxi	1	0	1	0	1	1
Motorcycle	1	0	1	0	1	1
Car Driver	84	7	91	4	78	82
Car/ Van Passenger	7	1	7	0	6	7
Bicycle	3	0	3	0	2	3
On Foot	13	1	14	1	12	13
Total	126	10	136	6	117	123

6.2.20. As shown above the existing office use are forecast to generate 136 and 123 two-way total person trips in the AM and PM peak hours, respectively.

Existing Residential

6.2.21. The Site currently includes a total of 28 residential units. The trip generation associated with the existing residential units has been estimated using surveys from the TRICS database. The TRICS surveys selected are based on the following criteria and the sites identified can be found in **Table 6-10.**

- Land use – Residential – Privately Owned Flats
- Weekday surveys
- Location – All England

- Units – 150+

Table 6-10 – TRICS Residential Sites

Reference	Description	Location	Survey	Units
BD-03-C-01	BLOCKS OF FLATS	LEIGHTON BUZZARD	15/05/2018	175
BM-03-C-01	BLOCKS OF FLATS	BROMLEY	12/11/2018	160
GM-03-C-02	BLOCKS OF FLATS	MANCHESTER	13/10/2011	154
HM-03-C-02	BLOCKS OF FLATS	HAMMERSMITH	30/04/2019	194
IS-03-C-07	BLOCKS OF FLATS	ISLINGTON	06/06/2019	185

6.2.22. The TRICS output, showing the weighted average total person trip rates from the sites selected, is provided as **Appendix D**.

6.2.23. **Table 6-11** shows the total person trip rates and estimated residential total person trips, based on 28 units, for the AM and PM peak hours.

Table 6-11 – Existing Residential Total Person Trip Generation

Residential trips (28 units)	AM Peak hour			PM Peak hour		
	In	Out	Total	In	Out	Total
Total Person Trip Rate per dwelling	0.074	0.491	0.565	0.351	0.134	0.485
Total Person Trip Generation	2	14	16	10	4	14

6.2.24. To estimate mode of travel, the 2011 Census data has been used to identify the 'location of usual residence and place of work by method of travel to work – Resident Population' for the middle super output area (MSOA) Slough 007, 009 and 011 (shown in **Figure 6-2**).

6.2.25. **Table 6-12** shows the results from the 2011 Census data for method of travel to work.

Table 6-12 – 2011 Census Data for Method of Travel to Work

Mode of Travel	Mode Share
	Raw Data
Train	12%
Bus	11%
Taxi	1%
Motorcycle	0%
Car/ Van Driver	52%
Car/ Van Passenger	6%
Bicycle	3%
On Foot	14%
Total	**100%**

6.2.26. The estimated trips for the existing 28 residential units are shown for the peak hours, by mode of travel, in **Table 6-13**.

Table 6-13 - Existing Residential Trips by Mode of Travel

Mode	AM Peak hour			PM Peak hour		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Train	0	2	2	1	0	2
Bus	0	1	2	1	0	1
Taxi	0	0	0	0	0	0
Motorcycle	0	0	0	0	0	0
Car Driver	1	7	8	5	2	7
Car/ Van Passenger	0	1	1	1	0	1
Bicycle	0	0	0	0	0	0
On Foot	0	2	2	1	1	2
Total	**2**	**14**	**16**	**10**	**4**	**14**

6.2.27. As shown above the existing residential units are forecast to generate 16 and 14 two-way total person trips in the AM and PM peak hours, respectively.

Cinema

6.2.28. The existing Site includes 6,870sqm GEA of Sui Generis Cinema floorspace. Forecast trips have been derived for the existing cinema use using surveys from the TRICS database. Surveys have been selected based on the following criteria and the sites identified can be found in **Table 6-14**.

- Land use – Leisure – Multiplex Cinema
- Weekday surveys
- Location – All England
- Size - All

Table 6-14 – TRICS D2 Cinema

Reference	Description	Area	Survey	GFA sqm
CN-07-A-01	ODEON	CAMDEN	Town Centre	464
NY-07-A-02	VUE	NORTH YORKSHIRE	Edge of Town	4500
SH-07-A-02	CINEWORLD	SHROPSHIRE	Edge of Town Centre	2400
WO-07-A-01	ODEON	WORCESTERSHIRE	Town Centre	2200

6.2.29. The TRICS output, reporting the weighted average total person trip rates from the sites selected, is available in **Appendix D**. **Table 6-15** shows the trip rates and the estimated total person trips in the peak hours.

Table 6-15 – Existing D2 Cinema Total Person Trip Generation

	AM Peak hour			PM Peak hour		
	In	Out	Total	In	Out	Total
Total Person Trip Rate per 100sqm	0	0	0	4.391	2.488	6.879
Total Person Trip Generation	0	0	0	302	171	473

6.2.30. It is considered that people travelling to the existing cinema would share similar travel patterns to those travelling to the existing retail use. Therefore, the retail mode share has been used to derive the multi-modal cinema trips. The resulting forecast is shown in **Table 6-16**.

Table 6-16 – Existing Cinema Trips by Mode of Travel

Mode	Modal Split	AM Peak hour			PM Peak hour		
		In	Out	Total	In	Out	Total
Train	20%	0	0	0	60	34	94
Bus	39%	0	0	0	117	66	184
Taxi	0%	0	0	0	0	0	0
Motorcycle	0%	0	0	0	1	1	1
Car Driver	23%	0	0	0	68	38	106
Car/ Van Passenger	11%	0	0	0	32	18	50
Bicycle	0%	0	0	0	1	1	2
On Foot	7%	0	0	0	22	12	34
Total	**100%**	**0**	**0**	**0**	302	171	473

6.2.31. As shown above the existing cinema is forecast to generate 473 two-way total person trips in the PM peak hour.

TOTAL BASELINE TRIPS

6.2.32. **Table 6-17** outlines the existing trip generation associated with the Site.

Table 6-17 – Baseline Trips by Model of Travel

Mode	AM Peak hour			PM Peak hour		
	In	Out	Total	In	Out	Total
Train	99	71	170	331	318	650
Bus	181	136	317	646	610	1,256
Taxi	1	1	2	2	2	4
Motorcycle	2	1	3	5	5	10
Car Driver	185	91	276	382	428	810
Car/ Van Passenger	54	38	92	177	171	347
Bicycle	5	2	6	7	9	16
On Foot	46	28	74	123	126	248
Total	573	367	941	1,672	1,669	3,342

6.2.33. As shown in **Table 6-17**, if the existing uses on Site traded at full potential, the existing Site could generate a total of 941 and 3,342 person trips in the AM and PM peak hours respectively, with 1,359 trips being made by car during the evening peak.

6.3 PROPOSED DEVELOPMENT TRAVEL DEMAND

6.3.1. This section details the methodology and multi-modal trip generation forecast for the Development Proposals, and the net increase when compared against the baseline conditions.

6.3.2. The Development Proposals and flexibility sought is described in Chapter 5 above.

6.3.3. As shown in Table 5-1Table 5-1 – Sitewide Floorspace and flexibility in Chapter 5, flexibility is being sought between the provision of residential and office accommodation across the Development. As a result, two scenarios have been defined as detailed in Table 6-18 and **Table 6-19**:

- Maximum Residential; and
- Maximum Office.

Table 6-18 - Maximum Residential

Land use	Floorspace
Residential	1,600 units
Office	0 sqm
Use Class E (excluding office uses), F (excluding primary and secondary schools, indoor or outdoor swimming pool or skating rink), Sui Generis (Pubs, Bars, Hot Food Take Away) and Sui Generis Leisure (Live Music/Cinema)	12,000[3] sqm of which 1,500sqm is Sui Generis Leisure (Live Music/Cinema) and 2,250sm is Sui Generis (Pubs, Bars, Hot Food Take Away)

Table 6-19 - Maximum Office

Land use	Floorspace
Residential	950 units
Office	40,000 sqm
Use Class E (excluding office uses), F (excluding primary and secondary schools, indoor or outdoor swimming pool or skating rink), Sui Generis (Pubs, Bars, Hot Food Take Away) and Sui Generis Leisure (Live Music/Cinema)	12,000[3] sqm of which 1,500sqm is Sui Generis Leisure (Live Music/Cinema) and 2,250sm is Sui Generis (Pubs, Bars, Hot Food Take Away)

6.3.4. On the basis of trip generation rates and professional judgement, it has been concluded that the Maximum Office scenario would result in the worst case position in terms of transport impact. However, both the Maximum Office and Maximum Residential scenarios have been assessed with regard to the traffic impact assessments.

[3] Whilst the maximum floorspace cap for Class E & Class F uses is stated as 12,000 sqm (GEA) and the maximum floorspace cap for Sui Generis uses is stated as 3,750 sqm (GEA), we propose to limit the combined maximum floorspace cap across both Class E & F and Sui Generis uses to 12,000 sqm (GEA).

6.3.5. In order to create a robust assessment of highways impact, a worst-case scenario was developed in terms of trip generation. The Table below sets out the daily trip rates that were agreed with SBC during the TA Scoping stage.

Table 6-20 – Agreed daily trip rates by land use

Use	Daily two-way trip rate
Office / Commercial	16.25 Trips / 100sqm
Residential	5.084 Trips / Dwelling
Care Home*	4.746 Trips / Unit
Class E & F and Sui Generis bar/ pub/ hot food take away	42.75 Trips / 100sqm
Sui Generis (for assessment purposes assumed to be cinema)	99.1 Trips / 100sqm

**Care Home trip rate not presented to SBC at Scoping Stage because the scoping discussions predated the decision to include this land use within the QM OPA.*

6.3.6. The Use Class E (excluding office uses), F (excluding primary and secondary schools, indoor or outdoor swimming pool or skating rink) and Sui Generis parts of the proposals equate to a combined maximum quantum of 12,000 sqm (GEA). ,. The basement areas are considered to be ancillary to the Development and therefore will not generate any primary trips.

6.3.7. As can be seen from the Table above, the trip generation associated with office use is significantly higher than that of residential use so, in order to robustly appraise highway impact, the maximum range of office use (40,000sqm) has been modelled along with the resultant number of residential units. For the residential uses, as stated in Chapter 5, there is flexibility included for 0 - 20% of the offer to be Use Class C2 if the demand for such a use exists. The Table above demonstrates that the trip rate associated with Use Class C2 is slightly lower than for residential uses. Therefore, all of the resultant residential units (950) are assessed as residential, with no allowance for C2 Uses.

Proposed Office

6.3.8. To ensure a consistent approach, the trip generation associated with the proposed office use has been estimated using the TRICS sites identified to assess the existing baseline conditions. **Table 6-21** shows the total person trip rates and estimated trip generation for the proposed office use, 40,000 sqm GEA.

Table 6-21 – Proposed Office Total Person Trip Generation

Proposed Office (40,000 sqm)	AM Peak hour (0800-0900)			PM Peak hour (1700-1800)		
	In	Out	Total	In	Out	Total
Total Person Trip Rate per 100sqm	1.946	0.154	2.10	0.1	1.805	1.905
Total Person Trip Generation	778	62	840	40	722	762

6.3.9. To estimate the trips by mode of travel, the 2011 Census mode share has been adjusted to appropriately represent the level of parking associated with the proposed office use. The mode share has been adjusted to reflect car parking provision of one parking space per 100 sqm of office floor area. The adjusted mode share is outlined at **Table 6-22**.

Table 6-22 - MTW Adjusted Mode Share for Proposed Office

Mode of Travel	Mode Share	
	Raw Data	Adjusted
Train	8%	38%
Bus	6%	29%
Taxi	0%	0%
Motorcycle	1%	1%
Car/ Van Driver	67%	20%
Car/ Van Passenger	5%	0%
Bicycle	2%	2%
On Foot	10%	10%
Total	**100%**	**100%**

6.3.10. The estimated multi-modal peak hour travel demand for the proposed office use, applying a total floor area of 40,000 sqm GEA, is outlined at **Table 6-23**.

Table 6-23 – Proposed Office Trips by Mode of Travel

Proposed Office (40,000 sqm)	AM Peak hour			PM Peak hour		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Train	296	23	319	15	274	290
Bus	226	18	244	12	209	221
Taxi	0	0	0	0	0	0
Motorcycle	8	1	8	0	7	8
Car Driver	156	12	168	8	144	152
Car/ Van Passenger	0	0	0	0	0	0
Bicycle	17	1	18	1	15	16
On Foot	78	6	84	4	72	76
Total	**779**	**62**	**841**	**40**	**723**	**763**

6.3.11. A sense check of the adjusted car driver mode share has been undertaken and is presented in **Table 6-25. Table 6-24** shows the estimated office parking accumulation profile. The office car parking provision for 40,000 sqm would be up to 400 spaces, however it is assumed parking occupancy may peak on an average day at approximately 85% of the car park capacity, as offices are less likely to operate at full capacity (this takes account of a proportion of people off sick, flexible working, leave, or out of the office on employers' business).

Table 6-24 – Proposed Office Trips by Mode of Travel

Time Range	People Trip Rates		Total People		Car Driver (20%)		Parking Accumulation
	Arr	Dept	Arr	Dept	Arr	Dept	
07:00-08:00	0.943	0.062	377	25	75	5	70

08:00-09:00	1.946	0.154	778	62	156	12	214
09:00-10:00	1.600	0.225	640	90	128	18	324
10:00-11:00	0.664	0.398	266	159	53	32	345
11:00-12:00	0.375	0.389	150	156	30	31	344
12:00-13:00	0.918	1.239	367	496	73	99	318
13:00-14:00	0.946	0.763	378	305	76	61	333
14:00-15:00	0.369	0.408	148	163	30	33	330
15:00-16:00	0.145	0.768	58	307	12	61	280
16:00-17:00	0.117	0.949	47	380	9	76	213
17:00-18:00	0.100	1.805	40	722	8	144	77
18:00-19:00	0.070	0.900	28	360	6	72	11

6.3.12. The parking accumulation shown in **Table 6-24** applies a 20% car mode share to the estimated daily arrival and departure trips. The parking accumulation shows a peak parking demand of 345 cars between 10am and 11am, which equates to approximately 85% of the expected office car park capacity. Therefore, the office Car Driver mode share applied, 20%, is in line with the office car parking provision when assessed against the estimated daily car arrival and departure profiles.

6.3.13. With regard to any concerns with overspill parking generated by the proposed Office use, it should be noted that Slough town centre is largely covered by Controlled Parking Zones, principally four zones, A, B, L and M. In these areas only residents are allowed to park at any time or parking is for residents between 9am – 5pm. There are a few pay & display bays but these are for 1hr only. This is clearly to dissuade commuters / shoppers from parking in these areas. Therefore, the existing parking restrictions would be considered fit-for-purpose to negate the risk of overspill parking in the town centre.

6.3.14. It is suggested a Parking Management Plan for the potential Office development for the Reserved Matters Applications to set out how the office car parking will be managed.

Proposed Residential

6.3.15. The trip generation forecast for the proposed residential units has been derived using the same TRICS sites used to estimate the existing baseline residential trips. The total person trip rates and total person trips, based on the proposed 950 units, are shown in **Table 6-25**.

Table 6-25 – Proposed Residential Total Person Trip Generation

Proposed Residential (950 units)	AM Peak hour			PM Peak hour		
	In	Out	Total	In	Out	Total
Total Person Trip Rate per dwelling	0.074	0.491	0.565	0.351	0.134	0.485
Total Person Trip Generation	70	465	535	333	127	460

6.3.16. The 2011 Census mode share has been adjusted to appropriately represent the level of parking associated with the residential proposals. The reason for the reduction in the car driver mode share is to account for parking availability on site, which is delivers approx. 0.3 car parking spaces per unit. The adjusted mode share is shown in **Table 6-26**.

Table 6-26 – MTW Adjusted Mode Share

Mode of Travel	Mode Share	
	Raw Data	Adjusted
Train	12%	22%
Bus	11%	20%
Taxi	1%	1%
Motorcycle	0%	0%
Car/ Van Driver	52%	34%
Car/ Van Passenger	6%	6%
Bicycle	3%	3%
On Foot	14%	14%
Total	**100%**	**100%**

6.3.17. The estimated multi-modal peak hour travel demand associated with the proposed 950 residential units is outlined at **Table 6-27**.

Table 6-27 – Proposed Residential Trips by Mode of Travel

Proposed Residential (950 units)	AM Peak hour			PM Peak hour		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Train	15	103	118	73	28	101
Bus	14	93	107	67	25	92
Taxi	1	5	5	3	1	5
Motorcycle	0	0	0	0	0	0
Car Driver	24	159	182	113	43	157
Car/ Van Passenger	4	28	32	20	8	28
Bicycle	2	13	15	9	4	13
On Foot	10	65	75	46	18	64
Total	70	465	535	333	127	460

6.3.18. A sense check of the adjusted car driver mode share has been undertaken as follows. The trip profile associated with the agreed trip rates (from TRICS and appended in the TA Scoping Report) has been applied to the development quantum (up to 950 dwellings) to establish the parking accumulation profile. The parking accumulation has been capped at the maximum number of parking spaces available (285 spaces), so to not artificially exceed the quantum of parking proposed on site. It is assumed that the car park would be full in the morning, with all 285 parking spaces occupied.

6.3.19. Error! Not a valid bookmark self-reference. below shows the estimated residential parking accumulation for 950 residential units. As can be seen from the Table below, applying a 34% mode share provides a robust appraisal of transport impacts, as the car park fully empties during the course of a typical day.

Table 6-28 – Estimated Residential Parking Accumulation

Time Range	People Trip Rates		Total People		Car Driver (34%)		Parking Accumulation
	Arr	Dept	Arr	Dept	Arr	Dept	
07:00-08:00	0.048	0.313	46	297	16	101	199
08:00-09:00	0.074	0.491	70	466	24	159	65
09:00-10:00	0.088	0.22	84	209	28	71	22
10:00-11:00	0.111	0.142	105	135	36	46	12
11:00-12:00	0.099	0.131	94	124	32	42	2
12:00-13:00	0.141	0.16	134	152	46	52	-4
13:00-14:00	0.134	0.136	127	129	43	44	-5
14:00-15:00	0.127	0.119	121	113	41	38	-2
15:00-16:00	0.195	0.165	185	157	63	53	7
16:00-17:00	0.24	0.189	228	180	78	61	24
17:00-18:00	0.351	0.134	333	127	113	43	94
18:00-19:00	0.472	0.141	448	134	152	46	201
19:00-20:00	0.295	0.126	280	120	95	41	255
20:00-21:00	0.147	0.095	140	90	47	31	272

6.3.20. With regard to any concerns with overspill parking generated by the proposed Residential use, it should be noted that Slough town centre is largely covered by Controlled Parking Zones, principally four zones, A, B, L and M. These areas are largely residential parking only with some P&D bays but these are for 1hr only. It is assumed new residents would be prohibited from obtaining on-street residential parking permits, therefore, the existing parking restrictions would be considered fit-for-purpose to negate the risk of overspill parking in the town centre.

6.3.21. It is suggested a Parking Management Plan for the Residential development for the Reserved Matters Applications to set out how the residential car parking will be allocated and managed.

Proposed Retail / Food and Beverage

6.3.22. For consistency, the same AM and PM peak hour trip rates and mode share used to estimate the existing retail trip generation have been utilised to calculate the proposed Use Class E (excluding office uses) & F (excluding primary and secondary schools, indoor or outdoor swimming pool or skating rink) use. For the proposed trip generation, it has been assumed 30% of trips will be linked to other uses within or near to the Site. The reasoning behind this assumption is presented in the following paragraphs.

6.3.23. The trip rates associated with the commercial uses have been discounted by 30% to reflect non-primary journeys during the peak hours, which is considered a conservative assumption. Although not fixed at this Outline Planning stage, it is likely that the commercial (up to 8,250sqm retail / F&B) will fundamentally be there to support the primary land uses (residential and/or office) proposed.

6.3.24. It is important to note that the 30% reduction to account for non-primary trips only applies to the commercial floor area proposed (up to 8,250sqm) and not the sui-generis proposed (3,750 sqm) therefore presenting a robust assessment.

6.3.25. The resulting multimodal proposed retail trip generation is shown in **Table 6-29**.

Table 6-29 – Proposed Use Class E (excluding office uses) & F (excluding primary and secondary schools, indoor or outdoor swimming pool or skating rink)Trips by Mode - including 30% linked trips factor

Mode	Modal Split	AM Peak hour			PM Peak hour		
		In	Out	Total	In	Out	Total
Train	20%	15	11	26	44	45	89
Bus	39%	28	22	50	87	88	175
Taxi	0%	0	0	0	0	0	0
Motorcycle	0%	0	0	0	1	1	1
Car Driver	23%	16	13	29	50	51	101
Car/ Van Passenger	11%	8	6	14	24	24	48
Bicycle	0%	0	0	1	1	1	2
On Foot	7%	5	4	9	16	17	33
Total	**100%**	**73**	**56**	**130**	**223**	**226**	**449**

Proposed Sui Generis

6.3.26. The proposals seek to include a Sui Generis element comprising up to 3,750sqm. To ensure a consistent approach the methodology used to assess the existing former use class D2 land uses within the baseline has been adopted.

6.3.27. The resulting multi-modal trip generation is shown in **Table 6-30**.

Table 6-30 – Proposed D2 Culture Trips by Model of Travel

D2 Culture (3,750 sqm)	AM Peak hour			PM Peak hour		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Train	0	0	0	33	19	51
Bus	0	0	0	64	36	100
Taxi	0	0	0	0	0	0
Motorcycle	0	0	0	0	0	1
Car Driver	0	0	0	37	21	58
Car/ Van Passenger	0	0	0	17	10	27

Bicycle	0	0	0	1	0	1
On Foot	0	0	0	12	7	19
Total	**0**	**0**	**0**	**165**	**93**	**258**

6.4 NET IMPACT

6.4.1. **Table 6-31** outlines the total proposed trips by mode of travel associated with the proposals at the Site.

Table 6-31 – Total Proposed Trips by Mode of Travel

Mode	AM Peak hour			PM Peak hour		
	IN	OUT	TOT	IN	OUT	TOT
Train	326	137	463	166	366	532
Bus	268	133	401	229	359	588
Taxi	1	5	5	4	2	5
Motorcycle	8	1	9	2	8	10
Driving a car	196	184	380	209	260	468
Passenger in a car	12	34	46	61	42	103
Bicycle	19	15	34	12	20	32
On foot	93	75	168	79	113	192
Total	**923**	**583**	**1506**	**760**	**1170**	**1930**

6.4.2. **Table 6-32** shows the overall net impact by mode of travel.

Table 6-32 - Net Impact Assessment by Model of Travel

Mode	AM Peak			PM Peak		
	IN	OUT	TOT	IN	OUT	TOT
Train	227	66	293	-166	48	-118
Bus	87	-3	84	-417	-251	-668
Taxi	0	4	4	2	-1	1
Motorcycle	6	0	6	-3	3	-1
Driving a car	11	92	103	-174	-169	-342
Passenger in a car	-42	-4	-46	-115	-129	-245
Bicycle	14	13	27	5	11	16
On foot	47	47	94	-44	-12	-57
Total	**349**	**216**	**565**	**-913**	**-500**	**-1412**

6.4.3. As the proposals predominantly comprise of workspace land uses, the tidal nature of staff arrival and departure patters results in a morning peak hour net increase when compared to the existing retail use, which is typically quieter during this period.

6.4.4. In comparison, the proposals are forecast to generate an overall net reduction during the PM peak as this is typically a busier time for retail land uses.

6.5 SERVICING TRIP GENERATION

RESIDENTIAL

6.5.1. Indicative Delivery and servicing trips have been forecast using

6.5.2. The residential servicing trip rates applied are set out below in **Table 6-33**.

Table 6-33 – Proposed Residential Servicing Trip Rates per Dwelling

Residential	Daily (0700-1900)		
	In	Out	Tot
LGV	0.155	0.153	0.308
HGV	0.007	0.007	0.014
Total vehicle daily arrival trip rate	0.162	0.160	0.322

6.5.3. The forecast servicing demand by vehicle type associated with the Development Proposals is outlined below in **Table 6-34**..

Table 6-34 – Proposed Residential Estimated Servicing Demand - 950 units

Vehicle Type	Daily (0700-1900)		
	In	Out	Tot
LGV	147	145	293
HGV	7	7	14
Total	**154**	**152**	**306**

NON-RESIDENTIAL

6.5.4. The number of service vehicle trips associated with the floor area proposed for each land use has been estimated using the TRICS database.

6.5.5. A typical daily servicing vehicle trip-rate of 0.25 service vehicle arrivals per 100m^2 for office uses and 1.35 service vehicle arrivals per 100m^2 for retail uses. These servicing trip-rates are considered to represent a worst-case scenario.

6.5.6. Based on the above, the proposed floor areas at Queensmere have been applied to the servicing trip rates to forecast daily arrival servicing trips. A breakdown of the number of service vehicle trips is provided in **Table 6-35**.

Table 6-35 – Proposed Retail, Office and Sus Generis Estimated Servicing Demand

Land Use	Floor Area (m^2)	Servicing Trip Rate daily arrivals per 100 sqm	Daily (0700-1900)		
			In	Out	Tot

Retail	8,250	1.35	112	112	224
Office	40,000	0.25	101	101	202
Sui Generis	3,750	1.35	51	51	101
Total			**264**	**264**	**528**

**Use Class E (excluding office uses) & F (excluding primary and secondary schools, indoor or outdoor swimming pool or skating rink)*

6.5.7. As shown above, the Site is forecast to generate 264 servicing arrival trips a day, related to the non-residential uses proposed at Queensmere. It is forecast that for the Retail use 82.5% of deliveries would take place by car/van or large good vehicles (LGV) – vehicles up to 8m. The remaining 17.5% of deliveries would take place by heavy goods vehicle (HGV) – those greater than 8m.

6.5.8. **Table 6-36** shows the breakdown of servicing trips by vehicle type across the day.

Table 6-36 – Proposed Retail, Office and Sui Generis Servicing Trips by Vehicle Type

Vehicle Type	Daily (0700-1900)		
	In	Out	Tot
LGV	228	228	456
HGV	35	35	70
Total	**263**	**263**	**526**

SUMMARY

6.5.9. Based on the forecast servicing trips generation outlined above, the proposals are forecast to generate a total of 834 (residential and non-residential) two-way serving movements across a typical day. This equates to approximately 70 two-way vehicle movements per hour based on a typical 12-hour day (0700-1900). It is likely that deliveries could take place beyond the typical 12-hour day further spreading the hourly arrival profile.

7 EFFECT OF THE DEVELOPMENT

7.1 INTRODUCTION

7.1.1. This chapter assesses the impact of the Development Proposals on the external transport network, in terms of walking and cycling, and the public transport network.

7.2 PEDESTRIAN

7.2.1. The change in pedestrian trips associated with the proposals are shown in **Table 7-1**.

Table 7-1 – Estimated Change in Pedestrian Trips

Mode	Weekday AM Peak hour			Weekday PM Peak hour		
	In	Out	Total	In	Out	Total
On foot	47	47	94	-44	-12	-56
On foot (to Public Transport Services)	313	63	376	-582	-203	-785
Total	**360**	**110**	**470**	**-627**	**-216**	**-842**

7.2.2. The proposals are forecast to generate an increase of 94 two-way main mode pedestrian trips within the morning peak, with an additional 376 trips walking to public transport services. This equates to an increase of 470 two-way pedestrians in the AM peak hour.

7.2.3. The change in pedestrian trips forecasted for the PM peak hour is expected to result in an overall reduction of 842 two-way trips.

7.2.4. Whilst the existing town centre provides a good pedestrian environment, the proposals seek to upgrade extensive areas of public realm throughout the Site and strengthen connections with the wider Town Centre.

7.2.5. Based on the forecast trip generation above and the proposed improvements, it is expected that the forecast uplift in pedestrian trips during the morning peak can be accommodated within the footway network surrounding the Site and would not have any material impact. The reduction in pedestrian trips forecasted in the PM peak hour is expected to relieve congestion on the local footway network during that period of the day.

7.3 CYCLE

7.3.1. The change in cycle trips associated with the proposals are shown in **Table 7-2**.

Table 7-2 – Estimated Change in Cycle Trips

Mode	Weekday AM Peak hour			Weekday PM Peak hour		
	In	Out	Total	In	Out	Total
Cycle	14	13	27	5	11	16

7.3.2. The proposals are forecast to generate an uplift of 27 and 16 two-way cycle trips in the AM and PM peak hours respectively. This equates to less than one cycle movement per minute during both peak hours. This is not expected to materially impact the local cycle network.

7.4 BUS

7.4.1. The change in bus passenger trips associated with the proposals are shown in **Table 7-3**.

Table 7-3 – Estimated Change in Bus Trips

Mode	Weekday AM Peak (0800-0900)			Weekday PM Peak (1700-1800)		
	In	Out	Total	In	Out	Total
Bus	87	-3	84	-417	-251	-668

7.4.2. The proposals are forecast to generate an increase of 84 two-way train trips within the AM peak hour. The frequency of existing bus services within the vicinity of the Site comprises a total of 48 services during the AM peak hour. Therefore, the increase in train trips during the AM peak hour would result in an average uplift of approximately one passenger per service. The implementation of the Slough Mass Rapid Transit will provide additional services and capacity for passengers to mitigate this impact once it becomes operational.

7.4.3. The change in bus trips forecasted for the PM peak hour is expected to result in an overall reduction of 668 two-way trips. The reduction in bus trips forecasted for the evening peak is expected relieve any congestion on the bus network during that period of the day.

7.5 RAIL

7.5.1. The change in rail trips associated with the proposals are shown in **Table 7-4**.

Table 7-4 – Estimated Change in Rail Trips

Mode	Weekday AM Peak hour			Weekday PM Peak hour		
	In	Out	Total	In	Out	Total
Train	226	66	293	-166	48	-118

7.5.2. The proposals are forecast to generate an increase of 293 two-way rail trips within the AM peak hour. The frequency of train services currently provided from Slough rail station comprises a total of 15 services during the morning peak. Therefore, the increase in train trips during the AM peak hour would result in an average uplift of 18 passengers per service. The full opening of the Elizabeth Line will provide additional services and capacity for passengers to travel and is expected to mitigate this impact.

7.5.3. The change in rail trips forecasted for the PM peak hour is expected to result in an overall reduction of 118 two-way trips. The reduction in rail trips forecasted for the PM peak hour is expected relieve congestion on the train network during that period of the day.

8 EFFECT ON THE LOCAL HIGHWAY NETWORK

8.1 INTRODUCTION

8.1.1. This chapter will outline the approach to assessing the effect of the forecast Development traffic on the local highway. Following pre-application discussions, it was understood that SBC had developed a multi-modal SATURN model to forecast the effects of planned growth between the validated base year of 2017 and the forecast years of 2026 and 2036.

8.1.2. The highway impacts associated with the Maximum Office scenario and the Maximum Residential scenario have been determined using a cordon of Slough Borough Council's Multi-Modal Model (hereafter referred to as "SMMM17"), which extends to the Slough urban area. The SMMM17, developed by Atkins on behalf of SBC, is validated to a base year of 2017 and has a forecast year up to the end of the Planned Period in 2036.

8.1.3. In addition to the 2017 validated base model, the following model scenarios were derived:

- 2036 Do Minimum reference case: with the Site operating, in terms of trip generation, as it currently does;
- 2036 Do Something: Do Minimum reference case + Site operating in line with trip generation associated with full build out of the Development Proposals.

8.2 2017 VALIDATED BASE MODEL

8.2.1. The existing 2017 base year multi-modal model of Slough consists of a highway model built in SATURN, a public transport assignment model built in EMME, and both of these assignment models are linked by a Variable Demand Model (VDM), also built in EMME. The model is TAG compliant and it has had many applications such as assisting in identifying measures and policies to facilitate the significant residential and employment developments envisaged in the Local Plan.

8.2.2. The highway assignment model has been developed and validated using SATURN version 11.3.12W. SATURN is a proprietary software suite able to encompass strategic modelling at a regional level down to the assessment of individual junctions at the simulation level. As a simulation modelling tool, SATURN can analyse relatively minor changes in the network such as traffic management and provide detailed analysis of traffic behaviour at junctions.

8.2.3. The SMMM17 modelling system was developed to represent travel conditions in 2017 and consists of three key elements:

- A Highway Assignment Model (HAM) representing vehicle-based movements within and across the Slough Borough Council (SBC) area for a March weekday;
- A Public Transport Assignment Model (PTAM) representing bus and rail movements for the same area and time periods as the HAM;
- A five-stage multi-modal incremental Demand Model (VDM) that estimates frequency choice, main mode choice, time period choice, destination choice, and sub-mode choice in response to changes in generalised costs of travel across the 24-hour period (07:00 – 07:00).

8.2.4. The public transport assignment model as well the VDM use EMME v4.3.3. Both SATURN and EMME are regarded as the industry standard strategic assignment modelling software.

8.2.5. The Local Model Validation Report, produced by Atkins, is a document that describes the methodology employed in developing the SMMM17. It concludes that the model meets the acceptance criteria prescribed by the Department for Transport and, as such, is deemed suitable for assessing the impacts of the Development Proposals.

8.3 2036 DO MINIMUM REFERENCE CASE

8.3.1. The forecasting process commences with the development of the 'reference case' by updating growth in demand to the forecast year based on known developments, Local Plan interventions, changes in socio-economic and demographic factors. The reference case growth assumptions include an additional 13,700sqm residential space and an additional 589,688sqm employment space. A breakdown of these figures, most of which are linked to specific developments covering the cumulative development sites included in this Environmental Statement, are summarised in the Table below.

Table 8-1 – Assumptions on Reference Case Land uses

Site	Land Use Type	Quantum (sqm non-resi / Units resi)
Former Horlicks Site	Residential	1,300
North West Quadrant*	Residential	1,400
	Commercial	30,659
Tesco*	Residential	1,000
Future Works	Commercial	46,953
Porter Building	Commercial	16,400
Former Octagon Building	Commercial	12,401
Old Library Site	Hotel	244 (beds)
	Residential	62
	Retail	1,000
Stoke Wharf	Retail	300
	Residential	370
Upton Hospital	Residential	250
Former Azko Nobel	Commercial	71,500
	Residential	1,000
Cadent Site	Residential	500
Royal Mail	Residential	500
Stoke Gardens	Residential	300

*Development not included as a cumulative scheme, as scheduled in Table 2.3 of the QM OPA ES, however SBC's model includes the traffic growth associated with this site. This is considered a robust assessment of transport impacts.

8.3.2. At the time of modelling, the list of additional transport schemes compared with the base year is shown in **Table 8.2** below. This information was provided by SBC via their consultants, Atkins.

Table 8-2 – Assumptions on Reference Transport Schemes

Promoter	Scheme	Expected Opening Year
Slough Borough Council	Burnham Station and access improvement scheme	Before 2018
Slough Borough Council	A4 'SMaRT' scheme	Before 2020
Slough Borough Council	Highway modifications along the length of the A4 to provide bus lanes and junction priority for SMaRT	Before 2020
Slough Borough Council	Langley Station and access improvements scheme	Before 2020
Slough Borough Council	Strategic P&R close to M4 J5 and prolongation of the SMaRT service to stop at the P&R site	2021
Slough Borough Council	A332 (Windsor Road) Route Enhancement	Before 2020
Slough Borough Council	A355 Tuns Lane	Before 2020
Slough Borough Council	Stoke Road Scheme	2021
Slough Borough Council	Bus gate on High Street	Before 2020
Cemex	Mineral Extraction at Riding Court Farm	2022
Highways England	M4 Smart Motorway Jct 3 - Jct 12	2023
Highways England	M25 Smart Motorway Junction 10-16	2020
Transport for London	The Elizabeth Line	2019

8.4 2036 DO SOMETHING

8.4.1. WSP created Do Something matrices using the Do Minimum as described above and altering only the trip generation associated with the Site to reflect the change in the Site arising from the Development Proposals from primarily retail to employment and residential land use. The data from the 2036 model has been used to inform the Transport Assessment, Air Quality Assessment, the Noise Appraisal and the Construction Assessment.

8.5 MODELLING ASSESSMENT

ASSESSMENT SCENARIOS

8.5.1. The SBC model has two forecast years; 2026 and 2036. As the Development Proposals are unlikely to be substantially occupied by 2026, the assessment work focusses on the 2036 forecast year only.

8.5.2. The following model scenarios were derived for the AM and PM peaks:

- 2036 Do Minimum: (i.e. no wider highways mitigation / transport vision referenced above) with the Site operating, in terms of trip generation, as it currently does; and
- 2036 Do Something: Do Minimum + Site operating in line with trip generation associated with full build out of the Development Proposals.

2036 DO MINIMUM

8.5.3. The Do Minimum network, as inherited in the model from SBC, is shown in **Figure 8-1**. The Observatory (zone 2106) is shown to access off A4 Wellington Street via a 3-arm priority controlled roundabout at node 24150; Queensmere (zone 2107) is shown to access off of A4 Wellington Street at a 4-arm signal controlled junction at node 89046 although it is noted that the Queensmere approach is left-in/left-out only. The access junctions are shown in **Figure 8-2**.

Figure 8-1 – 2036 Do Minimum, Network

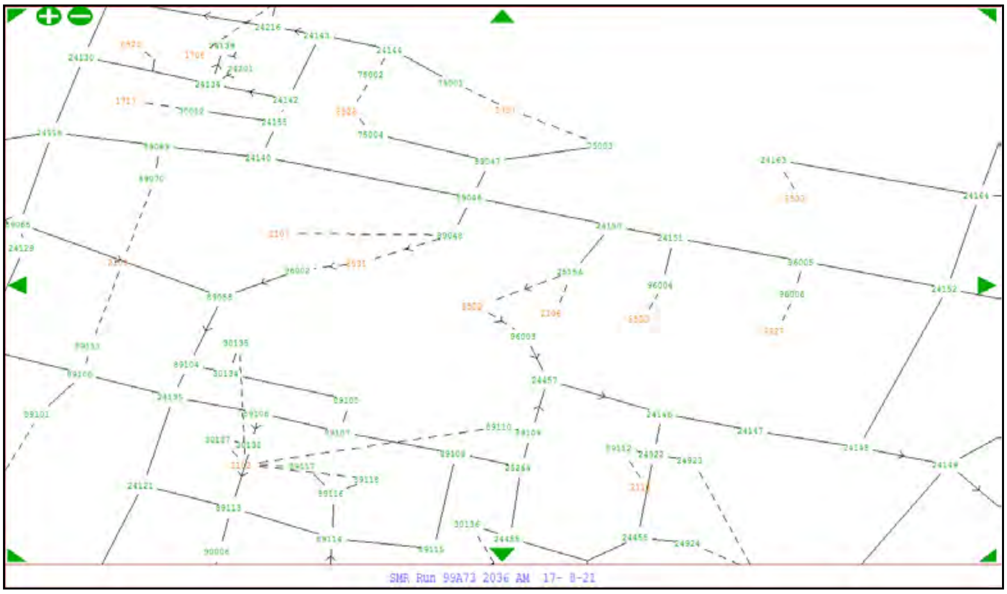
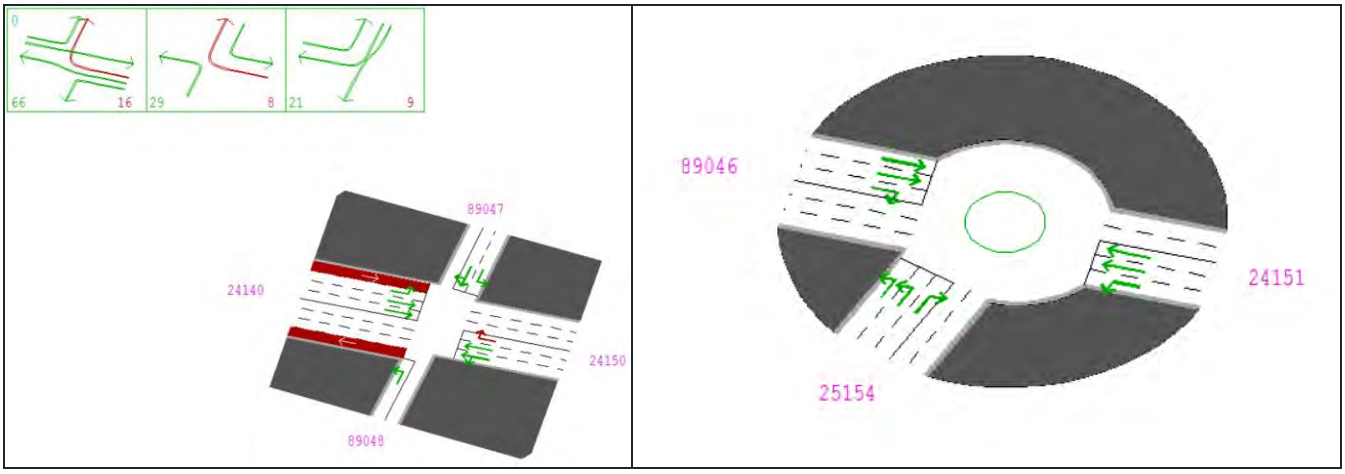


Figure 8-2 – Queensmere and Observatory Access Junctions



8.5.4. The Do Minimum 2036 cordon matrices were provided by Atkins with the model networks however WSP updated the Observatory and Queensmere origin and destination totals to reflect a bespoke trip generation exercise based on the land uses. The trip generation modelled at the Development location in the Do Minimum scenarios is shown in **Table 8-3** for the AM and PM peaks. It is noted that zones 8531 and 8532, which are shown in **Figure 8-1**, are empty zones within the Do Minimum scenario (e.g. the origin and destination trips are both 0).

Table 8-3 – Do Minimum, Existing Development Trip Generation

	AM Peak (08:00 – 09:00)		PM Peak (17:00 – 18:00)	
	Arrival	Departure	Arrival	Departure
Zone 2106 (Observatory)	72	55	217	221
Zone 2107 (Queensmere)	191	98	413	455

2036 DO SOMETHING

8.5.5. The Do Something network is shown in **Figure 8-3**; it can be seen that zones 2106 and 2107 now provide access from the priority-controlled roundabout at 24150. In reality, as part of the Development Proposals, the Queensmere Road / Tesco signalised junction will be one-way southbound only and for the HTC site traffic-only. However, for the purposes of the cordon model assessment, this connector has been removed and, as such, the stage 2 signal timings have been optimised. The updated signalised Tesco junction is shown in **Figure 8-4**.

Figure 8-3 – 2036 Do Something, Network

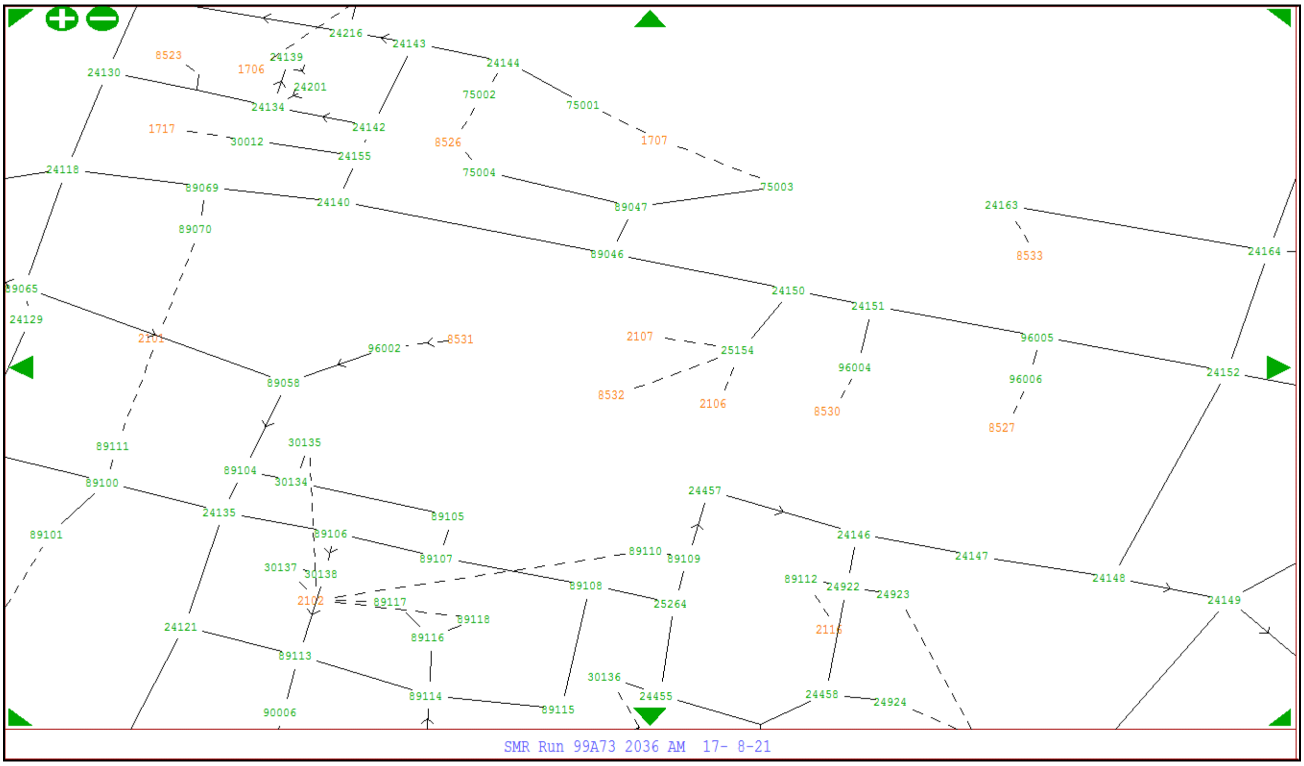
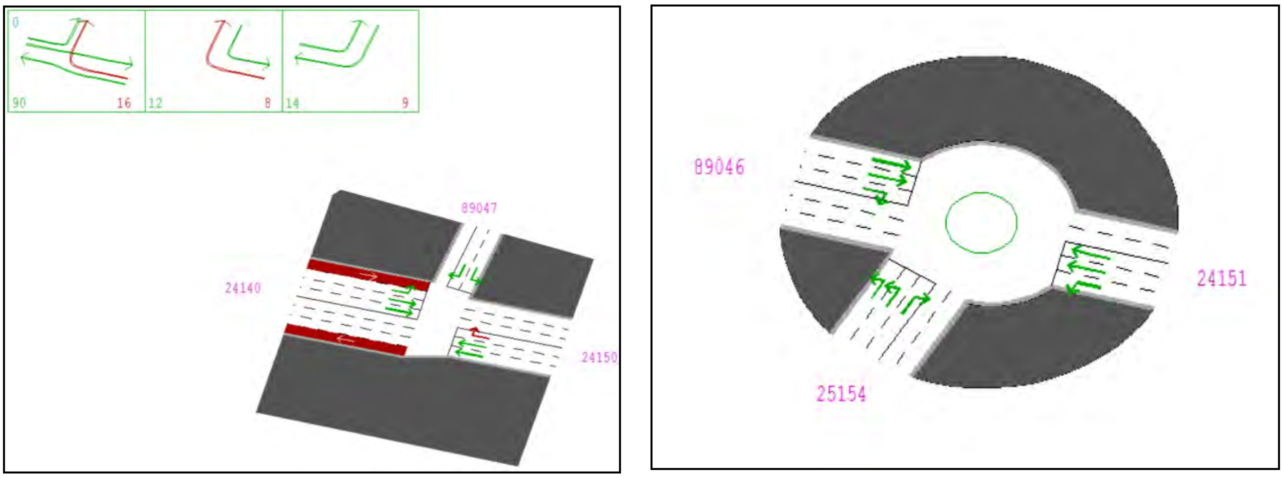


Figure 8-4 – Do Something Access Junctions



8.5.6. WSP have created Do Something matrices for the Maximum Office and Maximum Residential scenarios using the Do Minimum as described earlier and altering the trip generation at Zone 2107 to reflect the changes in land use.

Maximum Office Scenario

8.5.7. The trip generation modelled for the Do Something Maximum Office scenario is presented in **Table 8-4** for the AM and PM peak. It is noted that the following applies:

- Zone 2106 is unchanged between the Do Minimum and Do Something and continues to include trips associated with the Observatory;
- Zone 2107 represents residential trips associated with the Development Proposals;
- Zone 8532 represents the employment and commercial trips; and,
- Zone 8531 is egress only and represents delivery and servicing trips leaving the Development via the exit-only access to the south.

8.5.8. The zone numbers listed above and in **Table 8-4** correspond to those shown in **Figure 8-3**.

Table 8-4 – Do Something Maximum Office Scenario Proposed Development Trips Generation

	AM Peak (08:00 – 09:00)		PM Peak (17:00 – 18:00)	
	Arrival	Departure	Arrival	Departure
Zone 2106 (Observatory)	72	55	217	221
Zone 2107 (Residential)	40	267	191	73
Zone 8532 (Employment/Commercial)	172	25	59	196
Zone 8531 (New Zone)	0	15	0	15

8.5.9. As set out in the Maximum Office scenario section, it should be noted the previously proposed Site access arrangements have been amended to address comments received from SBC. The Illustrative Scheme now shows a new vehicle access for the Site in the form of a left-in entry on the westbound lane of the A4 Wellington Street, which has not been included in the SATURN model due to the timing of this change late in the programme for the planning application.

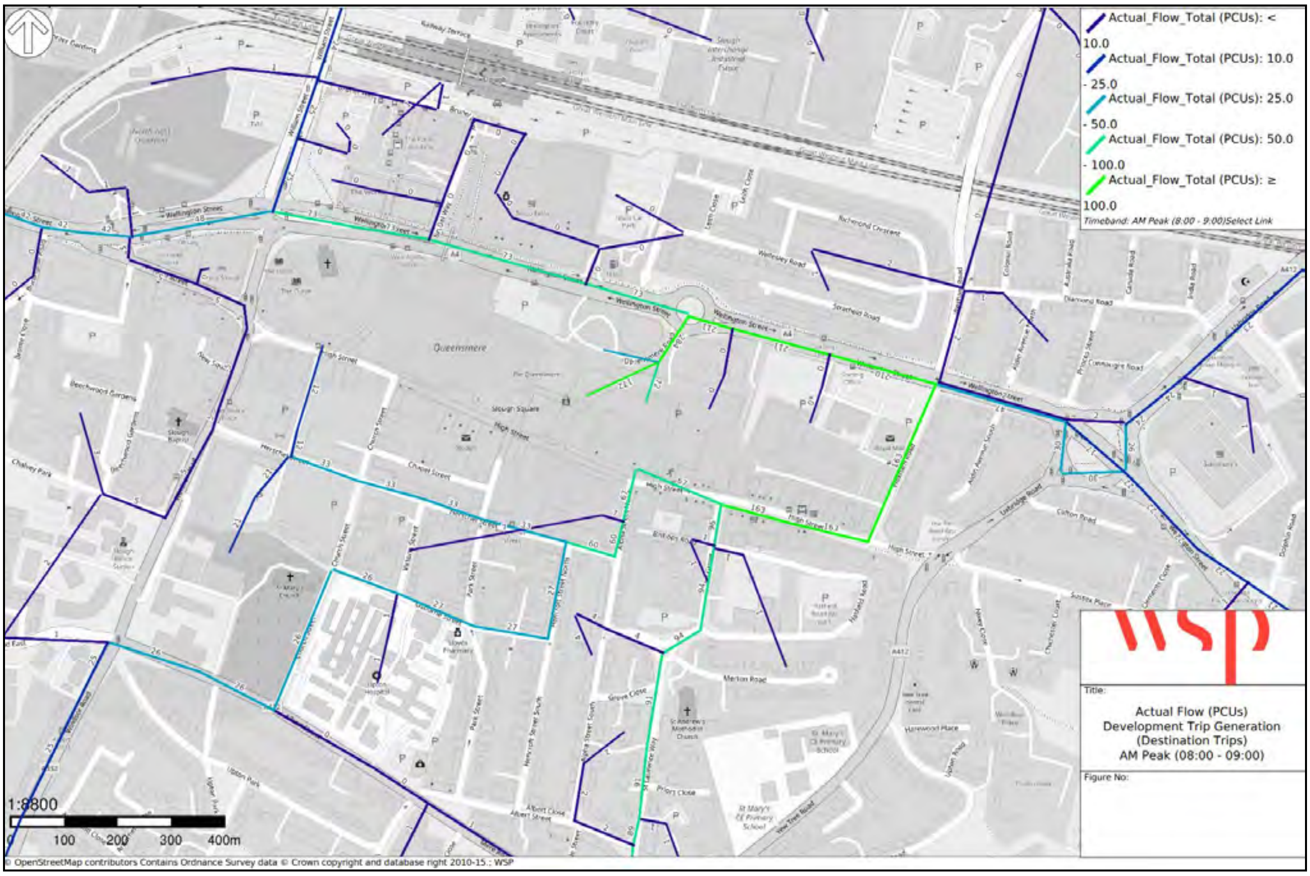
8.5.10. However, due to the proximity between the new vehicle access and the previous main vehicle access, the HTC roundabout, it is concluded the change would not warrant updates to the SATURN model. A review has been undertaken and it is considered the change to the access arrangement would only effect the assessment of two junctions on the A4 Wellington Street, firstly the HTC roundabout junction, with changes to the turning movements at this junction, and secondly the Queensmere Road / A4 / Tesco access signalised junction. The turning movement at these two junctions have been manually forecast and the models have been assessed. These two junctions have been assessed using ARCADY and LinSig to assess the impact of the revised turning movements at these junctions as a result of the revised Site access arrangements, the results of which are presented in Chapter 9.

8.5.11. Select Link analysis is used to graphically display loaded paths (these have been obtained through assignment) along a chosen link and consists of various route paths from origin points to destination points. In essence, a select link demonstrates where all flow that travels along a selected link travels from to get to that point and how it disperses on the highway network beyond the selected link.

8.5.12. **Figure 8-5** to **Figure 8-8** present select link analysis undertaken on the proposed Maximum Office development inbound and outbound links to demonstrate the distribution of the trip generation on the existing highway network within the vicinity of the development.

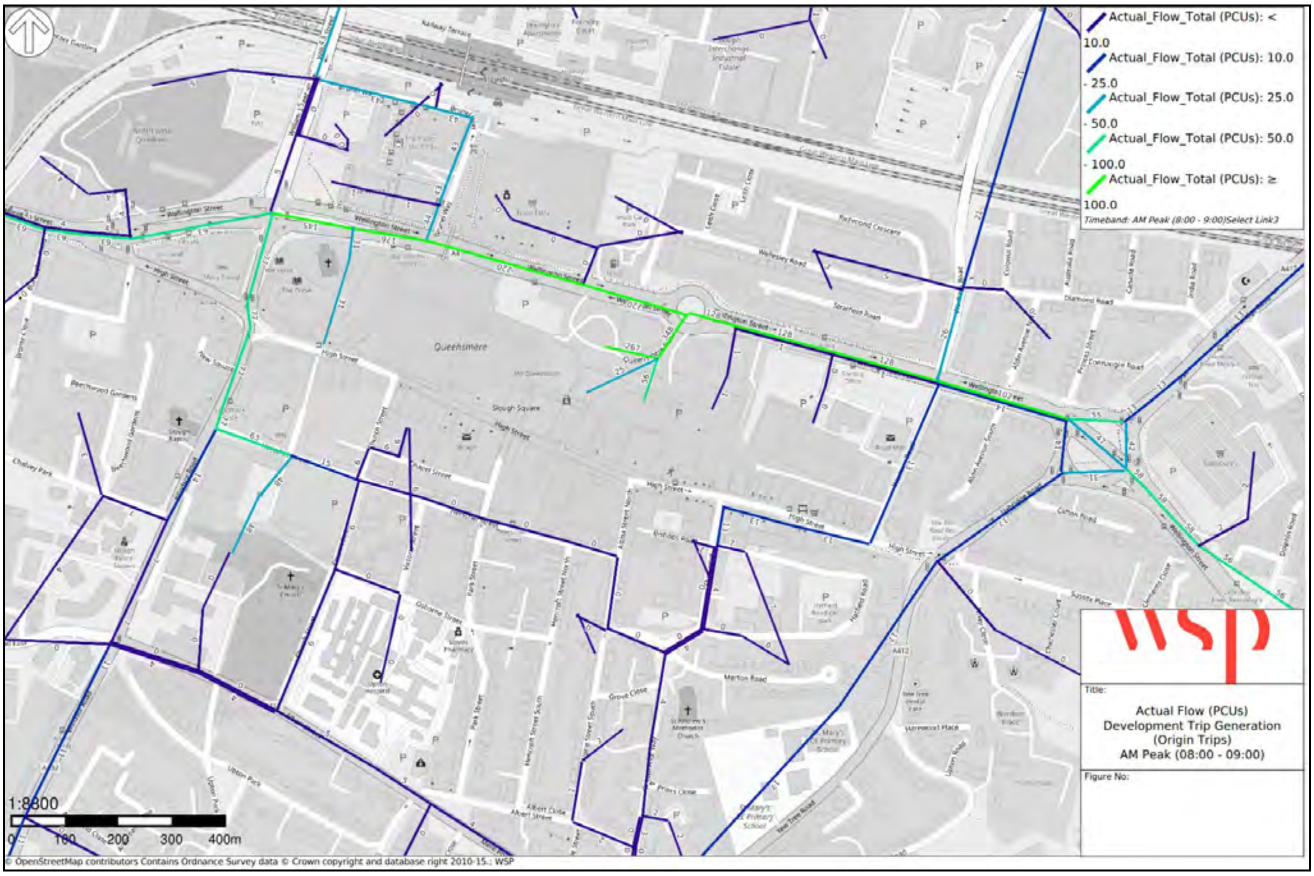
8.5.13. Figure 8-5 and **Figure 8-6** present the AM Peak arrivals and departures trip distribution respectively and show a combination of the residential, employment and commercial trips. In the AM Peak, 211 PCUs (74%) of the total 284 PU arrival trips arrive from Wellington Street east with the vast majority (163 PCUs) originating along High Street and Wrexham Road northbound. To the west of the development, most of the arrivals travel along Bath Road (48 of 73) with a further 25 trips travelling southbound along B416 William Street.

Figure 8-5 – Maximum Office Scenario Proposed Development, Arrivals, AM Peak



8.5.14. As shown in **Figure 8-6**, 220 of the total 328 departures travel west along A4 Wellington Street towards the A4 / B416 junction; the distribution of trips is relatively equal southbound along William Street and westbound along A4 Wellington Street (east of the A4 / B416 junction).

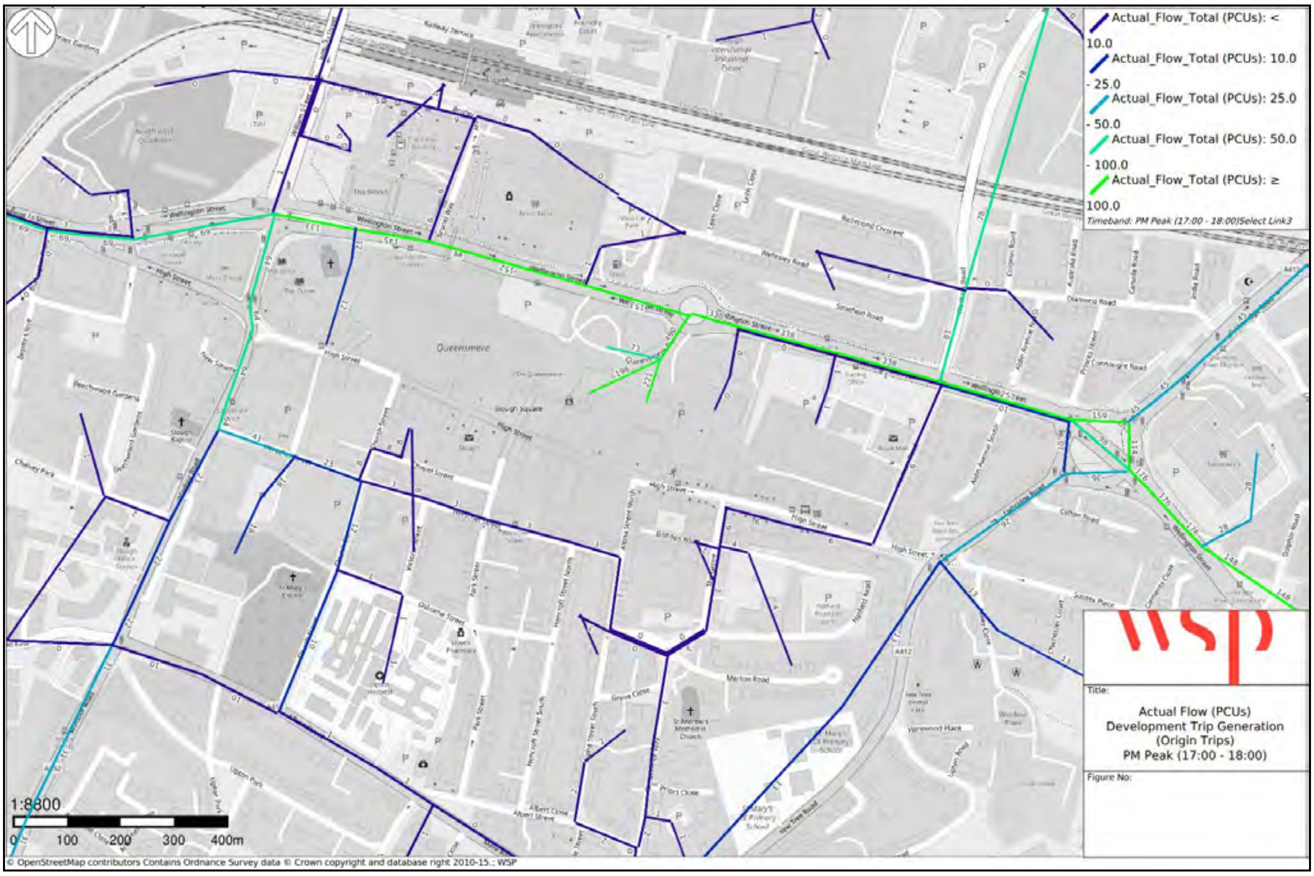
Figure 8-6 – Maximum Office Scenario Proposed Development, Departures, AM Peak



8.5.15. Figure 8-7 and **Figure 8-8** present the PM Peak arrivals and departures trip distribution respectively; the figures show a combination of the residential, employment and commercial trips. In the PM Peak, 286 PCUs (61%), of the total 467 PU arrival trips, arrive from Wellington Street east with relatively similar proportions originating along High Street / Wrexham Road northbound and further along Wellington Street (165 of 286, 57%), east of A4 / A412 junction (121 of 286, 42%).

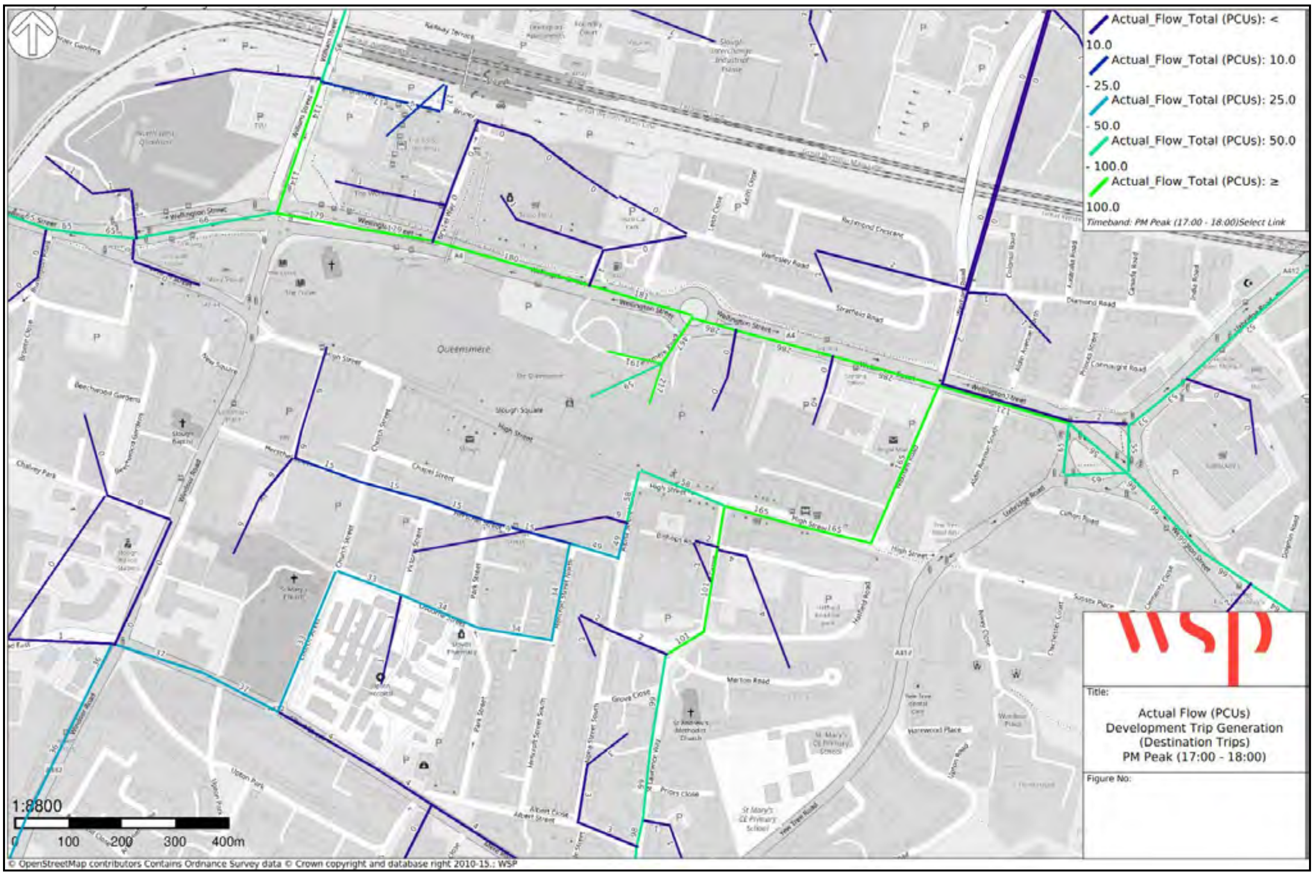
8.5.16. To the west of the development, most of the arrivals travel along William Street southbound (114 of 179, 64%) with a further 66 trips travelling eastbound along A4 Wellington Street.

Figure 8-7 – Maximum Office Scenario Proposed Development, Arrivals, PM Peak



8.5.17. As shown in the PM peak departure trips in **Figure 8-8**, 338 (69%) of the total 490 departures travel east along A4 Wellington Street with 81 trips travelling northbound along Wrexham Road and the remaining 257 travelling towards the A4 / A412 junction. Of the 153 departures travelling westbound along A4 Wellington Street, approximately 69 (45%) continue along Wellington Street whilst 64 (42%) travel southbound along William Street; the remaining proportion distribute onto the local highway network within the vicinity of the proposed development.

Figure 8-8 – Maximum Office Scenario Proposed Development, Departures, PM Peak



MAXIMUM OFFICE SCENARIO RESULTS

8.5.18. The section highlights some of the key results from the strategic modelling undertaken and a series of comparison between the Do Minimum and Do Something Maximum Office scenarios for the AM and PM peak to demonstrate the impacts of a proposed development scenario on the highway network. The analysis includes:

- Actual Flow Difference;
- Link Delay Difference;
- Volume Capacity Ratios; and,
- Journey Times.

Maximum Office Scenario - Actual Flow Difference

8.5.19. The actual flow difference plots were derived to show the difference between the Do Minimum and Do Something Maximum Office scenario and to present the impact on the existing highway network within Slough. These are shown in Figure 8-9 and **Figure 8-10** for the AM and PM peak respectively.

8.5.20. In the Do Something Maximum Office scenario, the southern connector at the Tesco signalised junction is removed; in reality, this will allow southbound movements into the HTC building and as such the signals at this junction have been optimised in the Do Something Maximum Office scenario to account for the removal of the connector. As a result of this signal optimisation and more green time being dedicated to the main through-movement, there is some re-routing towards Wellington Street from parallel routes.

8.5.21. As a consequence of the proposed scheme the results show there is generally an increase in actual flows along the A4 particularly along Wellington Street and the A412, and to the east of the development at the A4 Wellington Street / A412 junction.

Figure 8-9 – 2036 Do Something Maximum Office – Do Minimum, Actual Flow (PCUs), AM Peak (08:00 – 09:00)

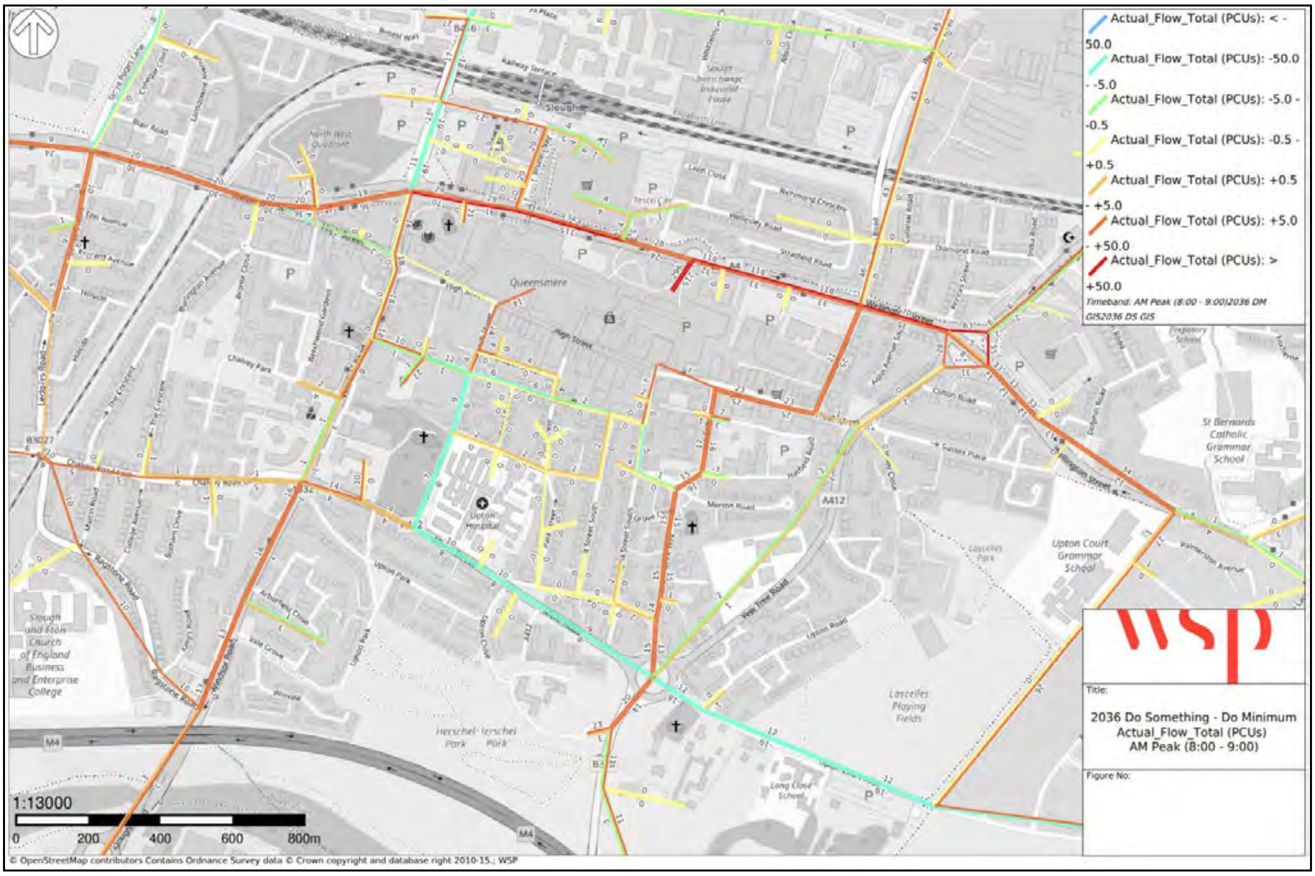
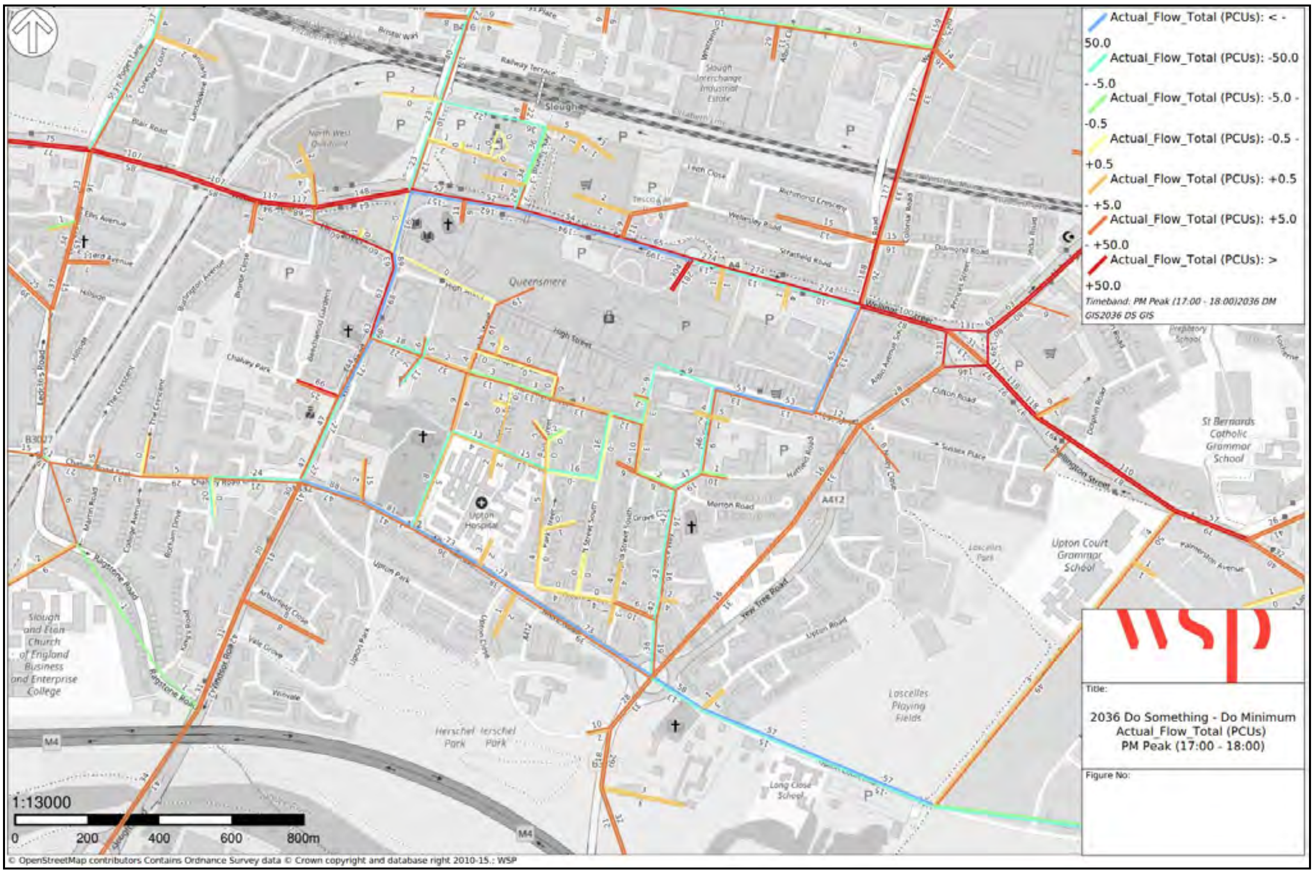


Figure 8-10 – 2036 Do Something Maximum Office – Do Minimum, Actual Flow (PCUs), PM Peak (17:00 – 18:00)



Maximum Office Link Delay Difference

8.5.22. Figure 8-11and **Figure 8-12** show the link delay difference plots between the Do Something Maximum Office and Do Minimum scenarios for the AM and PM peak.

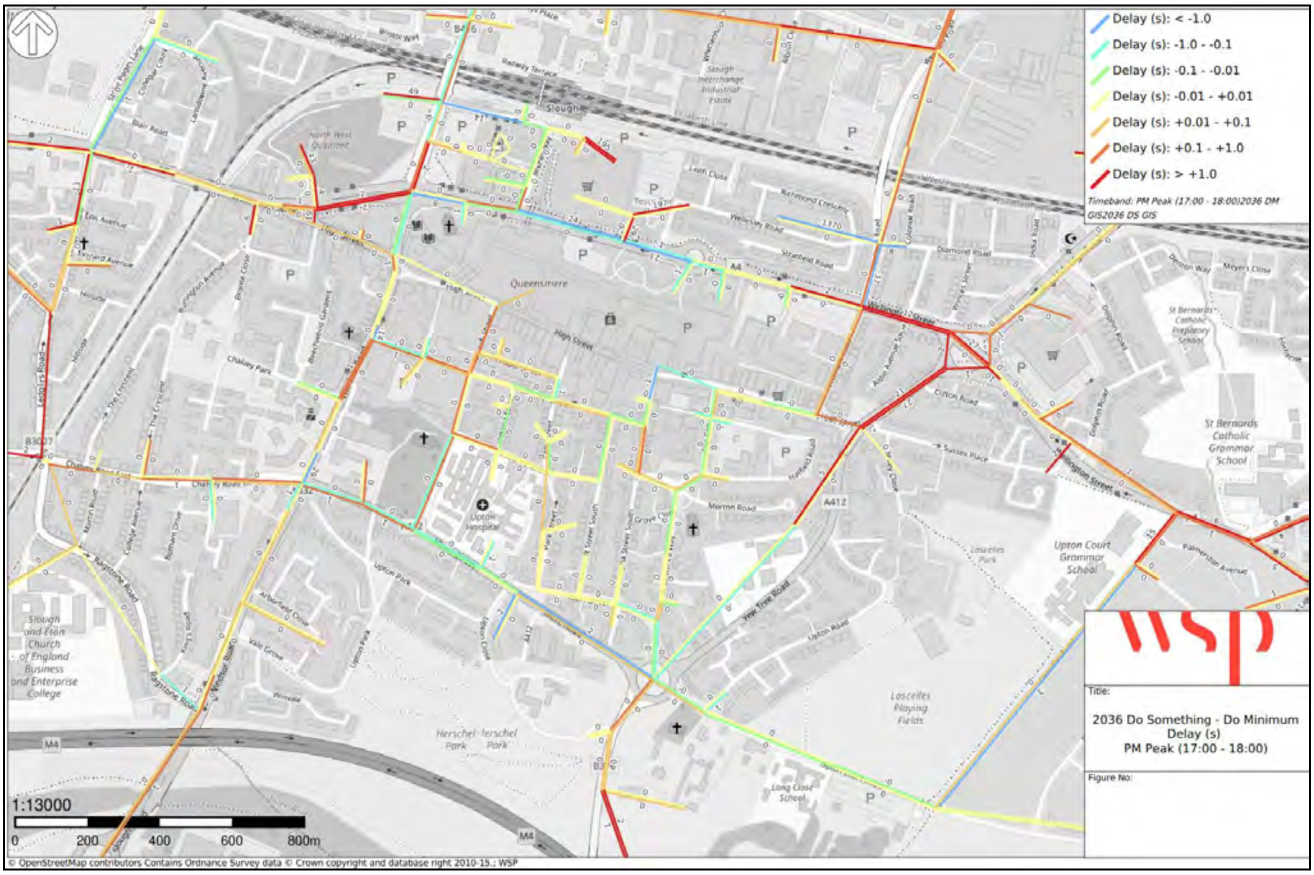
8.5.23. Overall, the plots show there is little to no change in the link delay between the Do Something Maximum Office scenario and Do Minimum, particularly along the A4, A412, B416 and A355. The removal of one of the signal phases at the Tesco signalised junction and subsequent optimisation of signals has led to a reduction in eastbound delay of 16 seconds and westbound reduction of 19 seconds in the AM Peak; in the PM peak, the mirroring reductions are 24 seconds eastbound and 23 seconds westbound respectively

Figure 8-11 – 2036 Do Something Maximum Office – Do Minimum, Delay (s), AM Peak (08:00 – 09:00)

8.5.24. The proposed development is shown to have a greater impact on link delays at the A4 Wellington Street / A412 roundabout in the PM peak with the greatest increase in link delay shown on the A412 Uxbridge Road approach of 21 seconds northbound and 27 seconds southbound. It is noted that the most significant increases in delay correspond to the links that see the greatest increase in PCU volumes as a result of the proposed development.

8.5.25. It is noted that some of the link connectors (e.g. where the zones load onto the network) demonstrate increases in delay between Do Minimum and Do Something Maximum Office scenarios in both the AM and PM peak however the Do Minimum already presented high delays in these locations therefore small increases in trips attributed to the proposed development's trip generation exponentially deteriorated the delay in these locations.

Figure 8-12 – 2036 Do Something Maximum Office – Do Minimum, Delay (s), PM Peak (17:00 – 18:00)



Maximum Office - Volume Capacity Difference

8.5.26. The Volume Capacity (VC) Ratio was assessed based on the worst turn at the junction, therefore the results only apply to one arm of the junction; the results have looked at the comparison between the worst turn V/C in the Do Minimum and Do Something Maximum Office scenarios to determine which junctions are adversely impacts as a result of the proposed development.

8.5.27. In order to identify which locations require more detailed local junction capacity modelling, an assessment criteria has been defined; junctions where the worst-turn V/C is greater than 85% in the Do Something Maximum Office – AM or PM peak scenario – and has an increase of more than 2% between the DM and DS, will be modelled in detail within junction-specific software. As exception to the criteria is in cases where a node representing a zone (or multiple zones) access/egress loading onto the highway network. In addition to the Site access junction, the following junctions have been identified as requiring more detail assessment:

- A4 Wellington Street / A412 Uxbridge Road signalised roundabout;
- A4 Wellington Street / Brunel Way signalised junction; and
- A4 Wellington Street / Tesco exit / Queensmere Road signalised junction.

8.5.28. The volume capacity results are presented in Figure 8-13 to **Figure 8-16** for the AM and PM peak for Do Minimum and Do Something Maximum Office scenarios respectively.

8.5.29. In Do Minimum AM and PM peak the volume capacity ratio at the A4 / B416 junction is between 79–84%, whereas with the proposed development in the Do Something Maximum Office scenario, AM and PM peak show that A4 / B416 junction has a maximum volume capacity ratio of 84% therefore demonstrating that the development does not deteriorate the worst-turn V/C at this junction.

8.5.30. At the A4 / A412 junction in the Do Minimum, the AM and PM peak maximum volume over capacity is between 91-96%; in the Do Something, the maximum worst-turn V/C increases to 101% on the A4 Wellington Street eastbound approach. In the PM peak, despite the increases in vehicle volumes and the link delay increases presented earlier in this chapter, the maximum worst-turn V/C remains as 96% therefore demonstrating negligible change in V/C between the Do Something Maximum Office and Do Minimum.

Figure 8-13 – Volume Capacity Ratio, Do Minimum, AM Peak

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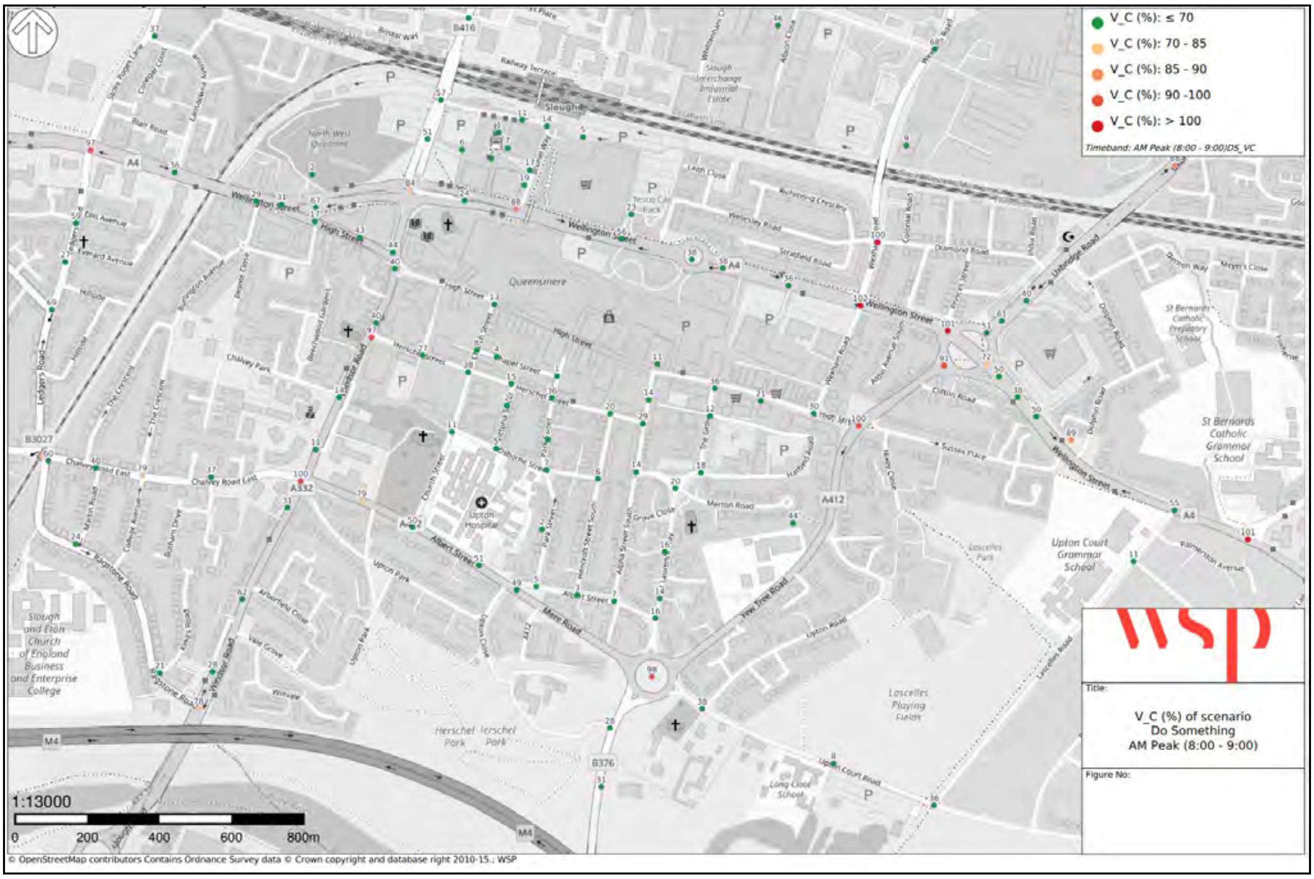
Figure 8-14 – Volume Capacity Ratio, Do Minimum, PM Peak

Figure 8-15 – Volume Capacity Ratio, Do Something Maximum Office, AM Peak



8.5.31. In the Do Something Maximum Office PM Peak, worst-turn junction volume over capacity at the Wellington Street / Tesco access signalised junction significantly improves from 139 to 53 which is primarily attributed to a reduction in westbound flow in addition to the optimisation of signals. The reduction in flow is partially due to the relocation of the zone 2107 access/connector but also the change in land use from employment to residential has resulted in a change of trip generation and distribution.

Figure 8-16 – Volume Capacity Ratio, Do Something Maximum Office, PM Peak

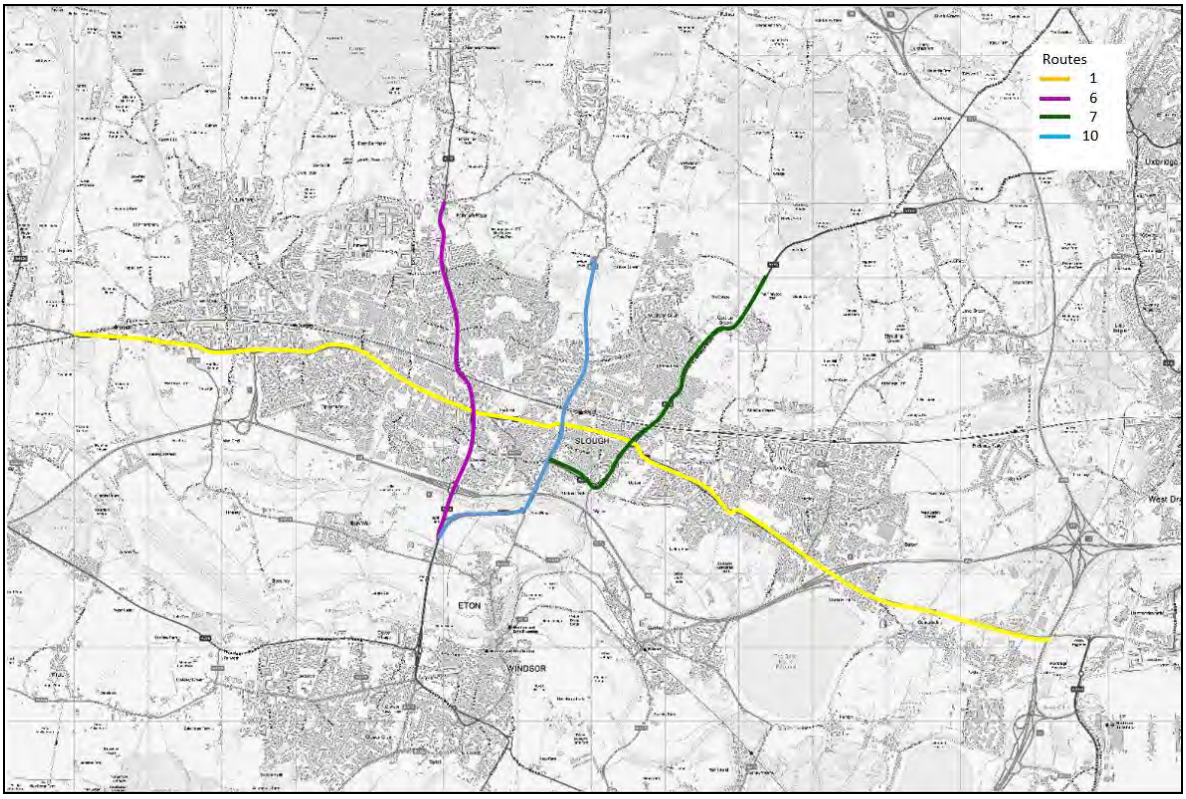
Maximum Office - Journey Time Difference

8.5.32. Journey times have been extracted along key corridors within Slough in proximity of the development, and along corridors which are forecast to see the greatest increase in vehicle volumes as a result of the proposed development. The key routes are described in **Table 8-5** and presented in **Figure 8-17**.

Table 8-5 – Journey Time Locations

Route	Location
1	A4
6	A355
7	A412
10	B416

Figure 8-17 – Maximum Office Scenario Journey Time Routes



8.5.33. The journey times along each route are compared to the base year and Do Minimum results and are shown in **Table 8-6**. The results present the change in modelled journey times between Do Minimum and the Base Year; and Do Something Maximum Office against Do Minimum, for both the AM and PM periods.

Table 8-6 – Journey Times Comparison (in seconds)

ID / Name		Length (m)	Base Year		Do Minimum		Do Something Max. Office			
			AM	PM	AM	PM	AM	PM	DS vs DM AM	DS vs DM PM
1	Route1_EB	4160	676	633	758	723	770	714	12	-9
2	Route1_WB	4170	912	782	980	854	996	844	16	-10
3	Route6_NB	2595	375	432	420	498	421	492	1	-6
4	Route6_SB	2599	450	536	499	707	505	656	6	-51
5	Route7_NB	2614	361	374	397	408	401	407	4	-1
6	Route7_SB	2624	408	384	419	388	425	386	6	-2
7	Route10_NB	3420	551	514	593	591	596	573	3	-18
8	Route10_SB	3636	612	596	692	695	705	628	13	-67

8.5.34. Overall the results show there is an increase in journey time between the 2017 Base and the Forecast Year Do Minimum scenario, which is expected due to the level of growth predicted between 2017 and 2036.

8.5.35. When comparing Do Something Maximum Office to Do Minimum, **Table 8-6** presents a small increase in journey times for all 8 one-way routes within Slough in the AM peak; the greatest increase of 16 seconds is shown to be along the A4 westbound whilst the smallest increase of 1 second is northbound along Route 6. In contrast, during the PM peak the Do Something Maximum Office scenario demonstrates a reduction in journey times along all routes when compared with the Do Minimum; this is primarily attributed to the optimisation of signals at the Tesco access along Wellington Street and the associated re-routing that occurred as a result of this change.

Maximum Residential Scenario

8.5.36. WSP has also undertaken strategic modelling work to assess the impact of the Maximum Residential scenario. The Maximum Residential scenario replaces the 40,000sqm Office space with 650 additional residential dwellings, keeping all other components of the development proposals the same. The Maximum Residential scenario assesses the following development mix:

- 1,600 residential dwellings;
- 12,000 sqm Town Centre Uses[4]; and
- 3,750sqm Sui Generis.

8.5.37. The trip generation modelled for the Do Something Maximum Residential scenario is presented in **Table 8-7** for the AM and PM peak. It is noted that the following applies:

- Zone 2106 is unchanged between the Do Minimum and Do Something Maximum Residential scenario and continues to include trips associated with the Observatory;
- Zone 2107 represents residential trips associated with the proposed residential development;
- Zone 8532 represents the employment and commercial trips (mainly associated with the Town Centre and sui generis uses); and,
- Zone 8531 is egress only and represents delivery and servicing trips leaving the development via the exit-only access to the south.

8.5.38. As set out in the Maximum Office Scenario section, it should be noted the previously proposed Site access arrangements have been amended to address comments received from SBC. The Illustrative Scheme now shows a new vehicle access for the Site in the form of a left-in entry on the westbound lane of the A4 Wellington Street, which has not been included in the SATURN model due to the timing of this change late in the programme for the planning application.

8.5.39. However, due to the proximity between the new vehicle access and the previous main vehicle access, the HTC roundabout, it is concluded the change would not warrant updates to the SATURN model. A review has been undertaken and it is considered the change to the access arrangement would only effect the assessment of two junctions on the A4 Wellington Street, firstly the HTC roundabout junction, with changes to the turning movements at this junction, and secondly the Queensmere Road / A4 / Tesco access signalised junction. The turning movement at these two junctions have been manually forecast and the models have been assessed. These two junctions have been assessed using ARCADY and LinSig to assess the impact of the revised turning movements at these junctions as a result of the revised Site access arrangements, the results of which are presented in Chapter 9.

8.5.40. The zone numbers listed above correspond to those shown in **Figure 8-18**.

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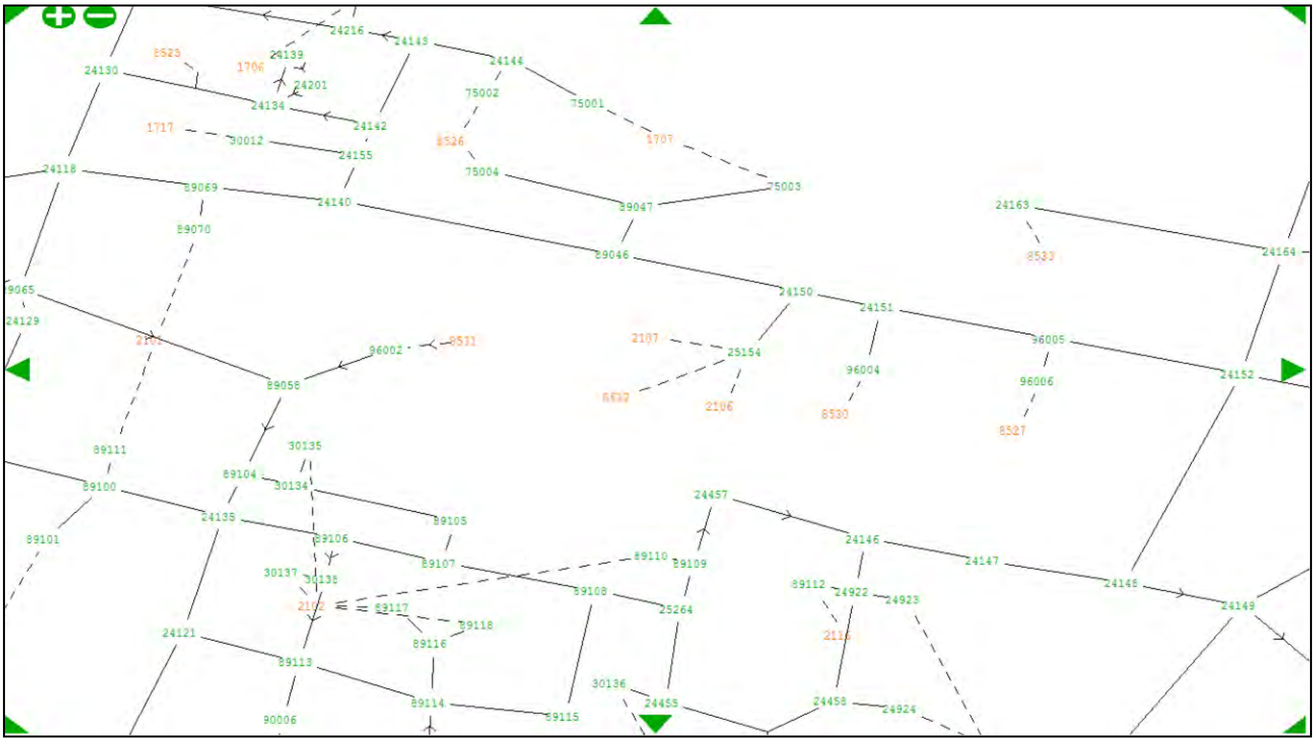
[4] Whilst the maximum floorspace cap for Class E & Class F uses is stated as 12,000 sqm (GEA) and the maximum floorspace cap for Sui Generis uses is stated as 3,750 sqm (GEA), we propose to limit the combined maximum floorspace cap across both Class E & F and Sui Generis uses to 12,000 sqm (GEA).

Figure 8-18 – Volume Capacity Ratio, Do Something Maximum Office, PM Peak



8.5.41. The trip generation at Zone 2107 has been increased to allow for 650 additional residential dwellings, and Zone 8532 has been reduced to reflect the corresponding reduction in office floorspace. The trips associated with the Maximum Residential scenario are presented in **Table 8-7** for the AM and PM peak.

Table 8-7 – Do Something Maximum Residential Proposed Development Trip Generation

	AM Peak (08:00 – 09:00)		PM Peak (17:00 – 18:00)	
	Arrival	Departure	Arrival	Departure
Zone 2106 (Observatory)	72	55	217	221
Zone 2107 (Residential)	57	376	269	103
Zone 8532 (Employment/Commercial)	16	12	49	50
Zone 8531 (New Zone)	0	15	0	15

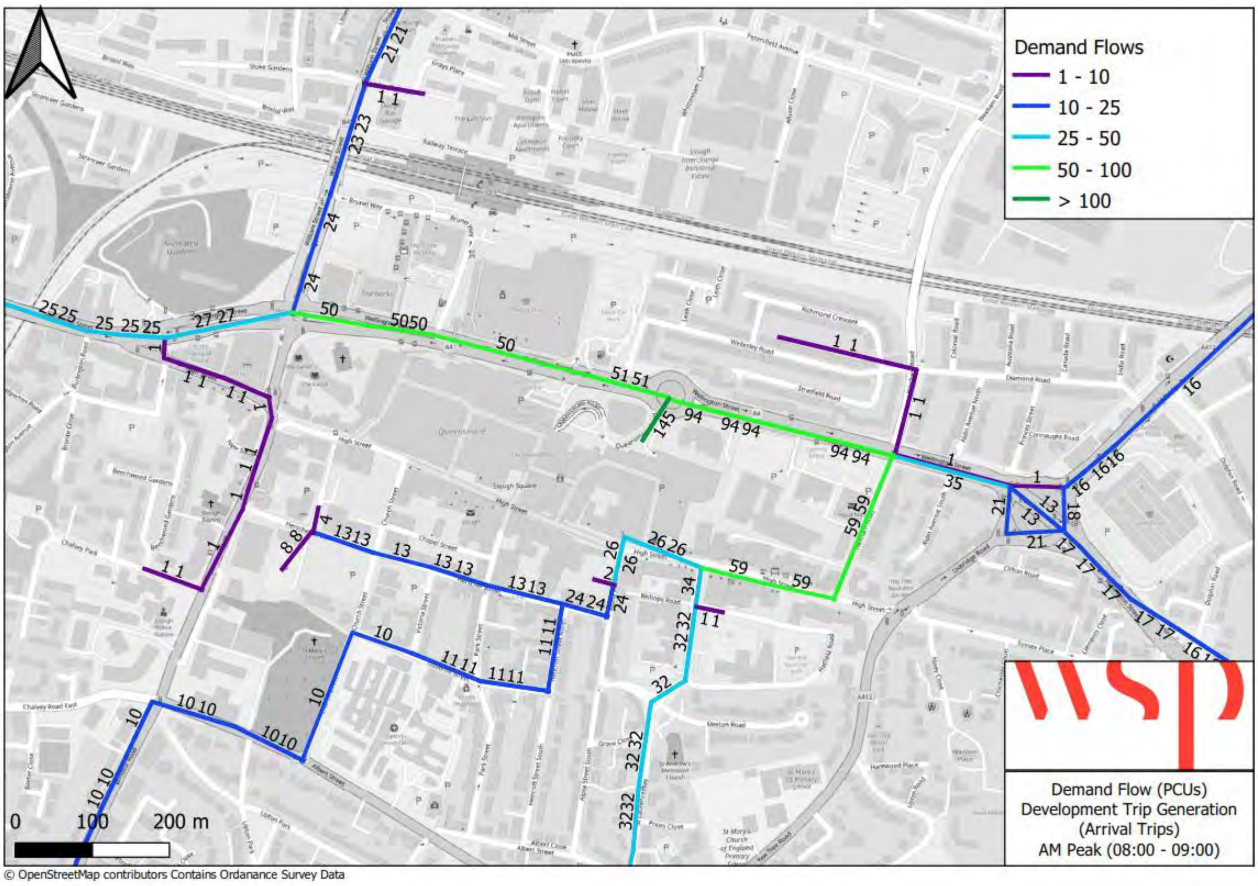
8.5.42. Select Link analysis is used to graphically display loaded paths (obtained through assignment) along a chosen link and consists of various route paths from origin points to destination points. In essence, a select link demonstrates where all flow that travels along a selected link travels from to get to that point and how it disperses on the highway network beyond the selected link.

8.5.43. **Figure 8-19** to **Figure 8-22** presents select link analysis undertaken on the proposed Maximum Residential development scenario on both inbound and outbound links to demonstrate the distribution of the trip generation on the existing highway network within the vicinity of the development.

8.5.44. Figure 8-19 to **Figure 8-20** present the AM Peak arrivals and departures trip distribution respectively; the figures show a combination of the residential and commercial trips.

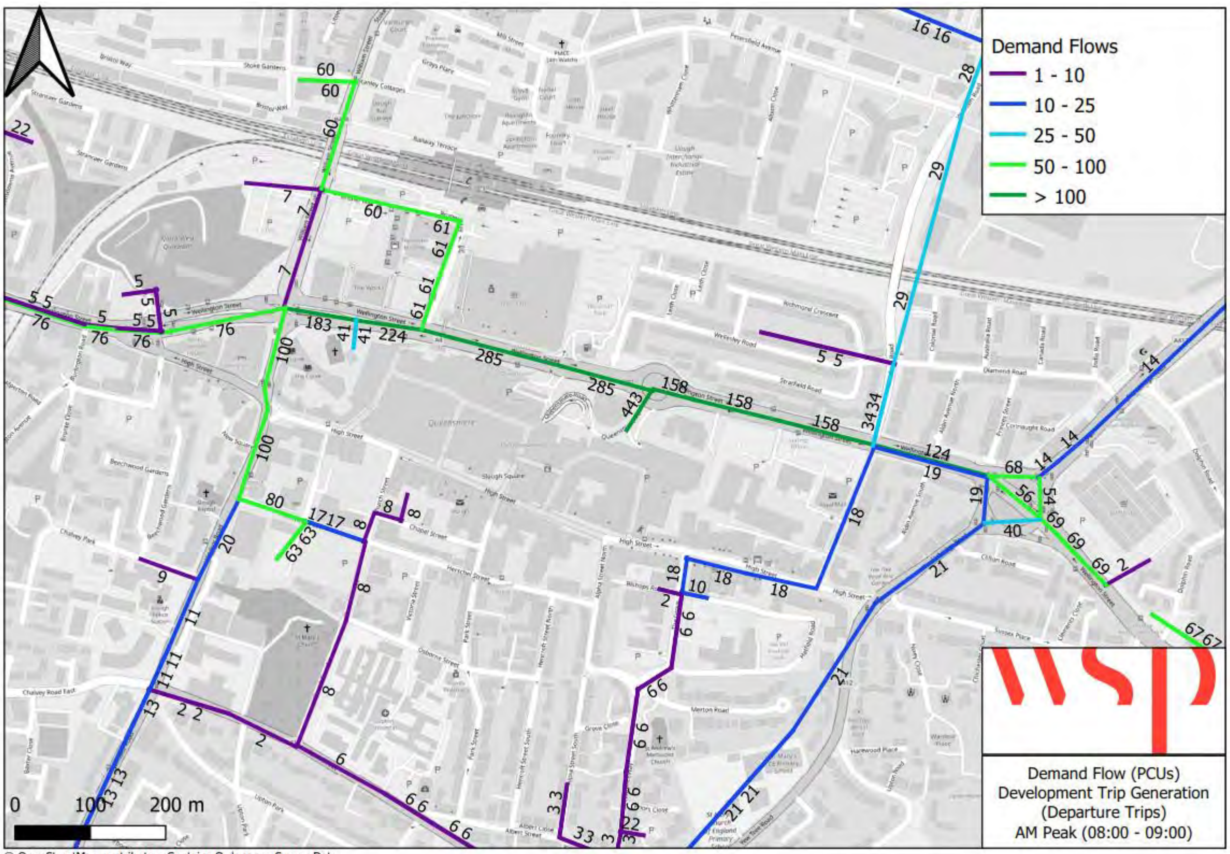
8.5.45. **Figure 8-19** shows 94 PCUs (65%), of the total 145 PCU arrival trips, arrive from Wellington Street east with the largest proportion of flow originating from Wexham Road south (59 PCUs). Similar magnitudes of flow enter the A4 / A412 Uxbridge Road through junction from A412 Uxbridge Road north and A4 Sussex Place (16 PCUs and 17 PCUs respectively).

Figure 8-19 – Maximum Residential Proposed Development, Arrivals, AM Peak



8.5.46. **Figure 8-20** illustrates that 285 PCUs (64%), of the total 443 PCU departure trips access the wider network using Wellington Street west with vast majority travelling south on A332 Windsor Road (100 PCUs). The remaining 36% of development flow (158 PCUs) travel east of the development and use the A4 Wellington Street / A412 Uxbridge Road through junction where 69 trips continue east.

Figure 8-20 – Maximum Residential Proposed Development, Departures, AM Peak

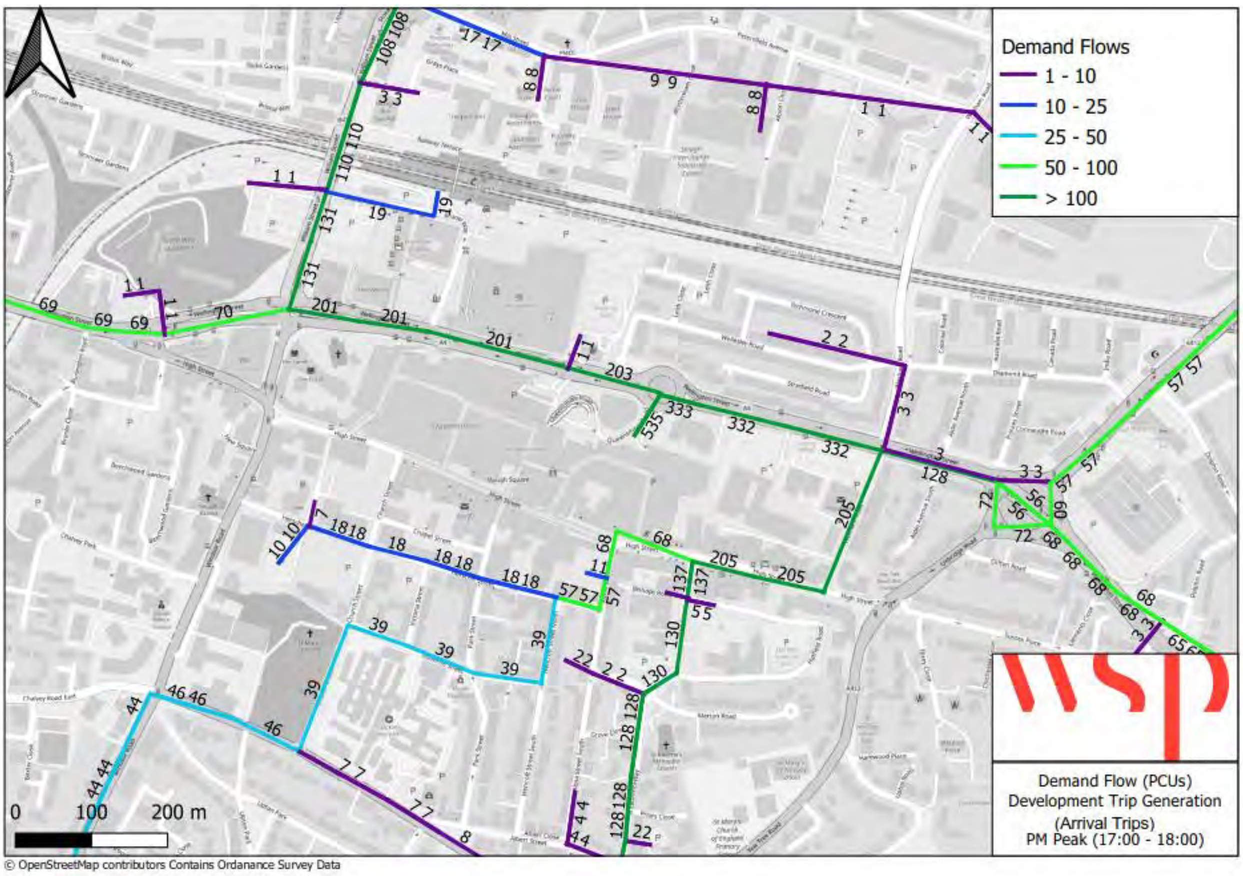


8.5.47. The select link analysis presents a change in tidality of flow when comparing the Maximum Residential scenario with the flows for the Maximum Office scenario, where there are increased departures from the site of 95 PCUs and reductions of arrivals of 139 PCUs.

8.5.48. **Figure 8-21** and **Figure 8-22** present the PM Peak arrivals and departures trip distribution respectively.

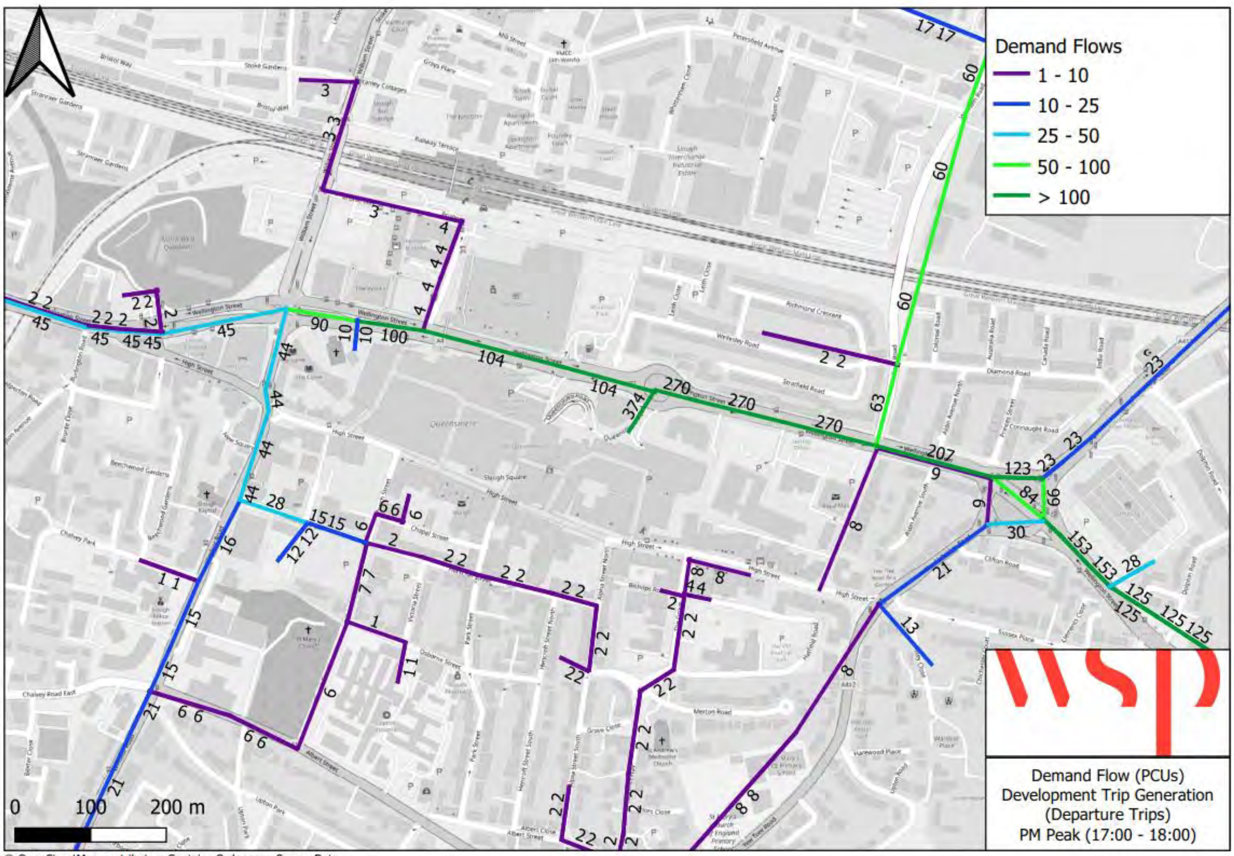
8.5.49. **Figure 8-21** highlights that during the PM Peak 333 PCUs (62%), of the total 535 PCU arrival trips, arrive from Wellington Street east with a large proportion of these originating along High Street / Wexham Road northbound. There are 201 arrival flows from the west of Wellington Street, of which 131 (65%) travel southbound on Stoke Road.

Figure 8-21 – Maximum Residential Proposed Development, Arrivals, PM Peak



8.5.50. As shown in the PM peak departure trips in **Figure 8-22**, 270 (72%) of the total 374 departures travel east along A4 Wellington Street with 63 trips travelling northbound along Wexham Road and the remaining 207 trips travelling towards the A4 / A412 junction. Of the 104 departures travelling westbound along A4 Wellington Street, approximately 45 (43%) continue along Wellington Street whilst 49% travel southbound along William Street; the remaining proportion distribute onto the local highway network within the vicinity of the proposed development.

Figure 8-22 – Maximum Residential Proposed Development, Departures, PM Peak



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8.5.51. The total approach flow at the HTC roundabout junction is detailed for the Maximum Office scenario and Maximum Residential scenario in **Table 8-8** to provide a comparison.

Table 8-8 –Total Entry flow at HTC Junction, Arrival Flow, Maximum Residential vs Maximum Office

Approach Arm	Maximum Office		Maximum Residential	
	AM	PM	AM	PM
Wellington Street Eastern Arm	74.2% (211)	38.7% (181)	64.8% (94)	61.0% (333)
Wellington Street Western Arm	25.8% (73)	61.3% (286)	35.2% (51)	38.0% (203)

8.5.52. It is apparent that during the AM Peak of the Maximum Office scenario there are greater proportions of flow accessing the site via the Wellington Street eastern arm, 74.2% compared with 64.8% in the Maximum Residential scenario; this is likely as a result of the routing from the strategic network M25, A4 London Road and M4 as the development site is a trip attractor in the Maximum Office scenario. During the PM peak there is rerouting evident with 61% of total flows accessing the site via the Wellington Street eastern arm in the Maximum Residential scenario whereby 61% accessed the site using the western arm in the Maximum Office scenario.

MAXIMUM RESIDENTIAL RESULTS

8.5.53. The results section highlights the key results from the strategic modelling undertaken for the Maximum Residential scenario and a series of comparison between the Do Minimum and Do Something Maximum Residential scenarios for the AM and PM peak to demonstrate the impacts of the proposed development scenario on the existing highway network. The results analysis includes:

- Actual Flow Difference;
- Link Delay Difference; and
- Volume Capacity Ratios.

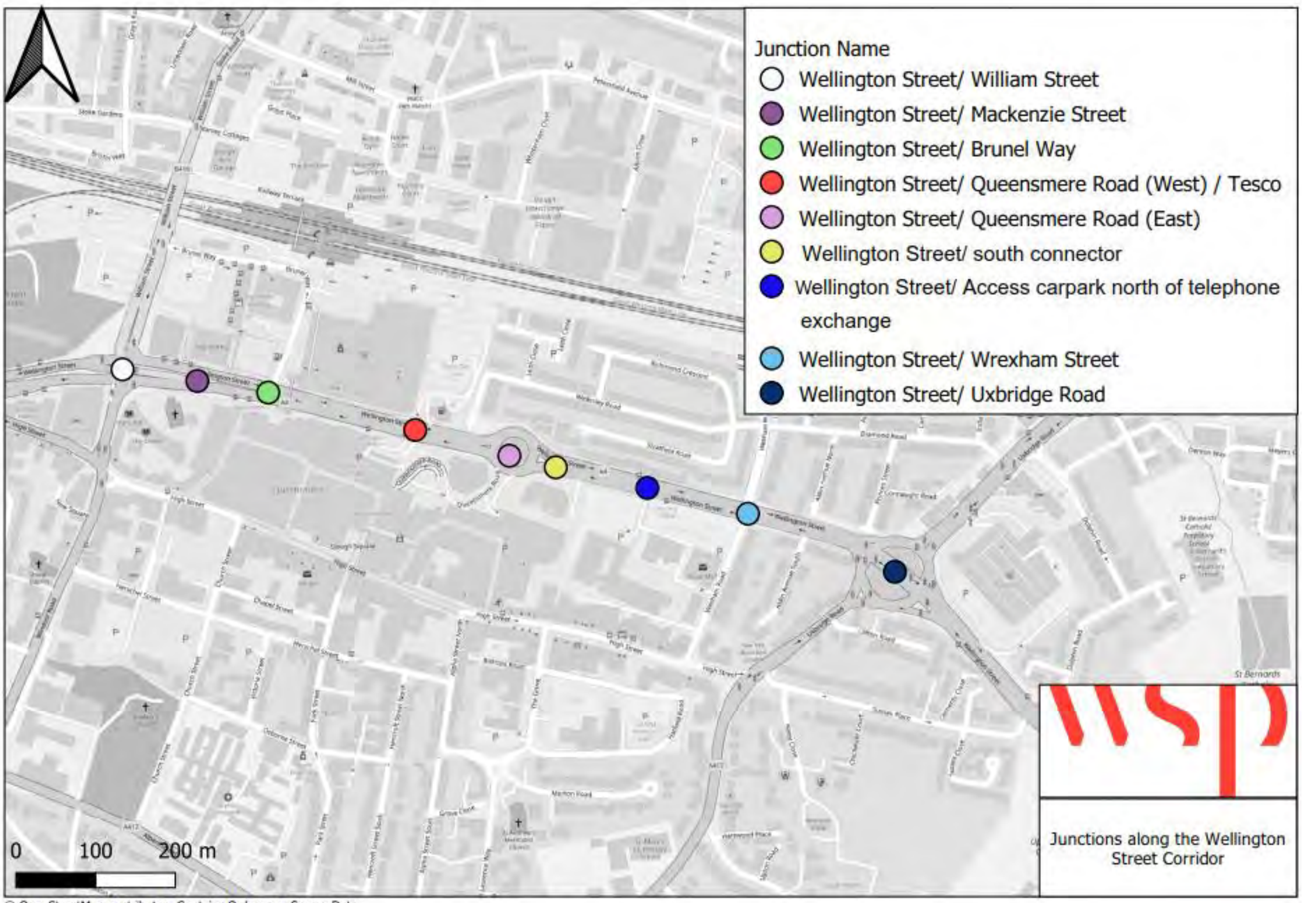
Maximum Residential - Actual Flow Difference

8.5.54. The actual flow difference plots were derived to show the difference between the Do Minimum, Maximum Office and Maximum Residential scenarios and present the proposed impact of the development on the existing highway network within Slough.

8.5.55. The Maximum Residential scenario uses the same network as that applied for the Maximum Office scenario; the southern connector at the Tesco signalised junction is removed; in reality, this will allow southbound movements into the HTC building and as such the signals at this junction have been optimised in the Do Something Maximum Residential scenario to account for the removal of the connector.

8.5.56. Flow change at all junctions along the A4 Wellington Street corridor have been assessed for the AM and PM peak, presenting the real and percentage flow change. **Figure 8-23** details the locations of these junctions and **Table 8-8** and **Table 8-9** show the total approach flows during the AM and PM peak respectively.

Figure 8-23 - Key junctions assessed along the Wellington Street Corridor



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8.5.57. **Table 8-8** shows there are increases of flow using junctions along the A4 Wellington Street corridor during the AM peak. The largest increase of total flow at the junction when comparing the Maximum Residential and Do Minimum scenario is at the Wellington Street/ Queensmere Road junction where increases of 346 flow are apparent; there are increases of 388 flows seen on the Queensmere Road northbound approach, this is due to the increased departures anticipated at the residential site. Similarly, there are increases at the Wellington Street/ Brunel Way junction of up to 246 flows, where 202 increases approach from junction from Wellington Street east, given 64% of all departure trips route west on Wellington Street this is unsurprising.

8.5.58. Comparisons between the Maximum Residential and Maximum Office scenarios present decreases of between 38 (2%) and 98 (5%) flow using Wellington Street / Queensmere Road (East) Junction, Wellington Street / Wexham Street Junction. The largest decreases of 98 PCUs are seen at the Wellington Street / south connector and Wellington Street / Access to carpark north of telephone exchange junctions; this is as a result of the reduced flow approaching the site using Wellington Street westbound during the Maximum Residential scenario.

Table 8-9 - Actual Flow change at key junctions along Wellington Street Corridor, AM Peak

Symbol	Junction Name	Max Res Flow	Max Res v DM Flow	%age change	Max Res v Max Office Flow	%age change
⬭ (white)	Wellington Street/ William Street Junction	3314	111	3%	3	0%
⬭ (purple)	Wellington Street/ Mackenzie Street Junction	2056	212	11%	57	3%
⬭ (green)	Wellington Street/ Brunel Way Junction	2204	246	13%	68	3%
⬭ (dark grey)	Wellington Street/ Queensmere Road (West) / Tesco Entrance Junction	2200	58	3%	67	3%
⬭ (pink)	Wellington Street/ Queensmere Road (East) Junction	2349	346	17%	-38	-2%
⬭ (yellow)	Wellington Street/ south connector	2017	77	4%	-98	-5%
⬭ (violet)	Wellington Street/ Access to carpark north of telephone exchange	2027	77	4%	-98	-5%
⬭ (light blue)	Wellington Street/ Wexham Street Junction	3513	112	3%	-86	-2%
⬭ (navy)	Wellington Street/ Uxbridge Road Roundabout	5381	118	2%	13	0%

8.5.59. **Table 8-9** presents the trends along the A4 corridor during the PM Peak; comparisons between Maximum Residential and Do Minimum present significant flow decreases of between 214 and 299 at junctions to the west of the development. There are decreases of 761 flows at the Wellington Street. Tesco junction however these reductions are due to the removal of the southern connector arm in the Do Something Maximum Residential scenario and therefore likely overinflated.

8.5.60. The comparison between the Maximum Residential and Maximum Office scenarios show reductions of actual flows between 13 and 39 at the junctions on the corridor to the west of the site, as more development flow enters the site during this peak due to the change in tidality of flow in the Maximum Residential scenario, it has been seen that many will use the junctions to the east and as such an increased demand is evident in this locality.

Table 8-10 - Actual Flow change at key junctions along Wellington Street Corridor, PM Peak

Symbol	Junction Name	Max Res Flow	Max Res v DM Flow	%age change	Max Res v Max Office Flow	%age change
⬭ (white)	Wellington Street/ William Street Junction	3097	-214	-6%	-24	-1%
⬭ (purple)	Wellington Street/ Mackenzie Street Junction	1671	-248	-13%	-22	-1%
⬭ (green)	Wellington Street/ Brunel Way Junction	1883	-299	-14%	-18	-1%
⬭ (dark grey)	Wellington Street/ Queensmere Road (West) / Tesco Entrance Junction	2026	-761	-27%	-18	-1%
⬭ (pink)	Wellington Street/ Queensmere Road (East) Junction	2582	138	6%	-39	-1%
⬭ (yellow)	Wellington Street/ south connector	2284	103	5%	-13	-1%
⬭ (violet)	Wellington Street/ Access to carpark north of telephone exchange	2331	102	5%	-13	-1%
⬭ (light blue)	Wellington Street/ Wexham Street Junction	3610	71	2%	-20	-1%
⬭ (navy)	Wellington Street/ Uxbridge Road Roundabout	4804	49	1%	-38	-1%

8.5.61. The results show there is generally an increase in actual flows along the A4 particularly along Wellington Street and the A412, and to the east of the development at the A4 Wellington Street / A412 junction. The differences between Maximum Residential and Maximum Office show that there are small changes at junctions along the corridor with a reduced flow demand in the PM peak of the Maximum Residential scenario compared with the Maximum Office scenario.

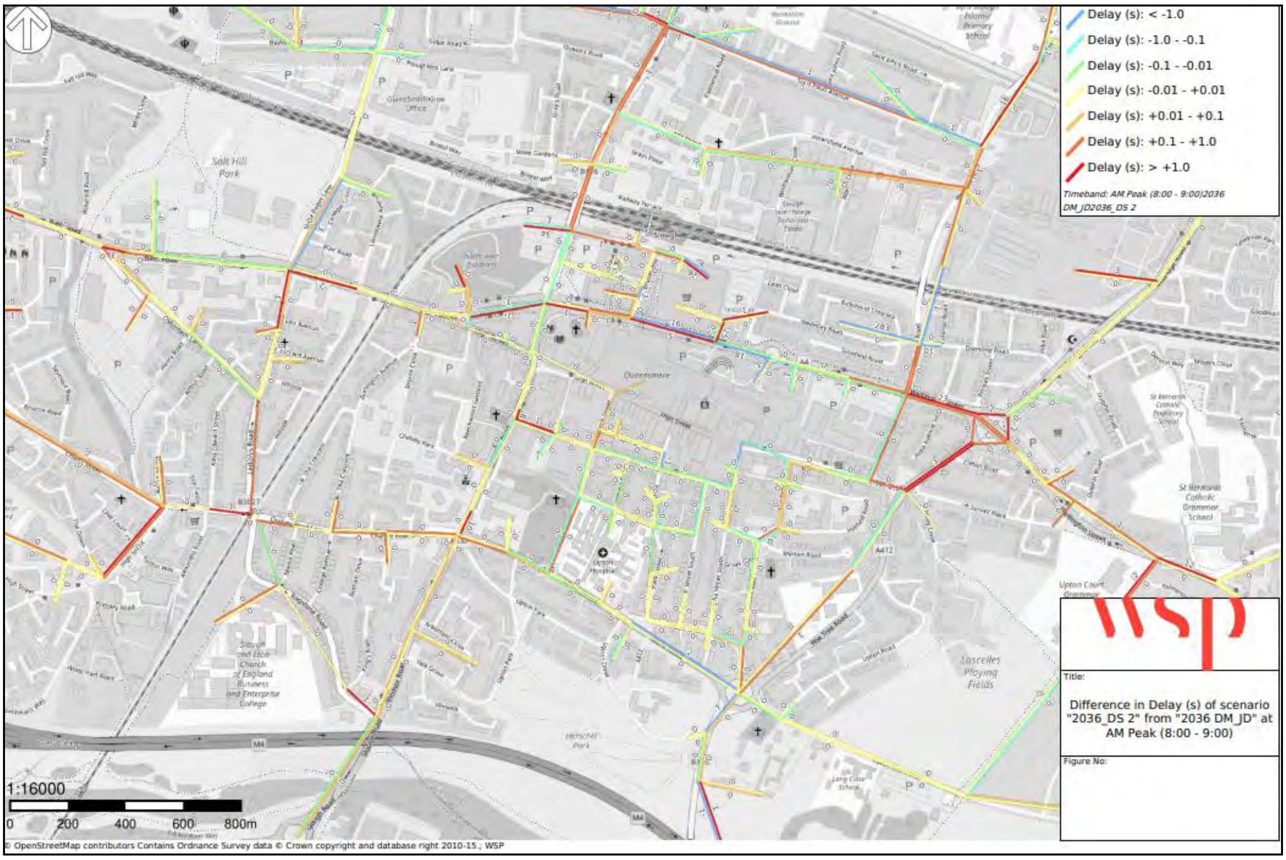
Maximum Residential - Link Delay Difference

8.5.62. Link delay differences along the corridor for the Maximum Residential and Do Minimum scenarios were assessed and shown in **Figure 8-24** and **Figure 8-25** for the AM and PM peak respectively.

8.5.63. Overall, the plots show there is little to no change in the link delay between the Maximum Residential scenario and Do Minimum, particularly along the B416 and A355. The removal of one of the signal phases at the Tesco signalised junction and subsequent optimisation of signals has led to a reduction in eastbound delay of 16 seconds and westbound reduction of 18 seconds in the AM Peak; in the PM peak, the mirroring reductions are 24 seconds eastbound and westbound.

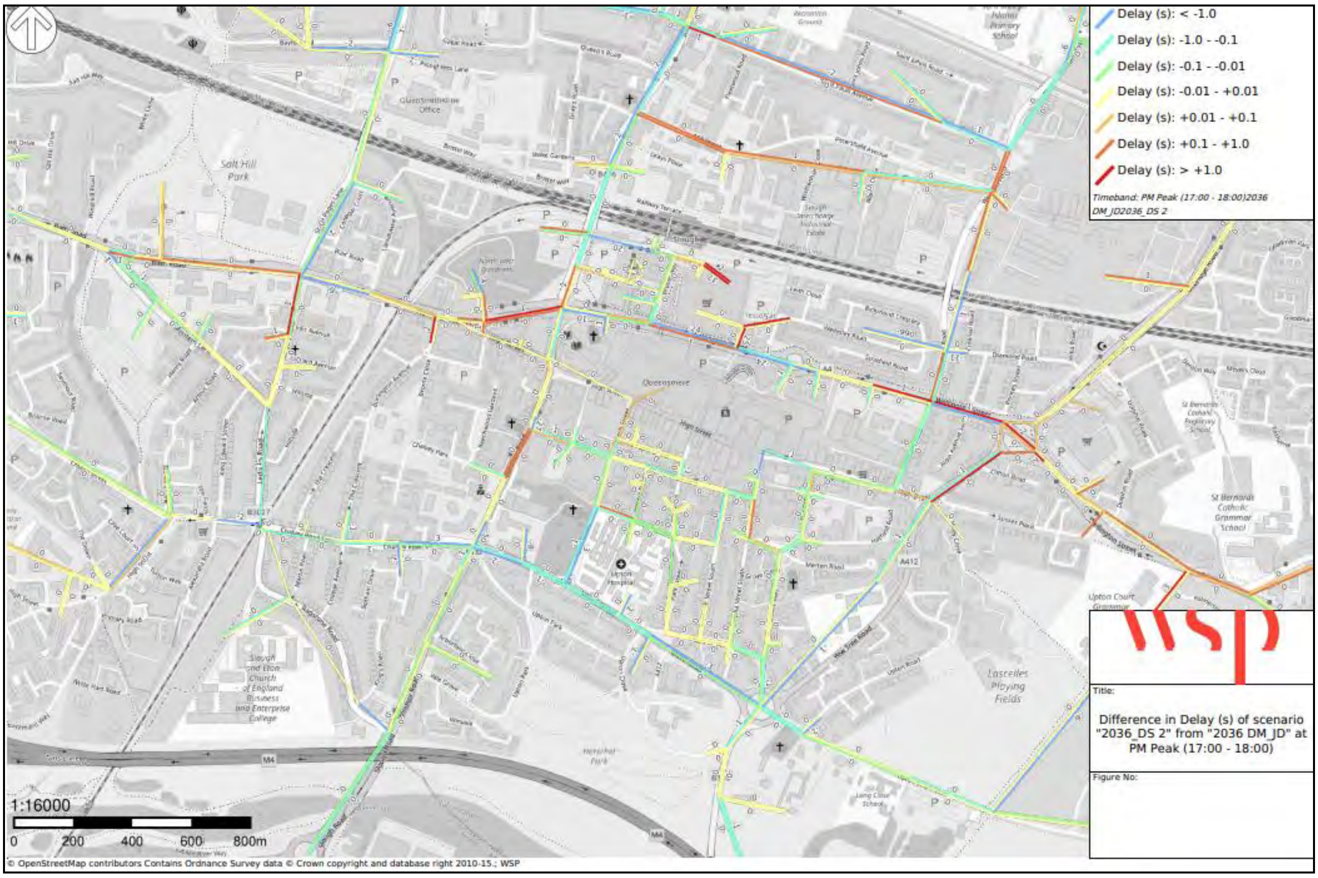
8.5.64. The proposed Maximum Residential development scenario is shown to have an impact on link delays at the A4 Wellington Street / A412 roundabout in the AM peak delays of up to 23 seconds are evident on the approach arm to the Wellington Street / Uxbridge Road junction it is noted that the most significant increases in delay correspond to the links that see the greatest increase in PCU volumes as a result of the proposed development scenario.

Figure 8-24 - 2036 Do Something Maximum Residential – Do Minimum, Delay (s), AM Peak (08:00 – 09:00)



8.5.65. The proposed Maximum Residential development scenario is anticipated to have little or no change on link delays along the corridor. It is noted that some of the link connectors (e.g. where the zones load onto the network) demonstrate increases in delay between Do Minimum and Do Something Maximum Residential scenarios in both the AM and PM peak however the Do Minimum already presented high delays in these locations therefore small increases in trips attributed to the proposed development trip generation exponentially deteriorated the delay in these locations.

Figure 8-25 - 2036 Do Something Maximum Residential – Do Minimum, Delay (s), PM Peak (17:00 – 18:00)



8.6 CONCLUSIONS

8.6.1. There is generally an increase in traffic on the A4 and its approaches when comparing the Do Minimum scenario with the Maximum Residential scenario, however, when comparing the Maximum Office and Maximum Residential scenarios, minor reductions in flows are observed. This is because the Maximum Residential scenario assessment generates fewer vehicle trips than the Maximum Office scenario.

8.6.2. When comparing link delay between the Maximum Office and Maximum Residential scenarios, there is little change between each scenario. This is because the traffic generation of the Maximum Office scenario is higher and there are marginally higher delays observed.

8.6.3. Overall, it can be concluded that the Maximum Office scenario presents a worst case assessment in terms of traffic impact.

8.6.4. The proposed development scenarios are both predicted to increase flows along the A4 Wellington Street in both the AM and PM peak hours. It is noted that there are locations along Wellington Street which present a reduction in PCUs when comparing Do Something Maximum Office vs Do Minimum, for example in the AM peak between the A4 / B412 junction and Queensmere existing roundabout access, however this is primarily accredited to the change in dominant land use from employment to residential and the change of trip generation (e.g. tidal flows, likely to be more arrivals for employment land use where as more departures for residential) and distribution of trips in addition to the optimisation of signals at the Tesco junction.

8.6.5. In the AM peak the most significant flow increase (excluding the connector and access onto Wellington Street), of 121 PCUs is shown to be westbound on Wellington Street between the Tesco access and Brunel Way; east of the development, the AM peak also presents significant increases of 117 PCUs on Wellington Street eastbound between Queensmere access and Wrexham Road junctions.

8.6.6. In the PM peak the most significant flow increase of 192-274 PCUs is shown to be eastbound on Wellington Street between Queensmere and Wrexham Road junctions; west of the development, the PM peak also presents significant increases of 148 PCUs on the eastbound approach to the A4 Wellington Street / B412 William Street junction.

8.6.7. Link delay increases very little between the Do Minimum and Do Something Maximum Office AM peak scenarios with the greatest increases generally shown on zone loading points onto the highway network. Reductions in delay are seen on both A4 Wellington Street approaches to the Tesco signalised junction as a result of the signal optimisation process allocating more green time to the through-movement in this location. In both time periods, the greatest increases in delay are observed at the A4 / A412 junction with the PM peak showing a greater impact of a maximum increase of 27 seconds compared to 8 seconds in the AM peak. Overall the changes in delay are negligible across the model cordon and the optimisation of signals at the Tesco signalised junction is shown to have a positive impact on the operation of Wellington Street.

8.6.8. Similar to the link delay analysis, the worst-turn volume over capacity demonstrates that the proposed development is forecast to have minimal impacts on the operation of existing junctions, with notable improvements cited at the Tesco signalised access junction.

8.6.9. Comparing the journey times between the Do Minimum and Do Something Maximum Office scenario shows that the proposed development is forecast to have minimal impacts on the AM peak journey times, with a maximum increase of 16 seconds westbound along Wellington Street; the PM peak shows reductions in journey times – this is primarily attributed to the change in trip patterns relating to the proposed land uses and the optimisation of signals at the Tesco access junction.

8.6.10. The assessment in this chapter also analysed the volume-capacity impacts the proposed development could have on local junctions. The junctions that would experience the most significant impact have been assessed in the following chapter.

9

9 JUNCTION MODELLING ASSESSMENT

9.1 INTRODUCTION

9.1.1. The following junctions have been selected for a detailed modelling assessment:

- HTC roundabout;
- A4 Wellington Street / A412 Uxbridge Road signalised roundabout;
- A4 Wellington Street / Brunel Way signalised junction;
- A4 Wellington Street / Tesco exit / Queensmere Road signalised junction;
- A4 Wellington Street / Wexham Road signalised junction;
- A4 Bath Road / Stoke Poges Lane / Ledgers Road signalised junction;
- Windsor Road / Herschel Street signalised junction;
- Windsor Road / Albert Street / Chalvey Road East signalised junction; and
- A4 London Road / Sussex Place / Langley Road signalised junction.

9.1.2. These junctions have been assessed separately in this chapter. The HTC roundabout has been assessed using Junctions 10 and the remaining signalised junctions have been assessed using LinSig. Full results are provided in **Appendix E**.

9.1.1. The below assessment presents the results for both the Maximum Office scenario, which represents the wort-case scenario, and the Maximum Residential scenario.

9.2 HTC ROUNDABOUT

9.2.1. The results for Do Minimum and Do Something scenarios for the HTC roundabout in the Maximum Office and Maximum Residential scenarios are summarised in Table 9-1 below.

Table 9-1 – HTC roundabout assessment – Max Office and Residential Scenarios

Approach	AM Peak				PM Peak			
	Queue (PCU)	Delay (s)	RFC	Level of Service	Queue (PCU)	Delay (s)	RFC	Level of Service
Do Minimum								
Wellington Street West	0.6	2.39	0.36	A	1.1	3.12	0.52	A
Wellington Street East	0.8	2.26	0.43	A	0.7	2.29	0.43	A
Queensmere Road	0.0	1.81	0.03	A	0.1	1.86	0.11	A
Max Office – Do Something								
Wellington Street West	0.7	2.59	0.39	A	1.2	3.39	0.53	A
Wellington Street East	0.8	2.33	0.44	A	0.6	2.12	0.39	A
Queensmere Road	0.2	2.08	0.18	A	0.3	2.05	0.24	A
Max Residential – Do Something								
Wellington Street West	0.7	2.64	0.40	A	1.5	3.79	0.59	A
Wellington Street East	0.7	2.22	0.41	A	1.1	2.80	0.52	A
Queensmere Road	0.3	2.06	0.22	A	0.2	2.00	0.19	A

9.2.2. The results in Table 9-1 indicate that, in the worst-case scenario, the roundabout will perform well below its maximum capacity as a result of the development and that its level of service will remain at the highest level (i.e. A). Based on this, it is expected that the proposals will impact the HTC roundabout minimally.

9.3 A4 WELLINGTON STREET / A412 UXBRIDGE ROAD

Max Office Scenario

9.3.1. The results for the Do Minimum and Do Something for the A4 Wellington Street / A412 Uxbridge Road signalised roundabout in the Max Office scenario are summarised in **Tables 9-2** and **9-3** below.

Table 9-2 – A4 Wellington Street / A412 Uxbridge Road signalised roundabout assessment – AM Peak – Max Office Scenario

Approach	Degree of Saturation			Mean Maximum Queue		
	Base	DM	DS	Base	DM	DS
Wellington Street (W)	63	59.6	60	8.3	8.2	8.2
Gyratory N	63.8	28.8	40.6	6.6	2.6	3.7
Uxbridge Road (N)	84.6	110.6	108.9	10.5	78.1	69.6
Gyratory E	92	82.8	84.7	19.7	16.2	16.9
Wellington Street (E)	71.3	85.8	86.8	8.2	10.7	11.1
Gyratory S	90.7	106.9	111.2	14.6	36.1	47
Uxbridge Road (S)	88.4	89.3	89.6	15.7	17	17.2
Gyratory W	54.5	62.8	62.9	9.1	9	9

Table 9-3 – A4 Wellington Street / A412 Uxbridge Road signalised roundabout assessment – PM Peak – Max Office Scenario

Approach	Degree of Saturation			Mean Maximum Queue		
	Base	DM	DS	Base	DM	DS
Wellington Street (W)	66.3	62.4	62.1	8.9	8.7	8.8
Gyratory N	59.9	34.4	32.5	5.9	2.9	2.8
Uxbridge Road (N)	81.8	87.3	91.5	9.3	14.7	16.8
Gyratory E	88.7	89.9	93.7	16.9	18.8	21
Wellington Street (E)	61.9	73	70.2	6.9	7.8	7.7
Gyratory S	82.2	103.7	96.2	12	29.1	18
Uxbridge Road (S)	82.7	100.2	104	12.4	30.5	41.2
Gyratory W	53.6	71.2	70.7	7.3	9	2.8

9.3.2. As can be seen from the above tables, the Degree of Saturation and Mean Max Queue length results of the Do Something scenario are generally similar to the Do Minimum scenario. Most approaches operate within their theoretical capacity (i.e. at or below 90%). The cases in which the capacity is above 90% are not caused as a result of the development as they are already above capacity in the Do Minimum scenario.

Max Residential Scenario

9.3.3. The results for the Do Minimum and Do Something for the A4 Wellington Street / A412 Uxbridge Road signalised roundabout in the Max Residential scenario are summarised in **Tables 9-4** and **9-5** below.

Table 9-4 – A4 Wellington Street / A412 Uxbridge Road signalised roundabout assessment – AM Peak – Max Residential Scenario

Approach	Degree of Saturation			Mean Maximum Queue		
	Base	DM	DS	Base	DM	DS
Wellington Street (W)	63	59.6	60	8.3	8.2	8.2
Gyratory N	63.8	28.8	40.6	6.6	2.6	3.7
Uxbridge Road (N)	84.6	110.6	108.9	10.5	78.1	69.6
Gyratory E	92	82.8	84.7	19.7	16.2	16.9
Wellington Street (E)	71.3	85.8	86.8	8.2	10.7	11.1
Gyratory S	90.7	106.9	111.2	14.6	36.1	47
Uxbridge Road (S)	88.4	89.3	89.6	15.7	17	17.2
Gyratory W	54.5	62.8	62.9	9.1	9	9

Table 9-5 – A4 Wellington Street / A412 Uxbridge Road signalised roundabout assessment – PM Peak – Max Residential Scenario

Approach	Degree of Saturation			Mean Maximum Queue		
	Base	DM	DS	Base	DM	DS
Wellington Street (W)	66.3	62.4	62.1	8.9	8.7	8.8
Gyratory N	59.9	34.4	32.5	5.9	2.9	2.8
Uxbridge Road (N)	81.8	87.3	91.5	9.3	14.7	16.8
Gyratory E	88.7	89.9	93.7	16.9	18.8	21
Wellington Street (E)	61.9	73	70.2	6.9	7.8	7.7
Gyratory S	82.2	103.7	96.2	12	29.1	18
Uxbridge Road (S)	82.7	100.2	104	12.4	30.5	41.2
Gyratory W	53.6	71.2	70.7	7.3	9	2.8

9.3.4. As can be seen from the above tables, the Degree of Saturation and Mean Max Queue length results of the Do Something scenario are generally similar to the Do Minimum scenario. On some approaches, the degree of saturation and mean maximum queue are below the results of the Do Minimum scenario. Generally, the cases where the capacity is above 90% are not caused as a result of the development as they are already above capacity in the Do Minimum scenario.

9.4 A4 WELLINGTON STREET / BRUNEL WAY

Max Office Scenario

9.4.1. The results for the Do Minimum and Do Something for the A4 Wellington Street / Brunel Way signalised junction in the Max Office Scenario are summarised in **Tables 9-6** and **9-7** below.

Table 9-6 – A4 Wellington Street / Brunel Way signalised junction assessment – AM Peak – Max Office Scenario

Approach	Degree of Saturation			Mean Maximum Queue		
	Base	DM	DS	Base	DM	DS
Brunel Rd (N)	8.6	1.6	1.8	0.7	0.1	0.1
Wellington Street (E)	58.2	63.2	70	7.8	7.1	8.6
Wellington Street (W)	41.9	37	39.1	5.6	4.7	5.1

Table 9-7 – A4 Wellington Street / Brunel Way signalised junction – PM Peak – Max Office Scenario

Approach	Degree of Saturation			Mean Maximum Queue		
	Base	DM	DS	Base	DM	DS
Brunel Rd (N)	22.3	7.8	6.2	1.9	0.6	0.5
Wellington Street (E)	35.2	68.1	57	3.6	7.9	4.8
Wellington Street (W)	55.2	48	47.4	8.4	6.9	6.6

9.4.2. As it can be seen in the tables above, the Degree of Saturation on each approach during the Do Something scenario is below their maximum theoretical capacity, indicating that the impacts as a result of the development would be minimal.

Max Residential Scenario

9.4.3. The results for the Do Minimum and Do Something for the A4 Wellington Street / Brunel Way signalised junction in the Max Residential Scenario are summarised in **Tables 9-8** and **9-9** below.

Table 9-8 – A4 Wellington Street / Brunel Way signalised junction assessment – AM Peak – Max Residential Scenario

Approach	Degree of Saturation			Mean Maximum Queue		
	Base	DM	DS	Base	DM	DS
Brunel Rd (N)	8.6	1.6	1.8	0.7	0.1	0.1
Wellington Street (E)	58.2	63.2	70	7.8	7.1	8.6
Wellington Street (W)	41.9	37	39.1	5.6	4.7	5.1

Table 9-9 – A4 Wellington Street / Brunel Way signalised junction – PM Peak – Max Residential Scenario

Approach	Degree of Saturation			Mean Maximum Queue		
	Base	DM	DS	Base	DM	DS
Brunel Rd (N)	22.3	7.8	6.2	1.9	0.6	0.5
Wellington Street (E)	35.2	68.1	57	3.6	7.9	4.8
Wellington Street (W)	55.2	48	47.4	8.4	6.9	6.6

9.4.4. As it can be seen in the tables above, the Degree of Saturation on each approach during the Do Something scenario is below their maximum theoretical capacity, indicating that the impacts as a result of the development would be minimal.

9.5 A4 WELLINGTON STREET / TESCO EXIT / QUEENSMERE ROAD

Max Office Scenario

9.5.1. The results for the Do Minimum and Do Something for the A4 Wellington Street / Tesco exit / Queensmere Road signalised junction in the Max Office Scenario are summarised in **Tables 9-10** and **9-11** below.

Table 9-10 – A4 Wellington Street / Tesco exit / Queensmere Road signalised junction assessment – AM Peak – Max Office Scenario

Approach	DoS			MMQ		
	Base	DM	DS	Base	DM	DS
Wellington Street (W)	55.8	50.9	59.4	6.6	6.7	7.8
Tesco Exit	25.2	29.6	29	1.5	1.5	1.5
Wellington Street (E)	63.9	64.1	76.8	6.7	6.8	9.2

Queensmere Road	0	48.9	0	0	2.4	0

Table 9-11 – A4 Wellington Street / Tesco exit / Queensmere Road signalised junction – PM Peak – Max Office Scenario

Approach	DoS			MMQ		
	Base	DM	DS	Base	DM	DS
Wellington Street (W)	68.2	83.6	49.4	8.8	14.3	8.8
Tesco Exit	66.9	24.8	22.7	6.3	1.2	1.8
Wellington Street (E)	68.2	90.3	51.8	8.6	16.8	9.1
Queensmere Road	21.7	90.4	0	1.7	16.7	0

9.5.2. Similarly to the A4 Wellington Street / Brunel Way junction, the Degree of Saturation on each approach of the A4 Wellington Street / Tesco exit / Queensmere Road signalised junction during the Do Something scenario is below their maximum theoretical capacity, indicating that the impacts as a result of the development would be minimal.

Max Residential Scenario

9.5.3. The results for the Do Minimum and Do Something for the A4 Wellington Street / Tesco exit / Queensmere Road signalised junction in the Max Residential Scenario are summarised in **Tables 9-12** and **9-13** below.

Table 9-12 – A4 Wellington Street / Tesco exit / Queensmere Road signalised junction assessment – AM Peak – Max Residential Scenario

Approach	DoS			MMQ		
	Base	DM	DS	Base	DM	DS
Wellington Street (W)	55.8	50.9	56.2	6.6	6.7	7.4
Tesco Exit	25.2	29.6	28.9	1.5	1.5	1.5
Wellington Street (E)	63.9	64.1	72.8	6.7	6.8	8.4
Queensmere Road	0.0	48.9	0.0	0.0	2.4	0.0

Table 9-13 – A4 Wellington Street / Tesco exit / Queensmere Road signalised junction – PM Peak

Approach	DoS			MMQ		
	Base	DM	DS	Base	DM	DS
Wellington Street (W)	68.2	83.6	50.6	8.8	14.3	9.0
Tesco Exit	66.9	24.8	22.7	6.3	1.2	1.8
Wellington Street (E)	68.2	90.3	54.0	8.6	16.8	9.7
Queensmere Road	21.7	90.4	0.0	1.7	16.7	0.0

9.5.4. The Degree of Saturation on each approach of the A4 Wellington Street / Tesco exit / Queensmere Road signalised junction during the Do Something scenario is below their maximum theoretical capacity, indicating that the impacts as a result of the development would be minimal.

9.6 A4 WELLINGTON STREET / WEXHAM ROAD

Max Office Scenario

9.6.1. The results for the Do Minimum and Do Something for the A4 Wellington Street / Wexham Road signalised junction in the Max Office Scenario are summarised in **Tables 9-14** and **9-15** below.

Table 9-14 – A4 Wellington Street / Wexham Road signalised junction assessment – AM Peak – Max Office Scenario

Approach	DoS			MMQ		
	Base	DM	DS	Base	DM	DS
Wellington St WB - Right	-	75.2	74.6	-	13.3	16.1
Wellington St WB - Ahead	55.6	37.2	35.9	9.2	4.9	5.1
Wellington St WB - Ahead	54.9	37	35.8	8.9	4.8	5.1
Wellington St EB Entry - Left	97.4	85.8	78.8	28.4	11.4	13.4
Wellington St EB Entry - Ahead	51.3	88.5	88.6	8.6	13.8	19.1
Wexham Rd N Entry - Left	96.4	89.7	91.1	22.3	23.2	28.4

Table 9-15 – A4 Wellington Street / Wexham Road signalised junction assessment – PM Peak – Max Office Scenario

Approach	DoS			MMQ		
	Base	DM	DS	Base	DM	DS
Wellington St WB - Right	-	77.4	71.4	-	11.4	12.6
Wellington St WB - Ahead	51.1	39.7	34.4	8.0	5.4	4.8
Wellington St WB - Ahead	50.1	38.9	34.2	7.6	5.3	4.7
Wellington St EB Entry - Left	102.8	67	77.8	49.3	9.5	15.9
Wellington St EB Entry - Ahead	62.5	98.4	95.6	12.2	27.7	30.1
Wexham Rd N Entry - Left	101.2	101.4	96.9	23.4	37.8	31.7

9.6.2. As can be seen from the above tables, the Degree of Saturation and Mean Max Queue length results of the Do Something scenario are generally similar to the Do Minimum scenario. This indicates that the impacts as a result of the development would be minimal.

Max Residential Scenario

9.6.3. The results for the Do Minimum and Do Something for the A4 Wellington Street / Wexham Road signalised junction in the Max Residential Scenario are summarised in **Tables 9-16** and **9-17** below.

Table 9-16 – A4 Wellington Street / Wexham Road signalised junction assessment – AM Peak – Max Residential Scenario

Approach	DoS			MMQ		
	Base	DM	DS	Base	DM	DS
Wellington St WB - Right	-	75.2	74.8	-	13.3	16.2
Wellington St WB - Ahead	55.6	37.2	31.3	9.2	4.9	4.2
Wellington St WB - Ahead	54.9	37	32.6	8.9	4.8	4.5
Wellington St EB Entry - Left	97.4	85.8	80.1	28.4	11.4	13.8
Wellington St EB Entry - Ahead	51.3	88.5	90.7	8.6	13.8	20.4
Wexham Rd N Entry - Left	96.4	89.7	91	22.3	23.2	28.3

Table 9-17 – A4 Wellington Street / Wexham Road signalised junction assessment – PM Peak – Max Residential Scenario

Approach	DoS			MMQ		
	Base	DM	DS	Base	DM	DS
Wellington St WB - Right	-	77.4	67.9	-	11.4	12.2
Wellington St WB - Ahead	51.1	39.7	36.3	9.2	5.4	5.2
Wellington St WB - Ahead	50.1	38.9	35.7	8.9	5.3	5.1
Wellington St EB Entry - Left	102.8	67	79	28.4	9.5	15.9
Wellington St EB Entry - Ahead	62.5	98.4	93.6	8.6	27.7	26.8
Wexham Rd N Entry - Left	101.2	101.4	93.5	22.3	37.8	27.9

9.6.4. Similarly to the Max Office scenario, the Degree of Saturation and Mean Max Queue length results of the Do Something scenario for the Max Residential are generally similar to the Do Minimum scenario. This indicates that the impacts as a result of the development would be minimal.

9.7 A4 BATH ROAD / STOKE POGES LANE / LEDGERS ROAD

Max Office Scenario

9.7.1. The results for the Do Minimum and Do Something for the A4 Bath Road / Stoke Poges Lane / Ledgers Road signalised junction in the Max Office Scenario are summarised in **Tables 9-18** and **9-19** below.

Table 9-18 – A4 Bath Road / Stoke Poges Lane / Ledgers Road signalised junction assessment – AM Peak – Max Office Scenario

Approach	DoS			MMQ		
	Base	DM	DS	Base	DM	DS
Bath Rd WB Entry - Ahead & Left	14.8	16.5	16.6	2.3	2.4	2.5
Bath Rd WB Entry - Ahead	94	118.5	122.2	26.6	93	106.7
Bath Rd WB Entry - Right	102.9	115.1	117.2	14.8	25.8	27.9
Ledgers Rd Entry - Ahead & Left	102.8	117.9	118.8	15.6	32.1	33.2
Ledgers Rd Entry - Right	88.3	102	104.4	8.2	15.2	17.2
Bath Rd EB Entry - Ahead	51.7	65.2	61.1	7.9	9.9	9.1

& Left						
Bath Rd EB Entry - Ahead	102.7	103.1	108.1	37.5	36	48.7
Bath Rd EB Entry - Right	1.4	4	3.8	0.2	0.5	0.4
Stoke Poges Ln Entry - Ahead & Left	99.3	118.9	118.6	15.5	43.1	42.8
Stoke Poges Ln Entry - Right	103.4	120.2	119.8	19	44.1	43.6

Table 9-19 – A4 Bath Road / Stoke Poges Lane / Ledgers Road signalised junction assessment – PM Peak – Max Office Scenario

Approach	DoS			MMQ		
	Base	DM	DS	Base	DM	DS
Bath Rd WB Entry - Ahead & Left	14.5	14.9	14.9	2.2	2.3	2.3
Bath Rd WB Entry - Ahead	86	97.1	97.5	20.8	30.9	31.5
Bath Rd WB Entry - Right	113.2	119.2	120.8	29.2	39.1	39
Ledgers Rd Entry - Ahead & Left	110.6	121.8	120.7	22.5	31.4	30.3
Ledgers Rd Entry - Right	100.2	109.3	109.9	13.1	18.8	19.2
Bath Rd EB Entry - Ahead & Left	58.5	79.3	65.5	8.8	13.3	10.2
Bath Rd EB Entry - Ahead	113.4	121.2	128	65.6	87.6	111.8
Bath Rd EB Entry - Right	0.8	1.6	1.5	0.1	0.2	0.2
Stoke Poges Ln Entry - Ahead & Left	89.4	75.9	72.4	10.1	7.4	6.9
Stoke Poges Ln Entry - Right	112.4	123.8	121.4	27.6	44.4	41.2

9.7.2. With the exception of some increases in MMQ along Bath Road (eastbound/westbound entry), the results of the Do Something scenario are generally similar to the Do Minimum scenario, indicating that the development will not substantially impact this junction.

Max Residential Scenario

9.7.3. The results for the Do Minimum and Do Something for the A4 Bath Road / Stoke Poges Lane / Ledgers Road signalised junction in the Max Residential Scenario are summarised in **Tables 9-20** and **9-21** below.

Table 9-20 – A4 Bath Road / Stoke Poges Lane / Ledgers Road signalised junction assessment – AM Peak – Max Residential Scenario

Approach	DoS			MMQ		
	Base	DM	DS	Base	DM	DS
Bath Rd WB Entry - Ahead & Left	14.8	16.5	16.6	2.3	2.4	2.5
Bath Rd WB Entry - Ahead	94	118.5	124	26.6	93	113.3
Bath Rd WB Entry - Right	102.9	115.1	117.2	14.8	25.8	27.9
Ledgers Rd Entry - Ahead & Left	102.8	117.9	119.2	15.6	32.1	33.7
Ledgers Rd Entry - Right	88.3	102	104.9	8.2	15.2	17.6
Bath Rd EB Entry - Ahead & Left	51.7	65.2	61.1	7.9	9.9	9.1
Bath Rd EB Entry - Ahead	102.7	103.1	105.1	37.5	36	40.7
Bath Rd EB Entry - Right	1.4	4	4	0.2	0.5	0.5
Stoke Poges Ln Entry - Ahead & Left	99.3	118.9	118.6	15.5	43.1	42.7
Stoke Poges Ln Entry - Right	103.4	120.2	119.8	19	44.1	43.6

Table 9-21 – A4 Bath Road / Stoke Poges Lane / Ledgers Road signalised junction assessment – PM Peak – Max Residential Scenario

Approach	DoS			MMQ		
	Base	DM	DS	Base	DM	DS
Bath Rd WB Entry - Ahead & Left	14.5	14.9	14.9	2.2	2.3	2.3
Bath Rd WB Entry - Ahead	86	97.1	96.0	20.8	30.9	29.2
Bath Rd WB Entry - Right	113.2	119.2	128.1	29.2	39.1	45.6
Ledgers Rd Entry - Ahead & Left	110.6	121.8	121.2	22.5	31.4	30.8
Ledgers Rd Entry - Right	100.2	109.3	108.7	13.1	18.8	18.3
Bath Rd EB Entry - Ahead & Left	58.5	79.3	63.4	8.8	13.3	10
Bath Rd EB Entry - Ahead	113.4	121.2	124.7	65.6	87.6	104
Bath Rd EB Entry - Right	0.8	1.6	1.5	0.1	0.2	0.2
Stoke Poges Ln Entry - Ahead & Left	89.4	75.9	74.4	10.1	7.4	7.2
Stoke Poges Ln Entry -	112.4	123.8	121.8	27.6	44.4	41.7

Right						

9.7.4. The results for the Max Residential scenario are similar to the Max Office scenario, with some increases in queueing expected on Bath Road (eastbound/westbound entries). Generally, the results of the Do Something scenario are similar to the Do Minimum scenario, indicating that the development will impact this junction minimally.

9.8 WINDSOR ROAD / HERSCHEL STREET

Max Office Scenario

9.8.1. The results for the Do Minimum and Do Something for the Windsor Road / Herschel Street signalised junction in the Max Office Scenario are summarised in **Tables 9-22** and **9-23** below.

Table 9-22 – Windsor Road / Herschel Street signalised junction assessment – AM Peak – Max Office Scenario

Approach	DoS			MMQ		
	Base	DM	DS	Base	DM	DS
Herschel St Entry - Left	11.3	12.9	12.9	0.9	1.1	1.1
Herschel St Entry - Right	55.2	64.6	64.8	5.6	6.7	6.8
Windsor Rd NB - Ahead	23.4	24.2	24.3	2.6	2.8	2.8
Windsor Rd SB Entry - Ahead & Left	51.4	65.2	66.5	6	8.3	8.5
Windsor Rd SB Entry - Ahead	53.5	62	63	6.7	8.4	8.6

Table 9-23 – Windsor Road / Herschel Street signalised junction assessment – PM Peak – Max Office Scenario

Approach	DoS			MMQ		
	Base	DM	DS	Base	DM	DS
Herschel St Entry - Left	16.7	9.4	8.6	1.5	0.7	0.7
Herschel St Entry - Right	51.4	72.2	65.1	5.5	7.7	7.1
Windsor Rd NB - Ahead	25.1	26.1	28.8	2.7	3.1	3.4
Windsor Rd SB Entry - Ahead & Left	51.9	69	63.8	5.5	9.3	7.9
Windsor Rd SB Entry - Ahead	41.8	70.7	56.5	4.6	10.5	7.2

9.8.2. The results of the Do Something scenario in the AM peak are generally similar to the Do Minimum scenario, indicating that the development will have minimal impact on this junction. Hertchel Street and Windsor Road can experience some slight reductions in queueing in the PM peak of the Do Something scenario, which should relieve some congestion at the junction during this period.

Max Residential Scenario

9.8.3. The results for the Do Minimum and Do Something for the Windsor Road / Herschel Street signalised junction in the Max Residential Scenario are summarised in **Tables 9-24** and **9-25** below.

Table 9-24 – Windsor Road / Herschel Street signalised junction assessment – AM Peak – Max Residential Scenario

Approach	DoS			MMQ		
	Base	DM	DS	Base	DM	DS
Herschel St Entry - Left	11.3	12.9	12.9	0.9	1.1	1.1
Herschel St Entry - Right	55.2	64.6	64.6	5.6	6.7	6.7
Windsor Rd NB - Ahead	23.4	24.2	23.6	2.6	2.8	2.7
Windsor Rd SB Entry - Ahead & Left	51.4	65.2	66.8	6	8.3	8.6
Windsor Rd SB Entry - Ahead	53.5	62	63.9	6.7	8.4	8.7

Table 9-25 – Windsor Road / Herschel Street signalised junction assessment – PM Peak – Max Residential Scenario

Approach	DoS			MMQ		
	Base	DM	DS	Base	DM	DS
Herschel St Entry - Left	16.7	9.4	8.2	1.5	0.7	0.7
Herschel St Entry - Right	51.4	72.2	63.4	5.5	7.7	7
Windsor Rd NB - Ahead	25.1	26.1	29.6	2.7	3.1	3.4
Windsor Rd SB Entry - Ahead & Left	51.9	69	64.0	5.5	9.3	7.7
Windsor Rd SB Entry - Ahead	41.8	70.7	57.8	4.6	10.5	7.3

9.8.4. As per the Max Office scenario, the results for the Max Residential scenario are generally similar to the Do Minimum scenario, indicating that the development will have minimal impact on this junction. The junction can also experience reductions in queueing in the PM peak of the Do Something scenario on some approaches.

9.9 WINDSOR ROAD / ALBERT STREET / CHALVEY ROAD

Max Office Scenario

9.9.1. The results for the Do Minimum and Do Something for the Windsor Road / Albert Street / Chalvey Road signalised junction in the Max Office Scenario are summarised in **Tables 9-26** and **9-27** below.

Table 9-26 – Windsor Road / Albert Street / Chalvey Road signalised junction assessment – AM Peak – Max Office Scenario

Approach	DoS			MMQ		
	Base	DM	DS	Base	DM	DS
Albert St Entry - Left	54	65.2	66.8	6.1	8.4	8.9
Albert St Entry - Ahead	53.8	67	69.3	6	7.8	8.1
Albert St Entry - Right	12.6	20.4	21.2	0.8	1.2	1.3
Windsor Rd NB - Ahead & Left	35	39.4	39.4	5.9	6.8	6.8
Windsor Rd NB - Ahead	37.1	39.9	39.0	6.7	7.4	7.3
Windsor Rd NB - Right	43.2	68.3	68.9	7.7	14.8	15.2
Chalvey Rd E Entry - Ahead & Left & Right	42.2	44.5	47.8	5.1	4.9	5
Windsor Rd SB Entry - Ahead & Left	48	42.3	40.1	3.9	3.7	3.5
Windsor Rd SB Entry - Ahead	46.4	46.3	45.9	4.2	4.5	4.5
Windsor Rd SB Entry - Right	12	11	11	0.9	0.9	0.9

Table 9-27 – Windsor Road / Albert Street / Chalvey Road signalised junction assessment – PM Peak – Max Office Scenario

Approach	DoS			MMQ		
	Base	DM	DS	Base	DM	DS
Albert St Entry - Left	58.4	61.2	60.1	7	7.7	7.3
Albert St Entry - Ahead	51.5	58.6	57.6	5.7	6.7	6.3
Albert St Entry - Right	6.1	10.9	10.6	0.3	0.5	0.5
Windsor Rd NB - Ahead & Left	23.1	30	30	3.7	5	5.1
Windsor Rd NB - Ahead	23.9	31	31	4	5.4	5.5
Windsor Rd NB - Right	53.1	61.2	54	9.9	12.3	10.5
Chalvey Rd E Entry - Ahead & Left & Right	54	61	57.5	7.3	8.4	7.1
Windsor Rd SB Entry - Ahead & Left	38.1	54	43	3	4.5	3.5
Windsor Rd SB Entry - Ahead	42.8	57.4	49.5	3.8	5.3	4.5
Windsor Rd SB Entry - Right	11.6	14.3	13.2	1	1.1	1

9.9.2. As can be seen from the above tables, the Degree of Saturation and Mean Max Queue length results of the Do Something scenario are generally similar to the Do Minimum scenario. This indicates that the impacts as a result of the development would be minimal.

Max Residential Scenario

9.9.3. The results for the Do Minimum and Do Something for the Windsor Road / Albert Street / Chalvey Road signalised junction in the Max Residential Scenario are summarised in **Tables 9-28** and **9-27** below.

Table 9-28 – Windsor Road / Albert Street / Chalvey Road signalised junction assessment – AM Peak – Max Office Scenario

Approach	DoS			MMQ		
	Base	DM	DS	Base	DM	DS
Albert St Entry - Left	54	65.2	66.8	6.1	8.4	8.9
Albert St Entry - Ahead	53.8	67	69.3	6	7.8	8.1
Albert St Entry - Right	12.6	20.4	21.2	0.8	1.2	1.3
Windsor Rd NB - Ahead & Left	35	39.4	39.4	5.9	6.8	6.8
Windsor Rd NB - Ahead	37.1	39.9	39.0	6.7	7.4	7.3
Windsor Rd NB - Right	43.2	68.3	68.9	7.7	14.8	15.2
Chalvey Rd E Entry - Ahead & Left & Right	42.2	44.5	47.8	5.1	4.9	5
Windsor Rd SB Entry - Ahead & Left	48	42.3	40.1	3.9	3.7	3.5
Windsor Rd SB Entry - Ahead	46.4	46.3	45.9	4.2	4.5	4.5
Windsor Rd SB Entry - Right	12	11	11	0.9	0.9	0.9

Table 9-29 – Windsor Road / Albert Street / Chalvey Road signalised junction assessment – PM Peak – Max Office Scenario

Approach	DoS			MMQ		
	Base	DM	DS	Base	DM	DS
Albert St Entry - Left	58.4	61.2	60.1	7	7.7	7.3
Albert St Entry - Ahead	51.5	58.6	57.6	5.7	6.7	6.3
Albert St Entry - Right	6.1	10.9	10.6	0.3	0.5	0.5
Windsor Rd NB - Ahead & Left	23.1	30	30	3.7	5	5.1
Windsor Rd NB - Ahead	23.9	31	31	4	5.4	5.5
Windsor Rd NB - Right	53.1	61.2	54	9.9	12.3	10.5
Chalvey Rd E Entry - Ahead & Left & Right	54	61	57.5	7.3	8.4	7.1
Windsor Rd SB Entry - Ahead & Left	38.1	54	43	3	4.5	3.5
Windsor Rd SB Entry - Ahead	42.8	57.4	49.5	3.8	5.3	4.5
Windsor Rd SB Entry - Right	11.6	14.3	13.2	1	1.1	1

9.9.4. Similarly to the Max Office scenario, the Degree of Saturation and Mean Max Queue length results of the Do Something scenario for the Max Residential are generally similar to the Do Minimum scenario. This indicates that the impacts as a result of the development would be minimal.

9.10 A4 LONDON ROAD / SUSSEX PLACE / LANGLEY ROAD

Max Office Scenario

9.10.1. The results for the Do Minimum and Do Something for the A4 London Road / Sussex Place / Langley Road signalised junction in the Max Office Scenario are summarised in **Tables 9-30** and **9-31** below.

Table 9-30 – A4 London Road / Sussex Place / Langley Road signalised junction assessment – AM Peak – Max Office Scenario

Approach	DoS			MMQ		
	Base	DM	DS	Base	DM	DS
London Rd WB Entry - Ahead	55.4	55.1	55.3	6.7	7.2	7.2
London Rd WB Entry - Right	11.6	16.3	16.3	0.2	0.3	0.3
London Rd EB Entry - Left	86.4	80.2	80.4	12.7	11.9	12
London Rd EB Entry - Ahead	75.2	80	80.1	10.6	12.9	13.1
Windsor Rd RT	83.6	82.5	83.1	12.7	11	11.2
Windsor Rd LT	0.5	0.4	0.4	0	0.4	0

Table 9-31 – A4 London Road / Sussex Place / Langley Road signalised junction assessment – PM Peak – Max Office Scenario

Approach	DoS			MMQ		
	Base	DM	DS	Base	DM	DS
London Rd WB Entry - Ahead	72	78	78	10.4	12.1	12.1
London Rd WB Entry - Right	0	8	8	0.0	0.1	0.1
London Rd EB Entry - Left	86.7	77.5	76.3	13.6	10.8	10.6
London Rd EB Entry - Ahead	64.5	91	89.5	8.6	17.5	16.7
Windsor Rd RT	89.2	91.5	91.8	14.2	15	15.2
Windsor Rd LT	1.3	1.2	1.2	0.1	0.1	0.1

9.10.2. The Degree of Saturation and Mean Max Queue length results of the Do Something scenario are generally similar to the Do Minimum scenario. This indicates that the impacts as a result of the development would be minimal.

Max Residential Scenario

9.10.3. The results for the Do Minimum and Do Something for the A4 London Road / Sussex Place / Langley Road signalised junction in the Max Residential Scenario are summarised in **Tables 9-32** and **9-33** below.

Table 9-32 – A4 London Road / Sussex Place / Langley Road signalised junction assessment – AM Peak – Max Residential Scenario

Approach	DoS			MMQ		
	Base	DM	DS	Base	DM	DS
London Rd WB Entry - Ahead	55.4	55.1	55.3	6.7	7.2	7.2
London Rd WB Entry - Right	11.6	16.3	16.3	0.2	0.3	0.3
London Rd EB Entry - Left	86.4	80.2	80.4	12.7	11.9	12
London Rd EB Entry - Ahead	75.2	80	80.1	10.6	12.9	13.1
Windsor Rd RT	83.6	82.5	83.1	12.7	11	11.2
Windsor Rd LT	0.5	0.4	0.4	0	0.4	0

Table 9-33 – A4 London Road / Sussex Place / Langley Road signalised junction assessment – PM Peak – Max Residential Scenario

Approach	DoS			MMQ		
	Base	DM	DS	Base	DM	DS
London Rd WB Entry - Ahead	72	78	78	6.7	7.2	12.1
London Rd WB Entry - Right	0	8	8	0.2	0.3	0.1
London Rd EB Entry - Left	86.7	77.5	76.3	12.7	11.9	10.6
London Rd EB Entry - Ahead	64.5	91	89.5	10.6	12.9	16.7
Windsor Rd RT	89.2	91.5	91.8	12.7	11	15.2
Windsor Rd LT	1.3	1.2	1.2	0	0.4	0.1

9.10.4. Similarly to the Max Office scenario, the Degree of Saturation and Mean Max Queue length results of the Do Something scenario for the Max Residential are generally similar to the Do Minimum scenario. This indicates that the impacts as a result of the development would be minimal.

10 MITIGATION AND TRANSPORT STRATEGY

10.1 INTRODUCTION

10.1.1. This chapter describes the measures proposed to mitigate the impact of the proposed development and influence travel behaviour and servicing arrangements towards sustainable trends.

10.2 TRAVEL PLANNING

10.2.1. Framework Travel Plans for the residential and commercial uses have been prepared along with this Transport Assessment and are provided in **Appendix F**. The documents provide an overview of the package of measures for each proposed use aimed at promoting sustainable travel, with an emphasis on promoting alternatives to the car.

10.2.2. The documents will establish a structured strategy with clear objectives and targets, supported by suitable policies and quality measures for implementation. This will set the tone for the future detailed Travel Plans that will be later prepared for each proposed use. These would be required by way of condition pursuant to relevant Reserved Matters Applications.

10.2.3. It is noted that whilst the location of a development, its physical design and proximity to facilities and services create the conditions to make sustainable travel choices a natural option, communicating these opportunities to occupiers is also critical to the success of the Travel Plans.

10.2.4. The Travel Plans will be a 'living documents' requiring monitoring, regular reviews and revisions to ensure they remain relevant to the Site and those using the Site and provide continuous improvements for their duration.

10.2.5. The Travel Plans will demonstrate a holistic approach by incorporating both 'hard' engineering measures and 'soft' marketing and management measures necessary to address the transport impacts arising from development.

10.3 DELIVERIES AND SERVICING

10.3.1. An Indicative Delivery and Servicing Strategy has been prepared as a supporting document for the OPA. The document informs the SBC of the intent of the applicant in managing service vehicle trips to and from the development, designed to minimise the impact of these goods vehicle trips on the surrounding public highway.

10.4 ILLUSTRATIVE CONSTRUCTION LOGISTICS PLAN

10.4.1. The Illustrative Construction Logistics Plan will provide a framework to better manage all types of freight movement to and from the Site during the demolition and construction phase. The purpose of this document, which is submitted as a supporting document as part of the QM OPA, is to provide an indication of how activities could be managed at the Site during construction of the QM OPA.

10.4.2. This document seeks to minimise the impacts of construction on the surrounding highway network. It is concerned with the highways and transport elements of construction and therefore should be read in conjunction with the Principal Contractor's Construction Method Statement and Construction Management Plan which considers other matters not directly relating to transport and logistics.

10.4.3. This document will seek to support the achievement of the following objectives:

- To demonstrate that construction materials can be delivered, and waste removed in a safe, efficient and environmentally friendly way.
- To identify deliveries that can be reduced, re-timed or even consolidated, particularly during peak periods.
- To help cut congestion on SBC's roads and ease pressure on the environment.
- To encourage construction workers to travel to the Site by sustainable or active travel modes.
- To improve vehicle and road user safety.
- To encourage the use of greener vehicles.
- To improve the reliability of deliveries to the Site.
- To reduce fuel costs and carbon emissions for freight operators.

11 SUMMARY AND CONCLUSION

11.1 SUMMARY

11.1.1. WSP have been commissioned by Green Monarch B1 2016 Limited and Green Monarch B2 2016 Limited to prepare a TA to support an outline planning application for the redevelopment of the Site.

11.1.2. The existing shopping centre comprises the following:

- 47,783sqm of retail use;
- 6,458sqm of office use;
- 28 residential units; and
- 6,870sqm of cinema.

11.1.3. The existing Site has two existing vehicle accesses, all via the A4 Wellington Street: the roundabout known locally as the HTC roundabout, which provides access to the Observatory car park and a left-in, left out access to the Site's car park. These two accesses are linked by Queensmere Road, a one-way eastbound loop road which provides three exit lanes from the Site and an entry lane to the OBS car park at the junction with the HTC roundabout. Queensmere Road also offers access to HTC Slough which lies to the north of the Site adjacent to the HTC roundabout.

11.1.4. The QM OPA is comprised of a series of individual Development Zones, each of which is subject to maximum parameters identified on associated Parameter Plans. For each Development Zone, Parameter Plans set Maximum Building Heights, together with a Maximum Building Footprint. This creates a maximum envelope for each Development Zone within which a building or buildings could be delivered ("Development Block(s)").

11.1.5. The maximum parameters of all of the Development Zones, and the maximum amounts of floorspace set out for each Development Zone in the DSD could not all be built out in full due to the site wide limitation of floor area in the PA2 Schedule of Floorspace, for which approval is sought. The QM OPA therefore seeks flexibility to draw from the sitewide Schedule of Floorspace (PA2) to provide a range of land uses across the different Development Zones, such that the location and type of certain land uses to be delivered across the different Development Zones remains flexible at the outline application stage.

11.1.6. The precise quantum of each land use to be delivered per Development Zone will be secured at Reserved Matters Application stage on a phased/Development Zone basis and will need to be in accordance with the PA2 schedule and Development Zone floorspace schedules in the DSD.

11.1.7. Flexibility is being sought between the provision of residential and office accommodation across the Development. As a result, two scenarios have been defined as detailed in **Table 11-1** and **Table 11-2**:

- Maximum Residential; and
- Maximum Office.

Table 11-1 – Maximum Residential

Land use	Floorspace
Residential	1,600 units
Office	0 sqm
Use Class E (excluding office uses), F (excluding primary and secondary schools, indoor or outdoor swimming pool or skating rink), Sui Generis (Pubs, Bars, Hot Food Take Away) and Sui Generis Leisure (Live Music/Cinema)	12,000[5] sqm of which 1,500sqm is Sui Generis Leisure (Live Music/Cinema) and 2,250sm is Sui Generis (Pubs, Bars, Hot Food Take Away)*

Table 11-2 – Maximum Office

Land use	Floorspace
Residential	950 units
Office	40,000 sqm
Use Class E (excluding office uses), F (excluding primary and secondary schools, indoor or outdoor swimming pool or skating rink), Sui Generis (Pubs, Bars, Hot Food Take Away) and Sui Generis Leisure (Live Music/Cinema)	12,000[5] sqm of which 1,500sqm is Sui Generis Leisure (Live Music/Cinema) and 2,250sm is Sui Generis (Pubs, Bars, Hot Food Take Away)*

11.1.8. On the basis of trip generation rates and professional judgement, it has been concluded that Scenario 2 (Maximum Office, Minimum Residential) as set out above would result in the worst case position in terms of transport impact. Therefore, this TA assesses scenario 2 as the worst case in terms of trip generation.

11.1.9. The QM OPA is an outline application with all matters reserved. In respect of Access, the QM OPA does seek approval for the points of access to/from the highway network into the Site, but that the detailed access arrangements together with the location and configuration of internal vehicular circulation reserved for determination at a reserved matter stage.

11.1.10. The proposed development will provide a highly permeable scheme and will enhance connectivity across the Site which will be an improvement when compared to the existing Site. Footways will be provided on both sides of the boulevard route between the HTC roundabout and the High Street access. Additionally, the scheme has been designed to provide landscaped areas with footpaths between each Development Zone. These will provide north-south pedestrian connections between the A4 Wellington Street and High Street. Furthermore, a pedestrian friendly public realm will be provided at the western end of the Site and next to the HTC building.

11.1.11. The proposals will provide car parking for the residential element at a ratio of 0.3 spaces per unit or 1 space per 100sqm (GEA) commercial space. This includes 5% of the total capacity provided as accessible parking spaces for people with reduced mobility and 20% of the total provided with electric vehicle charging infrastructure.

11.1.12. A cycle parking ratio of one space per residential unit has been agreed with SBC at pre-application stage. Cycle stores will be provided at ground floor, and for some Development Zones on first floor, in the form of two-tiered cycle racks.

11.1.13. An impact assessment has been undertaken in chapters 6-10 of this TA to determine how the proposals would affect the local highway, pedestrian, cycle and public transport networks during

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peak times. chapter 7 provides a summary of the impacts on the pedestrian, cycle and public transport networks and concludes that the impacts of the proposed development on each of these would be minimal (and would ease congestion in some cases). Chapters 8-9 analyse the impacts that the proposals would have on the local highway network based on the results of SBC's SATURN model and detailed modelling assessments using Junctions 10 and LinSig. These concluded that the impact of the proposals on the local highway network and junctions would be low.

11.2 CONCLUSION

11.2.1. This TA demonstrates that the Site is accessible, sustainable and in accordance with national, regional and local policy. It can, therefore, be concluded that the Site is acceptable from both a highways and transport perspective.

Appendix A

SBC PLANNING
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Green Monarch

SLOUGH CENTRAL, SLOUGH

Transport Assessment Scoping Note

APRIL 2020

PUBLIC

Green Monarch

SLOUGH CENTRAL, SLOUGH

Transport Assessment Scoping Note

TYPE OF DOCUMENT (VERSION) PUBLIC

PROJECT NO. 70060763

DATE: APRIL 2020

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QUALITY CONTROL

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks	Draft	For Issue		
Date	-	April 2020		
Prepared by	LS / AT	LS / AT		
Signature				
Checked by	AT	AT		
Signature				
Authorised by	DMcD	DMcD		
Signature				
Project number	70060763	70060763		
Report number				
File reference	\\uk.wspgroup.com\central data\Projects\700607xx\70060763 - Slough Town Centre\03 WIP\TP Transport Planning\05 Reports\04 Tansport Scope\200407 - Slough Central_Transport Assessment Scoping Note_DRAFT.docx			

SBC PLANNING
RECEIVED : 24.06.2022

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1 INTRODUCTION

1.1 PREFACE

1.1.1. WSP has been appointed by Green Monarch to provide highway and transportation advice to support an outline planning application for proposals to redevelop the Queensmere and Observatory Shopping Centres, hereafter referred to as 'the site'.

1.1.2. The purpose of the Scoping Note is to outline the transport matters relating to the development proposals with a view to agreeing the key transport principles and scope of the Transport Assessment (TA) with Slough Borough Council (SBC), in advance of the planning submission.

1.1.3. The TA will be prepared in support of an outline planning application to be submitted later in 2020. The TA will be written with reference to Best Practice Guidance.

1.1.4. Table 1-1 below outlines the key sections to be included as part of the TA.

Table 1-1 – TA Checklist

Section	Topic	Scoped In / Out
Introduction and background	Site Location	In
	Full description of development proposals	In
	Details of any previous applications	In
Baseline conditions	Land uses	In
	Car parking	In
	Cycle parking	In
	Motorcycle parking	In
Baseline Network	Walking	In
	Cycling	In
	Public Transport Network	In
	Road Network	In
Highway Network	Existing trips - total generated	In
	Existing trips - mode splits	In
	Existing trips - trip distribution	In
	Existing trips - temporal breakdown	In
	Future trips - source data and methodology	In
	Future trips - mode, time, purpose and distribution	In
	Future trips - delivery and servicing, trip distribution/ timing	In
Impacts - cycling and walking	Footway capacity (Fruin)	Out

	Available footway width (Gehl)	Out
Impacts - bus network	New demand by direction	In
	Bus priority	In
	Junction capacity on major routes	Out
Impacts - national rail network	Route capacity (RODS/ Railplan)	Out
	Station capacity	Out
Impacts - road network	Traffic levels	In
	Junction analysis (PICADY/ ARCADY or other as appropriate)	Subject to SBC data
	Construction traffic	Out
Impacts - taxis	Capacity of taxi ranks	Out
Cumulative impacts	Local additional development impacts	In

1.2 EXISTING SITE

1.2.1. The site currently consists of two shopping centres, the Queensmere and Observatory which comprise of retail outlets, restaurants, cinema, gym, office use and residential units. The site is located 200m south of Slough Railway Station. The site is bound to the north by the A4 Wellington Street and the High Street to the south.

1.2.2. The site has three existing vehicle accesses, all via the A4 Wellington Street: the roundabout known locally as the HTC roundabout, a left-in, left out access to the Queensmere shopping centre car park, and a left-in, left-out next to the Verona Apartments.

1.2.3. The site location, including the existing vehicle accesses, is shown in Figure 1-1.

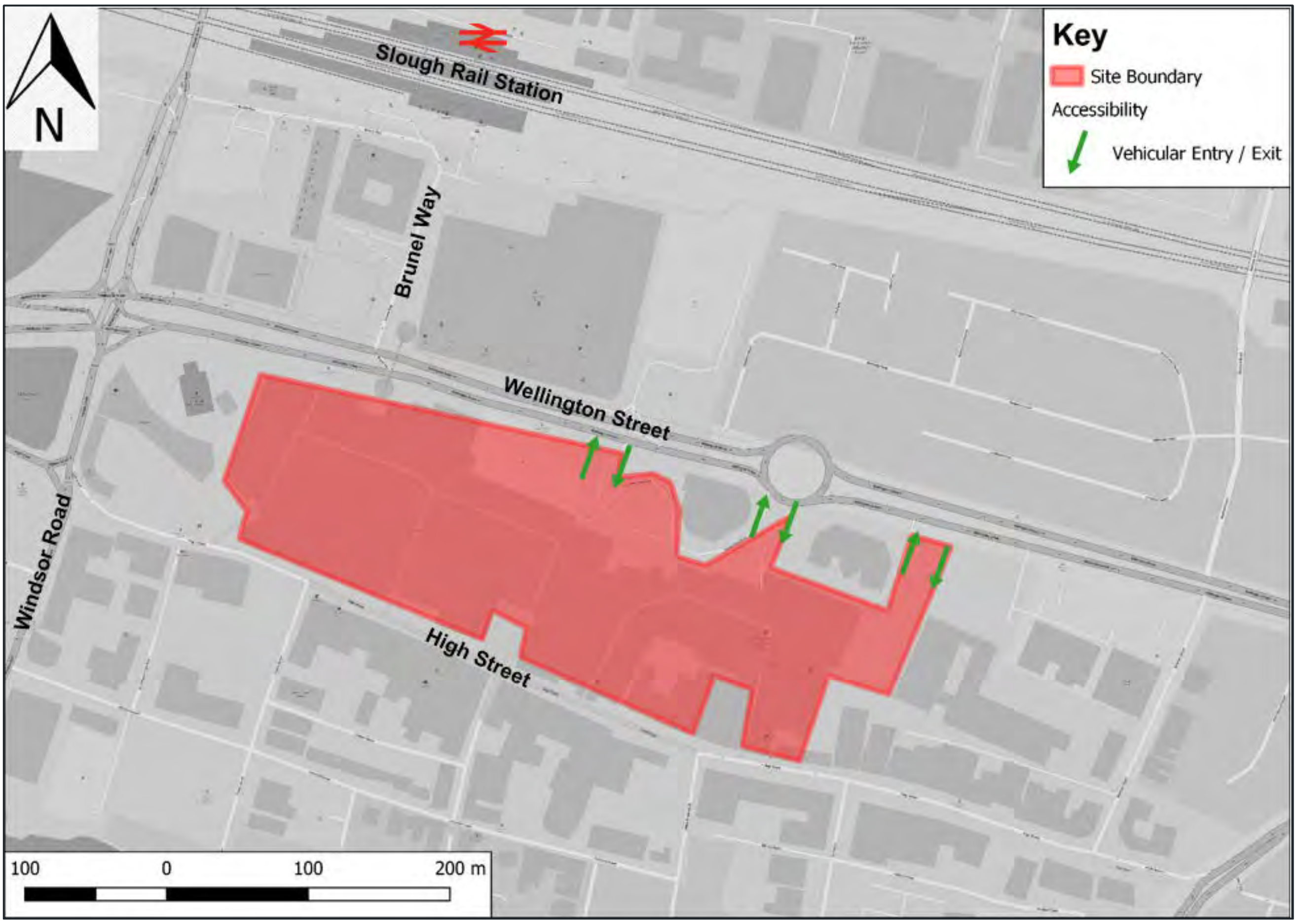


Figure 1-1 - Site Location

1.2.4. Table 1-2 outlines the existing land use schedule.

Table 1-2 – Existing Accommodation Schedule

Land Use	GIA (sq m)	GIA (sq ft)
Retail (A1-A5)	85,947	925,123
Office (B1)	6,264	67,425
Residential (C3)	2,040 (28 Units)	21,958 (28 Units)
Cinema (D2)	7,338	78,985
Total	**101,589**	**1,093,491**

1.3 OVERVIEW OF PROPOSALS

1.3.1. The proposals seek to redevelop the site with the following:

Table 1-3 – Proposed Development Quantum (subject to alterations)

Land Use	GIA (sq m)
Residential (C3)	101,055sqm (1,054 units)
Office (B1)	208,211sqm
Retail / F&B (A1 – A5)	13,488sqm
Culture (D2)	3,464sqm
Total	**326,218sqm (1,054 Units)**

1.4 REPORT PURPOSE

1.4.1. This Scoping Note has been prepared to set out and agree the scope and approach of the TA with SBC. The TA will be written with reference to national and local planning policy and best practice guidelines.

1.4.2. It is intended that the content of this Scoping Note is agreed with Highway officers at SBC.

1.4.3. The Slough Central Transport Assessment will be broadly structured as follows:

- Section 1 – Introduction
- Section 2 – Policy Context
- Section 3 – Existing Transport Conditions
- Section 4 – Existing Access and Movement
- Section 5 – Development Proposals
- Section 6 – Forecast Travel Demand
- Section 7 – Effect of the Development
- Section 8 – Management Measures
- Section 9 – Summary and Conclusions

2 PLANNING POLICY AND GUIDANCE

2.1 INTRODUCTION

2.1.1. The TA will set out details of relevant transport related policies at a national, regional and local level. Specifically, an overview of the following documents will be provided:

NATIONAL POLICY

- National Planning Policy Framework
- National Planning Practice Guidance

LOCAL POLICY

- Slough Borough Council Local Plan
- Slough Borough Council Emerging Local Plan
- Slough Local Development Framework: Core Strategy 2006 – 2026: Development Plan Document
- Transport and Highway Guidance Developers Guide Part 3 – Interim Document November 2008
- Local Transport Plan 3 Supplementary Strategy Document: Parking Strategy (October 2016)
- Centre of Slough - Interim Planning Framework (July 2019)

3 EXISTING TRANSPORT CONDITIONS

3.1 INTRODUCTION

3.1.1. This section presents a review of the existing transport network, including public transport accessibility and active travel routes.

3.2 PEDESTRIAN ACCESSIBILITY

3.2.1. The National Travel Survey 2015 (released in September 2016) notes that walking is the most frequent mode of travel used for short distance trips within 1 mile (1.6km). Infrastructure that supports efficient travel on foot therefore promotes walking as a viable alternative to short car trips.

3.2.2. The Slough Central site is located within a town centre with a high density of amenities and public transport services. The site is within a 200m walking distance of Slough train and bus stations; Upton Hospital; and large supermarkets, Tesco and Sainsburys. Walking isochrones at 5-minute intervals up to 30 minutes are shown in Figure 3-1.

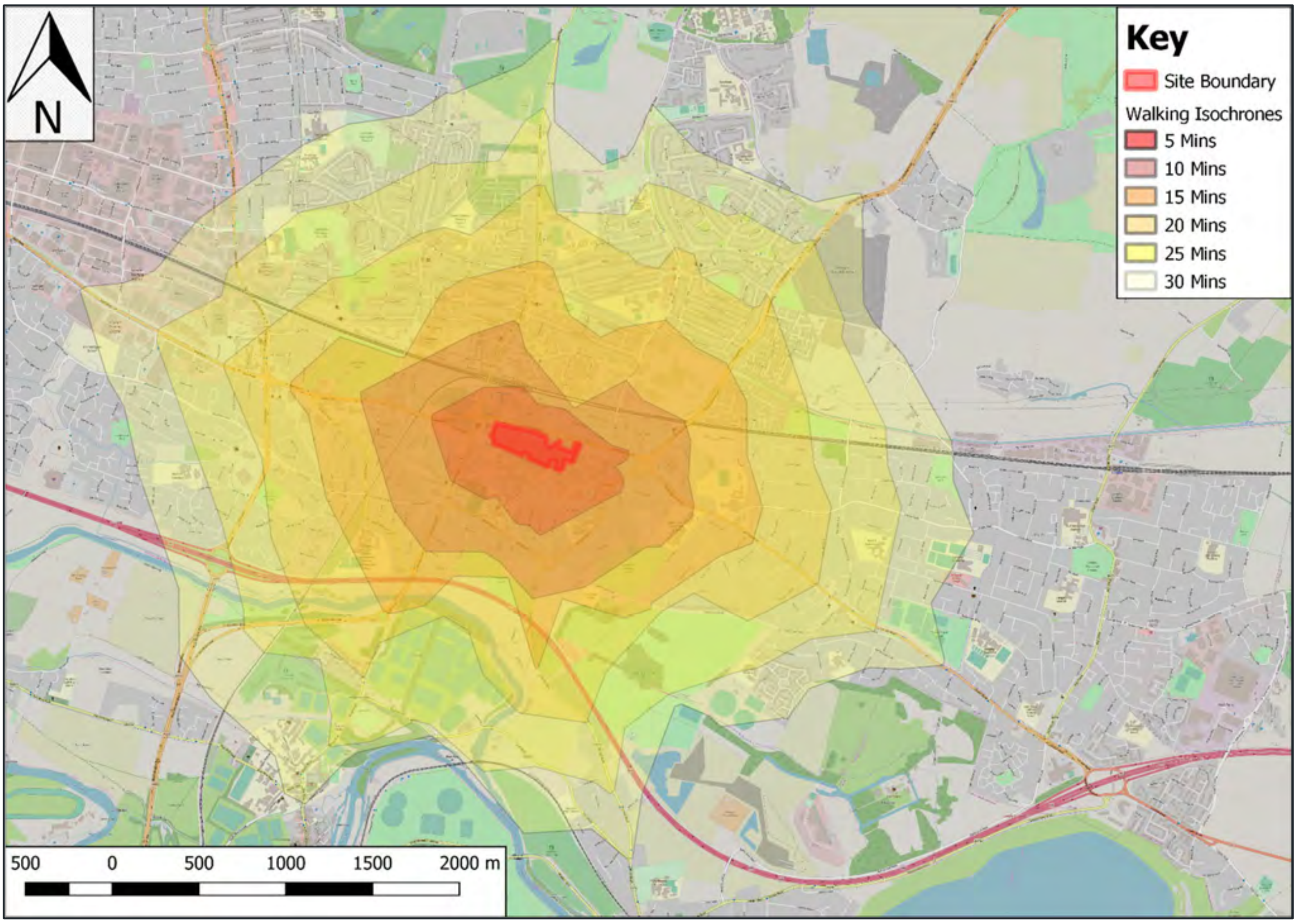


Figure 3-1 - Pedestrian Isochrone Map

3.3 CYCLE ACCESSIBILITY

3.3.1. It is typically considered that cycling also has the potential to substitute for short car trips, particularly those journeys less than five kilometres in length. However many people will cycle considerable distances depending on the weather, time of day, level of fitness, convenience, and real or perceived safety.

3.3.2. The site benefits from good connections to the Sustrans National Routes and Sustrans Local Routes, which provide safe cycle routes for its users and connect onto the wider cycle network.

3.3.3. Additionally, many sections of Slough town centre and the surrounding area consist of shared paths for both cyclists and pedestrians, with wide paths located around the site as well as cycle storage and locking infrastructure.

3.3.4. Figure 3-2 illustrates cycling isochrones, demonstrating accessibility for up to 30-minute journey times from the site, in 5-minute intervals. The map shows that key locations including Longford and Maidenhead are accessible within a 30-minute cycle.

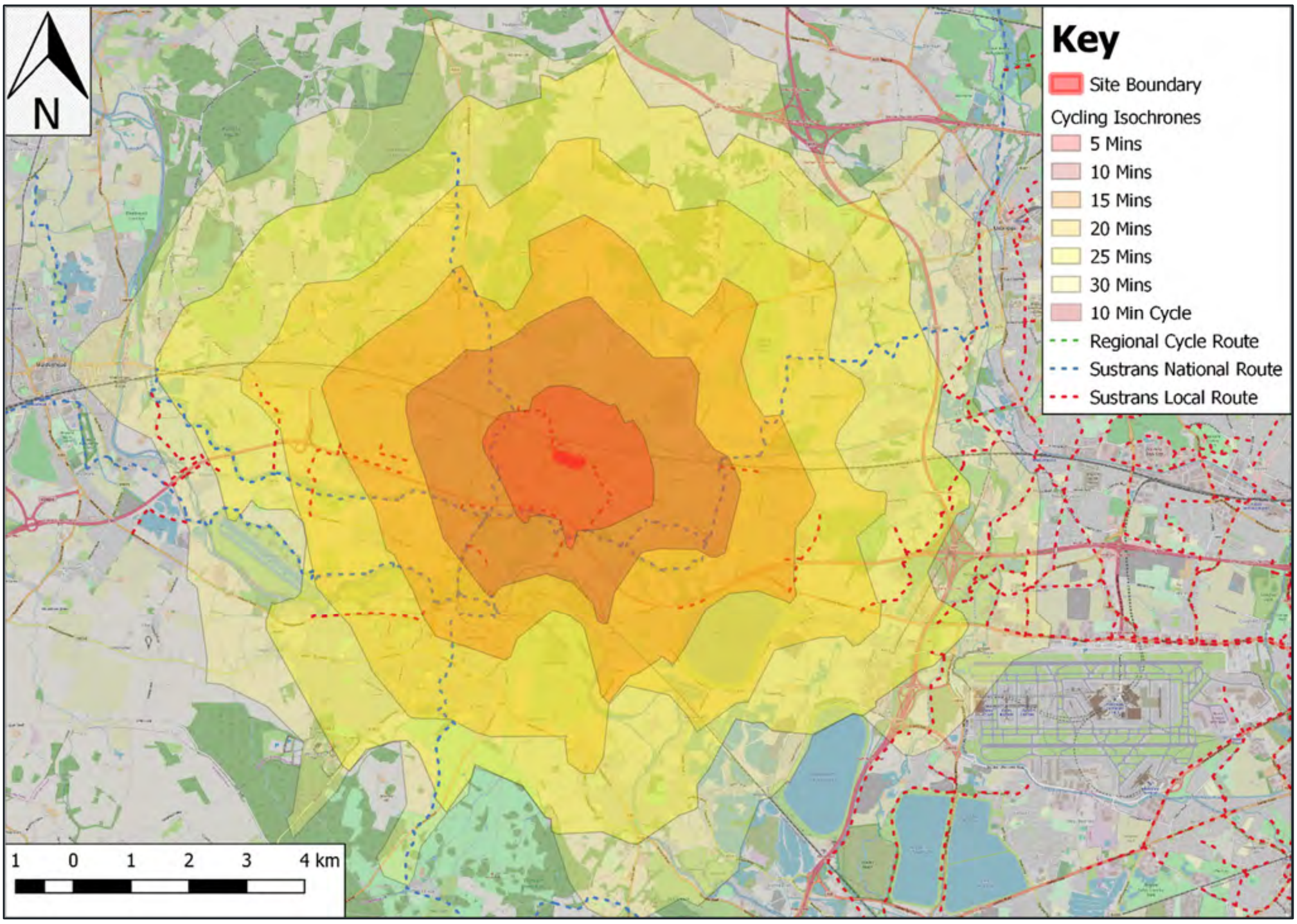


Figure 3-2 - Cycle Isochrone

3.4 PUBLIC TRANSPORT ACCESSIBILITY

3.4.1. Public transport facilities near the site are shown in Figure 3-3. This section summarises routes and frequency of these services.

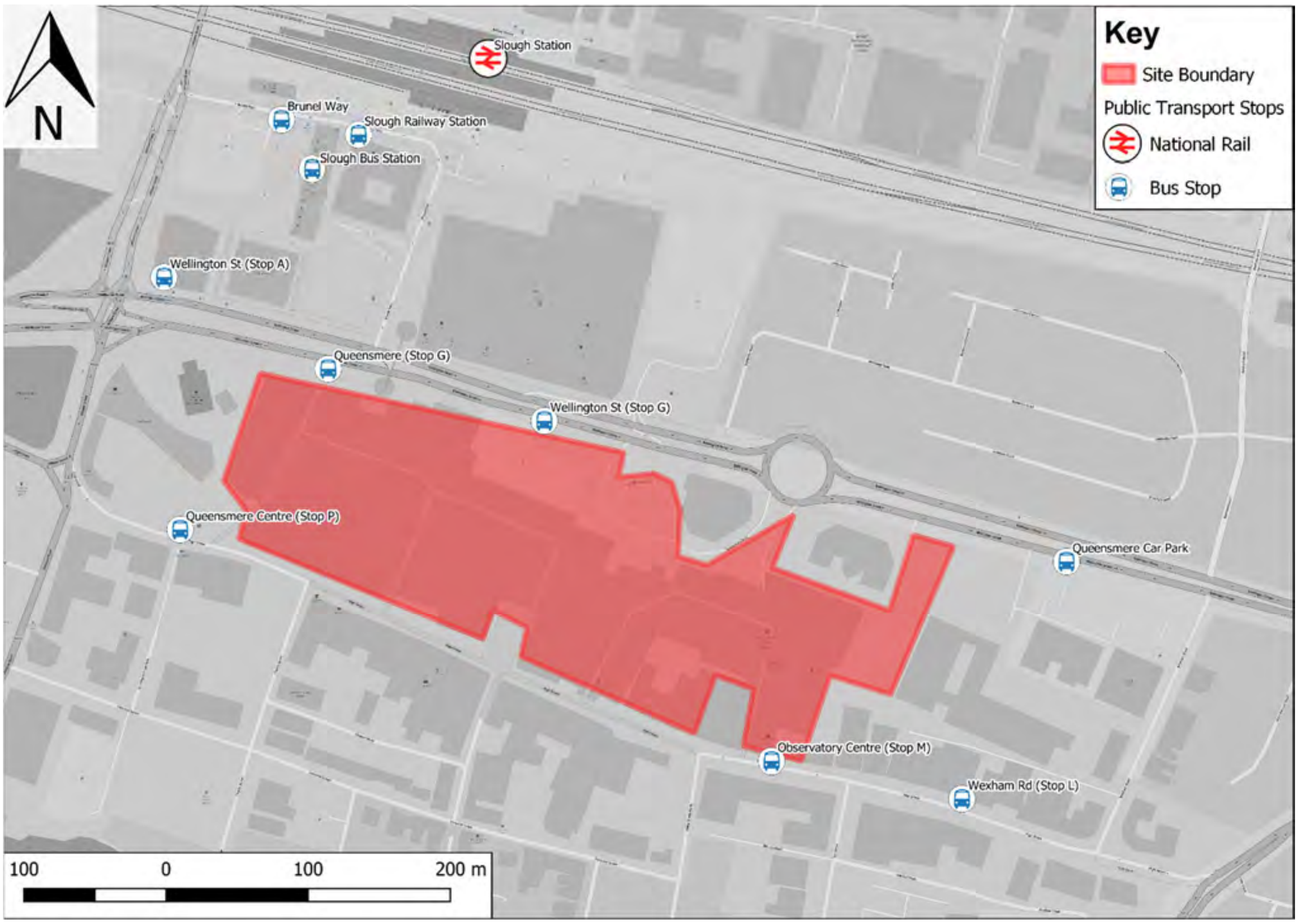
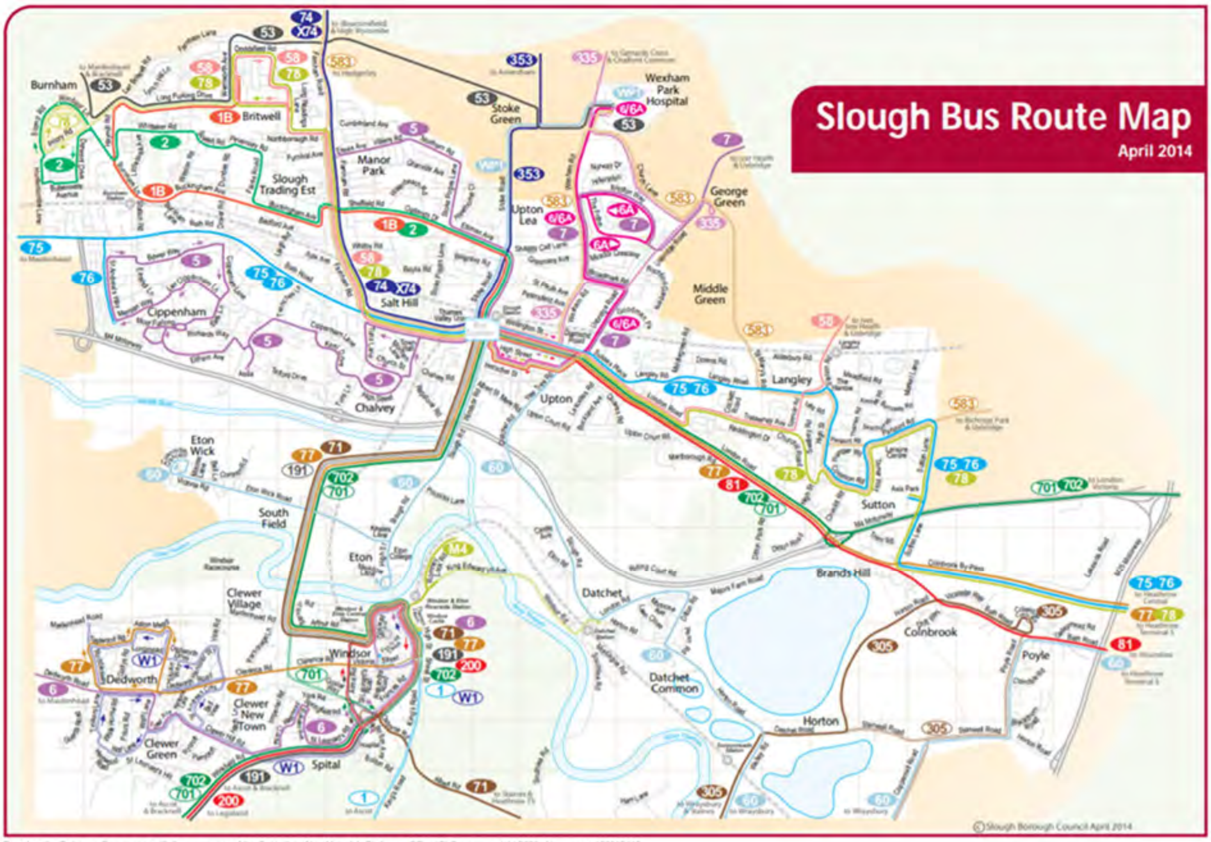


Figure 3-3 - Local Public Transport Facilities

BUS

3.4.2. The site benefits from its close proximity to Slough bus station, which lies to the north between Wellington Street and Brunel Way. The Slough bus station provides access to the vast majority of routes operating across Slough. This Slough bus route map is shown in Figure 3-4.



Based on the Ordnance Survey map with the permission of the Controller of her Majesty's Stationery Office (C) Crown copyright 2008. Licence no. 100019446

Figure 3-4 - Slough Bus Route Map

3.4.3. A summary of the bus services available within walking distance from the site are provided in Table 3-1

Table 3-1 – Bus Services Accessible from the Site

Stop	Line	Direction	AM Freq.	PM Freq.
Slough Station	1B	Britwell	1	1
	2	Dedworth	1	1
	3	Uxbridge	2	2
	4	Maidenhead - Heathrow	2	2
	5	Cippenham	2	1
	8	Heathrow	2	2
	15	Eton Wick - Maidenhead	1	1
	81	Colnbrook - Hounslow	5	4
	X74	High Wycombe	2	2
	104	Chiltern Hundreds	1	1
	702/703	Bracknell – Heathrow T5	2	2

Slough Brunel Way	12	Elliman Avenue - Britwell	2	2
	13	Slough Trading Estate - Burnham	6-7 per day	
	WP1	Wexham Park Hospital	3	3
Slough Wellington Street	1	Slough Queensmere – Britwell Kennedy Park Shops	3	3
	6	Wexham Court	2	2
	9	Heathrow T5	2	2
	583	Uxbridge Station	3-4 per day	
	702/703	Reading – Victoria Coach Station	1	1

RAIL

3.4.4. Great Western Railway operate services through Slough rail station, with connections running frequently to London (London Paddington) and other destinations including Windsor, Reading and Didcot Parkway.

3.4.5. A summary of the rail services within walking distance of the site are provided in Table 3-2.

Table 3-2 – Rail Services Accessible from the Site

Destination	Route	AM Freq.	PM Freq.
Windsor & Eton Central	Slough – Windsor & Eton Central	3	3
London Paddington	London Paddington – Oxford	2	2
Oxford		2	2
Reading	Reading – London Paddington	2	2
London Paddington		2	2
Didcot Parkway	Didcot Parkway – London Paddington	2	2
London Paddington		2	2
Worcester Shrub Hill	London Paddington – Worcester Shrub Hill	1	1
London Paddington		1	1

3.4.6. Slough rail station will provide access to Elizabeth Line services, when the route is opened, currently scheduled for October 2020. The Elizabeth Line services will extend across London from east to west. This will improve accessibility to and from and Slough, with the new line extending to Reading in the west, and Shenfield and Abbey Wood in the east. The Elizabeth Line will also provide direct services to Heathrow Airport.

3.4.7. The Elizabeth Line will provide an additional six trains per hour during peak times, and four off-peak trains per hour. Journey times along the new line will be as follows:

- Slough to Heathrow Central: 15 mins
- Slough to Reading: 22 mins
- Slough to Tottenham Court Road: 32 mins
- Slough to Canary Wharf: 46 mins
- Slough to Abbey Wood: 58 mins
- Slough to Shenfield: 81 mins

4 EXISTING ACCESS AND MOVEMENT

4.1 VEHICULAR ACCESS

4.1.1. The site is bound by the A4 Wellington Street to the north, Royal Mail / Slough Telephone Exchange to the east, Slough High Street to the south and William Street / The Curve Slough to the west.

4.1.2. The site has three existing vehicle accesses, all via the A4 Wellington Street: the roundabout known locally as the HTC roundabout, which provides access to the Observatory car park; a left-in, left out access to the Queensmere shopping centre car park; and a left-in, left-out next to the Verona Apartments.

4.1.3. It should be noted that Queensmere Road also offers access to HTC Slough which lies to the north of the site adjacent to the HTC roundabout.

Existing Servicing Arrangement

4.1.4. Service vehicles currently access the site via the existing accesses on Wellington Street. The primary servicing access is taken from Wellington Street, to the west of the HTC roundabout, in the form of a signalised left in, left-out access which provides access to Queensmere Road.

4.1.5. Queensmere Road is a one-way eastbound loop road which provides access to the ramped servicing access connecting the rooftop loading area. The rooftop provides a loop road and egress back onto Queensmere Road where vehicles then exist via the HTC roundabout.

4.1.6. Wellington Street also provides a secondary servicing access to the east of the HTC roundabout which is formed by a priority left in left out arrangement.

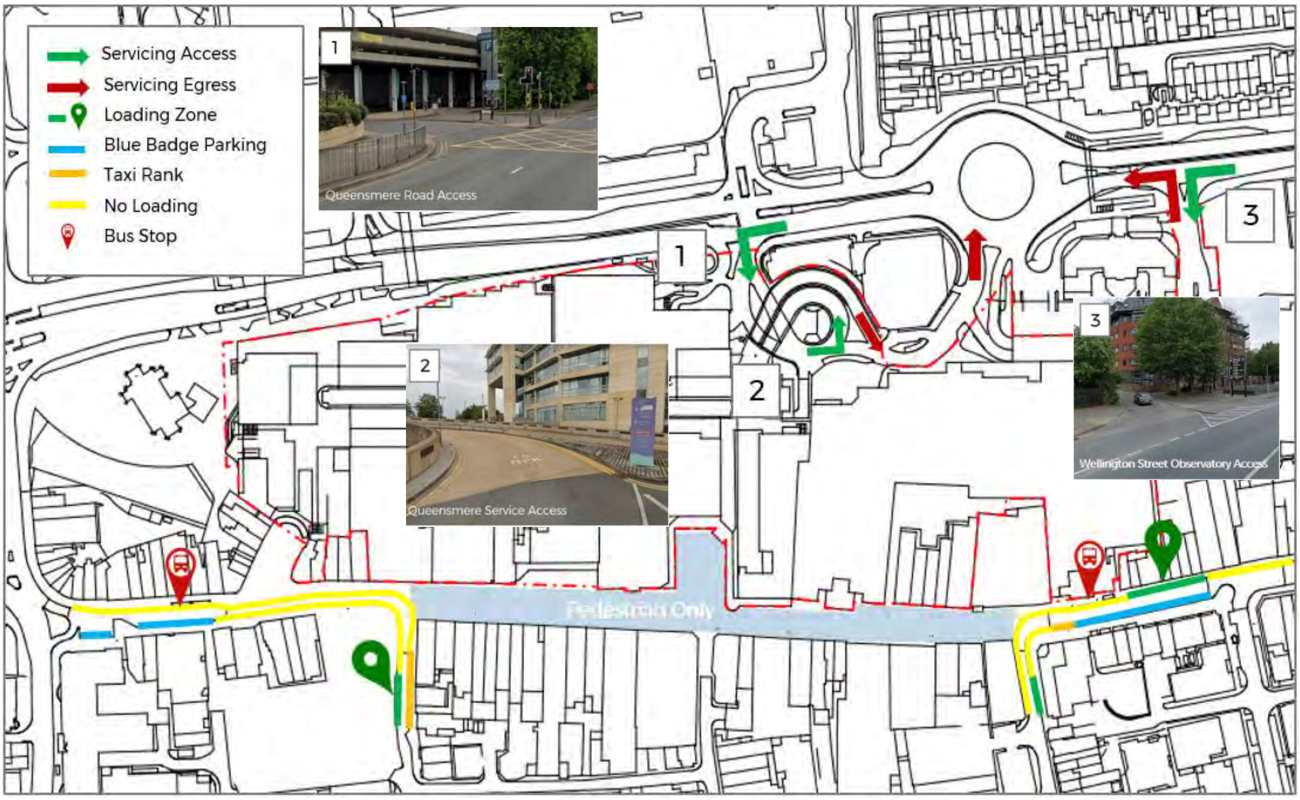


Figure 4-1 - Existing Servicing Arrangement

High Street

4.1.7. The High Street is situated at the sites southern boundary and is predominantly made up of a pedestrian only zone. The pedestrian zone has retractable bollards at each end for occasional permitted vehicular access. The remaining sections of the high street are largely made up of double yellow lines with double kerbside blips indicating no loading at any time. As showing in Figure 4-1 there are a handful of facilities for blue badge holders, taxi ranks and two sections for loading vehicles.

4.1.8. To note, the High Street has a one way eastbound for vehicles using the link.

4.2 PARKING ON-SITE

4.2.1. The existing parking numbers available on site are currently being established by the applicant, however are in the region of the following:

- Queensmere shopping centre (multi-storey height restriction 1.95m) – 575 spaces
- Observatory shopping centre – 830 spaces
- Possibly other smaller car parks on-site – to be confirmed
- Total of 1,405 spaces on site

4.3 TOWN CENTRE PARKING

4.3.1. There are a number of nearby public car parks in Slough town centre which are operated by SBC:

- Buckingham Gardens car park
- Herschel car park
- The Grove car park
- Hatfield car park

source: http://www.slough.gov.uk/parking-travel-and-roads/map-of-council-car-parks.aspx

4.3.2. Slough's LTP3 SSD: Parking Strategy (2016) identifies the car parking quantum in Slough Town Centre as shown in Figure 4-2.

Bay/Car Park Description			No. of spaces		
Bay/Car Park	Owner	Type	General	Disabled	Total
On-street bays[5]	SBC	Pay & Display	408	24	432
Off-street surface level[6]	SBC	Pay & Display	160	27	187
Off-street multi-storey[7]	SBC	Pay & Display	998	27	1,025
Off-street surface level[8]	Private	Attendant	561		561
Off-street multi-storey[9]	Private	Pay on Foot	1,345	65	1,410
Slough Rail Station	Private	Pay & Display	626		626
Tesco Supermarket (Wellington Street)	Private	Minimum in-store payment	837	47	884
Total			4,935	190	5,125

5 Assumes each on-street parking bay measures 5.5m in length and includes length of bays located in the following streets: Albert Street (104m), Beechwood Gardens (11m), Bishops Road (28m), Chalvey Park (132m), Church Street (195m), Hatfield Road (148m), High Street (200m), Leith Close (84m), Osborne Street (258m), Park Street (230m), St Laurence Way (122m), Stratfield Road (156m), The Grove (65m), Wellesley Road (388m), Wexham Road (127m), Windsor Road (50m), Victoria Street (76m). Total length of 2,374m of on-street parking.
6 Includes The Grove (45 spaces), Buckingham Gardens (60 spaces), Alpha Street North (17 spaces) and Burlington (65 spaces)
7 Includes Hatfield and Herschel multi-storey car parks
8 Includes Victoria Street (46 spaces), Brunel Way (126 spaces), Church Street (96 spaces), Burlington (100 spaces), Buckingham Gardens (120 spaces) and Upton Park Hospital (73 spaces)
9 Includes Queensmere and Observatory multi-storey car parks

Figure 4-2 - Car Parking Facilities in 2016 Servicing Slough Town Centre

4.4 PERSONAL INJURY ACCIDENT DATA

4.4.1. Personal injury accident data for the most recent 5-year period will be obtained and analysed in the TA. Any existing highways safety issues will be identified and, if necessary, mitigation measures proposed.

5 SLOUGH CENTRAL PROPOSALS

5.1 DEVELOPMENT ZONES

5.1.1. The Slough Central Masterplan site will be split into the eight Development Zones for the purpose of the development proposals and the outline planning application, as shown in Figure 5-1.

Figure 5-1 - Slough Central Development Zones (subject to change)

5.2 DEVELOPMENT DESCRIPTION

5.2.1. Table 5-1 shows the development proposals, which may be subject to further changes.

Table 5-1 – Proposed Development Quantum (subject to alterations)

Land Use	GIA (sq m)
Residential (C3)	101,055sqm (1,054 units)
Office (B1)	208,211sqm
Retail (A1 – A5)	13,488sqm
Culture (D2)	3,464sqm
Total	**326,218sqm (1,054 Units)**

5.3 ACCESS STRATEGY

5.3.1. Whilst the access strategy is still being developed, the overall site will offer a safe, permeable environment, whilst retaining and enhancing the pedestrian nature of the town centre. The access strategy will focus on ensuring that opportunities for active travel are maximised and fully inclusive for all users.

Walking

5.3.2. The Slough Central proposals seek to provide maximum permeability for pedestrians through the proposed building block layout and orientation. The proposed site layout will create connections through the site which will adjoin existing surrounding pedestrian routes and create areas and networks of high quality public realm.

5.3.3. The site layout will encourage more instinctive wayfinding, providing flexible space for pedestrians travelling in all directions through the town centre. The internal layout offers pedestrian connections between the Boulevard route, and the High Street to the south; and Wellington Street to the north.

5.3.4. The internal pedestrian layout is emerging at this stage; however the streets will provide adequate footways for pedestrians on both sides of the road.

A4 Wellington Street

5.3.5. A key improvement associated with the proposals will be an improved connection between the site and Brunel Way. The strategy will improve walking connections between the site and Slough rail and bus station on Brunel Way.

5.3.6. The proposals seek to improve the pedestrian crossing arrangement on Wellington Street, which is currently a two stage arrangement, meaning that people crossing the road are required to wait on an island in the middle of the road.

5.3.7. The proposals will re-align the pedestrian crossing to the east of the junction with Brunel Way to provide a single stage at-grade crossing, which removes the need to wait in the centre of the A4. Realigning the crossing also has the benefit of improving the desire line between the site and the Station and the attractiveness of the crossing.

5.3.8. Initial studies suggest this should be feasible, however is subject to further investigation and discussions with SBC.

5.3.9. It is envisaged the new crossing will form a key north-south link between Slough station and the High Street, via the Slough Central site.

Cycling

5.3.10. Cycling forms a key mode of transport within the Slough Central proposals for residents, staff and visitors alike. Appropriate cycle parking will be provided that balances SBC requirements with design best practice to ensure that cycle use is encouraged as much as possible. Cycle parking will include long-stay parking for residents and staff, likely to be provided at basement level; and short stay visitor parking within the public realm adjacent to building entrances and active frontages.

5.3.11. The streetscape will be designed with cyclists in-mind, to ensure routes are attractive for cyclists and safe to use. The aim to reduce traffic movements across the site should support the desire to provide cycle-friendly streets, where cyclists feel comfortable cycling in the carriageway.

5.3.12. The proposals seek to maximise cycle connectivity throughout the site. A key cycle route will be along the Boulevard, providing a connection between the HTC roundabout and the High Street. This route forms a central link through the site picking up all secondary links to various buildings across the site.

Vehicular Access

5.3.13. The existing vehicle access arrangements on the A4 Wellington Street will be retained, including the access opposite the Tesco filling station; the HTC roundabout; and the access east of Verona Apartments.

5.3.14. As shown in Figure 5-2, the site will include a Boulevard route running east-west between the HTC roundabout and a proposed access on the High Street. The Boulevard will be the main route for vehicles across the site.

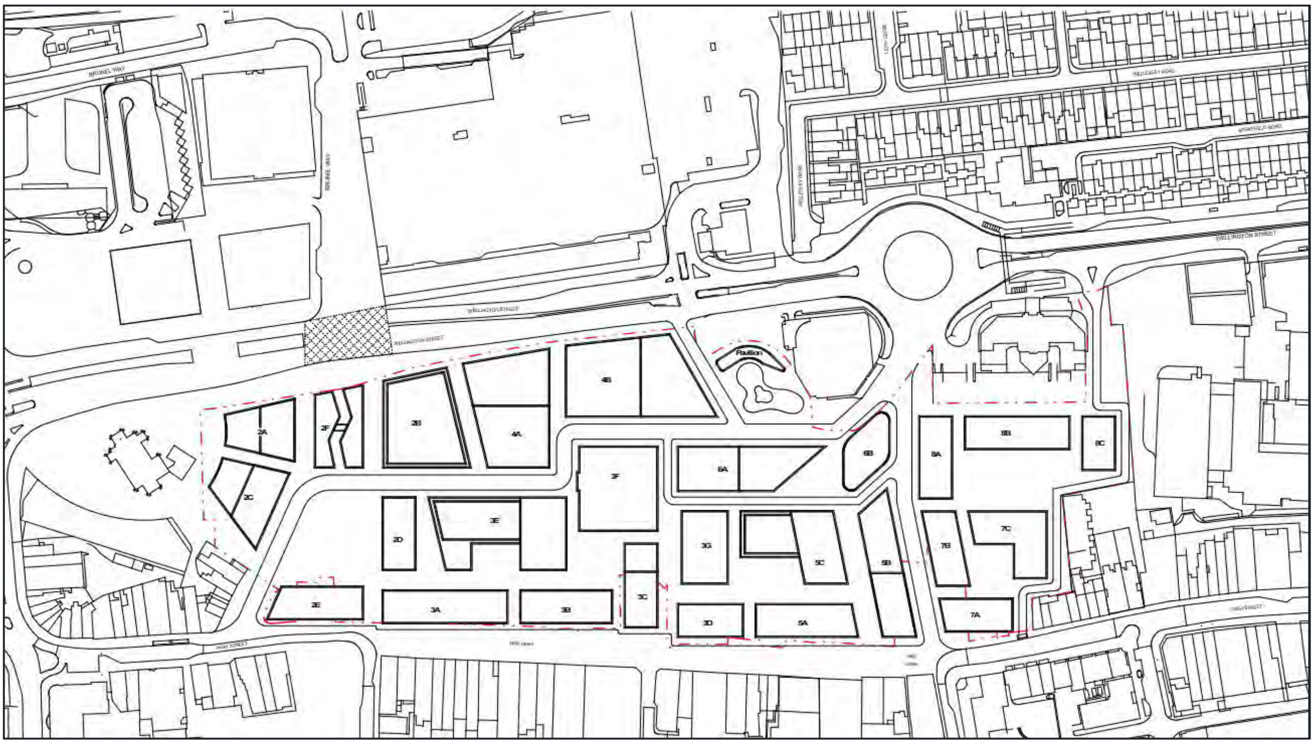


Figure 5-2 - Emerging Vehicular Access Strategy

5.3.15. The proposed parking strategy currently includes basement car parking, which would extend across the site area. The proposed vehicle access arrangements for the basement are emerging at this stage, however, access to the basements will be achieved from the Boulevard.

5.4 CAR PARKING

5.4.1. As outlined in Slough's Transport and Highway Guidance Development Guide Part 3 (2008) the parking standards for office, retail and residential uses are shown in Table 5-2.

Table 5-2 – Slough Parking Policy 2008

Use	Town Centre Commercial Core Area
A1 – A3	Nil
B1(a) Office	Max. 1 to 40sqm
C3	Nil

5.4.2. In addition to the parking standards set out in the Development Guide Part 3 (2008), Slough's LTP3 SSD: Parking Strategy (2016) states the following:

- *No increase in the total number of car parking spaces on-site will be permitted within commercial (re)development schemes.*
- *Residential development does not have to be car-free, however should be appropriate.*
- Electric Charging Points - All new town centre car parks should provide fast electric vehicle charging points. Rapid chargers will be provided on-street in appropriate locations in the town centre and across the borough to support a greater uptake of electric vehicles. *All new developments shall provide vehicle electric charging points in accordance with the IAQM guidance 2015.*

5.4.3. The IAQM 2015 has since been superseded by IAQM 2017, however, the requirements for electric charging points remain consistent:

- The provision of at least 1 Electric Vehicle (EV) "fast charge" point per 10 residential dwellings and/or 1000m2 of commercial floorspace. Where on-site parking is provided for residential dwellings, EV charging points for each parking space should be made.

5.4.4. WSP attended a pre-application meeting with SBC Highways on 10 March 2020. It is understood the Highways officer tabled the following parking ratios for discussion:

- Office – 1 space per 100 sqm GFA
- Residential – 0.3 spaces per unit

5.4.5. Table 5-3 shows the SBC parking requirements, based on the parking ratios for the proposed office and residential use only, as discussed at the pre-application meeting on 10 March 2020, based on the proposed GEA floor areas.

Table 5-3 – SBC Parking Requirements based on GEA

Land Use	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8	Total
Culture	-	-	-	-	-	-	-	-	-
F&B	-	-	-	-	-	-	-	-	-
Office	-	371	599	789	129	194	-	-	2,082
Residential	-	36	77	-	52	34	57	60	316
Retail	-	-	-	-	-	-	-	-	-
Total	**-**	**407**	**676**	**789**	**181**	**228**	**57**	**60**	**2,398**

Proposed Parking On-site

5.4.6. The development proposals seek to provide an appropriate level of parking for each land use, based on commercial need and other town centre schemes in Slough.

5.4.7. Table 5-4 outlines the parking target ratios by use for each of the Development Zones, based on the proposed Net Internal Area (NIA) for non-residential uses, and the proposed number of units for the residential.

Table 5-4 – Proposed Parking Target Ratios by Use (based on NIA)

Land Use	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8	Avg
Culture -1 space per (sqm NIA)	-	40	40	50	50	50	50	50	47
F&B - 1 space per (sqm NIA)	-	40	40	50	50	50	50	50	47
Office - 1 space per (sqm NIA)	-	75	100	100	125	125	140	140	115
Residential - spaces per unit	-	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4
Retail - 1 space per (sqm NIA)	-	40	40	50	50	50	50	50	47

5.4.8. The parking ratios generally reduce for later Development Zones, as it is assumed public transport provision will improve and the reliance on cars will reduce.

5.4.9. Table 5-5 shows the proposed parking targets, applying the ratios shown in Table 5-4, against the proposed floor areas (NIA) and the number of residential units.

Table 5-5 – Proposed Parking by Zone (subject to change)

Land Use	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8	Total
Culture	0	63	0	0	0	0	0	0	63
F&B	0	22	31	0	15	7	0	0	75
Office	0	358	433	570	74	112	0	0	1548
Residential	0	60	129	0	70	46	76	80	461
Retail	0	39	61	0	27	16	8	0	151
Total	**0**	**542**	**653**	**570**	**186**	**181**	**84**	**80**	**2295**

5.4.10. As outlined above the proposals seek to provide a total of 2,295 car parking spaces within the Slough Central masterplan site.

5.4.11. To benchmark the proposed number of parking spaces, a review of local planning applications within Slough Town Centre has been undertaken to understand local precedent for commercial office parking. Table 5-6 outlines three commercially led developments and the parking ratios per sqm (GEA).

Table 5-6 – Local Workplace Parking Precedent

Application	Office Floor Area sqm (GEA)	Parking Provision	Parking Ratio (space:sqm GEA)
Slough Central	*208,211*	*1,548*	*1:134*
Station Square	19,608	120	1:163
1 Brunel Way	10,650	100	1:107
2 Brunel Place	31,278	134	1:233
Average (excludes Slough Central)			**1:168**

5.4.12. Table 5-6 shows a range from 1 space per 107-233sqm for office development within the town centre at an average of 1 space per 168sqm. The proposals seek to provide 1,548 spaces on-site for the office use, a ratio of 1 space per 134sqm GEA. This level of parking is in line with recent planning applications.

5.4.13. Table 5-5 shows a parking target of 461 parking spaces for the resident uses at a parking ratio of c. 0.44 spaces per unit. This level of parking is considered to be in line with LTP3 SSD: Parking Strategy (2016) which suggests an appropriate level of residential parking should be provided.

5.4.14. LTP3 SSD: Parking Strategy 2016 suggests *Provision for mobility impaired (blue badge holders) will be provided and located in line with current guidance.* In view of the absence of blue badge parking standards within SBC policy, it is proposed to adopt the "*London Plan Intend to Publish, 2019"* standards in the first instance due to its robust requirements. Table 5-7 outlines the number of accessible parking spaces required for the proposed Slough Central development.

Table 5-7 – Proposed Accessible Parking Provision

Land Use	Total Parking Provision	Accessible Parking (included within total parking provision)*	
		Outset	Future
Workspace	1548	77	77
Residential	461	14	32
Retail / F&B	226	14	9
Culture	63	4	3
Total	2295	108	121

**Accessible parking: London Plan Intend to Publish, 2019 standards*

5.5 CYCLE PARKING

5.5.1. Cycle parking will be provided in line with the *Developers Guide Part 3 (2008)* and *SBC Local Transport Plan 3 Supplementary Strategy Document: Parking Strategy (2016).*

5.5.2. It is likely that a combination of two-tier cycle racks and Sheffield stands would be used for long-stay cycle parking, with the Sheffield stands providing parking for non-standard cycles. The proposals will provide Sheffield stands for short-stay cycle parking within the public realm in appropriate locations in close proximity to accesses.

5.5.3. To note, there is limited information provided in regard to short-stay cycle parking for the residential, workspace, retail and elements of the proposals. Similarly, requirements for long-stay staff parking is limited for the culture element of the scheme, while food and beverage is 'calculated on merit'.

5.5.4. In the absence of Slough cycle parking standards for some uses, it is proposed to apply the London Plan 2019 cycle parking standards where required. Table 5-8 outlines the cycle parking requirements along with the proposed cycle parking numbers.

Table 5-8 – Cycle Parking Requirements / Proposals

Land Use	Floor Area (sqm)	Land Use Assumptions	Slough BC Standard	Proposed Long-stay	Proposed Short-stay
Resi.	101,055sqm (1,054 units)	All 1-3 beds	Min 1 per unit	1054	26
Workspace	208,211sqm	B1 Office	Min 1 per 125sqm	1666	87*
Retail	13,488sqm	A1 Shops	Min 1 per 125sqm	72	135
F&B	3,464sqm	A3 Food/Drink/Pubs	1 per 175sqm*	26	112
Culture	**326,218sqm (1,054 Units)**	D2 Entertainment	Min 1 per 50 visitors	*TBC*	135
Total	101,055sqm (1,054 units)	-	-	**2817**	**395**

**London Plan standards apply where none provided by SBC*

5.6 DELIVERY & SERVICING

Proposed Servicing Arrangement

5.6.1. Following a similar approach to the existing arrangement service vehicles will primarily access the site via Wellington Street via the existing HTC roundabout and the secondary service access to the east of the HTC roundabout.

5.6.2. It is likely that the preferred option will involve the existing HTC roundabout exit becoming a two-way link for vehicles accessing the site. This approach provides greater flexibility for service vehicles and removes the need for vehicles travelling east on Wellington Street to double back as per the existing arrangement.

5.6.3. The existing signalised left in access opposite Tesco filling station will remain as part of the proposals along with and the secondary serving access to the east of the HTC roundabout.

5.6.4. As illustrated the proposals seek to incorporate a main Boulevard though the site. The main route would provide a one-way westbound route for service vehicles, entering via the HTC roundabout and exiting onto the High Street.

6 TRIP GENERATION

6.1 INTRODUCTION

6.1.1. This section will outline the trip generation forecast for the proposed development. The estimated travel demand for the proposed development will be compared to an 'existing conditions' scenario, in order to understand the net impact of the development proposals.

6.1.2. As the main proposed uses are office and residential, the development peak times for trips are expected to be weekday AM and PM peak hours, which would coincide with the network peak hours. Therefore, the trip generation estimates will be for weekday AM and PM peak hours only.

6.1.3. It is considered that the reduction of retail floor area associated with the proposals will generate a net reduction in trips over the retail development peak times, during a weekend. Therefore, forecast trip generation assessment will focus on the weekday AM and PM net additional trips only.

6.1.4. Given the mixed-use nature of both the existing and proposed land uses, it is expected that there will be an amount of cross-visitation (or internalisation) of trips between different uses on the site. However, for consistency between the existing and proposed scenarios, no account for this will be made in the assessment.

6.2 BASELINE TRAVEL DEMAND

Existing Retail

6.2.1. As the application site currently includes the Queensmere and Observatory shopping centres, it is proposed to forecast retail trips for the existing use to better understand the net impact of the development proposals.

6.2.2. It is acknowledged the existing retail use on the site is not trading at full capacity, resulting in lower footfall than would typically be expected for shopping centres of these sizes. However from a planning point of view, the site can be refurbished within the parameters of its existing use.

6.2.3. Therefore, it is proposed to forecast retail trips using observed data from other comparable retail centres trading nearer their full potential. The first step in forecasting the retail trip generation is to identify the expected number of annual visitors to the shopping centres, based on observed data.

6.2.4. Table 6-1 outlines the number of annual trips surveyed at three retail locations, which are Westfield London; The Whitgift Centre, Croydon and Brent Cross Shopping Centre. For the purposes of forecasting existing retail trips at the site an average of the Whitgift Centre and Brent Cross has been used to derive annual visitors for the site. Westfield London has been excluded due to its higher volume of annual trips.

Table 6-1 – Total Annual Visitors Arrival Trips

Site	Annual Trips (arrivals)	Floor Area GIA (sqft)	Trip Rates (annual trips per 1m sqft floor area GIA)
Whitgift Centre, Croydon	19.1M	1.3msqft	14.6m
Brent Cross	-	-	16.0M*
Average:			15.3M
Westfield London	27.0M	1.5M sqft	18.0M**

**Westfield – Project Star Transport Assessment 2003*
***Westfield Shopping towns – Daily footfall Counts 2011*

6.2.5. Daily trip profiles were observed for the Westfield London site over a one-week period and are presented in Table 6-2. Saturday was observed as the busiest day of the week and Thursday was the busiest weekday, which would be regarded as typical for most shopping centre sites. It is proposed to apply the Westfield London trip profile, which is regarded as standard to most shopping centres, to the Slough Central site to provide an existing trip baseline scenario.

6.2.6. Table 6-2 shows the retail daily profiles along with the estimated daily arrivals for the existing retail use at the site, based on an existing retail floor area of 85,947 sqm GIA.

Table 6-2 – Daily Trip Profile

Day	Retail Profile	Estimated Existing Daily Arrivals at Slough Central site
Monday	12.3%	33,481
Tuesday	12.3%	33,481
Wednesday	12.5%	34,025
Thursday	13.5%	36,747
Friday	14.6%	39,741
Saturday	20.5%	55,801
Sunday	14.2%	38,652

Note: Summation errors due to rounding

6.2.7. Table 6-3 shows the observed AM and PM peak hour inbound and outbound trip profiles for the busiest weekday, a Thursday, with Figure 6-1 showing the trip profile over the whole day.

Table 6-3 – Retail Profiles – Typical Weekday (Thursday)

Time	Inbound	Outbound
0800-0900	2.17%	0.22%
1700-1800	8.05%	8.48%

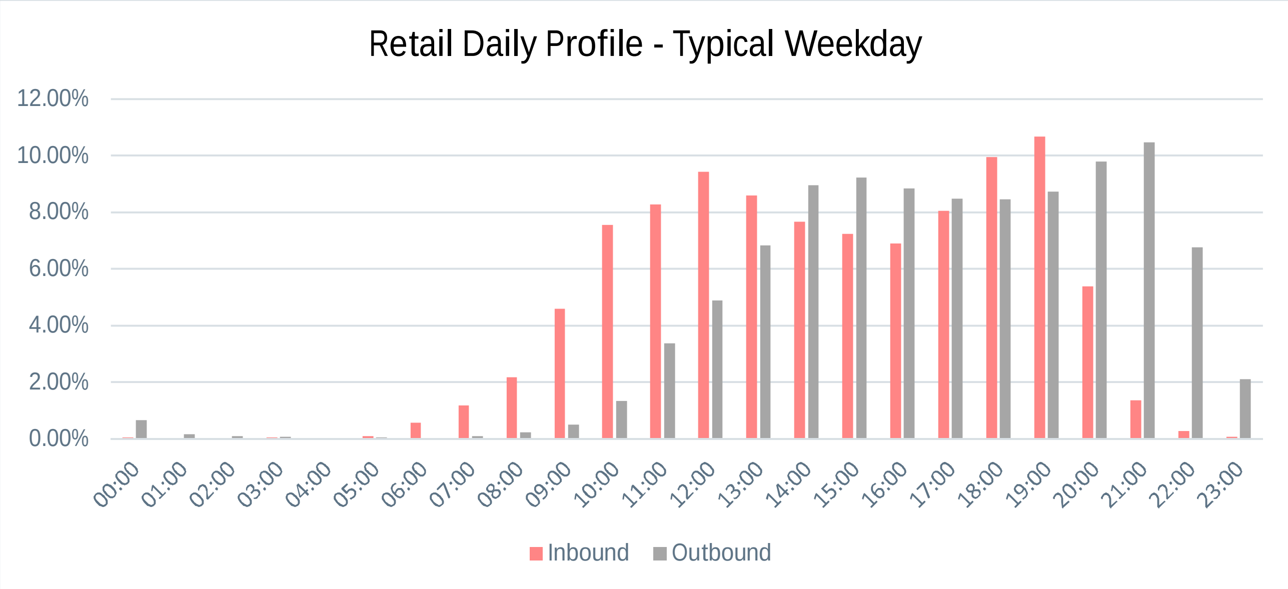


Figure 6-1 – Retail Daily Profile - Typical Weekday

6.2.8. The AM and PM weekday trip profile has been applied to the existing retail floor areas at the site to provide a baseline retail trip generation, as shown in Table 6-4.

Table 6-4 – Existing Retail Total Person Trip Generation

Time	In	Out	Total
Thursday AM (0800-0900)	796	82	878
Thursday PM (1700-1800)	2959	3118	6077

6.2.9. The total person trips outlined in Table 6-4 have been assigned to a mode of travel, as shown in Table 6-5. The mode of travel is based on the Westfield retail modal split.

Table 6-5 – Existing Retail Trip Generation by Mode of Travel

Mode	Modal Split	AM Peak			PM Peak		
		In	Out	Total	In	Out	Total
Train	20%	158	16	175	589	620	1209
Bus	39%	310	32	341	1151	1213	2364
Taxi	0%	1	0	1	3	3	6
Motorcycle	0%	2	0	3	9	9	18
Car Driver	23%	179	18	198	666	701	1367
Car/ Van Passenger	11%	84	9	93	314	330	644
Bicycle	0%	3	0	4	12	12	24
On Foot	7%	58	6	64	216	228	444
Total	**100%**	**796**	**82**	**878**	**2959**	**3118**	**6077**

6.2.10. As shown in Table 6-5, if operating near to its full potential, the existing site would generate up to 878 and 6,077 two-way total person trips during the weekday AM and PM peak hour respectively.

Existing Office

6.2.11. As shown in Table 1-2, the existing site includes 6,264 sqm GIA of office floorspace. The trip generation associated with the existing office floorspace has been forecast using surveys from the TRICS database. TRICS survey data has been selected applying the criteria below. The sites selected can be found in Table 6-6.

- Land use – Employment - Office
- Weekday surveys
- Location – All England
- Floor Area – 2500+

Table 6-6 – TRICS Office Sites

Reference	Description	Location	Survey	Floor Area sqm
CN-02-A-03	OFFICES	CAMDEN	06/12/2017	26639
EX-02-A-03	OFFICES	ESSEX	23/10/2013	45000
GM-02-A-07	OFFICES	GREATER MANCHESTER	19/10/2011	4200
GM-02-A-08	OFFICES	GREATER MANCHESTER	26/09/2016	3960

6.2.12. Two sites have been removed during the selection process due to their unusual employee density. The TRICS output, showing the weighted average total person trip rates from the sites selected, is provided as Appendix A. The total person trip rates and total person trips estimated for the existing office use, for the AM and PM peak hours, are shown in Table 6-7.

Table 6-7 – Total Person Trip Rates

	AM Peak (0800-0900)			PM Peak (1700-1800)		
	In	Out	Total	In	Out	Total
Total Person Trip Rate per 100sqm	1.946	0.154	2.10	0.1	1.805	1.905
Total Person Trip Generation	122	10	132	6	113	119

6.2.13. The 2011 Census data has been used to disaggregate the residential total person trips by mode. The data set used is ‘location of usual residence and place work by method of travel to work (MTW) – Workplace population’ for the middle super output area (MSOA) Slough 007, 009 and 011, as shown in Figure 6-2.

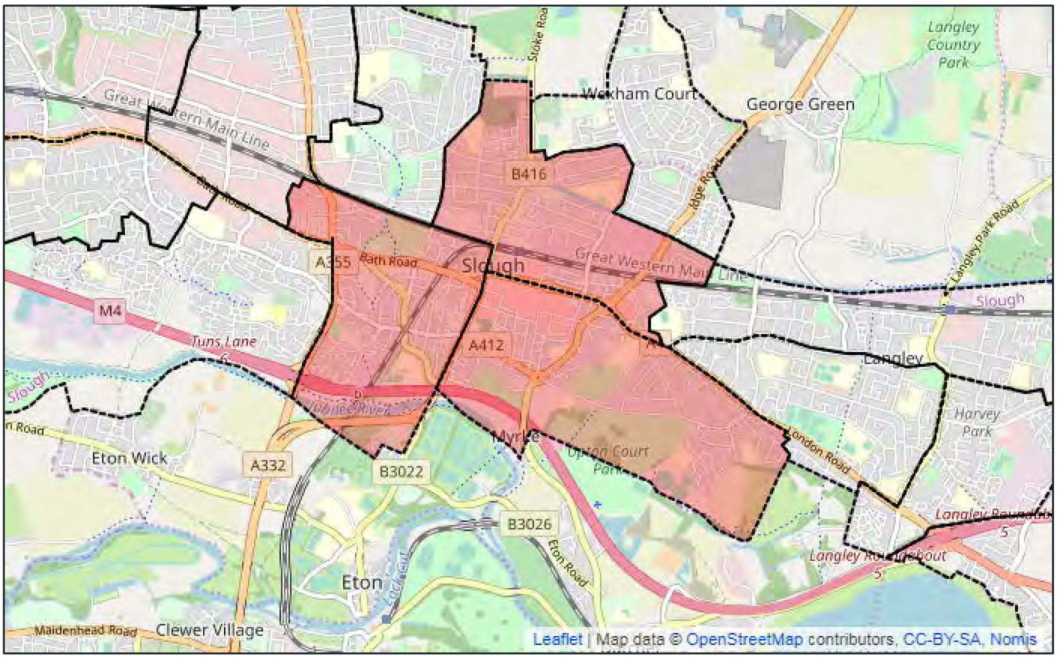


Figure 6-2 - Slough Town Centre MSOA

6.2.14. The mode share from the 2011 Census for Method of Travel to Work data, for the workforce travelling to the MSOA, shown in Figure 6-3, is provided in Table 6-8.

Table 6-8 – 2011 Census for Method of Travel to Work

Mode of Travel	Mode Share
	Raw Data
Train	8%
Bus	6%
Taxi	0%
Motorcycle	1%
Car/ Van Driver	67%
Car/ Van Passenger	5%
Bicycle	2%
On Foot	10%
Total	100%

6.2.15. The estimated travel demand, by mode of travel, for the existing office use, based on an existing floor area of 6,264sqm GIA, is shown in Table 6-9.

Table 6-9 – Office Travel Demand: Existing (6,264sqm)

Mode	AM Peak			PM Peak		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Train	10	1	11	1	9	10
Bus	8	1	8	0	7	7
Taxi	1	0	1	0	1	1
Motorcycle	1	0	1	0	1	1
Car Driver	81	6	88	4	75	80
Car/ Van Passenger	7	1	7	0	6	6
Bicycle	3	0	3	0	2	3
On Foot	12	1	13	1	12	12
Total	122	10	132	6	113	119

6.2.16. As shown above, the existing office floorspace is forecast to generate 61 two-way trips in the AM and PM peak hour respectively.

Existing Residential

6.2.17. The site currently includes a total of 28 residential units as shown in Table 1-2. The trip generation associated with the existing residential units has been estimated using surveys from the TRICS database. The TRICS surveys selected are based on the following criteria and the sites identified can be found in Table 6-10.

- Land use – Residential – Privately Owned Flats
- Weekday surveys
- Location – All England
- Units – 150+

Table 6-10 – TRICS Residential Sites

Reference	Description	Location	Survey	Units
BD-03-C-01	BLOCKS OF FLATS	LEIGHTON BUZZARD	15/05/2018	175
BM-03-C-01	BLOCKS OF FLATS	BROMLEY	12/11/2018	160
GM-03-C-02	BLOCKS OF FLATS	MANCHESTER	13/10/2011	154
HM-03-C-02	BLOCKS OF FLATS	HAMMERSMITH	30/04/2019	194
IS-03-C-07	BLOCKS OF FLATS	ISLINGTON	06/06/2019	185

6.2.18. The TRICS output, showing the weighted average total person trip rates from the sites selected, is provided as Appendix A.

6.2.19. Table 6-11 shows the total person trip rates and estimated residential trips, based on 28 units, for the AM and PM peak hours.

Table 6-11 – Residential Total Person Trip Rates – 28 units

	AM Peak (0800-0900)			PM Peak (1700-1800)		
	In	Out	Total	In	Out	Total
Total Person Trip Rate per dwelling	0.074	0.491	0.565	0.351	0.134	0.485
Total Person Trip Generation	2	14	16	10	4	14

6.2.20. To estimate mode of travel, the 2011 Census data has been used to identify the 'location of usual residence and place of work by method of travel to work – Resident Population' for the middle super output area (MSOA) Slough 007, 009 and 011 (shown in Figure 6-2).

6.2.21. Table 6-12 shows the results from the 2011 Census data for method of travel to work.

Table 6-12 – 2011 Census Data for Method of Travel to Work

Mode of Travel	Mode Share
	Raw Data
Train	12%
Bus	11%
Taxi	1%
Motorcycle	0%
Car/ Van Driver	52%
Car/ Van Passenger	6%
Bicycle	3%
On Foot	14%
Total	100%

6.2.22. The estimated trips for the existing 28 residential units are shown for the peak hours, by mode of travel, in Table 6-13.

Table 6-13 - Residential Travel Demand: Existing 28 units

Mode	AM Peak			PM Peak		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Train	0	2	2	1	0	2
Bus	0	1	2	1	0	1
Taxi	0	0	0	0	0	0
Motorcycle	0	0	0	0	0	0
Car Driver	1	7	8	5	2	7
Car/ Van Passenger	0	1	1	1	0	1
Bicycle	0	0	0	0	0	0
On Foot	0	2	2	1	1	2
Total	2	14	16	10	4	14

6.2.23. As shown above the existing residential units are forecast to generate 16 and 14 two-way total person trips in the AM and PM peak hours respectively.

D2 CINEMA

6.2.24. The existing site includes 7,338sqm GIA of D2 Cinema floorspace as shown in Table 1-2. Forecast trips have been derived for the existing cinema use using surveys from the TRICS database. Surveys have been selected based on the following criteria and the sites identified can be found in Table 6-14.

- Land use – Leisure – Mulitplex Cinema
- Weekday surveys
- Location – All England
- Size - All

Table 6-14 – TRICS D2 Cinema

Reference	Description	Area	Survey	GFA sqm
CN-07-A-01	ODEON	CAMDEN	Town Centre	464
NY-07-A-02	VUE	NORTH YORKSHIRE	Edge of Town	4500
SH-07-A-02	CINEWORLD	SHROPSHIRE	Edge of Town Centre	2400
WO-07-A-01	ODEON	WORCESTERSHIRE	Town Centre	2200

6.2.25. The TRICS output, reporting the weighted average total person trip rates from the sites selected, is available in Appendix A. Table 6-15 shows the trip rates and the estimated total person trips in the peak hours.

Table 6-15 – D2 Cinema total Person Trip Rates

	AM Peak (0800-0900)			PM Peak (1700-1800)		
	In	Out	Total	In	Out	Total
Total Person Trip Rate per 100sqm	0	0	0	4.391	2.488	6.879
Total Person Trip Generation	0	0	0	322	183	505

It is considered that people travelling to the existing cinema would share similar travel patterns to those travelling to the existing retail use. Therefore, the retail mode share has been used to derive the multi-modal cinema trips. The resulting forecast is shown in Table 6-16.

Table 6-16 – Cinema Travel Demand: Existing 7,338sqm

Mode	Modal Split	AM Peak			PM Peak		
		In	Out	Total	In	Out	Total
Train	20%	0	0	0	64	36	100
Bus	39%	0	0	0	125	71	196
Taxi	0%	0	0	0	0	0	1
Motorcycle	0%	0	0	0	1	1	2
Car Driver	23%	0	0	0	72	41	114
Car/ Van Passenger	11%	0	0	0	34	19	54
Bicycle	0%	0	0	0	1	1	2
On Foot	7%	0	0	0	24	13	37
Total	100%	0	0	0	322	183	505

6.2.26. As shown above the existing cinema is forecast to generate 505 two-way total person trips in the PM peak hour.

TOTAL BASELINE TRIPS

6.2.27. Table 6-17 outlines the existing trip generation associated with the site.

Table 6-17 – Baseline Trip Generation

Mode	AM Peak			PM Peak		
	In	Out	Total	In	Out	Total
Train	169	19	187	655	666	1321
Bus	318	34	351	1278	1291	2569
Taxi	1	0	2	3	4	7
Motorcycle	3	0	3	10	11	20
Car Driver	262	32	294	748	820	1568
Car/ Van Passenger	91	10	101	349	356	705
Bicycle	6	1	7	14	16	29
On Foot	71	9	80	242	253	495
Total	920	105	1025	3298	3417	6715

6.2.28. As shown in Table 6-17, if the existing uses on site traded at full potential, the existing site could generate a total of 1,025 and 6,715 person trips in the AM and PM peak hours respectively, with approximately 1,500 trips being made by car during the evening peak.

6.3 PROPOSED DEVELOPMENT TRAVEL DEMAND

6.3.1. This section details the methodology and multi-modal trip generation forecast for the proposed development, and the net increase when compared against the baseline conditions.

PROPOSED OFFICE

6.3.2. To ensure a consistent approach, the trip generation associated with the proposed office use has been estimated using the TRICS sites identified to assess the existing baseline conditions. Table 6-18 shows the total person trip rates and estimated trip generation for the proposed office use, 208,211 sqm GIA.

Table 6-18 – Total Person Trip Rates / Generation (208,211sqm)

	AM Peak (0800-0900)			PM Peak (1700-1800)		
	In	Out	Total	In	Out	Total
Total Person Trip Rate per 100sqm	1.946	0.154	2.10	0.1	1.805	1.905
Total Person Trip Generation	4052	321	4372	208	3758	3966

6.3.3. To estimate the trips by mode of travel, the 2011 census mode share has been adjusted to appropriately represent the level of parking associated with the proposed office use. The mode share has been adjusted to reflect car parking supply. The adjusted mode share is outlined at Table 6-19.

Table 6-19 - MTW Adjusted Mode Share for Proposed Office

Mode of Travel	Mode Share	
	Raw Data	Adjusted
Train	8%	38%
Bus	6%	29%
Taxi	0%	0%
Motorcycle	1%	1%
Car/ Van Driver	67%	20%
Car/ Van Passenger	5%	0%
Bicycle	2%	2%
On Foot	10%	10%
Total	100%	100%

6.3.4. The estimated multi-modal peak hour travel demand for the proposed office use, applying a total floor area of 208,211sqm, is outlined at Table 6-20.

Table 6-20 – Office Travel Demand: Total Proposed (208,211sqm)

Mode	AM Peak			PM Peak		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Train	1529	121	1650	79	1418	1497
Bus	1170	93	1262	60	1085	1145
Taxi	20	2	21	1	18	19
Motorcycle	22	2	24	1	21	22
Car Driver	810	64	874	42	752	793
Car/ Van Passenger	0	0	0	0	0	0
Bicycle	86	7	93	4	80	84
On Foot	415	33	448	21	385	406
Total	4052	321	4372	208	3758	3966

PROPOSED RESIDENTIAL

6.3.5. The trip generation forecast for the proposed residential units has been derived using the same TRICS sites used to estimate the existing baseline residential trips. The total person trip rates and total person trips, based on the proposed 1,054 units, are shown in Table 6-21.

Table 6-21 – Residential Total Person Trip Rates – 1,054 units

	AM Peak (0800-0900)			PM Peak (1700-1800)		
	In	Out	Total	In	Out	Total
Total Person Trip Rate per dwelling	0.074	0.491	0.565	0.351	0.134	0.485
Total Person Trip Generation	78	518	596	370	141	511

6.3.6. The 2011 Census mode share has been adjusted to appropriately represent the level of parking associated with the residential proposals. The adjusted mode share is shown in Table 6-22.

Table 6-22 - MTW Adjusted Mode Share

Mode of Travel	Mode Share	
	Raw Data	Adjusted
Train	12%	22%
Bus	11%	20%
Taxi	1%	1%
Motorcycle	0%	0%
Car/ Van Driver	52%	40%
Car/ Van Passenger	6%	0%
Bicycle	3%	3%
On Foot	14%	14%
Total	100%	100%

6.3.7. The estimated multi-modal peak hour travel demand associated with the proposed 1,054 residential units is outlined at Table 6-23.

Table 6-23 - Residential Travel Demand: Total Proposed (1054 Units)

Mode	AM Peak			PM Peak		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Train	17	115	132	82	31	114
Bus	15	102	117	73	28	101
Taxi	1	4	5	3	1	4
Motorcycle	0	2	3	2	1	2
Car Driver	31	207	238	148	56	204
Car/ Van Passenger	0	0	0	0	0	0
Bicycle	2	15	17	10	4	14
On Foot	11	72	83	51	20	71
Total	78	518	596	370	141	511

PROPOSED RETAIL / FOOD AND BEVERAGE

6.3.8. For consistency, the approach to existing retail trip generation presented in Section 6.2 has been applied to the proposed retail and F&B use. The resulting multimodal retail trip generation is shown in Table 6-24.

Table 6-24 – Proposed Retail / F&B Trip Generation (13,488sqm)

Mode	Modal Split	AM Peak			PM Peak		
		In	Out	Total	In	Out	Total
Train	20%	25	3	27	92	97	190
Bus	39%	49	5	54	181	190	371
Taxi	0%	0	0	0	0	0	1
Motorcycle	0%	0	0	0	1	1	3
Car Driver	23%	28	3	31	104	110	215
Car/ Van Passenger	11%	13	1	15	49	52	101
Bicycle	0%	0	0	1	2	2	4
On Foot	7%	9	1	10	34	36	70
Total	100%	125	13	138	464	489	954

PROPOSED CULTURE

6.3.9. The proposals seek to include an element of D2 culture (3,464 sqm). To ensure a consistent approach the methodology used to assess the existing D2 land uses within the baseline has been adopted.

6.3.10. The resulting multi-modal trip generation is shown in Table 6-25.

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Table 6-25 - D2 Culture Travel Demand: Total Proposed (3,464 sqm)

Mode	AM Peak			PM Peak		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Train	0	0	0	30	17	47
Bus	0	0	0	59	34	93
Taxi	0	0	0	0	0	0
Motorcycle	0	0	0	0	0	1
Car Driver	0	0	0	34	19	54
Car/ Van Passenger	0	0	0	16	9	25
Bicycle	0	0	0	1	0	1
On Foot	0	0	0	11	6	17
Total	0	0	0	152	86	238

6.4 NET IMPACT

6.4.1. Table 6-26 below outlines the total proposed trips associated with the proposals at Slough Central with Table 6-27 demonstrating the overall net impact.

Table 6-26 – Total Proposed Trips

Mode	AM Peak			PM Peak		
	IN	OUT	TOT	IN	OUT	TOT
Train	1571	239	1810	274	1558	1832
Bus	1234	200	1433	354	1326	1679
Taxi	20	6	26	5	20	25
Motorcycle	23	4	27	5	23	27
Driving a car	870	274	1144	317	931	1248
Passenger in a car	13	1	15	60	58	118
Bicycle	89	21	110	17	86	103
On foot	435	106	541	114	445	559
Total	4255	851	5106	1145	4447	5592

Table 6-27 - Net Impact Assessment

Mode	AM Peak			PM Peak		
	IN	OUT	TOT	IN	OUT	TOT
Train	1402	220	1622	-381	892	511
Bus	916	166	1082	-924	34	-890
Taxi	19	6	25	1	16	17
Motorcycle	20	4	24	-5	12	7
Driving a car	608	242	850	-430	111	-319
Passenger in a car	-78	-9	-87	-289	-298	-587
Bicycle	83	21	103	4	70	74
On foot	364	97	461	-127	192	64
Total	3335	746	4080	-2152	1030	-1123

6.4.2. As the proposals predominantly comprise of workspace land uses, the tidal nature of staff arrival and departure patters results in a morning peak hour net increase when compared to the existing retail use, which is typically quieter during this period.

6.4.3. In comparison, the proposals are forecast to generate an overall net reduction during the PM peak as this is typically a busier time for retail land uses.

6.5 SERVICING TRIP GENERATION

RESIDENTIAL

6.5.1. Delivery and servicing trips have been forecast using data from surveys undertaken at Imperial Wharf in Fulham, in 2014; and at Bow Quarter in Tower Hamlets in 2016. These surveys were commissioned by WSP and have been accepted for planning applications to a number of other similar residential developments.

- Imperial Wharf (1,745 Dwellings) – 2014 survey; and
- Bow Quarter (773 Dwellings) – 2016 survey.

6.5.2. The residential servicing trip rates are set out below in Table 6-28.

Table 6-28 – Residential Servicing Trip Rates (Per Dwelling)

Time Period	Weekday AM Peak (0800-0900)			Weekday PM Peak (1700-1800)			Daily (0700-1900)		
	In	Out	Tot	In	Out	Tot	In	Out	Tot
LGV	0.004	0.004	0.008	0.001	0.002	0.002	0.045	0.045	0.091
HGV	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.009	0.017

6.5.3. The forecast servicing demand associated with the development proposals (1064 dwellings) is outlined below in Table 6-29.

Table 6-29 – Estimated Servicing Demand: 1054 units

Time Period	0800-0900			1700-1800			0700-1900 (Daily)		
	In	Out	Tot	In	Out	Tot	In	Out	Tot
LGV	4	4	8	1	2	3	48	48	96
HGV	0	0	0	0	0	0	9	9	18
Total	**4**	**4**	**8**	**1**	**2**	**3**	**57**	**57**	**114**

NON-RESIDENTIAL

6.5.4. WSP holds a database of servicing and delivery information from a range of office and flexible use developments which have been surveyed. The number of service vehicle trips associated with the floor area proposed for each land use has been estimated using this servicing database.

6.5.5. The servicing database generates a typical daily servicing vehicle trip-rate of 0.2 service vehicle arrivals per 100m^2 NIA for office uses and 2.0 service vehicle arrivals per 100m^2 NIA for food/beverage retail uses. Non-food retail uses have a typical servicing vehicle trip rate of 1.35 service vehicle arrivlas per 100m^2 NIA. These servicing trip-rates are considered to represent a worst-case scenario.

6.5.6. Based on the above, the proposed floor areas at Slough Central have been applied to the servicing trip rates to forecast daily arrival servicing trips. A breakdown of the number of service vehicle trips is provided in Table 6-30. These are based on the floor areas provided in Table 1-3, which have been converted to NIA.

Table 6-30 – Non-residential Servicing Trips

Land Use	NIA (m^2)	Servicing Trip Rate (per 100m^2 NIA)	Daily Servicing Arrival Trips
Non-food Retail	9015	1.35	122
Food Retail	4473	2	89
Office	208211	0.2	416

6.5.7. As shown above, the site is forecast to generate 628 servicing arrival trips a day, related to the non-residential uses proposed at Slough Central. It is forecast that 85% of deliveries would take place by car/van or large good vehicles (LGV) – vehicles up to 8m. The remaining 15% of deliveries would take place by heavy goods vehicle (HGV) – those greater than 8m.

6.5.8. Table 6-31 shows the breakdown of servicing trips by vehicle type across the day.

Table 6-31 – Servicing Trips by Vehicle Type

Vehicle Type	Daily Servicing Arrival Trips
LGV / MGV	533
HGV	94
Total	**628**

SUMMARY

6.5.9. Based on the forecast servicing trips generation outlined above, the proposals are forecast to generate a total of 742 (residential and non-residential) serving trips across a typical day. This equates to approximately 62 vehicles per hour based on a typical 12-hour day (0700-1900). It is likely that deliveries could take place beyond the typical 12-hour day further spreading the hourly arrival profile, however, this will be detailed within the Delivery and Servicing Plan (DSP) that will accompany the application.

7 EFFECT OF THE DEVELOPMENT

7.1 INTRODUCTION

7.1.1. This chapter will outline the approach to assessing the effect of the development proposals on the local highway and public transport network. From initial discussions with the borough, it is understood that SBC have developed a multi-modal model to forecast the effects of planned growth between the validated base year of 2017 and two forecast years of 2026 and 2036. Through preliminary scoping discussions, SBC have requested that the proposed development be tested using their model.

7.2 BACKGROUND

7.2.1. As mentioned above, the Slough multi-modal model (SMMM17) has been developed to predict the impact of planned developments in Slough up to the end of the planned period of 2036. This work is complete and we have been informed (in the absence of a Forecasting Report) by Atkins, who are Slough Borough Council's term consultant, that the forecast year models are fit-for-purpose and ready for use.

7.2.2. The SMMM17 model is currently being used by Slough Borough Council to consider a wide range of potential interventions to achieve the key principles of their transport vision and mitigate the impact of planned growth in the Borough. At the time of writing, this work is not yet complete and it is expected that a suite of measures will be reported to Cabinet in the autumn of 2020. As these interventions are not yet funded and do not form part of any adopted policies, they cannot be considered to form part of the forecast base year assessments for the Slough Central planning application.

7.3 PROPOSED MODEL RUNS

7.3.1. With the above in mind, it is proposed that the forecast year models for the Slough Central planning application are undertaken using the SMMM17 "do minimum" scenario, i.e. only including committed infrastructure improvements and not the potential interventions which make up the transport vision. A separate sensitivity test will be undertaken that includes the potential interventions and reported on in the Transport Assessment.

7.3.2. As previously stated, the SMMM17 has two forecast years; 2026 and 2036. As the development is unlikely to be substantially occupied by 2026, it is proposed that the assessment work focusses on the 2036 forecast year only.

7.3.3. In addition to the 2017 validated base model, the following model runs are proposed for the morning and evening peak hours only:

- 2036 do minimum (i.e. no wider highways mitigation / transport vision referenced above) with the site operating, in terms of trip generation, as it currently does (to inform the EIA)
- 2036 do minimum with site operating nearer to full potential in line with the extant permission on the site
- 2036 do minimum + proposed development

7.3.4. The following sensitivity tests are also requested:

- 2036 do minimum + SBC transport vision (including SBC mitigation)

- 2036 do minimum + SBC transport vision (including SBC mitigation) + proposed development

7.4 MODEL INPUT AND OUTPUT

INPUT

7.4.1. WSP will provide the proposed development quantum of Slough Central for each model scenario listed above in Microsoft Excel format. The initial SMMM17 model run would be undertaken by Atkins. The highway assignment model (HAM) would then be provided to WSP to review the outputs, and WSP would have the opportunity to undertake 'fixed demand' assignments as required.

7.4.2. Any updated HAM runs could be provided to SBC and Atkins for technical review if required.

OUTPUT

7.4.3. At a meeting between WSP and Atkins on 20th March 2020, it was agreed that Atkins would assign the full SMMM17 model, which includes variable demand (VDM) and incremental logit mode choice components. Once assigned, they would issue WSP the highways models to inform local junction testing and analysis.

7.4.4. Full AADT / AAWT spreadsheets for all scenarios listed above will be extracted from the final HAM in Microsoft Excel format for environmental assessments, by Atkins.

7.4.5. A Technical Note summarising the modelling methodology and results will also be provided by Atkins.

7.5 PUBLIC TRANSPORT IMPACT

7.5.1. In the first instance, the TA will identify the benefits surrounding improved public realm and access to the local public transport facilities that are proposed as part of the Slough Central Masterplan.

7.5.2. The Transport Assessment will identify the number of rail and bus trips to and from the proposed development site during the AM peak hour and PM peak hour, on a weekday.

7.5.3. The Transport Assessment will not include an assessment on the impact on mainline rail services as it is assumed this would have been undertaken for the opening of the Elizabeth Line at Slough station, therefore no further assessment would be required.

7.5.4. The Transport Assessment will identify the number of additional trips on all existing bus services within a 400m walking distance of the site, identifying additional bus passenger trips during the AM and PM weekday network peak hours.

8 MANAGEMENT MEASURES

8.1 TRAVEL PLAN

8.1.1. The scale of the proposals at Slough Central would require a Travel Plan (TP) to be submitted as part of the Planning Application and this is considered as a key document to promote a local shift in sustainable travel which is required within Slough.

8.1.2. Travel Plans are a key measure in promoting modes of transport available to a development and its future residents and staff. A standalone TP will be submitted alongside the application to cover all residential and employment uses across the site. The TP will aim to set preliminary targets and measures to which the TP can be assessed. Typically, these targets and measures will be updated in the 1st year of occupation to ensure they accurately reflect the end users on site.

8.1.3. The objective of the Travel Plan will be to promote sustainable methods of transport and where possible reduce peak hour single occupancy car trips. A key part of the Travel Plan will be to promote a shift in mode share by raising awareness through the issue of “Welcome Packs” to each new household. This document can also be made available to staff within the employment uses.

8.1.4. The Welcome Pack will include the following information, as appropriate:

- Mapping of the nearest public transport facilities with timetable information;
- Details of local cycle routes and pedestrian footpaths;
- Promotion of smarter working practices such as flexible working hours, video conferencing, remote access, etc.;
- Promote cycle training and a bicycle user group;
- Location of local amenities; and
- Useful travel information, including telephone numbers and websites for public transport services and local taxi firms etc.

8.1.5. In addition to the above, the Travel Plan provides a number of initiatives to promote and increase the use of sustainable transport options focussing on each land use associated with the proposed development.

8.2 DELIVERY AND SERVICING PLANS

8.2.1. It is proposed to prepare a Delivery and Serving Plan (DSP) to accompany the application. The DSP will detail how delivery and servicing arrangements to the site will be managed while outlining objectives to support sustainable development that seek to:

- Demonstrate that goods and services can be delivered, and waste removed, in a safe, efficient and environmentally friendly way;
- Identify deliveries that could be reduced, re-timed or even consolidated, particularly during busy periods;
- Improve the reliability of deliveries to the Site;
- Reduce the operating costs of the freight companies; and

- Reduce the impact of freight activity on local residents and the environment

8.2.2. The aim of the DSP is to ensure that servicing of the Development can be carried out efficiently, without creating any significant negative impacts on the local highway network, on residents or on commercial occupiers surrounding the Site, and with minimal impact on the environment.

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Appendix A

TRICS OUTPUTS

Filtering Summary

Land Use	02/A	EMPLOYMENT/OFFICE
Selected Trip Rate Calculation Parameter Range	2500-114000 sqm GFA	
Actual Trip Rate Calculation Parameter Range	3960-40000 sqm GFA	
Date Range	Minimum: 01/01/11	Maximum: 06/03/19
Parking Spaces Range	All Surveys Included	
Days of the week selected	Monday	1
	Wednesday	3
Main Location Types selected	Town Centre	4
Population <1 Mile ranges selected	25,001 to 50,000	2
	50,001 to 100,000	1
	100,001 or More	1
Population <5 Mile ranges selected	125,001 to 250,000	1
	500,001 or More	3
Car Ownership <5 Mile ranges selected	0.6 to 1.0	3
	1.1 to 1.5	1
PTAL Rating	No PTAL Present	3
	6b (High) Excellent	1

Calculation Reference: AUDIT-100301-200204-0232

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : A - OFFICE
MULTI-MODAL TOTAL PEOPLE

Selected regions and areas:

01	GREATER LONDON		
	CN	CAMDEN	1 days
02	SOUTH EAST		
	EX	ESSEX	1 days
08	NORTH WEST		
	GM	GREATER MANCHESTER	2 days

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

Secondary 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: 3960 to 40000 (units: sqm)
Range Selected by User: 2500 to 114000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/11 to 06/03/19

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
Wednesday 3 days

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

Selected survey types:
Manual count 4 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 undertaking using machines.

Selected Locations:
Town Centre 4

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:
Built-Up Zone 4

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.

Secondary Filtering selection:

Use Class:
B1 4 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Secondary Filtering selection (Cont.):

Population within 1 mile:

25,001 to 50,000	2 days
50,001 to 100,000	1 days
100,001 or More	1 days

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

Population within 5 miles:

125,001 to 250,000	1 days
500,001 or More	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	3 days
1.1 to 1.5	1 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	3 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	3 days
6b (High) Excellent	1 days

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

LIST OF SITES relevant to selection parameters

1 CN-02-A-03 PLANNING & ENGINEERING CAMDEN
FITZROY STREET
FITZROVIA

Town Centre
Built-Up Zone
Total Gross floor area: 26639 sqm
Survey date: WEDNESDAY 06/12/17 Survey Type: MANUAL

2 EX-02-A-03 HMRC ESSEX
VICTORIA AVENUE
SOUTHEND-ON-SEA

Town Centre
Built-Up Zone
Total Gross floor area: 45000 sqm
Survey date: WEDNESDAY 23/10/13 Survey Type: MANUAL

3 GM-02-A-07 LAW OFFICES GREATER MANCHESTER
MOSELEY STREET
MANCHESTER

Town Centre
Built-Up Zone
Total Gross floor area: 4200 sqm
Survey date: WEDNESDAY 19/10/11 Survey Type: MANUAL

4 GM-02-A-08 REGUS GREATER MANCHESTER
FOUNTAIN STREET
MANCHESTER

Town Centre
Built-Up Zone
Total Gross floor area: 3960 sqm
Survey date: MONDAY 26/09/16 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.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
CA-02-A-05	Employee density not comparable
TV-02-A-04	Council Offices not comparable

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	4	18700	0.386	4	18700	0.019	4	18700	0.405
07:30 - 08:00	4	18700	0.557	4	18700	0.043	4	18700	0.600
08:00 - 08:30	4	18700	0.842	4	18700	0.068	4	18700	0.910
08:30 - 09:00	4	**18700**	**1.104**	4	18700	0.086	4	**18700**	**1.190**
09:00 - 09:30	4	18700	1.043	4	18700	0.126	4	18700	1.169
09:30 - 10:00	4	18700	0.557	4	18700	0.099	4	18700	0.656
10:00 - 10:30	4	18700	0.381	4	18700	0.201	4	18700	0.582
10:30 - 11:00	4	18700	0.283	4	18700	0.197	4	18700	0.480
11:00 - 11:30	4	18700	0.182	4	18700	0.156	4	18700	0.338
11:30 - 12:00	4	18700	0.193	4	18700	0.233	4	18700	0.426
12:00 - 12:30	4	18700	0.439	4	18700	0.667	4	18700	1.106
12:30 - 13:00	4	18700	0.479	4	18700	0.572	4	18700	1.051
13:00 - 13:30	4	18700	0.520	4	18700	0.489	4	18700	1.009
13:30 - 14:00	4	18700	0.426	4	18700	0.274	4	18700	0.700
14:00 - 14:30	4	18700	0.235	4	18700	0.127	4	18700	0.362
14:30 - 15:00	4	18700	0.134	4	18700	0.281	4	18700	0.415
15:00 - 15:30	4	18700	0.074	4	18700	0.360	4	18700	0.434
15:30 - 16:00	4	18700	0.071	4	18700	0.408	4	18700	0.479
16:00 - 16:30	4	18700	0.072	4	18700	0.424	4	18700	0.496
16:30 - 17:00	4	18700	0.045	4	18700	0.525	4	18700	0.570
17:00 - 17:30	4	18700	0.064	4	18700	0.858	4	18700	0.922
17:30 - 18:00	4	18700	0.036	4	**18700**	**0.947**	4	18700	0.983
18:00 - 18:30	4	18700	0.023	4	18700	0.635	4	18700	0.658
18:30 - 19:00	4	18700	0.047	4	18700	0.265	4	18700	0.312
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			8.193			8.060			16.253

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.*

Filtering Summary

Land Use	03/C	RESIDENTIAL/FLATS PRIVATELY OWNED
Selected Trip Rate Calculation Parameter Range	150-493 DWELLS	
Actual Trip Rate Calculation Parameter Range	154-194 DWELLS	
Date Range	Minimum: 01/01/11	Maximum: 18/06/19
Parking Spaces Range	All Surveys Included	
Bedrooms Per Dwelling Range:	All Surveys Included	
Percentage of dwellings privately owned:	All Surveys Included	
Days of the week selected	Monday	1
	Tuesday	2
	Thursday	2
Main Location Types selected	Town Centre	3
	Edge of Town Centre	2
Population <1 Mile ranges selected	25,001 to 50,000	3
	50,001 to 100,000	1
	100,001 or More	1
Population <5 Mile ranges selected	50,001 to 75,000	1
	500,001 or More	4
Car Ownership <5 Mile ranges selected	0.5 or Less	2
	0.6 to 1.0	2
	1.1 to 1.5	1
PTAL Rating	No PTAL Present	2
	5 Very Good	1
	6a Excellent	1
	6b (High) Excellent	1

SBC PLANNING
RECEIVED : 24.06.2022

Calculation Reference: AUDIT-100301-200129-0140

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : C - FLATS PRIVATELY OWNED
MULTI-MODAL TOTAL PEOPLE

Selected regions and areas:

01	GREATER LONDON		
	BM	BROMLEY	1 days
	HM	HAMMERSMITH AND FULHAM	1 days
	IS	ISLINGTON	1 days
02	SOUTH EAST		
	BD	BEDFORDSHIRE	1 days
08	NORTH WEST		
	GM	GREATER MANCHESTER	1 days

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

Secondary 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: Number of dwellings
Actual Range: 154 to 194 (units:)
Range Selected by User: 150 to 493 (units:)

Parking Spaces Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/11 to 18/06/19

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	2 days
Thursday	2 days

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

Selected survey types:

Manual count	5 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 undertaking using machines.

Selected Locations:

Town Centre	3
Edge of Town Centre	2

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:

Development Zone	1
Residential Zone	1
Built-Up Zone	3

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.

Secondary Filtering selection:

Use Class:

C3	5 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

25,001 to 50,000	3 days
50,001 to 100,000	1 days
100,001 or More	1 days

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

Population within 5 miles:

50,001 to 75,000	1 days
500,001 or More	4 days

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

Car ownership within 5 miles:

0.5 or Less	2 days
0.6 to 1.0	2 days
1.1 to 1.5	1 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	2 days
No	3 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	2 days
5 Very Good	1 days
6a Excellent	1 days
6b (High) Excellent	1 days

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

LIST OF SITES relevant to selection parameters

Site(1):	BD-03-C-01	Site area:	0.85 hect
Development Name:	BLOCKS OF FLATS	Number of dwellings:	175
Location:	LEIGHTON BUZZARD	Housing density:	673
Postcode:	LU7 2NG	Total Bedrooms:	350
Main Location Type:	Edge of Town Centre	Survey Date:	15/05/18
Sub-Location Type:	Residential Zone	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	213

Site(2):	BM-03-C-01	Site area:	0.36 hect
Development Name:	BLOCKS OF FLATS	Number of dwellings:	160
Location:	BROMLEY	Housing density:	842
Postcode:	BR1 1HR	Total Bedrooms:	232
Main Location Type:	Town Centre	Survey Date:	12/11/18
Sub-Location Type:	Built-Up Zone	Survey Day:	Monday
PTAL:	6a Excellent	Parking Spaces:	83

Site(3):	GM-03-C-02	Site area:	0.37 hect
Development Name:	BLOCK OF FLATS	Number of dwellings:	154
Location:	MANCHESTER	Housing density:	670
Postcode:	M1 5BD	Total Bedrooms:	280
Main Location Type:	Town Centre	Survey Date:	13/10/11
Sub-Location Type:	Built-Up Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	100

Site(4):	HM-03-C-02	Site area:	0.45 hect
Development Name:	BLOCKS OF FLATS	Number of dwellings:	194
Location:	HAMMERSMITH	Housing density:	431
Postcode:	W6 OBU	Total Bedrooms:	375
Main Location Type:	Town Centre	Survey Date:	30/04/19
Sub-Location Type:	Built-Up Zone	Survey Day:	Tuesday
PTAL:	6b (High) Excellent	Parking Spaces:	53

Site(5):	IS-03-C-07	Site area:	0.21 hect
Development Name:	BLOCK OF FLATS	Number of dwellings:	185
Location:	ISLINGTON	Housing density:	1423
Postcode:	EC1V 1AD	Total Bedrooms:	292
Main Location Type:	Edge of Town Centre	Survey Date:	06/06/19
Sub-Location Type:	Development Zone	Survey Day:	Thursday
PTAL:	5 Very Good	Parking Spaces:	86

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	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	5	174	0.048	5	174	0.313	5	174	0.361
08:00 - 09:00	5	174	0.074	5	174	**0.491**	5	174	0.565
09:00 - 10:00	5	174	0.088	5	174	0.220	5	174	0.308
10:00 - 11:00	5	174	0.111	5	174	0.142	5	174	0.253
11:00 - 12:00	5	174	0.099	5	174	0.131	5	174	0.230
12:00 - 13:00	5	174	0.141	5	174	0.160	5	174	0.301
13:00 - 14:00	5	174	0.134	5	174	0.136	5	174	0.270
14:00 - 15:00	5	174	0.127	5	174	0.119	5	174	0.246
15:00 - 16:00	5	174	0.195	5	174	0.165	5	174	0.360
16:00 - 17:00	5	174	0.240	5	174	0.189	5	174	0.429
17:00 - 18:00	5	174	0.351	5	174	0.134	5	174	0.485
18:00 - 19:00	5	174	**0.472**	5	174	0.141	5	174	**0.613**
19:00 - 20:00	3	180	0.295	3	180	0.126	3	180	0.421
20:00 - 21:00	3	180	0.147	3	180	0.095	3	180	0.242
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.522			2.562			5.084

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TECHNICAL NOTE 5

DATE:	04 June 2020	**CONFIDENTIALITY:**	Confidential
SUBJECT:	Response to SBC TA Scope Review		
PROJECT:	Slough Central	**AUTHOR:**	L Schroder
CHECKED:	D McDougall	**APPROVED:**	D McDougall

INTRODUCTION

A Transport Assessment Scoping Report for the proposed Slough Central development has been prepared by WSP on behalf of the applicant, Green Monarch, and issued to Slough Borough Council (hereafter referred to as SBC) on 17th April 2020. The purpose of the Scoping Report is to outline the transport matters relating to the development proposals with a view to agreeing the key transport principles and scope of the Transport Assessment (TA) with SBC, in advance of a planning submission.

Since it was issued, SBC have undertaken a review of the TA Scoping Report and provided comments and raised queries where necessary. This Technical Note provides a response to SBC's review, to provide clarity on the queries raised, with the ultimate aim of formally agreeing the scope of the TA.

This Technical Note follows a section-by-section response to SBC's review, and, for simplicity, is aligned to the headings and paragraph numbering system contained therein. However, where paragraphs are omitted is because they do not require a response.

REVIEW AND RESPONSE

Introduction

[Para 1.3 The Scoping Note includes a 'TA checklist', which has scoped out a number of items. Of these, it is considered that the capacity and condition of the pedestrian routes around the site and between the site and the bus and railway station should be considered within the Transport Assessment, particularly as the proposal suggests that there will be a considerable increase in the use of non car modes. In addition, information should be provided on the impact of the proposal during the construction phase.]

Response – The Transport Assessment will include a qualitative analysis of routes around the site

Existing Transport Conditions

[Para 2.2 In addition to the information provided in the Scoping Note, this section should include a review of the condition and capacity of pedestrian routes and crossings around the site and linking the site with bus stops, the bus and railway stations and other key local destinations. Details of the types of review to be carried out should be provided and agreed with SBC. The condition of local public transport hubs and in particular bus stops, should also be considered.]

Response – Noted. See Para 1.3

[Para 2.3 Further detail should also be provided on direct access to cycle routes from the site to key destinations.]

Response – Noted. The TA will detail these.

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Existing Access and Movement

[Para 2.6 Further information should be provided on parking availability in the area of the site, including current charging regimes. This should include any on street parking that may be used by visitors to the site and any available information on parking occupancies.]

Response – This information will be presented in the TA

Access Strategy

[Para 2.9 The important need for pedestrians to cross the A4 Wellington Street in order to access the rail and bus stations via Brunel Way has been identified. Initial improvements include the realignment of the pedestrian crossing to the east of the junction with Brunel Way to provide a single stage at-grade crossing. It is also suggested that this will improve the desire line between the site and the station and will improve the attractiveness of the crossing. The feasibility and impact of this improvement will need to be fully detailed within the TA, along with an assessment of whether any further improvements that may be required.]

Response – Noted. This will be covered in the TA.

[Para 2.11 This section should also set out the latest development proposals including details of parking and access by vehicles, pedestrians and cyclists.]

Response – Noted and Agreed.

[Para 2.12 It is proposed that long stay cycle parking will be provided at basement level. If this is the case then measures should be taken to ensure that the cycle parking is secure]

Response – Noted. This will be covered in the TA.

[Para 2.14 It is proposed to provide 461 parking spaces for residential use, which reflects a ratio of 0.44 spaces per unit, higher than both the 2008 parking policy and more recent advice from Slough Borough Council Highways officers. There are 1,548 parking spaces proposed for the office uses, however it is difficult to determine what ratio this represents as the proposed floor areas have not been set out in GFA. Additional parking is proposed for the other land uses. As stated above, floor areas should be set out in consistent units, which should be GFA rather than GIA, GEA or NIA. A total of 2295 car parking spaces are proposed for the whole site. The site is located in an accessible town centre location and the TA should consider whether some elements of the proposals are suitable as car free development.]

Response –The proposed parking figures were presented as Net Internal Area so that they were consistent with other documentation shared with SBC. The TA will present parking ratios as GFA.

The proposed parking of ca. 2,500 spaces total has been discussed and agreed in principle with SBC.

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[Para 2.15 Information should be provided on the management of these spaces, whether they will be allocated to specific uses or shared, and how any charging regime would work and be monitored.]

Response – Noted. This will be covered in the TA.

[Para 2.16 Electric charging points should be provided in accordance with the current standards.]

Response – Noted. This will be covered in the TA.

[Para 2.17 Plans showing the access and servicing strategy should be provided, including AutoTRACK analyses to ensure all service vehicles, refuse vehicles and emergency vehicles can enter and exit the site in a forward gear.]

Response – Noted. This will be covered in the TA.

<u>Trip Generation</u>

[Para 2.18 Trip generation for the existing retail facility appears to have been derived from data from the Whitgift Centre in Croydon and Brent Cross Shopping Centre, with a daily trip profile derived from Westfield London. It is not clear whether this is recent data, therefore it needs to be confirmed when this data is from.]

Response – The data is from 2016

[Para 2.19 It is not considered that any of these sites are comparable to the shopping centres in Slough town centre. Both sites are considerably larger than the shopping centres in Slough, with Brent Cross being an out of town destination retail site, while the Whitgift Centre in Croydon is located within a large destination shopping area with many large and unique shops attracting visitors from a wide area. The shopping centres in Slough are likely to generate a higher proportion of local trips and secondary trips.]

[Para 2.20 The daily trip profile for the existing site has been derived from the Westfield London site. It is not clear when this data was obtained. This shopping centre is clearly not comparable with the shopping centres in Slough, therefore if the trip profile is to be accepted, further evidence is required in order to justify its selection.]

[Para 2.21 The Westfield London retail mode split has been applied to the data to derive a mode share for the existing facility. Whilst the shopping centres in Slough are in the town centre and close to the bus and rail stations it is not comparable, in terms of accessibility, with Westfield London, which has four underground stations within a few minutes walk as well as overground services, bus services and five Santander cycling sites around the centre. Mode share by vehicle at this location may be lower as a result of the site's proximity to London. An alternative method should be found for determining the likely mode share of travel to the existing site.]

Response – We do not agree with the statement made by SBC that the sites used to predict the shopping mall trip generation are not comparable to the Queensmere and Observatory mall in Slough. Although they differ in terms of their geography, they are very similar in terms of retail/leisure/F&B mix, parking offer and

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potential retail draw. The TA Scope review states that the Whitgift Centre is home to “large and unique” shops, however there is nothing (in Planning terms) to prevent refurbishment of the Queensmere and Observatory site within the parameters of the extant permissions to attract “large and unique” occupiers and draw trade from a wider catchment.

A review of all potential data sources was undertaken at the time that the trip generation methodology was derived. One potential source of data, and indeed the simplest, would be to use data from the TRICS database. A review of potential sites returned two suitable surveys in which to base the retail trip generation on – one in Kent (KC-01-M-01) and one in Scotland (NL-01-M-01). However, these did not include any weekday data. Therefore, using TRICS data would have relied upon complex methodologies to predict weekday trip rates and arrival/departure profiles based on observed weekend survey data, or piecing together data from multiple sources.

As previously stated, WSP holds footfall and trip profile data (some of which is commercially sensitive) for a number of shopping malls across the UK. Instead of relying on the aforementioned TRICS-based methodology, the decision was taken to use an average of similar sites that WSP hold data for and base the trip generation on these sites.

As presented in the TA Scope and discussed at meetings with SBC, the emphasis of the existing situation assessment is on the potential of the site, not how it currently trades. At a meeting on 3rd June 2020 with SBC and their consultants, Origin, they raised concern that in their opinion the footfall stated in the TA Scope from the average of The Whitgift Centre and Brent Cross Shopping Centre (15.3 million annual trips per million square foot of development) seemed high and may overestimate the baseline volume of trips associated with the site. Origin requested further information be provided that compared the trip generation figure proposed in the TA Scope with figures from other Town Centre shopping malls in the UK. This is evidenced in the Table below.

Table 1 – Comparison of Trip Generation of other UK Malls

Site	GIA SQFT	Yearly Footfall (M trips / Year)	Trip Rates (annual trips per 1M sqft floor area)	Average
The Chimes, Uxbridge	588,427	11	18.7	17.61
Chapelfield, Norwich	679,991	15	22.1	
Broadmarsh, Nottingham	645,834	11	17.0	
Intu Derby	1,736,576	22	12.7	
Whitgift Centre, Croydon	1,302,432	19	14.6	15.3
Brent Cross	-	-	16.0	
Westfield London	1,485,418	27	18.2	-

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As stated, the TA Scope proposes a trip rate based on observed data of 15.3 million trips per 1 million sqft annually. This figure applied to the area of the existing site (925,000sqft approx.) equates to 14.15 million predicted trips per year if the site was to operate more in line with its potential. The average of the sites not considered is 17.61 million trips per 1 million sqft per year, meaning that if this rate were to be applied to the floor area of the existing site, then 16.3 million trips would be predicted to visit the mall annually. Compared with what is proposed in the TA Scope, this would overestimate the volume of trips predicted to visit the site by 2.15 million per year. It is therefore considered that the retail trip rates presented in the TA scope are conservative, valid and comparable with the Queensmere and Observatory Mall.

We disagree with the statement that the predicted mode share for the existing site is not comparable with that of Westfield London. Both sites are located in areas of high public transport accessibility and benefit from generous parking provision (Westfield London has 5,000 off-street parking spaces). Notwithstanding this, the mode share shown in the TA Scope is for illustrative purposes only, as the SMMM17 (SBC's multi-modal model) used to model the impacts of the existing and proposed development includes a mode choice component which will predict the ultimate mode share based on generalised cost and available car parking.

[Para 2.22 A TRICS® analysis has been undertaken to derive total person trip rates for the existing office use. Four sites have been included in the assessment, all within town centre locations. However, one of the sites is located in Greater London (Camden), which has a '6b (High) Excellent' PTAL rating. It is considered that this is not likely to be comparable with the application site, in terms of accessibility to public transport. A further assessment should therefore be carried out that does not include sites from Greater London. The mode share data is based on travel to work data from the 2011 Census and is appropriate. Full calculations should be provided.]

Response – Noted. It should be noted The TRICS data has been used to estimate total people trips only, therefore the inclusion of a London site is likely to increase the estimated trips rate per 100 sqm. The method to forecast travel by mode has not used the TRICS sites.

[Para 2.23 A TRICS® assessment has also been undertaken to derive a residential trip rate. Only five sites have been selected from the database, and those with fewer than 150 units have been excluded. As the site currently has 28 residential units, smaller residential developments could have been included in the analysis. It is also noted that three of the selected sites are in Greater London with 'Very Good' or better PTAL ratings. These sites are not likely to be comparable with the location of the application in terms of access to public transport. A further TRICS® assessment should be carried out that does not contain sites within Great London.]

Response – The accessibility of the site does not have a significant effect on the trip generation of a residential dwelling, more the mode share which will be based on the transport options available to the occupants of said dwellings. We therefore query why this analysis is necessary.

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[Para 2.25 A TRICS® assessment has been undertaken to derive a trip rate for the existing cinema use. It is stated that the TRICS® output is included in Appendix A, however this appears to be missing. Very few sites are available in the TRICS® database and following our own review of the database, the resulting trip rates appear to be reasonable. The retail mode share has been applied to the cinema land use, while it is agreed that the mode share is likely to be similar to the retail land use, the retail mode share has been based on the mode share at Westfield retail park which is not considered to be comparable to the shopping centres in Slough.]

Response – See previous comments on retail mode share

[Para 2.26 Trip generation rates for proposed office use are the same as those applied to the existing office development and, as detailed above, the assessment of the existing office trip rates needs to be re-run without sites in Greater London being included.]

Response – Noted. Noted. This will be covered in the TA.

[Para 2.27 The mode share for office use has been adjusted to reflect the car parking supply, as shown in Table 3 below. It is not clear exactly how the adjusted mode share has been derived; therefore, full calculations should be included within the Transport Assessment. However, it is clear that the proposal requires significant changes to the existing mode share, with a 30% increase in rail use, an increase in bus use of 23% and a reduction in car use of 47%. The Transport Assessment should set out how such a large change in mode share can be achieved and should incorporate the impact of on street and off street parking supply in the area of the site.]

Response – As stated previously, the mode share proportions are shown for illustration only. The mode share for the proposals will be determined by SBC's mode choice model.

[Para 2.28 The trip rate applied to the proposed residential uses is the same as that derived for the existing residential uses and should therefore be re-assessed without sites in Greater London, as detailed previously. The mode share derived from National Census data has again been adjusted to reflect the parking provision. The changes are set out in Table 4 below and show that the proposal assumes a 10% increase in use of the train, a 9% increase in bus use and a 12% reduction in car use. As with the office mode share, full calculations should be provided to set out how the mode share has been derived, along with information setting out how the changes in mode share can be achieved.]

Response – As stated previously, the mode share proportions are shown for illustration only. The mode share for the proposals will be determined by SBC's mode choice model.

[Para 2.29 The trip generation rate for retail and food retail has been derived from the retail trip rate obtained for the existing land use. As detailed above, the existing retail trip rates need to be reviewed, therefore may not be appropriate for the proposed use. In addition, the retail trip rate may not be appropriate for the food and beverage land uses if they are likely to extend their opening hours into the

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evening. An alternative trip rate should be considered. The mode share is based on data from the Westfield retail development and, as detailed previously, is not appropriate for a site in Slough.]

Response – See comments responding to Paras 2.19 – 2.21

[Para 2.30 Trips generated by the proposed cultural land use have been derived using the D2 cinema land use. More information should be provided on the nature of the proposed land use before this can be agreed. If the applicant is seeking permission for an open D2 use for this section of the site, then trips associated with the most intensive use falling under this use class should be taken into account in order to ensure a robust assessment.]

Response – Noted. This will be covered in the TA.

[Para 2.31 Servicing and delivery trips to residential units have been forecast using survey data from Imperial Wharf in Fulham in 2014, and Bow Quarter in Tower Hamlets in 2015. It is noted that both these sites are in Greater London, therefore further evidence is required to demonstrate why these sites would be comparable with a site in Slough.]

Response – Noted. This will be covered in the TA.

[Para 2.32 The level of servicing likely to be generated by the non-residential uses has been derived from a servicing and delivery database held by WSP. Further information should be provided to confirm that the sites available in the database are comparable with the land uses and location of the proposed development.]

Response – Noted. This will be covered in the TA.

Effect of the Development

[Para 2.37 Additional junction testing may be required dependant on the results of the modelling. It is suggested that the full scope of junctions to be modelled is agreed with the applicants on the basis of difference plots (if available) and impact sifting once initial model runs have been completed. This will allow the assessment to focus on those junctions where there is deemed to be a material impact based on the model outputs.]

Response – Noted

[Para 2.38 If the build out of the development is to be in phases then this should also be taken into account in the impact assessment in order to identify if, and at which point during the build, mitigation may be required.]

Response – The Outline Planning Application is intended to follow a parameter-based approach therefore the proposals (in accordance with The Town and Country Planning (Environmental Impact Assessment) Regulations, 2017) will be assessed as an all-or-nothing scenario with an opening year of 2036. Triggers

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for highways mitigation can be identified as the scheme progresses by undertaking a desktop appraisal if necessary. No further highways modelling using SBC's SMMM17 is proposed.

Public Transport Impact

[Para 2.39 The public transport impact should include a review of the capacity of existing bus and rail services and ensure that the generated trips can be accommodated given the proposed significant change in mode share and change of use from a predominantly retail facility to a predominantly residential development. The scope of the public transport review will need to be agreed with SBC.]

Response – The SMMM17 will include analysis of public transport impact. The Transport Assessment will report on this.

[Para 2.40 Consideration should also be given to whether such measures as a car hire club could offer some benefit for the site as some residents and office workers will be able to get to and from the site solely using sustainable modes during the week but may want the occasional use of a car for business meetings or long journeys at weekends.]

Response – Noted. This will be covered in the TA.

Management Measures

Para 2.41 The Travel Plan should be produced in consultation with Slough Borough Council and in accordance with Slough's Travel Plan Guidance and Checklist, while a Delivery and Servicing Plan and a Construction Management Plan should also be produced in agreement with Slough Borough Council.

Response – Noted

CONCLUSION

This response to SBC's review of the Slough Central TA Scope has been prepared by WSP and it seeks to address the comments raised.

The main point of concern from SBC appears to be in relation to the trip generation of the site, specifically the retail component. Their concern is in relation to the validity of the data used to predict the existing trip generation in line with the current uses present at the site. A thorough review of alternative methodologies and data sources is presented in this response which reinforce the view that the data contained in the TA Scope is valid and suitable for the Transport Assessment.

We trust that the information contained within this response is sufficient for SBC to agree the scope of the Transport Assessment.

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DATE:	16 June 2020	**CONFIDENTIALITY:**	Confidential
SUBJECT:	Response to SBC TA Scope Review (2)		
PROJECT:	Slough Central	**AUTHOR:**	L Schroder
CHECKED:	D McDougall	**APPROVED:**	D McDougall

INTRODUCTION

This Technical Note has been prepared in response to SBC's review of the Slough Central Transport Assessment Scoping Report and, most recently, correspondence between SBC's consultants (Origin) and WSP. A number of concerns have been resolved however, there are a number of issues raised where Origin either seek clarity on or disagree with.

This Technical Note aims to deal with the remaining issues and, as previous, follows a section-by-section response, and, for simplicity, is aligned to the headings and paragraph numbering system contained therein. Where paragraphs are omitted is because they do not require a response.

REVIEW AND RESPONSE

Transport Assessment

[Para 2.1 WSP has stated that a parking provision of around 2,500 spaces has been discussed and agreed in principle with Slough Borough Council. Nevertheless, the level of parking provision within the site should be justified with reference to the relevant parking standards and taking account of the likely parking demand which will be affected by the number of shared and allocated spaces available within the car parks, the proposed parking regime and the availability of alternative parking nearby.]

Response – The Transport Assessment will include a qualitative and quantitative analysis of parking provision.

Trip Generation

[Para 2.3 Origin remain of the opinion that these sites are not comparable to the potential of the existing sites within Slough. WSP argue that these sites are comparable in terms of development mix, parking offer and potential retail draw. Weekday TRICS® data is not available for retail sites. No weekend data has been provided for the London based shopping centres used by WSP to estimate their trip rates; however if a comparison was made between the weekend data for the chosen sites and the weekend data for the sites within TRICS®, that showed they were comparable, this may give more comfort to the use of the proposed weekday trip rates.]

Response – The following is based on observed data at shopping malls over several neutral months and has been used to establish the existing trip generation if the site was to operate to its true potential. It is **highly confidential**. You are reminded of your obligations under the NDA between Slough Borough Council, their agents / consultants and the Applicant. A redacted version of this Technical Note will be included in the Transport Assessment.

The trip generation exercise for the existing site, based on the sites presented in the TA Scoping Report, predicts a daily one-way footfall of 55,800 trips on a typical Saturday. The observed split of footfall across each weekday is as follows:

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Trip rates applied to existing floor area (85,947sqm), as proposed by WSP		
Day	Profile	One-Way Trips
Monday	12.3%	33,481
Tuesday	12.3%	33,481
Wednesday	12.5%	34,025
Thursday	13.5%	36,747
Friday	14.6%	39,741
Saturday	**20.5%**	**55,801**
Sunday	14.2%	38,652
Total Weekly		271,927

Origin request a test of comparability of the trip generation data provided in the TA Scope against the data provided in TRICS. In response to this request, we have reviewed the TRICS database and identified the two most comparable mixed shopping mall sites available. As stated in WSP Technical Note 5, these sites are located in Kent (KC-01-M-01) and the other in Scotland (NL-01-M-01). These sites were chosen based on location (Town Centre), accessibility and quality of data (multi-modal surveys).

The site in Kent is a small mixed mall made up of thirteen small-scale independent retailers in the centre of Maidstone with relatively poor retail and no on-site parking offer. Any calculations based on this site should therefore be treated with caution. Conversely, the site in Scotland is a mixed mall with its own parking provision and (at the time of the survey) a similar retail offer compared to the potential of the existing site in Slough, with a retail mix strongly biased towards comparison goods.

Trip rates applied to existing floor area (85,947sqm), as requested by Origin	
Site	One-Way Trips (Saturday)
KC-01-M-01	42,523
NL-01-M-01	62,615

As can be seen from the evidence above, applying the trip rates from each of the two TRICS sites results in comparable footfall to that proposed in the TA Scope. It is therefore concluded that the methodology proposed in the TA Scope, which uses **observed** data on footfall at shopping malls, is sound and should therefore be accepted by SBC.

[Para 2.4 WSP state that "there is nothing (in Planning terms) to prevent refurbishment of the Queensmere and Observatory site within the parameters of the extant permissions to attract "large and unique" occupiers and draw trade from a wider catchment". While this may be the case in theory, there is no evidence to support the idea that if the existing shopping centres were refurbished, without the need for further planning permission, they would have the same level of draw from a wider catchment as the chosen

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sites in the London area. It is also the case that we are not looking at a refurb scheme, this is an application for new development and it should therefore be assessed using appropriate and agreed trip rates.]

Response – It is surprising that Origin make the rather bold assertion that refurbishing shopping malls does not increase footfall and geographic catchment. Evidence for investment prompting increased footfall at shopping malls is widely documented – a concise review is summarised in *"The effects of mall renovation on shopping values, satisfaction and spending behaviour"* (published in The Journal of Retailing and Consumer services, July 2014), which reinforces the direct correlation between investment, footfall and consumer spend.

[Para 2.5 Further information has since been provided for an additional four shopping centres in Uxbridge, Norwich, Nottingham and Derby, although no dates have been provided for the data and it is not clear how the trip rates were derived. Annual trip rates vary from 12.7 million trips per square foot of floor area in Derby to 22.1 million trips per square foot in Norwich, with the average being 17.61 million trips per square foot. The average trip rates for the Whitgift centre and Brent Cross is 15.3 million trips per square foot of floor area. WSP argue that if the higher trip rate for the four additional sites was used then the trip rate would overestimate the number of trips to the site and therefore the lower trip rate should be used. Whilst the use of a conservative trip rate for the potential existing uses would provide a robust result, as it is proposed to use the same trip rate for the proposed development, a conservative trip rate could potentially underestimate the trip generation associated with the future site.]

Response – The surveys for the additional four shopping centres were carried out no earlier than 2015 and the trip rates have simply been derived from garden gate surveys at each store as a function of the floor area; similar to way that TRICS trip rates are calculated. For the purpose of assessment and for ease of comparability between the baseline and forecast scenarios the same trip rate for the shopping mall element is proposed.

[Para 2.6 It would seem questionable as to why a shopping centre in an area outside of London, such as Norwich, Nottingham or Derby would be any less comparable to a shopping centre in Slough than a shopping centre in London would be to a shopping centre in Slough. Further evidence to support WSP's argument in this respect should be provided. It would also be useful to see a comparison between the trip rates for the chosen sites and the trip rates for the retail uses that were included in the Slough Multi Modal Model, which may assist in the agreement of trip rates.]

Response – As has been demonstrated and proven earlier on in this Technical Note and in our previous Technical Note 5, geographic location, be it London or *not* London, has little bearing over the trip generation of the mall itself. The rationale for using the sites that are detailed in the scoping note is simple:

- There is limited information contained in traditional sources (TRICS) is extremely limited, although a comparison of weekend data (at the request of Origin) indicates similar volumes of trips generated;
- The data that WSP holds for the sites presented in the TA scope is robust and extremely detailed;

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- Data from other four sites referenced in Technical Note 5 is commercially sensitive and not available for publication, although headline footfall analysis identifies similar trip generation to the sites chosen.

The trip rates used for the SMMM are best matched to current travel patterns (for model validation purposes) so no direct comparison can be made.

[Para 2.7 Origin does not accept that the mode share at The Westfield London is comparable with the shopping centres in Slough. As stated in our TN1, WSP applied the Westfield mode share to the total person trip rate for retail uses to derive a trip rate by mode. However, WSP's TN5 now states that this exercise was for illustrative purposes only and that the mode share will be derived from the Council's multi-model model (SMMM17).]

Response – Please confirm that this should no longer a concern.

Existing and Proposed Office Use

[Para 2.8 A TRICS® analysis has been undertaken to derive total person trip rates for the existing office use. Four sites have been included in the assessment, all within town centre locations. However, one of the sites is located in Greater London (Camden), which has a '6b (High) Excellent' PTAL rating. It is considered that this is not likely to be comparable with the application site, in terms of accessibility to public transport. WSP have stated that the TRICS® data has only been used in terms of total person trips and that the use of a central London site is appropriate.]

Response – Removal of the London trip rate from the dataset results in a lower trip rate per 100sqm of B1 office. The resultant rates are shown below.

Trips per 100 sqm GFA (London removed)			
Period	Inbound	Outbound	Total
0800-0900	1.221	0.044	1.265
1700-1800	0.044	1.228	1.272
Daily	6.563	6.446	13.009

Trips per 100 sqm GFA (TA Scope)			
Period	Inbound	Outbound	Total
0800-0900	1.946	0.154	2.1
1700-1800	0.1	1.805	1.905
Daily	8.193	8.06	16.253

Given that the trip rates proposed in the TA scope are higher than the suggested approach by Origin, it is not proposed to alter them in the Transport Assessment. This will provide a robust assessment.

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[Para 2.9 Table 1 below sets out a comparison of the trip rates proposed by WSP and the trip rates for a B1 Office use that was used in the development of the Slough Multi-Modal Model. It shows that the trip rate proposed by WSP is significantly lower than that derived from the other Transport Assessments in the local area. While the use of this trip rate may result in a robust assessment of the existing traffic generation potential of the site, it also has the potential to underestimate the traffic generation potential of the proposed development. Further analysis should therefore be undertaken in order to derive a trip rate that is appropriate for both the existing and proposed office use.]

Response – The comparison that Origin make is void because the SMMM trip rates referred to in their Table 1 are for a three-hour period. The WSP rates are for a single hour.

<u>Existing and Proposed Residential Uses</u>

[Para 2.11 A TRICS® assessment has also been undertaken to derive a residential trip rate. Only five sites have been selected from the database, and those with fewer than 150 units have been excluded. As the site currently has 28 residential units, smaller residential developments could have been included in the analysis. It is also noted that three of the selected sites are in Greater London with 'Very Good' or better PTAL ratings. These sites are not likely to be comparable with the location of the application in terms of access to public transport. Origin previously advised that A further TRICS® assessment should be carried out that does not contain sites within Great London.]

Response – Based on the trip rates as presented in the TA scope, the existing residential component of the site makes up 1.5% of the total trips in the morning peak hour and 0.2% during the evening peak. Even if the trip rates were doubled, as a result of selecting smaller sites from TRICS, it would be unlikely to result in any material impact or change to the overall trip generation.

A comparison has also been made between the AM and PM period trip rates and those used for other sites in the Borough (and as used in the SMMM17). These are summarised below:

Mode	**Site**	**AM 0700-1000**			**PM 1600-1900**		
		In	Out	Total	In	Out	Total
PT	**Slough Central**	**0.088**	**0.43**	**0.518**	**0.446**	**0.195**	**0.641**
	Azko Nobel	0.044	0.241	0.285	0.366	0.126	0.492
	TVU	0.056	0.362	0.418	0.412	0.115	0.527
Car Driver	**Slough Central**	**0.084**	**0.41**	**0.494**	**0.425**	**0.186**	**0.611**
	Azko Nobel	0.067	0.362	0.429	0.366	0.126	0.492
	TVU	0.056	0.241	0.297	0.253	0.115	0.368

As can be seen, the Slough Central residential trip rates are the most robust and should be considered acceptable.

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Existing Cinema

[Para 2.14 A TRICS® assessment has been undertaken to derive a trip rate for the existing cinema use. It was previously stated that the TRICS® output data was included in Appendix A of the Scoping Note, however this was missing. Very few sites are available in the TRICS® database and following our own review of the database, the resulting trip rates appear to be reasonable. However, we still request that the TRICS® data used to derive a trip rate for the existing use is provided for completeness.]

Response – TRICS data included as Appendix A

Proposed Retail / Food and Beverage

[Para 2.16 The trip generation rate for retail and food retail has been derived from the retail trip rate obtained for the existing land use. Origin's view on the proposed trip rates has been detailed above. In addition, as stated in our previous TN, the retail trip rate may not be appropriate for the food and beverage land uses if they are likely to extend their opening hours into the evening. An alternative trip rate should be considered. The mode share data will now be based on the Slough Multi-Modal Model and not from the Westfield retail development as set out in the Scoping Note.]

Response – The trip rates used to establish the volume of trips generated by the existing retail/F&B offer at the site are evidenced from that of a mixed shopping mall, which includes a mix of retail, leisure and food/beverage uses. The proposed development will also have a significant retail/leisure/F&B offer, tailored to the expected retail need of the area, albeit on a smaller scale. For the reasons cited in this Technical Note and the Note that preceded it, the trip rates for this component of the development should now be accepted.

CONCLUSION

This Technical Note seeks to address the remaining concerns by SBC in relation to the Scope of the Transport Assessment for the proposed Slough Central development.

The main point of concern remains to be with the methodology for calculating the existing trip generation for the site and Origin (SBC's consultants) have queried how the existing trip rates have been derived. Through this scoping process, the trip rates proposed by WSP have, at the request of Origin, been sense-checked against other sources of data. This thorough exercise confirms that the proposed methodology is both appropriate and suitably robust.

The results of this review should give SBC comfort that the methodologies contained within the TA Scoping Report is sound.

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RECEIVED : 24.06.2022

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APPENDIX A

Calculation Reference: AUDIT-100301-200617-0621

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 07 - LEISURE
Category : A - MULTIPLEX CINEMAS
MULTI-MODAL TOTAL PEOPLE

Selected regions and areas:

01	GREATER LONDON		
	CN	CAMDEN	1 days
06	WEST MIDLANDS		
	SH	SHROPSHIRE	1 days
	WO	WORCESTERSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	NY	NORTH YORKSHIRE	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: 464 to 4500 (units: sqm)
Range Selected by User: 464 to 4500 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/05 to 18/11/16

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:
Friday 4 days

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

Selected survey types:
Manual count 4 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 undertaking using machines.

Selected Locations:
Town Centre 2
Edge of Town Centre 1
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:
Retail Zone 1
Built-Up Zone 2
High Street 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.

Secondary Filtering selection:

Use Class:
D2 4 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Secondary Filtering selection (Cont.):

Population within 1 mile:

5,001 to 10,000	1 days
20,001 to 25,000	1 days
25,001 to 50,000	1 days
50,001 to 100,000	1 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	1 days
125,001 to 250,000	2 days
500,001 or More	1 days

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

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	1 days
1.1 to 1.5	1 days
1.6 to 2.0	1 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	4 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	3 days
6b (High) Excellent	1 days

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

LIST OF SITES relevant to selection parameters

1 CN-07-A-01 ODEON CAMDEN
TOTTENHAM COURT RD
BLOOMSBURY

Town Centre
Built-Up Zone
Total Gross floor area: 464 sqm
Survey date: FRIDAY 23/10/09 Survey Type: MANUAL

2 NY-07-A-02 VUE NORTH YORKSHIRE
STIRLING ROAD
YORK
CLIFTON MOOR
Edge of Town
Retail Zone
Total Gross floor area: 4500 sqm
Survey date: FRIDAY 18/09/09 Survey Type: MANUAL

3 SH-07-A-02 CINEWORLD SHROPSHIRE
OLD POTTS WAY
SHREWSBURY

Edge of Town Centre
Built-Up Zone
Total Gross floor area: 2400 sqm
Survey date: FRIDAY 19/06/09 Survey Type: MANUAL

4 WO-07-A-01 ODEON WORCESTERSHIRE
FOREGATE STREET
WORCESTER

Town Centre
High Street
Total Gross floor area: 2200 sqm
Survey date: FRIDAY 18/11/16 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 07 - LEISURE/A - MULTIPLEX CINEMAS
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00	2	3450	0.116	2	3450	1.580	2	3450	1.696
01:00 - 02:00	2	3450	0.000	2	3450	1.333	2	3450	1.333
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00	2	2300	0.000	2	2300	0.000	2	2300	0.000
11:00 - 12:00	2	2300	0.022	2	2300	0.022	2	2300	0.044
12:00 - 13:00	4	2391	1.349	4	2391	0.523	4	2391	1.872
13:00 - 14:00	4	2391	2.028	4	2391	0.910	4	2391	2.938
14:00 - 15:00	4	2391	1.819	4	2391	0.857	4	2391	2.676
15:00 - 16:00	4	2391	2.248	4	2391	1.893	4	2391	4.141
16:00 - 17:00	4	2391	3.168	4	2391	2.373	4	2391	5.541
17:00 - 18:00	4	2391	4.391	4	2391	2.488	4	2391	6.879
18:00 - 19:00	4	2391	6.723	4	2391	3.921	4	2391	10.644
19:00 - 20:00	4	**2391**	**10.006**	4	2391	5.217	4	2391	15.223
20:00 - 21:00	4	2391	8.574	4	2391	7.037	4	**2391**	**15.611**
21:00 - 22:00	4	2391	6.159	4	2391	6.964	4	2391	13.123
22:00 - 23:00	4	2391	2.394	4	**2391**	**8.982**	4	2391	11.376
23:00 - 24:00	4	2391	0.450	4	2391	5.646	4	2391	6.096
Total Rates:			49.447			49.746			99.193

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.*

TECHNICAL NOTE 8

DATE:	01 July 2020	**CONFIDENTIALITY:**	Confidential
SUBJECT:	Response to SBC TA Scope Review (3)		
PROJECT:	Slough Central	**AUTHOR:**	L Schroder
CHECKED:	D McDougall	**APPROVED:**	D McDougall

INTRODUCTION

This Technical Note has been prepared in response to SBC's review of the Slough Central Transport Assessment Scoping Report and, most recently, correspondence between SBC's consultants (Origin) and WSP. The document that this response is in relation to is Technical Note 1B, prepared by Origin on 26th June 2020.

This Technical Note aims to deal with the remaining issues and, as previous, follows a section-by-section response, and, for simplicity, is aligned to the headings and paragraph numbering system contained therein. Where paragraphs are omitted is because they do not require a response.

REVIEW AND RESPONSE

Trip Generation

[Para 2.3 WSP have provided further commentary on the sites within the TRICS® database. One site is in Kent and WSP state that it "is a small mixed mall made up of thirteen small-scale independent retailers in the centre of Maidstone with relatively poor retail and no on-site parking offer". WSP go on to state that "Any calculations based on this site should therefore be treated with caution". We agree that the data from this site should be treated with caution, but nevertheless in the absence of any better data it at least provides a comparator to consider.

Para 2.4 The second site is a mixed mall with its own parking provision and a similar retail offer compared to the potential of the existing site in Slough. The site is however located is Scotland. This site would appear to be more comparable to the site in Slough. It is however still noted that the available TRICS® data is limited in terms of available sites.

Para 2.5 WSP has stated that based on the trip rates derived from their chosen sites; the existing site would have the potential to generate a daily one-way footfall of 55,800 trips on a typical Saturday. A review of the two available sites in the TRICS® database, located in Kent and Scotland has shown a one-way footfall of 42,523 and 62,615 trips respectively on a typical Saturday. On this basis WSP conclude that the proposed trip rate is acceptable.

Para 2.6 Having reviewed the available TRICS® data ourselves, we are of the opinion that the daily footfall for a Saturday, proposed by WSP, does reasonably compare with the limited TRICS® data for a Saturday. Following on from this as it has been demonstrated that the Saturday data compares reasonably well, we now have greater confidence that the weekday data proposed by WSP should also compare reasonably well.]

Response – Agreed.

TECHNICAL NOTE 8

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[Para 2.14 In summary we have crossed checked as much as we can against the available TRICS® data and as much as we can against data provided for other shopping centres around the country and can now accept that the daily one-way footfall levels set out in WSP's Table 6-2 of the Scoping Note.]

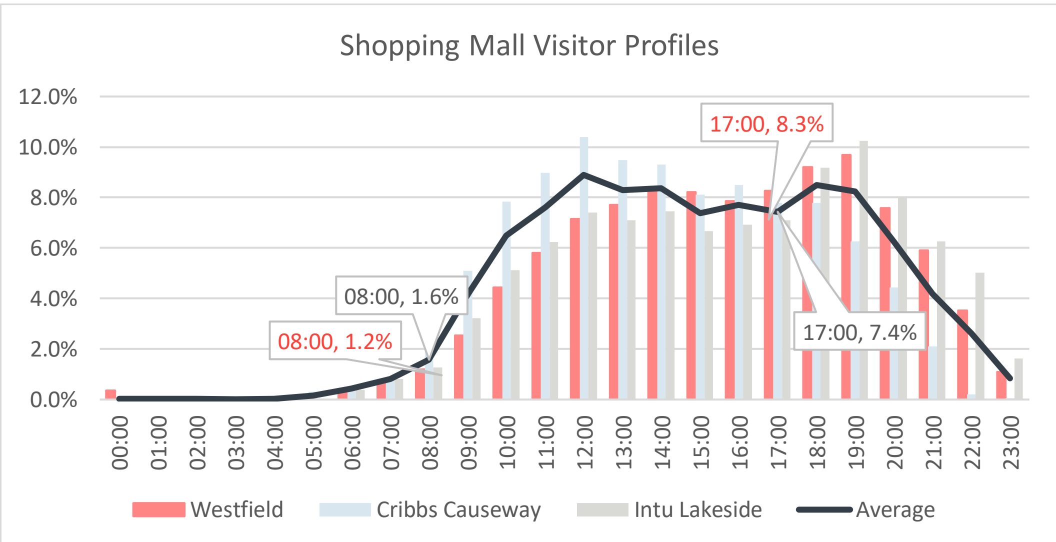
Response – We note that you accept the daily trip generation as outlined in out TA Scoping Note dated April 2020.

[Para 2.17 No raw data for the daily trips recorded at Westfield London is provided to evidence what is presented in the Table and raw survey data would normally be expected to support the development of trip rates. It would therefore be helpful if the raw data was provided to enable the distribution of trips across the day to be reviewed and validated. Clearly, we are only interested in the raw numbers by hour and no other information that may be commercially sensitive.]

Response – The data is provided in Appendix A of this Note

[Para 2.18 - Origin remains concerned about the continued use of a single site in isolation as the basis for trip distribution across the day and it would helpful if this could again be validated with additional information from the other sites referenced at Brent Cross and Whitgift if that data is available. This would again provide further confidence in the data.]

Response – Presented below is further analysis to validate the suitability of the Westfield daily profile of trips. Unfortunately, this data is not available for the Brent Cross and Whitgift centres, however we are in possession of footfall counts for Cribbs Causeway (2014 data) and Intu Lakeside (2011 data).



As can be seen from the graph above; shopping malls of similar size, regardless of location, follow similar profiles of trips by hour with comparatively few trips during the morning peak hour rising to a fairly even distribution throughout the day, tailing off after the evening peak hour. Note: the "Average" line is that of the two comparator sites and does not include the Westfield Site. We trust that this provides SBC/Origin with

TECHNICAL NOTE 8

DATE:	01 July 2020	**CONFIDENTIALITY:**	Confidential
SUBJECT:	Response to SBC TA Scope Review (3)		
PROJECT:	Slough Central	**AUTHOR:**	L Schroder
CHECKED:	D McDougall	**APPROVED:**	D McDougall

sufficient confidence that the method used to convert daily footfall to hourly data is acceptable and that this can be agreed.

CONCLUSION

This Technical Note seeks to address the remaining concerns by SBC in relation to the Scope of the Transport Assessment for the proposed Slough Central development.

SBC/Origin have accepted the daily trip generation of the site but outline the requirement for further evidence to support the conversion of daily data to peak hour. At the time of writing the TA Scope for the proposed development (April 2020), there was limited evidence in the public domain to identify the profile of trips associated with shopping malls across a typical day. This still remains the case for the following reasons:

- The TRICS database provides limited data, with the majority of surveys at *Mixed Shopping Malls* (the category to which Malls are defined within the database) taking place on a Saturday. Obviously it would be wholly innacurate to apply a weekend profile to a weekday, and;
- The hourly footfall statistics for shopping malls across the UK remain a closely guarded secret by operators, because they are commercially sensitive.

As detailed in the TA Scoping report, a daily profile for the Westfield London site was applied on the basis that this site represents a typical shopping mall with similar hours of operation and shopping/F&B mix. Further analysis has been undertaken at the request of SBC/Origin to validate the pattern of shopping mall trips throughout a weekday. From the analysis undertaken, it is confirmed that other shopping malls operate similarly to Westfield London, proving the hypothesis that shopping malls, regardless of location, generate similar proportions of trips by hour throughout the day.

We trust that the information evidenced in this Technical Note will allow SBC/Origin to agree the scope of the Transport Assessment.

TECHNICAL NOTE 8

DATE:	01 July 2020	**CONFIDENTIALITY:**	Confidential
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APPENDIX A

SBC PLANNING
RECEIVED : 24.06.2022

Westfield London

September/October Footfall by Day - HIGHLY CONFIDENTIAL

	Footfall (observed)
Thursday	82,264
Friday	81,667
Saturday	95,990
Sunday	80,074
Monday	74,716
Tuesday	72,499
Wednesda	68,202
Thursday	67,880
Friday	72,056
Saturday	100,994
Sunday	69,521
Monday	60,876
Tuesday	58,298
Wednesda	60,987
Thursday	63,885
Friday	69,832
Saturday	100,972
Sunday	67,034
Monday	56,210
Tuesday	58,609
Wednesda	62,017
Thursday	63,023
Friday	72,559
Saturday	116,251
Sunday	70,834
Monday	57,723
Tuesday	59,080
Wednesda	62,498
Thursday	64,877
Friday	73,300
	2,164,728

	Footfall (typical)
Monday	62,381
Tuesday	62,122
Wednesday	63,426
Thursday	68,386
Friday	73,883
Saturday	103,552
Sunday	71,866

IN TRIPS

	Thurs	Sat	Sun
00:00	0.04%	0.03%	0.07%
01:00	0.01%	0.01%	0.02%
02:00	0.02%	0.01%	0.01%
03:00	0.04%	0.01%	0.01%
04:00	0.02%	0.00%	0.00%
05:00	0.09%	0.03%	0.01%
06:00	0.57%	0.26%	0.03%
07:00	1.17%	0.41%	0.16%
08:00	2.17%	1.22%	0.25%
09:00	4.58%	3.96%	0.65%
10:00	7.54%	7.06%	3.16%
11:00	8.27%	8.67%	11.24%
12:00	9.42%	9.85%	17.81%
13:00	8.58%	10.56%	16.86%
14:00	7.66%	11.74%	15.60%
15:00	7.23%	11.57%	14.09%
16:00	6.89%	9.57%	9.53%
17:00	8.05%	7.78%	4.63%
18:00	9.93%	6.56%	2.27%
19:00	10.66%	5.92%	1.76%
20:00	5.37%	3.03%	1.18%
21:00	1.36%	1.07%	0.49%
22:00	0.27%	0.39%	0.13%
23:00	0.07%	0.24%	0.04%

	Thurs	Sat	Sun
00:00	27	36	53
01:00	6	13	14
02:00	12	8	5
03:00	27	10	7
04:00	14	5	2
05:00	59	36	5
06:00	393	266	19
07:00	800	429	115
08:00	1,482	1,268	179
09:00	3,133	4,104	470
10:00	5,157	7,309	2,271
11:00	5,654	8,982	8,080
12:00	6,440	10,202	12,800
13:00	5,867	10,940	12,120
14:00	5,235	12,162	11,208
15:00	4,946	11,981	10,124
16:00	4,709	9,915	6,848
17:00	5,507	8,055	3,328
18:00	6,792	6,792	1,633
19:00	7,292	6,131	1,268
20:00	3,671	3,141	845
21:00	927	1,111	351
22:00	182	403	91
23:00	51	253	31

OUT TRIPS

	Thurs	Sat	Sun
00:00	0.65%	0.69%	1.11%
01:00	0.16%	0.54%	0.73%
02:00	0.09%	0.13%	0.17%
03:00	0.06%	0.03%	0.01%
04:00	0.02%	0.01%	0.01%
05:00	0.04%	0.01%	0.01%
06:00	0.02%	0.03%	0.01%
07:00	0.09%	0.11%	0.03%
08:00	0.22%	0.20%	0.03%
09:00	0.50%	0.48%	0.13%
10:00	1.33%	1.51%	0.48%
11:00	3.36%	3.18%	0.77%
12:00	4.88%	4.69%	3.24%
13:00	6.82%	6.24%	7.73%
14:00	8.95%	7.91%	11.47%
15:00	9.21%	9.70%	15.30%
16:00	8.83%	11.87%	17.11%
17:00	8.48%	13.24%	17.39%
18:00	8.45%	11.78%	13.44%
19:00	8.72%	7.05%	4.07%
20:00	9.79%	8.07%	2.34%
21:00	10.47%	6.77%	1.59%
22:00	6.76%	3.08%	1.47%
23:00	2.10%	2.66%	1.33%

	Thurs	Sat	Sun
00:00	448	714	798
01:00	106	564	523
02:00	65	132	121
03:00	40	30	10
04:00	15	13	7
05:00	27	11	5
06:00	15	32	10
07:00	60	118	20
08:00	152	212	22
09:00	339	502	94
10:00	908	1,568	344
11:00	2,297	3,294	555
12:00	3,338	4,859	2,329
13:00	4,667	6,457	5,559
14:00	6,121	8,189	8,247
15:00	6,302	10,046	10,999
16:00	6,035	12,294	12,294
17:00	5,802	13,714	12,500
18:00	5,779	12,197	9,661
19:00	5,964	7,303	2,928
20:00	6,693	8,358	1,680
21:00	7,158	7,007	1,144
22:00	4,623	3,187	1,058
23:00	1,433	2,752	959

TECHNICAL NOTE 8

DATE:	21 July 2020	**CONFIDENTIALITY:**	Confidential
SUBJECT:	Response to SBC TA Scope Review (4)		
PROJECT:	Slough Central	**AUTHOR:**	L Schroder
CHECKED:	D McDougall	**APPROVED:**	D McDougall

INTRODUCTION

This Technical Note has been prepared in response to SBC's review of the Slough Central Transport Assessment Scoping Report and, most recently, correspondence between SBC's consultants (Origin) and WSP. The document that this response is in relation to is Technical Note 1C, prepared by Origin on 20th July 2020.

This Technical Note aims to deal with the remaining issues and, as previous, follows a section-by-section response, and, for simplicity, is aligned to the headings and paragraph numbering system contained therein. Where paragraphs are omitted is because they do not require a response.

REVIEW AND RESPONSE

Daily Trip Profile

[Para 2.1 The daily profile in Figure 6-1 of the Scoping Note is said to be based on the operation of Westfield London and is based on a single site in isolation. Trip generation has been provided for Westfield in Appendix A of TN8. Inbound and outbound daily trips have been provided for a Thursday, Saturday and Sunday. No date has been provided]

Response – The data presented in Appendix A is an average of every Thursday recorded over a 30-day period between September and October in 2016. The date of the information was confirmed in TN05. This can easily be cross-referenced against the total values in the table, which (when summed) equal the "average Thursday" data presented in the fourth column from the left (68,386).

[Para 2.3 Whilst a series of tables and a graph has been provided, it is not clear what the distribution for Westfield represents – it does not appear to reflect the inbound or outbound trips from the survey data and it is not clear how the data has been calculated. Similarly, it is not clear what the hourly profile data for the Cribbs Causeway and Intu Lakeside sites represents. It is not possible to agree the hourly profiles without further information to clarify the data that has been provided.]

Response – The data presented in Appendix A of TN08 is the sum of the inbound and outbound trips per hour represented as a percentage of the total two-way traffic observed during the surveys at Westfield. The data for Cribbs Causeway (issued to Tim Thurley of Origin Consultants on 9th July 2020) states that the values displayed are two-way trips. Similarly, the Intu data (although not stated in the supporting evidence) is expressed as two-way trips.

It should be noted, the sole reason for presenting a daily profile and its comparison with other similar retail-led sites is to support the hypothesis that the Westfield trip profile is typical of any other mall with similar retail/leisure mix. The analysis carried out by WSP confirms this to be the case and that the Westfield profile is valid.

TECHNICAL NOTE 8

DATE:	21 July 2020	**CONFIDENTIALITY:**	Confidential
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[Para 2.4 In order for us to gain a better understanding of the information provided, we have carried out our own TRICS® analysis of a mixed shopping mall in Eastbourne, where the data has been obtained from a survey on a weekday in 2001. A comparison of the resulting person trip hourly profile (i.e. the proportion of daily trips at the site during each hour) with the 'WSP Average' data suggests a much higher morning peak percentage than the WSP Average data.]

Response – WSP has provided the original survey data for the Westfield London shopping centre, and data for Cribbs Causeway and Intu Lakeside to support the use of the Westfield London site. WSP maintain this data is considered more suitable than sites provided in TRICS. In addition, the Eastbourne shopping centre site Origin has presented, from the TRICS database, was surveyed in 2001 which would be considered outdated

A previous review of the Eastbourne shopping centre site found a significant make-up of the retail offering at the site was a Tesco supermarket. The differences in shopping patterns between comparison and convenience goods are well documented[1], for example shoppers purchasing food shopping on the way to/from work as part of a linked trip, which explains the comparatively high volume of trips during the morning period. WSP have been careful to present data for sites which only contain comparison goods stores, to match the retail offer of the Queensmere and Observatory malls in Slough. In summary, it is considered the two sites cannot be compared, as the retail offer is completely different.

CONCLUSION

This Technical Note seeks to address the remaining concerns by SBC in relation to the Scope of the Transport Assessment for the proposed Slough Central development.

SBC/Origin have queried the appropriateness of the data provided by WSP to calculate the hourly profile of trips associated with the existing retail uses at the Slough Central site. The analysis undertaken by WSP has been undertaken to support the hypothesis that a Westfield mall is not dissimilar from other retail malls elsewhere in the country in terms of daily trip profile. This work proves the aforementioned hypothesis and confirms that fewer people visit comparison-good malls in the morning peak hour when compared with periods later on in the day. Origin's own analysis, based on a single site with a large proportion of the retail floor area being a food supermarket, is not considered suitable. It is hoped SBC / Origin will agree with the selection of the Westfield London site, supported by data for the Cribbs Causeway and Intu Lakeside sites, after a review of the clarifications provided in this note.

[1] *Retail concentration: a comparison of spatial convenience in shopping strips and shopping centres, Reimers et al, 2014*

Slough Central Transport Assessment Scoping Addendum

DATE:	10 March 2021	**CONFIDENTIALITY:**	Public
SUBJECT:	Transport Assessment Scoping Addendum		
PROJECT:	Slough Central	**AUTHOR:**	LS
CHECKED:	AT	**APPROVED:**	DMcD

INTRODUCTION

This Addendum to the Transport Assessment Scoping Note (TASN) (April 2020) has been prepared by WSP, on behalf of the applicant for Slough Central, to provide an update on the proposals for the Slough Central development.

WSP prepared and issued a TASN to SBC in April 2020, which formed the basis of a comprehensive four-month scoping exercise with SBC highways officers. The scheme presented in the TASN was different in scale and mix to that which is proposed now, but the principles of regenerating the existing site remain the same.

The Scoping Note Addendum will provide an update on the revised development proposals and will set out previously agreed principles associated with the scope of the Transport Assessment and methodologies that remain valid, and update approaches where necessary.

The document will follow the same format as the initial Transport Assessment Scoping Note (TASN) submitted in April 2020.

OVERVIEW OF PROPOSALS

The updated development proposals seek to redevelop the site as a residential led scheme. The proposals include retail and commercial use at ground floor in some development blocks, including those areas fronting the existing High Street. It should be noted, the development proposals currently show residential development across the site, however the proposals include an option with part Office use. Should part of the site include Office floorspace, there is flexibility sought to include a multi-storey car park. The development description is set out below:

Outline application (with all matters reserved) for the phased demolition of all buildings and the phased redevelopment of the site to provide a mixed-use scheme comprising residential; flexible commercial floor space (Use Class E); car and cycle parking; site wide landscaping and associated servicing and highways works.

The proposals, including the possible office use in Development Zone 4, are shown in Table 1.

Table 1: Slough Central Updated Development Quantum (subject to alterations)

Land Use	2020 Proposals	2021 Revised Proposals
	GIA (sqm)	GIA (sqm)
Residential Uses	1,054 units	Up to 2,500 units
Retail / Food and Beverage Uses	13,488 sqm	Up to 15,000 sqm
Workspace Uses	208,211 sqm	0 to 50,000 sqm*

Other**	3,464 sqm (D2 Culture use)	4,750 sqm (Sui Generis use)

**Subject to the emerging proposals and ongoing discussions, the Slough Central proposals will include a degree of flexibility including a variable option which results in one of the residential focussed development blocks switching to Office use (class E(g)(i) along with the inclusion of a multi-storey car park.*

*** It is anticipated that the outline planning application will seek permission for a number of sui generis uses. Consideration is being given to the flexibility to include a small cinema (up to 1,500 sqm) or a live music venue (up to 1,500 sqm), however it is also possible that neither would be provided. In addition, the EIA will consider the potential provision of pub / wine bar / hot food take-aways (up to 3,250 sqm). Therefore, it is anticipated that a combined maximum of up to 4,750 sqm for these Sui Generis uses, assuming either a cinema or live music venue were provided in addition to the maximum amount of pub / wine bar / hot food takeaway floor space will be sought for.*

PLANNING POLICY AND GUIDANCE

As previously, the TA will include details of relevant transport related policies at a national, regional and local level.

EXISTING TRANSPORT CONDITIONS

As before, The TA will provide a review of the existing transport network, including public transport accessibility and active travel routes.

SLOUGH CENTRAL PROPOSALS

Development Proposals

The development proposals include residential units which will be provided across the site. The proposals include some retail and commercial use at ground floor in some of the buildings, including those fronting the existing High Street.

It should be noted, the development proposals currently show residential in all nine Development Zones, however, subject to emerging discussion there may be an option to include office use a multi-storey car park, as outlined above.

Access

The development proposals would retain the use of the existing two site accesses along the north edge of the site; both of which are on the A4 Wellington Street, one via the HTC roundabout and second the left-in, left-out junction with Queensmere Road.

The proposals would require Queensmere Road to become a two-way road along the east-west section only, which is currently one-way eastbound only.

The proposals also include a new vehicle access for the site at the junction with the High Street and Church Street in the southwest corner of the site. The proposed junction would be a priority junction and exit only.

Figure 1 shows the proposed street layout for the Slough Central development.

wsp

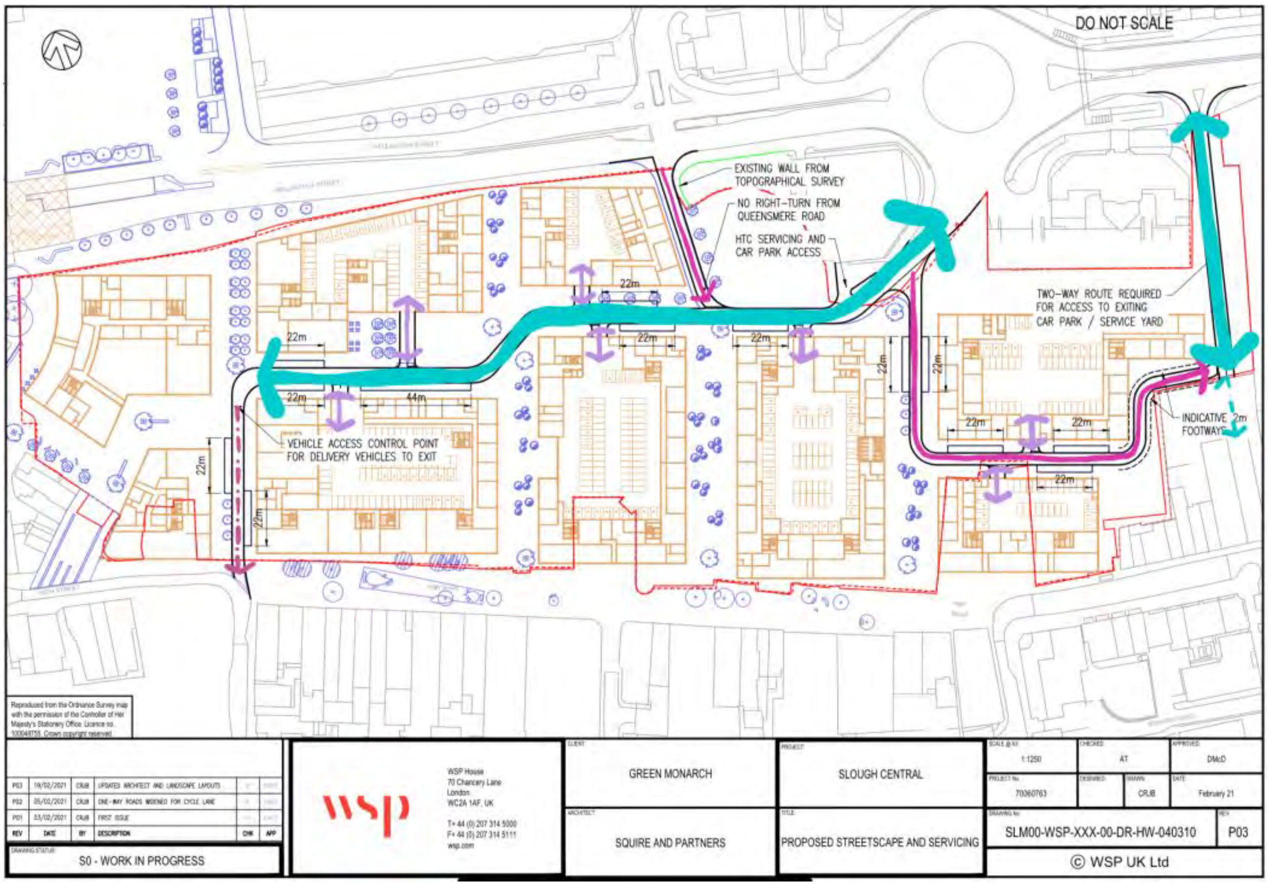

Figure 1: Slough Central Proposed Street Layout (layout and red line indicative and subject to change)

Street Layout

The development proposals include a new east-west route through the centre of the site which would run from the HTC roundabout to the east, following the Queensmere Road alignment, and extend through the site to adjoin the High Street / Church Street in the southwest corner of the site. The east-west route would be two-way along the majority of the route, however, in order to limit the impacts to the High Street area, the route would be one-way exit only at the proposed junction with High Street and Church Street.

The Queensmere Road section of the street which runs through the site, between the A4 Wellington Street left in, left out junction and the HTC roundabout, is currently one-way eastbound. The proposals seek to investigate the potential to make part of this section of Queensmere Road, the section aligned east-west, two-way.

The existing left-in, left-out junction on the A4 Wellington Street, next to the Verona Apartments would be retained. A two-way route would extend along the east edge of the site between the A4 Wellington Street to the north and the existing car park / servicing yard to the south, which sits adjacent to the site, outside the site boundary, therefore preserving the vehicle access.

The two-way roads will provide 6m wide carriageway widths, and the one-way roads will provide 4.7m wide carriageways.

A comprehensive site-wide network of pedestrian / cycle routes will be directly linked to the off-site networks, maximising the opportunity for residents to access neighbouring employment, retail and public transport facilities by non-motorised modes.

SBC PLANNING
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Car Parking

Residential car parking will be provided at a ratio of approximately 0.3 parking spaces per unit.

At the time of writing, there are no published SBC guidelines on Electric Vehicle (EV) charging provision. Therefore, the proposed EV provision will match that of other sites within Slough that the Borough have resolved to grant planning permission to. For the avoidance of doubt, this is 10% of the total parking quantum will be active and 10% will be passive provision.

Cycle Parking

Cycle parking will be provided in line with the Developers Guide Part 3 (2008) and SBC Local Transport Plan 3 Supplementary Strategy Document: Parking Strategy (2016).

The long-stay cycle parking for residential will be one cycle space per unit. The long-stay residential cycle parking will be provided at ground floor level within each of the Development Zones.

The short-stay cycle parking for residential will be one space per 40 units and will be provided externally as close to building entrances as possible.

Adequate long-stay and short-stay cycle parking for other proposed uses will also be provided.

Delivery and Servicing

The strategy is for each Development Zone on-site to be serviced individually by way of on-street dedicated loading areas.

Delivery and servicing vehicles accessing the Slough Central development would enter the site via either the HTC roundabout or the left-in junction on the A4 Wellington Street. To avoid the need for delivery and servicing vehicles to turn on-site, loading bays would be provided along the servicing vehicle routes, and service vehicles would exit via the proposed junction with High Street and Church Street.

The on-street loading bays would be approximately 3m in width and would sit on the edge of the carriageways. The loading bays would be at the same level as the adjacent footways and the surface treatment would be demarcated from the carriageway, with the aim for the loading bays to be used by pedestrians when not occupied. A minimum width of 2m for pedestrians would be retained between the back edge of the loading bays and the building / landscaping to retain a clear route for pedestrians when the loading bays are not in use.

Figure 1 shows the proposed street layout including the indicative location of the loading bays.

TRIP GENERATION

Existing Retail

The Queensmere and Observatory shopping malls have been under-trading for some time, with shoppers within the retail catchment preferring to visit other malls elsewhere. Therefore, the proposed method of assessment for the baseline scenario, as presented in the TASN (reference, April 2020) was that, in planning terms, there is little to prevent the owners of the Queensmere and Observatory shopping centres from substantially improving the retail offer of both buildings and increasing retail draw. For this reason, trip rates of other retail malls in the UK that trade closer to their optimum were applied to the existing retail floor area to establish a baseline trip generation instead of carrying out surveys of the Queensmere and Observatory site, as the latter would have underestimated the baseline trip generation of the retail uses currently present on the Site.

The principle of this assessment technique has been accepted by SBC, however further clarification was requested on the validity of the data sources used to determine the daily to peak hour trip profile. WSP TN8 (01/07/2020) and TN9 (21/07/2020) provided additional evidence from two alternative retail sites which demonstrated comparable retail profiles (i.e. what proportion of the daily trips occur in each hour of the day). The analysis highlighted the data provided within the previously submitted TASN material was sound but SBC requested further information from other sites across the UK to substantiate the evidence provided by WSP. Unfortunately, there are commercial sensitivities surrounding shopping mall l departure and arrival profiles, meaning that the availability of this data is acutely limited. Despite WSP providing as much information that is publicly available, SBC were not able to agree the peak hour trip generation for the baseline assessment.

WSP and the Applicant remain of the opinion that the trip rate methodology, as presented in the previously submitted TASN material, is appropriate. However, it is clear that if a mutually agreed Transport Assessment is to be submitted as part of the Planning Application, then this issue needs to be resolved.

As such, analysis has been undertaken of the car-based trip generation of the Queensmere and Observatory (from surveys undertaken in 2017) and compared with the previously estimated trip generation as summarised in the TASN. Assuming that mode share proportions of shopping malls in the UK are broadly similar, we are able to use the observed traffic generation of the site as a proxy to factor the overall trip generation (as presented in the previously submitted TASN) to match, therefore reflecting the lower-than-typical trading levels of the malls with a small uplift to allow for a slight increase in retail draw.

On that basis, WSP proposes to factor the baseline person retail trip as presented in the TASN by 0.41 to reflect the current underutilisation of the existing malls. This reduction factor has been derived by comparing existing site traffic count data to the vehicular trip generation derived in Table 6-5 of the original Transport Assessment Scoping Note (TASN) (April 2020).

The resulting retail total person trip generation is outlined below.

Table 2: Existing Retail Trip Generation

Total Person	AM Peak			PM Peak		
	In	Out	Total	In	Out	Total
Optimum Retail (as per previous TASN)	796	82	878	2959	3118	6077
Resultant Trip Gen, with Reduction Applied	326	33	360	1213	1278	2492

As previously agreed in Origin TN 1B dated 26/06/2020, retail modal split will be derived from the SMMM17.

Existing Office

As previously agreed in Origin TN 1B dated 26/06/2020 and presented in Table 6-7 of the original TASN (April 2020) with SMMM17 office modal split applied.

Existing Residential

As previously agreed with SBC

Existing Cinema

As previously agreed with SBC.

Proposed Residential

As previously agreed with SBC.

Servicing Trip Generation

As previously agreed with SBC

EFFECT OF THE DEVELOPMENT

Proposed Model Runs

As set out in section 7 of the original TASN (April 2020) the SMMM17 will be used to assess the effect of the development.

In addition to the 2017 validated base model, the following model runs are proposed for the morning and evening peak hours only:

- 2036 do minimum
- 2036 do minimum + proposed development

The following sensitivity tests are also requested:

- 2036 do minimum + SBC transport vision (including SBC mitigation)
- 2036 do minimum + SBC transport vision (including SBC mitigation) + proposed development

Public Transport Impact

The SMMM17 will include analysis of public transport impact. The Transport Assessment will report on this.

MANAGEMENT MEASURE

Travel Plan

As previously set out in the original TASN (April 2020), an outline Travel Plan will be submitted as part of the planning application.

Delivery and Servicing Plan

As previously set out in the original TASN (April 2020), an outline Delivery and Servicing Plan will be submitted as part of the planning application.

CONCLUSION

The planning application will be outline with all matters reserved, for the phased demolition of all buildings and the phased redevelopment of the site to provide a mixed-use scheme comprising residential; flexible commercial floor space (Use Class E); Sui Generis; car and cycle parking; site wide landscaping and associated servicing and highways works.

The development proposals would retain the use of the existing two site accesses on the A4 Wellington Street, via the HTC roundabout and the left-in junction with Queensmere Road. The proposals also include a new vehicle access for the site at the junction with the High Street and Church Street. The proposed junction would be a priority junction and exit only.

Residential car parking will be provided a at a ratio of approximately 0.3 parking spaces per unit.

Cycle parking will be provided in line with the Developers Guide Part 3 (2008) and SBC Local Transport Plan 3 Supplementary Strategy Document: Parking Strategy (2016).

The proposed approach seeks to be self-sufficient with regard to car parking.

With regard to trip generation:

- Existing Retail – Trip rates as previously presented within the original WSP TASN (April 2020) with a reduction factor applied to satisfy SBC's concerns regarding peak hour trip generation.
- Existing Office, Residential and Cinema - As previously agreed by SBC
- Proposed Residential – As previously agreed by SBC.
- Proposed Office – As per agreed methodology.
- Servicing Trip Rates - Trip rates as previously presented within the original WSP TASN (April 2020).

Effect of the Development

It is intended to retain the approach set out within the original TASN (April 2020) and therefore the SMMM17 will used to assess the effect of the development.

An Outline Travel plan and Delivery and Servicing Plan will be submitted as part of the application.

Slough Central Transport Assessment Scoping Addendum

DATE:	10 March 2021	**CONFIDENTIALITY:**	Public
SUBJECT:	Transport Assessment Scoping Addendum		
PROJECT:	Slough Central	**AUTHOR:**	LS
CHECKED:	AT	**APPROVED:**	DMcD

INTRODUCTION

This Addendum to the Transport Assessment Scoping Note (TASN) (April 2020) has been prepared by WSP, on behalf of the applicant for Slough Central, to provide an update on the proposals for the Slough Central development.

WSP prepared and issued a TASN to SBC in April 2020, which formed the basis of a comprehensive four-month scoping exercise with SBC highways officers. The scheme presented in the TASN was different in scale and mix to that which is proposed now, but the principles of regenerating the existing site remain the same.

The Scoping Note Addendum will provide an update on the revised development proposals and will set out previously agreed principles associated with the scope of the Transport Assessment and methodologies that remain valid, and update approaches where necessary.

The document will follow the same format as the initial Transport Assessment Scoping Note (TASN) submitted in April 2020.

OVERVIEW OF PROPOSALS

Outline planning permission will be sought for a phased Development with all matters reserved for up to 450,000 sqm of Development across a series of Development Zones. The Development Zones would each have a maximum height and footprint to identify areas where buildings and other infrastructure would be located.

The following sets out how the proposed land uses are anticipated to make up the total quantum of Development sought for by the outline planning application:

<u>Residential Use (Use Class C3 with the potential for a small quantum of C2)</u>

Provision of up to 2,500 units.

Note that the outline planning application will seek flexibility of uses over two Development Zones for two alternative land use options either of which could be brought forward at the Reserved Matters Application stage in the relevant Development Zone (these are described as the Flexible Development Zones). For one of the Flexible Development Zones, flexibility would be sought between either residential uses or office use, for the second Flexible Development Zone, flexibility would be sought between residential use or a multi-storey car park (MSCP), or a combination of residential use and MSCP. The maximum number of residential units that would be proposed on Site is 2,500 units.

Office Use (Use Class E)

0 sqm (where the Flexible Development Zone is residential) or up to 50,000 sqm (where the Flexible Development Zone is office use). This range is on the basis that the application will seek flexibility between either residential use or office use on one Flexible Development Zone.

Retail, food and beverage (Use Class E) and Community (Use Class F)

Up to 15,000 sqm.

It should be noted that any community uses proposed in Use Class F would not include either F1(a) provision of education or F2(d) indoor or outdoor swimming pool or skating rink.

Sui Generis

Up to 4,750 sqm

It is anticipated that the outline planning application will seek permission for a number of sui generis uses. Consideration is being given to the flexibility to include a small cinema (up to 1,500 sqm) or a live music venue (up to 1,500 sqm), however it is also possible that neither would be provided. In addition, the EIA will consider the potential provision of pub / wine bar / hot food take-aways (up to 3,250 sqm). Therefore, it is anticipated that a combined maximum of up to 4,750 sqm for these Sui Generis uses, assuming either a cinema or live music venue were provided in addition to the maximum amount of pub / wine bar / hot food takeaway floorspace will be sought.

Associated car parking

A proportion of affordable housing will be provided by the Development. It is envisaged that retail, food and beverage uses would primarily occupy ground floor levels, with residential in the main above, or office above within the Flexible Development Zone as noted previously. The cinema or live music venue, if provided, would be located in one Development Zone, albeit the specific development zone is not being fixed at this stage, however the potential provision of pub / wine bar / hot food take-aways could be spread across the Development Zones. The outline planning application will also include details of associated infrastructure, road adaptations to highways junctions on Wellington Street, and pedestrian, cycle and vehicle routes, parking, drainage, public realm, landscaping and earthworks.

PLANNING POLICY AND GUIDANCE

As previously, the TA will include details of relevant transport related policies at a national, regional and local level.

EXISTING TRANSPORT CONDITIONS

As before, The TA will provide a review of the existing transport network, including public transport accessibility and active travel routes.

SLOUGH CENTRAL PROPOSALS

Development Proposals

The development proposals include residential units which will be provided across the site. The proposals include some retail and commercial use at ground floor in some of the buildings, including those fronting the existing High Street.

It should be noted, the development proposals currently show residential in all nine Development Zones, however, the outline application includes options for office use and a multi-storey car park, as outlined above.

Access

The development proposals would retain the use of the existing two site accesses along the north edge of the site; both of which are on the A4 Wellington Street, one via the HTC roundabout and second the left-in, left-out junction with Queensmere Road.

The proposals would require Queensmere Road to become a two-way road along the east-west section only, which is currently one-way eastbound only.

The proposals also include a new vehicle access for the site at the junction with the High Street and Church Street in the southwest corner of the site. The proposed junction would be a priority junction and exit only.

Figure 1 shows the proposed street layout for the Slough Central development.

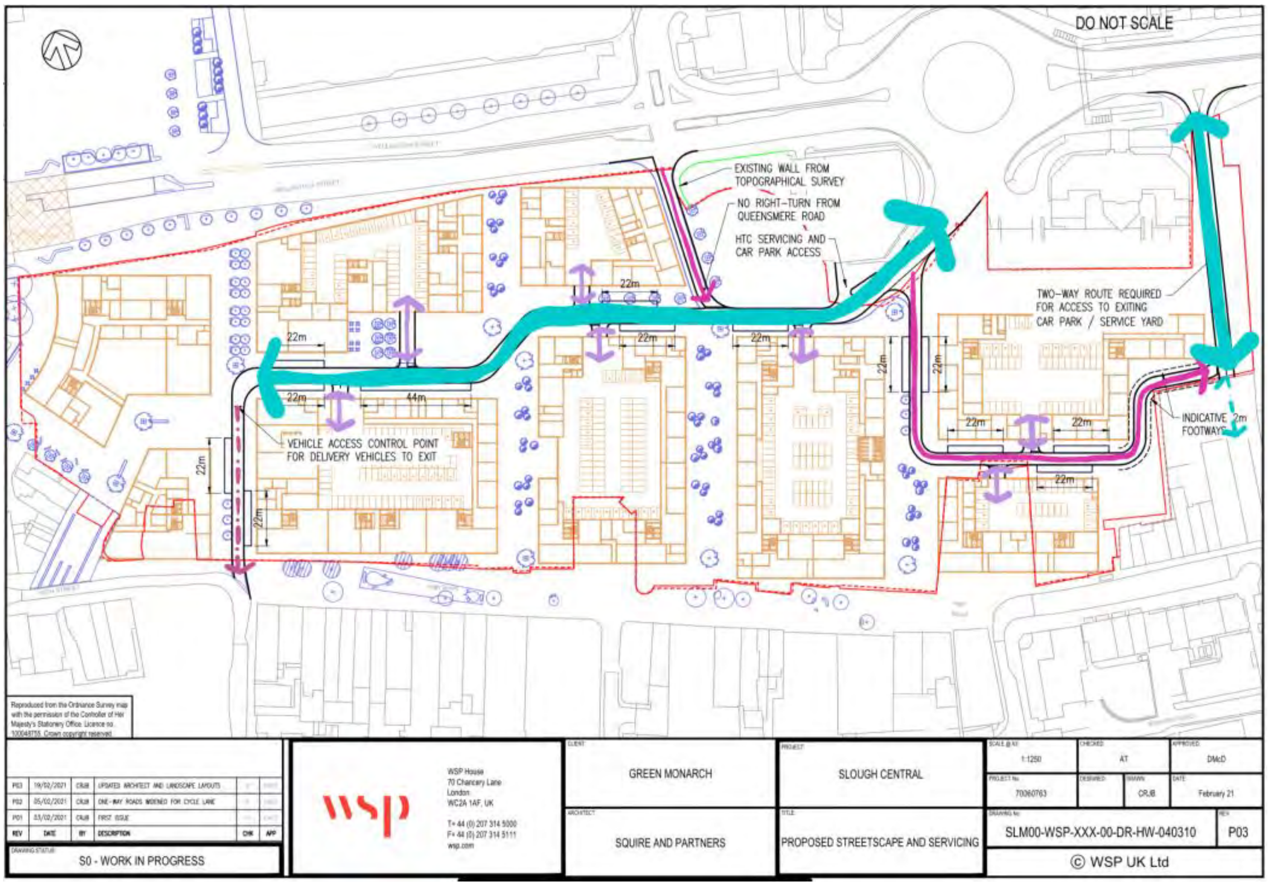

Figure 1: Slough Central Proposed Street Layout (layout and red line indicative and subject to change)

Street Layout

The development proposals include a new east-west route through the centre of the site which would run from the HTC roundabout to the east, following the Queensmere Road alignment, and extend through the site to adjoin the High Street / Church Street in the southwest corner of the site. The east-west route would be two-way along the majority of the route, however, in order to limit the impacts to the High Street area, the route would be one-way exit only at the proposed junction with High Street and Church Street.

The Queensmere Road section of the street which runs through the site, between the A4 Wellington Street left in, left out junction and the HTC roundabout, is currently one-way eastbound. The proposals seek to investigate the potential to make part of this section of Queensmere Road, the section aligned east-west, two-way.

The existing left-in, left-out junction on the A4 Wellington Street, next to the Verona Apartments would be retained. A two-way route would extend along the east edge of the site between the A4 Wellington Street to the north and the existing car park / servicing yard to the south, which sits adjacent to the site, outside the site boundary, therefore preserving the vehicle access.

The two-way roads will provide 6m wide carriageway widths, and the one-way roads will provide 4.7m wide carriageways.

A comprehensive site-wide network of pedestrian / cycle routes will be directly linked to the off-site networks, maximising the opportunity for residents to access neighbouring employment, retail and public transport facilities by non-motorised modes.

Car Parking

Residential car parking will be provided at a ratio of approximately 0.3 parking spaces per unit.

At the time of writing, there are no published SBC guidelines on Electric Vehicle (EV) charging provision. Therefore, the proposed EV provision will match that of other sites within Slough that the Borough have resolved to grant planning permission to. For the avoidance of doubt, this is 10% of the total parking quantum will be active and 10% will be passive provision.

Cycle Parking

Cycle parking will be provided in line with the Developers Guide Part 3 (2008) and SBC Local Transport Plan 3 Supplementary Strategy Document: Parking Strategy (2016).

The long-stay cycle parking for residential will be one cycle space per unit. The long-stay residential cycle parking will be provided at ground floor level within each of the Development Zones.

The short-stay cycle parking for residential will be one space per 40 units and will be provided externally as close to building entrances as possible.

Adequate long-stay and short-stay cycle parking for other proposed uses will also be provided.

Delivery and Servicing

The strategy is for each Development Zone on-site to be serviced individually by way of on-street dedicated loading areas.

Delivery and servicing vehicles accessing the Slough Central development would enter the site via either the HTC roundabout or the left-in junction on the A4 Wellington Street. To avoid the need for delivery and servicing vehicles to turn on-site, loading bays would be provided along the servicing vehicle routes, and service vehicles would exit via the proposed junction with High Street and Church Street.

The on-street loading bays would be approximately 3m in width and would sit on the edge of the carriageways. The loading bays would be at the same level as the adjacent footways and the surface treatment would be demarcated from the carriageway, with the aim for the loading bays to be used by pedestrians when not occupied. A minimum width of 2m for pedestrians would be retained between the back edge of the loading bays and the building / landscaping to retain a clear route for pedestrians when the loading bays are not in use.

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Figure 1 shows the proposed street layout including the indicative location of the loading bays.

TRIP GENERATION

Existing Retail

The Queensmere and Observatory shopping malls have been under-trading for some time, with shoppers within the retail catchment preferring to visit other malls elsewhere. Therefore, the proposed method of assessment for the baseline scenario, as presented in the TASN (reference, April 2020) was that, in planning terms, there is little to prevent the owners of the Queensmere and Observatory shopping centres from substantially improving the retail offer of both buildings and increasing retail draw. For this reason, trip rates of other retail malls in the UK that trade closer to their optimum were applied to the existing retail floor area to establish a baseline trip generation instead of carrying out surveys of the Queensmere and Observatory site, as the latter would have underestimated the baseline trip generation of the retail uses currently present on the Site.

The principle of this assessment technique has been accepted by SBC, however further clarification was requested on the validity of the data sources used to determine the daily to peak hour trip profile. WSP TN8 (01/07/2020) and TN9 (21/07/2020) provided additional evidence from two alternative retail sites which demonstrated comparable retail profiles (i.e. what proportion of the daily trips occur in each hour of the day). The analysis highlighted the data provided within the previously submitted TASN material was sound but SBC requested further information from other sites across the UK to substantiate the evidence provided by WSP. Unfortunately, there are commercial sensitivities surrounding shopping mall I departure and arrival profiles, meaning that the availability of this data is acutely limited. Despite WSP providing as much information that is publicly available, SBC were not able to agree the peak hour trip generation for the baseline assessment.

WSP and the Applicant remain of the opinion that the trip rate methodology, as presented in the previously submitted TASN material, is appropriate. However, it is clear that if a mutually agreed Transport Assessment is to be submitted as part of the Planning Application, then this issue needs to be resolved.

As such, analysis has been undertaken of the car-based trip generation of the Queensmere and Observatory (from surveys undertaken in 2017) and compared with the previously estimated trip generation as summarised in the TASN. Assuming that mode share proportions of shopping malls in the UK are broadly similar, we are able to use the observed traffic generation of the site as a proxy to factor the overall trip generation (as presented in the previously submitted TASN) to match, therefore reflecting the lower-than-typical trading levels of the malls with a small uplift to allow for a slight increase in retail draw.

On that basis, WSP proposes to factor the baseline person retail trip as presented in the TASN by 0.41 to reflect the current underutilisation of the existing malls. This reduction factor has been derived by comparing existing site traffic count data to the vehicular trip generation derived in Table 6-5 of the original Transport Assessment Scoping Note (TASN) (April 2020).

The resulting retail total person trip generation is outlined below.

Table 1: Existing Retail Trip Generation

Total Person	AM Peak			PM Peak		
	In	Out	Total	In	Out	Total
Optimum Retail (as per previous TASN)	796	82	878	2959	3118	6077
Resultant Trip Gen, with Reduction Applied	326	33	360	1213	1278	2492

As previously agreed in Origin TN 1B dated 26/06/2020, retail modal split will be derived from the SMMM17.

Existing Office

As previously agreed in Origin TN 1B dated 26/06/2020 and presented in Table 6-7 of the original TASN (April 2020) with SMMM17 office modal split applied.

Existing Residential

As previously agreed with SBC

Existing Cinema

As previously agreed with SBC.

Proposed Residential

As previously agreed with SBC.

Proposed Office

As previously agreed with SBC.

Proposed Retail

Methodology for calculation as previously proposed, albeit with revised trip rates as detailed in this addendum.

Proposed Sui Generis

Given the flexibility surrounding the sui generis land use category, we propose to use the same trip rates as the Proposed Retail use. This will enable a robust assessment of trips generated.

Servicing Trip Generation

Methodology as previously agreed with SBC

EFFECT OF THE DEVELOPMENT

Proposed Model Runs

As set out in section 7 of the original TASN (April 2020) the SMMM17 will be used to assess the effect of the development.

In addition to the 2017 validated base model, the following model runs are proposed for the morning and evening peak hours only:

- 2036 do minimum
- 2036 do minimum + proposed development

The following sensitivity tests are also requested:

- 2036 do minimum + SBC transport vision (including SBC mitigation)
- 2036 do minimum + SBC transport vision (including SBC mitigation) + proposed development

Public Transport Impact

The SMMM17 will include analysis of public transport impact. The Transport Assessment will report on this.

MANAGEMENT MEASURE

Travel Plan

As previously set out in the original TASN (April 2020), an outline Travel Plan will be submitted as part of the planning application.

Delivery and Servicing Plan

As previously set out in the original TASN (April 2020), an outline Delivery and Servicing Plan will be submitted as part of the planning application.

CONCLUSION

The planning application will be outline with all matters reserved, for the phased demolition of all buildings and the phased redevelopment of the site to provide a mixed-use scheme comprising residential; flexible commercial floor space (Use Class E); Sui Generis; car and cycle parking; site wide landscaping and associated servicing and highways works.

The development proposals would retain the use of the existing two site accesses on the A4 Wellington Street, via the HTC roundabout and the left-in junction with Queensmere Road. The proposals also include a new vehicle access for the site at the junction with the High Street and Church Street. The proposed junction would be a priority junction and exit only.

Residential car parking will be provided a at a ratio of approximately 0.3 parking spaces per unit.

Cycle parking will be provided in line with the Developers Guide Part 3 (2008) and SBC Local Transport Plan 3 Supplementary Strategy Document: Parking Strategy (2016).

The proposed approach seeks to be self-sufficient with regard to car parking.

With regard to trip generation:

- Existing Retail – Trip rates as previously presented within the original WSP TASN (April 2020) with a reduction factor applied to satisfy SBC's concerns regarding peak hour trip generation.
- Existing Office, Residential and Cinema - As previously agreed by SBC
- Proposed Residential – As previously agreed by SBC.

- Proposed Retail – Methodology for calculation as previously proposed, albeit with revised trip rates as detailed in this addendum
- Proposed Office – As per agreed methodology.
- Proposed sui generis – adopt same trip rates as proposed retail uses in order to provide a robust assessment of trips.
- Servicing Trip Rates - Trip rates as previously presented within the original WSP TASN (April 2020).

Effect of the Development

It is intended to retain the approach set out within the original TASN (April 2020) and therefore the SMMM17 will used to assess the effect of the development.

An Outline Travel plan and Delivery and Servicing Plan will be submitted as part of the application.

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Basic Info

	Property	Status	Quantum (ft^2)
		TEN2	LSE8
1	OBSERVATORY	Occupied	2,887 ft^2
2	OBSERVATORY	Occupied	961 ft^2
3	OBSERVATORY	Occupied	914 ft^2
4	OBSERVATORY	Occupied	362 ft^2
5	OBSERVATORY	Vacant	26,964 ft^2
6	OBSERVATORY	Occupied	939 ft^2
7	OBSERVATORY	Vacant	884 ft^2
8	OBSERVATORY	Vacant	153 ft^2
9	OBSERVATORY	Occupied	32,439 ft^2
10	OBSERVATORY	Occupied	838 ft^2
11	OBSERVATORY	Occupied	587 ft^2
12	OBSERVATORY	Occupied	335 ft^2
13	OBSERVATORY	Occupied	5,708 ft^2
14	OBSERVATORY	Occupied	1,779 ft^2
15	OBSERVATORY	Vacant	2,452 ft^2
16	OBSERVATORY	Vacant	2,844 ft^2
17	OBSERVATORY	Occupied	2,473 ft^2
18	OBSERVATORY	Occupied	2,794 ft^2
19	OBSERVATORY	Vacant	2,049 ft^2
20	OBSERVATORY	Occupied	2,941 ft^2
21	OBSERVATORY	Occupied	2,115 ft^2
22	OBSERVATORY	Occupied	9,536 ft^2
23	OBSERVATORY	Occupied	4,300 ft^2
24	OBSERVATORY	Occupied	2,117 ft^2
25	OBSERVATORY	Occupied	2,057 ft^2
26	OBSERVATORY	Occupied	1,426 ft^2
27	OBSERVATORY	Occupied	22,286 ft^2
28	OBSERVATORY	Occupied	2,983 ft^2
29	OBSERVATORY	Vacant	1,071 ft^2
30	OBSERVATORY	Occupied	1,858 ft^2
31	OBSERVATORY	Occupied	2,050 ft^2
32	OBSERVATORY	Occupied	4,009 ft^2
33	OBSERVATORY	Occupied	2,663 ft^2
34	OBSERVATORY	Occupied	7,588 ft^2
35	OBSERVATORY	Occupied	1,503 ft^2
36	OBSERVATORY	Vacant	869 ft^2
37	OBSERVATORY	Occupied	2,391 ft^2
38	OBSERVATORY	Occupied	835 ft^2
39	OBSERVATORY	Occupied	4,148 ft^2
40	OBSERVATORY	Occupied	17,144 ft^2
41	OBSERVATORY	Occupied	3,023 ft^2
42	OBSERVATORY	Occupied	1,260 ft^2
43	OBSERVATORY	Occupied	1 ft^2
44	QUEENSMERE	Occupied	1,177 ft^2
45	QUEENSMERE	Occupied	1,688 ft^2

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	46	QUEENSMERE	Vacant	1,810 ft²
	47	QUEENSMERE	Vacant	1,627 ft²
	48	QUEENSMERE	Occupied	2,827 ft²
	49	QUEENSMERE	Vacant	4,122 ft²
	50	QUEENSMERE	Occupied	4,855 ft²
	51	QUEENSMERE	Occupied	12,098 ft²
	52	QUEENSMERE	Occupied	887 ft²

Total	Occupied	Vacant	% Vacant
655,460 ft²	511,824 ft²	143,636 ft²	22%

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Slough Borough Council

SLOUGH CENTRAL, SLOUGH

Technical Note 1: Review of Transport Assessment Scoping Note produced by WSP, dated April 2020[V2]

June 2020

Location: **Slough Central**
Project: **Mixed Use Development**
Report Title: **Technical Note 1: Review of Transport Assessment Scoping Note[V2]**
Client: **Slough Borough Council**

PROJECT DETAILS	
SITE	Slough Central
PROJECT	Redevelopment of the Queensmere and Observatory Shopping Centres, Slough
REPORT TITLE	Technical Note 1: Review of Transport Assessment Scoping Note, April 2020
CLIENT	Slough Borough Council

	Name	Position	Date
Prepared By	Hilary Lofmark	Associate	12/05/2020
Checked By	Tim Thurley	Senior Associate	20/05/2020
Authorised By	Del Tester	Managing Director	22/05/2020

Status	Revision	Description	Date
Draft	V1	Draft to Client	22/05/2020
Final	V2	Update report following comments from Client	02/06/2020

CONTENTS

1 INTRODUCTION

1.1 Origin Transport Consultants Ltd (Origin) has been commissioned by Slough Borough Council to review the Transport Assessment Scoping Note produced by WSP in April 2020 in support of the redevelopment of the Queensmere and Observatory Shopping Centres in Slough town centre.

1.2 The site currently comprises retail, restaurant, cinema, office and residential units and is located just south of Slough railway station. It is proposed to redevelop the site to provide a predominantly residential and office development, with a reduced quantity of retail units. **Table 1** sets out the change in floor area between the existing and proposed uses and shows that the proposed development comprises more than three times the floor area of the existing facility.

	Existing GIA (sqm)	Proposed GIA (sqm)
Retail/Food & Beverage (A1-A5)	85, 947	13,488
Office (B1)	6,264	208,211
Residential (C3)	2,040 (28 units)	101,055 (1,054 units)
Cinema (D2)	7,338	-
Culture (D2)	-	3,464
Total	**101,589**	**326,218**

Table 1: Proposed Redevelopment

1.3 The Scoping Note includes a 'TA checklist', which has scoped out a number of items. Of these, it is considered that the capacity and condition of the pedestrian routes around the site and between the site and the bus and railway station should be considered within the Transport Assessment, particularly as the proposal suggests that there will be a considerable increase in the use of non car modes. In addition, information should be provided on the impact of the proposal during the construction phase.

2 TRANSPORT ASSESSMENT

Existing Transport Conditions

2.1 This section of the Scoping Note provides information on pedestrian accessibility, cycle accessibility and public transport accessibility, including by bus and rail.

2.2 In addition to the information provided in the Scoping Note, this section should include a review of the condition and capacity of pedestrian routes and crossings around the site and linking the site with bus stops, the bus and railway stations and other key local destinations. Details of the types of review to be carried out should be provided and agreed with SBC. The condition of local public transport hubs and in particular bus stops, should also be considered.

2.3 Further detail should also be provided on direct access to cycle routes from the site to key destinations.

Existing Access and Movement

2.4 This section provides information on the existing vehicular access points to the site, which are via the roundabout known locally as the HTC roundabout, a left in left out access to the Queensmere shopping centre carpark and a left in left out access next to the Verona Apartments. These access points are all located along the A4 Wellington Street. Confirmation that existing access for service vehicles is from the A4 is also provided.

2.5 This section also details existing on-site parking and also off-site parking provision within the town centre. Confirmation is also given that Personal Injury Accident data for the most recent 5 year period will be obtained and analysed in the TA.

2.6 Further information should be provided on parking availability in the area of the site, including current charging regimes. This should include any on street parking that may be used by visitors to the site and any available information on parking occupancies.

Slough Central Proposals

2.7 This section confirms the proposed eight development zones and includes information on the proposed floor areas of the different land uses; however, it is noted that these may be subject to further changes.

Access Strategy

2.8 It is stated that the proposals seek to provide maximum permeability for pedestrians through the proposed building block layout and orientation, creating connections through the site which will connect surrounding pedestrian routes.

2.9 The important need for pedestrians to cross the A4 Wellington Street in order to access the rail and bus stations via Brunel Way has been identified. Initial improvements include the realignment of the pedestrian crossing to the east of the junction with Brunel Way to provide a single stage at-grade crossing. It is also suggested that this will improve the desire line between the site and the station and will improve the attractiveness of the crossing. The feasibility and impact of this improvement will need to be fully detailed within the TA, along with an assessment of whether any further improvements that may be required.

2.10 It is proposed that the existing vehicular access arrangements are to be retained in order to serve the site, and will include a Boulevard route running east-west between the HTC roundabout and a proposed access on the High Street in order to provide a main route for vehicular access across the site.

2.11 This section should also set out the latest development proposals including details of parking and access by vehicles, pedestrians and cyclists.

2.12 It is proposed that long stay cycle parking will be provided at basement level. If this is the case then measures should be taken to ensure that the cycle parking is secure.

2.13 The proposed parking standards are set out in **Table 2** below and are compared with guidance issued by Slough Borough Council at a meeting on 10 March 2020, and data from Slough Parking Policy dated 2008. It is accepted that parking levels for the site may be subject to reductions when compared to standards due to the sustainable location of the site, however any deviation from the advice set out by Slough Borough Council should be justified, and the floor areas should be set out using consistent units so that the standards are comparable. Parking should also be provided in appropriate locations and details of how parking is to be managed throughout the site should also be provided.

	Proposed	SBC Highways Advice	Slough Parking Policy 2008
Culture	1 space per 40-50 NIA	-	-
Food and Beverage	1 space per 40-50 NIA	-	Nil
Office	1 space per 75-140 NIA	1 space per 100 sqm GFA	Max 1 space per 40 sqm
Residential	0.4-0.5 space per unit	0.3 spaces per unit	Nil
Retail	1 space per 40-50 NIA	-	Nil

Table 2: Parking Provision

2.14 It is proposed to provide 461 parking spaces for residential use, which reflects a ratio of 0.44 spaces per unit, higher than both the 2008 parking policy and more recent advice from Slough Borough Council Highways officers. There are 1,548 parking spaces proposed for the office uses, however it is difficult to determine what ratio this represents as the proposed floor areas have not been set out in GFA. Additional parking is proposed for the other land uses. As stated above, floor areas should be set out in consistent units, which should be GFA rather than GIA, GEA or NIA. A total of 2295 car parking spaces are proposed for the whole site. The site is located in an accessible town centre location and the TA should consider whether some elements of the proposals are suitable as car free development.

2.15 Information should be provided on the management of these spaces, whether they will be allocated to specific uses or shared, and how any charging regime would work and be monitored.

2.16 Electric charging points should be provided in accordance with the current standards.

2.17 Plans showing the access and servicing strategy should be provided, including AutoTRACK analyses to ensure all service vehicles, refuse vehicles and emergency vehicles can enter and exit the site in a forward gear.

Trip Generation

Existing Retail

2.18 Trip generation for the existing retail facility appears to have been derived from data from the Whitgift Centre in Croydon and Brent Cross Shopping Centre, with a daily trip profile derived from Westfield London. It is not clear whether this is recent data, therefore it needs to be confirmed when this data is from.

2.19 It is not considered that any of these sites are comparable to the shopping centres in Slough town centre. Both sites are considerably larger than the shopping centres in Slough, with Brent Cross being an out of town destination retail site, while the Whitgift Centre in Croydon is located within a large destination shopping area with many large and unique shops attracting visitors from a wide area. The shopping centres in Slough are likely to generate a higher proportion of local trips and secondary trips.

2.20 The daily trip profile for the existing site has been derived from the Westfield London site. It is not clear when this data was obtained. This shopping centre is clearly not comparable with the shopping centres in Slough, therefore if the trip profile is to be accepted, further evidence is required in order to justify its selection.

2.21 The Westfield London retail mode split has been applied to the data to derive a mode share for the existing facility. Whilst the shopping centres in Slough are in the town centre and close to the bus and rail stations it is not comparable, in terms of accessibility, with Westfield London, which has four underground stations within a few minutes walk as well as overground services, bus services and five Santander cycling sites around the centre. Mode share by vehicle at this location may be lower as a result of the site's proximity to London. An alternative method should be found for determining the likely mode share of travel to the existing site.

Existing Office

2.22 A TRICS® analysis has been undertaken to derive total person trip rates for the existing office use. Four sites have been included in the assessment, all within town centre locations. However, one of the sites is located in Greater London (Camden), which has a '6b (High) Excellent' PTAL rating. It is considered that this is not likely to be comparable with the application site, in terms of accessibility to public transport. A further assessment should therefore be carried out that does not include sites from Greater London. The mode share data is based on travel to work data from the 2011 Census and is appropriate. Full calculations should be provided.

Existing Residential

2.23 A TRICS® assessment has also been undertaken to derive a residential trip rate. Only five sites have been selected from the database, and those with fewer than 150 units have been excluded. As the site currently has 28 residential units, smaller residential developments could have been included in the analysis. It is also noted that three of the selected sites are in Greater London with 'Very Good' or better PTAL ratings. These sites are not likely to be comparable with the location of the application in terms of access to public transport. A further TRICS® assessment should be carried out that does not contain sites within Great London.

2.24 The mode share data is based on travel to work data from the 2011 Census and is considered to be appropriate, although full calculations should be provided within the Transport Assessment.

Existing Cinema

2.25 A TRICS® assessment has been undertaken to derive a trip rate for the existing cinema use. It is stated that the TRICS® output is included in Appendix A, however this appears to be missing. Very few sites are available in the TRICS® database and following our own review of the database, the resulting trip rates appear to be reasonable. The retail mode share has been applied to the cinema land use, while it is agreed that the mode share is likely to be similar to the retail land use, the retail mode share has been based on the mode share at Westfield retail park which is not considered to be comparable to the shopping centres in Slough.

Proposed Trip Generation

Proposed Office

2.26 Trip generation rates for proposed office use are the same as those applied to the existing office development and, as detailed above, the assessment of the existing office trip rates needs to be re-run without sites in Greater London being included.

2.27 The mode share for office use has been adjusted to reflect the car parking supply, as shown in **Table 3** below. It is not clear exactly how the adjusted mode share has been derived; therefore, full calculations should be included within the Transport Assessment. However, it is clear that the proposal requires significant changes to the existing mode share, with a 30% increase in rail use, an increase in bus use of 23% and a reduction in car use of 47%. The Transport Assessment should set out how such a large change in mode share can be achieved and should incorporate the impact of on street and off street parking supply in the area of the site.

Mode	Census Data Mode Share (%)	Adjusted Mode Share (%)
Train	8	38
Bus	6	29
Taxi	0	0
Motorcycle	1	1
Car/Van driver	67	20
Car/Van passenger	5	0
Bicycle	2	2
On Foot	10	10
Total	100	100

Table 3: Proposed Office Use Mode Share Adjustments

Proposed Residential

2.28 The trip rate applied to the proposed residential uses is the same as that derived for the existing residential uses and should therefore be re-assessed without sites in Greater London, as detailed previously. The mode share derived from National Census data has again been adjusted to reflect the parking provision. The changes are set out in **Table 4** below and show that the proposal assumes a 10% increase in use of the train, a 9% increase in bus use and a 12% reduction in car use. As with the office mode share, full calculations should be provided to set out how the mode share has been derived, along with information setting out how the changes in mode share can be achieved.

Mode	Census Data Mode Share (%)	Adjusted Mode Share (%)
Train	12	22
Bus	11	20
Taxi	1	1
Motorcycle	0	0
Car/Van driver	52	40
Car/Van passenger	6	0
Bicycle	3	3
On Foot	14	14
Total	100	100

Table 4: Proposed Residential Land Use Mode Share Adjustments

Proposed Retail / Food and Beverage

2.29 The trip generation rate for retail and food retail has been derived from the retail trip rate obtained for the existing land use. As detailed above, the existing retail trip rates need to be reviewed, therefore may not be appropriate for the proposed use. In addition, the retail trip rate may not be appropriate for the food and beverage land uses if they are likely to extend their opening hours into the evening. An alternative trip rate should be considered. The mode share is based on data from the Westfield retail development and, as detailed previously, is not appropriate for a site in Slough.

2.30 Trips generated by the proposed cultural land use have been derived using the D2 cinema land use. More information should be provided on the nature of the proposed land use before this can be agreed. If the applicant is seeking permission for an open D2 use for this section of the site, then trips associated with the most intensive use falling under this use class should be taken into account in order to ensure a robust assessment.

Servicing Trip Generation

2.31 Servicing and delivery trips to residential units have been forecast using survey data from Imperial Wharf in Fulham in 2014, and Bow Quarter in Tower Hamlets in 2015. It is noted that both these sites are in Greater London, therefore further evidence is required to demonstrate why these sites would be comparable with a site in Slough.

2.32 The level of servicing likely to be generated by the non-residential uses has been derived from a servicing and delivery database held by WSP. Further information should be provided to confirm that the sites available in the database are comparable with the land uses and location of the proposed development.

2.33 The net impact assessment contained within the Scoping Note will need to be re-visited once agreement on the tripe rates for the existing and proposed land uses has been reached.

ORIGIN

Effect of the Development

2.34 The development will be tested using Slough Borough Council's multi-modal model (SMMM17) for the forecast year of 2036. WSP will provide the trip generation from the proposal and Atkins will undertake the modelling.

2.35 It is proposed to run:

- 2017 Validated Base Model
- 2036 Do minimum with site operating as it is
- 2036 Do minimum with site operating at full capacity
- 2036 Do minimum with proposed development
- 2036 Do minimum with Slough Borough Council's transport vision
- 2036 Do minimum with Slough Borough Council's transport vision and proposed development.

2.36 The Scoping Note does not set out what junctions will be tested using the model data. It is likely that peak hour assessments will be required of at least the following junctions:

- HTC Roundabout
- Wellington St access junction adjacent to Verona Apartments
- Wellington St/Queensmere Road signal junction, with and without the proposed upgrade to the pedestrian crossing
- A412/Wellington St roundabout
- Wellington St/William St/Stoke Road
- High St/Windsor Road/William St
- High Street/Boulevard from site

2.37 Additional junction testing may be required dependant on the results of the modelling. It is suggested that the full scope of junctions to be modelled is agreed with the applicants on the basis of difference plots (if available) and impact sifting once initial model runs have been completed. This will allow the assessment to focus on those junctions where there is deemed to be a material impact based on the model outputs.

2.38 If the build out of the development is to be in phases then this should also be taken into account in the impact assessment in order to identify if, and at which point during the build, mitigation may be required.

Public Transport Impact

2.39 The public transport impact should include a review of the capacity of existing bus and rail services and ensure that the generated trips can be accommodated given the proposed significant change in mode share and change of use from a predominantly retail facility to a predominantly residential development. The scope of the public transport review will need to be agreed with SBC.

2.40 Consideration should also be given to whether such measures as a car hire club could offer some benefit for the site as some residents and office workers will be able to get to and from the site solely using sustainable modes during the week but may want the occasional use of a car for business meetings or long journeys at weekends.

Management Measures

2.41 The Travel Plan should be produced in consultation with Slough Borough Council and in accordance with Slough's Travel Plan Guidance and Checklist, while a Delivery and Servicing Plan and a Construction Management Plan should also be produced in agreement with Slough Borough Council.

3 SUMMARY

3.1 This Technical Note has set out Origin Transport Consultants' comments on the Transport Assessment Scoping Note produced by WSP in support of the redevelopment of two shopping centres in Slough town centre.

3.2 There are a number of elements, in particular in relation to the trip generation, parking provision and modal share that need to be reviewed before the Scoping Note can be agreed.

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Slough Borough Council

SLOUGH CENTRAL, SLOUGH

Technical Note 1A: Review of Transport Assessment Scoping Note produced by WSP, dated April 2020[V1]

10th June 2020

Location: **Slough Central**
Project: **Mixed Use Development**
Report Title: **Technical Note 1A: Review of Transport Assessment Scoping Note[V1]**
Client: **Slough Borough Council**

ORIGIN

PROJECT DETAILS	
SITE	Slough Central
PROJECT	Redevelopment of the Queensmere and Observatory Shopping Centres, Slough
REPORT TITLE	Technical Note 1A: Review of Transport Assessment Scoping Note, April 2020
CLIENT	Slough Borough Council

	Name	Position	Date
Prepared By	Hilary Lofmark	Associate	10/06/2020
Checked By	Tim Thurley	Senior Associate	11/06/2020
Authorised By	Del Tester	Managing Director	11/06/2020

Status	Revision	Description	Date
Draft	V1	Draft to Client	11/06/2020
Final	V1	Final Issue	12/06/2020

CONTENTS

1 INTRODUCTION

1.1 Origin Transport Consultants Ltd (Origin) has been commissioned by Slough Borough Council to review the Transport Assessment Scoping Note produced by WSP in April 2020 in support of the redevelopment of the Queensmere and Observatory Shopping Centres in Slough town centre. Origin's comments on the Scoping Note were provided in Technical Note 1, issued on 2nd June 2020. WSP have reviewed Origin's TN and on 4th June 2020 provided their response in a report titled Technical Note 5. Whilst many of the comments were agreed, some remain outstanding.

1.2 It should be noted that this TN 1A only covers the points that are still not agreed. The points that are no longer covered have been noted by WSP and will be dealt with in the Transport Assessment, as confirmed by the comments in WSP's Technical Note 5.

2 TRANSPORT ASSESSMENT

Access Strategy

2.1 WSP has stated that a parking provision of around 2,500 spaces has been discussed and agreed in principle with Slough Borough Council. Nevertheless, the level of parking provision within the site should be justified with reference to the relevant parking standards and taking account of the likely parking demand which will be affected by the number of shared and allocated spaces available within the car parks, the proposed parking regime and the availability of alternative parking nearby.

Trip Generation

Existing Retail

2.2 Trip generation for the existing retail facility has been derived from data for 2016 for the Whitgift Centre in Croydon and Brent Cross Shopping Centre, with a daily trip profile derived from Westfield London.

2.3 Origin remain of the opinion that these sites are not comparable to the potential of the existing sites within Slough. WSP argue that these sites are comparable in terms of development mix, parking offer and potential retail draw. Weekday TRICS® data is not available for retail sites. No weekend data has been provided for the London based shopping centres used by WSP to estimate their trip rates; however if a comparison was made between the weekend data for the chosen sites and the weekend data for the sites within TRICS®, that showed they were comparable, this may give more comfort to the use of the proposed weekday trip rates.

2.4 WSP state that “there is nothing (in Planning terms) to prevent refurbishment of the Queensmere and Observatory site within the parameters of the extant permissions to attract “large and unique” occupiers and draw trade from a wider catchment”. While this may be the case in theory, there is no evidence to support the idea that if the existing shopping centres were refurbished, without the need for further planning permission, they would have the same level of draw from a wider catchment as the chosen sites in the London area. It is also the case that we are not looking at a refurb scheme, this is an application for new development and it should therefore be assessed using appropriate and agreed trip rates.

2.5 Further information has since been provided for an additional four shopping centres in Uxbridge, Norwich, Nottingham and Derby, although no dates have been provided for the data and it is not clear how the trip rates were derived. Annual trip rates vary from 12.7 million trips per square foot of floor area in Derby to 22.1 million trips per square foot in Norwich, with the average being 17.61 million trips per square foot. The average trip rates for the Whitgift centre and Brent Cross is 15.3 million trips per square foot of floor area. WSP argue that if the higher trip rate for the four additional sites was used then the trip rate would overestimate the number of trips to the site and therefore the lower trip rate should be used. Whilst the use of a conservative trip rate for the potential existing uses would provide a robust result, as it is proposed to use the same trip rate for the proposed development, a conservative trip rate could potentially underestimate the trip generation associated with the future site.

2.6 It would seem questionable as to why a shopping centre in an area outside of London, such as Norwich, Nottingham or Derby would be any less comparable to a shopping centre in Slough than a shopping centre in London would be to a shopping centre in Slough. Further evidence to support WSP's argument in this respect should be provided. It would also be useful to see a comparison between the trip rates for the chosen sites and the trip rates for the retail uses that were included in the Slough Multi Modal Model, which may assist in the agreement of trip rates.

2.7 Origin does not accept that the mode share at The Westfield London is comparable with the shopping centres in Slough. As stated in our TN1, WSP applied the Westfield mode share to the total person trip rate for retail uses to derive a trip rate by mode. However, WSP's TN5 now states that this exercise was for illustrative purposes only and that the mode share will be derived from the Council's multi-model model (SMMM17).

Existing and Proposed Office Use

2.8 A TRICS® analysis has been undertaken to derive total person trip rates for the existing office use. Four sites have been included in the assessment, all within town centre locations. However, one of the sites is located in Greater London (Camden), which has a '6b (High) Excellent' PTAL rating. It is considered that this is not likely to be comparable with the application site, in terms of accessibility to public transport. WSP have stated that the TRICS® data has only been used in terms of total person trips and that the use of a central London site is appropriate.

2.9 **Table 1** below sets out a comparison of the trip rates proposed by WSP and the trip rates for a B1 Office use that was used in the development of the Slough Multi-Modal Model. It shows that the trip rate proposed by WSP is significantly lower than that derived from the other Transport Assessments in the local area. While the use of this trip rate may result in a robust assessment of the existing traffic generation potential of the site, it also has the potential to underestimate the traffic generation potential of the proposed development. Further analysis should therefore be undertaken in order to derive a trip rate that is appropriate for both the existing and proposed office use.

	AM Peak		PM Peak	
	IN	OUT	IN	OUT
WSP	1.29	0.09	0.06	1.2
SMMM	2.665	0.507	0.489	2.304

Table 1: B1 Office Trip Generation

2.10 Origin had expressed concern at the mode share calculations that had been used for the proposed office uses, however WSP has now confirmed that mode share data from the multi-modal model will be used instead.

Existing and Proposed Residential Uses

2.11 A TRICS® assessment has also been undertaken to derive a residential trip rate. Only five sites have been selected from the database, and those with fewer than 150 units have been excluded. As the site currently has 28 residential units, smaller residential developments could have been included in the analysis. It is also noted that three of the selected sites are in Greater London with 'Very Good' or better PTAL ratings. These sites are not likely to be comparable with the location of the application in terms of access to public transport. Origin previously advised that A further TRICS® assessment should be carried out that does not contain sites within Great London.

2.12 WSP argue that the accessibility of the site does not have a significant effect on the trip generation of a residential dwelling and therefore they do not consider that any further analysis is necessary. However Origin would argue that data for comparable locations should be used in the analysis. The trip generation data should also be compared with trip rates used for comparable sites in Slough to confirm that it is acceptable.

2.13 WSP has also now stated that future mode share for the residential use will be derived from the multi-modal model.

Existing Cinema

2.14 A TRICS® assessment has been undertaken to derive a trip rate for the existing cinema use. It was previously stated that the TRICS® output data was included in Appendix A of the Scoping Note, however this was missing. Very few sites are available in the TRICS® database and following our own review of the database, the resulting trip rates appear to be reasonable. However, we still request that the TRICS® data used to derive a trip rate for the existing use is provided for completeness.

2.15 Origin expressed concern with the use of the mode share from The Westfield London shopping centre, however, WSP has now stated that this will not be used and it will instead be decided by the multi-modal model.

Proposed Retail / Food and Beverage

2.16 The trip generation rate for retail and food retail has been derived from the retail trip rate obtained for the existing land use. Origin's view on the proposed trip rates has been detailed above. In addition, as stated in our previous TN, the retail trip rate may not be appropriate for the food and beverage land uses if they are likely to extend their opening hours into the evening. An alternative trip rate should be considered. The mode share data will now be based on the Slough Multi-Modal Model and not from the Westfield retail development as set out in the Scoping Note.

3 SUMMARY

3.1 This Technical Note has set out Origin Transport Consultants' comments on the Transport Assessment Scoping Note produced by WSP in support of the redevelopment of two shopping centres in Slough town centre.

3.2 There remain some elements, in particular in relation to the trip generation and parking provision that need to be reviewed before the Scoping Note can be agreed.

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Slough Borough Council

SLOUGH CENTRAL, SLOUGH

Technical Note 1C: Review of Transport Assessment Scoping Note produced by WSP, dated April 2020[V1]

20th July 2020

Location: Slough Central
Project: Mixed Use Development
Report Title: Technical Note 1C: Review of Transport Assessment Scoping Note V1
Client: Slough Borough Council

PROJECT DETAILS	
SITE	Slough Central
PROJECT	Redevelopment of the Queensmere and Observatory Shopping Centres, Slough
REPORT TITLE	Technical Note 1C: Review of Transport Assessment Scoping Note, April 2020
CLIENT	Slough Borough Council

	Name	Position	Date
Prepared By	Hilary Lofmark	Associate	15/07/2020
Checked By	Tim Thurley	Senior Associate	16/07/2020
Authorised By	Del Tester	Managing Director	16/07/2020

Status	Revision	Description	Date
Draft	V1	Draft to Client	16/07/2020
Final	V1	Client Issue	20/07/2020

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APPENDICES

SBC PLANNING
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1 INTRODUCTION

1.1 Origin Transport Consultants Ltd (Origin) has been commissioned by Slough Borough Council to review the Transport Assessment Scoping Note produced by WSP in April 2020 in support of the redevelopment of the Queensmere and Observatory Shopping Centres in Slough town centre. Origin's comments on the Scoping Note were provided in Technical Note 1, issued on 2nd June 2020, Technical Note 1A issued on 12th June 2020 and Technical Note 1B issued on 26th June 2020. WSP have reviewed Origin's TN1, TN1A and TN1B and provided their responses in their Technical Notes 5, 6 and 8. Whilst the majority of the comments were agreed, some remain outstanding.

1.2 It should be noted that this TN1C only covers the points that are still not agreed. The points that are no longer covered have been noted by WSP and will be dealt with in the Transport Assessment, as confirmed by the comments in WSP's Technical Notes 5, 6 and 8.

2 TRANSPORT ASSESSMENT

Daily Trip Profile

2.1 The daily profile in Figure 6-1 of the Scoping Note is said to be based on the operation of Westfield London and is based on a single site in isolation. Trip generation has been provided for Westfield in Appendix A of TN8. Inbound and outbound daily trips have been provided for a Thursday, Saturday and Sunday. No date has been provided.

2.2 Origin remains concerned about the continued use of a single site in isolation as the basis for trip distribution across the day, and therefore further daily profile information has been provided for Cribbs Causeway and Intu Lakeside, and this has been compared with data from Westfield.

2.3 Whilst a series of tables and a graph has been provided, it is not clear what the distribution for Westfield represents – it does not appear to reflect the inbound or outbound trips from the survey data and it is not clear how the data has been calculated. Similarly, it is not clear what the hourly profile data for the Cribbs Causeway and Intu Lakeside sites represents. It is not possible to agree the hourly profiles without further information to clarify the data that has been provided.

2.4 In order for us to gain a better understanding of the information provided, we have carried out our own TRICS® analysis of a mixed shopping mall in Eastbourne, where the data has been obtained from a survey on a weekday in 2001. A comparison of the resulting person trip hourly profile (i.e. the proportion of daily trips at the site during each hour) with the 'WSP Average' data suggests a much higher morning peak percentage than the WSP Average data. However as it is not clear what the WSP 'Average' data represents it is not possible to determine whether the two sets of data are directly comparable. The results are shown in Figure 1 below and the TRICS® output is attached at **Appendix A**.

Figure 1: Comparison of Eastbourne and 'WSP Average' Hourly Profiles

2.5 A similar tabular analysis has been undertaken by applying the hourly profile from the Eastbourne site to the proposed daily one-way person trips from the WSP data of 36,747. **Table 1** summarises the results. **Table 2** gives the same analysis, but under the assumption that the WSP Average profile is based on inbound trips only, as it is not clear what it represents. In both cases it suggests that there is potentially a significant difference in the number of trips arriving at the site during the peak hours. **Table 3** summarises the difference in hourly profiles throughout the day for both situations. The WSP Average data sums to 99.9%, which is why there are slightly fewer total daily trips using the WSP Average profile.

Time	Eastbourne	WSP Average	Difference
0000	0	0	0
0100	0	0	0
0200	0	0	0
0300	0	0	0
0400	0	0	0
0500	0	37	37
0600	0	147	147
0700	349	294	-55
0800	1712	588	-1124
0900	3632	1543	-2089
1000	5049	2389	-2661
1100	4788	2793	-1995
1200	4562	3270	-1291
1300	4264	3050	-1214
1400	3671	3087	-584
1500	3548	2719	-828
1600	2377	2830	452
1700	1643	2719	1076
1800	436	3123	2687
1900	454	3050	2596
2000	262	2278	2016
2100	0	1543	1543
2200	0	955	955
2300	0	294	294
Total	36747	36710	

Table 1: Comparison of WSP and Eastbourne Hourly Profiles

Time	Eastbourne	WSP Average	Difference
0000	0	0	0
0100	0	0	0
0200	0	0	0
0300	0	0	0
0400	0	0	0
0500	0	37	37
0600	0	147	147
0700	1129	294	-835
0800	2032	588	-1444
0900	3311	1543	-1767
1000	3846	2389	-1458
1100	3838	2793	-1045
1200	3662	3270	-392
1300	3579	3050	-529
1400	3445	3087	-358
1500	3453	2719	-734
1600	3236	2830	-406
1700	2566	2719	153
1800	1421	3123	1702
1900	1004	3050	2046
2000	226	2278	2052
2100	0	1543	1543
2200	0	955	955
2300	0	294	294
Total	36747	36710	

Table 2: Comparison of WSP and Eastbourne Daily Inbound Trip Profiles

Time	**Eastbourne** Hourly Profile	**Eastbourne** Inbound Trip Profile	**WSP Average** ?? Profile
0000	0.00	0.00	0.00
0100	0.00	0.00	0.00
0200	0.00	0.00	0.00
0300	0.00	0.00	0.00
0400	0.00	0.00	0.00
0500	0.00	0.00	0.10
0600	0.00	0.00	0.40
0700	0.95	3.07	0.80
0800	4.66	5.53	1.60
0900	9.88	9.01	4.20
1000	13.74	10.47	6.50
1100	13.03	10.44	7.60
1200	12.41	9.97	8.90
1300	11.60	9.74	8.30
1400	9.99	9.37	8.40
1500	9.65	9.40	7.40
1600	6.47	8.81	7.70
1700	4.47	6.98	7.40
1800	1.19	3.87	8.50
1900	1.24	2.73	8.30
2000	0.71	0.62	6.20
2100	0.00	0.00	4.20
2200	0.00	0.00	2.60
2300	0.00	0.00	0.80
Total	100	100	100

Table 3: Comparison of Daily Profiles

2.6 Our further analysis of another site available in the TRICS® database has highlighted potential significant differences in trips during certain times of the day, in particular during the AM peak period, which is of concern. We therefore require further evidence and/or explanation to support the use of the daily trip profile put forward by WSP.

3 SUMMARY

3.1 This Technical Note has set out Origin Transport Consultants' comments on the Transport Assessment Scoping Note produced by WSP in support of the redevelopment of two shopping centres in Slough town centre.

3.2 The only outstanding comments relate to the distribution of trips to the existing and proposed retail element of the scheme across the day. Whilst information has been provided from other sites for comparison purposes, it is not clear what the data represents. Further information should be provided to clarify the data that has been provided, before the distribution can be agreed.

APPENDIX A

Calculation Reference: AUDIT-356901-200709-0738

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL
Category : M - MIXED SHOPPING MALLS
MULTI-MODAL VEHICLES

Selected regions and areas:
02 SOUTH EAST
ES EAST SUSSEX 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: 14693 to 14693 (units: sqm)
Range Selected by User: 482 to 14693 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/01 to 24/11/12

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:
Thursday 1 days

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

Selected survey types:
Manual count 1 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 undertaking using machines.

Selected Locations:
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:
Residential Zone 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.

Secondary Filtering selection:

Use Class:
Not Known 1 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:
10,001 to 15,000 1 days

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

Secondary Filtering selection (Cont.):

Population within 5 miles:

100,001 to 125,000	1 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	1 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.

Petrol filling station:

Included in the survey count	0 days
Excluded from count or no filling station	1 days

This data displays the number of surveys within the selected set that include petrol filling station activity, and the number of surveys that do not.

Travel Plan:

Not Known	1 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	1 days

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

LIST OF SITES relevant to selection parameters

1 ES-01-M-02 SHOPPING MALL EAST SUSSEX
KINGFISHER DRIVE
EASTBOURNE
LANGNEY
Edge of Town
Residential Zone
Total Gross floor area: 14693 sqm
Survey date: THURSDAY 01/03/01 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.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
DL-01-M-02	.

TRIP RATE for Land Use 01 - RETAIL/M - MIXED SHOPPING MALLS

MULTI-MODAL 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	1	14693	0.919	1	14693	0.783	1	14693	1.702
08:00 - 09:00	1	14693	1.654	1	14693	1.123	1	14693	2.777
09:00 - 10:00	1	14693	2.695	1	14693	1.947	1	14693	4.642
10:00 - 11:00	1	**14693**	**3.131**	1	14693	2.579	1	14693	5.710
11:00 - 12:00	1	14693	3.124	1	**14693**	**3.226**	1	**14693**	**6.350**
12:00 - 13:00	1	14693	2.981	1	14693	3.069	1	14693	6.050
13:00 - 14:00	1	14693	2.913	1	14693	3.029	1	14693	5.942
14:00 - 15:00	1	14693	2.804	1	14693	3.035	1	14693	5.839
15:00 - 16:00	1	14693	2.811	1	14693	2.859	1	14693	5.670
16:00 - 17:00	1	14693	2.634	1	14693	3.090	1	14693	5.724
17:00 - 18:00	1	14693	2.089	1	14693	2.375	1	14693	4.464
18:00 - 19:00	1	14693	1.157	1	14693	1.627	1	14693	2.784
19:00 - 20:00	1	14693	0.817	1	14693	0.810	1	14693	1.627
20:00 - 21:00	1	14693	0.184	1	14693	0.259	1	14693	0.443
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			29.913			29.811			59.724

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.*

Parameter summary

Trip rate parameter range selected:	14693 - 14693 (units: sqm)
Survey date date range:	01/01/01 - 24/11/12
Number of weekdays (Monday-Friday):	1
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	1

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 01 - RETAIL/M - MIXED SHOPPING MALLS

MULTI-MODAL TOTAL PEOPLE

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	1	14693	1.109	1	14693	0.837	1	14693	1.946
08:00 - 09:00	1	14693	3.226	1	14693	1.729	1	14693	4.955
09:00 - 10:00	1	14693	5.356	1	14693	3.491	1	14693	8.847
10:00 - 11:00	1	**14693**	**5.812**	1	14693	4.356	1	14693	10.168
11:00 - 12:00	1	14693	5.234	1	**14693**	**5.581**	1	14693	10.815
12:00 - 13:00	1	14693	4.744	1	14693	4.819	1	14693	9.563
13:00 - 14:00	1	14693	4.764	1	14693	4.730	1	14693	9.494
14:00 - 15:00	1	14693	4.478	1	14693	4.805	1	14693	9.283
15:00 - 16:00	1	14693	5.506	1	14693	5.452	1	**14693**	**10.958**
16:00 - 17:00	1	14693	4.478	1	14693	5.356	1	14693	9.834
17:00 - 18:00	1	14693	2.988	1	14693	4.213	1	14693	7.201
18:00 - 19:00	1	14693	1.810	1	14693	2.613	1	14693	4.423
19:00 - 20:00	1	14693	1.293	1	14693	1.327	1	14693	2.620
20:00 - 21:00	1	14693	0.231	1	14693	0.313	1	14693	0.544
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			51.029			49.622			100.651

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.*

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Slough Borough Council

SLOUGH CENTRAL, SLOUGH

Technical Note 1D: Review of Transport Assessment Scoping Addendum produced by WSP, dated 27 April 2021[V1]

20th May 2021

SBC PLANNING
RECEIVED : 24.06.2022

Location: Slough Central
Project: Mixed Use Development
Report Title: Technical Note 1D: Review of Transport Assessment Scoping Addendum V1
Client: Slough Borough Council

PROJECT DETAILS	
SITE	Slough Central
PROJECT	Redevelopment of the Queensmere and Observatory Shopping Centres, Slough
REPORT TITLE	Technical Note 1D: Review of Transport Assessment Scoping Addendum, April 2021
CLIENT	Slough Borough Council

	Name	Position	Date
Prepared By	Hilary Lofmark	Associate	11/05/2021
Checked By	Tim Thurley	Senior Associate	11/05/2021
Authorised By	Del Tester	Managing Director	12/05/2021

Status	Revision	Description	Date
Draft	V1	Draft to Client	12/05/2021
Final	V1	Issued	20/05/2021

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APPENDICES

ORIGIN

1 INTRODUCTION

1.1 Origin Transport Consultants Ltd (Origin) has been commissioned by Slough Borough Council to review the Transport Addendum Note – Baseline Travel Demand produced by WSP in April 2021 in support of the redevelopment of the Queensmere and Observatory Shopping Centres in Slough town centre. This Technical Note will also touch on the previous Transport Assessment Scoping Note produced by WSP and dated 11 March 2021, following the initial comments that were provided by Origin in an email dated 1 April 2021. The email containing the initial comments is included at **Appendix A** of this Technical Note for information.

1.2 The latest Transport Assessment Scoping Addendum report relates to a revised development mix with up to 2,500 residential units compared with the 1,054 units that were previously proposed. Retail floor areas are broadly similar to the previous proposal and the workspace use has decreased from 208,211 sqm to 50,000 sqm. It is also understood that some flexibility will be sought to allow one of the development zones to be used for residential or office uses, and another development zone to be used for residential or multi-storey car park use. The acceptability of these flexible uses will need to be demonstrated during the application process.

1.3 The development will also include up to 4,750 sqm of sui generis uses, possibly including a cinema or live music venue (both up to 1,500 sqm). Consideration will also be made for the provision of a pub/wine bar hot/food takeaway uses (up to 3,240 sqm).

1.4 Four previous Technical Notes have been prepared by Origin in response to the original Scoping Note. A further email response was provided to the Scoping Addendum on 1 April 2021. The only outstanding issue was the hourly trip profile for retail uses at both the existing site and for the proposed development. This Technical Note TN1D therefore only covers this outstanding issue and incorporates the comments outlined in the email of 1 April 2021.

2 TRANSPORT ASSESSMENT

Development

2.1 The Transport Assessment Scoping Addendum states that the outline planning application will include details of associated infrastructure, road adaptions to highways junctions on Wellington Street and pedestrian, cycle and vehicle routes, parking, drainage, public realm, landscaping and earthworks.

2.2 Access to the proposed development will be through the existing two A4 accesses along the north edge of the site, one being via the HTC roundabout and the other via the left in, left out junction with Queensmere Road. This is currently one-way but will need to change to two-way working. A new exit only access is proposed to the south west corner of the site at the junction with High Street and Church Street.

2.3 A new east-west route through the centre of the site is proposed, however only high level detail of this is provided at this stage. All access routes and access points will need to be considered in detail at appropriate stage of the application process.

2.4 It is proposed to provide residential parking at a ratio of 0.3 parking spaces per unit and this is consistent with the stated advice from Slough Borough Council Highway Officers who suggested a ratio of 0.3 spaces per unit would be acceptable. Cycle parking is to be provided in accordance with the latest policy.

2.5 Each development zone on site is to be serviced individually by way of dedicated on-street loading areas. Service vehicle access will be via the HTC roundabout or the left in junction on the A4. It is proposed to provide loading bays along the service vehicle routes to avoid the need for delivery vehicles to turn on-site. Service vehicles would exit the site via the proposed junction with High Street and Church Street. Further details will be required at the application stage to demonstrate that this service vehicle strategy can be accommodated safely.

2.6 Trip rates relating to the residential uses, office uses and the cinema use have previously been agreed. It has also previously been confirmed that the mode share data will be based on the Slough Multi-Modal Model. However whilst the daily trip generation rate for retail trips has been agreed, the daily trip profile for both the existing and proposed retail development remains to be agreed.

<u>Daily Trip Profile</u>

2.7 WSP has based their daily trip profile on the operation of Westfield retail park in London. Origin have concerns about the use of a single site in isolation, and having reviewed data for a TRICS® site in Eastbourne are concerned that the daily profiles do vary and this could have a material impact on peak hour trip generation.

2.8 At a meeting with Slough Borough Council on 1 April 2021 it was suggested that the data be compared with the Westgate Oxford shopping centre planning application. However, having agreed to look at it, WSP have now stated that no survey data was found that could be used to determine the daily trip profile, although they have presented new data for the Eden Walk shopping centre site in Kingston-upon-Thames instead.

2.9 The Eden Walk shopping centre is in a town centre location with good access to public transport, with a 700 space public car park nearby and can therefore be considered similar in terms of accessibility to the site in Slough.

2.10 A series of pedestrian and vehicle surveys have been undertaken as part of an application to redevelop the Eden Walk site. The surveys were undertaken on weekdays and at a weekend in June. The analysis has just looked at data for a Thursday. It would be useful if it could be confirmed whether the Thursday was the busiest day of the week of the surveys, and if it is not, what would the profile be on another day.

2.11 The Eden Walk site includes a Sainsburys supermarket. The access to the site directly adjacent to the Sainsburys store has been excluded from the analysis as no large food retail store is present at the existing or proposed development at the site in Slough.

2.12 The methodology used to derive the daily profile appears to be reasonable.

2.13 **Table 1** below compares the resulting daily trip profiles for Westfield, Eden Walk and the site in Eastbourne. Whilst WSP consider that the Eden Walk data supports the validity of the Westfield data, it can be seen that there are differences in the peak hour between the three sites. As the site at Eden Walk has a slightly higher profile during the peak hours than the site at Westfield, the use of the Eden Walk profile would provide a reasonable assessment and whilst showing a lower morning peak trip profile than the Eastbourne site, given the similarity in terms of accessibility of the site to the site in Slough it is considered acceptable for the analysis.

	Westfield	Eden Walk	Eastbourne
0700-0800	0.6	0.5	3
0800-0900	1.2	2.1	5
0900-1000	2.5	4.3	8
1000-1100	4.4	6.9	10
1100-1200	5.8	9.9	11
1200-1300	7.1	12.8	10
1300-1400	7.7	12.8	10
1400-1500	8.3	11.0	10
1500-1600	8.2	9.2	9
1600-1700	7.9	8.3	10
1700-1800	8.3	8.8	7
1800-1900	9.2	6.7	5
1900-2000	9.7	4.4	3
2000-2100	7.6	1.9	1
2100-2200	5.9	0.3	-

Table 1: Comparison of Two-Way Daily Flow

2.14 In their Scoping Addendum dated 11 March 2021, WSP has proposed to factor the baseline person retail trips by 0.41 to reflect the underutilisation of the existing shopping centre. This factor has been derived by comparing existing site traffic data with trip generation rates based on the Westfield site with no further evidence to support this. The use of this factor was queried in the initial comments on that Scoping Addendum in the email of 1 April 2021 and it is not considered that the appropriate information has yet been considered to address those concerns. The proposed factor should now be reviewed so that it is based on the Eden Walk site to determine whether the factor is likely to be appropriate and to determine the likely level of variation when using the data for the two sites.

3 SUMMARY

3.1 This Technical Note has set out Origin Transport Consultants' comments on the Transport Assessment Scoping Addendum produced by WSP in support of the redevelopment of two shopping centres in Slough town centre.

3.2 The only outstanding comments relate to the distribution of trips to the existing and proposed retail element of the scheme across the day.

3.3 Information for a Thursday in 2014 has been provided for a site at Eden Walk in Kingston-upon-Thames. Further information should be provided to confirm whether the Thursday was the busiest weekday at the time of the surveys. If it was not, the profile of the busiest day of the week should be reviewed and a comparison made to see if there are any significant differences.

3.4 The Eden Walk data should also be used to derive an underutilisation factor for the existing site, to be compared with the suggested value of 0.41 that was proposed on the basis of the Westfield shopping centre.

3.5 The additional data for the Eden Walk site appears to be helpful and can be used to determine the daily trip profile, however further information on the busiest day of the week should be provided, and the information can also be used to determine an appropriate underutilisation factor for the existing site. Full calculations should be provided so that the analysis can be checked.

APPENDIX A

From:	Tim Thurley
To:	McDougall, Doug
Cc:	Button Neil; Agha Imran; Trulock, Allan; Robert Palmer; Del Tester
Subject:	Slough Ahead - Scoping Note Addendum - Initial comments
Date:	01 April 2021 12:20:00
Attachments:	image713071.png image313955.png image494001.png image698590.png

Dear Doug,

Thank you for the Scoping Note Addendum that incorporates an update to the scope of the Transport Assessments following changes to the proposed development. I have the following initial comments to make. For clarity I will briefly outline the changes to the scheme and the position we got to following our previous scoping correspondence.

Position reached in previous Scoping discussions

You will be aware that we have provided four previous Technical Notes in response to your original Scoping Note, to which you also provided responses. The only issue that we did not close out was the agreement on the hourly trip profile used for the retail uses on site. We required further evidence in order to validate the profile that you had derived as we still had concerns relating to the differences in location between the sites that you had chosen and the proposed site in Slough and the effect this might have on the hourly trip profiles. We exchanged correspondence in late August/early September last year which confirmed our position and the information that we required to hopefully close out the scoping process, however the information was not provided.

Current proposal

In terms of what is now being proposed on site it is evident that this is much more a residential led development with up to 2,500 units proposed compared to the 1,054 units previously proposed. Retail floor areas are broadly similar to what was previously proposed and the workspace uses has decreased from 208,211 sqm to 50,000 sqm. It is also understood that some flexibility will be sought to allow one of the development zones to be used for residential or office, and another development zone to be used for residential or multi-storey car park use. The acceptability of these flexible uses will need to be demonstrated during the application process (you have suggested at reserved Matters).

There will also be an inclusion for up to 4,750 sqm of sui generis uses, possibly including a small cinema or live music venue (both up to 1,500 sqm). Consideration will also be made for the provision of a pub/wine bar/hot-food takeaway uses (up to 3,250 sqm).

For confirmation, the trip rates relating to the residential uses, the office uses and the cinema use have previously been agreed. It has also previously been confirmed that the mode share data will be based on the Slough Multi-Modal Model.

It is also stated that the outline planning application will also include details of associated infrastructure, road adaptions to highways junctions on Wellington Street, and pedestrian, cycle and vehicle routes, parking, drainage, public realm, landscaping and earthworks.

Access

Access to the proposed development will retain the use of the existing two accesses along the north edge of the site, both of which are on the A4, with one being via the HTC roundabout and the other via the left in, left out junction with Queensmere Road, which is currently one-way but will need to change to two-way. A new exit only access is proposed to the south west corner of the site at the junction with High street and Church Street.

A new east-west route through the centre of the site is proposed however only high level detail of this is provided at this stage. All access routes and access points will need to be considered in detail at appropriate stages in the application process.

Parking

It is proposed to provide residential parking at a ratio of approximately 0.3 parking spaces per unit. This is less than the previously proposed 0.44 spaces per unit, however it is consistent with information given in the original Scoping Note that stated advice from Slough Borough Council Highway Officers suggested that a ratio of 0.3 spaces per unit would be acceptable. Cycle parking is to be provided in accordance with the latest policy.

Delivery and Servicing

Each development zone on-site is to be serviced individually by the way of on-street dedicated loading areas and service vehicle access will be via the HTC roundabout or the left-in junction on the A4. It is proposed to provide loading bays along the service vehicle routes to avoid the need for delivery vehicles to turn on-site. Service vehicles would exit the site via the proposed junction with High Street and Church Street. Further details would be required at application stage to demonstrate that this service vehicle strategy can be accommodated safely.

Trip Generation

As stated above, the trip profile for the retail uses is the outstanding matter from previous Scoping discussions. Through the previous scoping discussions, which involved comparisons between daily trip rates for the Whitgift Centre in Croydon and Brent Cross Shopping and other various sites contained within the TRICS® database, we were able to agree the daily trip rates that were presented. However concerns remained regarding the use of daily trip profiles for Westfield shopping centre to base the hourly profile of trips for the site in Slough. As previously stated in our Technical Note 1C we had compared hourly profiles of other sites in TRICS® and there are potential significant differences between them and the profile that you provide in your Scoping Note. We therefore requested further evidence and/or explanation to support the use of the daily trip profile that you put forward.

You previously advised that we would receive further evidence to support the use of the profile work that you have undertaken to address our concerns relating to the difference in locations between the sites that you have chosen and the proposed site in Slough and the resulting potential differences in hourly profiles.

In the Scoping Note Addendum that you have recently submitted you have taken 2017 survey data from the Queensmere and Observatory centres and have compared that with the data from Whigift and Brent Cross. On the assumption that mode share proportions of shopping malls in the UK are broadly similar you have used the observed traffic generation of the site (from the 2017 surveys) as a proxy to factor the overall trip generation to match. You state that this will reflect the "lower than-typical trading levels of the malls with a small uplift to allow for a slight increase in retail draw".

You have therefore proposed to factor the baseline person retail trips as presented in the TASN by 0.41 to reflect the current underutilisation of the existing malls. This has been derived by comparing existing site traffic count data to the vehicular trip generation derived in Table 6-5 of the original TASN. However, the daily and peak hour profile are still taken from the Westfield site with no further evidence to support this (which has been previously requested). It is also evident that no data/calculations have been provided to support this or show how this has been done. Is it also not the case that if you have 2017 survey data of the existing site, could that not be used to determine the daily and weekly trip generation profiles rather than using data from Westfield, which is proving difficult to justify?

I trust that the above information is of some assistance.

Kind regards

Tim

Tim Thurley
Senior Associate
Origin Transport Consultants Limited

Working in partnership with
Highways Development Management
Directorate for Planning Growth & Sustainability
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SBC PLANNING
RECEIVED : 24.06.2022

Slough Borough Council

SLOUGH CENTRAL, SLOUGH

Technical Note 1E: Review of Transport Assessment Scoping Addendum produced by WSP, dated 27 April 2021[V1]

17th June 2021

SBC PLANNING
RECEIVED : 24.06.2022

ORIGIN

PROJECT DETAILS	
SITE	Slough Central
PROJECT	Redevelopment of the Queensmere and Observatory Shopping Centres, Slough
REPORT TITLE	Technical Note 1E: Review of Transport Assessment Scoping Addendum, April 2021
CLIENT	Slough Borough Council

	Name	Position	Date
Prepared By	Hilary Lofmark	Associate	15/06/2021
Checked By	Tim Thurley	Senior Associate	17/06/2021
Authorised By	Del Tester	Managing Director	17/06/2021

Status	Revision	Description	Date
Draft	V1	Draft to Client	17/06/2021
Final	V1	Issued	17/06/2021

CONTENTS

1 INTRODUCTION

1.1 Origin Transport Consultants Ltd (Origin) has been commissioned by Slough Borough Council to review the Transport Addendum Note – Baseline Travel Demand produced by WSP in April 2021 in support of the redevelopment of the Queensmere and Observatory Shopping Centres in Slough town centre. Additional Information was provided by WSP via email on 2nd June 2021 in response to Origin's Technical Note 1D dated 20th May 2021 with initial comments on the revised Transport Addendum Note.

1.2 The latest Transport Assessment Scoping Addendum report relates to a revised development mix with up to 2,500 residential units compared with the 1,054 units that were previously proposed. Retail floor areas are broadly similar to the previous proposal and the workspace use has decreased from 208,211 sqm to 50,000 sqm. It is also understood that some flexibility will be sought to allow one of the development zones to be used for residential or office uses, and another development zone to be used for residential or multi-storey car park use. The acceptability of these flexible uses will need to be demonstrated during the application process.

1.3 The development will also include up to 4,750 sqm of sui generis uses, possibly including a cinema or live music venue (both up to 1,500 sqm). Consideration will also be made for the provision of a pub/wine bar hot/food takeaway uses (up to 3,240 sqm).

1.4 Four Technical Notes have been prepared by Origin in response to the original Scoping Note. A further email response was provided to the Scoping Addendum on 1st April 2021 and additional comments were provided in Technical Note 1D dated 20th May 2021. The only outstanding issue was the hourly trip profile for retail uses at both the existing site and for the proposed development. Additional information was provided by WSP on 2nd June 2021 and this Technical Note TN1E therefore only covers this outstanding issue.

2 TRANSPORT ASSESSMENT

Development

2.1 The Transport Assessment Scoping Addendum states that the outline planning application will include details of associated infrastructure, road adaptions to highways junctions on Wellington Street and pedestrian, cycle and vehicle routes, parking, drainage, public realm, landscaping and earthworks.

2.2 Access to the proposed development will be through the existing two accesses off the A4 along the north edge of the site, one being via the HTC roundabout and the other via the left in, left out junction with Queensmere Road. This is currently one-way but will need to change to two-way working. A new exit only access is proposed to the south west corner of the site at the junction with High Street and Church Street.

2.3 A new east-west route through the centre of the site is proposed, however only high level detail of this is provided at this stage. All access routes and access points will need to be considered in detail at appropriate stages of the application process.

2.4 It is proposed to provide residential parking at a ratio of 0.3 parking spaces per unit and this is consistent with the stated advice from Slough Borough Council Highway Officers who suggested a ratio of 0.3 spaces per unit would be acceptable. Cycle parking is to be provided in accordance with the latest policy.

2.5 Each development zone on site is to be serviced individually by way of dedicated on-street loading areas. Service vehicle access will be via the HTC roundabout or the left in junction on the A4. It is proposed to provide loading bays along the service vehicle routes to avoid the need for delivery vehicles to turn on-site. Service vehicles would exit the site via the proposed junction with High Street and Church Street. Further details will be required at the application stage to demonstrate that this service vehicle strategy can be accommodated safely.

2.6 Trip rates relating to the residential uses, office uses and the cinema use have previously been agreed. It has also previously been confirmed that the mode share data will be based on the Slough Multi-Modal Model. However whilst the daily trip generation rate for retail trips has been agreed, the daily trip profile for both the existing and proposed retail development remains to be agreed.

Daily Trip Profile

2.7 WSP has based their daily trip profile on the operation of Westfield retail park in London. Origin have concerns about the use of a single site in isolation, and having reviewed data for a TRICS® site in Eastbourne are concerned that the daily profiles do vary and this could have a material impact on peak hour trip generation.

2.8 At a meeting with Slough Borough Council on 1st April 2021 it was suggested that the data be compared with the Westgate Oxford shopping centre planning application. However, having agreed to look at it, WSP have now stated that no survey data was found that could be used to determine the daily trip profile, although they have presented new data for the Eden Walk shopping centre site in Kingston-upon-Thames instead.

2.9 The Eden Walk shopping centre is in a town centre location with good access to public transport, with a 700 space public car park nearby and can therefore be considered similar in terms of accessibility to the site in Slough.

2.10 A series of pedestrian and vehicle surveys have been undertaken as part of an application to redevelop the Eden Walk site. The surveys were undertaken on a Thursday and at a weekend in June.

2.11 The Eden Walk site includes a Sainsburys supermarket. Initially the access to the site directly adjacent to the Sainsburys store was excluded from the analysis as no large food retail store is present at the existing or proposed development at the site in Slough, however the resulting analysis provided spurious results and the supermarket access was therefore retained within the analysis. The methodology used to derive the daily profile appears to be reasonable.

2.12 **Table 1** below compares the resulting daily trip profiles for Westfield, Eden Walk both with and without the Sainsburys supermarket and the site in Eastbourne. During the morning peak hour, the Eden walk site including the Sainsburys access has a slightly higher proportion than both Westfield and Eden Walk without the Sainsburys access, although it is lower than the proportion at the Eastbourne site. The evening peak proportion for Eden Walk including Sainsburys is slightly higher than the evening peak proportions at Westfield and Eastbourne, whilst being marginally lower than Eden Walk excluding the Sainsburys access. Given the similarity of the Eden Walk site in terms of accessibility to the site in Slough, and having considered the data for both Westfield and Eastbourne it is considered that the Eden Walk data including the Sainsburys access is acceptable for the analysis.

	Westfield	Eden Walk (excl Sainsburys)	Eden Walk (inc Sainsburys)	Eastbourne
0700-0800	0.6	0.5 %	0.9 %	3 %
0800-0900	**1.2**	**2.1 %**	**2.5 %**	**5 %**
0900-1000	2.5	4.3 %	4.5 %	8 %
1000-1100	4.4	6.9 %	7.1 %	10 %
1100-1200	5.8	9.9 %	9.7 %	11 %
1200-1300	7.1	12.8 %	12.1 %	10 %
1300-1400	7.7	12.8 %	12.6 %	10 %
1400-1500	8.3	11.0 %	10.8 %	10 %
1500-1600	8.2	9.2 %	9.3 %	9 %
1600-1700	7.9	8.3 %	8.4 %	10 %
1700-1800	**8.3**	**8.8 %**	**8.6 %**	**7 %**
1800-1900	9.2	6.7 %	6.7 %	5 %
1900-2000	9.7	4.4 %	4.5 %	3 %
2000-2100	7.6	1.9 %	1.9 %	1 %
2100-2200	5.9	0.3 %	0.4 %	-

Table 1: Comparison of Two-Way Daily Flow

2.13 In their Scoping Addendum dated 11th March 2021, WSP had proposed to factor the baseline person retail trips by 0.41 to reflect the underutilisation of the existing shopping centre. This factor has been derived by comparing existing site traffic data with trip generation rates based on the Westfield site with no further evidence to support this. However, WSP now intend to use tenancy data to determine the proportion of vacant floorspace at the site. The data shows that 22% of the shopping centre's retail floor space was vacant when the audit was undertaken. WSP have confirmed that the data used was collected in September 2019 and therefore the use of this data to factor the trip generation to account for underutilisation of the site is considered to be acceptable.

3 SUMMARY

3.1 This Technical Note has set out Origin Transport Consultants' comments on the Transport Assessment Scoping Addendum and additional information produced by WSP on 2 June 2021 in support of the redevelopment of two shopping centres in Slough town centre.

3.2 The only outstanding comments related to the distribution of trips to the existing and proposed retail element of the scheme across the day. Following a review of the data it is agreed that the data for Eden Walk including the Sainsburys access is acceptable as a basis for the hourly distribution of trips to the shopping centre in Slough.

3.3 The use of tenancy data, which was collected in September 2019, for determining an underutilisation factor for the existing shopping centre is also accepted.

3.4 It is now confirmed that all elements of the Scoping process have now been agreed.

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ORIGIN

WWW.ORIGIN-CONSULTANTS.COM

Tel: 0800 368 8911

11 BOUNDARY BUSINESS PARK, WHEATLEY ROAD, GARSINGTON, OXFORD, OX44 9EJ

Appendix B

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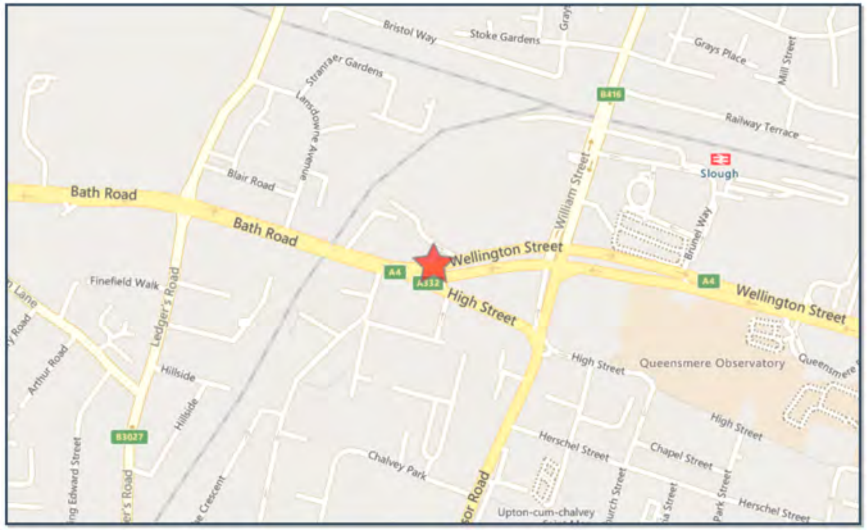
Validated Data

Crash Date: Saturday, February 17, 2018 **Time of Crash:** 9:45:00 AM **Crash Reference:** **2018430056338**

Highest Injury Severity:	Serious	**Road Number:**	A4	**Number of Casualties:**	1
Highway Authority:	Slough			**Number of Vehicles:**	1
Local Authority:	Slough Borough			**OS Grid Reference:**	497413 179995
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	30				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	T or staggered junction				
Junction Pedestrian Crossing:	Pedestrian phase at traffic signal junction				
Road Type:	Dual carriageway				
Junction Control:	Auto traffic signal				



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Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	-1	Unknown	Unknown	Vehicle proceeding normally along the carriageway, not on a bend	Front	Other	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Serious	Pedestrian	Female	36 - 45	In carriageway, crossing on pedestrian crossing facility	Crossing from driver's nearside - masked by parked or stationary vehicle

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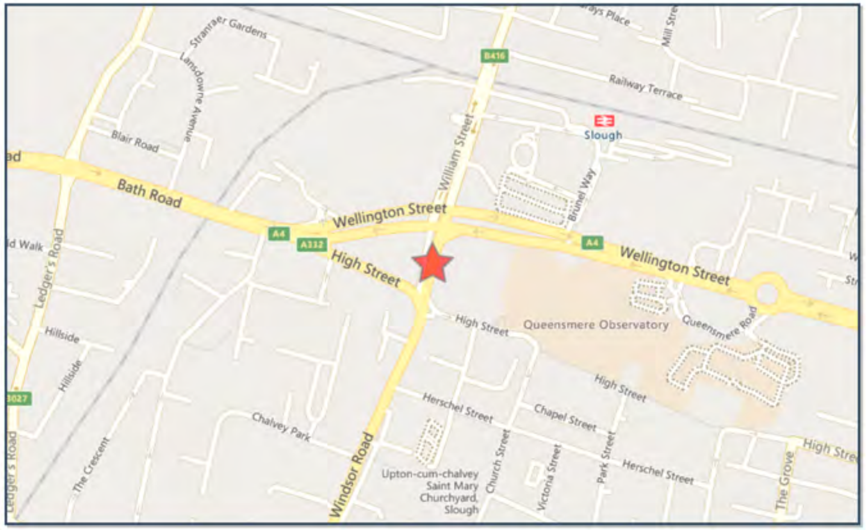
Validated Data

Crash Date:	Friday, May 25, 2018	**Time of Crash:**	8:25:00 AM	**Crash Reference:**	**2018430165045**

Highest Injury Severity:	Serious	**Road Number:**	A332	**Number of Casualties:**	1
Highway Authority:	Slough			**Number of Vehicles:**	2
Local Authority:	Slough Borough			**OS Grid Reference:**	497586 179938
Weather Description:	Fine without high winds				
Road Surface Description:	Wet or Damp				
Speed Limit:	30				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Using private drive or entrance				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Single carriageway				
Junction Control:	Give way or uncontrolled				



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Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	-1	Male	56 - 65	Vehicle is in the act of turning left	Nearside	Journey as part of work	None	None
2	Pedal cycle	-1	Female	26 - 35	Vehicle proceeding normally along the carriageway, not on a bend	Front	Commuting to/from work	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
2	1	Serious	Driver or rider	Female	26 - 35	Unknown or other	Unknown or other

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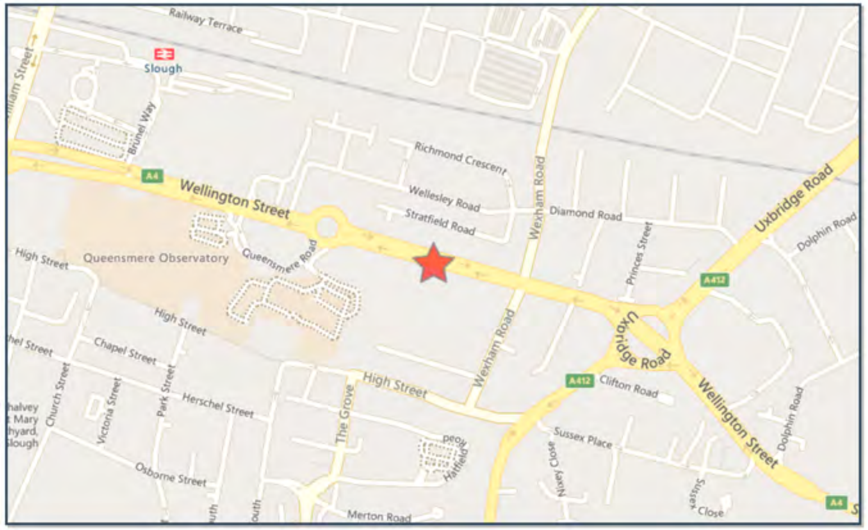
Validated Data

Crash Date: Sunday, May 20, 2018 **Time of Crash:** 2:57:00 PM **Crash Reference:** **2018430170505**

Highest Injury Severity: Serious
Road Number: A4
Number of Casualties: 1
Highway Authority: Slough
Number of Vehicles: 3
Local Authority: Slough Borough
OS Grid Reference: 498246 179857
Weather Description: Fine without high winds
Road Surface Description: Dry
Speed Limit: 40
Light Conditions: Daylight: regardless of presence of streetlights
Carriageway Hazards: None
Junction Detail: Not at or within 20 metres of junction
Junction Pedestrian Crossing: No physical crossing facility within 50 metres
Road Type: Dual carriageway
Junction Control: Not Applicable



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Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Motorcycle over 500cc	15	Male	26 - 35	Vehicle is passing another vehicle (moving or stationary) on its nearside	Offside	Other	None	None
2	Car (excluding private hire)	-1	Male	46 - 55	Vehicle proceeding normally along the carriageway, not on a bend	Nearside	Journey as part of work	None	None
3	Car (excluding private hire)	11	Female	26 - 35	Vehicle proceeding normally along the carriageway, not on a bend	Back	Other	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Serious	Driver or rider	Male	26 - 35	Unknown or other	Unknown or other

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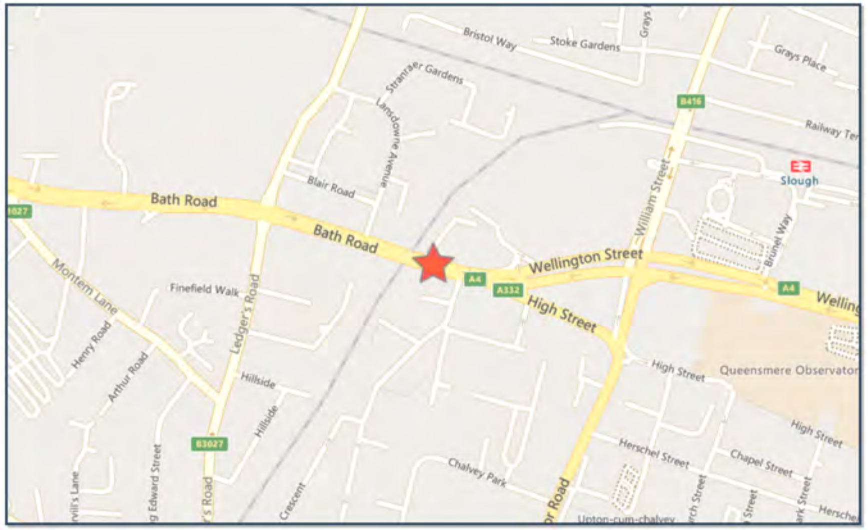
Validated Data

Crash Date:	Thursday, October 31, 2019	**Time of Crash:**	11:00:00 PM	**Crash Reference:**	**2019430348851**

Highest Injury Severity:	Serious	**Road Number:**	U0	**Number of Casualties:**	1
Highway Authority:	Slough			**Number of Vehicles:**	1
Local Authority:	Slough Borough			**OS Grid Reference:**	497294 180006
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	30				
Light Conditions:	Darkness: street lights present but unlit				
Carriageway Hazards:	None				
Junction Detail:	Not at or within 20 metres of junction				
Junction Pedestrian Crossing:	No physical crossing facility within 50 metres				
Road Type:	Dual carriageway				
Junction Control:	Not Applicable				



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Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	-1	Male	26 - 35	Vehicle proceeding normally along the carriageway, not on a bend	Front	Other	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Serious	Pedestrian	Male	26 - 35	In carriageway, not crossing	Unknown or other

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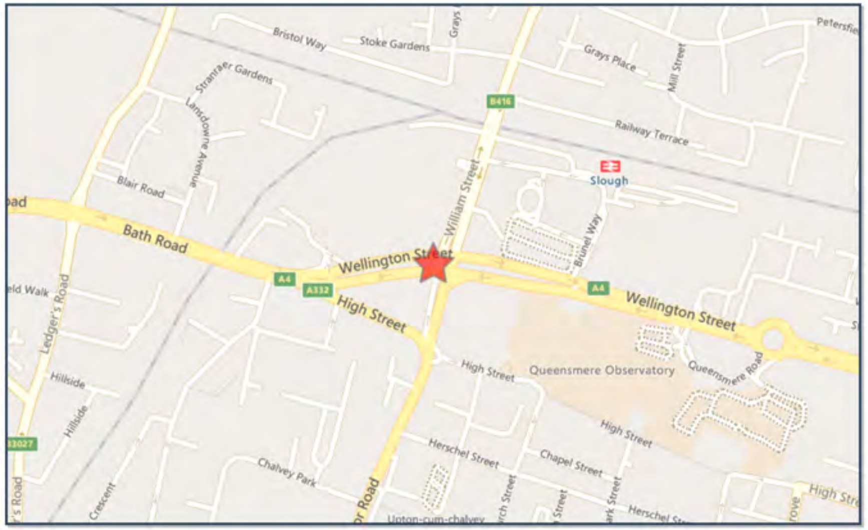
Provisional Data does not include vehicle and casualty records

Crash Date:	Saturday, April 04, 2020	**Time of Crash:**	10:30:00 AM	**Crash Reference:**	**2020430107207**

Highest Injury Severity:	Serious	**Road Number:**	A4	**Number of Casualties:**	1
Highway Authority:	Slough			**Number of Vehicles:**	1
Local Authority:	Slough Borough			**OS Grid Reference:**	497579 180011
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	30				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Crossroads				
Junction Pedestrian Crossing:	Pedestrian phase at traffic signal junction				
Road Type:	Single carriageway				
Junction Control:	Auto traffic signal				



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Provisional Data does not include vehicle and casualty records

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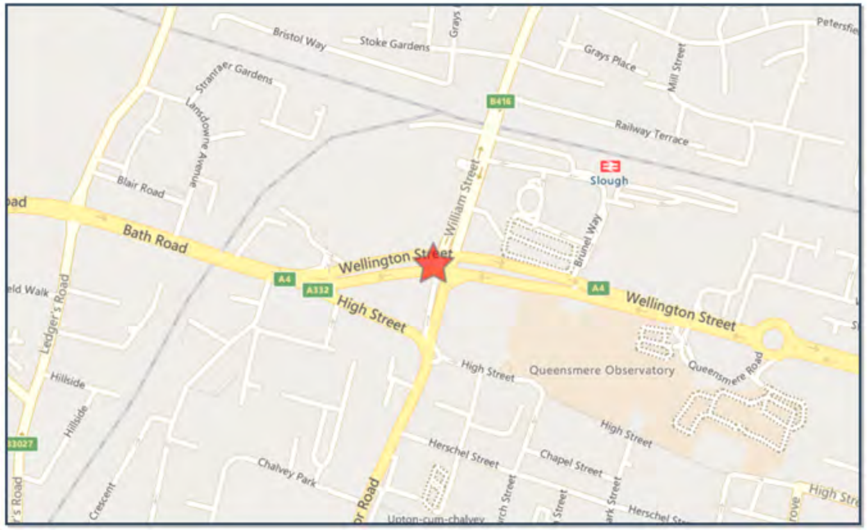
Provisional Data does not include vehicle and casualty records

Crash Date:	Monday, June 22, 2020	**Time of Crash:**	9:00:00 AM	**Crash Reference:**	**2020430197527**

Highest Injury Severity:	Serious	**Road Number:**	A4	**Number of Casualties:**	1
Highway Authority:	Slough			**Number of Vehicles:**	1
Local Authority:	Slough Borough			**OS Grid Reference:**	497579 180007

Weather Description:	Fine without high winds
Road Surface Description:	Dry
Speed Limit:	30
Light Conditions:	Daylight: regardless of presence of streetlights
Carriageway Hazards:	None
Junction Detail:	Crossroads
Junction Pedestrian Crossing:	Pedestrian phase at traffic signal junction
Road Type:	Dual carriageway
Junction Control:	Auto traffic signal



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Provisional Data does not include vehicle and casualty records

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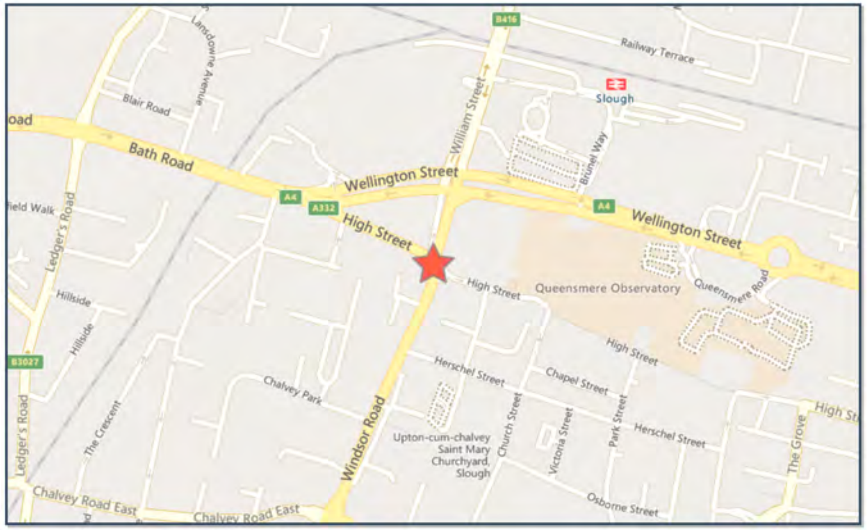
Validated Data

Crash Date:	Thursday, June 21, 2018	**Time of Crash:**	12:48:00 AM	**Crash Reference:**	**2018430187637**

Highest Injury Severity:	Serious	**Road Number:**	A322	**Number of Casualties:**	1
Highway Authority:	Slough			**Number of Vehicles:**	1
Local Authority:	Slough Borough			**OS Grid Reference:**	497571 179889
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	30				
Light Conditions:	Darkness: street lights present and lit				
Carriageway Hazards:	None				
Junction Detail:	T or staggered junction				
Junction Pedestrian Crossing:	Pedestrian phase at traffic signal junction				
Road Type:	Single carriageway				
Junction Control:	Auto traffic signal				



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Validated Data

Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Car (excluding private hire)	17	Male	36 - 45	Vehicle is in the act of turning left	Front	Other	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Serious	Pedestrian	Male	46 - 55	In carriageway, not crossing	In carriageway, stationary - not crossing (standing or playing), masked by parked or stationary vehicle

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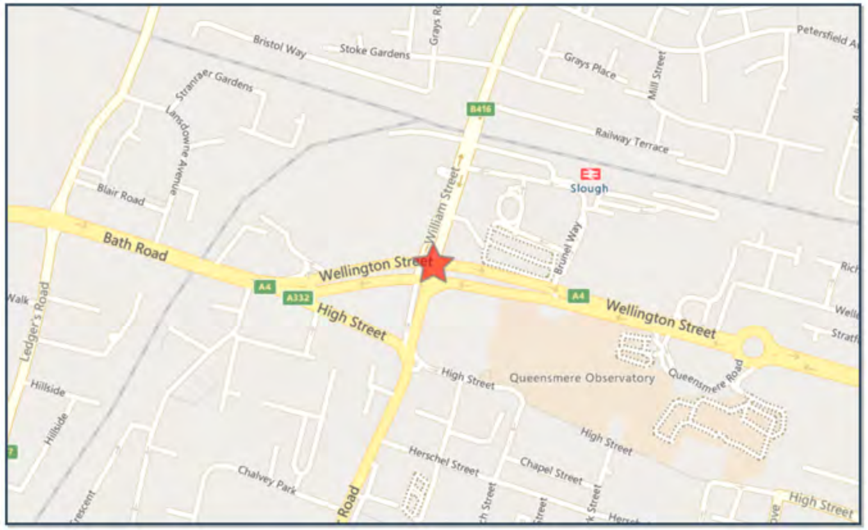
Validated Data

Crash Date:	Wednesday, July 24, 2019	**Time of Crash:**	9:11:00 AM	**Crash Reference:**	**2019430226550**

Highest Injury Severity:	Serious	**Road Number:**	A4	**Number of Casualties:**	1
Highway Authority:	Slough			**Number of Vehicles:**	2
Local Authority:	Slough Borough			**OS Grid Reference:**	497606 180022
Weather Description:	Fine without high winds				
Road Surface Description:	Dry				
Speed Limit:	30				
Light Conditions:	Daylight: regardless of presence of streetlights				
Carriageway Hazards:	None				
Junction Detail:	Crossroads				
Junction Pedestrian Crossing:	Pedestrian phase at traffic signal junction				
Road Type:	Dual carriageway				
Junction Control:	Auto traffic signal				



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Validated Data

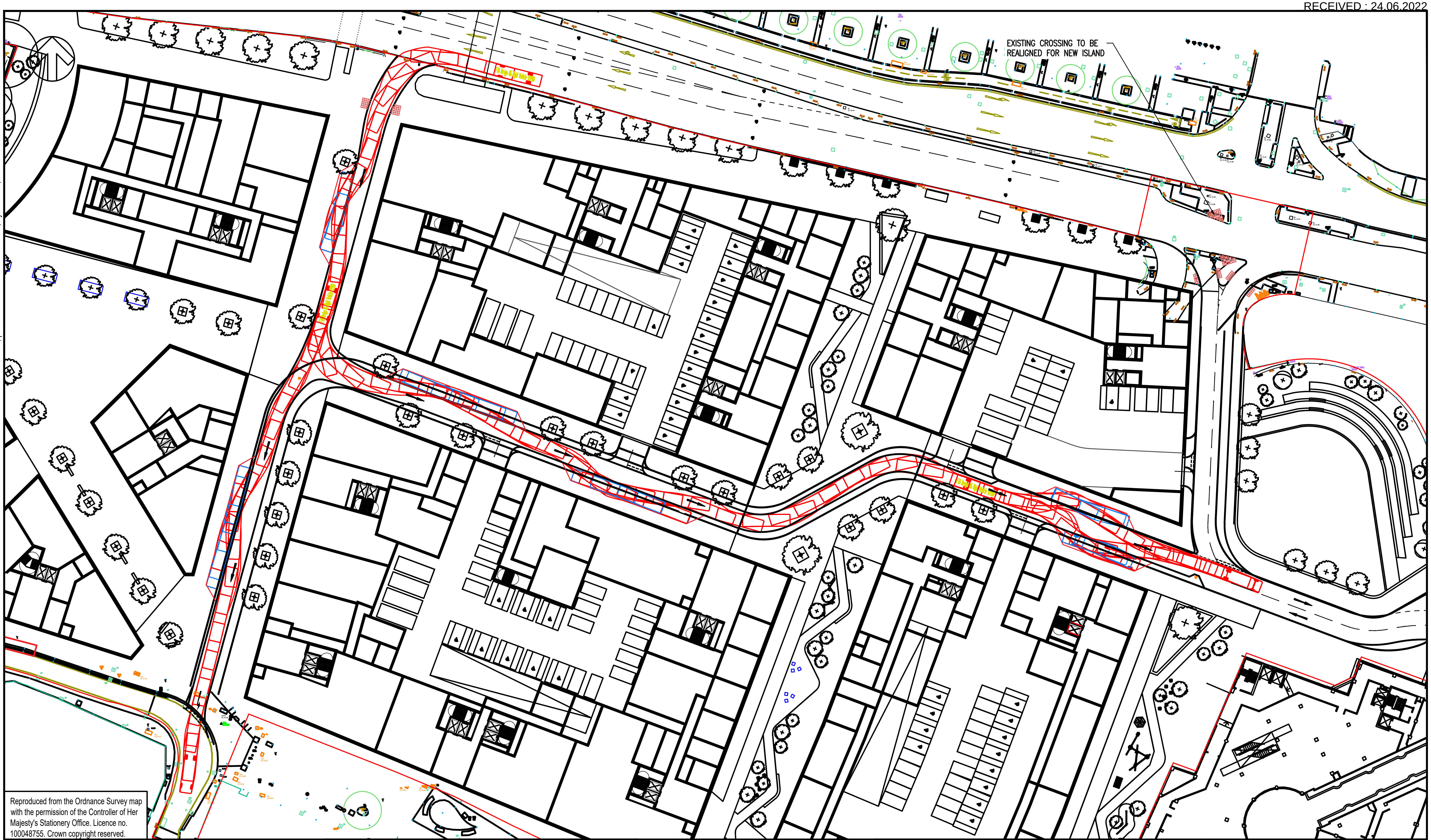
Vehicles involved

Vehicle Ref	Vehicle Type	Vehicle Age	Driver Gender	Driver Age Band	Vehicle Maneouvre	First Point of Impact	Journey Purpose	Hit Object - On Carriageway	Hit Object - Off Carriageway
1	Pedal cycle	-1	Female	Over 75	Vehicle proceeding normally along the carriageway, not on a bend	Front	Other	None	None
2	Goods vehicle over 3.5 tonnes and under 7.5 tonnes mgw	-1	Male	46 - 55	Vehicle proceeding normally along the carriageway, not on a bend	Nearside	Journey as part of work	None	None

Casualties

Vehicle Ref	Casualty Ref	Injury Severity	Casualty Class	Gender	Age Band	Pedestrian Location	Pedestrian Movement
1	1	Serious	Driver or rider	Female	Over 75	Unknown or other	Unknown or other

Appendix C



FTA Design HG Rigid Vehicle (1998)	
Overall Length	10.000m
Overall Width	2.500m
Overall Body Height	3.645m
Min Body Ground Clearance	0.440m
Track Width	2.470m
Lock to lock time	3.00s
Kerb to Kerb Turning Radius	11.000m

REV	DATE	BY	DESCRIPTION	CHK	APP
P03	14/06/2022	LB	SECOND REVISION	AT	DMCD

DRAWING STATUS: S0 - WORK IN PROGRESS

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CLIENT:	GREEN MONARCH
ARCHITECT:	SQUIRE AND PARTNERS
PROJECT:	SLOUGH TOWN CENTRE
TITLE:	SWEPT PATH ANALYSIS OF 10M RIGID ON QUEENSMERE ROAD
SCALE @ A3:	1:750
CHECKED:	AT
APPROVED:	DMCD
PROJECT No:	70060763
DESIGNED:	LB
DRAWN:	LB
DATE:	June 2022
DRAWING No:	70060763-TP-SK-29
REV:	P03

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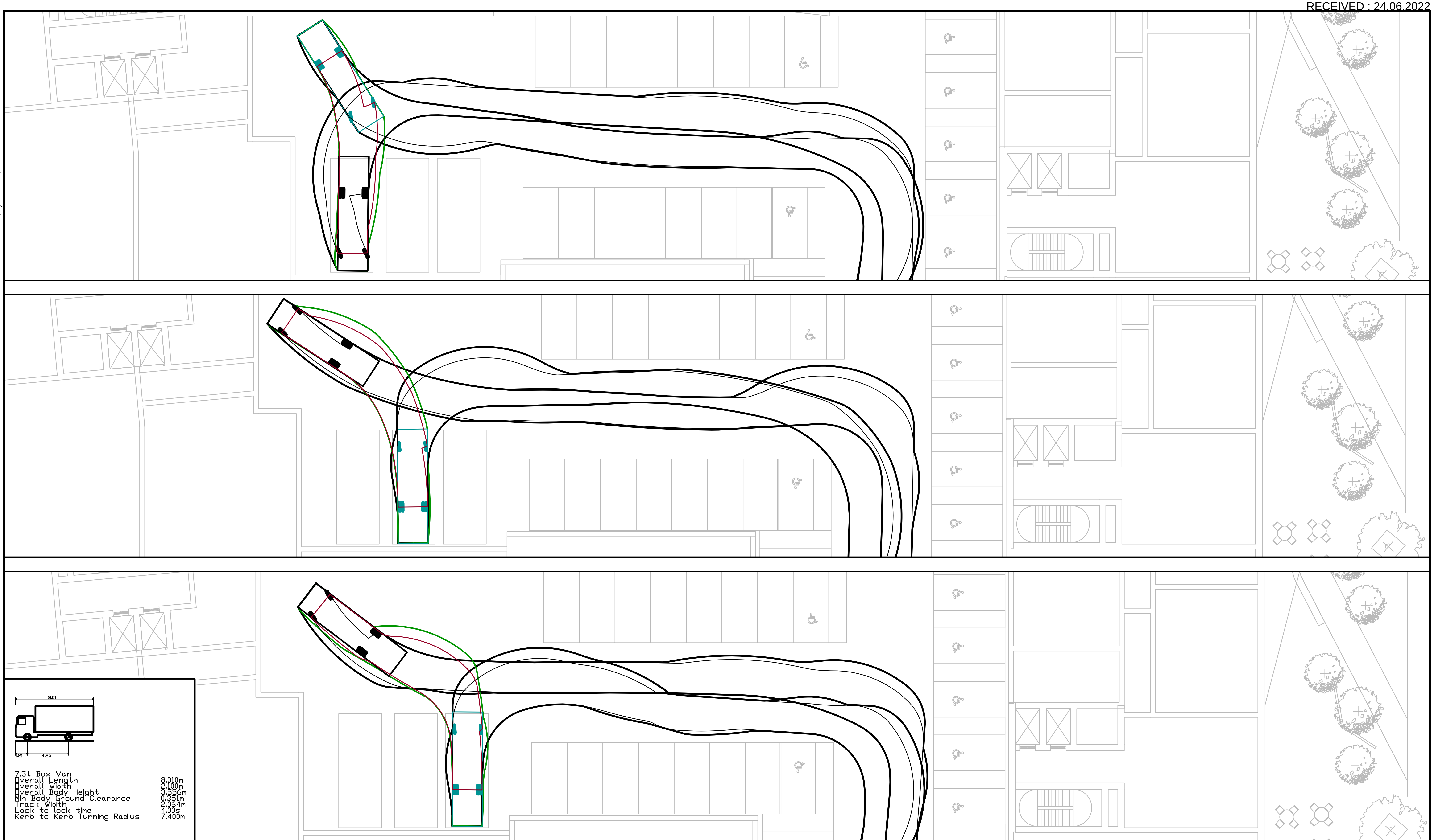

7.5t Box Van

Overall Length	8.010m
Overall Width	2.100m
Overall Body Height	3.556m
Min Body Ground Clearance	0.351m
Track Width	2.064m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	7.400m

REV	DATE	BY	DESCRIPTION	CHK	APP
P02	15/10/2021	LB	SECOND ISSUE	AT	DM
P01	13/05/2021	LB	FIRST ISSUE	AT	DM

DRAWING STATUS:
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CLIENT: GREEN MONARCH

ARCHITECT: SQUIRE AND PARTNERS

PROJECT: SLOUGH TOWN CENTRE

TITLE: SWEPT PATH ANALYSIS OF 10M RIGID VEHICLE
DEVELOPMENT ZONE 4

SCALE @ A3:	CHECKED:	APPROVED:
1:250	AT	DM

PROJECT No:	DESIGNED:	DRAWN:	DATE:
70060763	LB	LB	October 21

DRAWING No:	REV:
70060763-TP-SK-22	P01

File name \\UK.WSPGROUP.COM\CENTRAL DATA\PROJECTS\70060XXX\70060763 - SLOUGH TOWN CENTRE\03 WIP\TP TRANSPORT PLANNING\03 DRAWINGS\70060763-TP-SK-22.DWG, printed on 15 October 2021 11:52:30, by Bellezza, Liban

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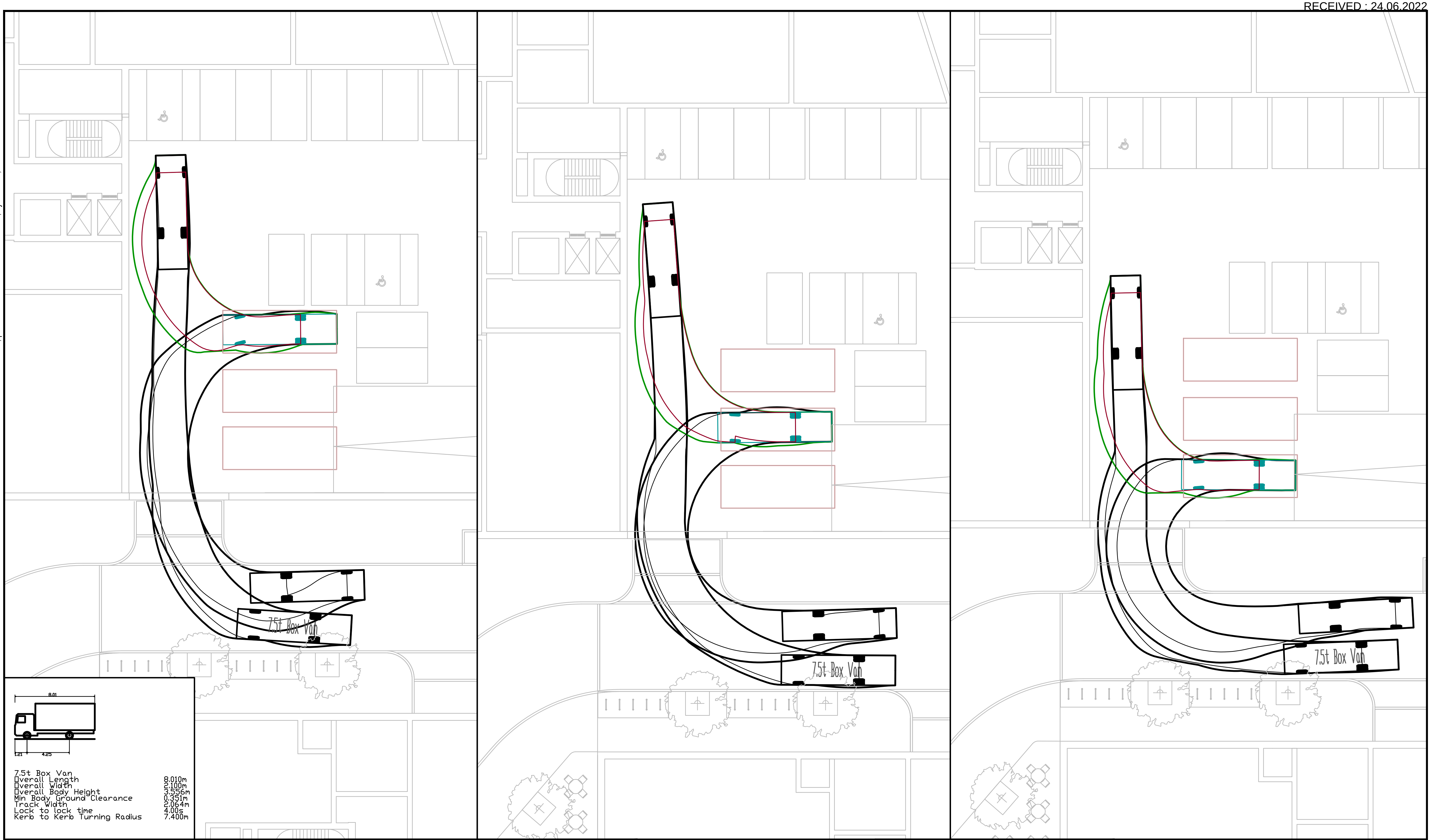

REV	DATE	BY	DESCRIPTION	CHK	APP
P2	15/10/2021	LB	SECOND ISSUE	LB	AT
P01	09/06/2021	LB	FIRST ISSUE	AT	AT

DRAWING STATUS: S0 - WORK IN PROGRESS

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CLIENT: GREEN MONARCH

ARCHITECT: SQUIRE AND PARTNERS

PROJECT: SLOUGH TOWN CENTRE

TITLE: SWEPT PATH ANALYSIS OF BOX VAN ZONE 6

SCALE @ A3:	CHECKED:		APPROVED:
1:500	AT		AT
PROJECT No:	DESIGNED:	DRAWN:	DATE:
70060763	LB	LB	October 21

DRAWING No: 70060763-TP-SK-23

REV: P02

File name \\UK.WSPGROUP.COM\CENTRAL DATA\PROJECTS\700607XX\70060763 - SLOUGH TOWN CENTRE\03 WIP\TP TRANSPORT PLANNING\03 DRAWINGS\70060763-TP-SK-23.DWG, printed on 15 October 2021 14:59:35, by Bellezza, Liban

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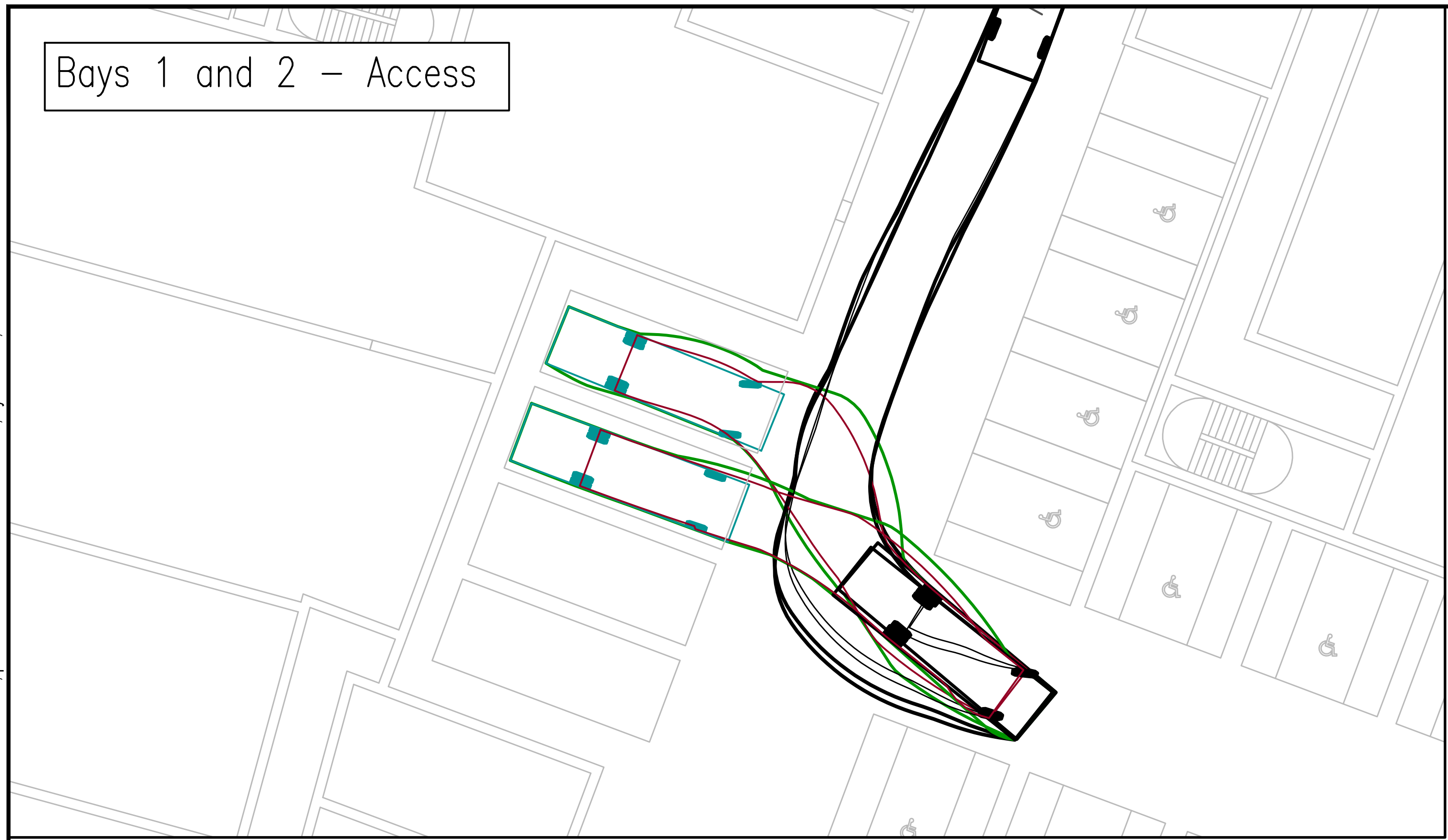

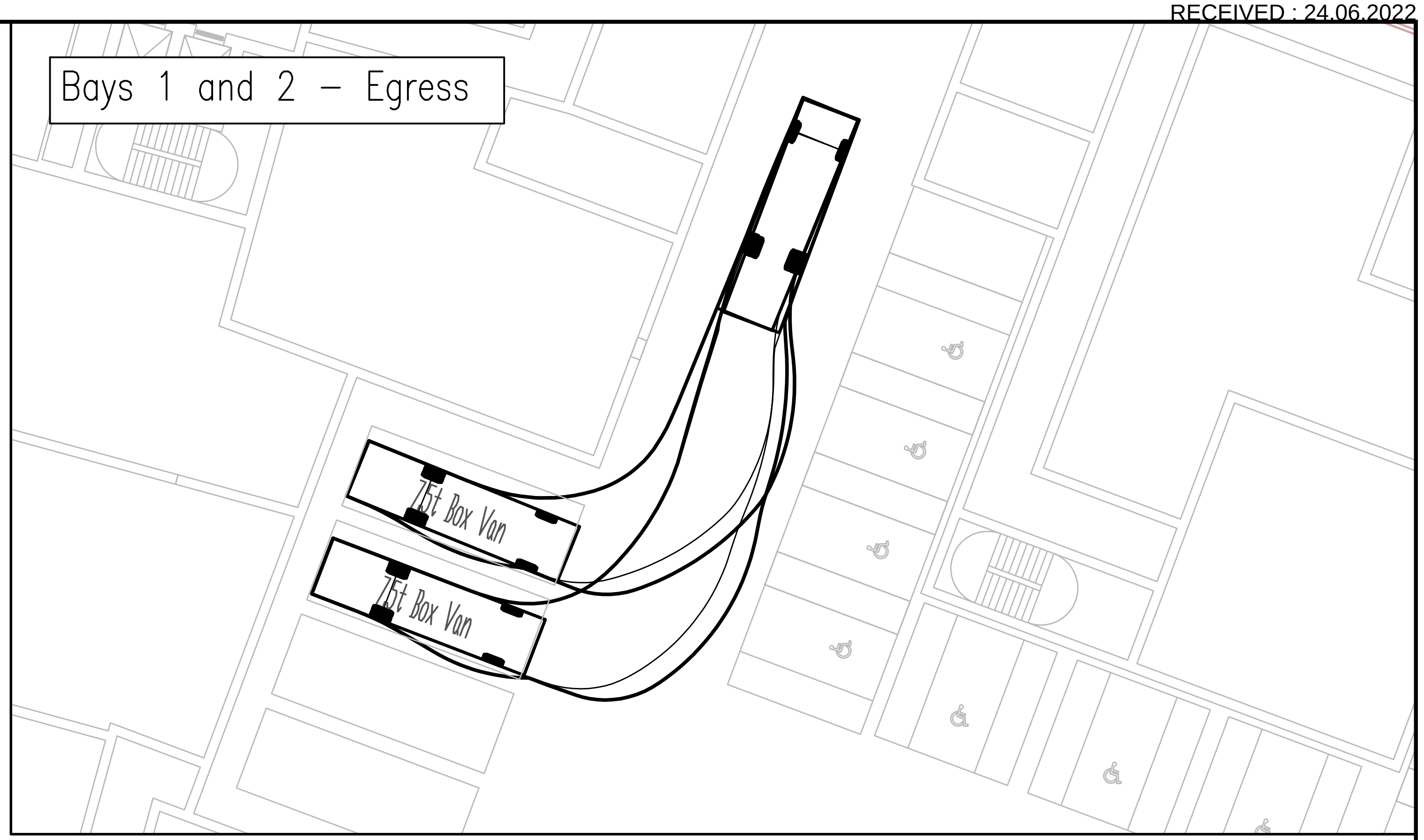

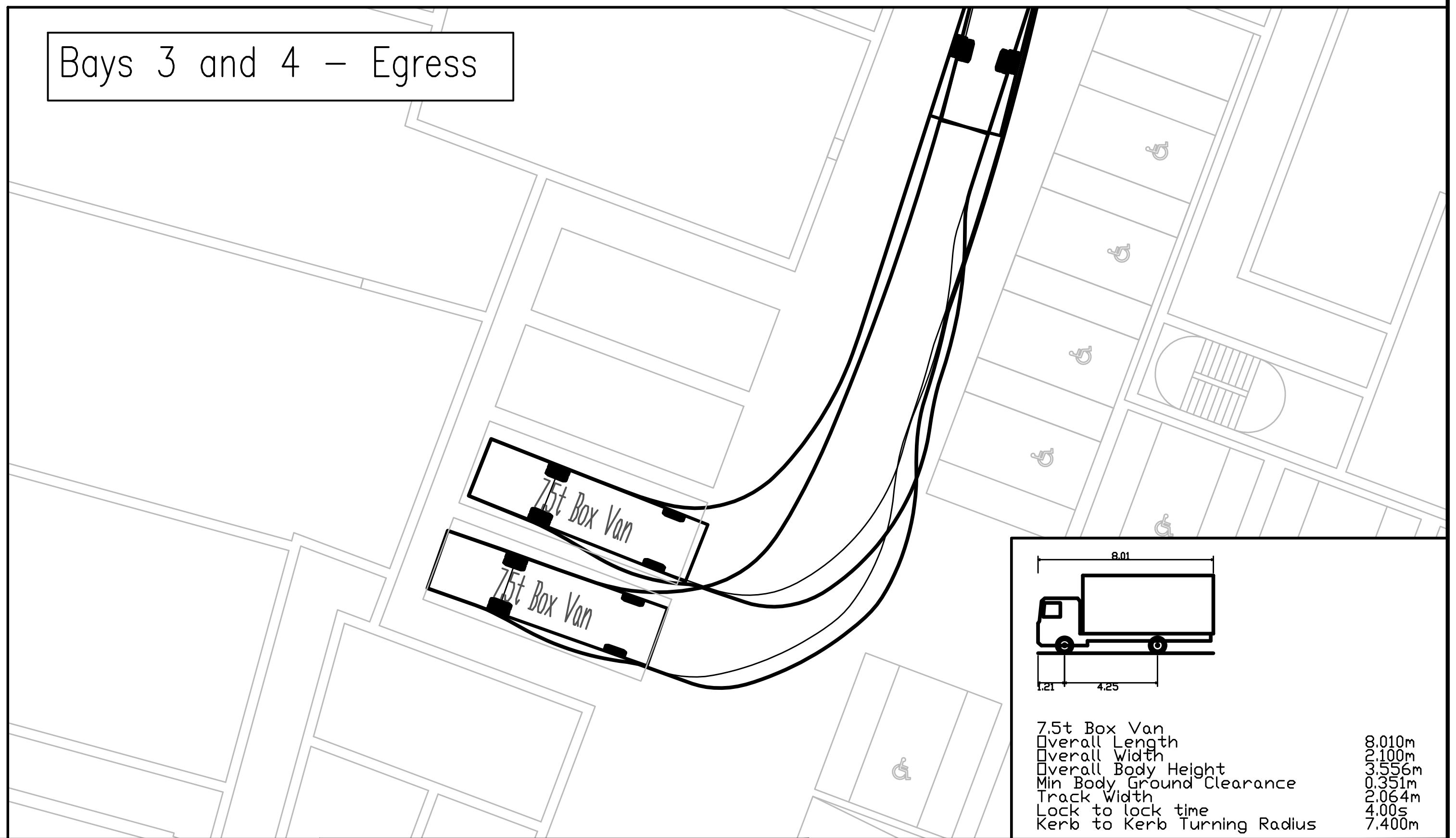

REV	DATE	BY	DESCRIPTION	CHK	APP
P02	15/10/2021	LB	SECOND ISSUE	AT	DMCD
P01	16/07/2021	LB	FIRST ISSUE	AT	AT

DRAWING STATUS: S0 - WORK IN PROGRESS

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wsp.com

CLIENT: GREEN MONARCH

ARCHITECT: SQUIRE AND PARTNERS

PROJECT: SLOUGH TOWN CENTRE

TITLE: SWEPT PATH ANALYSIS
7.5T BOX VAN
ZONE 3

SCALE @ A3: 1:250	CHECKED: AT	APPROVED: DMCD
PROJECT No: 70060763	DESIGNED: LB / DRAWN: LB	DATE: October 21
DRAWING No: 70060763-TP-SK-24		REV: P02

File name \\UK.WSPGROUP.COM\CENTRAL DATA\PROJECTS\700607XX\70060763 - SLOUGH TOWN CENTRE\03 WIP\TP TRANSPORT PLANNING\03 DRAWINGS\70060763-TP-SK-24.DWG, printed on 15 October 2021 15:14:46, by Bellezza, Liban

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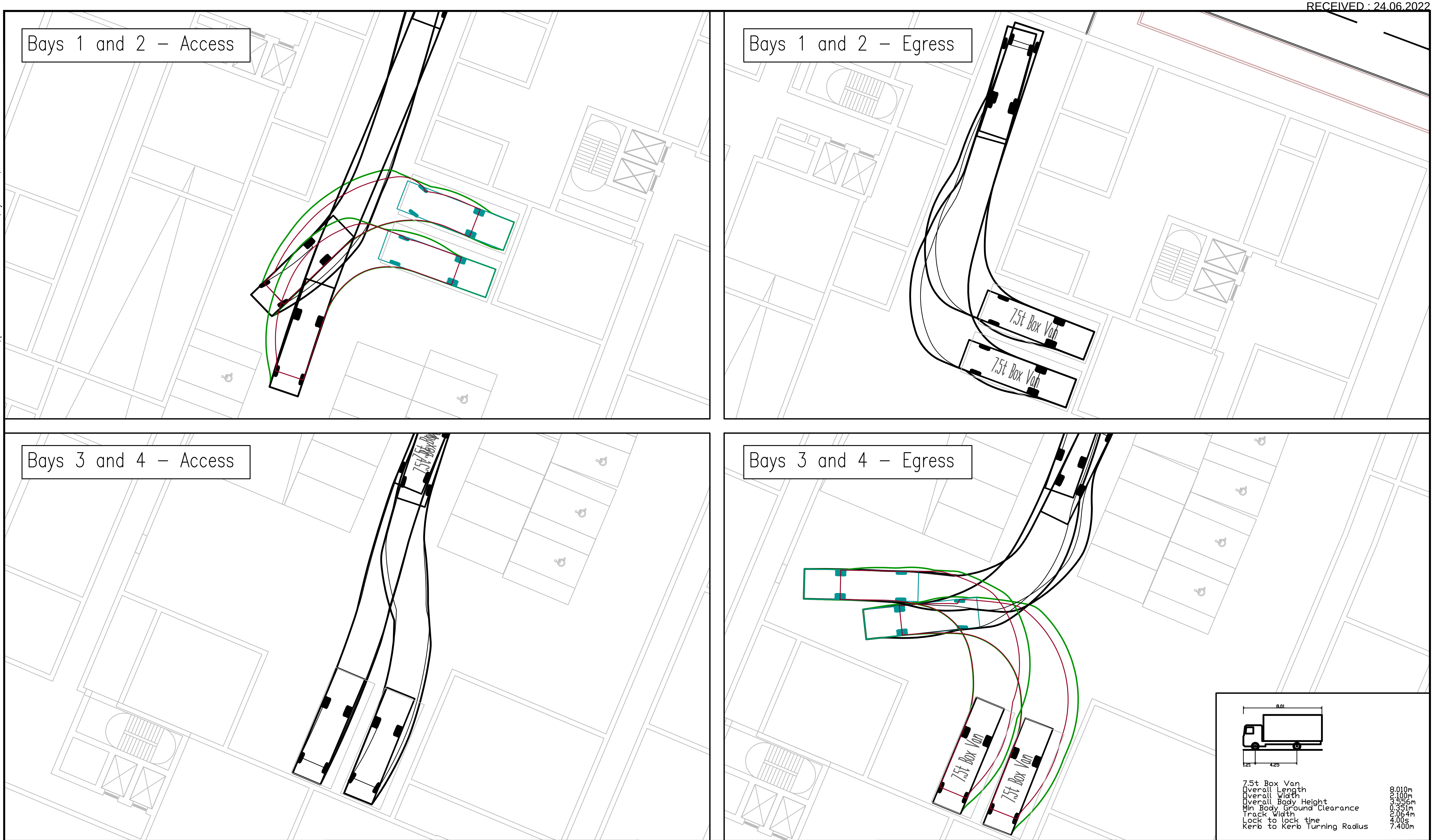

REV	DATE	BY	DESCRIPTION	CHK	APP
P02	15/10/2021	LB	SECOND ISSUE	AT	DMCD
P01	16/07/2021	LB	FIRST ISSUE	AT	AT

DRAWING STATUS: S0 - WORK IN PROGRESS

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CLIENT: GREEN MONARCH

ARCHITECT: SQUIRE AND PARTNERS

PROJECT: SLOUGH TOWN CENTRE

TITLE: SWEPT PATH ANALYSIS
7.5T BOX VAN
ZONE 5

SCALE @ A3: 1:250	CHECKED: AT		APPROVED: DMCD
PROJECT No: 70060763	DESIGNED: LB	DRAWN: LB	DATE: October 21

DRAWING No: 70060763-TP-SK-25

REV: P02

SBC PLANNING
RECEIVED : 24.06.2022

Appendix D

Filtering Summary

Land Use	02/A	EMPLOYMENT/OFFICE
Selected Trip Rate Calculation Parameter Range	2500-114000 sqm GFA	
Actual Trip Rate Calculation Parameter Range	3950-40000 sqm GFA	
Date Range	Minimum: 01/01/11	Maximum: 06/03/19
Parking Spaces Range	All Surveys Included	
Days of the week selected	Monday	1
	Tuesday	2
	Wednesday	3
Main Location Types selected	Town Centre	6
Population <1 Mile ranges selected	15,001 to 20,000	1
	25,001 to 50,000	3
	50,001 to 100,000	1
	100,001 or More	1
Population <5 Mile ranges selected	125,001 to 250,000	2
	250,001 to 500,000	1
	500,001 or More	3
Car Ownership <5 Mile ranges selected	0.6 to 1.0	3
	1.1 to 1.5	2
	1.6 to 2.0	1
PTAL Rating	No PTAL Present	5
	6b (High) Excellent	1

Calculation Reference: AUDIT-100301-200128-0136

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : A - OFFICE
MULTI-MODAL TOTAL PEOPLE

Selected regions and areas:

01	GREATER LONDON		
	CN	CAMDEN	1 days
02	SOUTH EAST		
	EX	ESSEX	1 days
04	EAST ANGLIA		
	CA	CAMBRIDGESHIRE	1 days
08	NORTH WEST		
	GM	GREATER MANCHESTER	2 days
09	NORTH		
	TV	TEES VALLEY	1 days

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

Secondary 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: 3950 to 40000 (units: sqm)
Range Selected by User: 2500 to 114000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/11 to 06/03/19

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	2 days
Wednesday	3 days

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

Selected survey types:

Manual count	6 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 undertaking using machines.

Selected Locations:

Town Centre	6

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:

Commercial Zone	1
Built-Up Zone	5

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.

Secondary Filtering selection:

Use Class:

B1	6 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

15,001 to 20,000	1 days
25,001 to 50,000	3 days
50,001 to 100,000	1 days
100,001 or More	1 days

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

Population within 5 miles:

125,001 to 250,000	2 days
250,001 to 500,000	1 days
500,001 or More	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	3 days
1.1 to 1.5	2 days
1.6 to 2.0	1 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	2 days
No	4 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	5 days
6b (High) Excellent	1 days

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

LIST OF SITES relevant to selection parameters

1 CA-02-A-05 OFFICES CAMBRIDGESHIRE
NEW ROAD
PETERBOROUGH

Town Centre
Built-Up Zone
Total Gross floor area: 8793 sqm
Survey date: TUESDAY 16/12/14 Survey Type: MANUAL

2 CN-02-A-03 PLANNING & ENGINEERING CAMDEN
FITZROY STREET
FITZROVIA

Town Centre
Built-Up Zone
Total Gross floor area: 26639 sqm
Survey date: WEDNESDAY 06/12/17 Survey Type: MANUAL

3 EX-02-A-03 HMRC ESSEX
VICTORIA AVENUE
SOUTHEND-ON-SEA

Town Centre
Built-Up Zone
Total Gross floor area: 45000 sqm
Survey date: WEDNESDAY 23/10/13 Survey Type: MANUAL

4 GM-02-A-07 LAW OFFICES GREATER MANCHESTER
MOSELEY STREET
MANCHESTER

Town Centre
Built-Up Zone
Total Gross floor area: 4200 sqm
Survey date: WEDNESDAY 19/10/11 Survey Type: MANUAL

5 GM-02-A-08 REGUS GREATER MANCHESTER
FOUNTAIN STREET
MANCHESTER

Town Centre
Built-Up Zone
Total Gross floor area: 3960 sqm
Survey date: MONDAY 26/09/16 Survey Type: MANUAL

6 TV-02-A-04 COUNCIL OFFICES TEES VALLEY
CORPORATION ROAD
MIDDLESBROUGH

Town Centre
Commercial Zone
Total Gross floor area: 3950 sqm
Survey date: TUESDAY 08/10/13 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
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	6	14590	0.366	6	14590	0.023	6	14590	0.389
07:30 - 08:00	6	14590	0.527	6	14590	0.046	6	14590	0.573
08:00 - 08:30	6	14590	0.851	6	14590	0.066	6	14590	0.917
08:30 - 09:00	**6**	**14590**	**1.062**	6	14590	0.103	**6**	**14590**	**1.165**
09:00 - 09:30	6	14590	0.965	6	14590	0.130	6	14590	1.095
09:30 - 10:00	6	14590	0.543	6	14590	0.127	6	14590	0.670
10:00 - 10:30	6	14590	0.388	6	14590	0.215	6	14590	0.603
10:30 - 11:00	6	14590	0.319	6	14590	0.215	6	14590	0.534
11:00 - 11:30	6	14590	0.210	6	14590	0.199	6	14590	0.409
11:30 - 12:00	6	14590	0.219	6	14590	0.265	6	14590	0.484
12:00 - 12:30	6	14590	0.465	6	14590	0.683	6	14590	1.148
12:30 - 13:00	6	14590	0.519	6	14590	0.584	6	14590	1.103
13:00 - 13:30	6	14590	0.572	6	14590	0.540	6	14590	1.112
13:30 - 14:00	6	14590	0.481	6	14590	0.311	6	14590	0.792
14:00 - 14:30	6	14590	0.279	6	14590	0.182	6	14590	0.461
14:30 - 15:00	6	14590	0.164	6	14590	0.320	6	14590	0.484
15:00 - 15:30	6	14590	0.109	6	14590	0.383	6	14590	0.492
15:30 - 16:00	6	14590	0.095	6	14590	0.420	6	14590	0.515
16:00 - 16:30	6	14590	0.096	6	14590	0.469	6	14590	0.565
16:30 - 17:00	6	14590	0.047	6	14590	0.524	6	14590	0.571
17:00 - 17:30	6	14590	0.057	6	14590	0.820	6	14590	0.877
17:30 - 18:00	6	14590	0.039	**6**	**14590**	**0.872**	6	14590	0.911
18:00 - 18:30	6	14590	0.022	6	14590	0.565	6	14590	0.587
18:30 - 19:00	6	14590	0.045	6	14590	0.252	6	14590	0.297
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			8.440			8.314			16.754

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.*

Filtering Summary

Land Use	03/C	RESIDENTIAL/FLATS PRIVATELY OWNED
Selected Trip Rate Calculation Parameter Range	150-493 DWELLS	
Actual Trip Rate Calculation Parameter Range	154-194 DWELLS	
Date Range	Minimum: 01/01/11	Maximum: 18/06/19
Parking Spaces Range	All Surveys Included	
Bedrooms Per Dwelling Range:	All Surveys Included	
Percentage of dwellings privately owned:	All Surveys Included	
Days of the week selected	Monday	1
	Tuesday	2
	Thursday	2
Main Location Types selected	Town Centre	3
	Edge of Town Centre	2
Population <1 Mile ranges selected	25,001 to 50,000	3
	50,001 to 100,000	1
	100,001 or More	1
Population <5 Mile ranges selected	50,001 to 75,000	1
	500,001 or More	4
Car Ownership <5 Mile ranges selected	0.5 or Less	2
	0.6 to 1.0	2
	1.1 to 1.5	1
PTAL Rating	No PTAL Present	2
	5 Very Good	1
	6a Excellent	1
	6b (High) Excellent	1

SBC PLANNING
RECEIVED : 24.06.2022

Calculation Reference: AUDIT-100301-200129-0140

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : C - FLATS PRIVATELY OWNED
MULTI-MODAL TOTAL PEOPLE

Selected regions and areas:

01	GREATER LONDON		
	BM	BROMLEY	1 days
	HM	HAMMERSMITH AND FULHAM	1 days
	IS	ISLINGTON	1 days
02	SOUTH EAST		
	BD	BEDFORDSHIRE	1 days
08	NORTH WEST		
	GM	GREATER MANCHESTER	1 days

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

Secondary 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: Number of dwellings
Actual Range: 154 to 194 (units:)
Range Selected by User: 150 to 493 (units:)

Parking Spaces Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/11 to 18/06/19

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	2 days
Thursday	2 days

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

Selected survey types:

Manual count	5 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 undertaking using machines.

Selected Locations:

Town Centre	3
Edge of Town Centre	2

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:

Development Zone	1
Residential Zone	1
Built-Up Zone	3

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.

Secondary Filtering selection:

Use Class:

C3	5 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

25,001 to 50,000	3 days
50,001 to 100,000	1 days
100,001 or More	1 days

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

Population within 5 miles:

50,001 to 75,000	1 days
500,001 or More	4 days

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

Car ownership within 5 miles:

0.5 or Less	2 days
0.6 to 1.0	2 days
1.1 to 1.5	1 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	2 days
No	3 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	2 days
5 Very Good	1 days
6a Excellent	1 days
6b (High) Excellent	1 days

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

LIST OF SITES relevant to selection parameters

Site(1):	BD-03-C-01	Site area:	0.85 hect
Development Name:	BLOCKS OF FLATS	Number of dwellings:	175
Location:	LEIGHTON BUZZARD	Housing density:	673
Postcode:	LU7 2NG	Total Bedrooms:	350
Main Location Type:	Edge of Town Centre	Survey Date:	15/05/18
Sub-Location Type:	Residential Zone	Survey Day:	Tuesday
PTAL:	n/a	Parking Spaces:	213

Site(2):	BM-03-C-01	Site area:	0.36 hect
Development Name:	BLOCKS OF FLATS	Number of dwellings:	160
Location:	BROMLEY	Housing density:	842
Postcode:	BR1 1HR	Total Bedrooms:	232
Main Location Type:	Town Centre	Survey Date:	12/11/18
Sub-Location Type:	Built-Up Zone	Survey Day:	Monday
PTAL:	6a Excellent	Parking Spaces:	83

Site(3):	GM-03-C-02	Site area:	0.37 hect
Development Name:	BLOCK OF FLATS	Number of dwellings:	154
Location:	MANCHESTER	Housing density:	670
Postcode:	M1 5BD	Total Bedrooms:	280
Main Location Type:	Town Centre	Survey Date:	13/10/11
Sub-Location Type:	Built-Up Zone	Survey Day:	Thursday
PTAL:	n/a	Parking Spaces:	100

Site(4):	HM-03-C-02	Site area:	0.45 hect
Development Name:	BLOCKS OF FLATS	Number of dwellings:	194
Location:	HAMMERSMITH	Housing density:	431
Postcode:	W6 OBU	Total Bedrooms:	375
Main Location Type:	Town Centre	Survey Date:	30/04/19
Sub-Location Type:	Built-Up Zone	Survey Day:	Tuesday
PTAL:	6b (High) Excellent	Parking Spaces:	53

Site(5):	IS-03-C-07	Site area:	0.21 hect
Development Name:	BLOCK OF FLATS	Number of dwellings:	185
Location:	ISLINGTON	Housing density:	1423
Postcode:	EC1V 1AD	Total Bedrooms:	292
Main Location Type:	Edge of Town Centre	Survey Date:	06/06/19
Sub-Location Type:	Development Zone	Survey Day:	Thursday
PTAL:	5 Very Good	Parking Spaces:	86

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	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	5	174	0.048	5	174	0.313	5	174	0.361
08:00 - 09:00	5	174	0.074	5	**174**	**0.491**	5	174	0.565
09:00 - 10:00	5	174	0.088	5	174	0.220	5	174	0.308
10:00 - 11:00	5	174	0.111	5	174	0.142	5	174	0.253
11:00 - 12:00	5	174	0.099	5	174	0.131	5	174	0.230
12:00 - 13:00	5	174	0.141	5	174	0.160	5	174	0.301
13:00 - 14:00	5	174	0.134	5	174	0.136	5	174	0.270
14:00 - 15:00	5	174	0.127	5	174	0.119	5	174	0.246
15:00 - 16:00	5	174	0.195	5	174	0.165	5	174	0.360
16:00 - 17:00	5	174	0.240	5	174	0.189	5	174	0.429
17:00 - 18:00	5	174	0.351	5	174	0.134	5	174	0.485
18:00 - 19:00	5	**174**	**0.472**	5	174	0.141	5	**174**	**0.613**
19:00 - 20:00	3	180	0.295	3	180	0.126	3	180	0.421
20:00 - 21:00	3	180	0.147	3	180	0.095	3	180	0.242
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.522			2.562			5.084

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.*

Filtering Summary

Land Use	02/A	EMPLOYMENT/OFFICE
Selected Trip Rate Calculation Parameter Range	2500-114000 sqm GFA	
Actual Trip Rate Calculation Parameter Range	3960-40000 sqm GFA	
Date Range	Minimum: 01/01/11	Maximum: 06/03/19
Parking Spaces Range	All Surveys Included	
Days of the week selected	Monday	1
	Wednesday	3
Main Location Types selected	Town Centre	4
Population <1 Mile ranges selected	25,001 to 50,000	2
	50,001 to 100,000	1
	100,001 or More	1
Population <5 Mile ranges selected	125,001 to 250,000	1
	500,001 or More	3
Car Ownership <5 Mile ranges selected	0.6 to 1.0	3
	1.1 to 1.5	1
PTAL Rating	No PTAL Present	3
	6b (High) Excellent	1

Calculation Reference: AUDIT-100301-200204-0232

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : A - OFFICE
MULTI-MODAL TOTAL PEOPLE

Selected regions and areas:

01	GREATER LONDON		
	CN	CAMDEN	1 days
02	SOUTH EAST		
	EX	ESSEX	1 days
08	NORTH WEST		
	GM	GREATER MANCHESTER	2 days

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

Secondary 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: 3960 to 40000 (units: sqm)
Range Selected by User: 2500 to 114000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/11 to 06/03/19

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
Wednesday 3 days

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

Selected survey types:
Manual count 4 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 undertaking using machines.

Selected Locations:
Town Centre 4

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:
Built-Up Zone 4

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.

Secondary Filtering selection:

Use Class:
B1 4 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Secondary Filtering selection (Cont.):

Population within 1 mile:

25,001 to 50,000	2 days
50,001 to 100,000	1 days
100,001 or More	1 days

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

Population within 5 miles:

125,001 to 250,000	1 days
500,001 or More	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	3 days
1.1 to 1.5	1 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	3 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	3 days
6b (High) Excellent	1 days

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

LIST OF SITES relevant to selection parameters

1 CN-02-A-03 PLANNING & ENGINEERING CAMDEN
FITZROY STREET
FITZROVIA

Town Centre
Built-Up Zone
Total Gross floor area: 26639 sqm
Survey date: WEDNESDAY 06/12/17 Survey Type: MANUAL

2 EX-02-A-03 HMRC ESSEX
VICTORIA AVENUE
SOUTHEND-ON-SEA

Town Centre
Built-Up Zone
Total Gross floor area: 45000 sqm
Survey date: WEDNESDAY 23/10/13 Survey Type: MANUAL

3 GM-02-A-07 LAW OFFICES GREATER MANCHESTER
MOSELEY STREET
MANCHESTER

Town Centre
Built-Up Zone
Total Gross floor area: 4200 sqm
Survey date: WEDNESDAY 19/10/11 Survey Type: MANUAL

4 GM-02-A-08 REGUS GREATER MANCHESTER
FOUNTAIN STREET
MANCHESTER

Town Centre
Built-Up Zone
Total Gross floor area: 3960 sqm
Survey date: MONDAY 26/09/16 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.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
CA-02-A-05	Employee density not comparable
TV-02-A-04	Council Offices not comparable

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

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	4	18700	0.386	4	18700	0.019	4	18700	0.405
07:30 - 08:00	4	18700	0.557	4	18700	0.043	4	18700	0.600
08:00 - 08:30	4	18700	0.842	4	18700	0.068	4	18700	0.910
08:30 - 09:00	4	**18700**	**1.104**	4	18700	0.086	4	**18700**	**1.190**
09:00 - 09:30	4	18700	1.043	4	18700	0.126	4	18700	1.169
09:30 - 10:00	4	18700	0.557	4	18700	0.099	4	18700	0.656
10:00 - 10:30	4	18700	0.381	4	18700	0.201	4	18700	0.582
10:30 - 11:00	4	18700	0.283	4	18700	0.197	4	18700	0.480
11:00 - 11:30	4	18700	0.182	4	18700	0.156	4	18700	0.338
11:30 - 12:00	4	18700	0.193	4	18700	0.233	4	18700	0.426
12:00 - 12:30	4	18700	0.439	4	18700	0.667	4	18700	1.106
12:30 - 13:00	4	18700	0.479	4	18700	0.572	4	18700	1.051
13:00 - 13:30	4	18700	0.520	4	18700	0.489	4	18700	1.009
13:30 - 14:00	4	18700	0.426	4	18700	0.274	4	18700	0.700
14:00 - 14:30	4	18700	0.235	4	18700	0.127	4	18700	0.362
14:30 - 15:00	4	18700	0.134	4	18700	0.281	4	18700	0.415
15:00 - 15:30	4	18700	0.074	4	18700	0.360	4	18700	0.434
15:30 - 16:00	4	18700	0.071	4	18700	0.408	4	18700	0.479
16:00 - 16:30	4	18700	0.072	4	18700	0.424	4	18700	0.496
16:30 - 17:00	4	18700	0.045	4	18700	0.525	4	18700	0.570
17:00 - 17:30	4	18700	0.064	4	18700	0.858	4	18700	0.922
17:30 - 18:00	4	18700	0.036	4	**18700**	**0.947**	4	18700	0.983
18:00 - 18:30	4	18700	0.023	4	18700	0.635	4	18700	0.658
18:30 - 19:00	4	18700	0.047	4	18700	0.265	4	18700	0.312
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			8.193			8.060			16.253

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.*

Calculation Reference: AUDIT-100301-200617-0621

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 07 - LEISURE
Category : A - MULTIPLEX CINEMAS
MULTI-MODAL TOTAL PEOPLE

Selected regions and areas:

01	GREATER LONDON		
	CN	CAMDEN	1 days
06	WEST MIDLANDS		
	SH	SHROPSHIRE	1 days
	WO	WORCESTERSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	NY	NORTH YORKSHIRE	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: 464 to 4500 (units: sqm)
Range Selected by User: 464 to 4500 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/05 to 18/11/16

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:
Friday 4 days

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

Selected survey types:
Manual count 4 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 undertaking using machines.

Selected Locations:
Town Centre 2
Edge of Town Centre 1
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:
Retail Zone 1
Built-Up Zone 2
High Street 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.

Secondary Filtering selection:

Use Class:
D2 4 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Secondary Filtering selection (Cont.):

Population within 1 mile:

5,001 to 10,000	1 days
20,001 to 25,000	1 days
25,001 to 50,000	1 days
50,001 to 100,000	1 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	1 days
125,001 to 250,000	2 days
500,001 or More	1 days

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

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	1 days
1.1 to 1.5	1 days
1.6 to 2.0	1 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	4 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	3 days
6b (High) Excellent	1 days

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

LIST OF SITES relevant to selection parameters

1 CN-07-A-01 ODEON CAMDEN
TOTTENHAM COURT RD
BLOOMSBURY

Town Centre
Built-Up Zone
Total Gross floor area: 464 sqm
Survey date: FRIDAY 23/10/09 Survey Type: MANUAL

2 NY-07-A-02 VUE NORTH YORKSHIRE
STIRLING ROAD
YORK
CLIFTON MOOR
Edge of Town
Retail Zone
Total Gross floor area: 4500 sqm
Survey date: FRIDAY 18/09/09 Survey Type: MANUAL

3 SH-07-A-02 CINEWORLD SHROPSHIRE
OLD POTTS WAY
SHREWSBURY

Edge of Town Centre
Built-Up Zone
Total Gross floor area: 2400 sqm
Survey date: FRIDAY 19/06/09 Survey Type: MANUAL

4 WO-07-A-01 ODEON WORCESTERSHIRE
FOREGATE STREET
WORCESTER

Town Centre
High Street
Total Gross floor area: 2200 sqm
Survey date: FRIDAY 18/11/16 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 07 - LEISURE/A - MULTIPLEX CINEMAS

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00	2	3450	0.116	2	3450	1.580	2	3450	1.696
01:00 - 02:00	2	3450	0.000	2	3450	1.333	2	3450	1.333
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00									
08:00 - 09:00									
09:00 - 10:00									
10:00 - 11:00	2	2300	0.000	2	2300	0.000	2	2300	0.000
11:00 - 12:00	2	2300	0.022	2	2300	0.022	2	2300	0.044
12:00 - 13:00	4	2391	1.349	4	2391	0.523	4	2391	1.872
13:00 - 14:00	4	2391	2.028	4	2391	0.910	4	2391	2.938
14:00 - 15:00	4	2391	1.819	4	2391	0.857	4	2391	2.676
15:00 - 16:00	4	2391	2.248	4	2391	1.893	4	2391	4.141
16:00 - 17:00	4	2391	3.168	4	2391	2.373	4	2391	5.541
17:00 - 18:00	4	2391	4.391	4	2391	2.488	4	2391	6.879
18:00 - 19:00	4	2391	6.723	4	2391	3.921	4	2391	10.644
19:00 - 20:00	4	**2391**	**10.006**	4	2391	5.217	4	2391	15.223
20:00 - 21:00	4	2391	8.574	4	2391	7.037	4	**2391**	**15.611**
21:00 - 22:00	4	2391	6.159	4	2391	6.964	4	2391	13.123
22:00 - 23:00	4	2391	2.394	4	**2391**	**8.982**	4	2391	11.376
23:00 - 24:00	4	2391	0.450	4	2391	5.646	4	2391	6.096
Total Rates:			49.447			49.746			99.193

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.

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Appendix E

Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.0.2.1574

For sales and distribution information, program advice and maintenance, contact TRL Software:
+44 (0)1344 379777 software@trl.co.uk trlsoftware.com

Filename: J3_Wellington St_ Queensmere Rd.j10
Path: \\uk.wspgroup.com\central data\Projects\700607xx\70060763 - Slough Town Centre\03 WIP\TM Transport Modelling\DS4 Models
Report generation date: 14/06/2022 15:13:10

Summary of junction performance

	AM						PM					
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	DM											
1 - Wellington St W	D1	0.6	2.39	0.36	A	124 % [2 - Wellington St E]	D2	1.1	3.12	0.52	A	79 % [1 - Wellington St W]
2 - Wellington St E		0.8	2.27	0.43	A			0.7	2.29	0.43	A	
3 - Queensmere Rd		0.0	1.81	0.03	A			0.1	1.86	0.11	A	
	DS											
1 - Wellington St W	D3	0.7	2.59	0.39	A	118 % [2 - Wellington St E]	D4	1.2	3.39	0.53	A	67 % [1 - Wellington St W]
2 - Wellington St E		0.8	2.31	0.44	A			0.6	2.12	0.39	A	
3 - Queensmere Rd		0.2	1.88	0.17	A			0.3	1.82	0.22	A	
	DS2											
1 - Wellington St W	D5	0.7	2.60	0.39	A	130 % [3 - Queensmere Rd]	D6	1.2	3.32	0.53	A	70 % [1 - Wellington St W]
2 - Wellington St E		0.7	2.14	0.39	A			0.7	2.22	0.42	A	
3 - Queensmere Rd		0.3	2.00	0.21	A			0.2	1.72	0.16	A	
	DS3											
1 - Wellington St W	D7	0.7	2.59	0.39	A	118 % [2 - Wellington St E]	D8	1.2	3.39	0.53	A	67 % [1 - Wellington St W]
2 - Wellington St E		0.8	2.33	0.44	A			0.6	2.12	0.39	A	
3 - Queensmere Rd		0.2	2.08	0.18	A			0.3	2.05	0.24	A	
	DS4											
1 - Wellington St W	D9	0.7	2.64	0.40	A	121 % [3 - Queensmere Rd]	D10	1.5	3.79	0.59	A	55 % [1 - Wellington St W]
2 - Wellington St E		0.7	2.22	0.41	A			1.1	2.80	0.52	A	
3 - Queensmere Rd		0.3	2.06	0.22	A			0.2	2.00	0.19	A	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	24/09/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	CORP\INTW00749
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	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
	✓	Delay	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	DM	AM	ONE HOUR	07:45	09:15	15
D2	DM	PM	ONE HOUR	17:00	18:30	15
D3	DS	AM	ONE HOUR	07:45	09:15	15
D4	DS	PM	ONE HOUR	17:00	18:30	15
D5	DS2	AM	ONE HOUR	07:45	09:15	15
D6	DS2	PM	ONE HOUR	17:00	18:30	15
D7	DS3	AM	ONE HOUR	07:45	09:15	15
D8	DS3	PM	ONE HOUR	17:00	18:30	15
D9	DS4	AM	ONE HOUR	07:45	09:15	15
D10	DS4	PM	ONE HOUR	17:00	18:30	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

DM, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	J3	Standard Roundabout		1, 2, 3	2.31	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	124	2 - Wellington St E	2.31	A

Arms

Arms

Arm	Name	Description	No give-way line
1	Wellington St W		
2	Wellington St E		
3	Queensmere Rd		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - Wellington St W	6.83	11.75	5.1	21.5	63.6	13.0		
2 - Wellington St E	6.85	13.68	14.4	26.7	63.6	28.0		
3 - Queensmere Rd	9.11	10.37	3.5	19.0	63.6	9.5		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Wellington St W	0.701	2586
2 - Wellington St E	0.751	2953
3 - Queensmere Rd	0.795	3139

The slope and intercept shown above include any corrections and adjustments.

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	DM	AM	ONE HOUR	07:45	09:15	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 (%)
1 - Wellington St W		✓	829	100.000

2 - Wellington St E		✓	1118	100.000
3 - Queensmere Rd		✓	55	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Wellington St W	2 - Wellington St E	3 - Queensmere Rd
From	1 - Wellington St W	39	754	36
	2 - Wellington St E	1082	0	36
	3 - Queensmere Rd	11	44	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Wellington St W	2 - Wellington St E	3 - Queensmere Rd
From	1 - Wellington St W	0	10	0
	2 - Wellington St E	5	0	0
	3 - Queensmere Rd	12	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Wellington St W	0.36	2.39	0.6	A
2 - Wellington St E	0.43	2.27	0.8	A
3 - Queensmere Rd	0.03	1.81	0.0	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	624	33	2563	0.244	623	0.3	2.022	A
2 - Wellington St E	842	56	2911	0.289	840	0.4	1.820	A
3 - Queensmere Rd	41	842	2470	0.017	41	0.0	1.562	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	745	40	2558	0.291	745	0.4	2.164	A
2 - Wellington St E	1005	67	2903	0.346	1005	0.6	1.988	A
3 - Queensmere Rd	49	1007	2338	0.021	49	0.0	1.657	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	913	48	2552	0.358	912	0.6	2.393	A
2 - Wellington St E	1231	83	2891	0.426	1230	0.8	2.270	A
3 - Queensmere Rd	61	1233	2159	0.028	61	0.0	1.808	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	913	48	2552	0.358	913	0.6	2.393	A
2 - Wellington St E	1231	83	2891	0.426	1231	0.8	2.272	A
3 - Queensmere Rd	61	1234	2158	0.028	61	0.0	1.809	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	745	40	2558	0.291	746	0.4	2.167	A
2 - Wellington St E	1005	67	2902	0.346	1006	0.6	1.990	A
3 - Queensmere Rd	49	1009	2337	0.021	49	0.0	1.661	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	624	33	2563	0.244	625	0.4	2.024	A
2 - Wellington St E	842	56	2911	0.289	842	0.4	1.824	A
3 - Queensmere Rd	41	844	2468	0.017	41	0.0	1.566	A

SBC PLANNING
RECEIVED : 24.06.2022

DM, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	J3	Standard Roundabout		1, 2, 3	2.64	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	79	1 - Wellington St W	2.64	A

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	DM	PM	ONE HOUR	17:00	18:30	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 (%)
1 - Wellington St W		✓	1149	100.000
2 - Wellington St E		✓	1074	100.000
3 - Queensmere Rd		✓	221	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Wellington St W	2 - Wellington St E	3 - Queensmere Rd
From	1 - Wellington St W	125	912	112
	2 - Wellington St E	968	0	106
	3 - Queensmere Rd	36	185	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Wellington St W	2 - Wellington St E	3 - Queensmere Rd
From	1 - Wellington St W	0	3	0
	2 - Wellington St E	0	0	0
	3 - Queensmere Rd	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Wellington St W	0.52	3.12	1.1	A
2 - Wellington St E	0.43	2.29	0.7	A
3 - Queensmere Rd	0.11	1.86	0.1	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	865	139	2489	0.348	863	0.5	2.257	A
2 - Wellington St E	809	178	2819	0.287	807	0.4	1.786	A
3 - Queensmere Rd	166	821	2486	0.067	166	0.1	1.551	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	1033	166	2470	0.418	1032	0.7	2.554	A
2 - Wellington St E	966	213	2793	0.346	965	0.5	1.969	A
3 - Queensmere Rd	199	982	2358	0.084	199	0.1	1.666	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	1265	204	2443	0.518	1264	1.1	3.109	A
2 - Wellington St E	1182	261	2757	0.429	1182	0.7	2.283	A
3 - Queensmere Rd	243	1202	2183	0.111	243	0.1	1.854	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	1265	204	2443	0.518	1265	1.1	3.117	A
2 - Wellington St E	1182	261	2757	0.429	1182	0.7	2.285	A
3 - Queensmere Rd	243	1203	2182	0.112	243	0.1	1.855	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	1033	166	2469	0.418	1034	0.7	2.564	A
2 - Wellington St E	966	213	2793	0.346	966	0.5	1.973	A
3 - Queensmere Rd	199	984	2357	0.084	199	0.1	1.669	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	865	139	2488	0.348	866	0.5	2.266	A
2 - Wellington St E	809	179	2819	0.287	809	0.4	1.793	A
3 - Queensmere Rd	166	823	2485	0.067	166	0.1	1.554	A

DS, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	J3	Standard Roundabout		1, 2, 3	2.35	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	118	2 - Wellington St E	2.35	A

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	DS	AM	ONE HOUR	07:45	09:15	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 (%)
1 - Wellington St W		✓	887	100.000
2 - Wellington St E		✓	1151	100.000
3 - Queensmere Rd		✓	348	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Wellington St W	2 - Wellington St E	3 - Queensmere Rd
From	1 - Wellington St W	2	812	73
	2 - Wellington St E	940	0	211
	3 - Queensmere Rd	220	128	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Wellington St W	2 - Wellington St E	3 - Queensmere Rd
From	1 - Wellington St W	0	9	0
	2 - Wellington St E	5	0	0
	3 - Queensmere Rd	1	1	0

Results

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Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Wellington St W	0.39	2.59	0.7	A
2 - Wellington St E	0.44	2.31	0.8	A
3 - Queensmere Rd	0.17	1.88	0.2	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	668	96	2519	0.265	666	0.4	2.107	A
2 - Wellington St E	867	56	2911	0.298	865	0.4	1.831	A
3 - Queensmere Rd	262	708	2576	0.102	262	0.1	1.568	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	797	115	2506	0.318	797	0.5	2.287	A
2 - Wellington St E	1035	67	2903	0.356	1034	0.6	2.008	A
3 - Queensmere Rd	313	846	2466	0.127	313	0.1	1.685	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	977	141	2487	0.393	976	0.7	2.583	A
2 - Wellington St E	1267	83	2891	0.438	1266	0.8	2.307	A
3 - Queensmere Rd	383	1036	2315	0.166	383	0.2	1.879	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	977	141	2487	0.393	977	0.7	2.585	A
2 - Wellington St E	1267	83	2891	0.438	1267	0.8	2.309	A
3 - Queensmere Rd	383	1037	2315	0.166	383	0.2	1.879	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	797	115	2505	0.318	798	0.5	2.289	A
2 - Wellington St E	1035	67	2902	0.357	1036	0.6	2.010	A
3 - Queensmere Rd	313	848	2465	0.127	313	0.1	1.689	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	668	96	2519	0.265	668	0.4	2.111	A
2 - Wellington St E	867	57	2911	0.298	867	0.4	1.838	A
3 - Queensmere Rd	262	710	2575	0.102	262	0.1	1.569	A

DS, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	J3	Standard Roundabout		1, 2, 3	2.61	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	67	1 - Wellington St W	2.61	A

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	DS	PM	ONE HOUR	17:00	18:30	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 (%)
1 - Wellington St W		✓	1129	100.000
2 - Wellington St E		✓	1001	100.000
3 - Queensmere Rd		✓	491	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Wellington St W	**2 - Wellington St E**	**3 - Queensmere Rd**
From	**1 - Wellington St W**	0	947	182
	2 - Wellington St E	715	0	286
	3 - Queensmere Rd	153	338	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Wellington St W	**2 - Wellington St E**	**3 - Queensmere Rd**
From	**1 - Wellington St W**	0	3	0
	2 - Wellington St E	0	0	0
	3 - Queensmere Rd	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Wellington St W	0.53	3.39	1.2	A
2 - Wellington St E	0.39	2.12	0.6	A
3 - Queensmere Rd	0.22	1.82	0.3	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	850	254	2408	0.353	848	0.6	2.352	A
2 - Wellington St E	754	137	2850	0.264	752	0.4	1.716	A
3 - Queensmere Rd	370	537	2712	0.136	369	0.2	1.536	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	1015	304	2373	0.428	1014	0.8	2.703	A
2 - Wellington St E	900	163	2830	0.318	899	0.5	1.863	A
3 - Queensmere Rd	441	642	2628	0.168	441	0.2	1.645	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	1243	372	2325	0.535	1241	1.2	3.386	A
2 - Wellington St E	1102	200	2803	0.393	1101	0.6	2.114	A
3 - Queensmere Rd	541	787	2514	0.215	540	0.3	1.823	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	1243	372	2325	0.535	1243	1.2	3.395	A
2 - Wellington St E	1102	200	2803	0.393	1102	0.6	2.116	A
3 - Queensmere Rd	541	787	2513	0.215	541	0.3	1.824	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	1015	304	2373	0.428	1017	0.8	2.714	A
2 - Wellington St E	900	164	2830	0.318	901	0.5	1.865	A
3 - Queensmere Rd	441	643	2628	0.168	442	0.2	1.646	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	850	255	2408	0.353	851	0.6	2.361	A
2 - Wellington St E	754	137	2850	0.264	754	0.4	1.717	A
3 - Queensmere Rd	370	539	2711	0.136	370	0.2	1.539	A

DS2 , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	J3	Standard Roundabout		1, 2, 3	2.29	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	130	3 - Queensmere Rd	2.29	A

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	DS2	AM	ONE HOUR	07:45	09:15	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 (%)
1 - Wellington St W		✓	873	100.000
2 - Wellington St E		✓	1033	100.000
3 - Queensmere Rd		✓	443	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Wellington St W	2 - Wellington St E	3 - Queensmere Rd
From	1 - Wellington St W	20	802	51
	2 - Wellington St E	939	0	94
	3 - Queensmere Rd	285	158	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Wellington St W	2 - Wellington St E	3 - Queensmere Rd
From	1 - Wellington St W	0	9	0
	2 - Wellington St E	5	0	0
	3 - Queensmere Rd	0	1	0

Results

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Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Wellington St W	0.39	2.60	0.7	A
2 - Wellington St E	0.39	2.14	0.7	A
3 - Queensmere Rd	0.21	2.00	0.3	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	657	119	2503	0.263	656	0.4	2.115	A
2 - Wellington St E	778	53	2913	0.267	776	0.4	1.764	A
3 - Queensmere Rd	334	721	2566	0.130	333	0.2	1.622	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	785	142	2487	0.316	784	0.5	2.297	A
2 - Wellington St E	929	64	2905	0.320	928	0.5	1.906	A
3 - Queensmere Rd	398	862	2454	0.162	398	0.2	1.762	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	961	174	2464	0.390	960	0.7	2.599	A
2 - Wellington St E	1137	78	2894	0.393	1137	0.7	2.143	A
3 - Queensmere Rd	488	1055	2300	0.212	487	0.3	1.999	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	961	174	2464	0.390	961	0.7	2.601	A
2 - Wellington St E	1137	78	2894	0.393	1137	0.7	2.145	A
3 - Queensmere Rd	488	1056	2300	0.212	488	0.3	1.999	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	785	142	2486	0.316	786	0.5	2.301	A
2 - Wellington St E	929	64	2905	0.320	929	0.5	1.907	A
3 - Queensmere Rd	398	863	2453	0.162	399	0.2	1.766	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	657	119	2503	0.263	658	0.4	2.120	A
2 - Wellington St E	778	53	2913	0.267	778	0.4	1.768	A
3 - Queensmere Rd	334	722	2565	0.130	334	0.2	1.626	A

DS2, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	J3	Standard Roundabout		1, 2, 3	2.64	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	70	1 - Wellington St W	2.64	A

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	DS2	PM	ONE HOUR	17:00	18:30	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 (%)
1 - Wellington St W		✓	1155	100.000
2 - Wellington St E		✓	1054	100.000
3 - Queensmere Rd		✓	374	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Wellington St W	**2 - Wellington St E**	**3 - Queensmere Rd**
From	**1 - Wellington St W**	0	951	204
	2 - Wellington St E	721	0	333
	3 - Queensmere Rd	104	270	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Wellington St W	**2 - Wellington St E**	**3 - Queensmere Rd**
From	**1 - Wellington St W**	0	3	0
	2 - Wellington St E	0	0	0
	3 - Queensmere Rd	0	0	0

Results

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Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Wellington St W	0.53	3.32	1.2	A
2 - Wellington St E	0.42	2.22	0.7	A
3 - Queensmere Rd	0.16	1.72	0.2	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	870	203	2444	0.356	867	0.6	2.327	A
2 - Wellington St E	794	153	2838	0.280	792	0.4	1.763	A
3 - Queensmere Rd	282	542	2708	0.104	281	0.1	1.482	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	1038	243	2416	0.430	1038	0.8	2.663	A
2 - Wellington St E	948	183	2815	0.337	947	0.5	1.930	A
3 - Queensmere Rd	336	648	2624	0.128	336	0.1	1.572	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	1272	297	2378	0.535	1270	1.2	3.312	A
2 - Wellington St E	1160	224	2785	0.417	1160	0.7	2.218	A
3 - Queensmere Rd	412	793	2508	0.164	412	0.2	1.716	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	1272	297	2378	0.535	1272	1.2	3.320	A
2 - Wellington St E	1160	225	2784	0.417	1160	0.7	2.220	A
3 - Queensmere Rd	412	794	2508	0.164	412	0.2	1.716	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	1038	243	2416	0.430	1040	0.8	2.674	A
2 - Wellington St E	948	184	2815	0.337	948	0.5	1.934	A
3 - Queensmere Rd	336	649	2623	0.128	336	0.1	1.576	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	870	203	2444	0.356	870	0.6	2.337	A
2 - Wellington St E	794	154	2838	0.280	794	0.4	1.764	A
3 - Queensmere Rd	282	543	2707	0.104	282	0.1	1.485	A

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DS3, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	J3	Standard Roundabout		1, 2, 3	2.39	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	118	2 - Wellington St E	2.39	A

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)
D7	DS3	AM	ONE HOUR	07:45	09:15	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 (%)
1 - Wellington St W		✓	887	100.000
2 - Wellington St E		✓	1151	100.000
3 - Queensmere Rd		✓	348	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Wellington St W	**2 - Wellington St E**	**3 - Queensmere Rd**
From	**1 - Wellington St W**	38	812	37
	2 - Wellington St E	1116	0	35
	3 - Queensmere Rd	220	128	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Wellington St W	**2 - Wellington St E**	**3 - Queensmere Rd**
From	**1 - Wellington St W**	0	9	0
	2 - Wellington St E	5	0	0
	3 - Queensmere Rd	0	1	0

Results

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Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Wellington St W	0.39	2.59	0.7	A
2 - Wellington St E	0.44	2.33	0.8	A
3 - Queensmere Rd	0.18	2.08	0.2	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	668	96	2519	0.265	666	0.4	2.108	A
2 - Wellington St E	867	56	2911	0.298	865	0.4	1.846	A
3 - Queensmere Rd	262	867	2450	0.107	262	0.1	1.655	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	797	115	2506	0.318	797	0.5	2.288	A
2 - Wellington St E	1035	67	2903	0.356	1034	0.6	2.024	A
3 - Queensmere Rd	313	1037	2315	0.135	313	0.2	1.809	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	977	141	2487	0.393	976	0.7	2.585	A
2 - Wellington St E	1267	83	2891	0.438	1266	0.8	2.326	A
3 - Queensmere Rd	383	1270	2130	0.180	383	0.2	2.074	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	977	141	2487	0.393	977	0.7	2.587	A
2 - Wellington St E	1267	83	2891	0.438	1267	0.8	2.328	A
3 - Queensmere Rd	383	1271	2129	0.180	383	0.2	2.075	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	797	115	2505	0.318	798	0.5	2.292	A
2 - Wellington St E	1035	67	2902	0.357	1036	0.6	2.028	A
3 - Queensmere Rd	313	1038	2314	0.135	313	0.2	1.814	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	668	96	2519	0.265	668	0.4	2.113	A
2 - Wellington St E	867	57	2911	0.298	867	0.4	1.850	A
3 - Queensmere Rd	262	869	2448	0.107	262	0.1	1.657	A

DS3, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	J3	Standard Roundabout		1, 2, 3	2.66	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	67	1 - Wellington St W	2.66	A

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)
D8	DS3	PM	ONE HOUR	17:00	18:30	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 (%)
1 - Wellington St W		✓	1129	100.000
2 - Wellington St E		✓	1001	100.000
3 - Queensmere Rd		✓	491	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Wellington St W	**2 - Wellington St E**	**3 - Queensmere Rd**
From	**1 - Wellington St W**	69	947	113
	2 - Wellington St E	897	0	104
	3 - Queensmere Rd	153	338	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Wellington St W	**2 - Wellington St E**	**3 - Queensmere Rd**
From	**1 - Wellington St W**	0	3	0
	2 - Wellington St E	0	0	0
	3 - Queensmere Rd	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Wellington St W	0.53	3.39	1.2	A
2 - Wellington St E	0.39	2.12	0.6	A
3 - Queensmere Rd	0.24	2.05	0.3	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	850	254	2408	0.353	848	0.6	2.352	A
2 - Wellington St E	754	137	2850	0.264	752	0.4	1.720	A
3 - Queensmere Rd	370	726	2562	0.144	369	0.2	1.641	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	1015	304	2373	0.428	1014	0.8	2.703	A
2 - Wellington St E	900	163	2830	0.318	899	0.5	1.868	A
3 - Queensmere Rd	441	868	2449	0.180	441	0.2	1.792	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	1243	372	2325	0.535	1241	1.2	3.386	A
2 - Wellington St E	1102	200	2803	0.393	1101	0.6	2.120	A
3 - Queensmere Rd	541	1063	2294	0.236	540	0.3	2.052	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	1243	372	2325	0.535	1243	1.2	3.395	A
2 - Wellington St E	1102	200	2803	0.393	1102	0.6	2.122	A
3 - Queensmere Rd	541	1064	2294	0.236	541	0.3	2.053	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	1015	304	2373	0.428	1017	0.8	2.712	A
2 - Wellington St E	900	164	2830	0.318	901	0.5	1.870	A
3 - Queensmere Rd	441	869	2448	0.180	442	0.2	1.793	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	850	255	2408	0.353	851	0.6	2.363	A
2 - Wellington St E	754	137	2850	0.264	754	0.4	1.723	A
3 - Queensmere Rd	370	728	2561	0.144	370	0.2	1.642	A

DS4, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	J3	Standard Roundabout		1, 2, 3	2.35	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	121	3 - Queensmere Rd	2.35	A

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)
D9	DS4	AM	ONE HOUR	07:45	09:15	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 (%)
1 - Wellington St W		✓	895	100.000
2 - Wellington St E		✓	1073	100.000
3 - Queensmere Rd		✓	443	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Wellington St W	2 - Wellington St E	3 - Queensmere Rd
From	1 - Wellington St W	42	802	51
	2 - Wellington St E	979	0	94
	3 - Queensmere Rd	285	158	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Wellington St W	2 - Wellington St E	3 - Queensmere Rd
From	1 - Wellington St W	0	9	0
	2 - Wellington St E	5	0	0
	3 - Queensmere Rd	0	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Wellington St W	0.40	2.64	0.7	A
2 - Wellington St E	0.41	2.22	0.7	A
3 - Queensmere Rd	0.22	2.06	0.3	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	674	119	2503	0.269	672	0.4	2.129	A
2 - Wellington St E	808	70	2901	0.279	806	0.4	1.800	A
3 - Queensmere Rd	334	767	2529	0.132	333	0.2	1.649	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	804	142	2487	0.323	804	0.5	2.319	A
2 - Wellington St E	965	83	2891	0.334	964	0.5	1.957	A
3 - Queensmere Rd	398	917	2410	0.165	398	0.2	1.800	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	985	174	2464	0.400	984	0.7	2.636	A
2 - Wellington St E	1182	102	2877	0.411	1181	0.7	2.222	A
3 - Queensmere Rd	488	1123	2246	0.217	487	0.3	2.060	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	985	174	2464	0.400	985	0.7	2.638	A
2 - Wellington St E	1182	102	2876	0.411	1182	0.7	2.224	A
3 - Queensmere Rd	488	1124	2245	0.217	488	0.3	2.061	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	804	142	2486	0.323	805	0.5	2.323	A
2 - Wellington St E	965	83	2890	0.334	966	0.5	1.961	A
3 - Queensmere Rd	398	919	2409	0.165	399	0.2	1.802	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	674	119	2503	0.269	674	0.4	2.134	A
2 - Wellington St E	808	70	2901	0.279	809	0.4	1.804	A
3 - Queensmere Rd	334	769	2528	0.132	334	0.2	1.653	A

DS4, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	J3	Standard Roundabout		1, 2, 3	3.13	A

Junction Network

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold	Network delay (s)	Network LOS
Left	Normal/unknown	55	1 - Wellington St W	3.13	A

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)
D10	DS4	PM	ONE HOUR	17:00	18:30	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 (%)
1 - Wellington St W		✓	1282	100.000
2 - Wellington St E		✓	1262	100.000
3 - Queensmere Rd		✓	374	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Wellington St W	**2 - Wellington St E**	**3 - Queensmere Rd**
From	**1 - Wellington St W**	127	951	204
	2 - Wellington St E	929	0	333
	3 - Queensmere Rd	104	270	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Wellington St W	**2 - Wellington St E**	**3 - Queensmere Rd**
From	**1 - Wellington St W**	0	3	0
	2 - Wellington St E	0	0	0
	3 - Queensmere Rd	0	0	0

Results

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Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Wellington St W	0.59	3.79	1.5	A
2 - Wellington St E	0.52	2.80	1.1	A
3 - Queensmere Rd	0.19	2.00	0.2	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	965	203	2444	0.395	963	0.7	2.471	A
2 - Wellington St E	950	249	2766	0.343	948	0.5	1.982	A
3 - Queensmere Rd	282	793	2509	0.112	281	0.1	1.615	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	1153	243	2416	0.477	1152	0.9	2.897	A
2 - Wellington St E	1134	298	2730	0.416	1133	0.7	2.259	A
3 - Queensmere Rd	336	949	2385	0.141	336	0.2	1.756	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	1412	297	2378	0.594	1410	1.5	3.779	A
2 - Wellington St E	1389	364	2679	0.518	1388	1.1	2.790	A
3 - Queensmere Rd	412	1161	2216	0.186	412	0.2	1.995	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	1412	297	2378	0.594	1412	1.5	3.794	A
2 - Wellington St E	1389	365	2679	0.519	1389	1.1	2.796	A
3 - Queensmere Rd	412	1163	2215	0.186	412	0.2	1.996	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	1153	243	2416	0.477	1155	0.9	2.914	A
2 - Wellington St E	1134	298	2729	0.416	1136	0.7	2.267	A
3 - Queensmere Rd	336	951	2383	0.141	336	0.2	1.760	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Wellington St W	965	203	2444	0.395	966	0.7	2.485	A
2 - Wellington St E	950	250	2766	0.343	951	0.5	1.988	A
3 - Queensmere Rd	282	796	2507	0.112	282	0.1	1.617	A

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Basic Results Summary

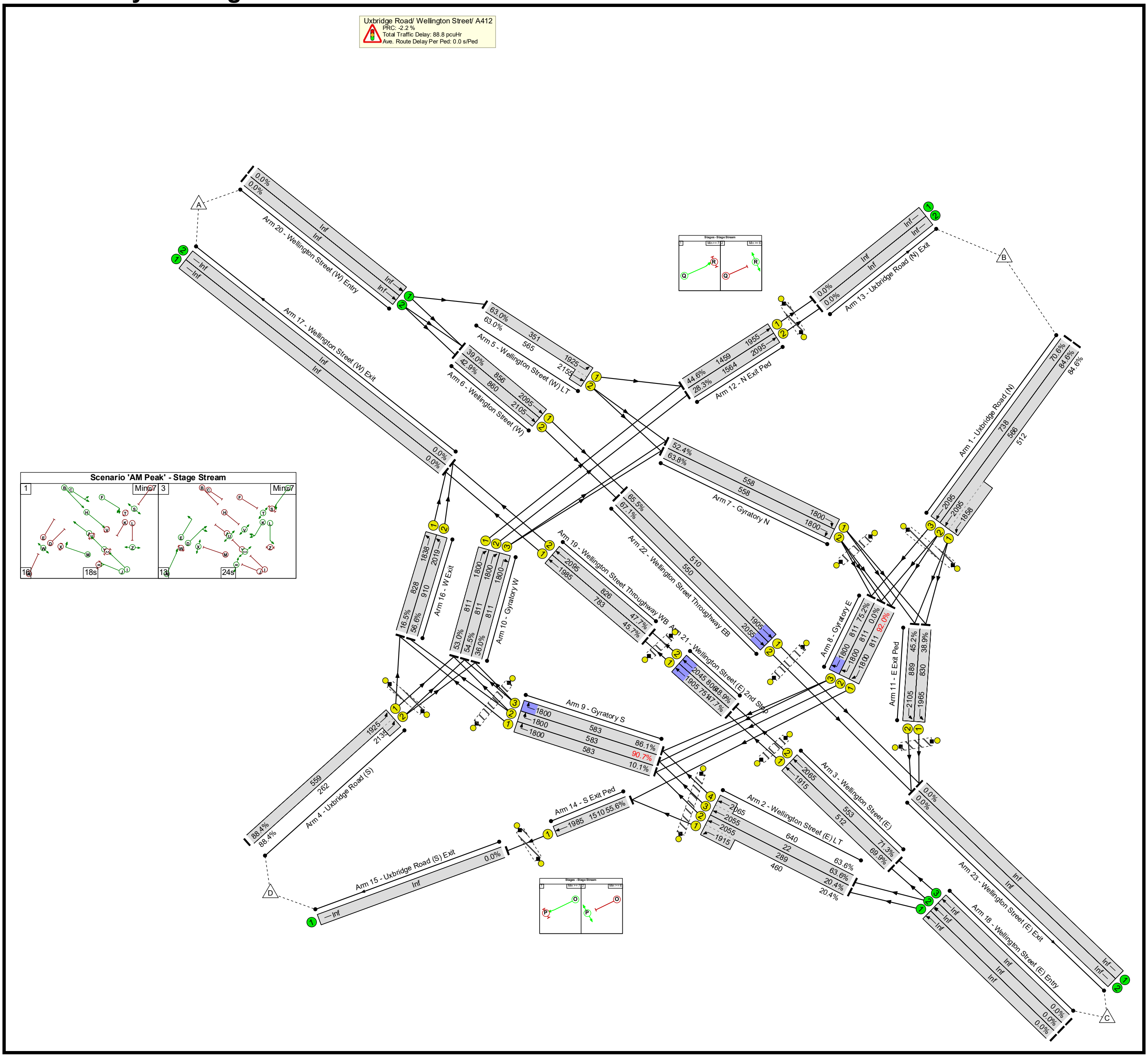
Basic Results Summary

User and Project Details

Project:	
Title:	
Location:	
File name:	J2.lsg3x
Author:	
Company:	
Address:	
Notes:	

Scenario 1: 'AM Peak' (FG1: 'AM Peak', Plan 2: 'Network Control Plan 2')

Network Layout Diagram



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Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**92.0%**	**0**	**0**	**0**	**88.8**	-	-
Uxbridge Road/ Wellington Street/ A412	-	-	-		-	-	-	-	-	-	**92.0%**	**0**	**0**	**0**	**88.8**	-	-
1/2+1/1	Uxbridge Road (N) Ahead Ahead2	U	G		1	24	-	912	2095:1858	566+512	84.6 : 84.6%	-	-	-	7.6	29.9	10.5
1/3	Uxbridge Road (N) Ahead	U	G		1	24	-	521	2095	738	70.6%	-	-	-	4.1	28.1	10.0
2/2+2/1	Wellington Street (E) LT Ahead Left	U	J		1	21	-	153	2055:1915	289+460	20.4 : 20.4%	-	-	-	0.9	20.7	1.5
2/3+2/4	Wellington Street (E) LT Ahead	U	J		1	21	-	421	2055:2065	22+640	63.6 : 63.6%	-	-	-	3.3	28.5	7.8
3/1	Wellington Street (E) Ahead	U	I		1	18	-	358	1915	512	69.9%	-	-	-	3.5	34.9	7.4
3/2	Wellington Street (E) Ahead	U	I		1	18	-	394	2065	553	71.3%	-	-	-	3.8	34.7	8.2
4/1+4/2	Uxbridge Road (S) Ahead Ahead2	U	N		1	27	-	726	1925:2135	559+262	88.4 : 88.4%	-	-	-	7.4	36.8	15.7
5/1+5/2	Wellington Street (W) LT Ahead Left	U	C		1	28	-	577	1925:2155	351+565	63.0 : 63.0%	-	-	-	3.3	20.9	8.3
6/1	Wellington Street (W) Ahead	U	B		1	28	-	334	2095	856	39.0%	-	-	-	1.7	18.2	4.9
6/2	Wellington Street (W) Ahead	U	B		1	28	-	369	2105	860	42.9%	-	-	-	1.9	18.7	5.5
7/1	Gyratory N Right	U	F		1	21	-	292	1800	558	52.4%	-	-	-	3.1	38.1	6.3

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Basic Results Summary

7/2	Gyratory N Right	U	F		1	21	-	356	1800	558	63.8%	-	-	-	1.4	14.3	6.6
8/1	Gyratory E Ahead	U	K		1	31	-	746	1800	811	92.0%	-	-	-	12.0	58.0	19.7
8/2	Gyratory E Right	U	K		1	31	-	0	1800	811	0.0%	-	-	-	0.0	0.0	0.0
8/3	Gyratory E Right	U	K		1	31	-	610	1800	811	75.2%	-	-	-	2.4	13.9	9.0
9/1	Gyratory S Right	U	M		1	22	-	59	1800	583	10.1%	-	-	-	0.1	8.5	0.2
9/2	Gyratory S Right Right2	U	M		1	22	-	529	1800	583	90.7%	-	-	-	8.4	57.1	14.6
9/3	Gyratory S Right	U	M		1	22	-	502	1800	583	86.1%	-	-	-	4.1	29.7	6.5
10/1	Gyratory W Ahead	U	D		1	31	-	430	1800	811	53.0%	-	-	-	0.9	7.2	1.3
10/2	Gyratory W Ahead	U	D		1	31	-	442	1800	811	54.5%	-	-	-	3.1	25.1	9.1
10/3	Gyratory W Right	U	D		1	31	-	292	1800	811	36.0%	-	-	-	0.7	8.7	2.2
11/1	E Exit Ped Left	U	L		1	29	-	323	1965	830	38.9%	-	-	-	1.4	15.1	3.6
11/2	E Exit Ped Left	U	L		1	29	-	402	2105	889	45.2%	-	-	-	1.4	12.8	3.6
12/1	N Exit Ped Ahead	U	Q		1	52	-	651	1955	1459	44.6%	-	-	-	0.6	3.2	1.6
12/2	N Exit Ped Ahead	U	Q		1	52	-	442	2095	1564	28.3%	-	-	-	0.2	1.6	0.2
14/1	S Exit Ped Ahead	U	O		1	53	-	840	1985	1510	55.6%	-	-	-	0.7	2.9	1.0
16/1	W Exit Left	U	E		1	31	-	137	1838	828	16.5%	-	-	-	0.4	10.5	1.4
16/2	W Exit Left	U	E		1	31	-	515	2019	910	56.6%	-	-	-	3.9	27.3	10.8
19/1	Wellington Street Throughway WB Ahead	U	A		1	27	-	358	1985	783	45.7%	-	-	-	0.8	8.1	1.1
19/2	Wellington Street Throughway WB Ahead	U	A		1	27	-	394	2095	826	47.7%	-	-	-	0.9	8.3	1.2

Basic Results Summary

21/1	Wellington Street (E) 2nd Stop Ahead	U	Y		1	27	-	358	1905	751	47.7%	-	-	-	0.6	6.2	0.7
21/2	Wellington Street (E) 2nd Stop Ahead	U	Y		1	27	-	394	2045	806	48.9%	-	-	-	0.7	6.0	0.8
22/1	Wellington Street Throughway EB Ahead	U	H		1	18	-	334	1905	510	65.5%	-	-	-	1.7	18.5	6.8
22/2	Wellington Street Throughway EB Ahead	U	H		1	18	-	369	2055	550	67.1%	-	-	-	1.8	18.0	7.4
Ped Link: P1	Unnamed Ped Link	-	Z		1	29	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	T		1	32	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	-	S		1	29	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P4	Unnamed Ped Link	-	U		1	32	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P5	Unnamed Ped Link	-	V		1	32	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P6	Unnamed Ped Link	-	X		1	32	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P7	Unnamed Ped Link	-	P		1	6	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P8	Unnamed Ped Link	-	AB		1	32	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P9	Unnamed Ped Link	-	W		1	29	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P10	Unnamed Ped Link	-	R		1	6	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P11	Unnamed Ped Link	-	AA		1	30	-	0	-	0	0.0%	-	-	-	-	-	-

C1 Stream: 1 PRC for Signalled Lanes (%): -2.2 Total Delay for Signalled Lanes (pcuHr): 87.33 Cycle Time (s): 71
C1 Stream: 2 PRC for Signalled Lanes (%): 61.8 Total Delay for Signalled Lanes (pcuHr): 0.69 Cycle Time (s): 71
C1 Stream: 3 PRC for Signalled Lanes (%): 101.8 Total Delay for Signalled Lanes (pcuHr): 0.78 Cycle Time (s): 71
PRC Over All Lanes (%): -2.2 Total Delay Over All Lanes(pcuHr): 88.80

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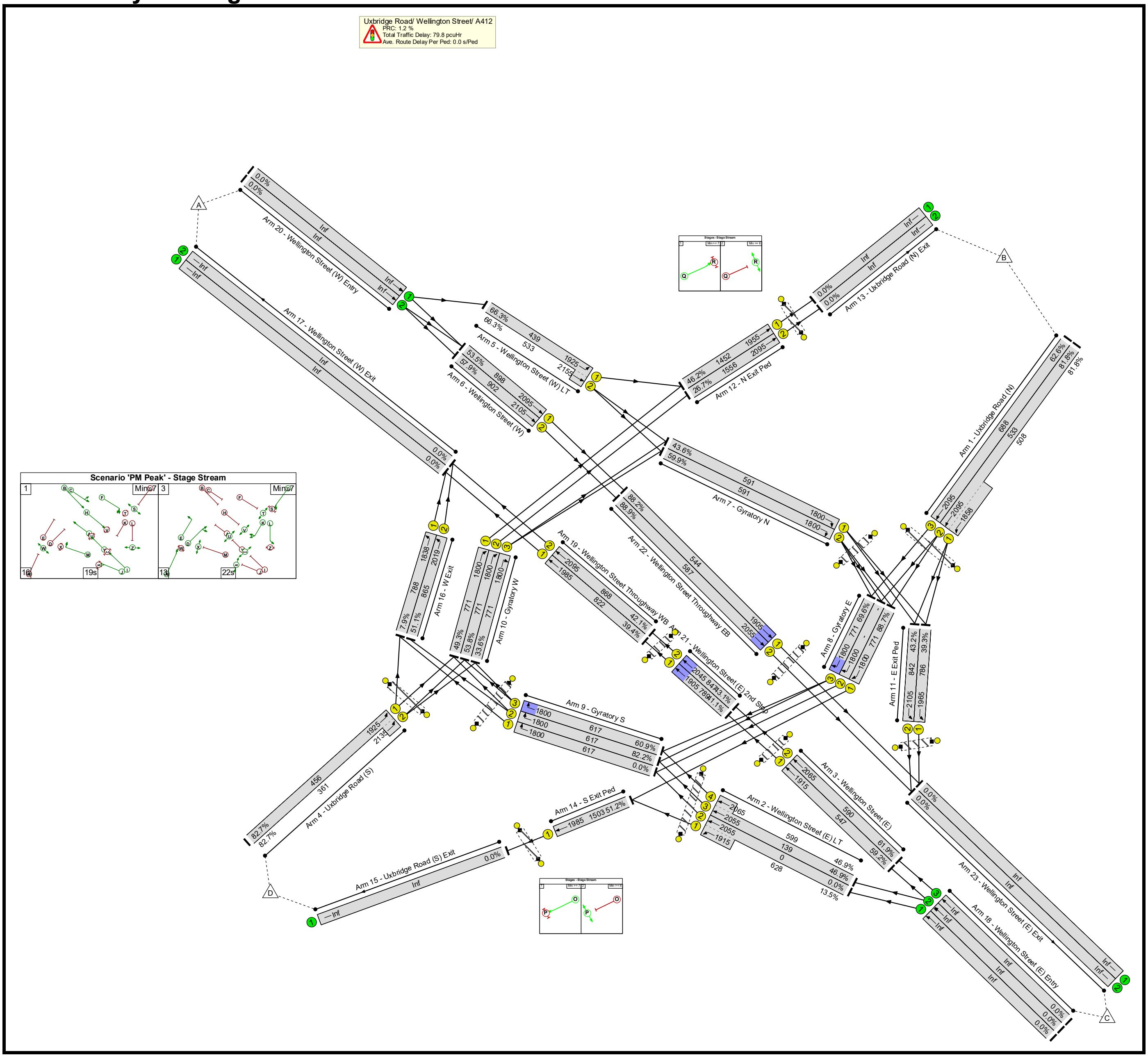
Basic Results Summary

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

Network Layout Diagram



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Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**88.9%**	**0**	**0**	**0**	**79.8**	-	-
Uxbridge Road/ Wellington Street/ A412	-	-	-		-	-	-	-	-	-	**88.9%**	**0**	**0**	**0**	**79.8**	-	-
1/2+1/1	Uxbridge Road (N) Ahead Ahead2	U	G		1	22	-	851	2095:1858	533+508	81.8 : 81.8%	-	-	-	6.9	29.4	9.3
1/3	Uxbridge Road (N) Ahead	U	G		1	22	-	431	2095	688	62.6%	-	-	-	3.2	26.8	7.9
2/2+2/1	Wellington Street (E) LT Ahead Left	U	J		1	22	-	85	2055:1915	0+628	0.0 : 13.5%	-	-	-	0.5	19.8	1.2
2/3+2/4	Wellington Street (E) LT Ahead	U	J		1	22	-	346	2055:2065	139+599	46.9 : 46.9%	-	-	-	2.2	22.7	5.0
3/1	Wellington Street (E) Ahead	U	I		1	19	-	324	1915	547	59.2%	-	-	-	2.7	29.5	6.1
3/2	Wellington Street (E) Ahead	U	I		1	19	-	365	2065	590	61.9%	-	-	-	3.0	29.6	6.9
4/1+4/2	Uxbridge Road (S) Ahead Ahead2	U	N		1	25	-	675	1925:2135	456+361	82.7 : 82.7%	-	-	-	5.8	31.0	12.4
5/1+5/2	Wellington Street (W) LT Ahead Left	U	C		1	29	-	644	1925:2155	439+533	66.3 : 66.3%	-	-	-	3.6	20.0	8.9
6/1	Wellington Street (W) Ahead	U	B		1	29	-	480	2095	898	53.5%	-	-	-	2.5	19.1	7.4
6/2	Wellington Street (W) Ahead	U	B		1	29	-	522	2105	902	57.9%	-	-	-	2.9	19.9	8.4
7/1	Gyratory N Right	U	F		1	22	-	258	1800	591	43.6%	-	-	-	2.5	35.4	5.4

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Basic Results Summary

7/2	Gyratory N Right	U	F		1	22	-	354	1800	591	59.9%	-	-	-	1.3	12.7	5.9
8/1	Gyratory E Ahead	U	K		1	29	-	684	1800	771	88.7%	-	-	-	9.9	51.9	16.9
8/2	Gyratory E Right	U	K		1	29	-	0	1800	-	-	-	-	-	-	-	-
8/3	Gyratory E Right	U	K		1	29	-	537	1800	771	69.6%	-	-	-	2.0	13.6	6.6
9/1	Gyratory S Right	U	M		1	23	-	0	1800	617	0.0%	-	-	-	0.0	0.0	0.0
9/2	Gyratory S Right Right2	U	M		1	23	-	507	1800	617	82.2%	-	-	-	5.8	41.2	12.0
9/3	Gyratory S Right	U	M		1	23	-	376	1800	617	60.9%	-	-	-	1.7	15.9	3.3
10/1	Gyratory W Ahead	U	D		1	29	-	380	1800	771	49.3%	-	-	-	0.9	8.2	2.1
10/2	Gyratory W Ahead	U	D		1	29	-	415	1800	771	53.8%	-	-	-	2.5	21.8	7.3
10/3	Gyratory W Right	U	D		1	29	-	259	1800	771	33.6%	-	-	-	0.7	9.3	1.9
11/1	E Exit Ped Left	U	L		1	27	-	309	1965	786	39.3%	-	-	-	1.3	14.9	3.0
11/2	E Exit Ped Left	U	L		1	27	-	364	2105	842	43.2%	-	-	-	1.4	13.8	3.3
12/1	N Exit Ped Ahead	U	Q		1	51	-	671	1955	1452	46.2%	-	-	-	0.7	3.8	2.1
12/2	N Exit Ped Ahead	U	Q		1	51	-	415	2095	1556	26.7%	-	-	-	0.2	1.6	0.2
14/1	S Exit Ped Ahead	U	O		1	52	-	769	1985	1503	51.2%	-	-	-	0.6	2.7	0.9
16/1	W Exit Left	U	E		1	29	-	62	1838	788	7.9%	-	-	-	0.1	4.8	0.1
16/2	W Exit Left	U	E		1	29	-	442	2019	865	51.1%	-	-	-	3.4	28.0	9.1
19/1	Wellington Street Throughway WB Ahead	U	A		1	28	-	324	1985	822	39.4%	-	-	-	0.6	6.2	0.7
19/2	Wellington Street Throughway WB Ahead	U	A		1	28	-	365	2095	868	42.1%	-	-	-	0.6	6.3	0.8

Basic Results Summary

21/1	Wellington Street (E) 2nd Stop Ahead	U	Y		1	28	-	324	1905	789	41.1%	-	-	-	0.5	5.4	0.6
21/2	Wellington Street (E) 2nd Stop Ahead	U	Y		1	28	-	365	2045	847	43.1%	-	-	-	0.5	5.3	0.7
22/1	Wellington Street Throughway EB Ahead	U	H		1	19	-	480	1905	544	88.2%	-	-	-	4.6	34.4	12.2
22/2	Wellington Street Throughway EB Ahead	U	H		1	19	-	522	2055	587	88.9%	-	-	-	4.9	33.6	13.3
Ped Link: P1	Unnamed Ped Link	-	Z		1	30	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	T		1	30	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	-	S		1	30	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P4	Unnamed Ped Link	-	U		1	30	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P5	Unnamed Ped Link	-	V		1	30	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P6	Unnamed Ped Link	-	X		1	30	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P7	Unnamed Ped Link	-	P		1	6	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P8	Unnamed Ped Link	-	AB		1	30	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P9	Unnamed Ped Link	-	W		1	30	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P10	Unnamed Ped Link	-	R		1	6	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P11	Unnamed Ped Link	-	AA		1	28	-	0	-	0	0.0%	-	-	-	-	-	-

C1 Stream: 1 PRC for Signalled Lanes (%): 1.2 Total Delay for Signalled Lanes (pcuHr): 78.35 Cycle Time (s): 70
C1 Stream: 2 PRC for Signalled Lanes (%): 75.9 Total Delay for Signalled Lanes (pcuHr): 0.58 Cycle Time (s): 70
C1 Stream: 3 PRC for Signalled Lanes (%): 94.8 Total Delay for Signalled Lanes (pcuHr): 0.89 Cycle Time (s): 70
PRC Over All Lanes (%): 1.2 Total Delay Over All Lanes(pcuHr): 79.82

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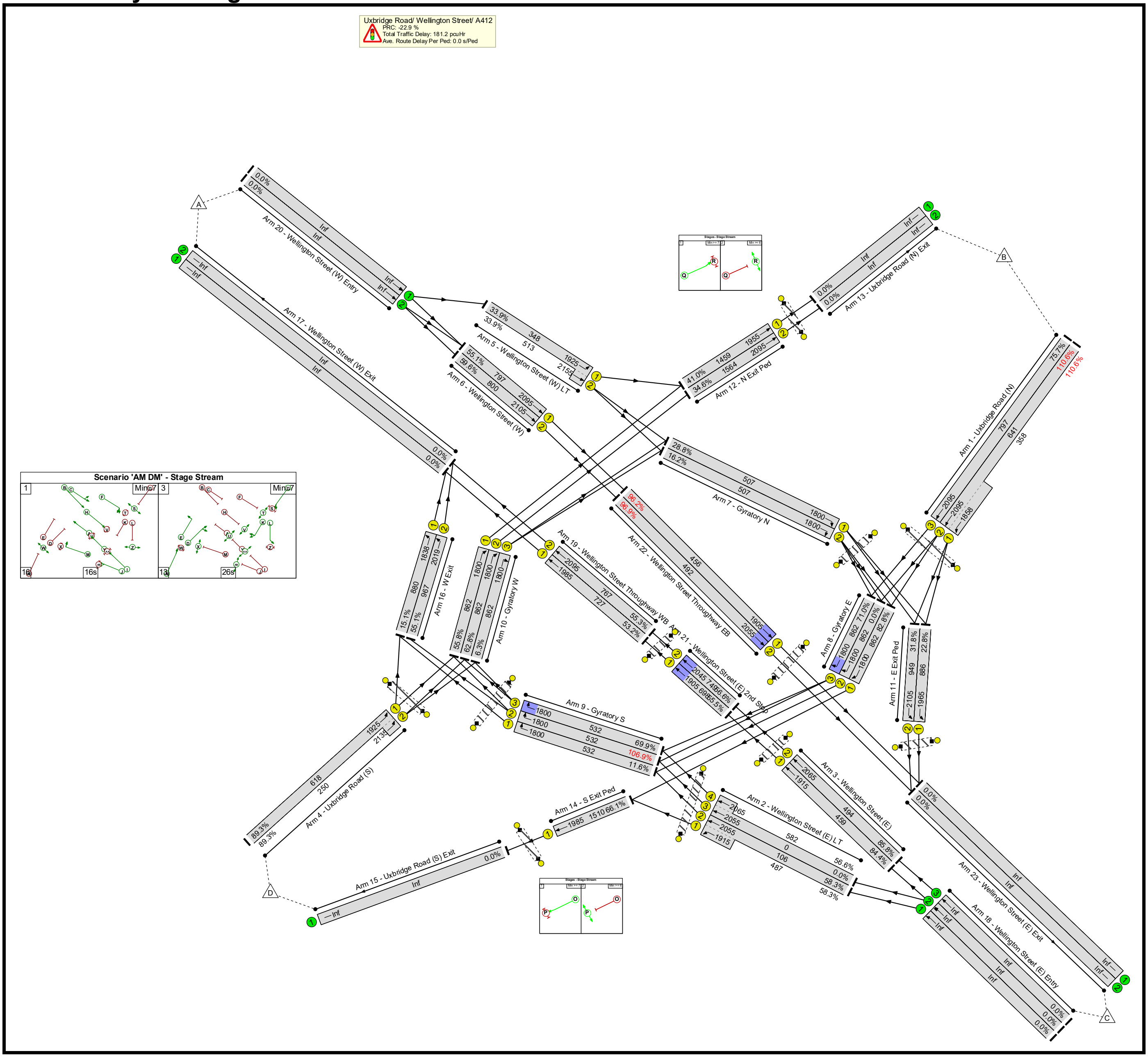
Basic Results Summary

Scenario 3: 'AM DM' (FG3: 'AM DM', Plan 2: 'Network Control Plan 2')

Network Layout Diagram



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Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**110.6%**	**0**	**0**	**0**	**181.2**	-	-
Uxbridge Road/ Wellington Street/ A412	-	-	-		-	-	-	-	-	-	**110.6%**	**0**	**0**	**0**	**181.2**	-	-
1/2+1/1	Uxbridge Road (N) Ahead Ahead2	U	G		1	26	-	1105	2095:1858	641+358	110.6 : 110.6%	-	-	-	67.6	220.4	78.1
1/3	Uxbridge Road (N) Ahead	U	G		1	26	-	603	2095	797	75.7%	-	-	-	4.7	28.3	11.7
2/2+2/1	Wellington Street (E) LT Ahead Left	U	J		1	19	-	346	2055:1915	106+487	58.3 : 58.3%	-	-	-	2.7	28.3	5.4
2/3+2/4	Wellington Street (E) LT Ahead	U	J		1	19	-	329	2055:2065	0+582	0.0 : 56.6%	-	-	-	2.6	28.9	6.1
3/1	Wellington Street (E) Ahead	U	I		1	16	-	387	1915	459	84.4%	-	-	-	5.3	49.2	9.7
3/2	Wellington Street (E) Ahead	U	I		1	16	-	424	2065	494	85.8%	-	-	-	5.8	49.5	10.7
4/1+4/2	Uxbridge Road (S) Ahead Ahead2	U	N		1	29	-	775	1925:2135	618+250	89.3 : 89.3%	-	-	-	7.8	36.2	17.0
5/1+5/2	Wellington Street (W) LT Ahead Left	U	C		1	26	-	292	1925:2155	348+513	33.9 : 33.9%	-	-	-	1.5	17.9	2.9
6/1	Wellington Street (W) Ahead	U	B		1	26	-	439	2095	797	55.1%	-	-	-	2.7	22.3	7.3
6/2	Wellington Street (W) Ahead	U	B		1	26	-	477	2105	800	59.6%	-	-	-	3.1	23.2	8.2
7/1	Gyratory N Right	U	F		1	19	-	146	1800	507	28.8%	-	-	-	0.9	22.8	2.6

Basic Results Summary

7/2	Gyratory N Right	U	F		1	19	-	82	1800	507	16.2%	-	-	-	0.2	9.0	1.1
8/1	Gyratory E Ahead	U	K		1	33	-	782	1800	862	82.8%	-	-	-	8.6	43.4	16.2
8/2	Gyratory E Right	U	K		1	33	-	0	1800	862	0.0%	-	-	-	0.0	0.0	0.0
8/3	Gyratory E Right	U	K		1	33	-	612	1800	862	71.0%	-	-	-	1.8	10.3	10.4
9/1	Gyratory S Right	U	M		1	20	-	62	1800	532	11.6%	-	-	-	0.2	9.3	0.2
9/2	Gyratory S Right Right2	U	M		1	20	-	569	1800	532	106.9%	-	-	-	29.7	187.7	36.1
9/3	Gyratory S Right	U	M		1	20	-	372	1800	532	69.9%	-	-	-	2.0	19.3	3.2
10/1	Gyratory W Ahead	U	D		1	33	-	481	1800	862	55.8%	-	-	-	0.9	6.9	1.2
10/2	Gyratory W Ahead	U	D		1	33	-	541	1800	862	62.8%	-	-	-	2.7	17.8	9.0
10/3	Gyratory W Right	U	D		1	33	-	54	1800	862	6.3%	-	-	-	0.2	11.8	0.9
11/1	E Exit Ped Left	U	L		1	31	-	211	1965	886	22.8%	-	-	-	0.9	16.8	2.8
11/2	E Exit Ped Left	U	L		1	31	-	331	2105	949	31.8%	-	-	-	0.8	9.7	1.6
12/1	N Exit Ped Ahead	U	Q		1	52	-	599	1955	1459	41.0%	-	-	-	0.4	2.6	0.9
12/2	N Exit Ped Ahead	U	Q		1	52	-	541	2095	1564	34.6%	-	-	-	0.3	1.8	0.3
14/1	S Exit Ped Ahead	U	O		1	53	-	1066	1985	1510	66.1%	-	-	-	1.1	4.0	2.2
16/1	W Exit Left	U	E		1	33	-	133	1838	880	15.1%	-	-	-	0.4	10.0	1.4
16/2	W Exit Left	U	E		1	33	-	569	2019	967	55.1%	-	-	-	3.7	24.9	11.1
19/1	Wellington Street Throughway WB Ahead	U	A		1	25	-	387	1985	727	53.2%	-	-	-	1.7	15.8	2.4
19/2	Wellington Street Throughway WB Ahead	U	A		1	25	-	424	2095	767	55.3%	-	-	-	1.9	16.3	2.7

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Basic Results Summary

21/1	Wellington Street (E) 2nd Stop Ahead	U	Y		1	25	-	387	1905	698	55.5%	-	-	-	0.9	8.0	1.0
21/2	Wellington Street (E) 2nd Stop Ahead	U	Y		1	25	-	424	2045	749	56.6%	-	-	-	0.9	7.9	1.1
22/1	Wellington Street Throughway EB Ahead	U	H		1	16	-	439	1905	456	96.2%	-	-	-	8.2	67.2	15.6
22/2	Wellington Street Throughway EB Ahead	U	H		1	16	-	477	2055	492	96.9%	-	-	-	9.0	68.0	17.1
Ped Link: P1	Unnamed Ped Link	-	Z		1	27	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	T		1	34	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	-	S		1	27	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P4	Unnamed Ped Link	-	U		1	34	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P5	Unnamed Ped Link	-	V		1	34	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P6	Unnamed Ped Link	-	X		1	34	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P7	Unnamed Ped Link	-	P		1	6	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P8	Unnamed Ped Link	-	AB		1	34	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P9	Unnamed Ped Link	-	W		1	27	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P10	Unnamed Ped Link	-	R		1	6	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P11	Unnamed Ped Link	-	AA		1	32	-	0	-	0	0.0%	-	-	-	-	-	-

C1 Stream: 1 PRC for Signalled Lanes (%): -22.9 Total Delay for Signalled Lanes (pcuHr): 179.43 Cycle Time (s): 71
C1 Stream: 2 PRC for Signalled Lanes (%): 36.1 Total Delay for Signalled Lanes (pcuHr): 1.12 Cycle Time (s): 71
C1 Stream: 3 PRC for Signalled Lanes (%): 119.3 Total Delay for Signalled Lanes (pcuHr): 0.69 Cycle Time (s): 71
PRC Over All Lanes (%): -22.9 Total Delay Over All Lanes(pcuHr): 181.24

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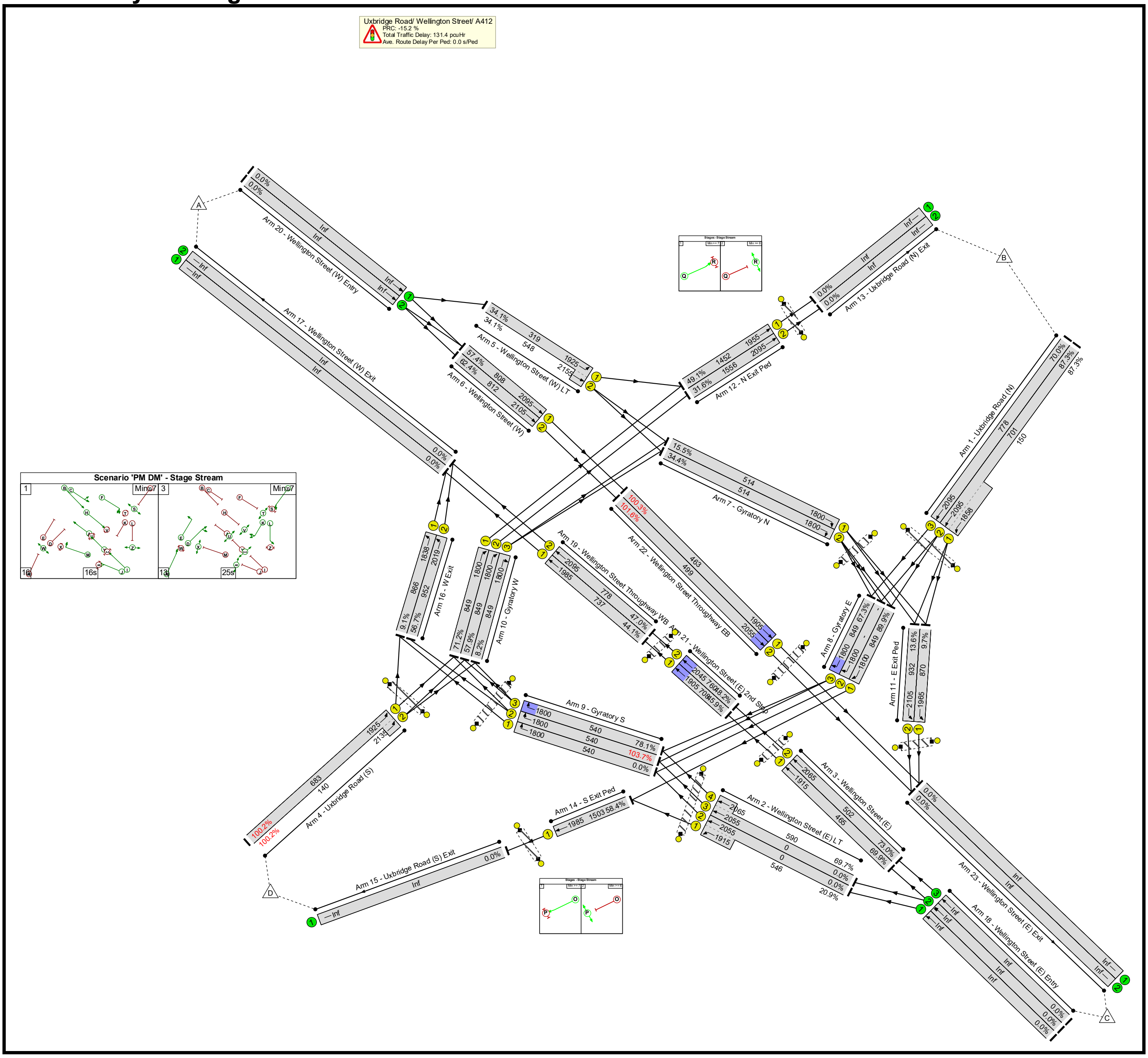
Basic Results Summary

Scenario 4: 'PM DM' (FG4: 'PM DM', Plan 2: 'Network Control Plan 2')

Network Layout Diagram



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Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**103.7%**	**0**	**0**	**0**	**131.4**	-	-
Uxbridge Road/ Wellington Street/ A412	-	-	-		-	-	-	-	-	-	**103.7%**	**0**	**0**	**0**	**131.4**	-	-
1/2+1/1	Uxbridge Road (N) Ahead Ahead2	U	G		1	25	-	743	2095:1858	701+150	87.3 : 87.3%	-	-	-	7.2	34.9	14.7
1/3	Uxbridge Road (N) Ahead	U	G		1	25	-	545	2095	778	70.0%	-	-	-	4.0	26.3	10.1
2/2+2/1	Wellington Street (E) LT Ahead Left	U	J		1	19	-	114	2055:1915	0+546	0.0 : 20.9%	-	-	-	0.7	23.2	1.8
2/3+2/4	Wellington Street (E) LT Ahead	U	J		1	19	-	411	2055:2065	0+590	0.0 : 69.7%	-	-	-	3.7	32.2	8.2
3/1	Wellington Street (E) Ahead	U	I		1	16	-	325	1915	465	69.9%	-	-	-	3.3	36.8	6.8
3/2	Wellington Street (E) Ahead	U	I		1	16	-	366	2065	502	73.0%	-	-	-	3.8	37.4	7.8
4/1+4/2	Uxbridge Road (S) Ahead Ahead2	U	N		1	28	-	825	1925:2135	683+140	100.2 : 100.2%	-	-	-	19.6	85.3	30.5
5/1+5/2	Wellington Street (W) LT Ahead Left	U	C		1	26	-	296	1925:2155	319+548	34.1 : 34.1%	-	-	-	1.4	17.5	3.0
6/1	Wellington Street (W) Ahead	U	B		1	26	-	464	2095	808	57.4%	-	-	-	2.9	22.2	7.8
6/2	Wellington Street (W) Ahead	U	B		1	26	-	507	2105	812	62.4%	-	-	-	3.3	23.3	8.7
7/1	Gyratory N Right	U	F		1	19	-	80	1800	514	15.5%	-	-	-	0.7	33.3	1.5

Basic Results Summary

7/2	Gyratory N Right	U	F		1	19	-	177	1800	514	34.4%	-	-	-	0.5	11.1	2.9
8/1	Gyratory E Ahead	U	K		1	32	-	763	1800	849	89.9%	-	-	-	11.0	51.9	18.8
8/2	Gyratory E Right	U	K		1	32	-	0	1800	-	-	-	-	-	-	-	-
8/3	Gyratory E Right	U	K		1	32	-	571	1800	849	67.3%	-	-	-	1.6	9.9	8.6
9/1	Gyratory S Right	U	M		1	20	-	0	1800	540	0.0%	-	-	-	0.0	0.0	0.0
9/2	Gyratory S Right Right2	U	M		1	20	-	560	1800	540	103.7%	-	-	-	22.8	146.6	29.1
9/3	Gyratory S Right	U	M		1	20	-	422	1800	540	78.1%	-	-	-	2.9	25.1	5.4
10/1	Gyratory W Ahead	U	D		1	32	-	606	1800	849	71.2%	-	-	-	2.1	12.3	2.8
10/2	Gyratory W Ahead	U	D		1	32	-	492	1800	849	57.9%	-	-	-	2.8	20.4	9.0
10/3	Gyratory W Right	U	D		1	32	-	70	1800	849	8.2%	-	-	-	0.2	10.8	0.9
11/1	E Exit Ped Left	U	L		1	30	-	84	1965	870	9.7%	-	-	-	0.3	14.5	1.0
11/2	E Exit Ped Left	U	L		1	30	-	127	2105	932	13.6%	-	-	-	0.4	11.5	1.0
12/1	N Exit Ped Ahead	U	Q		1	51	-	715	1955	1452	49.1%	-	-	-	0.6	2.8	1.0
12/2	N Exit Ped Ahead	U	Q		1	51	-	492	2095	1556	31.6%	-	-	-	0.2	1.7	0.2
14/1	S Exit Ped Ahead	U	O		1	52	-	877	1985	1503	58.4%	-	-	-	0.8	3.5	2.6
16/1	W Exit Left	U	E		1	32	-	79	1838	866	9.1%	-	-	-	0.2	7.1	0.3
16/2	W Exit Left	U	E		1	32	-	560	2019	952	56.7%	-	-	-	3.8	25.2	11.2
19/1	Wellington Street Throughway WB Ahead	U	A		1	25	-	325	1985	737	44.1%	-	-	-	0.9	9.7	1.2
19/2	Wellington Street Throughway WB Ahead	U	A		1	25	-	366	2095	778	47.0%	-	-	-	1.1	10.6	1.5

Basic Results Summary

21/1	Wellington Street (E) 2nd Stop Ahead	U	Y		1	25	-	325	1905	708	45.9%	-	-	-	0.6	6.4	0.7
21/2	Wellington Street (E) 2nd Stop Ahead	U	Y		1	25	-	366	2045	760	48.2%	-	-	-	0.6	6.3	0.8
22/1	Wellington Street Throughway EB Ahead	U	H		1	16	-	464	1905	463	100.3%	-	-	-	12.4	96.2	20.2
22/2	Wellington Street Throughway EB Ahead	U	H		1	16	-	507	2055	499	101.6%	-	-	-	15.0	106.3	23.4
Ped Link: P1	Unnamed Ped Link	-	Z		1	27	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	T		1	33	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	-	S		1	27	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P4	Unnamed Ped Link	-	U		1	33	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P5	Unnamed Ped Link	-	V		1	33	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P6	Unnamed Ped Link	-	X		1	33	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P7	Unnamed Ped Link	-	P		1	6	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P8	Unnamed Ped Link	-	AB		1	33	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P9	Unnamed Ped Link	-	W		1	27	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P10	Unnamed Ped Link	-	R		1	6	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P11	Unnamed Ped Link	-	AA		1	31	-	0	-	0	0.0%	-	-	-	-	-	-

C1 Stream: 1 PRC for Signalled Lanes (%): -15.2 Total Delay for Signalled Lanes (pcuHr): 129.75 Cycle Time (s): 70
C1 Stream: 2 PRC for Signalled Lanes (%): 54.2 Total Delay for Signalled Lanes (pcuHr): 0.84 Cycle Time (s): 70
C1 Stream: 3 PRC for Signalled Lanes (%): 83.2 Total Delay for Signalled Lanes (pcuHr): 0.79 Cycle Time (s): 70
PRC Over All Lanes (%): -15.2 Total Delay Over All Lanes(pcuHr): 131.37

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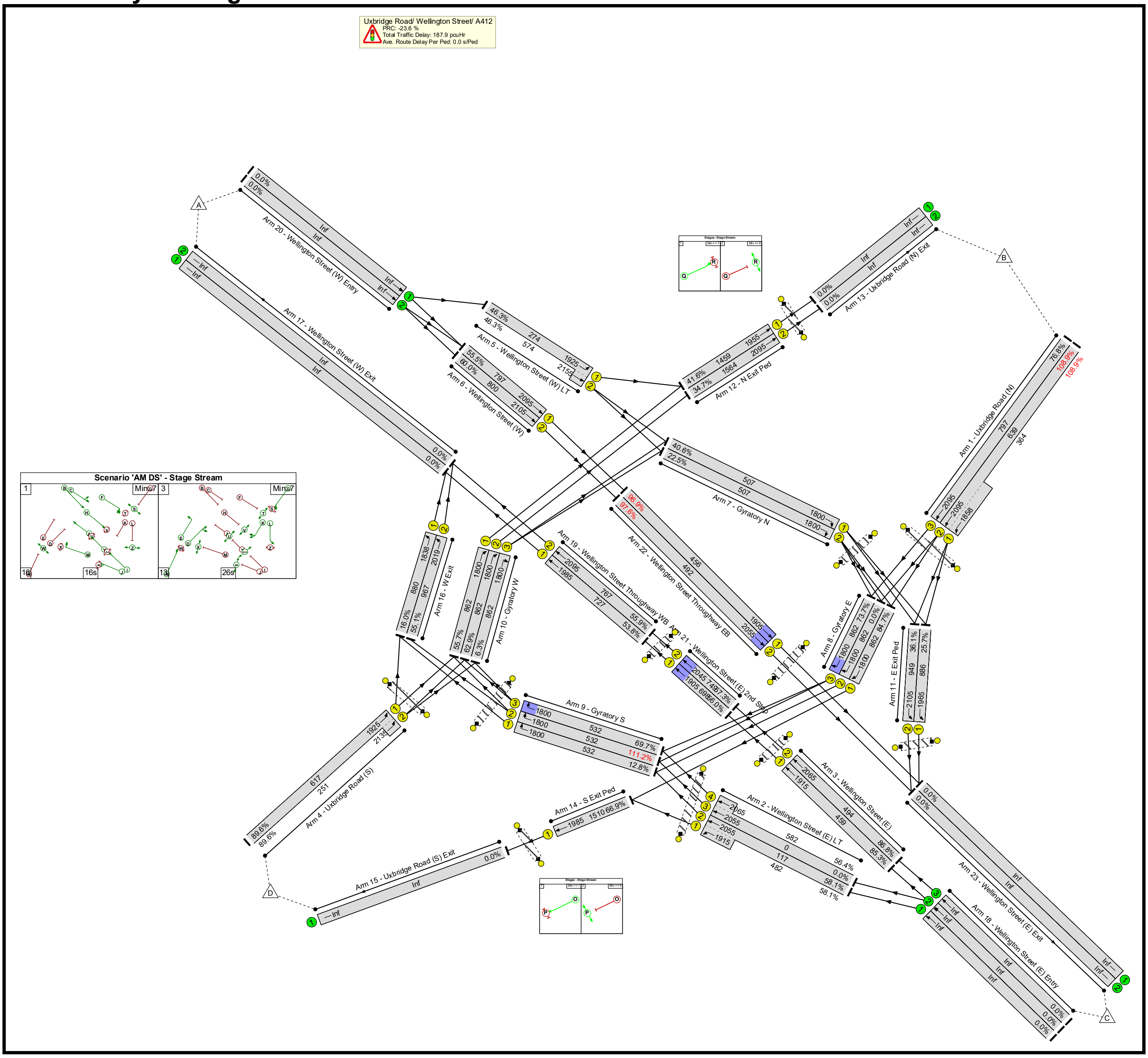
Basic Results Summary

Scenario 5: 'AM DS' (FG5: 'AM DS', Plan 2: 'Network Control Plan 2')

Network Layout Diagram



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Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**111.2%**	**0**	**0**	**0**	**187.9**	-	-
Uxbridge Road/ Wellington Street/ A412	-	-	-		-	-	-	-	-	-	**111.2%**	**0**	**0**	**0**	**187.9**	-	-
1/2+1/1	Uxbridge Road (N) Ahead Ahead2	U	G		1	26	-	1092	2095:1858	639+364	108.9 : 108.9%	-	-	-	59.0	194.6	69.6
1/3	Uxbridge Road (N) Ahead	U	G		1	26	-	612	2095	797	76.8%	-	-	-	4.9	28.8	12.2
2/2+2/1	Wellington Street (E) LT Ahead Left	U	J		1	19	-	348	2055:1915	117+482	58.1 : 58.1%	-	-	-	2.7	28.1	5.4
2/3+2/4	Wellington Street (E) LT Ahead	U	J		1	19	-	328	2055:2065	0+582	0.0 : 56.4%	-	-	-	2.6	28.8	6.1
3/1	Wellington Street (E) Ahead	U	I		1	16	-	391	1915	459	85.3%	-	-	-	5.5	50.5	10.0
3/2	Wellington Street (E) Ahead	U	I		1	16	-	429	2065	494	86.8%	-	-	-	6.1	51.1	11.1
4/1+4/2	Uxbridge Road (S) Ahead Ahead2	U	N		1	29	-	778	1925:2135	617+251	89.6 : 89.6%	-	-	-	7.9	36.7	17.2
5/1+5/2	Wellington Street (W) LT Ahead Left	U	C		1	26	-	393	1925:2155	274+574	46.3 : 46.3%	-	-	-	2.1	19.6	5.1
6/1	Wellington Street (W) Ahead	U	B		1	26	-	442	2095	797	55.5%	-	-	-	2.7	22.3	7.4
6/2	Wellington Street (W) Ahead	U	B		1	26	-	480	2105	800	60.0%	-	-	-	3.1	23.3	8.2
7/1	Gyratory N Right	U	F		1	19	-	206	1800	507	40.6%	-	-	-	1.2	20.3	3.7

Basic Results Summary

7/2	Gyratory N Right	U	F		1	19	-	114	1800	507	22.5%	-	-	-	0.3	9.0	1.2
8/1	Gyratory E Ahead	U	K		1	33	-	787	1800	862	84.7%	-	-	-	9.1	45.0	16.9
8/2	Gyratory E Right	U	K		1	33	-	0	1800	862	0.0%	-	-	-	0.0	0.0	0.0
8/3	Gyratory E Right	U	K		1	33	-	635	1800	862	73.7%	-	-	-	2.0	11.4	10.7
9/1	Gyratory S Right	U	M		1	20	-	68	1800	532	12.8%	-	-	-	0.2	9.3	0.2
9/2	Gyratory S Right Right2	U	M		1	20	-	592	1800	532	111.2%	-	-	-	40.6	246.9	47.0
9/3	Gyratory S Right	U	M		1	20	-	371	1800	532	69.7%	-	-	-	2.0	19.2	3.2
10/1	Gyratory W Ahead	U	D		1	33	-	480	1800	862	55.7%	-	-	-	0.9	6.9	1.2
10/2	Gyratory W Ahead	U	D		1	33	-	542	1800	862	62.9%	-	-	-	2.7	17.8	9.0
10/3	Gyratory W Right	U	D		1	33	-	54	1800	862	6.3%	-	-	-	0.2	11.8	0.9
11/1	E Exit Ped Left	U	L		1	31	-	235	1965	886	25.7%	-	-	-	1.1	17.0	3.2
11/2	E Exit Ped Left	U	L		1	31	-	367	2105	949	36.1%	-	-	-	1.1	11.1	2.4
12/1	N Exit Ped Ahead	U	Q		1	52	-	607	1955	1459	41.6%	-	-	-	0.4	2.6	0.9
12/2	N Exit Ped Ahead	U	Q		1	52	-	542	2095	1564	34.7%	-	-	-	0.3	1.8	0.3
14/1	S Exit Ped Ahead	U	O		1	53	-	1067	1985	1510	66.9%	-	-	-	1.2	4.3	3.2
16/1	W Exit Left	U	E		1	33	-	141	1838	880	16.0%	-	-	-	0.4	10.2	1.5
16/2	W Exit Left	U	E		1	33	-	592	2019	967	55.1%	-	-	-	3.7	24.9	11.1
19/1	Wellington Street Throughway WB Ahead	U	A		1	25	-	391	1985	727	53.8%	-	-	-	1.8	16.1	2.4
19/2	Wellington Street Throughway WB Ahead	U	A		1	25	-	429	2095	767	55.9%	-	-	-	2.0	16.5	3.0

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Basic Results Summary

21/1	Wellington Street (E) 2nd Stop Ahead	U	Y		1	25	-	391	1905	698	56.0%	-	-	-	0.9	8.2	1.0
21/2	Wellington Street (E) 2nd Stop Ahead	U	Y		1	25	-	429	2045	749	57.3%	-	-	-	1.0	8.1	1.2
22/1	Wellington Street Throughway EB Ahead	U	H		1	16	-	442	1905	456	96.9%	-	-	-	8.7	71.1	16.1
22/2	Wellington Street Throughway EB Ahead	U	H		1	16	-	480	2055	492	97.6%	-	-	-	9.6	71.9	17.7
Ped Link: P1	Unnamed Ped Link	-	Z		1	27	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	T		1	34	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	-	S		1	27	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P4	Unnamed Ped Link	-	U		1	34	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P5	Unnamed Ped Link	-	V		1	34	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P6	Unnamed Ped Link	-	X		1	34	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P7	Unnamed Ped Link	-	P		1	6	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P8	Unnamed Ped Link	-	AB		1	34	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P9	Unnamed Ped Link	-	W		1	27	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P10	Unnamed Ped Link	-	R		1	6	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P11	Unnamed Ped Link	-	AA		1	32	-	0	-	0	0.0%	-	-	-	-	-	-

C1	Stream: 1	PRC for Signalled Lanes (%):	-23.6	Total Delay for Signalled Lanes (pcuHr):	185.98	Cycle Time (s):	71
C1	Stream: 2	PRC for Signalled Lanes (%):	34.5	Total Delay for Signalled Lanes (pcuHr):	1.20	Cycle Time (s):	71
C1	Stream: 3	PRC for Signalled Lanes (%):	116.4	Total Delay for Signalled Lanes (pcuHr):	0.71	Cycle Time (s):	71
		PRC Over All Lanes (%):	-23.6	Total Delay Over All Lanes(pcuHr):	187.89		

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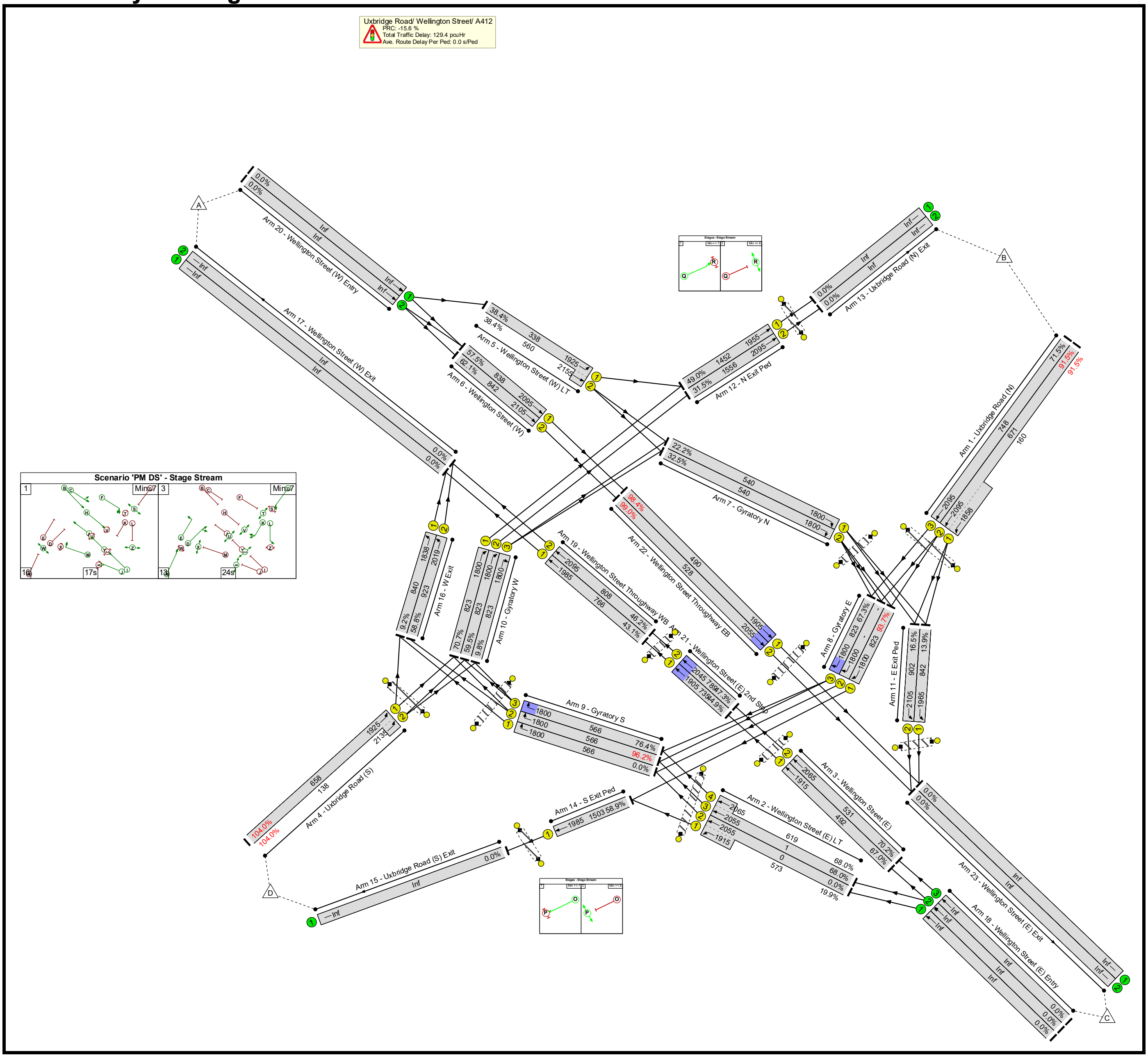
Basic Results Summary

Scenario 6: 'PM DS' (FG6: 'PM DS', Plan 2: 'Network Control Plan 2')

Network Layout Diagram



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Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**104.0%**	**0**	**0**	**0**	**129.4**	-	-
Uxbridge Road/ Wellington Street/ A412	-	-	-		-	-	-	-	-	-	**104.0%**	**0**	**0**	**0**	**129.4**	-	-
1/2+1/1	Uxbridge Road (N) Ahead Ahead2	U	G		1	24	-	760	2095:1858	671+160	91.5 : 91.5%	-	-	-	9.0	42.5	16.8
1/3	Uxbridge Road (N) Ahead	U	G		1	24	-	535	2095	748	71.5%	-	-	-	4.1	27.8	10.2
2/2+2/1	Wellington Street (E) LT Ahead Left	U	J		1	20	-	114	2055:1915	0+573	0.0 : 19.9%	-	-	-	0.7	22.2	1.8
2/3+2/4	Wellington Street (E) LT Ahead	U	J		1	20	-	422	2055:2065	1+619	68.0 : 68.0%	-	-	-	3.6	30.5	8.2
3/1	Wellington Street (E) Ahead	U	I		1	17	-	330	1915	492	67.0%	-	-	-	3.1	34.3	6.7
3/2	Wellington Street (E) Ahead	U	I		1	17	-	373	2065	531	70.2%	-	-	-	3.6	34.8	7.7
4/1+4/2	Uxbridge Road (S) Ahead Ahead2	U	N		1	27	-	828	1925:2135	658+138	104.0 : 104.0%	-	-	-	30.5	132.8	41.2
5/1+5/2	Wellington Street (W) LT Ahead Left	U	C		1	27	-	345	1925:2155	338+560	38.4 : 38.4%	-	-	-	1.7	17.2	3.7
6/1	Wellington Street (W) Ahead	U	B		1	27	-	482	2095	838	57.5%	-	-	-	2.9	21.4	7.9
6/2	Wellington Street (W) Ahead	U	B		1	27	-	523	2105	842	62.1%	-	-	-	3.3	22.4	8.8
7/1	Gyratory N Right	U	F		1	20	-	121	1800	540	22.2%	-	-	-	0.9	26.6	2.2

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Basic Results Summary

7/2	Gyratory N Right	U	F		1	20	-	176	1800	540	32.5%	-	-	-	0.5	10.6	2.8
8/1	Gyratory E Ahead	U	K		1	31	-	771	1800	823	93.7%	-	-	-	13.1	61.4	21.0
8/2	Gyratory E Right	U	K		1	31	-	0	1800	-	-	-	-	-	-	-	-
8/3	Gyratory E Right	U	K		1	31	-	554	1800	823	67.3%	-	-	-	1.5	10.0	8.6
9/1	Gyratory S Right	U	M		1	21	-	0	1800	566	0.0%	-	-	-	0.0	0.0	0.0
9/2	Gyratory S Right Right2	U	M		1	21	-	544	1800	566	96.2%	-	-	-	11.5	76.0	18.0
9/3	Gyratory S Right	U	M		1	21	-	432	1800	566	76.4%	-	-	-	2.5	21.2	5.6
10/1	Gyratory W Ahead	U	D		1	31	-	605	1800	823	70.7%	-	-	-	2.1	12.7	2.8
10/2	Gyratory W Ahead	U	D		1	31	-	494	1800	823	59.5%	-	-	-	2.9	21.4	9.2
10/3	Gyratory W Right	U	D		1	31	-	82	1800	823	9.8%	-	-	-	0.2	10.8	1.0
11/1	E Exit Ped Left	U	L		1	29	-	117	1965	842	13.9%	-	-	-	0.6	17.6	1.7
11/2	E Exit Ped Left	U	L		1	29	-	150	2105	902	16.5%	-	-	-	0.6	13.3	1.3
12/1	N Exit Ped Ahead	U	Q		1	51	-	735	1955	1452	49.0%	-	-	-	0.6	2.9	1.2
12/2	N Exit Ped Ahead	U	Q		1	51	-	494	2095	1556	31.5%	-	-	-	0.2	1.7	0.2
14/1	S Exit Ped Ahead	U	O		1	52	-	885	1985	1503	58.9%	-	-	-	0.8	3.2	1.4
16/1	W Exit Left	U	E		1	31	-	80	1838	840	9.2%	-	-	-	0.2	7.5	0.3
16/2	W Exit Left	U	E		1	31	-	543	2019	923	58.8%	-	-	-	4.0	26.5	11.3
19/1	Wellington Street Throughway WB Ahead	U	A		1	26	-	330	1985	766	43.1%	-	-	-	0.7	8.1	1.0
19/2	Wellington Street Throughway WB Ahead	U	A		1	26	-	373	2095	808	46.2%	-	-	-	0.9	8.7	1.2

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Basic Results Summary

21/1	Wellington Street (E) 2nd Stop Ahead	U	Y		1	26	-	330	1905	735	44.9%	-	-	-	0.6	6.1	0.7
21/2	Wellington Street (E) 2nd Stop Ahead	U	Y		1	26	-	373	2045	789	47.3%	-	-	-	0.6	6.0	0.7
22/1	Wellington Street Throughway EB Ahead	U	H		1	17	-	482	1905	490	98.4%	-	-	-	10.5	78.2	18.4
22/2	Wellington Street Throughway EB Ahead	U	H		1	17	-	523	2055	528	99.0%	-	-	-	11.5	79.1	20.2
Ped Link: P1	Unnamed Ped Link	-	Z		1	28	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	-	T		1	32	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	-	S		1	28	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P4	Unnamed Ped Link	-	U		1	32	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P5	Unnamed Ped Link	-	V		1	32	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P6	Unnamed Ped Link	-	X		1	32	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P7	Unnamed Ped Link	-	P		1	6	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P8	Unnamed Ped Link	-	AB		1	32	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P9	Unnamed Ped Link	-	W		1	28	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P10	Unnamed Ped Link	-	R		1	6	-	0	-	0	0.0%	-	-	-	-	-	-
Ped Link: P11	Unnamed Ped Link	-	AA		1	30	-	0	-	0	0.0%	-	-	-	-	-	-

C1 Stream: 1 PRC for Signalled Lanes (%): -15.6 Total Delay for Signalled Lanes (pcuHr): 127.83 Cycle Time (s): 70
C1 Stream: 2 PRC for Signalled Lanes (%): 52.9 Total Delay for Signalled Lanes (pcuHr): 0.79 Cycle Time (s): 70
C1 Stream: 3 PRC for Signalled Lanes (%): 83.7 Total Delay for Signalled Lanes (pcuHr): 0.81 Cycle Time (s): 70
PRC Over All Lanes (%): -15.6 Total Delay Over All Lanes(pcuHr): 129.43

Basic Results Summary

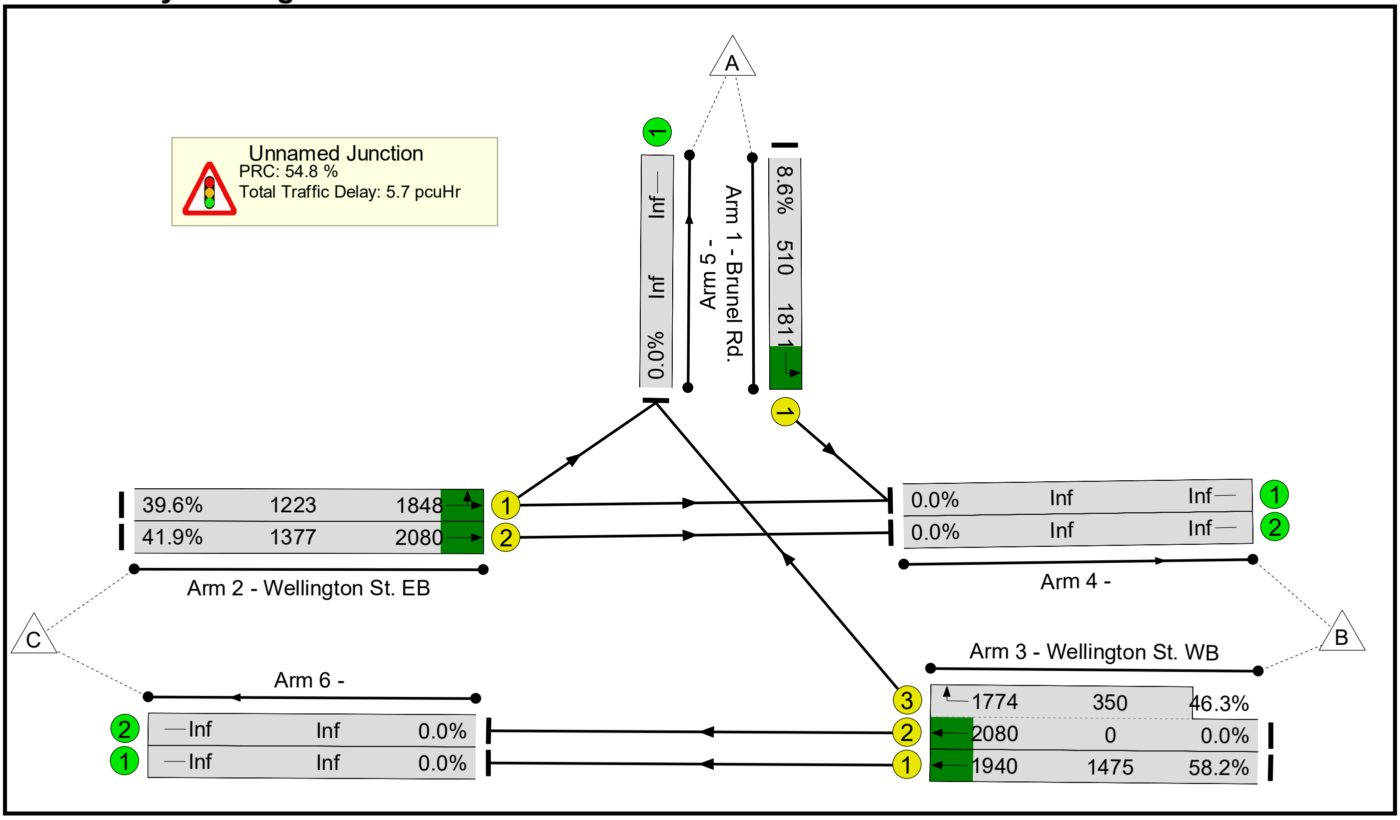
Basic Results Summary

User and Project Details

Project:	
Title:	
Location:	
File name:	TS093 - Wellington - Brunel.lsg3x
Author:	
Company:	
Address:	
Notes:	

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

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**58.2%**	**0**	**0**	**0**	**5.7**	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	**58.2%**	**0**	**0**	**0**	**5.7**	-	-
1/1	Brunel Rd. Left	U	D		1	23	-	44	1811	510	8.6%	-	-	-	0.3	22.7	0.7
2/1	Wellington St. EB Ahead Left	U	A		1	35	-	485	1848	1223	39.6%	-	-	-	1.1	7.9	4.6
2/2	Wellington St. EB Ahead	U	A		1	35	-	577	2080	1377	41.9%	-	-	-	1.3	7.9	5.6
3/1	Wellington St. WB Ahead	U	B		1	42	-	858	1940	1475	58.2%	-	-	-	1.6	6.6	7.8
3/2+3/3	Wellington St. WB Right Ahead	U	B C		1	42:13	-	162	2080:1774	0+350	0.0 : 46.3%	-	-	-	1.6	34.7	3.2

C1 PRC for Signalled Lanes (%): 54.8 Total Delay for Signalled Lanes (pcuHr): 5.73 Cycle Time (s): 71
PRC Over All Lanes (%): 54.8 Total Delay Over All Lanes(pcuHr): 5.73

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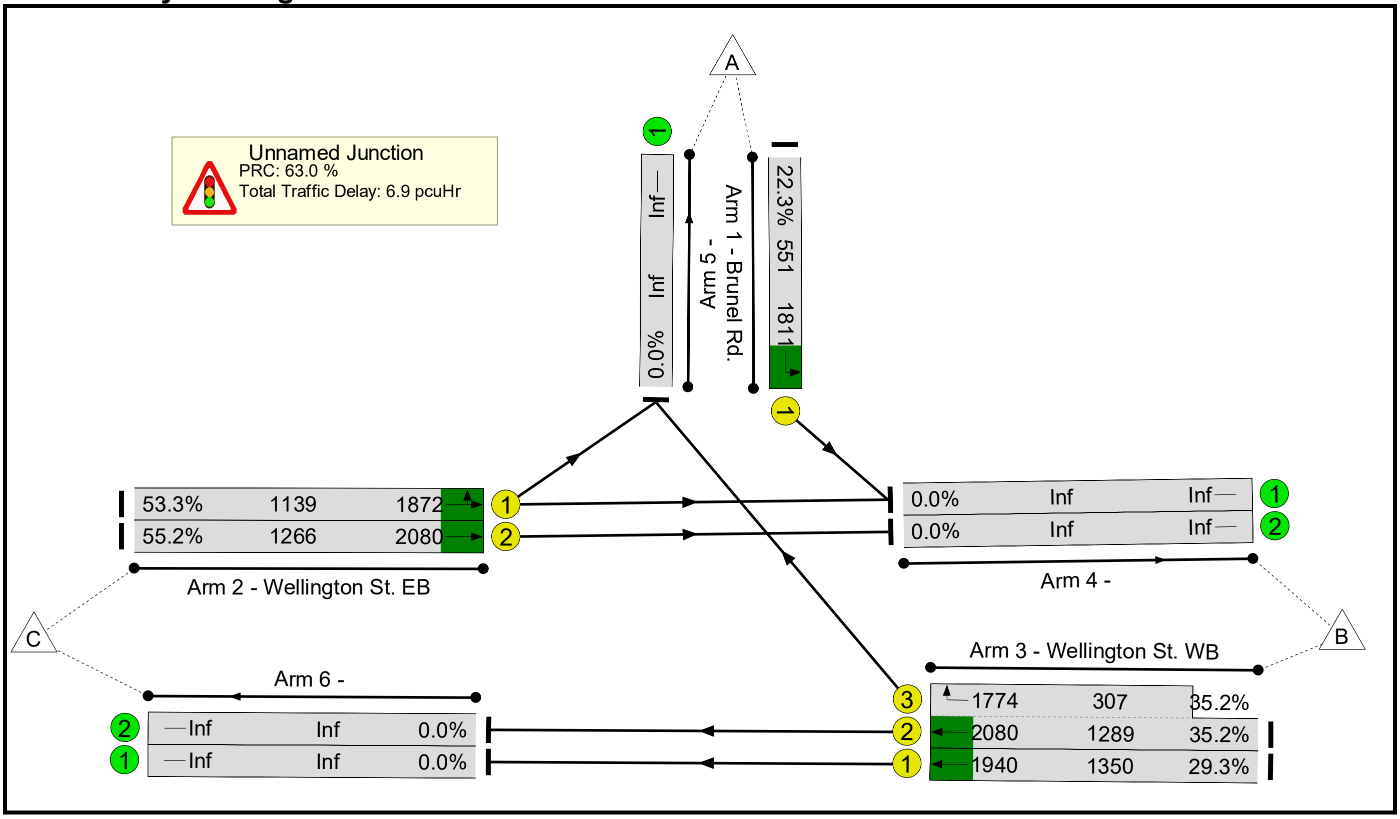
Basic Results Summary

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

Network Layout Diagram



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Basic Results Summary

Network Results

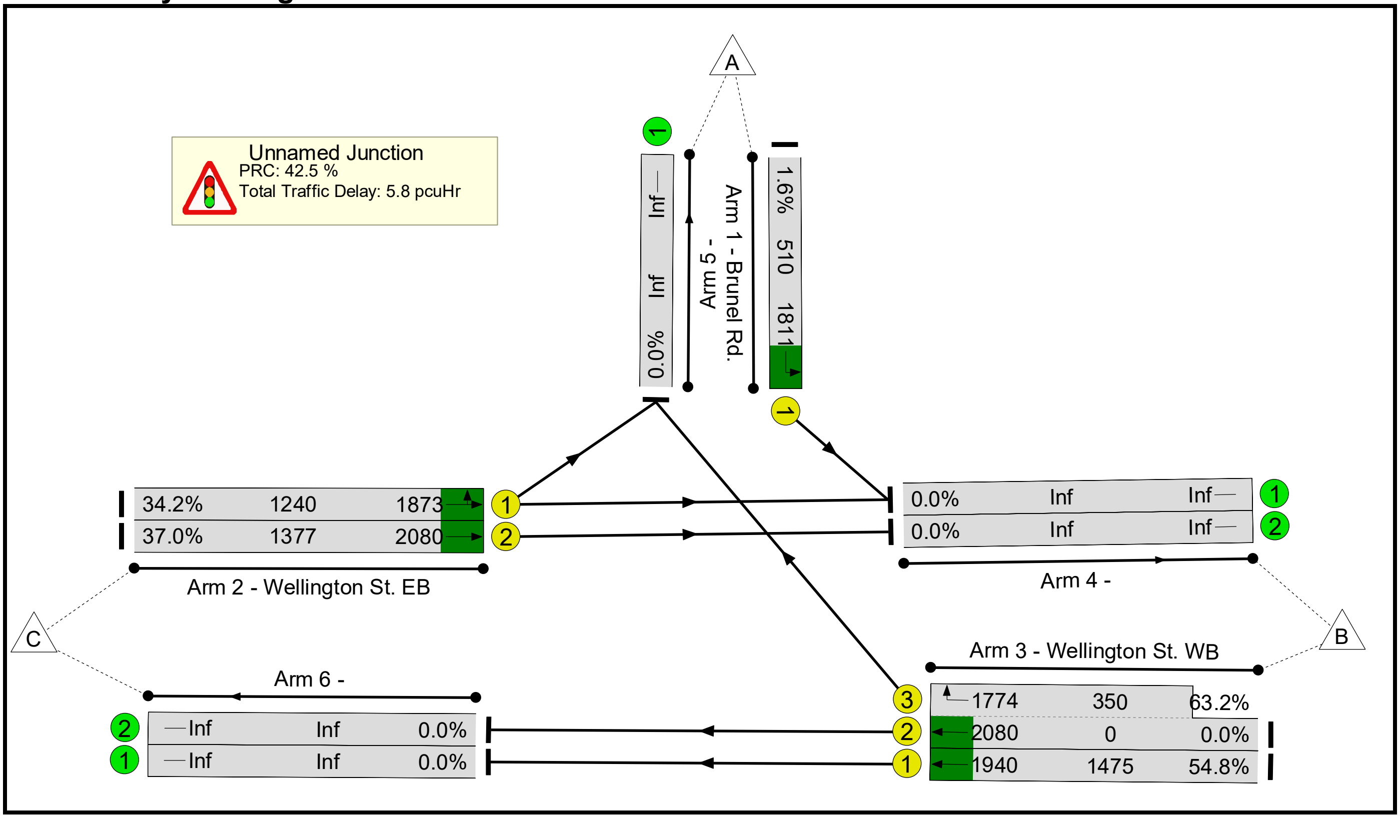
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**55.2%**	**0**	**0**	**0**	**6.9**	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	**55.2%**	**0**	**0**	**0**	**6.9**	-	-
1/1	Brunel Rd. Left	U	D		1	23	-	123	1811	551	22.3%	-	-	-	0.8	22.1	1.9
2/1	Wellington St. EB Ahead Left	U	A		1	33	-	607	1872	1139	53.3%	-	-	-	1.9	11.2	7.1
2/2	Wellington St. EB Ahead	U	A		1	33	-	699	2080	1266	55.2%	-	-	-	2.2	11.1	8.4
3/1	Wellington St. WB Ahead	U	B		1	39	-	396	1940	1350	29.3%	-	-	-	0.6	5.9	3.1
3/2+3/3	Wellington St. WB Right Ahead	U	B C		1	39:13	-	562	2080:1774	1289+307	35.2 : 35.2%	-	-	-	1.5	9.5	3.6

C1 PRC for Signalled Lanes (%): 63.0 Total Delay for Signalled Lanes (pcuHr): 6.94 Cycle Time (s): 69
PRC Over All Lanes (%): 63.0 Total Delay Over All Lanes(pcuHr): 6.94

Basic Results Summary

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

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**63.2%**	**0**	**0**	**0**	**5.8**	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	**63.2%**	**0**	**0**	**0**	**5.8**	-	-
1/1	Brunel Rd. Left	U	D		1	23	-	8	1811	510	1.6%	-	-	-	0.0	22.3	0.1
2/1	Wellington St. EB Ahead Left	U	A		1	35	-	424	1873	1240	34.2%	-	-	-	0.9	7.4	3.9
2/2	Wellington St. EB Ahead	U	A		1	35	-	509	2080	1377	37.0%	-	-	-	1.1	7.4	4.7
3/1	Wellington St. WB Ahead	U	B		1	42	-	808	1940	1475	54.8%	-	-	-	1.4	6.2	7.1
3/2+3/3	Wellington St. WB Right Ahead	U	B C		1	42:13	-	221	2080:1774	0+350	0.0 : 63.2%	-	-	-	2.5	39.9	4.8

C1 PRC for Signalled Lanes (%): 42.5 Total Delay for Signalled Lanes (pcuHr): 5.82 Cycle Time (s): 71
PRC Over All Lanes (%): 42.5 Total Delay Over All Lanes(pcuHr): 5.82

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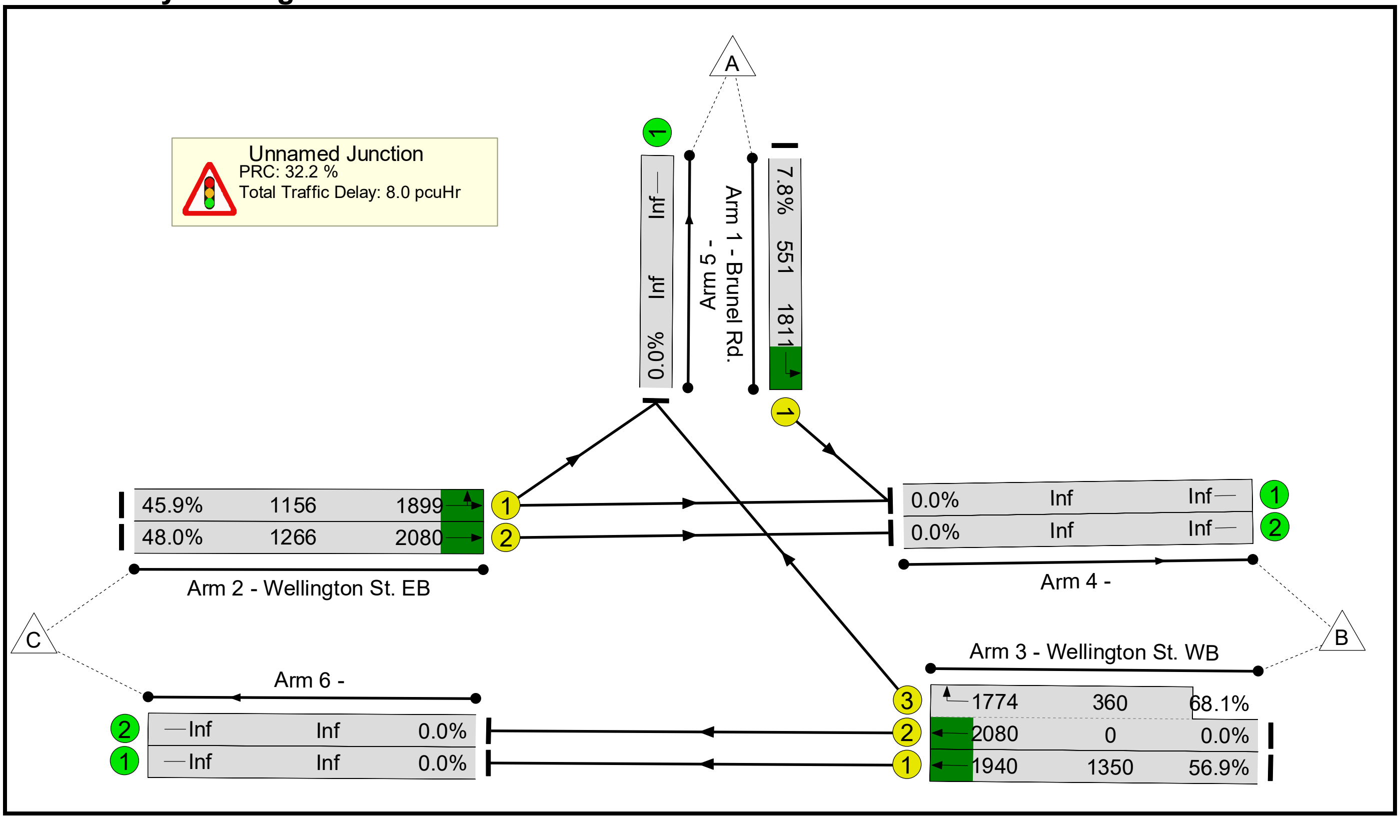
Basic Results Summary

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

Network Layout Diagram



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Basic Results Summary

Network Results

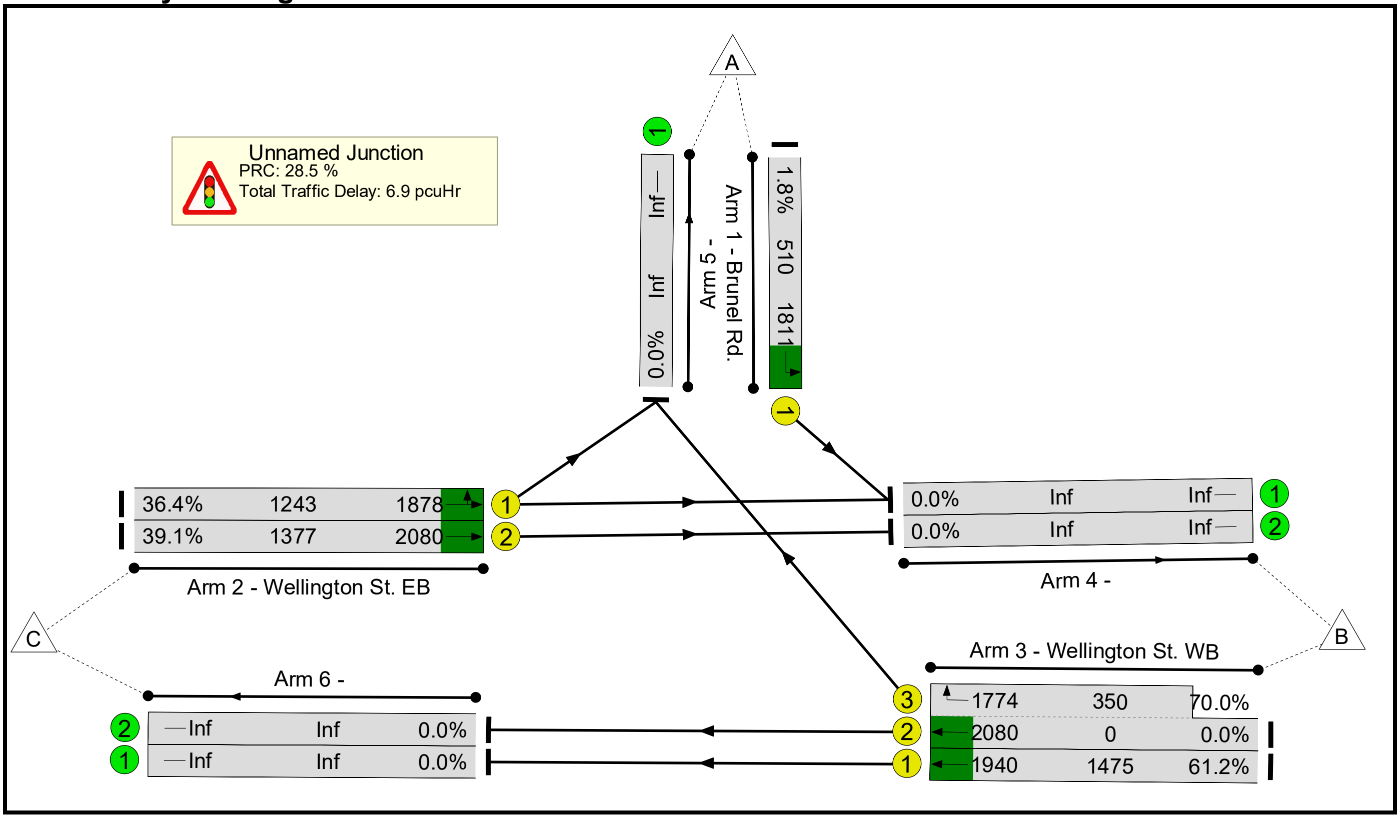
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**68.1%**	**0**	**0**	**0**	**8.0**	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	**68.1%**	**0**	**0**	**0**	**8.0**	-	-
1/1	Brunel Rd. Left	U	D		1	23	-	43	1811	551	7.8%	-	-	-	0.2	20.7	0.6
2/1	Wellington St. EB Ahead Left	U	A		1	33	-	530	1899	1156	45.9%	-	-	-	1.5	10.2	5.9
2/2	Wellington St. EB Ahead	U	A		1	33	-	608	2080	1266	48.0%	-	-	-	1.7	10.2	6.9
3/1	Wellington St. WB Ahead	U	B		1	39	-	768	1940	1350	56.9%	-	-	-	1.8	8.4	7.9
3/2+3/3	Wellington St. WB Right Ahead	U	B C		1	39:13	-	245	2080:1774	0+360	0.0 : 68.1%	-	-	-	2.8	40.8	5.3

C1 PRC for Signalled Lanes (%): 32.2 Total Delay for Signalled Lanes (pcuHr): 8.04 Cycle Time (s): 69
PRC Over All Lanes (%): 32.2 Total Delay Over All Lanes(pcuHr): 8.04

Basic Results Summary

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

Network Layout Diagram



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Basic Results Summary

Network Results

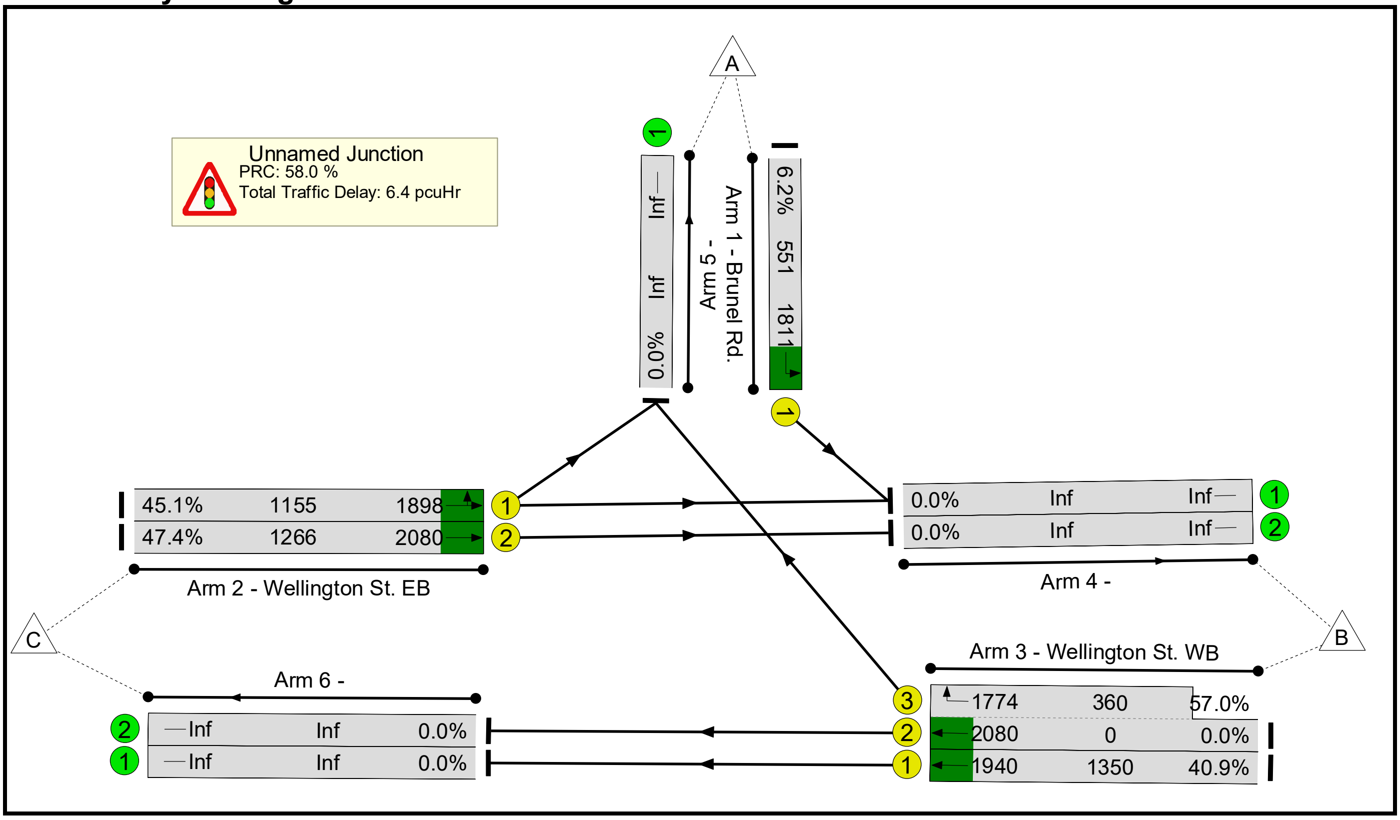
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**70.0%**	**0**	**0**	**0**	**6.9**	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	**70.0%**	**0**	**0**	**0**	**6.9**	-	-
1/1	Brunel Rd. Left	U	D		1	23	-	9	1811	510	1.8%	-	-	-	0.1	22.3	0.1
2/1	Wellington St. EB Ahead Left	U	A		1	35	-	453	1878	1243	36.4%	-	-	-	1.0	7.6	4.2
2/2	Wellington St. EB Ahead	U	A		1	35	-	539	2080	1377	39.1%	-	-	-	1.1	7.6	5.1
3/1	Wellington St. WB Ahead	U	B		1	42	-	903	1940	1475	61.2%	-	-	-	1.7	6.9	8.6
3/2+3/3	Wellington St. WB Right Ahead	U	B C		1	42:13	-	245	2080:1774	0+350	0.0 : 70.0%	-	-	-	3.0	43.4	5.6

C1	PRC for Signalled Lanes (%):	28.5	Total Delay for Signalled Lanes (pcuHr):	6.85	Cycle Time (s):	71
	PRC Over All Lanes (%):	28.5	Total Delay Over All Lanes(pcuHr):	6.85		

Basic Results Summary

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

Network Layout Diagram



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Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**57.0%**	**0**	**0**	**0**	**6.4**	-	-
Unnamed Junction	-	-	-		-	-	-	-	-	-	**57.0%**	**0**	**0**	**0**	**6.4**	-	-
1/1	Brunel Rd. Left	U	D		1	23	-	34	1811	551	6.2%	-	-	-	0.2	20.5	0.5
2/1	Wellington St. EB Ahead Left	U	A		1	33	-	521	1898	1155	45.1%	-	-	-	1.5	10.1	5.8
2/2	Wellington St. EB Ahead	U	A		1	33	-	600	2080	1266	47.4%	-	-	-	1.7	10.1	6.6
3/1	Wellington St. WB Ahead	U	B		1	39	-	552	1940	1350	40.9%	-	-	-	1.0	6.7	4.8
3/2+3/3	Wellington St. WB Right Ahead	U	B C		1	39:13	-	205	2080:1774	0+360	0.0 : 57.0%	-	-	-	2.1	36.3	4.2

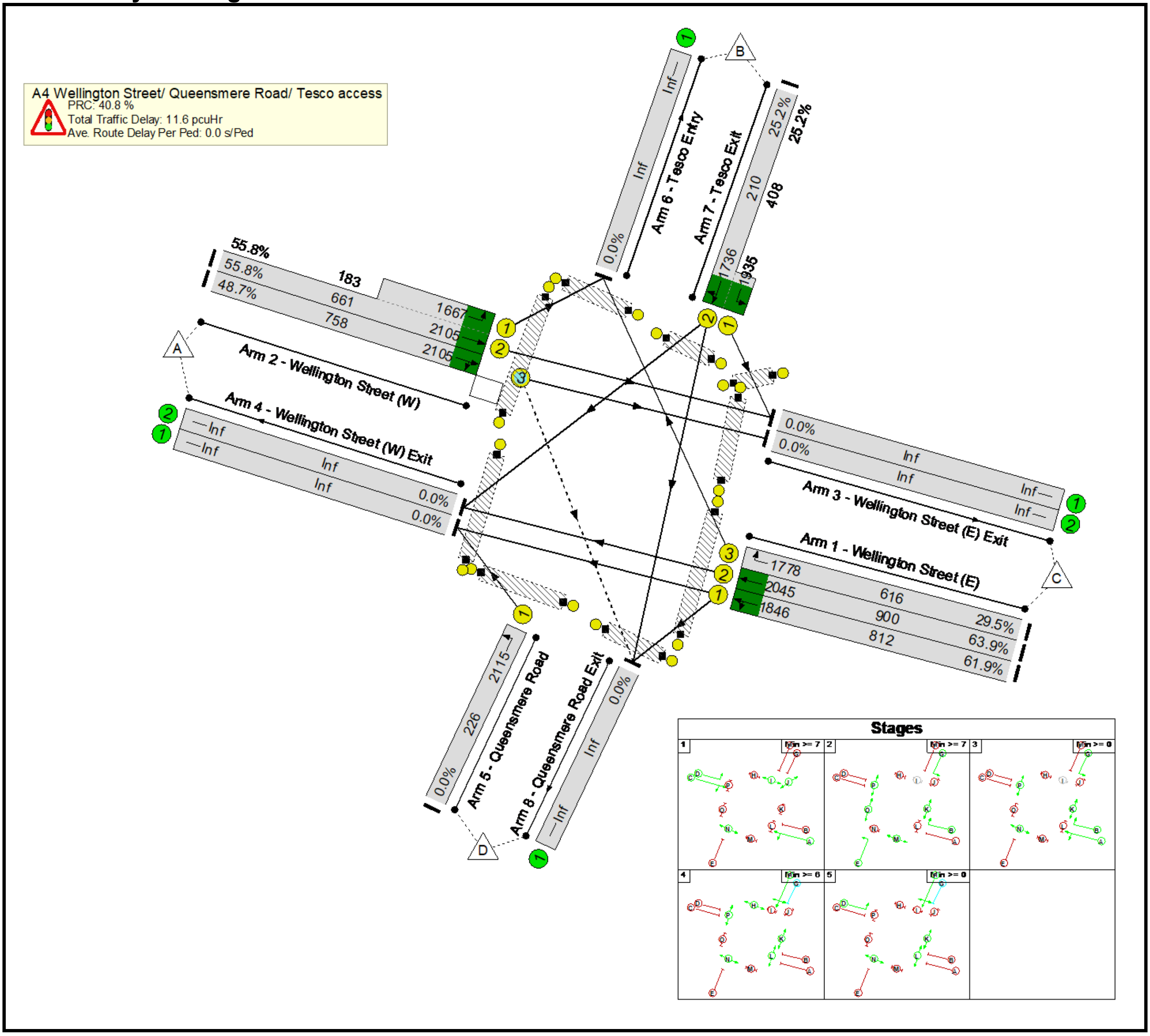
C1 PRC for Signalled Lanes (%): 58.0 Total Delay for Signalled Lanes (pcuHr): 6.44 Cycle Time (s): 69
PRC Over All Lanes (%): 58.0 Total Delay Over All Lanes(pcuHr): 6.44

Basic Results Summary
Basic Results Summary

User and Project Details

Project:	
Title:	
Location:	
File name:	J2_A4_Queensmere Rd (Tesco).lsg3x
Author:	
Company:	
Address:	
Notes:	

Scenario 1: 'AM Peak' (FG1: 'AM Peak', Plan 1: 'AM Peak')
Network Layout Diagram



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Basic Results Summary
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Item
Network	-	-	-		-	-	-	-	-	-	**63.9%**	**0**	**0**	**0**	**11.6**	-	-	**Network**
A4 Wellington Street/ Queensmere Road/ Tesco access	-	-	-		-	-	-	-	-	-	**63.9%**	**0**	**0**	**0**	**11.6**	-	-	**A4 Wellington Street/ Queensmere Road/ Tesco access**
1/1	Wellington Street (E) Ahead Left	U	A		2	28	-	503	1846	812	61.9%	-	-	-	2.0	14.3	5.7	1/1
1/2	Wellington Street (E) Ahead	U	A		2	28	-	575	2045	900	63.9%	-	-	-	2.3	14.5	6.7	1/2
1/3	Wellington Street (E) Right	U	B		1	25	-	182	1778	616	29.5%	-	-	-	1.1	22.0	2.9	1/3
2/2+2/1	Wellington Street (W) Ahead Left	U	C D		1	17:22	-	471	2105:1667	661+183	55.8 : 55.8%	-	-	-	2.9	22.3	6.6	2/2+2/1
2/3	Wellington Street (W) Ahead Right	O	C		1	17	-	369	2105	758	48.7%	0	0	0	2.4	23.2	6.4	2/3
5/1	Queensmere Road Left	U	E		1	7	-	0	2115	226	0.0%	-	-	-	0.0	0.0	0.0	5/1
7/2+7/1	Tesco Exit Left Right Ahead	U	F	G	1	17:46	29	156	1736:1935	210+408	25.2 : 25.2%	-	-	-	0.9	21.2	1.5	7/2+7/1
Ped Link: P1	Unnamed Ped Link	-	J		1	17	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P1
Ped Link: P2	Unnamed Ped Link	-	I		1	17	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P2
Ped Link: P3	Unnamed Ped Link	-	H		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P3
Ped Link: P4	Unnamed Ped Link	-	K		1	45	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P4

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Basic Results Summary

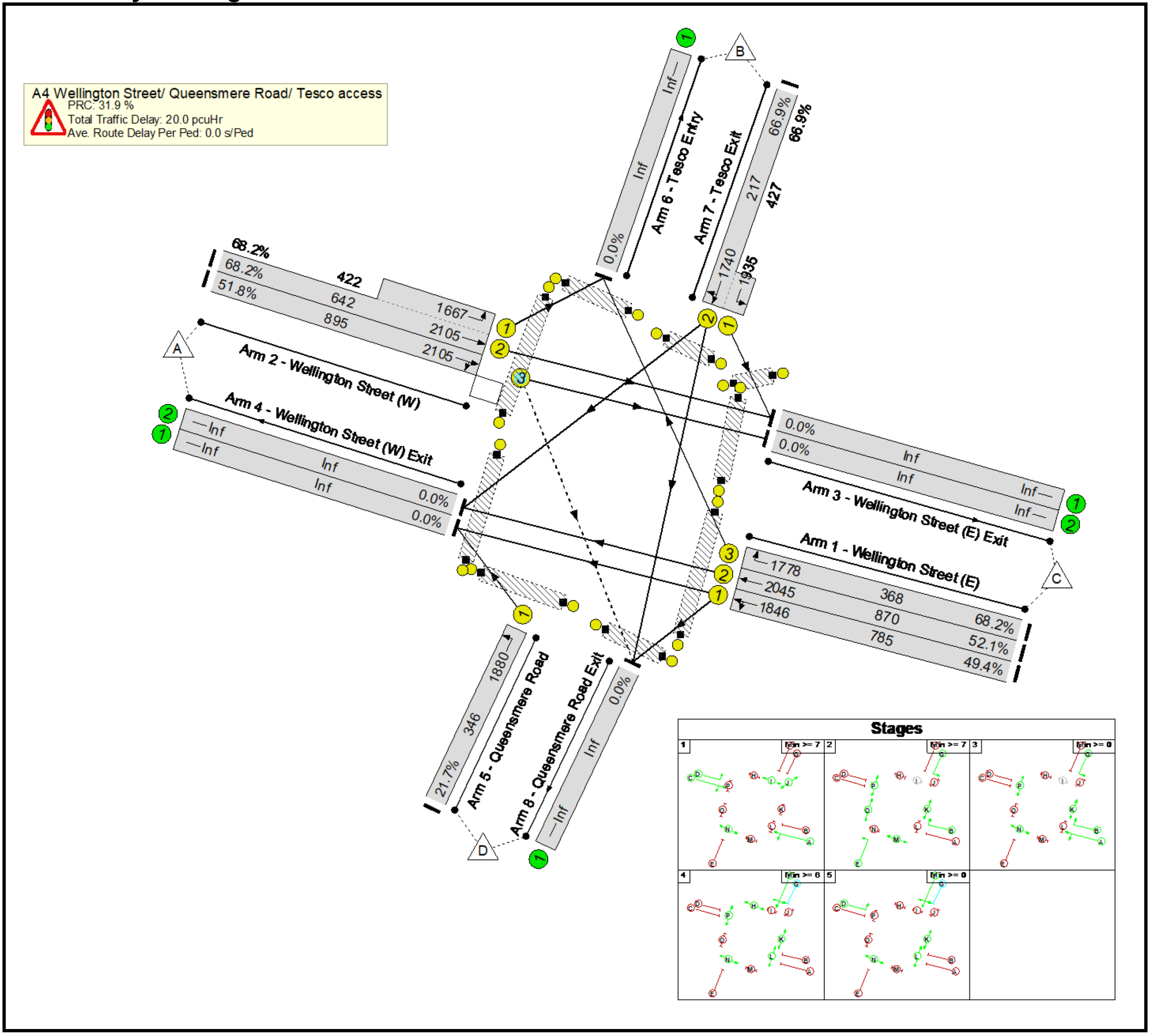
Ped Link: P5	Unnamed Ped Link	-	L		1	17	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P5
Ped Link: P6	Unnamed Ped Link	-	M		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P6
Ped Link: P7	Unnamed Ped Link	-	N		1	55	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P7
Ped Link: P8	Unnamed Ped Link	-	O		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P8
Ped Link: P9	Unnamed Ped Link	-	P		1	42	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P9

C1 PRC for Signalled Lanes (%): 40.8 Total Delay for Signalled Lanes (pcuHr): 11.64 Cycle Time (s): 75
PRC Over All Lanes (%): 40.8 Total Delay Over All Lanes(pcuHr): 11.64

Basic Results Summary

Scenario 2: 'PM Peak' (FG2: 'PM Peak', Plan 2: 'PM Peak')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Item
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**68.2%**	**0**	**0**	**0**	**20.0**	**-**	**-**	**Network**
A4 Wellington Street/ Queensmere Road/ Tesco access	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**68.2%**	**0**	**0**	**0**	**20.0**	**-**	**-**	**A4 Wellington Street/ Queensmere Road/ Tesco access**
1/1	Wellington Street (E) Ahead Left	U	A		1	36	-	388	1846	785	49.4%	-	-	-	2.4	22.7	7.3	1/1
1/2	Wellington Street (E) Ahead	U	A		1	36	-	453	2045	870	52.1%	-	-	-	2.9	22.8	8.6	1/2
1/3	Wellington Street (E) Right	U	B		1	17	-	251	1778	368	68.2%	-	-	-	3.3	47.0	6.6	1/3
2/2+2/1	Wellington Street (W) Ahead Left	U	C D		1	36:42	-	726	2105:1667	642+422	68.2 : 68.2%	-	-	-	4.4	21.6	8.7	2/2+2/1
2/3	Wellington Street (W) Ahead Right	O	C		1	36	-	464	2105	895	51.8%	0	0	0	2.9	22.6	8.8	2/3
5/1	Queensmere Road Left	U	E		1	15	-	75	1880	346	21.7%	-	-	-	0.8	36.8	1.7	5/1
7/2+7/1	Tesco Exit Left Right Ahead	U	F	G	1	18:39	21	431	1740:1935	217+427	66.9 : 66.9%	-	-	-	3.4	28.3	6.3	7/2+7/1
Ped Link: P1	Unnamed Ped Link	-	J		1	36	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P1
Ped Link: P2	Unnamed Ped Link	-	I		1	36	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P2
Ped Link: P3	Unnamed Ped Link	-	H		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P3
Ped Link: P4	Unnamed Ped Link	-	K		1	38	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P4

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Basic Results Summary

Ped Link: P5	Unnamed Ped Link	-	L		1	18	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P5
Ped Link: P6	Unnamed Ped Link	-	M		1	15	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P6
Ped Link: P7	Unnamed Ped Link	-	N		1	59	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P7
Ped Link: P8	Unnamed Ped Link	-	O		1	15	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P8
Ped Link: P9	Unnamed Ped Link	-	P		1	34	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P9

C1 PRC for Signalled Lanes (%): 31.9 Total Delay for Signalled Lanes (pcuHr): 20.01 Cycle Time (s): 87
PRC Over All Lanes (%): 31.9 Total Delay Over All Lanes(pcuHr): 20.01

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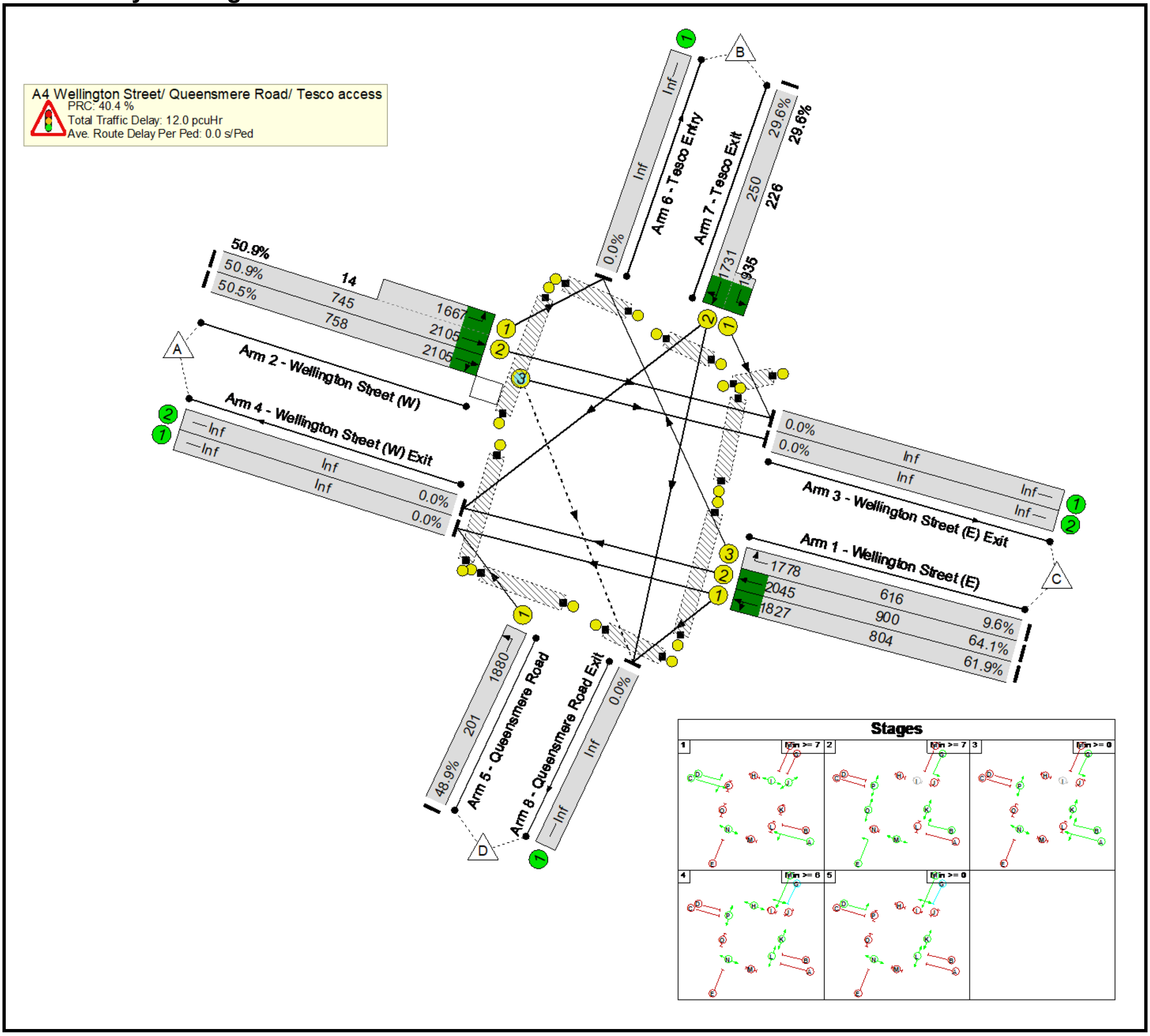
Basic Results Summary

Scenario 3: 'AM DM' (FG3: 'AM DM', Plan 1: 'AM Peak')

Network Layout Diagram



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Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Item
Network	-	-	-		-	-	-	-	-	-	**64.1%**	**0**	**0**	**0**	**12.0**	-	-	**Network**
A4 Wellington Street/ Queensmere Road/ Tesco access	-	-	-		-	-	-	-	-	-	**64.1%**	**0**	**0**	**0**	**12.0**	-	-	**A4 Wellington Street/ Queensmere Road/ Tesco access**
1/1	Wellington Street (E) Ahead Left	U	A		2	28	-	498	1827	804	61.9%	-	-	-	2.0	14.4	5.7	1/1
1/2	Wellington Street (E) Ahead	U	A		2	28	-	577	2045	900	64.1%	-	-	-	2.3	14.6	6.8	1/2
1/3	Wellington Street (E) Right	U	B		1	25	-	59	1778	616	9.6%	-	-	-	0.3	19.8	0.9	1/3
2/2+2/1	Wellington Street (W) Ahead Left	U	C D		1	17:22	-	386	2105:1667	745+14	50.9 : 50.9%	-	-	-	2.5	23.4	6.6	2/2+2/1
2/3	Wellington Street (W) Ahead Right	O	C		1	17	-	383	2105	758	50.5%	0	0	0	2.5	23.6	6.7	2/3
5/1	Queensmere Road Left	U	E		1	7	-	98	1880	201	48.9%	-	-	-	1.3	49.0	2.4	5/1
7/2+7/1	Tesco Exit Left Right Ahead	U	F	G	1	17:46	29	141	1731:1935	250+226	29.6 : 29.6%	-	-	-	1.0	25.1	1.5	7/2+7/1
Ped Link: P1	Unnamed Ped Link	-	J		1	17	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P1
Ped Link: P2	Unnamed Ped Link	-	I		1	17	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P2
Ped Link: P3	Unnamed Ped Link	-	H		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P3
Ped Link: P4	Unnamed Ped Link	-	K		1	45	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P4

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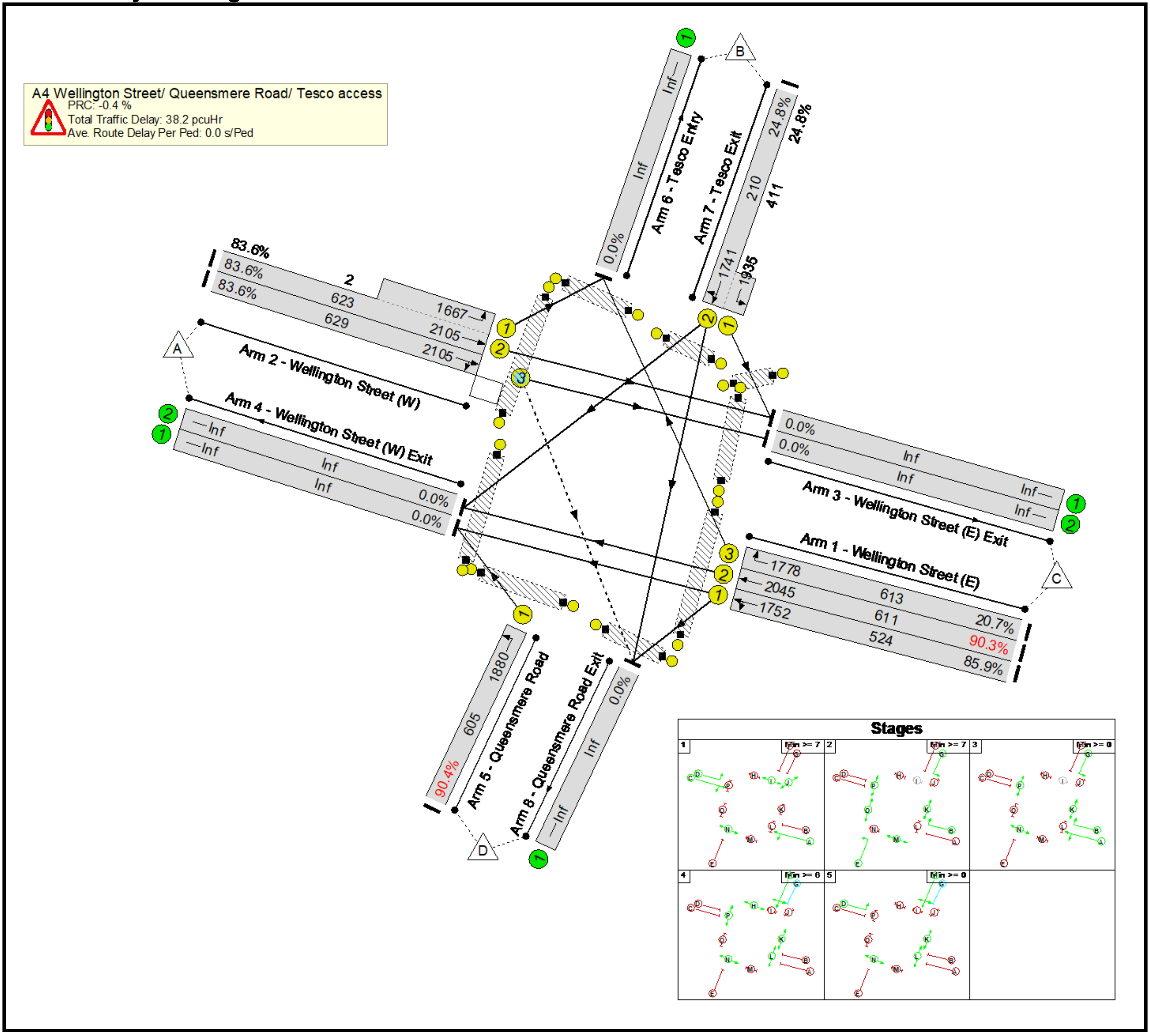
Basic Results Summary

Ped Link: P5	Unnamed Ped Link	-	L		1	17	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P5
Ped Link: P6	Unnamed Ped Link	-	M		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P6
Ped Link: P7	Unnamed Ped Link	-	N		1	55	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P7
Ped Link: P8	Unnamed Ped Link	-	O		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P8
Ped Link: P9	Unnamed Ped Link	-	P		1	42	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P9

C1 PRC for Signalled Lanes (%): 40.4 Total Delay for Signalled Lanes (pcuHr): 11.99 Cycle Time (s): 75
PRC Over All Lanes (%): 40.4 Total Delay Over All Lanes(pcuHr): 11.99

Basic Results Summary
Scenario 4: 'PM DM' (FG4: 'PM DM', Plan 2: 'PM Peak')
Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Item
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**90.4%**	**0**	**0**	**0**	**38.2**	**-**	**-**	**Network**
A4 Wellington Street/ Queensmere Road/ Tesco access	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**90.4%**	**0**	**0**	**0**	**38.2**	**-**	**-**	**A4 Wellington Street/ Queensmere Road/ Tesco access**
1/1	Wellington Street (E) Ahead Left	U	A		1	25	-	450	1752	524	85.9%	-	-	-	6.4	51.5	13.1	1/1
1/2	Wellington Street (E) Ahead	U	A		1	25	-	552	2045	611	90.3%	-	-	-	8.6	56.0	16.8	1/2
1/3	Wellington Street (E) Right	U	B		1	29	-	127	1778	613	20.7%	-	-	-	0.8	23.8	2.3	1/3
2/2+2/1	Wellington Street (W) Ahead Left	U	C D		1	25:30	-	523	2105:1667	623+2	83.6 : 83.6%	-	-	-	6.6	45.2	14.2	2/2+2/1
2/3	Wellington Street (W) Ahead Right	O	C		1	25	-	526	2105	629	83.6%	0	0	0	6.6	45.2	14.3	2/3
5/1	Queensmere Road Left	U	E		1	27	-	547	1880	605	90.4%	-	-	-	8.4	55.4	16.7	5/1
7/2+7/1	Tesco Exit Left Right Ahead	U	F	G	1	17:50	33	154	1741:1935	210+411	24.8 : 24.8%	-	-	-	0.8	18.6	1.2	7/2+7/1
Ped Link: P1	Unnamed Ped Link	-	J		1	25	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P1
Ped Link: P2	Unnamed Ped Link	-	I		1	25	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P2
Ped Link: P3	Unnamed Ped Link	-	H		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P3
Ped Link: P4	Unnamed Ped Link	-	K		1	49	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P4

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Basic Results Summary

Ped Link: P5	Unnamed Ped Link	-	L		1	17	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P5
Ped Link: P6	Unnamed Ped Link	-	M		1	27	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P6
Ped Link: P7	Unnamed Ped Link	-	N		1	47	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P7
Ped Link: P8	Unnamed Ped Link	-	O		1	27	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P8
Ped Link: P9	Unnamed Ped Link	-	P		1	46	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P9

C1 PRC for Signalled Lanes (%): -0.4 Total Delay for Signalled Lanes (pcuHr): 38.24 Cycle Time (s): 87
PRC Over All Lanes (%): -0.4 Total Delay Over All Lanes(pcuHr): 38.24

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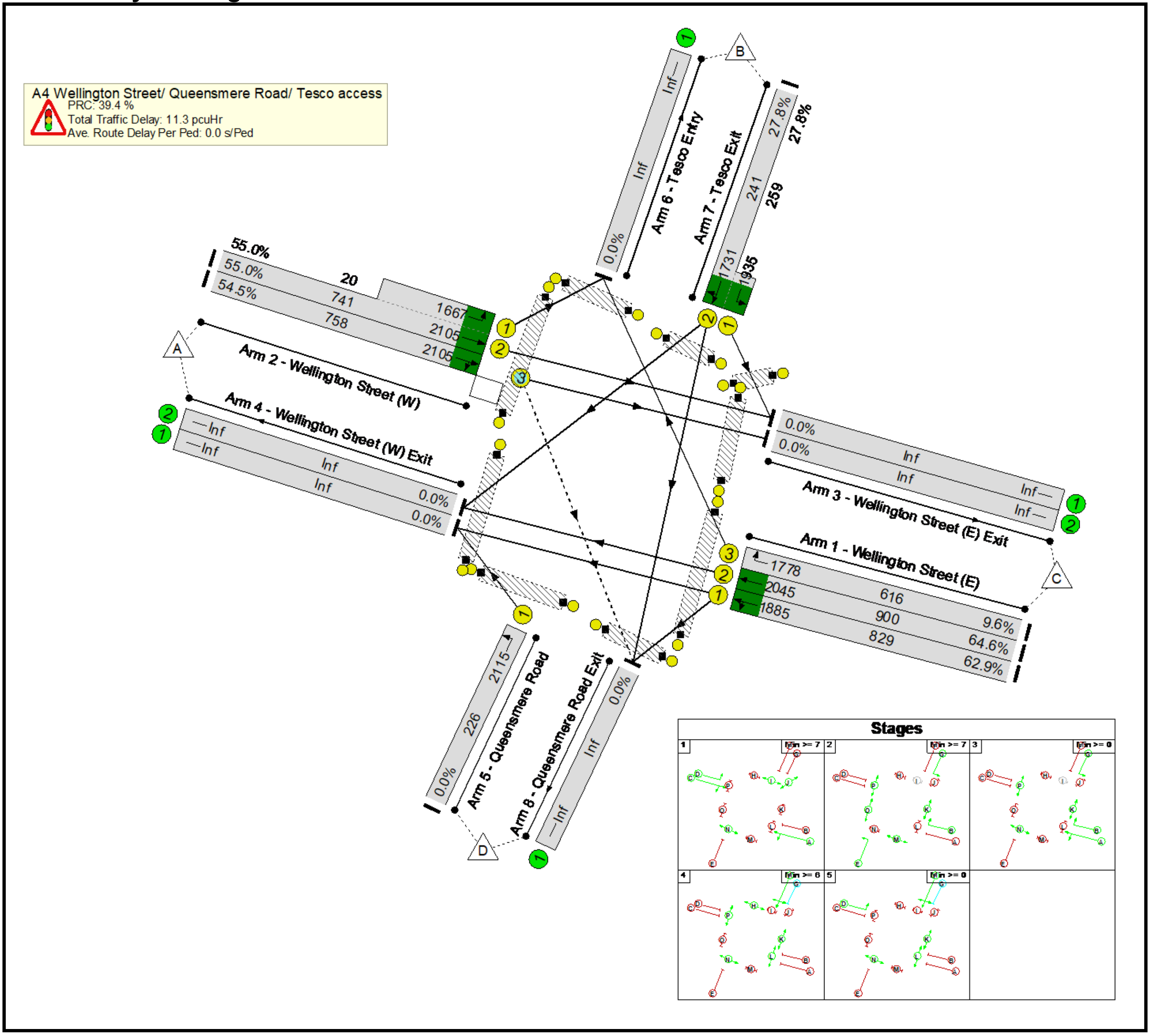
Basic Results Summary

Scenario 5: 'AM DS' (FG5: 'AM DS', Plan 1: 'AM Peak')

Network Layout Diagram



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Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Item
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**64.6%**	**0**	**0**	**0**	**11.3**	**-**	**-**	**Network**
A4 Wellington Street/ Queensmere Road/ Tesco access	-	-	-		-	-	-	-	-	-	**64.6%**	**0**	**0**	**0**	**11.3**	-	-	**A4 Wellington Street/ Queensmere Road/ Tesco access**
1/1	Wellington Street (E) Ahead Left	U	A		2	28	-	522	1885	829	62.9%	-	-	-	2.1	14.6	6.1	1/1
1/2	Wellington Street (E) Ahead	U	A		2	28	-	581	2045	900	64.6%	-	-	-	2.4	14.7	6.9	1/2
1/3	Wellington Street (E) Right	U	B		1	25	-	59	1778	616	9.6%	-	-	-	0.3	19.8	0.9	1/3
2/2+2/1	Wellington Street (W) Ahead Left	U	C D		1	17:22	-	419	2105:1667	741+20	55.0 : 55.0%	-	-	-	2.8	24.1	7.3	2/2+2/1
2/3	Wellington Street (W) Ahead Right	O	C		1	17	-	413	2105	758	54.5%	0	0	0	2.8	24.3	7.4	2/3
5/1	Queensmere Road Left	U	E		1	7	-	0	2115	226	0.0%	-	-	-	0.0	0.0	0.0	5/1
7/2+7/1	Tesco Exit Left Right Ahead	U	F	G	1	17:46	29	139	1731:1935	241+259	27.8 : 27.8%	-	-	-	0.9	24.1	1.4	7/2+7/1
Ped Link: P1	Unnamed Ped Link	-	J		1	17	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P1
Ped Link: P2	Unnamed Ped Link	-	I		1	17	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P2
Ped Link: P3	Unnamed Ped Link	-	H		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P3
Ped Link: P4	Unnamed Ped Link	-	K		1	45	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P4

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Basic Results Summary

Ped Link: P5	Unnamed Ped Link	-	L		1	17	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P5
Ped Link: P6	Unnamed Ped Link	-	M		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P6
Ped Link: P7	Unnamed Ped Link	-	N		1	55	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P7
Ped Link: P8	Unnamed Ped Link	-	O		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P8
Ped Link: P9	Unnamed Ped Link	-	P		1	42	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P9

C1 PRC for Signalled Lanes (%): 39.4 Total Delay for Signalled Lanes (pcuHr): 11.34 Cycle Time (s): 75
PRC Over All Lanes (%): 39.4 Total Delay Over All Lanes(pcuHr): 11.34

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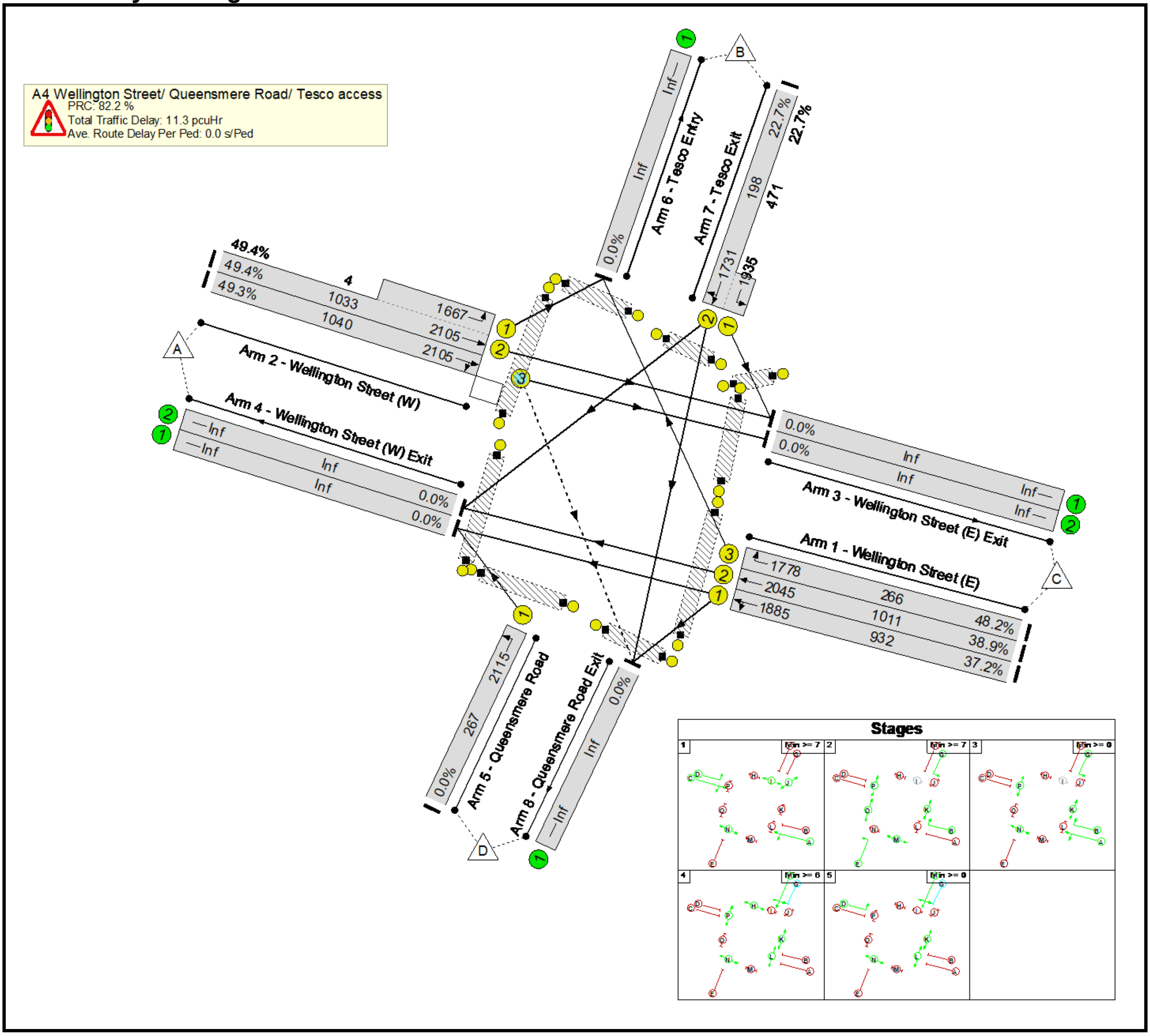
Basic Results Summary

Scenario 6: 'PM DS' (FG6: 'PM DS', Plan 2: 'PM Peak')

Network Layout Diagram



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Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Item
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**49.4%**	**0**	**0**	**0**	**11.3**	**-**	**-**	**Network**
A4 Wellington Street/ Queensmere Road/ Tesco access	-	-	-		-	-	-	-	-	-	**49.4%**	**0**	**0**	**0**	**11.3**	-	-	**A4 Wellington Street/ Queensmere Road/ Tesco access**
1/1	Wellington Street (E) Ahead Left	U	A		1	42	-	347	1885	932	37.2%	-	-	-	1.6	16.7	5.4	1/1
1/2	Wellington Street (E) Ahead	U	A		1	42	-	393	2045	1011	38.9%	-	-	-	1.8	16.7	6.2	1/2
1/3	Wellington Street (E) Right	U	B		1	12	-	128	1778	266	48.2%	-	-	-	1.7	46.9	3.3	1/3
2/2+2/1	Wellington Street (W) Ahead Left	U	C D		1	42:47	-	512	2105:1667	1033+4	49.4 : 49.4%	-	-	-	2.6	18.1	8.8	2/2+2/1
2/3	Wellington Street (W) Ahead Right	O	C		1	42	-	513	2105	1040	49.3%	0	0	0	2.6	18.1	8.8	2/3
5/1	Queensmere Road Left	U	E		1	10	-	0	2115	267	0.0%	-	-	-	0.0	0.0	0.0	5/1
7/2+7/1	Tesco Exit Left Right Ahead	U	F	G	1	17:33	16	152	1731:1935	198+471	22.7 : 22.7%	-	-	-	1.0	23.8	1.8	7/2+7/1
Ped Link: P1	Unnamed Ped Link	-	J		1	42	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P1
Ped Link: P2	Unnamed Ped Link	-	I		1	42	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P2
Ped Link: P3	Unnamed Ped Link	-	H		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P3
Ped Link: P4	Unnamed Ped Link	-	K		1	32	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P4

Basic Results Summary

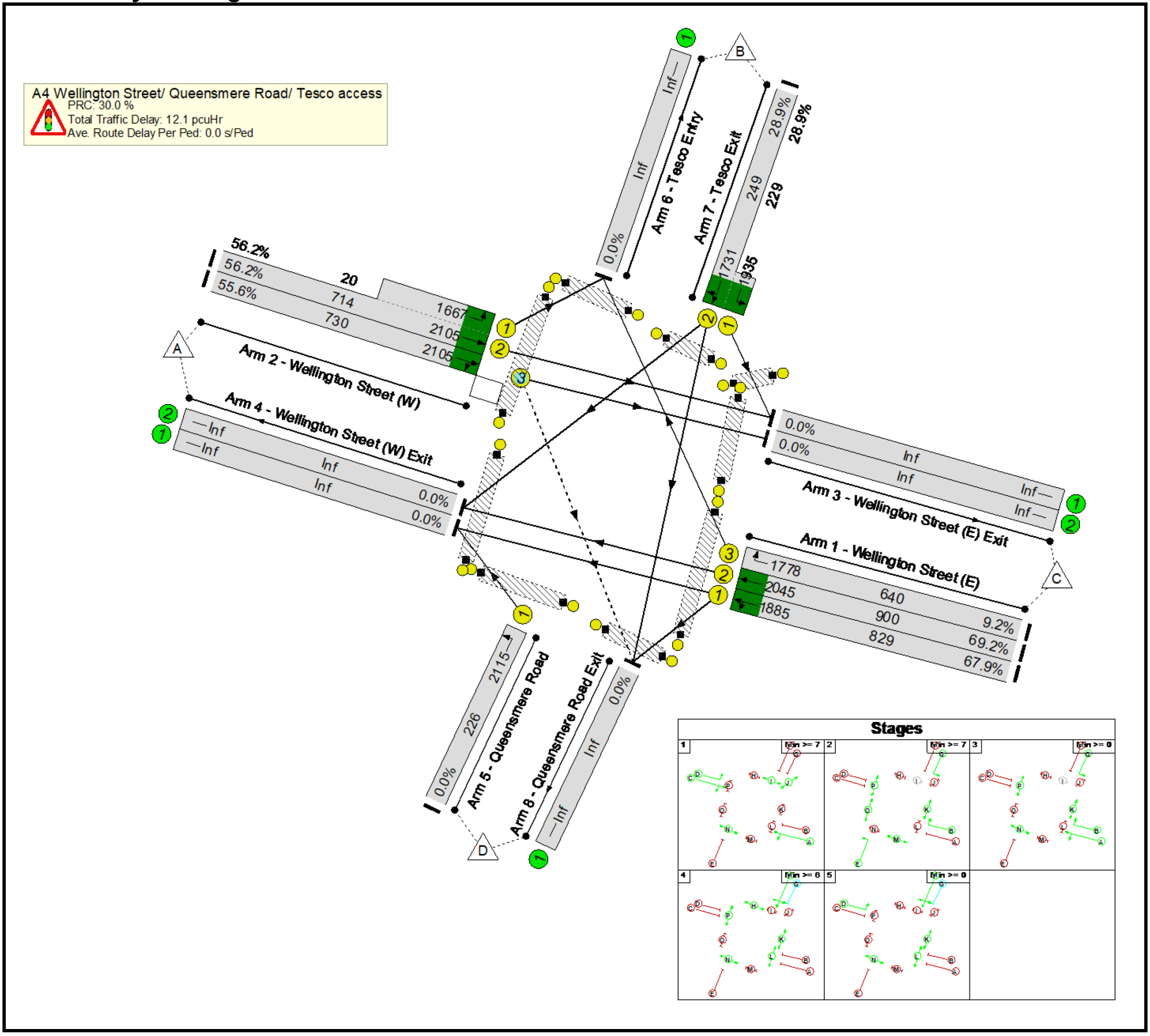
Ped Link: P5	Unnamed Ped Link	-	L		1	17	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P5
Ped Link: P6	Unnamed Ped Link	-	M		1	10	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P6
Ped Link: P7	Unnamed Ped Link	-	N		1	64	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P7
Ped Link: P8	Unnamed Ped Link	-	O		1	10	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P8
Ped Link: P9	Unnamed Ped Link	-	P		1	29	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P9

C1 PRC for Signalled Lanes (%): 82.2 Total Delay for Signalled Lanes (pcuHr): 11.26 Cycle Time (s): 87
PRC Over All Lanes (%): 82.2 Total Delay Over All Lanes(pcuHr): 11.26

Basic Results Summary

Scenario 7: 'AM DS2' (FG7: 'AM DS2', Plan 1: 'AM Peak')

Network Layout Diagram



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Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Item
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**69.2%**	**0**	**0**	**0**	**12.1**	**-**	**-**	**Network**
A4 Wellington Street/ Queensmere Road/ Tesco access	-	-	-		-	-	-	-	-	-	**69.2%**	**0**	**0**	**0**	**12.1**	-	-	**A4 Wellington Street/ Queensmere Road/ Tesco access**
1/1	Wellington Street (E) Ahead Left	U	A		2	28	-	563	1885	829	67.9%	-	-	-	2.4	15.6	6.8	1/1
1/2	Wellington Street (E) Ahead	U	A		2	28	-	623	2045	900	69.2%	-	-	-	2.7	15.4	7.5	1/2
1/3	Wellington Street (E) Right	U	B		1	26	-	59	1778	640	9.2%	-	-	-	0.3	19.0	0.9	1/3
2/2+2/1	Wellington Street (W) Ahead Left	U	C D		1	16:21	-	412	2105:1667	714+20	56.2 : 56.2%	-	-	-	2.9	25.2	7.3	2/2+2/1
2/3	Wellington Street (W) Ahead Right	O	C		1	16	-	406	2105	730	55.6%	0	0	0	2.9	25.4	7.4	2/3
5/1	Queensmere Road Left	U	E		1	7	-	0	2115	226	0.0%	-	-	-	0.0	0.0	0.0	5/1
7/2+7/1	Tesco Exit Left Right Ahead	U	F	G	1	17:47	30	138	1731:1935	249+229	28.9 : 28.9%	-	-	-	0.9	24.7	1.5	7/2+7/1
Ped Link: P1	Unnamed Ped Link	-	J		1	16	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P1
Ped Link: P2	Unnamed Ped Link	-	I		1	16	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P2
Ped Link: P3	Unnamed Ped Link	-	H		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P3
Ped Link: P4	Unnamed Ped Link	-	K		1	46	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P4

Basic Results Summary

Ped Link: P5	Unnamed Ped Link	-	L		1	17	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P5
Ped Link: P6	Unnamed Ped Link	-	M		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P6
Ped Link: P7	Unnamed Ped Link	-	N		1	55	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P7
Ped Link: P8	Unnamed Ped Link	-	O		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P8
Ped Link: P9	Unnamed Ped Link	-	P		1	43	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P9

C1 PRC for Signalled Lanes (%): 30.0 Total Delay for Signalled Lanes (pcuHr): 12.10 Cycle Time (s): 75
PRC Over All Lanes (%): 30.0 Total Delay Over All Lanes(pcuHr): 12.10

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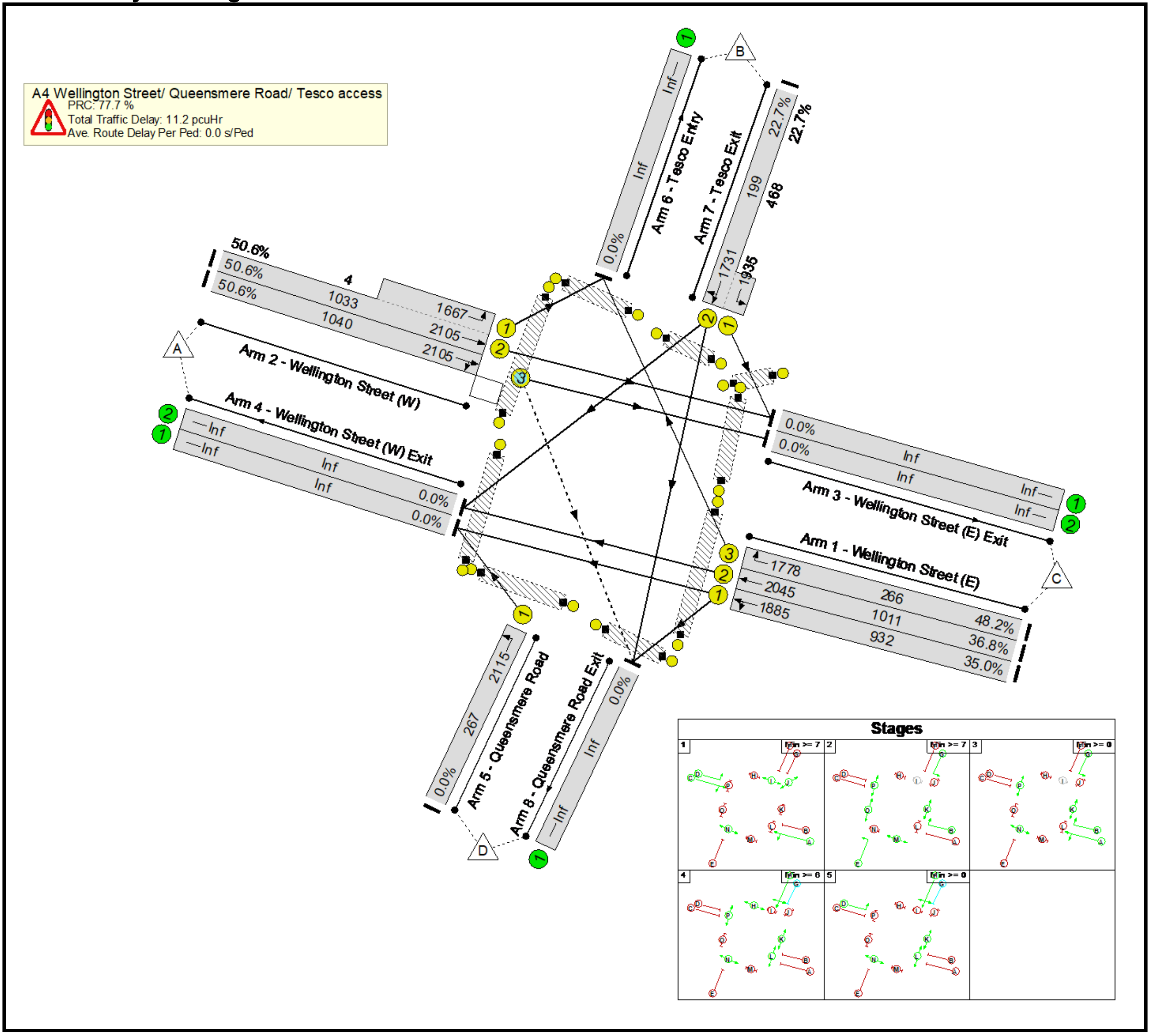
Basic Results Summary

Scenario 8: 'PM DS2' (FG8: 'PM DS2', Plan 2: 'PM Peak')

Network Layout Diagram



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Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Item
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**50.6%**	**0**	**0**	**0**	**11.2**	**-**	**-**	**Network**
A4 Wellington Street/ Queensmere Road/ Tesco access	-	-	-		-	-	-	-	-	-	**50.6%**	**0**	**0**	**0**	**11.2**	-	-	**A4 Wellington Street/ Queensmere Road/ Tesco access**
1/1	Wellington Street (E) Ahead Left	U	A		1	42	-	326	1885	932	35.0%	-	-	-	1.5	16.4	5.1	1/1
1/2	Wellington Street (E) Ahead	U	A		1	42	-	372	2045	1011	36.8%	-	-	-	1.7	16.4	5.8	1/2
1/3	Wellington Street (E) Right	U	B		1	12	-	128	1778	266	48.2%	-	-	-	1.7	46.9	3.3	1/3
2/2+2/1	Wellington Street (W) Ahead Left	U	C D		1	42:47	-	525	2105:1667	1033+4	50.6 : 50.6%	-	-	-	2.7	18.3	9.0	2/2+2/1
2/3	Wellington Street (W) Ahead Right	O	C		1	42	-	526	2105	1040	50.6%	0	0	0	2.7	18.3	9.0	2/3
5/1	Queensmere Road Left	U	E		1	10	-	0	2115	267	0.0%	-	-	-	0.0	0.0	0.0	5/1
7/2+7/1	Tesco Exit Left Right Ahead	U	F	G	1	17:33	16	151	1731:1935	199+468	22.7 : 22.7%	-	-	-	1.0	23.9	1.8	7/2+7/1
Ped Link: P1	Unnamed Ped Link	-	J		1	42	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P1
Ped Link: P2	Unnamed Ped Link	-	I		1	42	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P2
Ped Link: P3	Unnamed Ped Link	-	H		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P3
Ped Link: P4	Unnamed Ped Link	-	K		1	32	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P4

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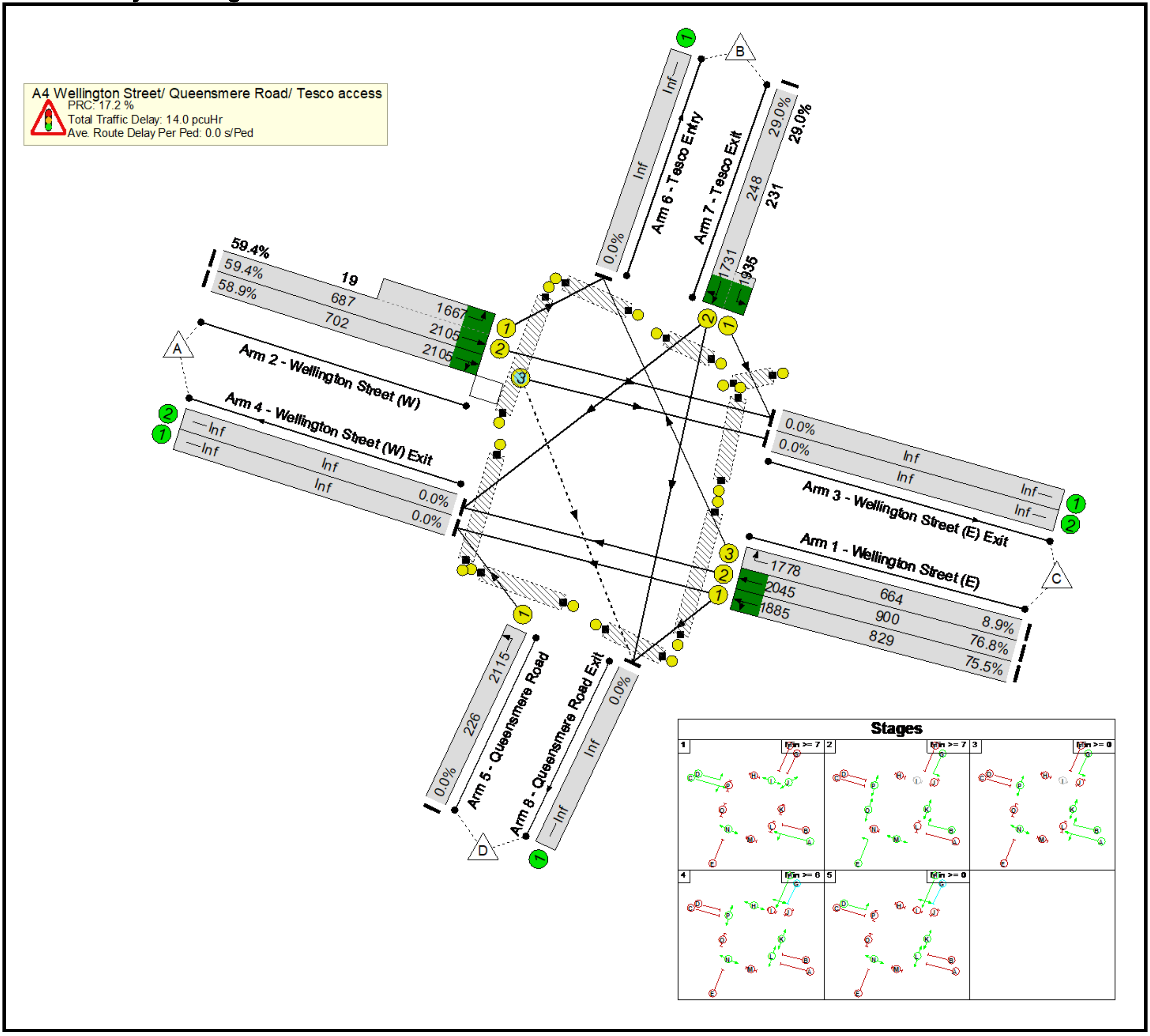
Basic Results Summary

Ped Link: P5	Unnamed Ped Link	-	L		1	17	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P5
Ped Link: P6	Unnamed Ped Link	-	M		1	10	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P6
Ped Link: P7	Unnamed Ped Link	-	N		1	64	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P7
Ped Link: P8	Unnamed Ped Link	-	O		1	10	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P8
Ped Link: P9	Unnamed Ped Link	-	P		1	29	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P9

C1 PRC for Signalled Lanes (%): 77.7 Total Delay for Signalled Lanes (pcuHr): 11.20 Cycle Time (s): 87
PRC Over All Lanes (%): 77.7 Total Delay Over All Lanes(pcuHr): 11.20

Basic Results Summary
Scenario 9: 'AM DS3' (FG9: 'AM DS3', Plan 1: 'AM Peak')
Network Layout Diagram



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Basic Results Summary
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Item
Network	-	-	-		-	-	-	-	-	-	**76.8%**	**0**	**0**	**0**	**14.0**	-	-	**Network**
A4 Wellington Street/ Queensmere Road/ Tesco access	-	-	-		-	-	-	-	-	-	**76.8%**	**0**	**0**	**0**	**14.0**	-	-	**A4 Wellington Street/ Queensmere Road/ Tesco access**
1/1	Wellington Street (E) Ahead Left	U	A		2	28	-	626	1885	829	75.5%	-	-	-	3.1	18.0	8.1	1/1
1/2	Wellington Street (E) Ahead	U	A		2	28	-	691	2045	900	76.8%	-	-	-	3.5	18.0	9.2	1/2
1/3	Wellington Street (E) Right	U	B		1	27	-	59	1778	664	8.9%	-	-	-	0.3	18.3	0.8	1/3
2/2+2/1	Wellington Street (W) Ahead Left	U	C D		1	15:20	-	419	2105:1667	687+19	59.4 : 59.4%	-	-	-	3.1	26.7	7.8	2/2+2/1
2/3	Wellington Street (W) Ahead Right	O	C		1	15	-	413	2105	702	58.9%	0	0	0	3.1	26.9	7.8	2/3
5/1	Queensmere Road Left	U	E		1	7	-	0	2115	226	0.0%	-	-	-	0.0	0.0	0.0	5/1
7/2+7/1	Tesco Exit Left Right Ahead	U	F	G	1	17:48	31	139	1731:1935	248+231	29.0 : 29.0%	-	-	-	0.9	24.3	1.5	7/2+7/1
Ped Link: P1	Unnamed Ped Link	-	J		1	15	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P1
Ped Link: P2	Unnamed Ped Link	-	I		1	15	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P2
Ped Link: P3	Unnamed Ped Link	-	H		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P3
Ped Link: P4	Unnamed Ped Link	-	K		1	47	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P4

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Basic Results Summary

Ped Link: P5	Unnamed Ped Link	-	L		1	17	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P5
Ped Link: P6	Unnamed Ped Link	-	M		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P6
Ped Link: P7	Unnamed Ped Link	-	N		1	55	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P7
Ped Link: P8	Unnamed Ped Link	-	O		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P8
Ped Link: P9	Unnamed Ped Link	-	P		1	44	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P9

C1 PRC for Signalled Lanes (%): 17.2 Total Delay for Signalled Lanes (pcuHr): 14.04 Cycle Time (s): 75
PRC Over All Lanes (%): 17.2 Total Delay Over All Lanes(pcuHr): 14.04

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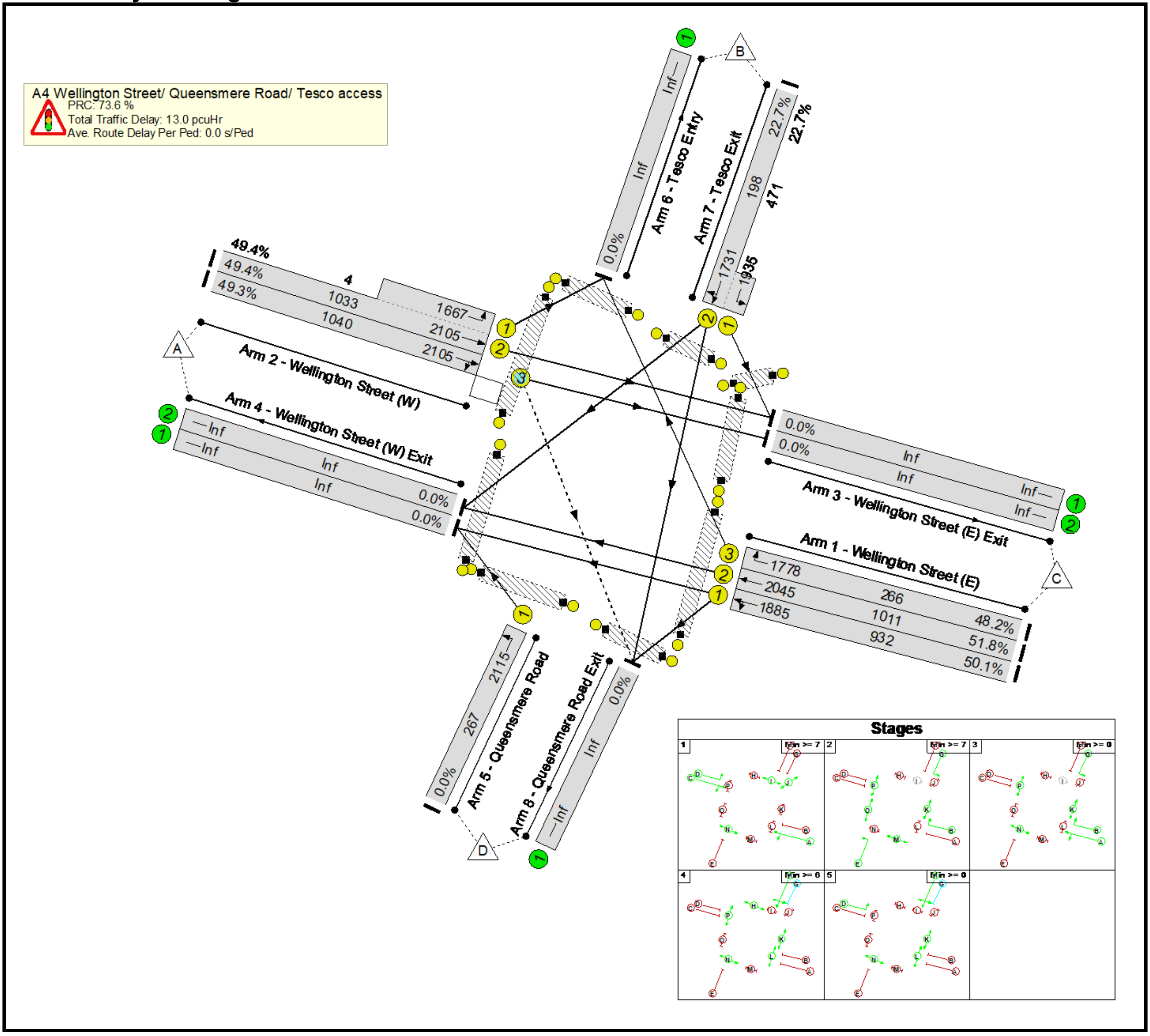
Basic Results Summary

Scenario 10: 'PM DS3' (FG10: 'PM DS3', Plan 2: 'PM Peak')

Network Layout Diagram



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Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Item
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**51.8%**	**0**	**0**	**0**	**13.0**	**-**	**-**	**Network**
A4 Wellington Street/ Queensmere Road/ Tesco access	-	-	-		-	-	-	-	-	-	**51.8%**	**0**	**0**	**0**	**13.0**	-	-	**A4 Wellington Street/ Queensmere Road/ Tesco access**
1/1	Wellington Street (E) Ahead Left	U	A		1	42	-	467	1885	932	50.1%	-	-	-	2.4	18.7	8.0	1/1
1/2	Wellington Street (E) Ahead	U	A		1	42	-	524	2045	1011	51.8%	-	-	-	2.7	18.7	9.1	1/2
1/3	Wellington Street (E) Right	U	B		1	12	-	128	1778	266	48.2%	-	-	-	1.7	46.9	3.3	1/3
2/2+2/1	Wellington Street (W) Ahead Left	U	C D		1	42:47	-	512	2105:1667	1033+4	49.4 : 49.4%	-	-	-	2.6	18.1	8.8	2/2+2/1
2/3	Wellington Street (W) Ahead Right	O	C		1	42	-	513	2105	1040	49.3%	0	0	0	2.6	18.1	8.8	2/3
5/1	Queensmere Road Left	U	E		1	10	-	0	2115	267	0.0%	-	-	-	0.0	0.0	0.0	5/1
7/2+7/1	Tesco Exit Left Right Ahead	U	F	G	1	17:33	16	152	1731:1935	198+471	22.7 : 22.7%	-	-	-	1.0	23.8	1.8	7/2+7/1
Ped Link: P1	Unnamed Ped Link	-	J		1	42	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P1
Ped Link: P2	Unnamed Ped Link	-	I		1	42	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P2
Ped Link: P3	Unnamed Ped Link	-	H		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P3
Ped Link: P4	Unnamed Ped Link	-	K		1	32	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P4

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Basic Results Summary

Ped Link: P5	Unnamed Ped Link	-	L		1	17	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P5
Ped Link: P6	Unnamed Ped Link	-	M		1	10	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P6
Ped Link: P7	Unnamed Ped Link	-	N		1	64	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P7
Ped Link: P8	Unnamed Ped Link	-	O		1	10	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P8
Ped Link: P9	Unnamed Ped Link	-	P		1	29	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P9

C1 PRC for Signalled Lanes (%): 73.6 Total Delay for Signalled Lanes (pcuHr): 12.96 Cycle Time (s): 87
PRC Over All Lanes (%): 73.6 Total Delay Over All Lanes(pcuHr): 12.96

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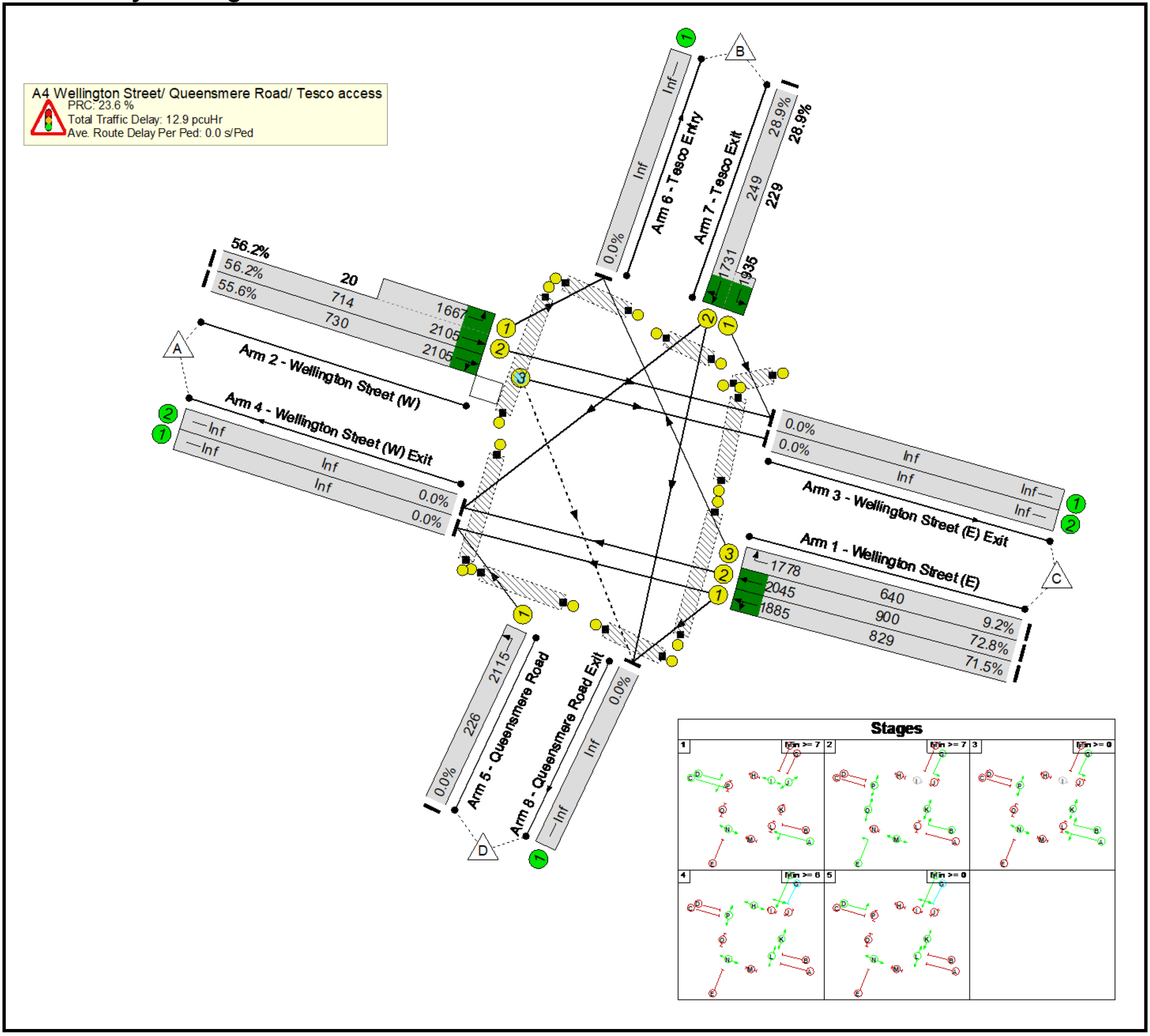
Basic Results Summary

Scenario 11: 'AM DS4' (FG11: 'AM DS4', Plan 1: 'AM Peak')

Network Layout Diagram



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Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Item
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**72.8%**	**0**	**0**	**0**	**12.9**	**-**	**-**	**Network**
A4 Wellington Street/ Queensmere Road/ Tesco access	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**72.8%**	**0**	**0**	**0**	**12.9**	**-**	**-**	**A4 Wellington Street/ Queensmere Road/ Tesco access**
1/1	Wellington Street (E) Ahead Left	U	A		2	28	-	593	1885	829	71.5%	-	-	-	2.8	17.0	7.6	1/1
1/2	Wellington Street (E) Ahead	U	A		2	28	-	655	2045	900	72.8%	-	-	-	3.1	17.0	8.4	1/2
1/3	Wellington Street (E) Right	U	B		1	26	-	59	1778	640	9.2%	-	-	-	0.3	19.0	0.9	1/3
2/2+2/1	Wellington Street (W) Ahead Left	U	C D		1	16:21	-	412	2105:1667	714+20	56.2 : 56.2%	-	-	-	2.9	25.2	7.3	2/2+2/1
2/3	Wellington Street (W) Ahead Right	O	C		1	16	-	406	2105	730	55.6%	0	0	0	2.9	25.4	7.4	2/3
5/1	Queensmere Road Left	U	E		1	7	-	0	2115	226	0.0%	-	-	-	0.0	0.0	0.0	5/1
7/2+7/1	Tesco Exit Left Right Ahead	U	F	G	1	17:47	30	138	1731:1935	249+229	28.9 : 28.9%	-	-	-	0.9	24.7	1.5	7/2+7/1
Ped Link: P1	Unnamed Ped Link	-	J		1	16	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P1
Ped Link: P2	Unnamed Ped Link	-	I		1	16	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P2
Ped Link: P3	Unnamed Ped Link	-	H		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P3
Ped Link: P4	Unnamed Ped Link	-	K		1	46	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P4

Basic Results Summary

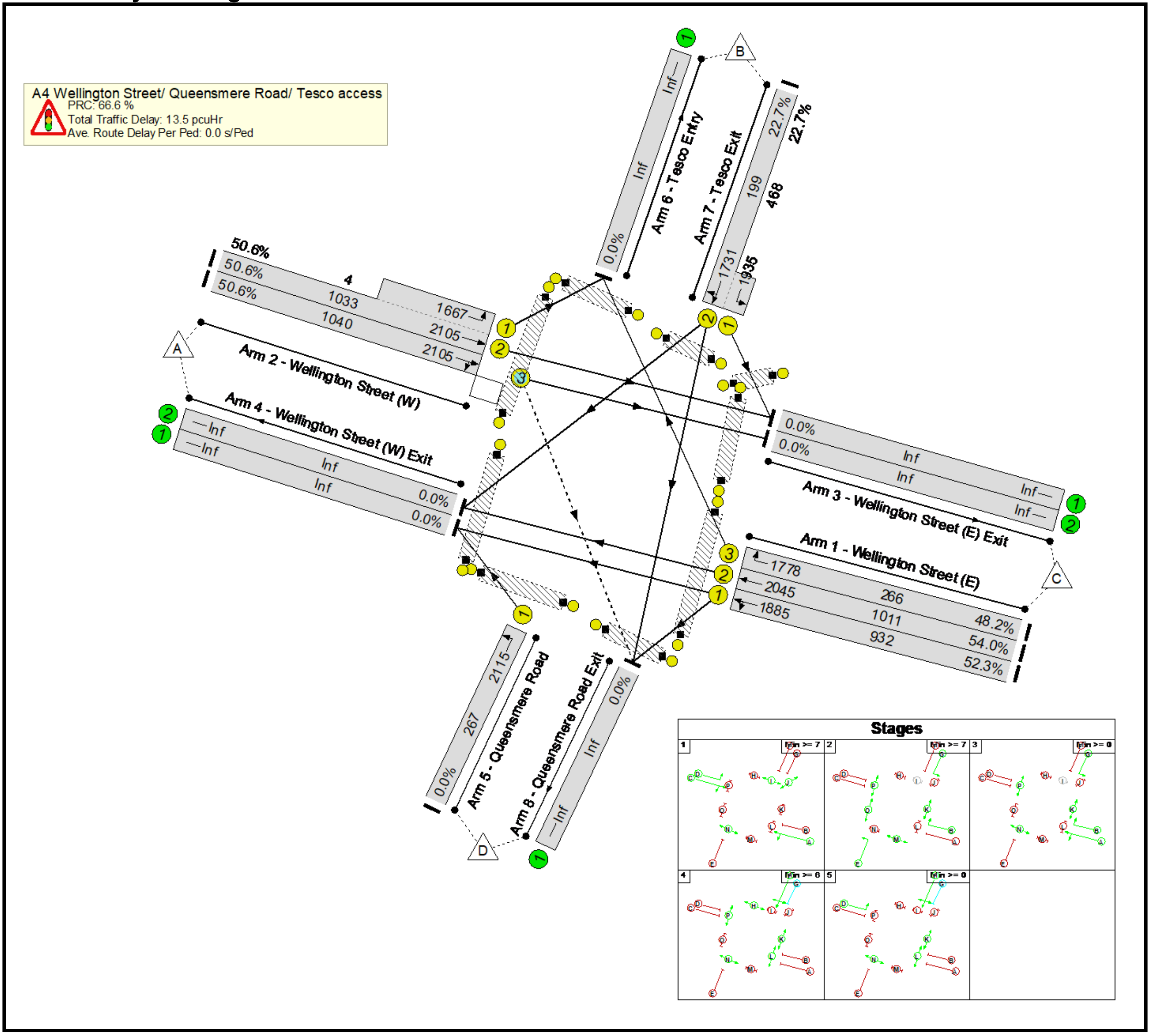
Ped Link: P5	Unnamed Ped Link	-	L		1	17	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P5
Ped Link: P6	Unnamed Ped Link	-	M		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P6
Ped Link: P7	Unnamed Ped Link	-	N		1	55	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P7
Ped Link: P8	Unnamed Ped Link	-	O		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P8
Ped Link: P9	Unnamed Ped Link	-	P		1	43	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P9

C1 PRC for Signalled Lanes (%): 23.6 Total Delay for Signalled Lanes (pcuHr): 12.89 Cycle Time (s): 75
PRC Over All Lanes (%): 23.6 Total Delay Over All Lanes(pcuHr): 12.89

Basic Results Summary

Scenario 12: 'PM DS4' (FG12: 'PM DS4', Plan 2: 'PM Peak')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Item
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**54.0%**	**0**	**0**	**0**	**13.5**	**-**	**-**	**Network**
A4 Wellington Street/ Queensmere Road/ Tesco access	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**54.0%**	**0**	**0**	**0**	**13.5**	**-**	**-**	**A4 Wellington Street/ Queensmere Road/ Tesco access**
1/1	Wellington Street (E) Ahead Left	U	A		1	42	-	487	1885	932	52.3%	-	-	-	2.6	19.0	8.5	1/1
1/2	Wellington Street (E) Ahead	U	A		1	42	-	546	2045	1011	54.0%	-	-	-	2.9	19.0	9.7	1/2
1/3	Wellington Street (E) Right	U	B		1	12	-	128	1778	266	48.2%	-	-	-	1.7	46.9	3.3	1/3
2/2+2/1	Wellington Street (W) Ahead Left	U	C D		1	42:47	-	525	2105:1667	1033+4	50.6 : 50.6%	-	-	-	2.7	18.3	9.0	2/2+2/1
2/3	Wellington Street (W) Ahead Right	O	C		1	42	-	526	2105	1040	50.6%	0	0	0	2.7	18.3	9.0	2/3
5/1	Queensmere Road Left	U	E		1	10	-	0	2115	267	0.0%	-	-	-	0.0	0.0	0.0	5/1
7/2+7/1	Tesco Exit Left Right Ahead	U	F	G	1	17:33	16	151	1731:1935	199+468	22.7 : 22.7%	-	-	-	1.0	23.9	1.8	7/2+7/1
Ped Link: P1	Unnamed Ped Link	-	J		1	42	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P1
Ped Link: P2	Unnamed Ped Link	-	I		1	42	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P2
Ped Link: P3	Unnamed Ped Link	-	H		1	7	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P3
Ped Link: P4	Unnamed Ped Link	-	K		1	32	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P4

Basic Results Summary

Ped Link: P5	Unnamed Ped Link	-	L		1	17	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P5
Ped Link: P6	Unnamed Ped Link	-	M		1	10	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P6
Ped Link: P7	Unnamed Ped Link	-	N		1	64	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P7
Ped Link: P8	Unnamed Ped Link	-	O		1	10	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P8
Ped Link: P9	Unnamed Ped Link	-	P		1	29	-	0	-	0	0.0%	-	-	-	-	-	-	Ped Link: P9

C1 PRC for Signalled Lanes (%): 66.6 Total Delay for Signalled Lanes (pcuHr): 13.48 Cycle Time (s): 87
PRC Over All Lanes (%): 66.6 Total Delay Over All Lanes(pcuHr): 13.48

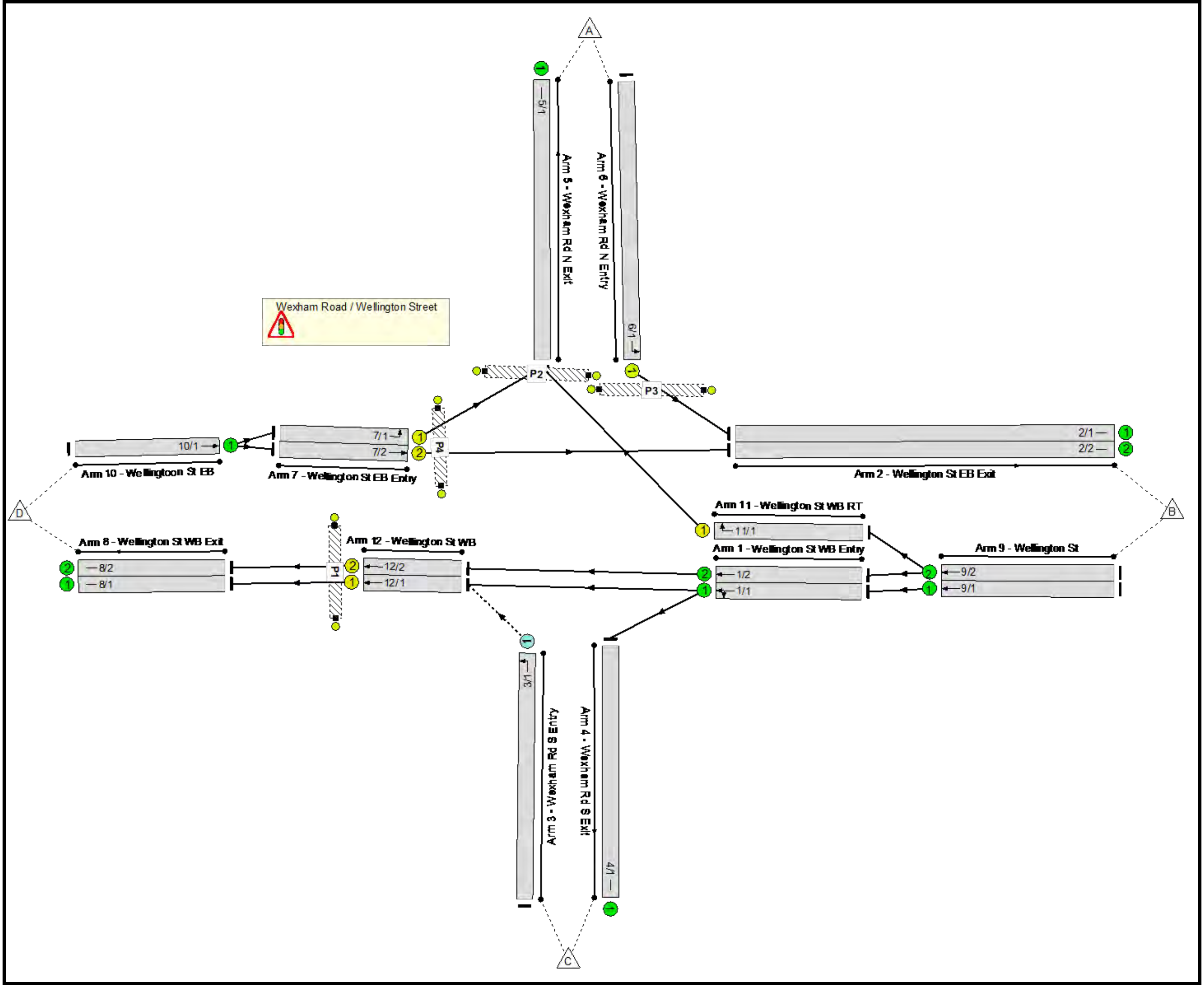
Full Input Data And Results

Full Input Data And Results

User and Project Details

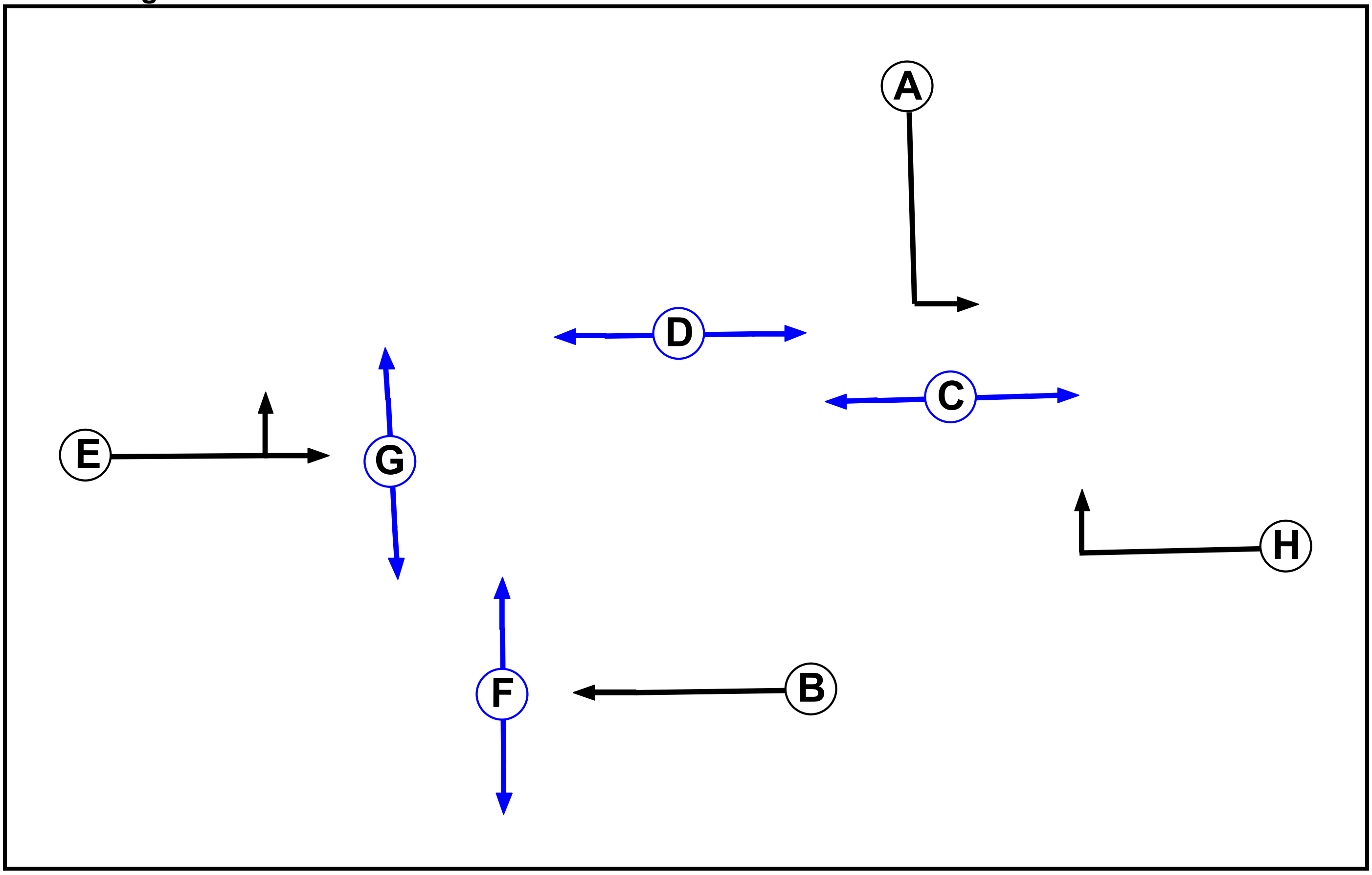
Project:	
Title:	
Location:	
Additional detail:	
File name:	Wexham Rd_Wellington St.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Pedestrian		6	6
D	Pedestrian		6	6
E	Traffic		7	7
F	Pedestrian		6	6
G	Pedestrian		6	6
H	Traffic		7	7

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Full Input Data And Results

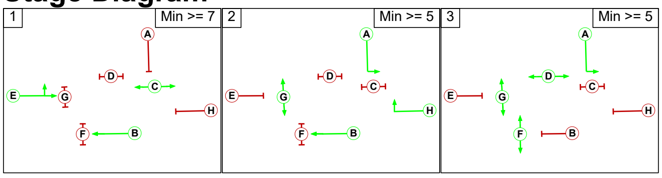
Phase Intergreens Matrix

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

Phases in Stage

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

Stage Diagram



Phase Delays

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

Prohibited Stage Change

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

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Full Input Data And Results

Give-Way Lane Input Data

Junction: Wexham Road / Wellington Street											
Lane	**Movement**	**Max Flow when Giving Way (PCU/Hr)**	**Min Flow when Giving Way (PCU/Hr)**	**Opposing Lane**	**Opp. Lane Coeff.**	**Opp. Mvmnts.**	**Right Turn Storage (PCU)**	**Non-Blocking Storage (PCU)**	**RTF**	**Right Turn Move up (s)**	**Max Turns in Intergreen (PCU)**
3/1 (Wexham Rd S Entry)	12/1 (Left)	715	0	1/1	0.22	To 12/1 (Ahead)	-	-	-	-	-

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Full Input Data And Results

Lane Input Data

Junction: Wexham Road / Wellington Street

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Wellington St WB Entry)	U		2	3	10.8	Geom	-	3.00	0.00	Y	Arm 4 Left	16.00
											Arm 12 Ahead	Inf
1/2 (Wellington St WB Entry)	U		2	3	10.8	Geom	-	3.00	0.00	Y	Arm 12 Ahead	Inf
2/1 (Wellington St EB Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
2/2 (Wellington St EB Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
3/1 (Wexham Rd S Entry)	O		2	3	10.4	Geom	-	2.50	0.00	Y	Arm 12 Left	Inf
4/1 (Wexham Rd S Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Wexham Rd N Exit)	U		2	3	20.2	Inf	-	-	-	-	-	-
6/1 (Wexham Rd N Entry)	U	A	2	3	5.2	Geom	-	2.50	0.00	Y	Arm 2 Left	13.00
7/1 (Wellington St EB Entry)	U	E	2	3	8.7	Geom	-	3.00	0.00	Y	Arm 5 Left	10.00
7/2 (Wellington St EB Entry)	U	E	2	3	8.7	Geom	-	3.00	0.00	Y	Arm 2 Ahead	Inf
8/1 (Wellington St WB Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/2 (Wellington St WB Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
9/1 (Wellington St)	U		2	3	60.0	Inf	-	-	-	-	-	-
9/2 (Wellington St)	U		2	3	60.0	Inf	-	-	-	-	-	-
10/1 (Wellingtoon St EB)	U		2	3	60.0	Inf	-	-	-	-	-	-
11/1 (Wellington St WB RT)	U	H	2	3	10.8	Geom	-	3.00	0.00	Y	Arm 5 Right	15.00
12/1 (Wellington St WB)	U	B	2	3	3.5	Geom	-	3.00	0.00	Y	Arm 8 Ahead	Inf

Full Input Data And Results

12/2 (Wellington St WB)	U	B	2	3	3.5	Geom	-	3.00	0.00	Y	Arm 8 Ahead	Inf

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM Base'	08:00	09:00	01:00	
2: 'PM Base'	17:00	18:00	01:00	
3: 'AM DM'	08:00	09:00	01:00	
4: 'PM DM'	17:00	18:00	01:00	
5: 'AM DS Residential'	08:00	09:00	01:00	
6: 'PM DS Residential'	17:00	18:00	01:00	
7: 'AM DS Commercial'	08:00	09:00	01:00	
8: 'PM DS Commercial'	17:00	18:00	01:00	

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

Traffic Flows, Desired

Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	591	0	0	591
	B	0	0	131	1341	1472
	C	0	0	0	235	235
	D	775	469	0	0	1244
	Tot.	775	1060	131	1576	3542

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: AM Base
Junction: Wexham Road / Wellington Street	
1/1	689
1/2	783
2/1	591
2/2	469
3/1	235
4/1	131
5/1	775
6/1	591
7/1	775
7/2	469
8/1	793
8/2	783
9/1	689
9/2	783
10/1	1244
11/1	0
12/1	793
12/2	783

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Full Input Data And Results

Lane Saturation Flows

Junction: Wexham Road / Wellington Street								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Wellington St WB Entry)	3.00	0.00	Y	Arm 4 Left	16.00	19.0 %	1881	1881
				Arm 12 Ahead	Inf	81.0 %		
1/2 (Wellington St WB Entry)	3.00	0.00	Y	Arm 12 Ahead	Inf	100.0 %	1915	1915
2/1 (Wellington St EB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (Wellington St EB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (Wexham Rd S Entry)	2.50	0.00	Y	Arm 12 Left	Inf	100.0 %	1865	1865
4/1 (Wexham Rd S Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Wexham Rd N Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Wexham Rd N Entry)	2.50	0.00	Y	Arm 2 Left	13.00	100.0 %	1672	1672
7/1 (Wellington St EB Entry)	3.00	0.00	Y	Arm 5 Left	10.00	100.0 %	1665	1665
7/2 (Wellington St EB Entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
8/1 (Wellington St WB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (Wellington St WB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (Wellington St Lane 1)	Infinite Saturation Flow						Inf	Inf
9/2 (Wellington St Lane 2)	Infinite Saturation Flow						Inf	Inf
10/1 (Wellingtoon St EB Lane 1)	Infinite Saturation Flow						Inf	Inf
11/1 (Wellington St WB RT)	3.00	0.00	Y	Arm 5 Right	15.00	0.0 %	1915	1915
12/1 (Wellington St WB)	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
12/2 (Wellington St WB)	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915

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

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	451	0	0	451
	B	0	0	172	1100	1272
	C	0	0	0	343	343
	D	989	692	0	0	1681
	Tot.	989	1143	172	1443	3747

Traffic Lane Flows

Lane	Scenario 2: PM Base
Junction: Wexham Road / Wellington Street	
1/1	558
1/2	714
2/1	451
2/2	692
3/1	343
4/1	172
5/1	989
6/1	451
7/1	989
7/2	692
8/1	729
8/2	714
9/1	558
9/2	714
10/1	1681
11/1	0
12/1	729
12/2	714

Full Input Data And Results

Lane Saturation Flows

Junction: Wexham Road / Wellington Street								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Wellington St WB Entry)	3.00	0.00	Y	Arm 4 Left	16.00	30.8 %	1861	1861
				Arm 12 Ahead	Inf	69.2 %		
1/2 (Wellington St WB Entry)	3.00	0.00	Y	Arm 12 Ahead	Inf	100.0 %	1915	1915
2/1 (Wellington St EB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (Wellington St EB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (Wexham Rd S Entry)	2.50	0.00	Y	Arm 12 Left	Inf	100.0 %	1865	1865
4/1 (Wexham Rd S Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Wexham Rd N Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Wexham Rd N Entry)	2.50	0.00	Y	Arm 2 Left	13.00	100.0 %	1672	1672
7/1 (Wellington St EB Entry)	3.00	0.00	Y	Arm 5 Left	10.00	100.0 %	1665	1665
7/2 (Wellington St EB Entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
8/1 (Wellington St WB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (Wellington St WB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (Wellington St Lane 1)	Infinite Saturation Flow						Inf	Inf
9/2 (Wellington St Lane 2)	Infinite Saturation Flow						Inf	Inf
10/1 (Wellingtoon St EB Lane 1)	Infinite Saturation Flow						Inf	Inf
11/1 (Wellington St WB RT)	3.00	0.00	Y	Arm 5 Right	15.00	0.0 %	1915	1915
12/1 (Wellington St WB)	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
12/2 (Wellington St WB)	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915

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

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	883	0	0	883
	B	567	0	147	834	1548
	C	0	0	0	224	224
	D	365	433	0	0	798
	Tot.	932	1316	147	1058	3453

Traffic Lane Flows

Lane	Scenario 3: AM DM
Junction: Wexham Road / Wellington Street	
1/1	454
1/2	527
2/1	883
2/2	433
3/1	224
4/1	147
5/1	932
6/1	883
7/1	365
7/2	433
8/1	531
8/2	527
9/1	454
9/2	1094
10/1	798
11/1	567
12/1	531
12/2	527

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Lane Saturation Flows

Junction: Wexham Road / Wellington Street								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Wellington St WB Entry)	3.00	0.00	Y	Arm 4 Left	16.00	32.4 %	1859	1859
				Arm 12 Ahead	Inf	67.6 %		
1/2 (Wellington St WB Entry)	3.00	0.00	Y	Arm 12 Ahead	Inf	100.0 %	1915	1915
2/1 (Wellington St EB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (Wellington St EB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (Wexham Rd S Entry)	2.50	0.00	Y	Arm 12 Left	Inf	100.0 %	1865	1865
4/1 (Wexham Rd S Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Wexham Rd N Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Wexham Rd N Entry)	2.50	0.00	Y	Arm 2 Left	13.00	100.0 %	1672	1672
7/1 (Wellington St EB Entry)	3.00	0.00	Y	Arm 5 Left	10.00	100.0 %	1665	1665
7/2 (Wellington St EB Entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
8/1 (Wellington St WB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (Wellington St WB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (Wellington St Lane 1)	Infinite Saturation Flow						Inf	Inf
9/2 (Wellington St Lane 2)	Infinite Saturation Flow						Inf	Inf
10/1 (Wellingtoon St EB Lane 1)	Infinite Saturation Flow						Inf	Inf
11/1 (Wellington St WB RT)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741	1741
12/1 (Wellington St WB)	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
12/2 (Wellington St WB)	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915

Full Input Data And Results

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

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	810	0	0	810
	B	434	0	214	735	1383
	C	0	0	0	386	386
	D	409	691	0	0	1100
	Tot.	843	1501	214	1121	3679

Traffic Lane Flows

Lane	Scenario 4: PM DM
Junction: Wexham Road / Wellington Street	
1/1	394
1/2	555
2/1	810
2/2	691
3/1	386
4/1	214
5/1	843
6/1	810
7/1	409
7/2	691
8/1	566
8/2	555
9/1	394
9/2	989
10/1	1100
11/1	434
12/1	566
12/2	555

Full Input Data And Results

Lane Saturation Flows

Junction: Wexham Road / Wellington Street								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Wellington St WB Entry)	3.00	0.00	Y	Arm 4 Left	16.00	54.3 %	1822	1822
				Arm 12 Ahead	Inf	45.7 %		
1/2 (Wellington St WB Entry)	3.00	0.00	Y	Arm 12 Ahead	Inf	100.0 %	1915	1915
2/1 (Wellington St EB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (Wellington St EB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (Wexham Rd S Entry)	2.50	0.00	Y	Arm 12 Left	Inf	100.0 %	1865	1865
4/1 (Wexham Rd S Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Wexham Rd N Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Wexham Rd N Entry)	2.50	0.00	Y	Arm 2 Left	13.00	100.0 %	1672	1672
7/1 (Wellington St EB Entry)	3.00	0.00	Y	Arm 5 Left	10.00	100.0 %	1665	1665
7/2 (Wellington St EB Entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
8/1 (Wellington St WB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (Wellington St WB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (Wellington St Lane 1)	Infinite Saturation Flow						Inf	Inf
9/2 (Wellington St Lane 2)	Infinite Saturation Flow						Inf	Inf
10/1 (Wellingtoon St EB Lane 1)	Infinite Saturation Flow						Inf	Inf
11/1 (Wellington St WB RT)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741	1741
12/1 (Wellington St WB)	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
12/2 (Wellington St WB)	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915

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

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	856	0	0	856
	B	570	0	182	832	1584
	C	0	0	0	140	140
	D	417	543	0	0	960
	Tot.	987	1399	182	972	3540

Traffic Lane Flows

Lane	Scenario 5: AM DS Residential
Junction: Wexham Road / Wellington Street	
1/1	518
1/2	496
2/1	856
2/2	543
3/1	140
4/1	182
5/1	987
6/1	856
7/1	417
7/2	543
8/1	476
8/2	496
9/1	518
9/2	1066
10/1	960
11/1	570
12/1	476
12/2	496

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Lane Saturation Flows

Junction: Wexham Road / Wellington Street								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Wellington St WB Entry)	3.00	0.00	Y	Arm 4 Left	16.00	35.1 %	1854	1854
				Arm 12 Ahead	Inf	64.9 %		
1/2 (Wellington St WB Entry)	3.00	0.00	Y	Arm 12 Ahead	Inf	100.0 %	1915	1915
2/1 (Wellington St EB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (Wellington St EB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (Wexham Rd S Entry)	2.50	0.00	Y	Arm 12 Left	Inf	100.0 %	1865	1865
4/1 (Wexham Rd S Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Wexham Rd N Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Wexham Rd N Entry)	2.50	0.00	Y	Arm 2 Left	13.00	100.0 %	1672	1672
7/1 (Wellington St EB Entry)	3.00	0.00	Y	Arm 5 Left	10.00	100.0 %	1665	1665
7/2 (Wellington St EB Entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
8/1 (Wellington St WB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (Wellington St WB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (Wellington St Lane 1)	Infinite Saturation Flow						Inf	Inf
9/2 (Wellington St Lane 2)	Infinite Saturation Flow						Inf	Inf
10/1 (Wellingtoon St EB Lane 1)	Infinite Saturation Flow						Inf	Inf
11/1 (Wellington St WB RT)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741	1741
12/1 (Wellington St WB)	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
12/2 (Wellington St WB)	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915

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

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	754	0	0	754
	B	422	0	196	761	1379
	C	0	0	0	334	334
	D	517	704	0	0	1221
	Tot.	939	1458	196	1095	3688

Traffic Lane Flows

Lane	Scenario 6: PM DS Residential
Junction: Wexham Road / Wellington Street	
1/1	414
1/2	543
2/1	754
2/2	704
3/1	334
4/1	196
5/1	939
6/1	754
7/1	517
7/2	704
8/1	552
8/2	543
9/1	414
9/2	965
10/1	1221
11/1	422
12/1	552
12/2	543

Lane Saturation Flows

Junction: Wexham Road / Wellington Street								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Wellington St WB Entry)	3.00	0.00	Y	Arm 4 Left	16.00	47.3 %	1834	1834
				Arm 12 Ahead	Inf	52.7 %		
1/2 (Wellington St WB Entry)	3.00	0.00	Y	Arm 12 Ahead	Inf	100.0 %	1915	1915
2/1 (Wellington St EB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (Wellington St EB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (Wexham Rd S Entry)	2.50	0.00	Y	Arm 12 Left	Inf	100.0 %	1865	1865
4/1 (Wexham Rd S Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Wexham Rd N Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Wexham Rd N Entry)	2.50	0.00	Y	Arm 2 Left	13.00	100.0 %	1672	1672
7/1 (Wellington St EB Entry)	3.00	0.00	Y	Arm 5 Left	10.00	100.0 %	1665	1665
7/2 (Wellington St EB Entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
8/1 (Wellington St WB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (Wellington St WB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (Wellington St Lane 1)	Infinite Saturation Flow						Inf	Inf
9/2 (Wellington St Lane 2)	Infinite Saturation Flow						Inf	Inf
10/1 (Wellingtoon St EB Lane 1)	Infinite Saturation Flow						Inf	Inf
11/1 (Wellington St WB RT)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741	1741
12/1 (Wellington St WB)	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
12/2 (Wellington St WB)	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915

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Scenario 7: 'AM DS Commercial' (FG7: 'AM DS Commercial', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	857	0	0	857
	B	568	0	172	846	1586
	C	0	0	0	245	245
	D	410	530	0	0	940
	Tot.	978	1387	172	1091	3628

Traffic Lane Flows

Lane	Scenario 7: AM DS Commercial
Junction: Wexham Road / Wellington Street	
1/1	473
1/2	545
2/1	857
2/2	530
3/1	245
4/1	172
5/1	978
6/1	857
7/1	410
7/2	530
8/1	546
8/2	545
9/1	473
9/2	1113
10/1	940
11/1	568
12/1	546
12/2	545

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Lane Saturation Flows

Junction: Wexham Road / Wellington Street								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Wellington St WB Entry)	3.00	0.00	Y	Arm 4 Left	16.00	36.4 %	1852	1852
				Arm 12 Ahead	Inf	63.6 %		
1/2 (Wellington St WB Entry)	3.00	0.00	Y	Arm 12 Ahead	Inf	100.0 %	1915	1915
2/1 (Wellington St EB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (Wellington St EB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (Wexham Rd S Entry)	2.50	0.00	Y	Arm 12 Left	Inf	100.0 %	1865	1865
4/1 (Wexham Rd S Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Wexham Rd N Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Wexham Rd N Entry)	2.50	0.00	Y	Arm 2 Left	13.00	100.0 %	1672	1672
7/1 (Wellington St EB Entry)	3.00	0.00	Y	Arm 5 Left	10.00	100.0 %	1665	1665
7/2 (Wellington St EB Entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
8/1 (Wellington St WB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (Wellington St WB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (Wellington St Lane 1)	Infinite Saturation Flow						Inf	Inf
9/2 (Wellington St Lane 2)	Infinite Saturation Flow						Inf	Inf
10/1 (Wellingtoon St EB Lane 1)	Infinite Saturation Flow						Inf	Inf
11/1 (Wellington St WB RT)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741	1741
12/1 (Wellington St WB)	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
12/2 (Wellington St WB)	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915

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Scenario 8: 'PM DS Commercial' (FG8: 'PM DS Commercial', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	752	0	0	752
	B	422	0	202	750	1374
	C	0	0	0	294	294
	D	532	752	0	0	1284
	Tot.	954	1504	202	1044	3704

Traffic Lane Flows

Lane	Scenario 8: PM DS Commercial
Junction: Wexham Road / Wellington Street	
1/1	431
1/2	521
2/1	752
2/2	752
3/1	294
4/1	202
5/1	954
6/1	752
7/1	532
7/2	752
8/1	523
8/2	521
9/1	431
9/2	943
10/1	1284
11/1	422
12/1	523
12/2	521

Full Input Data And Results

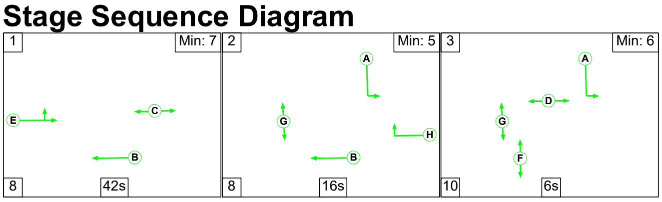
Lane Saturation Flows

Junction: Wexham Road / Wellington Street

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Wellington St WB Entry)	3.00	0.00	Y	Arm 4 Left	16.00	46.9 %	1834	1834
				Arm 12 Ahead	Inf	53.1 %		
1/2 (Wellington St WB Entry)	3.00	0.00	Y	Arm 12 Ahead	Inf	100.0 %	1915	1915
2/1 (Wellington St EB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (Wellington St EB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (Wexham Rd S Entry)	2.50	0.00	Y	Arm 12 Left	Inf	100.0 %	1865	1865
4/1 (Wexham Rd S Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Wexham Rd N Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Wexham Rd N Entry)	2.50	0.00	Y	Arm 2 Left	13.00	100.0 %	1672	1672
7/1 (Wellington St EB Entry)	3.00	0.00	Y	Arm 5 Left	10.00	100.0 %	1665	1665
7/2 (Wellington St EB Entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
8/1 (Wellington St WB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (Wellington St WB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (Wellington St Lane 1)	Infinite Saturation Flow						Inf	Inf
9/2 (Wellington St Lane 2)	Infinite Saturation Flow						Inf	Inf
10/1 (Wellingtoon St EB Lane 1)	Infinite Saturation Flow						Inf	Inf
11/1 (Wellington St WB RT)	3.00	0.00	Y	Arm 5 Right	15.00	100.0 %	1741	1741
12/1 (Wellington St WB)	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
12/2 (Wellington St WB)	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915

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

Stage Sequence Diagram



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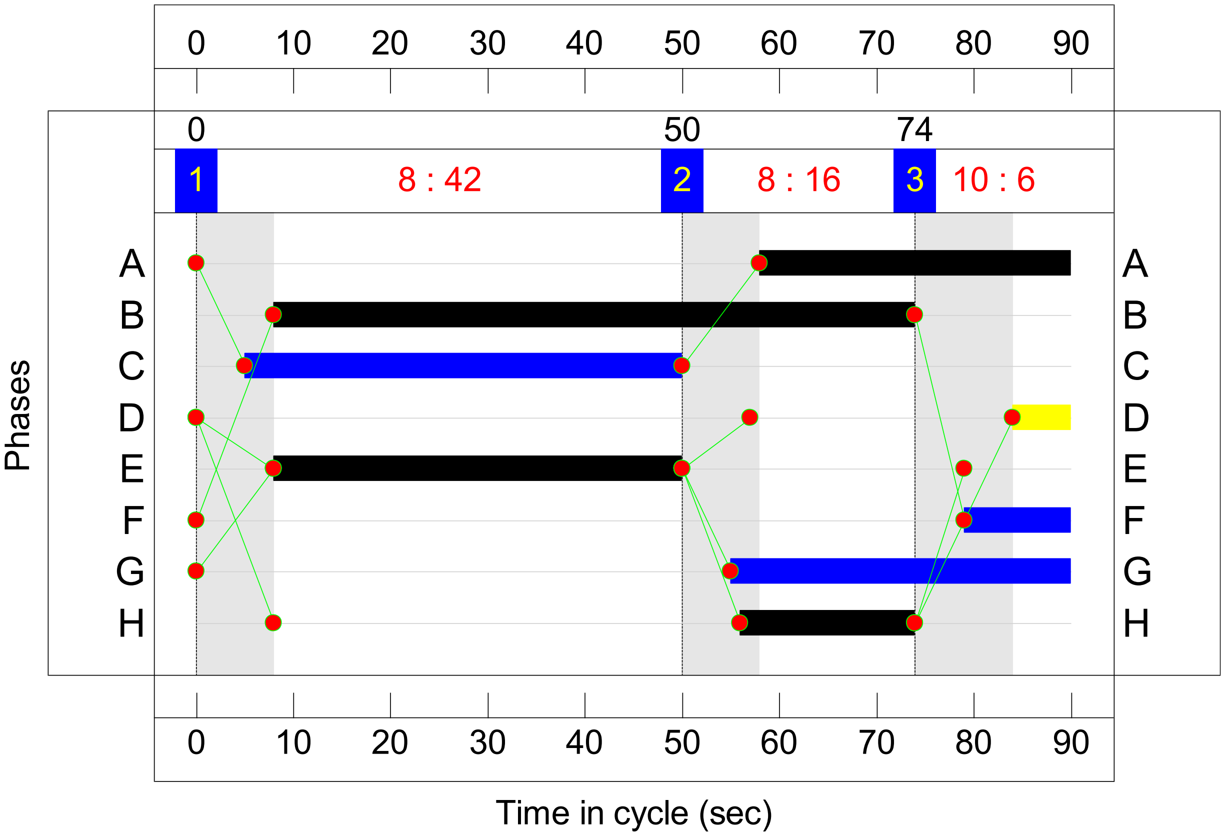
Stage Timings

Stage	1	2	3
Duration	42	16	6
Change Point	0	50	74

Signal Timings Diagram



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Network Layout Diagram

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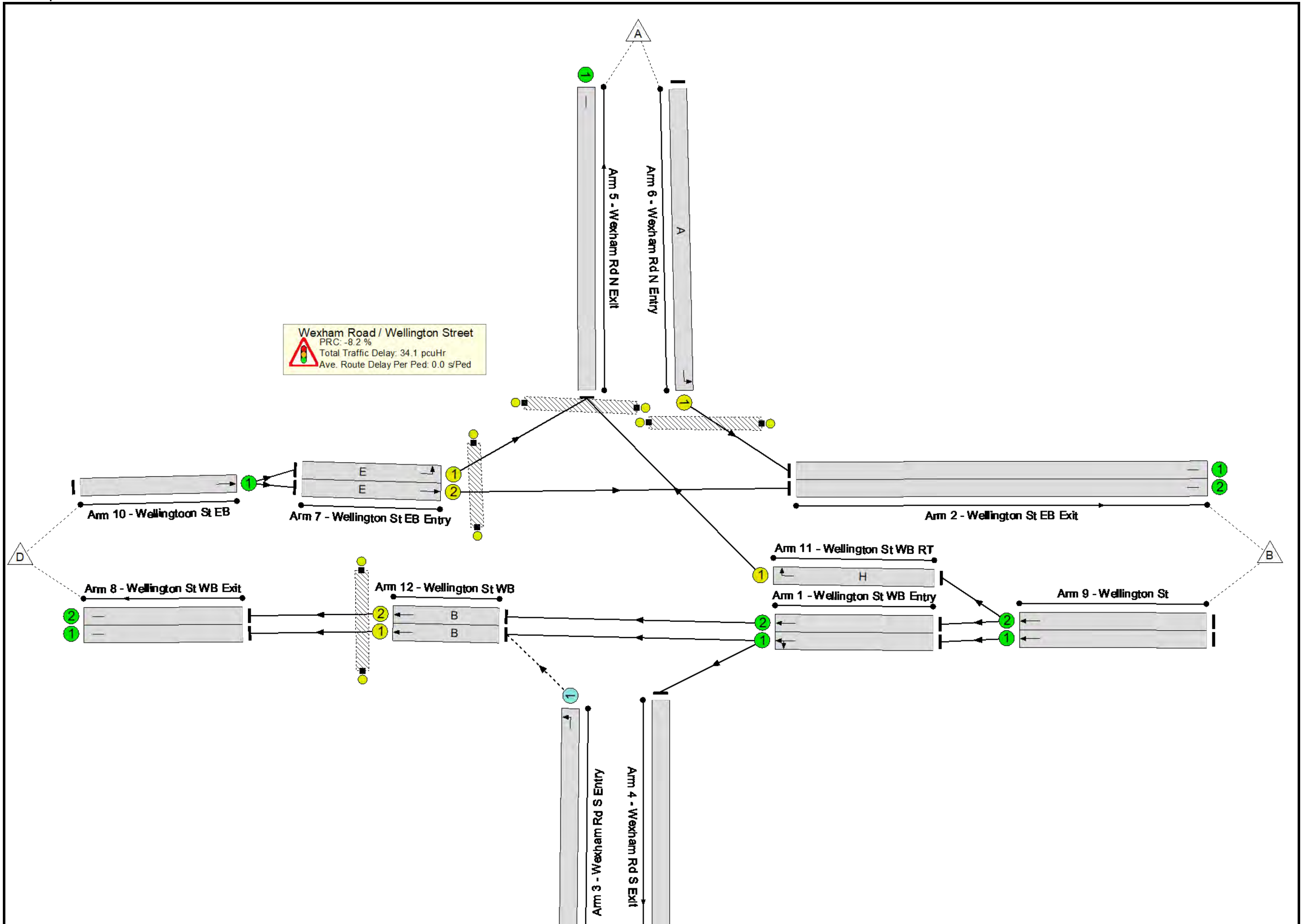

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Network Results

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**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**97.4%**
Wexham Road / Wellington Street	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**97.4%**
1/1	Wellington St WB Entry Left Ahead	U	N/A	N/A	-		-	-	-	689	1881	1881	36.6%
1/2	Wellington St WB Entry Ahead	U	N/A	N/A	-		-	-	-	783	1915	1915	40.9%
2/1	Wellington St EB Exit	U	N/A	N/A	-		-	-	-	591	Inf	Inf	0.0%
2/2	Wellington St EB Exit	U	N/A	N/A	-		-	-	-	469	Inf	Inf	0.0%
3/1	Wexham Rd S Entry Left	O	N/A	N/A	-		-	-	-	235	1865	592	39.7%
4/1	Wexham Rd S Exit	U	N/A	N/A	-		-	-	-	131	Inf	Inf	0.0%
5/1	Wexham Rd N Exit	U	N/A	N/A	-		-	-	-	775	Inf	Inf	0.0%
6/1	Wexham Rd N Entry Left	U	N/A	N/A	A		1	32	-	591	1672	613	96.4%
7/1	Wellington St EB Entry Left	U	N/A	N/A	E		1	42	-	775	1665	795	97.4%
7/2	Wellington St EB Entry Ahead	U	N/A	N/A	E		1	42	-	469	1915	915	51.3%
8/1	Wellington St WB Exit	U	N/A	N/A	-		-	-	-	793	Inf	Inf	0.0%
8/2	Wellington St WB Exit	U	N/A	N/A	-		-	-	-	783	Inf	Inf	0.0%
9/1	Wellington St Ahead	U	N/A	N/A	-		-	-	-	689	Inf	Inf	0.0%
9/2	Wellington St Ahead Ahead2	U	N/A	N/A	-		-	-	-	783	Inf	Inf	0.0%
10/1	Wellingtoon St EB Ahead	U	N/A	N/A	-		-	-	-	1244	Inf	Inf	0.0%

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11/1	Wellington St WB RT Right	U	N/A	N/A	H		1	18	-	0	1915	404	0.0%
12/1	Wellington St WB Ahead	U	N/A	N/A	B		1	66	-	793	1915	1426	55.6%
12/2	Wellington St WB Ahead	U	N/A	N/A	B		1	66	-	783	1915	1426	54.9%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	F		1	11	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	D		1	6	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	C		1	45	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	G		1	35	-	0	-	0	0.0%

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Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**235**	**0**	**0**	**13.8**	**20.3**	**0.0**	**34.1**	**-**	**-**	**-**	**-**
Wexham Road / Wellington Street	**-**	**-**	**235**	**0**	**0**	**13.8**	**20.3**	**0.0**	**34.1**	**-**	**-**	**-**	**-**
1/1	689	689	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
1/2	783	783	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3
2/1	591	591	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	469	469	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	235	235	235	0	0	0.0	0.3	-	0.3	5.0	0.0	0.3	0.3
4/1	131	131	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	775	775	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	591	591	-	-	-	4.6	7.8	-	12.4	75.6	14.4	7.8	22.3
7/1	775	775	-	-	-	4.9	9.7	-	14.7	68.1	18.7	9.7	28.4
7/2	469	469	-	-	-	2.1	0.5	-	2.6	20.3	8.1	0.5	8.6
8/1	793	793	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	783	783	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	689	689	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	783	783	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	1244	1244	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	793	793	-	-	-	1.1	0.6	-	1.7	7.9	8.6	0.6	9.2
12/2	783	783	-	-	-	1.1	0.6	-	1.7	7.8	8.3	0.6	8.9
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -8.2 Total Delay for Signalled Lanes (pcuHr): 33.13 Cycle Time (s): 90
PRC Over All Lanes (%): -8.2 Total Delay Over All Lanes(pcuHr): 34.09

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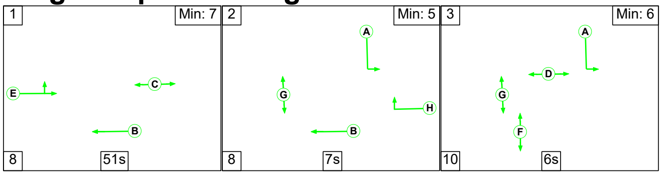
Scenario 2: 'PM Base' (FG2: 'PM Base', Plan 1: 'Network Control Plan 1')

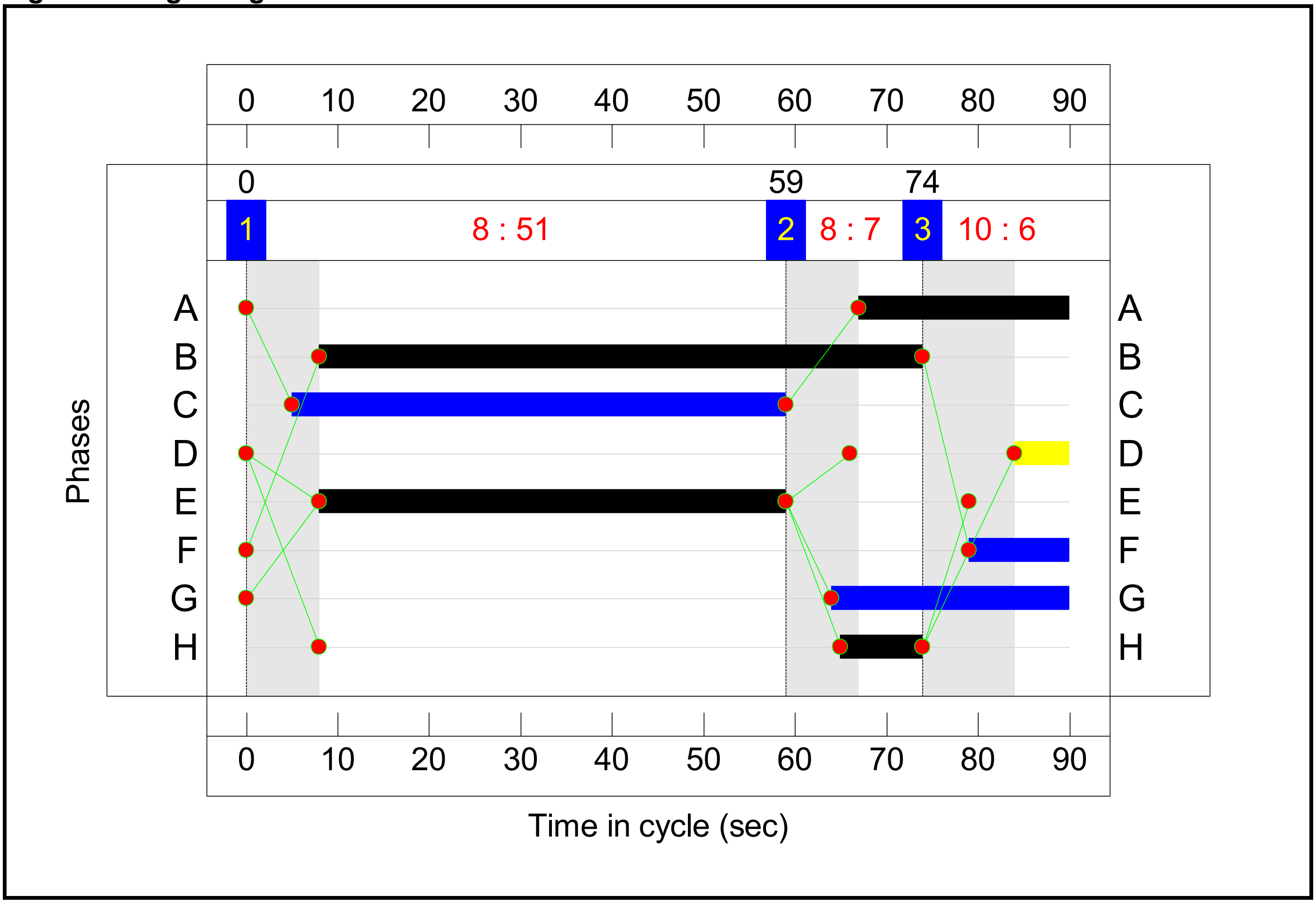
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	51	7	6
Change Point	0	59	74

Signal Timings Diagram



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Full Input Data And Results
Network Layout Diagram

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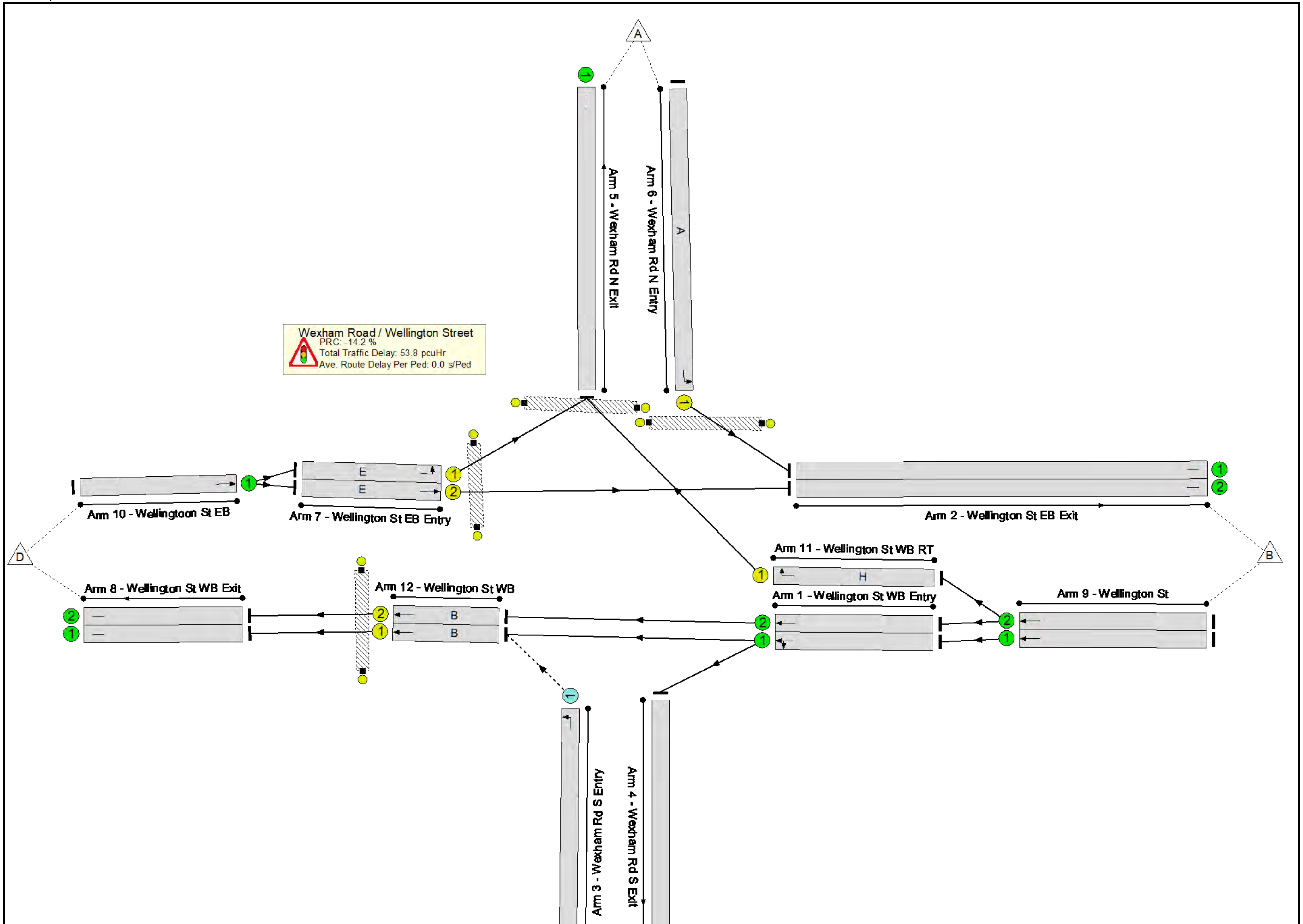
Full Input Data And Results



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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**	-	-		-	-	-	-	-	-	**102.8%**
Wexham Road / Wellington Street	-	-	**N/A**	-	-		-	-	-	-	-	-	**102.8%**
1/1	Wellington St WB Entry Left Ahead	U	N/A	N/A	-		-	-	-	558	1861	1861	30.0%
1/2	Wellington St WB Entry Ahead	U	N/A	N/A	-		-	-	-	714	1915	1915	37.3%
2/1	Wellington St EB Exit	U	N/A	N/A	-		-	-	-	451	Inf	Inf	0.0%
2/2	Wellington St EB Exit	U	N/A	N/A	-		-	-	-	692	Inf	Inf	0.0%
3/1	Wexham Rd S Entry Left	O	N/A	N/A	-		-	-	-	343	1865	630	54.4%
4/1	Wexham Rd S Exit	U	N/A	N/A	-		-	-	-	172	Inf	Inf	0.0%
5/1	Wexham Rd N Exit	U	N/A	N/A	-		-	-	-	989	Inf	Inf	0.0%
6/1	Wexham Rd N Entry Left	U	N/A	N/A	A		1	23	-	451	1672	446	101.2%
7/1	Wellington St EB Entry Left	U	N/A	N/A	E		1	51	-	989	1665	962	102.8%
7/2	Wellington St EB Entry Ahead	U	N/A	N/A	E		1	51	-	692	1915	1106	62.5%
8/1	Wellington St WB Exit	U	N/A	N/A	-		-	-	-	729	Inf	Inf	0.0%
8/2	Wellington St WB Exit	U	N/A	N/A	-		-	-	-	714	Inf	Inf	0.0%
9/1	Wellington St Ahead	U	N/A	N/A	-		-	-	-	558	Inf	Inf	0.0%
9/2	Wellington St Ahead Ahead2	U	N/A	N/A	-		-	-	-	714	Inf	Inf	0.0%
10/1	Wellingtoon St EB Ahead	U	N/A	N/A	-		-	-	-	1681	Inf	Inf	0.0%

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Full Input Data And Results

11/1	Wellington St WB RT Right	U	N/A	N/A	H		1	9	-	0	1915	213	0.0%
12/1	Wellington St WB Ahead	U	N/A	N/A	B		1	66	-	729	1915	1426	51.1%
12/2	Wellington St WB Ahead	U	N/A	N/A	B		1	66	-	714	1915	1426	50.1%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	F		1	11	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	D		1	6	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	C		1	54	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	G		1	26	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**343**	**0**	**0**	**15.0**	**38.8**	**0.0**	**53.8**	**-**	**-**	**-**	**-**
Wexham Road / Wellington Street	**-**	**-**	**343**	**0**	**0**	**15.0**	**38.8**	**0.0**	**53.8**	**-**	**-**	**-**	**-**
1/1	558	558	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2
1/2	714	714	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
2/1	446	446	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	692	692	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	343	343	343	0	0	0.0	0.6	-	0.6	6.2	0.0	0.6	0.6
4/1	172	172	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	962	962	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	451	446	-	-	-	4.4	12.0	-	16.4	130.8	11.4	12.0	23.4
7/1	989	962	-	-	-	6.3	23.9	-	30.2	109.8	25.4	23.9	49.3
7/2	692	692	-	-	-	2.4	0.8	-	3.2	16.9	11.3	0.8	12.2
8/1	729	729	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	714	714	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	558	558	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	714	714	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	1681	1681	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	729	729	-	-	-	1.0	0.5	-	1.5	7.3	7.5	0.5	8.0
12/2	714	714	-	-	-	0.9	0.5	-	1.4	7.2	7.1	0.5	7.6
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

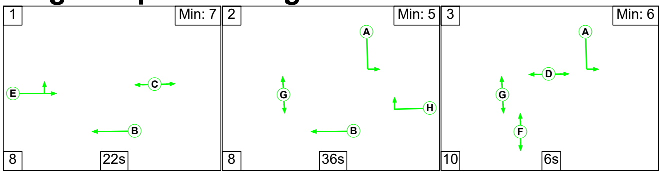
C1 PRC for Signalled Lanes (%): -14.2 Total Delay for Signalled Lanes (pcuHr): 52.71 Cycle Time (s): 90
PRC Over All Lanes (%): -14.2 Total Delay Over All Lanes(pcuHr): 53.82

Full Input Data And Results

Full Input Data And Results

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

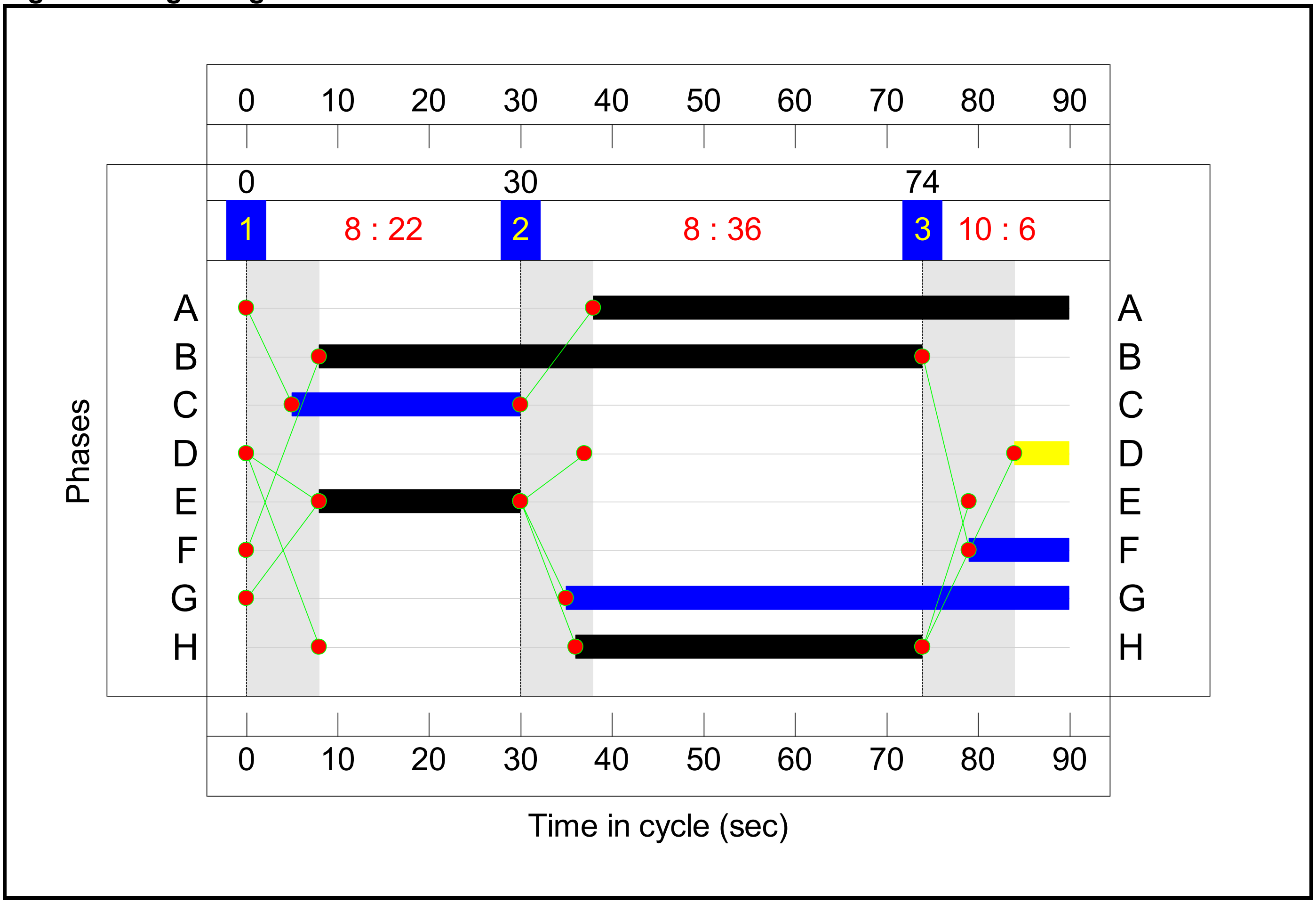
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	22	36	6
Change Point	0	30	74

Signal Timings Diagram



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Network Layout Diagram

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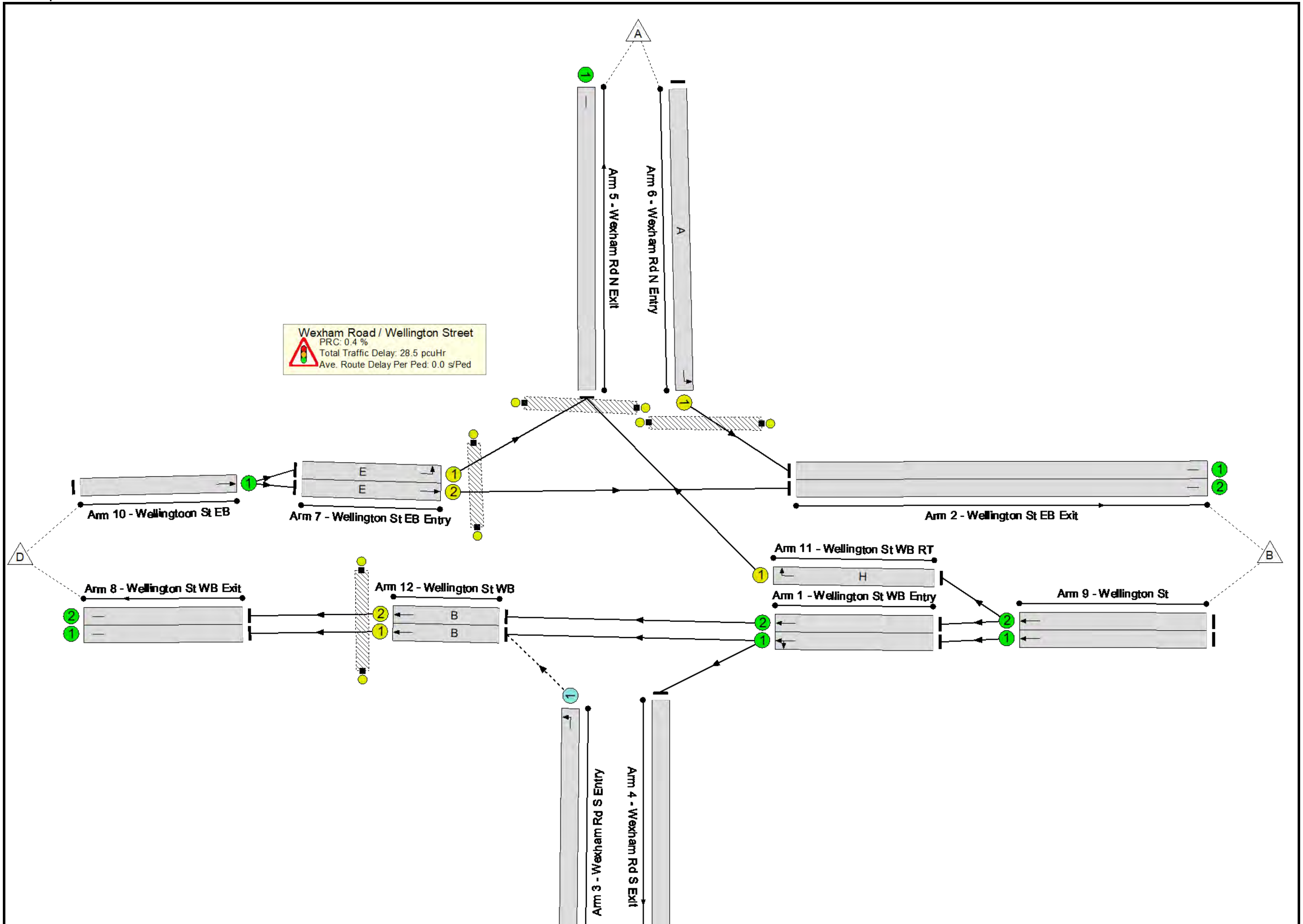

Full Input Data And Results

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**	-	-		-	-	-	-	-	-	**89.7%**
Wexham Road / Wellington Street	-	-	**N/A**	-	-		-	-	-	-	-	-	**89.7%**
1/1	Wellington St WB Entry Left Ahead	U	N/A	N/A	-		-	-	-	454	1859	1859	24.4%
1/2	Wellington St WB Entry Ahead	U	N/A	N/A	-		-	-	-	527	1915	1915	27.5%
2/1	Wellington St EB Exit	U	N/A	N/A	-		-	-	-	883	Inf	Inf	0.0%
2/2	Wellington St EB Exit	U	N/A	N/A	-		-	-	-	433	Inf	Inf	0.0%
3/1	Wexham Rd S Entry Left	O	N/A	N/A	-		-	-	-	224	1865	647	34.6%
4/1	Wexham Rd S Exit	U	N/A	N/A	-		-	-	-	147	Inf	Inf	0.0%
5/1	Wexham Rd N Exit	U	N/A	N/A	-		-	-	-	932	Inf	Inf	0.0%
6/1	Wexham Rd N Entry Left	U	N/A	N/A	A		1	52	-	883	1672	985	89.7%
7/1	Wellington St EB Entry Left	U	N/A	N/A	E		1	22	-	365	1665	425	85.8%
7/2	Wellington St EB Entry Ahead	U	N/A	N/A	E		1	22	-	433	1915	489	88.5%
8/1	Wellington St WB Exit	U	N/A	N/A	-		-	-	-	531	Inf	Inf	0.0%
8/2	Wellington St WB Exit	U	N/A	N/A	-		-	-	-	527	Inf	Inf	0.0%
9/1	Wellington St Ahead	U	N/A	N/A	-		-	-	-	454	Inf	Inf	0.0%
9/2	Wellington St Ahead Ahead2	U	N/A	N/A	-		-	-	-	1094	Inf	Inf	0.0%
10/1	Wellingtoon St EB Ahead	U	N/A	N/A	-		-	-	-	798	Inf	Inf	0.0%

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Full Input Data And Results

11/1	Wellington St WB RT Right	U	N/A	N/A	H		1	38	-	567	1741	754	75.2%
12/1	Wellington St WB Ahead	U	N/A	N/A	B		1	66	-	531	1915	1426	37.2%
12/2	Wellington St WB Ahead	U	N/A	N/A	B		1	66	-	527	1915	1426	37.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	F		1	11	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	D		1	6	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	C		1	25	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	G		1	55	-	0	-	0	0.0%

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Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**224**	**0**	**0**	**15.6**	**12.9**	**0.0**	**28.5**	**-**	**-**	**-**	**-**
Wexham Road / Wellington Street	**-**	**-**	**224**	**0**	**0**	**15.6**	**12.9**	**0.0**	**28.5**	**-**	**-**	**-**	**-**
1/1	454	454	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
1/2	527	527	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
2/1	883	883	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	433	433	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	224	224	224	0	0	0.0	0.3	-	0.3	4.2	0.0	0.3	0.3
4/1	147	147	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	932	932	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	883	883	-	-	-	4.0	4.0	-	8.0	32.5	19.1	4.0	23.2
7/1	365	365	-	-	-	3.2	2.8	-	6.0	59.2	8.6	2.8	11.4
7/2	433	433	-	-	-	3.9	3.4	-	7.3	60.7	10.3	3.4	13.8
8/1	531	531	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	527	527	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	454	454	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	1094	1094	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	798	798	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	567	567	-	-	-	3.4	1.5	-	4.9	30.9	11.8	1.5	13.3
12/1	531	531	-	-	-	0.6	0.3	-	0.9	6.1	4.6	0.3	4.9
12/2	527	527	-	-	-	0.6	0.3	-	0.9	6.1	4.5	0.3	4.8
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 0.4 Total Delay for Signalled Lanes (pcuHr): 27.93 Cycle Time (s): 90
PRC Over All Lanes (%): 0.4 Total Delay Over All Lanes(pcuHr): 28.55

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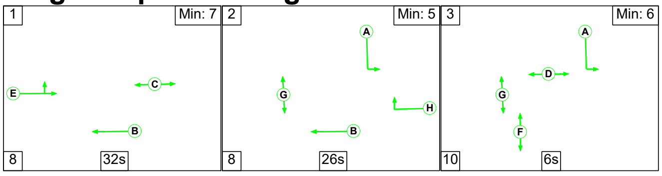
Full Input Data And Results

Full Input Data And Results

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

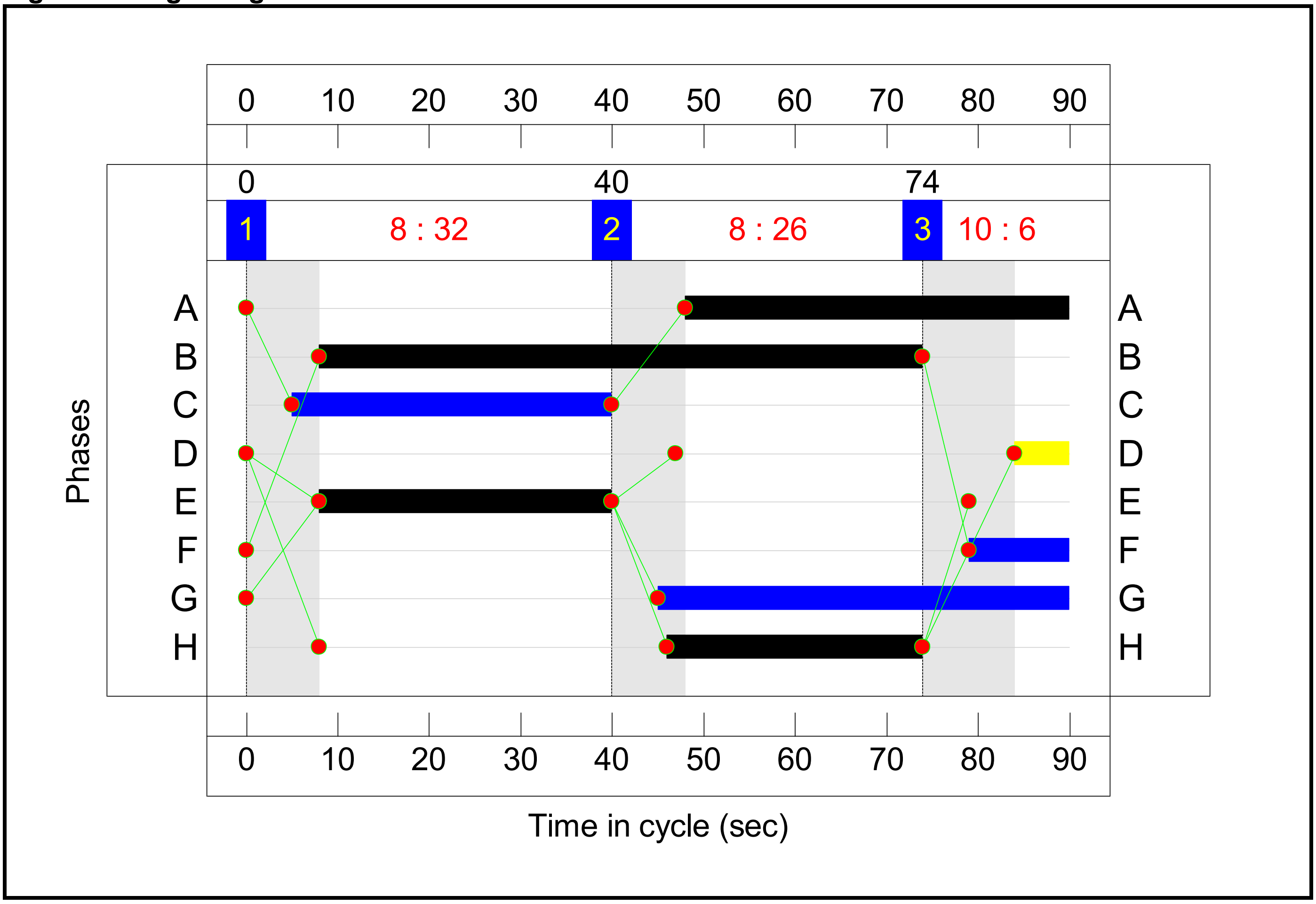
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	32	26	6
Change Point	0	40	74

Signal Timings Diagram



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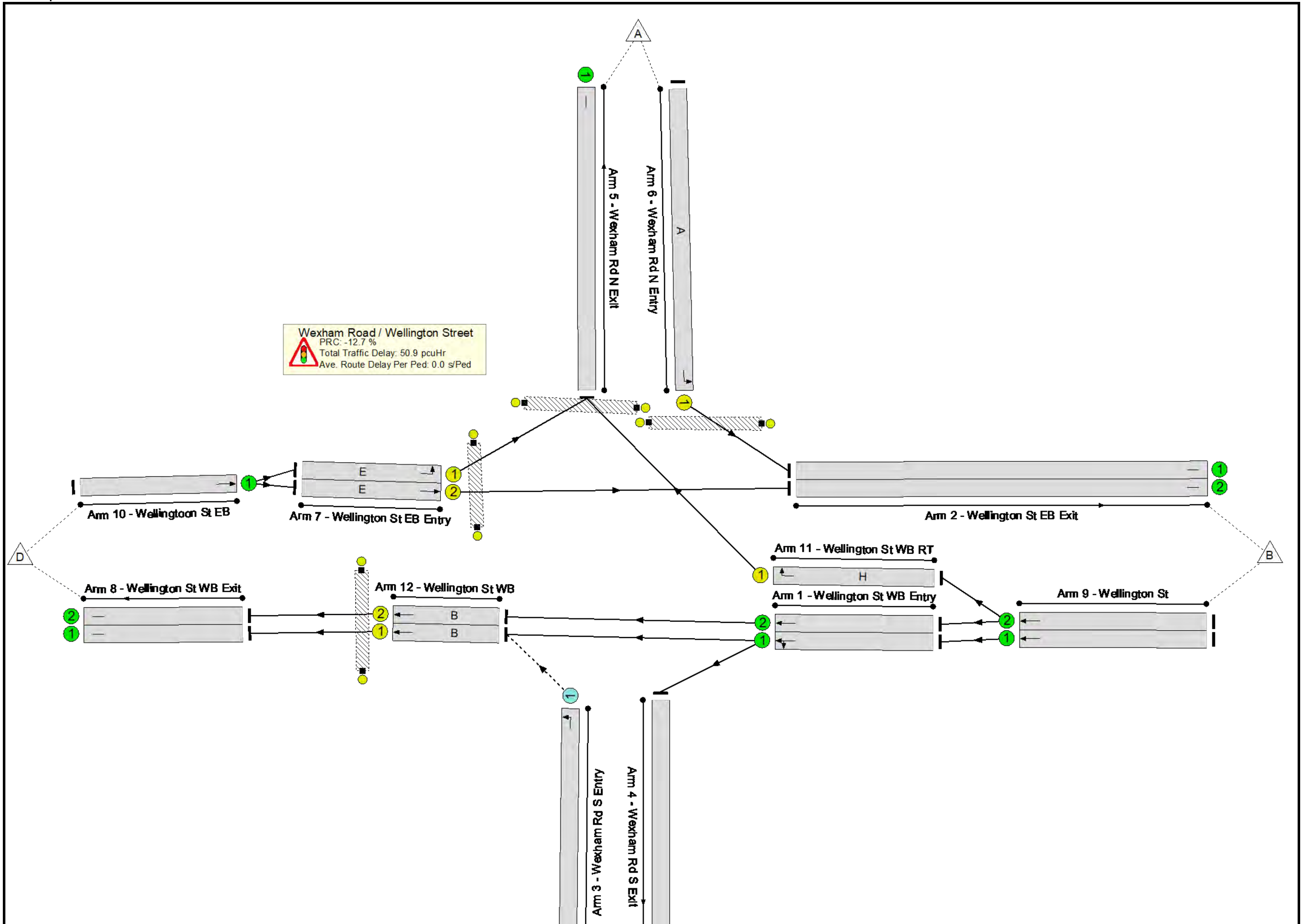
Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

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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**	-	-		-	-	-	-	-	-	**101.4%**
Wexham Road / Wellington Street	-	-	**N/A**	-	-		-	-	-	-	-	-	**101.4%**
1/1	Wellington St WB Entry Left Ahead	U	N/A	N/A	-		-	-	-	394	1822	1822	21.6%
1/2	Wellington St WB Entry Ahead	U	N/A	N/A	-		-	-	-	555	1915	1915	29.0%
2/1	Wellington St EB Exit	U	N/A	N/A	-		-	-	-	810	Inf	Inf	0.0%
2/2	Wellington St EB Exit	U	N/A	N/A	-		-	-	-	691	Inf	Inf	0.0%
3/1	Wexham Rd S Entry Left	O	N/A	N/A	-		-	-	-	386	1865	675	57.2%
4/1	Wexham Rd S Exit	U	N/A	N/A	-		-	-	-	214	Inf	Inf	0.0%
5/1	Wexham Rd N Exit	U	N/A	N/A	-		-	-	-	843	Inf	Inf	0.0%
6/1	Wexham Rd N Entry Left	U	N/A	N/A	A		1	42	-	810	1672	799	101.4%
7/1	Wellington St EB Entry Left	U	N/A	N/A	E		1	32	-	409	1665	610	67.0%
7/2	Wellington St EB Entry Ahead	U	N/A	N/A	E		1	32	-	691	1915	702	98.4%
8/1	Wellington St WB Exit	U	N/A	N/A	-		-	-	-	566	Inf	Inf	0.0%
8/2	Wellington St WB Exit	U	N/A	N/A	-		-	-	-	555	Inf	Inf	0.0%
9/1	Wellington St Ahead	U	N/A	N/A	-		-	-	-	394	Inf	Inf	0.0%
9/2	Wellington St Ahead Ahead2	U	N/A	N/A	-		-	-	-	989	Inf	Inf	0.0%
10/1	Wellingtoon St EB Ahead	U	N/A	N/A	-		-	-	-	1100	Inf	Inf	0.0%

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Full Input Data And Results

11/1	Wellington St WB RT Right	U	N/A	N/A	H		1	28	-	434	1741	561	77.4%
12/1	Wellington St WB Ahead	U	N/A	N/A	B		1	66	-	566	1915	1426	39.7%
12/2	Wellington St WB Ahead	U	N/A	N/A	B		1	66	-	555	1915	1426	38.9%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	F		1	11	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	D		1	6	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	C		1	35	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	G		1	45	-	0	-	0	0.0%

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Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**386**	**0**	**0**	**18.7**	**32.3**	**0.0**	**50.9**	**-**	**-**	**-**	**-**
Wexham Road / Wellington Street	**-**	**-**	**386**	**0**	**0**	**18.7**	**32.3**	**0.0**	**50.9**	**-**	**-**	**-**	**-**
1/1	394	394	-	-	-	0.0	0.1	-	0.1	1.3	0.0	0.1	0.1
1/2	555	555	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
2/1	799	799	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	691	691	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	386	386	386	0	0	0.0	0.7	-	0.7	6.2	0.0	0.7	0.7
4/1	214	214	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	843	843	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	810	799	-	-	-	5.9	17.3	-	23.2	103.1	20.5	17.3	37.8
7/1	409	409	-	-	-	2.7	1.0	-	3.7	32.8	8.5	1.0	9.5
7/2	691	691	-	-	-	5.4	10.6	-	16.1	83.7	17.1	10.6	27.7
8/1	566	566	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	555	555	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	394	394	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	989	989	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	1100	1100	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	434	434	-	-	-	3.3	1.7	-	5.0	41.4	9.8	1.7	11.4
12/1	566	566	-	-	-	0.7	0.3	-	1.0	6.3	5.0	0.3	5.4
12/2	555	555	-	-	-	0.6	0.3	-	1.0	6.2	4.9	0.3	5.3
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

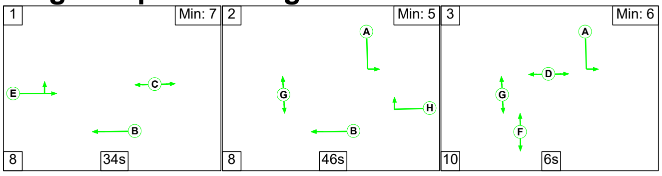
C1 PRC for Signalled Lanes (%): -12.7 Total Delay for Signalled Lanes (pcuHr): 49.91 Cycle Time (s): 90
PRC Over All Lanes (%): -12.7 Total Delay Over All Lanes(pcuHr): 50.92

Full Input Data And Results

Full Input Data And Results

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

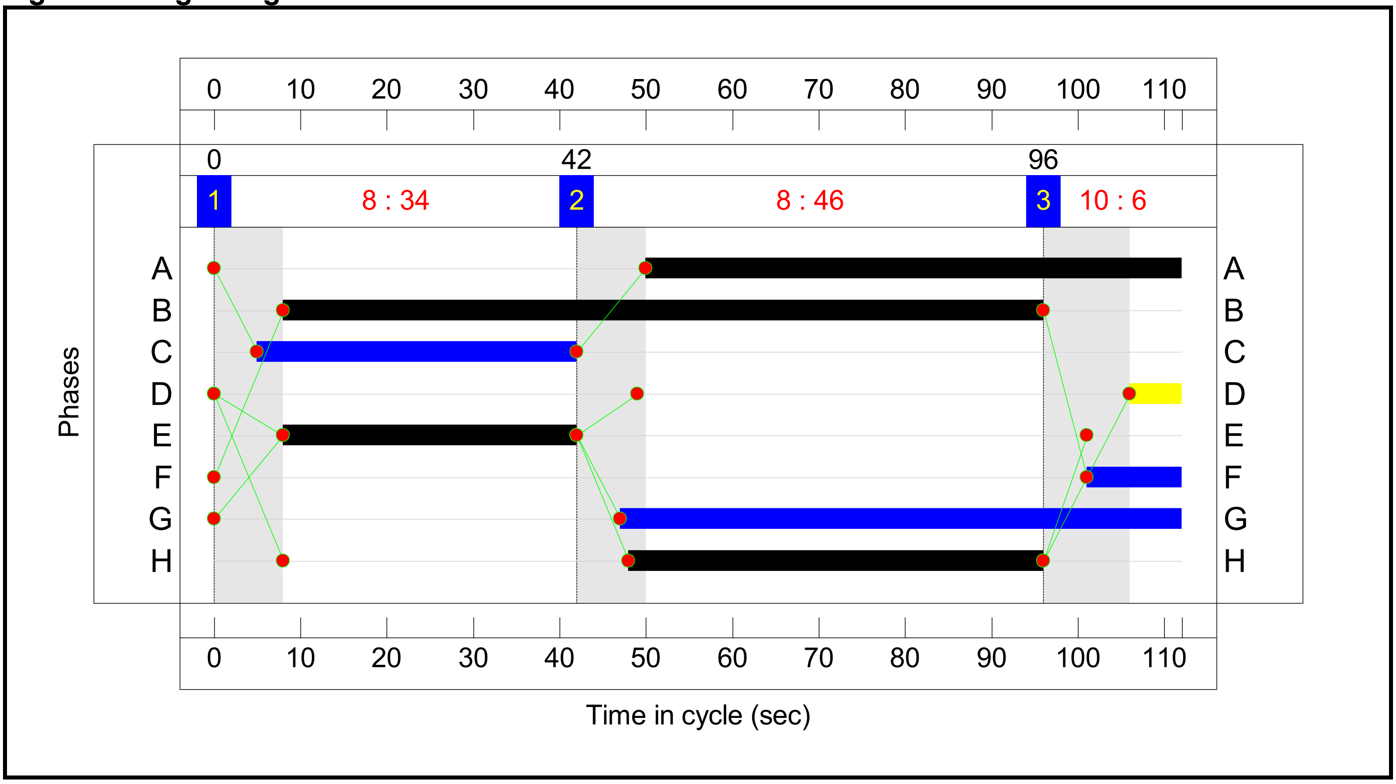
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	34	46	6
Change Point	0	42	96

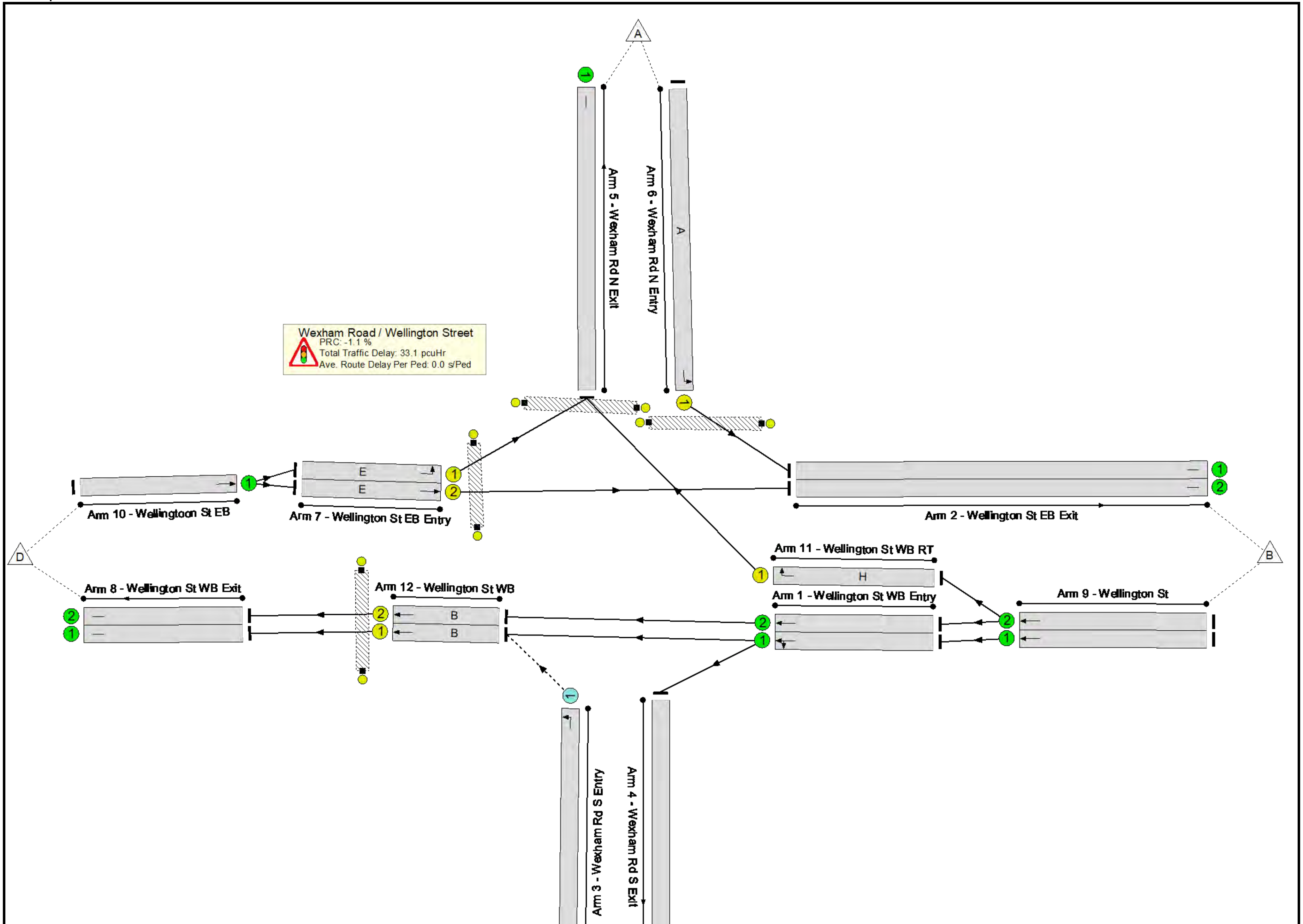
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



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Full Input Data And Results

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**	-	-		-	-	-	-	-	-	**91.0%**
Wexham Road / Wellington Street	-	-	**N/A**	-	-		-	-	-	-	-	-	**91.0%**
1/1	Wellington St WB Entry Left Ahead	U	N/A	N/A	-		-	-	-	518	1854	1854	27.9%
1/2	Wellington St WB Entry Ahead	U	N/A	N/A	-		-	-	-	496	1915	1915	25.9%
2/1	Wellington St EB Exit	U	N/A	N/A	-		-	-	-	856	Inf	Inf	0.0%
2/2	Wellington St EB Exit	U	N/A	N/A	-		-	-	-	543	Inf	Inf	0.0%
3/1	Wexham Rd S Entry Left	O	N/A	N/A	-		-	-	-	140	1865	641	21.8%
4/1	Wexham Rd S Exit	U	N/A	N/A	-		-	-	-	182	Inf	Inf	0.0%
5/1	Wexham Rd N Exit	U	N/A	N/A	-		-	-	-	987	Inf	Inf	0.0%
6/1	Wexham Rd N Entry Left	U	N/A	N/A	A		1	62	-	856	1672	941	91.0%
7/1	Wellington St EB Entry Left	U	N/A	N/A	E		1	34	-	417	1665	520	80.1%
7/2	Wellington St EB Entry Ahead	U	N/A	N/A	E		1	34	-	543	1915	598	90.7%
8/1	Wellington St WB Exit	U	N/A	N/A	-		-	-	-	476	Inf	Inf	0.0%
8/2	Wellington St WB Exit	U	N/A	N/A	-		-	-	-	496	Inf	Inf	0.0%
9/1	Wellington St Ahead	U	N/A	N/A	-		-	-	-	518	Inf	Inf	0.0%
9/2	Wellington St Ahead Ahead2	U	N/A	N/A	-		-	-	-	1066	Inf	Inf	0.0%
10/1	Wellingtoon St EB Ahead	U	N/A	N/A	-		-	-	-	960	Inf	Inf	0.0%

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Full Input Data And Results

11/1	Wellington St WB RT Right	U	N/A	N/A	H		1	48	-	570	1741	762	74.8%
12/1	Wellington St WB Ahead	U	N/A	N/A	B		1	88	-	476	1915	1522	31.3%
12/2	Wellington St WB Ahead	U	N/A	N/A	B		1	88	-	496	1915	1522	32.6%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	F		1	11	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	D		1	6	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	C		1	37	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	G		1	65	-	0	-	0	0.0%

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Full Input Data And Results

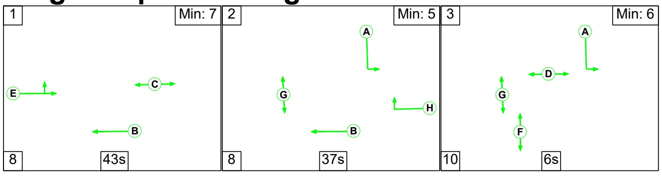
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**140**	**0**	**0**	**19.9**	**13.2**	**0.0**	**33.1**	**-**	**-**	**-**	**-**
Wexham Road / Wellington Street	**-**	**-**	**140**	**0**	**0**	**19.9**	**13.2**	**0.0**	**33.1**	**-**	**-**	**-**	**-**
1/1	518	518	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
1/2	496	496	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
2/1	856	856	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	543	543	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	140	140	140	0	0	0.0	0.1	-	0.1	3.6	0.0	0.1	0.1
4/1	182	182	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	987	987	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	856	856	-	-	-	5.2	4.6	-	9.8	41.2	23.8	4.6	28.3
7/1	417	417	-	-	-	4.1	1.9	-	6.0	52.1	11.8	1.9	13.8
7/2	543	543	-	-	-	5.6	4.2	-	9.8	65.1	16.1	4.2	20.4
8/1	476	476	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	496	496	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	518	518	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	1066	1066	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	960	960	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	570	570	-	-	-	4.2	1.5	-	5.6	35.6	14.7	1.5	16.2
12/1	476	476	-	-	-	0.4	0.2	-	0.6	4.9	4.0	0.2	4.2
12/2	496	496	-	-	-	0.4	0.2	-	0.7	4.9	4.3	0.2	4.5
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -1.1 Total Delay for Signalled Lanes (pcuHr): 32.61 Cycle Time (s): 112
PRC Over All Lanes (%): -1.1 Total Delay Over All Lanes(pcuHr): 33.12

Full Input Data And Results

Full Input Data And Results
Scenario 6: 'PM DS Residential' (FG6: 'PM DS Residential', Plan 1: 'Network Control Plan 1')

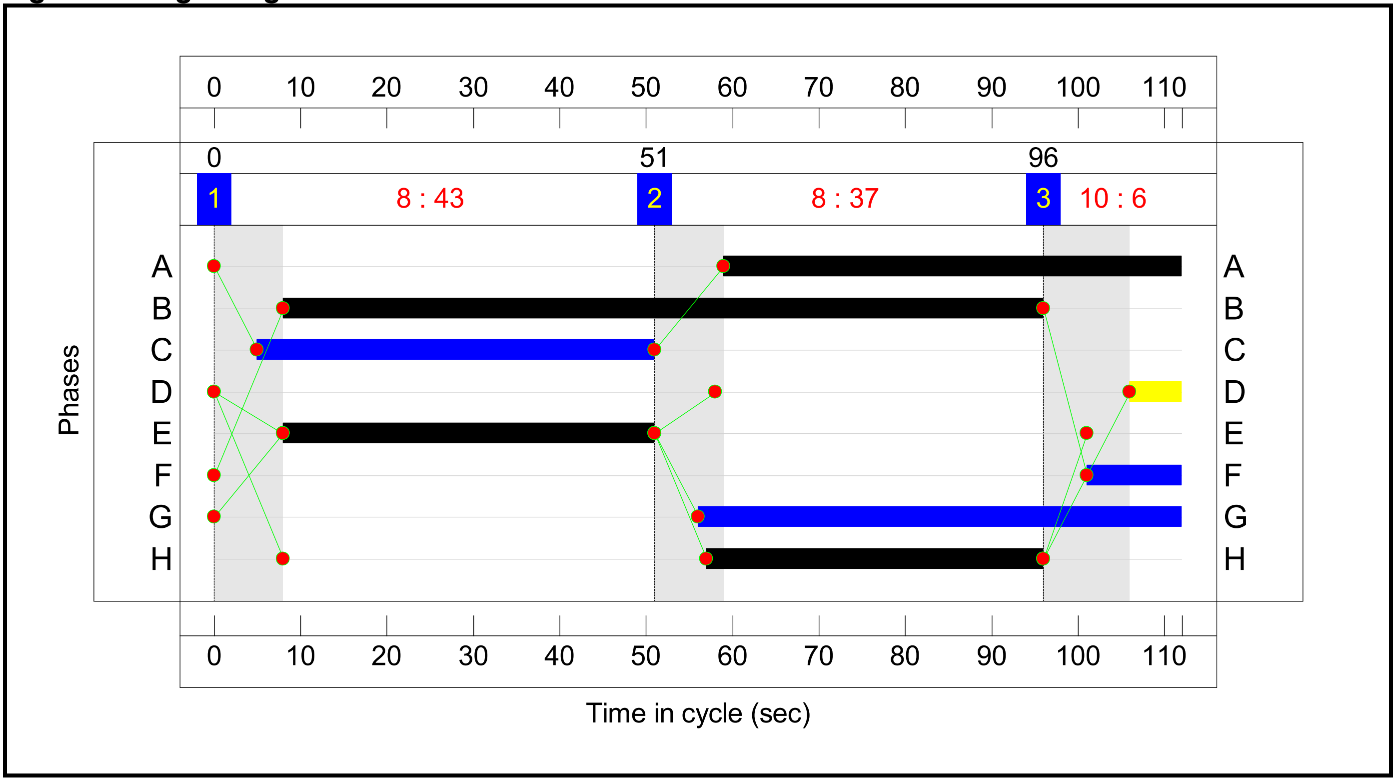
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	43	37	6
Change Point	0	51	96

Signal Timings Diagram



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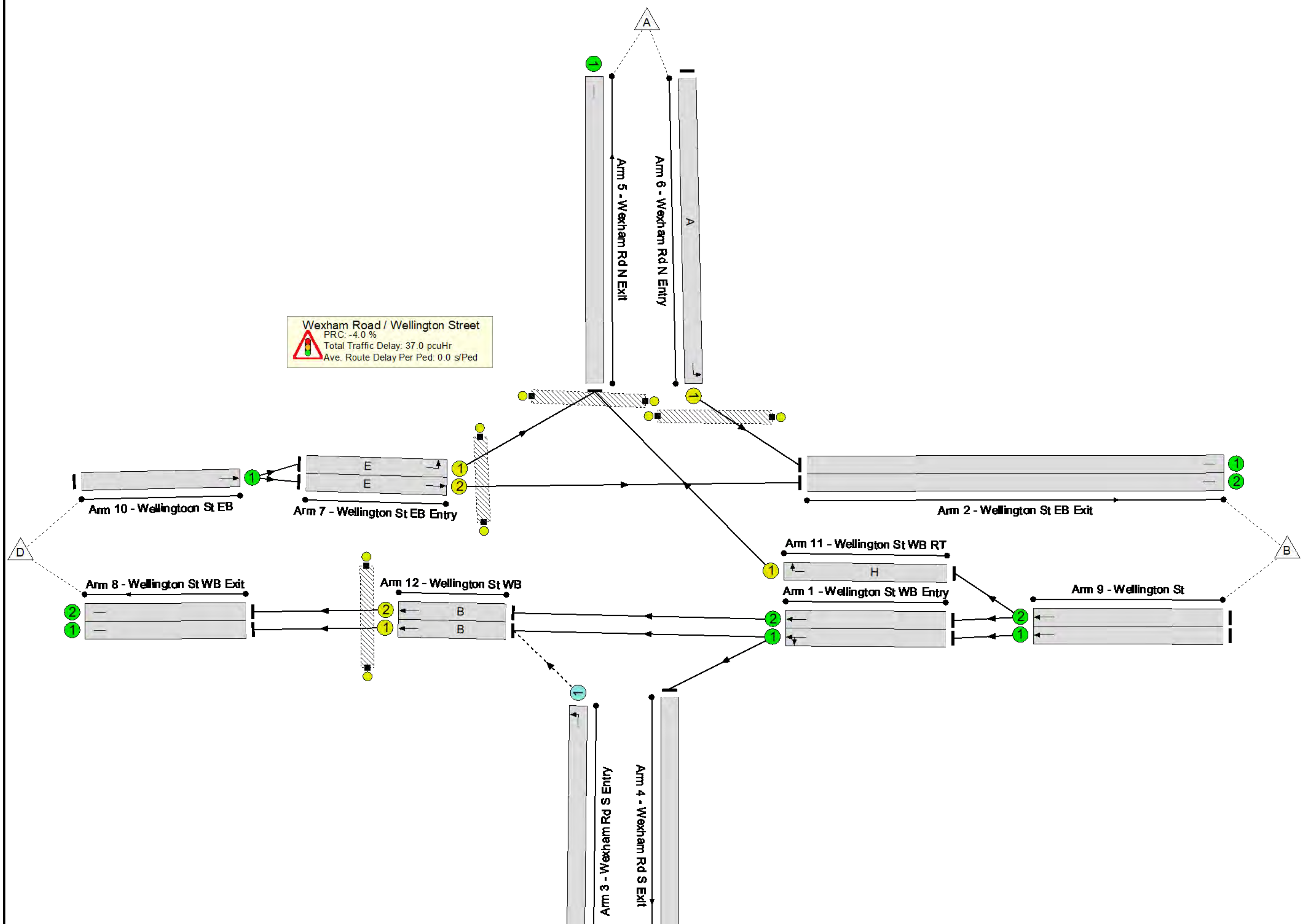
Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

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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**	-	-		-	-	-	-	-	-	**93.6%**
Wexham Road / Wellington Street	-	-	**N/A**	-	-		-	-	-	-	-	-	**93.6%**
1/1	Wellington St WB Entry Left Ahead	U	N/A	N/A	-		-	-	-	414	1834	1834	22.6%
1/2	Wellington St WB Entry Ahead	U	N/A	N/A	-		-	-	-	543	1915	1915	28.4%
2/1	Wellington St EB Exit	U	N/A	N/A	-		-	-	-	754	Inf	Inf	0.0%
2/2	Wellington St EB Exit	U	N/A	N/A	-		-	-	-	704	Inf	Inf	0.0%
3/1	Wexham Rd S Entry Left	O	N/A	N/A	-		-	-	-	334	1865	667	50.1%
4/1	Wexham Rd S Exit	U	N/A	N/A	-		-	-	-	196	Inf	Inf	0.0%
5/1	Wexham Rd N Exit	U	N/A	N/A	-		-	-	-	939	Inf	Inf	0.0%
6/1	Wexham Rd N Entry Left	U	N/A	N/A	A		1	53	-	754	1672	806	93.5%
7/1	Wellington St EB Entry Left	U	N/A	N/A	E		1	43	-	517	1665	654	79.0%
7/2	Wellington St EB Entry Ahead	U	N/A	N/A	E		1	43	-	704	1915	752	93.6%
8/1	Wellington St WB Exit	U	N/A	N/A	-		-	-	-	552	Inf	Inf	0.0%
8/2	Wellington St WB Exit	U	N/A	N/A	-		-	-	-	543	Inf	Inf	0.0%
9/1	Wellington St Ahead	U	N/A	N/A	-		-	-	-	414	Inf	Inf	0.0%
9/2	Wellington St Ahead Ahead2	U	N/A	N/A	-		-	-	-	965	Inf	Inf	0.0%
10/1	Wellingtoon St EB Ahead	U	N/A	N/A	-		-	-	-	1221	Inf	Inf	0.0%

Full Input Data And Results

11/1	Wellington St WB RT Right	U	N/A	N/A	H		1	39	-	422	1741	622	67.9%
12/1	Wellington St WB Ahead	U	N/A	N/A	B		1	88	-	552	1915	1522	36.3%
12/2	Wellington St WB Ahead	U	N/A	N/A	B		1	88	-	543	1915	1522	35.7%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	F		1	11	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	D		1	6	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	C		1	46	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	G		1	56	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**334**	**0**	**0**	**21.0**	**16.0**	**0.0**	**37.0**	**-**	**-**	**-**	**-**
Wexham Road / Wellington Street	**-**	**-**	**334**	**0**	**0**	**21.0**	**16.0**	**0.0**	**37.0**	**-**	**-**	**-**	**-**
1/1	414	414	-	-	-	0.0	0.1	-	0.1	1.3	0.0	0.1	0.1
1/2	543	543	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
2/1	754	754	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	704	704	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	334	334	334	0	0	0.0	0.5	-	0.5	5.4	0.0	0.5	0.5
4/1	196	196	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	939	939	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	754	754	-	-	-	5.7	5.9	-	11.6	55.5	22.0	5.9	27.9
7/1	517	517	-	-	-	4.3	1.8	-	6.1	42.7	14.1	1.8	15.9
7/2	704	704	-	-	-	6.4	5.9	-	12.2	62.6	20.9	5.9	26.8
8/1	552	552	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	543	543	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	414	414	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	965	965	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	1221	1221	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	422	422	-	-	-	3.6	1.0	-	4.6	39.5	11.1	1.0	12.2
12/1	552	552	-	-	-	0.5	0.3	-	0.8	5.2	4.9	0.3	5.2
12/2	543	543	-	-	-	0.5	0.3	-	0.8	5.1	4.8	0.3	5.1
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -4.0 Total Delay for Signalled Lanes (pcuHr): 36.20 Cycle Time (s): 112
PRC Over All Lanes (%): -4.0 Total Delay Over All Lanes(pcuHr): 37.05

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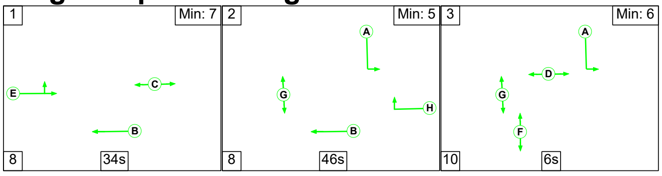
Full Input Data And Results

Full Input Data And Results

Scenario 7: 'AM DS Commercial' (FG7: 'AM DS Commercial', Plan 1: 'Network Control Plan 1')

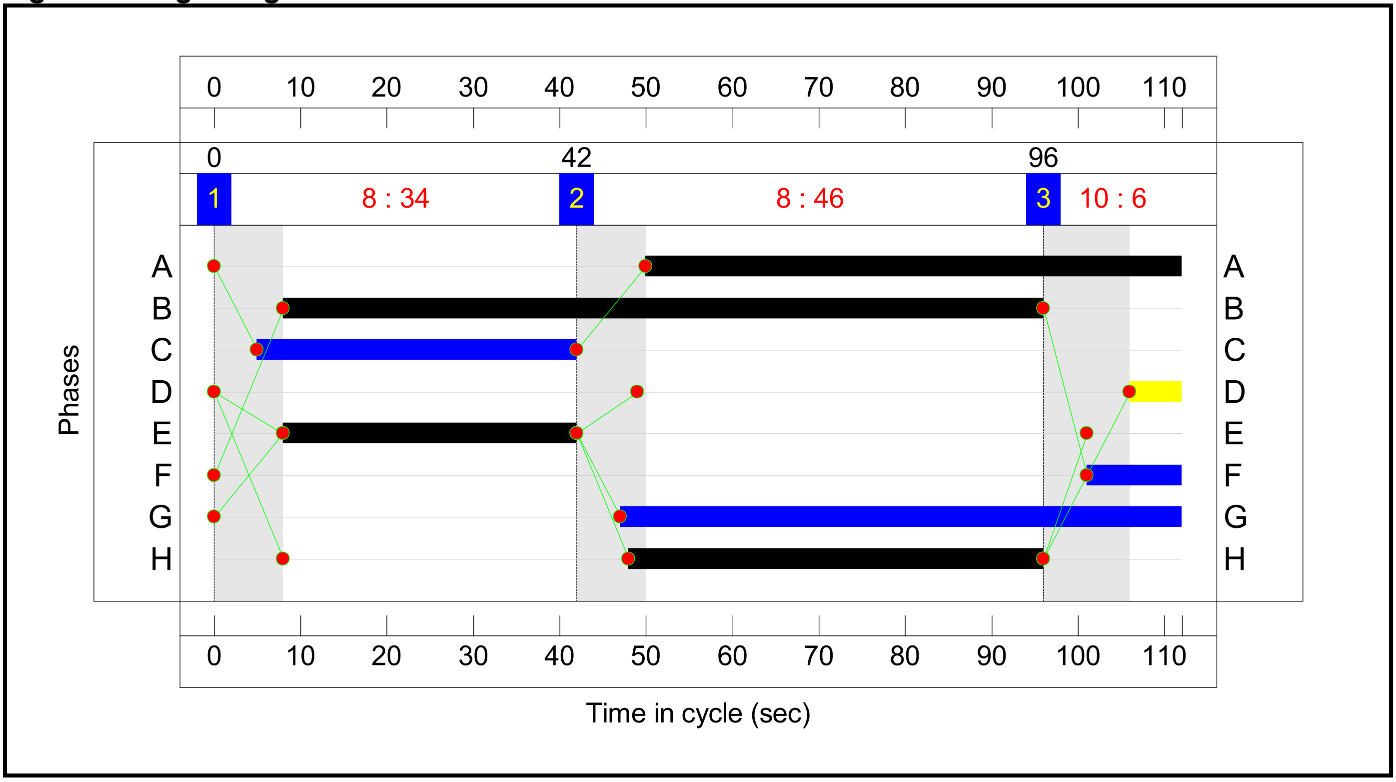
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	34	46	6
Change Point	0	42	96

Signal Timings Diagram



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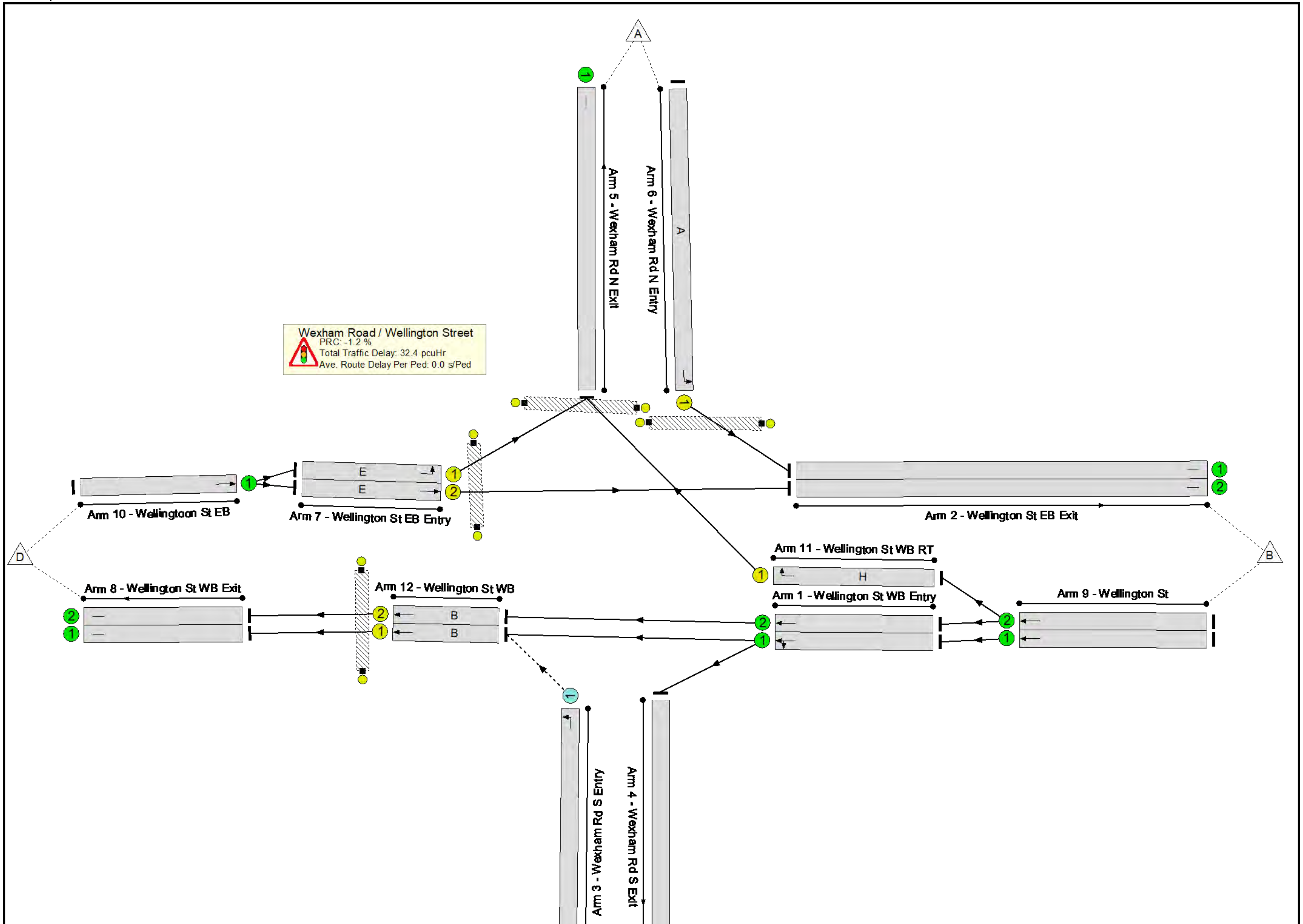
Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



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Full Input Data And Results

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**	-	-		-	-	-	-	-	-	**91.1%**
Wexham Road / Wellington Street	-	-	**N/A**	-	-		-	-	-	-	-	-	**91.1%**
1/1	Wellington St WB Entry Left Ahead	U	N/A	N/A	-		-	-	-	473	1852	1852	25.5%
1/2	Wellington St WB Entry Ahead	U	N/A	N/A	-		-	-	-	545	1915	1915	28.5%
2/1	Wellington St EB Exit	U	N/A	N/A	-		-	-	-	857	Inf	Inf	0.0%
2/2	Wellington St EB Exit	U	N/A	N/A	-		-	-	-	530	Inf	Inf	0.0%
3/1	Wexham Rd S Entry Left	O	N/A	N/A	-		-	-	-	245	1865	649	37.8%
4/1	Wexham Rd S Exit	U	N/A	N/A	-		-	-	-	172	Inf	Inf	0.0%
5/1	Wexham Rd N Exit	U	N/A	N/A	-		-	-	-	978	Inf	Inf	0.0%
6/1	Wexham Rd N Entry Left	U	N/A	N/A	A		1	62	-	857	1672	941	91.1%
7/1	Wellington St EB Entry Left	U	N/A	N/A	E		1	34	-	410	1665	520	78.8%
7/2	Wellington St EB Entry Ahead	U	N/A	N/A	E		1	34	-	530	1915	598	88.6%
8/1	Wellington St WB Exit	U	N/A	N/A	-		-	-	-	546	Inf	Inf	0.0%
8/2	Wellington St WB Exit	U	N/A	N/A	-		-	-	-	545	Inf	Inf	0.0%
9/1	Wellington St Ahead	U	N/A	N/A	-		-	-	-	473	Inf	Inf	0.0%
9/2	Wellington St Ahead Ahead2	U	N/A	N/A	-		-	-	-	1113	Inf	Inf	0.0%
10/1	Wellingtoon St EB Ahead	U	N/A	N/A	-		-	-	-	940	Inf	Inf	0.0%

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11/1	Wellington St WB RT Right	U	N/A	N/A	H		1	48	-	568	1741	762	74.6%
12/1	Wellington St WB Ahead	U	N/A	N/A	B		1	88	-	546	1915	1522	35.9%
12/2	Wellington St WB Ahead	U	N/A	N/A	B		1	88	-	545	1915	1522	35.8%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	F		1	11	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	D		1	6	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	C		1	37	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	G		1	65	-	0	-	0	0.0%

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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	**-**	**-**	**245**	**0**	**0**	**19.8**	**12.6**	**0.0**	**32.4**	**-**	**-**	**-**	**-**
Wexham Road / Wellington Street	**-**	**-**	**245**	**0**	**0**	**19.8**	**12.6**	**0.0**	**32.4**	**-**	**-**	**-**	**-**
1/1	473	473	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
1/2	545	545	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
2/1	857	857	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	530	530	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	245	245	245	0	0	0.0	0.3	-	0.3	4.5	0.0	0.3	0.3
4/1	172	172	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	978	978	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	857	857	-	-	-	5.2	4.6	-	9.9	41.4	23.8	4.6	28.4
7/1	410	410	-	-	-	4.0	1.8	-	5.8	50.9	11.6	1.8	13.4
7/2	530	530	-	-	-	5.4	3.5	-	8.9	60.5	15.6	3.5	19.1
8/1	546	546	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	545	545	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	473	473	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	1113	1113	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	940	940	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	568	568	-	-	-	4.1	1.4	-	5.6	35.5	14.7	1.4	16.1
12/1	546	546	-	-	-	0.5	0.3	-	0.8	5.1	4.9	0.3	5.1
12/2	545	545	-	-	-	0.5	0.3	-	0.8	5.1	4.8	0.3	5.1
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

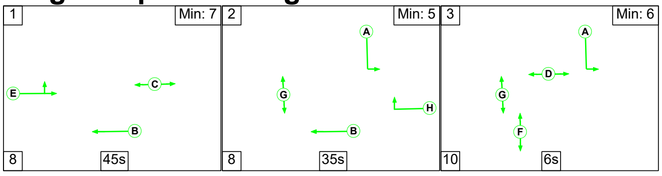
C1 PRC for Signalled Lanes (%): -1.2 Total Delay for Signalled Lanes (pcuHr): 31.71 Cycle Time (s): 112
PRC Over All Lanes (%): -1.2 Total Delay Over All Lanes(pcuHr): 32.38

Full Input Data And Results

Full Input Data And Results

Scenario 8: 'PM DS Commercial' (FG8: 'PM DS Commercial', Plan 1: 'Network Control Plan 1')

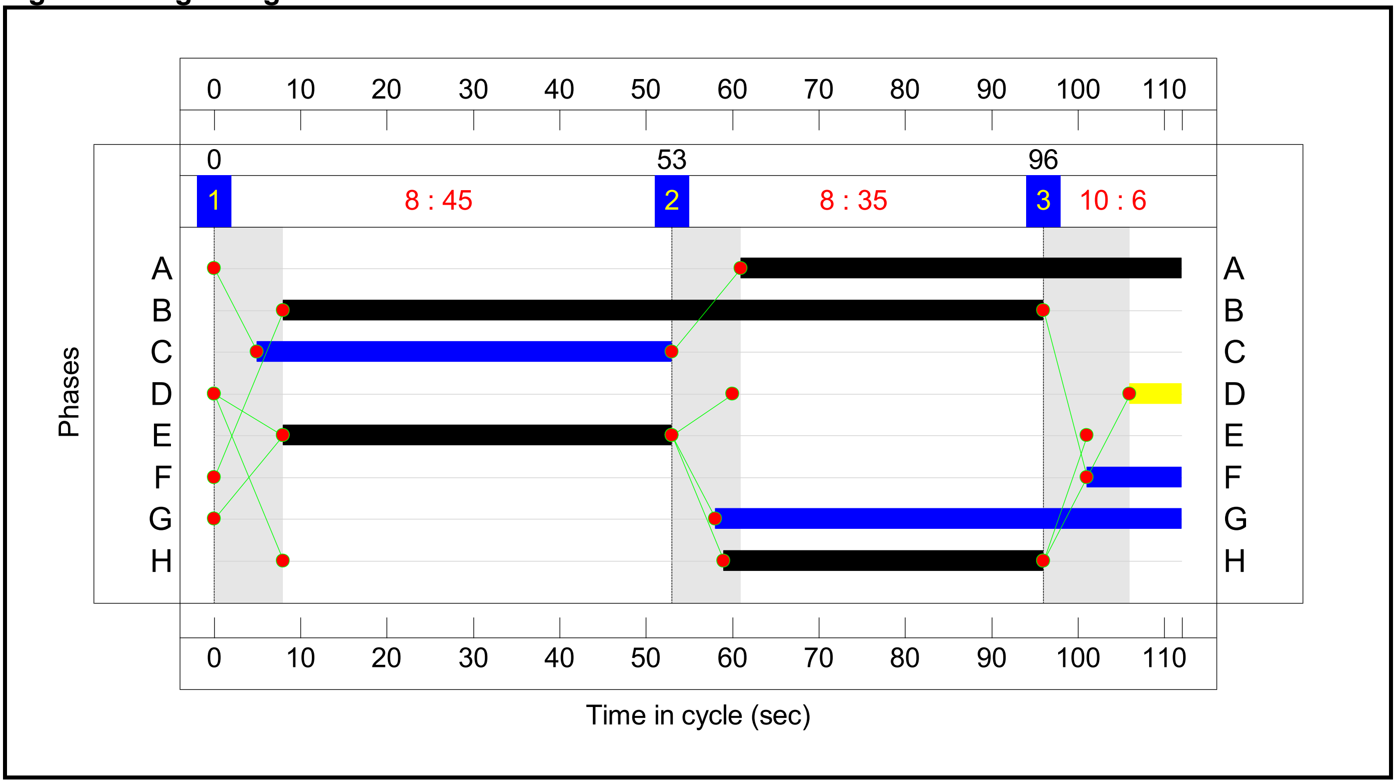
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	45	35	6
Change Point	0	53	96

Signal Timings Diagram



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Full Input Data And Results
Network Layout Diagram

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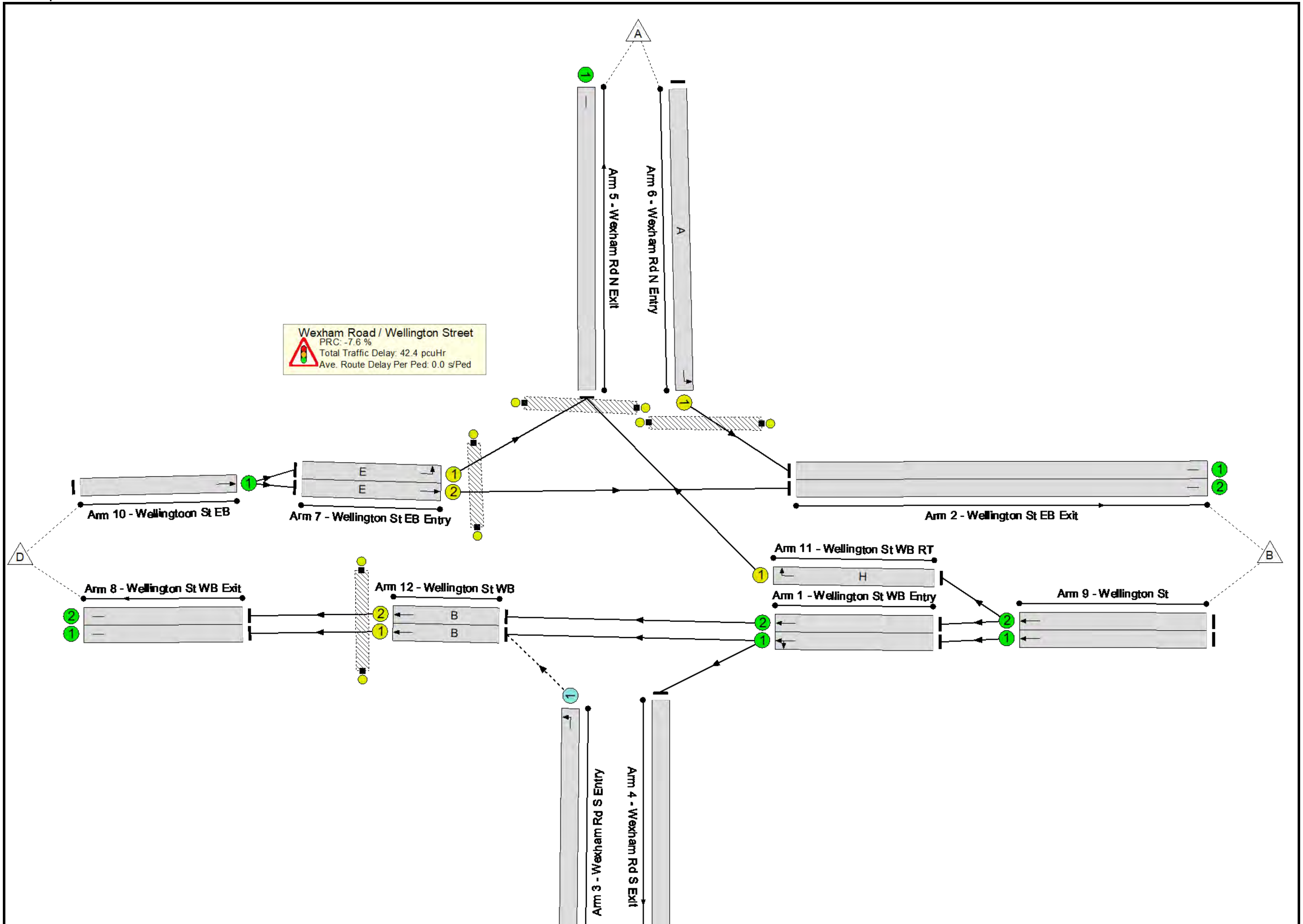
Full Input Data And Results



Full Input Data And Results

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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**	-	-		-	-	-	-	-	-	**96.9%**
Wexham Road / Wellington Street	-	-	**N/A**	-	-		-	-	-	-	-	-	**96.9%**
1/1	Wellington St WB Entry Left Ahead	U	N/A	N/A	-		-	-	-	431	1834	1834	23.5%
1/2	Wellington St WB Entry Ahead	U	N/A	N/A	-		-	-	-	521	1915	1915	27.2%
2/1	Wellington St EB Exit	U	N/A	N/A	-		-	-	-	752	Inf	Inf	0.0%
2/2	Wellington St EB Exit	U	N/A	N/A	-		-	-	-	752	Inf	Inf	0.0%
3/1	Wexham Rd S Entry Left	O	N/A	N/A	-		-	-	-	294	1865	665	44.2%
4/1	Wexham Rd S Exit	U	N/A	N/A	-		-	-	-	202	Inf	Inf	0.0%
5/1	Wexham Rd N Exit	U	N/A	N/A	-		-	-	-	954	Inf	Inf	0.0%
6/1	Wexham Rd N Entry Left	U	N/A	N/A	A		1	51	-	752	1672	776	96.9%
7/1	Wellington St EB Entry Left	U	N/A	N/A	E		1	45	-	532	1665	684	77.8%
7/2	Wellington St EB Entry Ahead	U	N/A	N/A	E		1	45	-	752	1915	787	95.6%
8/1	Wellington St WB Exit	U	N/A	N/A	-		-	-	-	523	Inf	Inf	0.0%
8/2	Wellington St WB Exit	U	N/A	N/A	-		-	-	-	521	Inf	Inf	0.0%
9/1	Wellington St Ahead	U	N/A	N/A	-		-	-	-	431	Inf	Inf	0.0%
9/2	Wellington St Ahead Ahead2	U	N/A	N/A	-		-	-	-	943	Inf	Inf	0.0%
10/1	Wellingtoon St EB Ahead	U	N/A	N/A	-		-	-	-	1284	Inf	Inf	0.0%

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Full Input Data And Results

11/1	Wellington St WB RT Right	U	N/A	N/A	H		1	37	-	422	1741	591	71.4%
12/1	Wellington St WB Ahead	U	N/A	N/A	B		1	88	-	523	1915	1522	34.4%
12/2	Wellington St WB Ahead	U	N/A	N/A	B		1	88	-	521	1915	1522	34.2%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	F		1	11	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	D		1	6	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	C		1	48	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	G		1	54	-	0	-	0	0.0%

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Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**294**	**0**	**0**	**21.7**	**20.7**	**0.0**	**42.4**	**-**	**-**	**-**	**-**
Wexham Road / Wellington Street	**-**	**-**	**294**	**0**	**0**	**21.7**	**20.7**	**0.0**	**42.4**	**-**	**-**	**-**	**-**
1/1	431	431	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
1/2	521	521	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
2/1	752	752	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	752	752	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	294	294	294	0	0	0.0	0.4	-	0.4	4.8	0.0	0.4	0.4
4/1	202	202	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	954	954	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	752	752	-	-	-	6.1	8.9	-	15.0	71.9	22.8	8.9	31.7
7/1	532	532	-	-	-	4.2	1.7	-	5.9	40.2	14.2	1.7	15.9
7/2	752	752	-	-	-	6.7	7.6	-	14.3	68.3	22.6	7.6	30.1
8/1	523	523	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	521	521	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	431	431	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	943	943	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	1284	1284	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	422	422	-	-	-	3.8	1.2	-	5.0	42.8	11.4	1.2	12.6
12/1	523	523	-	-	-	0.5	0.3	-	0.7	5.1	4.5	0.3	4.8
12/2	521	521	-	-	-	0.5	0.3	-	0.7	5.0	4.5	0.3	4.7
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -7.6 Total Delay for Signalled Lanes (pcuHr): 41.70 Cycle Time (s): 112
PRC Over All Lanes (%): -7.6 Total Delay Over All Lanes(pcuHr): 42.44

Full Input Data And Results

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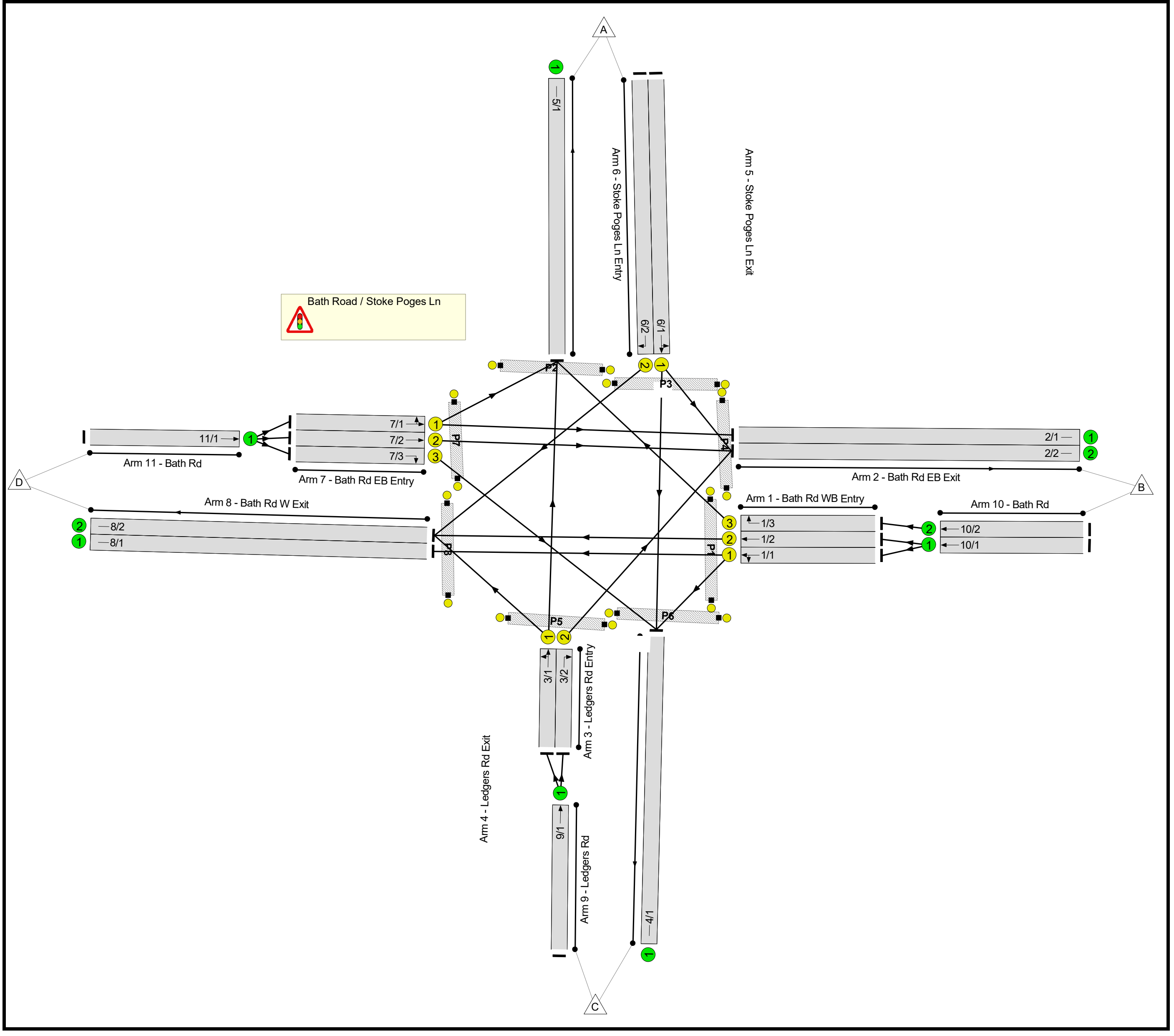
Full Input Data And Results

Full Input Data And Results

User and Project Details

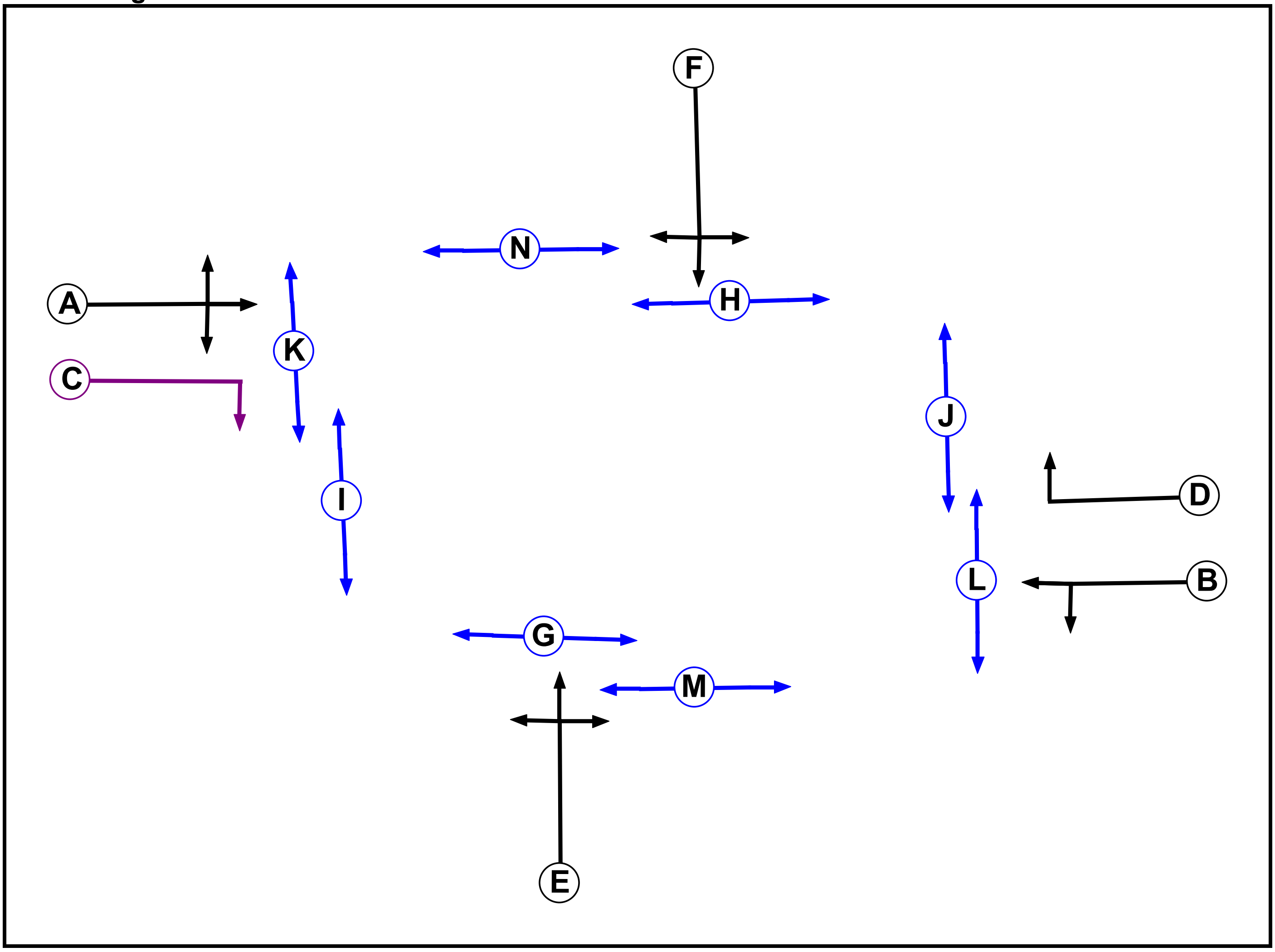
Project:	
Title:	
Location:	
Additional detail:	
File name:	High St_Stoke Poges_ledgers Rd_v2.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Ind. Arrow	A	4	4
D	Traffic		7	7
E	Traffic		7	7
F	Traffic		7	7
G	Pedestrian		6	6
H	Pedestrian		7	7
I	Pedestrian		6	6
J	Pedestrian		6	6
K	Pedestrian		7	7
L	Pedestrian		7	7
M	Pedestrian		6	6
N	Pedestrian		6	6

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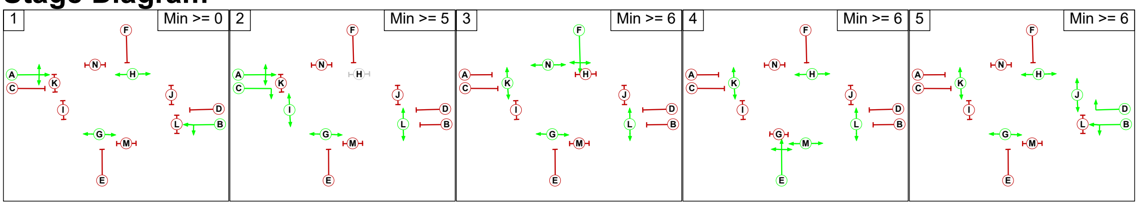
Phase Intergreens Matrix

		Starting Phase													
		A	B	C	D	E	F	G	H	I	J	K	L	M	N
Terminating Phase	A		-	-	6	6	8	-	-	-	10	6	-	-	10
	B	-		6	-	7	6	-	-	10	-	-	6	8	-
	C	-	8		-	6	6	-	-	-	-	6	-	11	-
	D	7	-	-		6	6	-	-	-	-	-	6	-	12
	E	7	5	6	7		9	5	-	9	12	-	-	-	10
	F	5	6	5	5	7		-	5	12	8	-	-	8	-
	G	-	-	-	-	8	-		-	-	-	-	-	-	-
	H	-	-	-	-	-	11	-		-	-	-	-	-	-
	I	-	9	-	-	9	9	-	-		-	-	-	-	-
	J	8	-	-	-	8	8	-	-	-		-	-	-	-
	K	11	-	11	-	-	-	-	-	-	-		-	-	-
	L	-	12	-	12	-	-	-	-	-	-	-		-	-
	M	-	10	10	-	-	10	-	-	-	-	-	-		-
	N	7	-	-	7	7	-	-	-	-	-	-	-	-	

Phases in Stage

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

Stage Diagram



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Full Input Data And Results

Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	3	B	Losing	2	2
1	4	A	Losing	1	1
2	1	C	Losing	3	3
2	3	C	Losing	2	2
2	4	A	Losing	2	2
2	5	A	Losing	1	1
2	5	C	Losing	3	3
3	1	F	Losing	6	6
3	5	F	Losing	4	4
4	1	E	Losing	4	4
4	2	E	Losing	2	2
4	3	E	Losing	1	1
5	2	D	Losing	3	3
5	3	B	Losing	4	4
5	4	D	Losing	1	1

Prohibited Stage Change

	To Stage					
		1	2	3	4	5
From Stage	1		10	11	8	10
	2	12		10	13	12
	3	12	12		8	12
	4	12	11	11		12
	5	11	11	12	8	

Give-Way Lane Input Data

Junction: Bath Road / Stoke Poges Ln
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: Bath Road / Stoke Poges Ln												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (Bath Rd WB Entry)	U	B	2	3	8.7	Geom	-	3.00	0.00	Y	Arm 4 Left	16.00
											Arm 8 Ahead	Inf
1/2 (Bath Rd WB Entry)	U	B	2	3	8.7	Geom	-	3.00	0.00	Y	Arm 8 Ahead	Inf
1/3 (Bath Rd WB Entry)	U	D	2	3	8.7	Geom	-	3.00	0.00	Y	Arm 5 Right	18.00
2/1 (Bath Rd EB Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
2/2 (Bath Rd EB Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
3/1 (Ledgers Rd Entry)	U	E	2	3	11.3	Geom	-	3.00	0.00	Y	Arm 5 Ahead	Inf
											Arm 8 Left	17.47
3/2 (Ledgers Rd Entry)	U	E	2	3	11.3	Geom	-	3.00	0.00	Y	Arm 2 Right	25.00
4/1 (Ledgers Rd Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Stoke Poges Ln Exit)	U		2	3	20.2	Inf	-	-	-	-	-	-
6/1 (Stoke Poges Ln Entry)	U	F	2	3	5.2	Geom	-	3.00	0.00	Y	Arm 2 Left	13.00
											Arm 4 Ahead	Inf
6/2 (Stoke Poges Ln Entry)	U	F	2	3	5.2	Geom	-	3.00	0.00	Y	Arm 8 Right	20.00
7/1 (Bath Rd EB Entry)	U	A	2	3	8.7	Geom	-	3.00	0.00	Y	Arm 2 Ahead	Inf
											Arm 5 Left	10.00
7/2 (Bath Rd EB Entry)	U	A	2	3	8.7	Geom	-	3.00	0.00	Y	Arm 2 Ahead	Inf
7/3 (Bath Rd EB Entry)	U	A C	2	3	8.7	Geom	-	3.00	0.00	Y	Arm 4 Right	13.00
8/1 (Bath Rd W Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

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8/2 (Bath Rd W Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
9/1 (Ledgers Rd)	U		2	3	60.0	Inf	-	-	-	-	-	-
10/1 (Bath Rd)	U		2	3	60.0	Inf	-	-	-	-	-	-
10/2 (Bath Rd)	U		2	3	60.0	Inf	-	-	-	-	-	-
11/1 (Bath Rd)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM Base'	08:00	09:00	01:00	
2: 'PM Base'	17:00	18:00	01:00	
3: 'AM DM'	08:00	09:00	01:00	
4: 'PM DM'	17:00	18:00	01:00	
5: 'AM DS Residential '	08:00	09:00	01:00	
6: 'PM DS Residential'	17:00	18:00	01:00	
7: 'AM DS Commercial'	08:00	09:00	01:00	
8: 'PM DS Commercial'	17:00	18:00	01:00	

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

Traffic Flows, Desired

Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	137	119	263	519
	B	195	0	6	777	978
	C	211	171	0	0	382
	D	190	732	8	0	930
	Tot.	596	1040	133	1040	2809

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Traffic Lane Flows

Lane	Scenario 1: AM Base
Junction: Bath Road / Stoke Poges Ln	
1/1	106
1/2	677
1/3	195
2/1	100
2/2	940
3/1	211
3/2	171
4/1	133
5/1	596
6/1	256
6/2	263
7/1	290
7/2	632
7/3	8
8/1	100
8/2	940
9/1	382
10/1	783
10/2	195
11/1	930

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Lane Saturation Flows

Junction: Bath Road / Stoke Poges Ln								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Bath Rd WB Entry)	3.00	0.00	Y	Arm 4 Left	16.00	5.7 %	1905	1905
				Arm 8 Ahead	Inf	94.3 %		
1/2 (Bath Rd WB Entry)	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
1/3 (Bath Rd WB Entry)	3.00	0.00	Y	Arm 5 Right	18.00	100.0 %	1768	1768
2/1 (Bath Rd EB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (Bath Rd EB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (Ledgers Rd Entry)	3.00	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1915	1915
				Arm 8 Left	17.47	0.0 %		
3/2 (Ledgers Rd Entry)	3.00	0.00	Y	Arm 2 Right	25.00	100.0 %	1807	1807
4/1 (Ledgers Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Stoke Poges Ln Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Stoke Poges Ln Entry)	3.00	0.00	Y	Arm 2 Left	13.00	53.5 %	1804	1804
				Arm 4 Ahead	Inf	46.5 %		
6/2 (Stoke Poges Ln Entry)	3.00	0.00	Y	Arm 8 Right	20.00	100.0 %	1781	1781
7/1 (Bath Rd EB Entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	34.5 %	1744	1744
				Arm 5 Left	10.00	65.5 %		
7/2 (Bath Rd EB Entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
7/3 (Bath Rd EB Entry)	3.00	0.00	Y	Arm 4 Right	13.00	100.0 %	1717	1717
8/1 (Bath Rd W Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (Bath Rd W Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (Ledgers Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (Bath Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (Bath Rd Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1 (Bath Rd Lane 1)	Infinite Saturation Flow						Inf	Inf

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

Traffic Flows, Desired

Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	73	148	268	489
	B	268	0	6	732	1006
	C	227	194	0	0	421
	D	209	759	4	0	972
	Tot.	704	1026	158	1000	2888

Traffic Lane Flows

Lane	Scenario 2: PM Base
Junction: Bath Road / Stoke Poges Ln	
1/1	106
1/2	632
1/3	268
2/1	100
2/2	926
3/1	227
3/2	194
4/1	158
5/1	704
6/1	221
6/2	268
7/1	309
7/2	659
7/3	4
8/1	100
8/2	900
9/1	421
10/1	738
10/2	268
11/1	972

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Lane Saturation Flows

Junction: Bath Road / Stoke Poges Ln								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Bath Rd WB Entry)	3.00	0.00	Y	Arm 4 Left	16.00	5.7 %	1905	1905
				Arm 8 Ahead	Inf	94.3 %		
1/2 (Bath Rd WB Entry)	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
1/3 (Bath Rd WB Entry)	3.00	0.00	Y	Arm 5 Right	18.00	100.0 %	1768	1768
2/1 (Bath Rd EB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (Bath Rd EB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (Ledgers Rd Entry)	3.00	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1915	1915
				Arm 8 Left	17.47	0.0 %		
3/2 (Ledgers Rd Entry)	3.00	0.00	Y	Arm 2 Right	25.00	100.0 %	1807	1807
4/1 (Ledgers Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Stoke Poges Ln Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Stoke Poges Ln Entry)	3.00	0.00	Y	Arm 2 Left	13.00	33.0 %	1845	1845
				Arm 4 Ahead	Inf	67.0 %		
6/2 (Stoke Poges Ln Entry)	3.00	0.00	Y	Arm 8 Right	20.00	100.0 %	1781	1781
7/1 (Bath Rd EB Entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	32.4 %	1739	1739
				Arm 5 Left	10.00	67.6 %		
7/2 (Bath Rd EB Entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
7/3 (Bath Rd EB Entry)	3.00	0.00	Y	Arm 4 Right	13.00	100.0 %	1717	1717
8/1 (Bath Rd W Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (Bath Rd W Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (Ledgers Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (Bath Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (Bath Rd Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1 (Bath Rd Lane 1)	Infinite Saturation Flow						Inf	Inf

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

Traffic Flows, Desired

Desired Flow :

		Destination				
Origin		A	B	C	D	Tot.
	A	0	156	192	344	692
	B	218	0	9	890	1117
	C	262	214	0	0	476
	D	233	682	20	0	935
	Tot.	713	1052	221	1234	3220

Traffic Lane Flows

Lane	Scenario 3: AM DM
Junction: Bath Road / Stoke Poges Ln	
1/1	109
1/2	790
1/3	218
2/1	100
2/2	952
3/1	262
3/2	214
4/1	221
5/1	713
6/1	348
6/2	344
7/1	333
7/2	582
7/3	20
8/1	100
8/2	1134
9/1	476
10/1	899
10/2	218
11/1	935

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Lane Saturation Flows

Junction: Bath Road / Stoke Poges Ln								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Bath Rd WB Entry)	3.00	0.00	Y	Arm 4 Left	16.00	8.3 %	1900	1900
				Arm 8 Ahead	Inf	91.7 %		
1/2 (Bath Rd WB Entry)	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
1/3 (Bath Rd WB Entry)	3.00	0.00	Y	Arm 5 Right	18.00	100.0 %	1768	1768
2/1 (Bath Rd EB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (Bath Rd EB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (Ledgers Rd Entry)	3.00	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1915	1915
				Arm 8 Left	17.47	0.0 %		
3/2 (Ledgers Rd Entry)	3.00	0.00	Y	Arm 2 Right	25.00	100.0 %	1807	1807
4/1 (Ledgers Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Stoke Poges Ln Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Stoke Poges Ln Entry)	3.00	0.00	Y	Arm 2 Left	13.00	44.8 %	1821	1821
				Arm 4 Ahead	Inf	55.2 %		
6/2 (Stoke Poges Ln Entry)	3.00	0.00	Y	Arm 8 Right	20.00	100.0 %	1781	1781
7/1 (Bath Rd EB Entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	30.0 %	1733	1733
				Arm 5 Left	10.00	70.0 %		
7/2 (Bath Rd EB Entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
7/3 (Bath Rd EB Entry)	3.00	0.00	Y	Arm 4 Right	13.00	100.0 %	1717	1717
8/1 (Bath Rd W Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (Bath Rd W Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (Ledgers Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (Bath Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (Bath Rd Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1 (Bath Rd Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

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

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	85	113	315	513
	B	301	0	9	814	1124
	C	229	194	0	0	423
	D	302	784	8	0	1094
	Tot.	832	1063	130	1129	3154

Traffic Lane Flows

Lane	Scenario 4: PM DM
Junction: Bath Road / Stoke Poges Ln	
1/1	109
1/2	714
1/3	301
2/1	100
2/2	963
3/1	229
3/2	194
4/1	130
5/1	832
6/1	198
6/2	315
7/1	402
7/2	684
7/3	8
8/1	100
8/2	1029
9/1	423
10/1	823
10/2	301
11/1	1094

Lane Saturation Flows

Junction: Bath Road / Stoke Poges Ln								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Bath Rd WB Entry)	3.00	0.00	Y	Arm 4 Left	16.00	8.3 %	1900	1900
				Arm 8 Ahead	Inf	91.7 %		
1/2 (Bath Rd WB Entry)	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
1/3 (Bath Rd WB Entry)	3.00	0.00	Y	Arm 5 Right	18.00	100.0 %	1768	1768
2/1 (Bath Rd EB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (Bath Rd EB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (Ledgers Rd Entry)	3.00	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1915	1915
				Arm 8 Left	17.47	0.0 %		
3/2 (Ledgers Rd Entry)	3.00	0.00	Y	Arm 2 Right	25.00	100.0 %	1807	1807
4/1 (Ledgers Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Stoke Poges Ln Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Stoke Poges Ln Entry)	3.00	0.00	Y	Arm 2 Left	13.00	42.9 %	1825	1825
				Arm 4 Ahead	Inf	57.1 %		
6/2 (Stoke Poges Ln Entry)	3.00	0.00	Y	Arm 8 Right	20.00	100.0 %	1781	1781
7/1 (Bath Rd EB Entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	24.9 %	1721	1721
				Arm 5 Left	10.00	75.1 %		
7/2 (Bath Rd EB Entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
7/3 (Bath Rd EB Entry)	3.00	0.00	Y	Arm 4 Right	13.00	100.0 %	1717	1717
8/1 (Bath Rd W Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (Bath Rd W Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (Ledgers Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (Bath Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (Bath Rd Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1 (Bath Rd Lane 1)	Infinite Saturation Flow						Inf	Inf

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

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	147	201	343	691
	B	222	0	10	927	1159
	C	265	220	0	0	485
	D	213	693	20	0	926
	Tot.	700	1060	231	1270	3261

Traffic Lane Flows

Lane	Scenario 5: AM DS Residential
Junction: Bath Road / Stoke Poges Ln	
1/1	110
1/2	827
1/3	222
2/1	100
2/2	960
3/1	265
3/2	220
4/1	231
5/1	700
6/1	348
6/2	343
7/1	313
7/2	593
7/3	20
8/1	100
8/2	1170
9/1	485
10/1	937
10/2	222
11/1	926

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Lane Saturation Flows

Junction: Bath Road / Stoke Poges Ln								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Bath Rd WB Entry)	3.00	0.00	Y	Arm 4 Left	16.00	9.1 %	1899	1899
				Arm 8 Ahead	Inf	90.9 %		
1/2 (Bath Rd WB Entry)	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
1/3 (Bath Rd WB Entry)	3.00	0.00	Y	Arm 5 Right	18.00	100.0 %	1768	1768
2/1 (Bath Rd EB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (Bath Rd EB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (Ledgers Rd Entry)	3.00	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1915	1915
				Arm 8 Left	17.47	0.0 %		
3/2 (Ledgers Rd Entry)	3.00	0.00	Y	Arm 2 Right	25.00	100.0 %	1807	1807
4/1 (Ledgers Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Stoke Poges Ln Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Stoke Poges Ln Entry)	3.00	0.00	Y	Arm 2 Left	13.00	42.2 %	1826	1826
				Arm 4 Ahead	Inf	57.8 %		
6/2 (Stoke Poges Ln Entry)	3.00	0.00	Y	Arm 8 Right	20.00	100.0 %	1781	1781
7/1 (Bath Rd EB Entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	31.9 %	1738	1738
				Arm 5 Left	10.00	68.1 %		
7/2 (Bath Rd EB Entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
7/3 (Bath Rd EB Entry)	3.00	0.00	Y	Arm 4 Right	13.00	100.0 %	1717	1717
8/1 (Bath Rd W Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (Bath Rd W Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (Ledgers Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (Bath Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (Bath Rd Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1 (Bath Rd Lane 1)	Infinite Saturation Flow						Inf	Inf

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

Traffic Flows, Desired

Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	82	112	310	504
	B	283	0	9	806	1098
	C	228	193	0	0	421
	D	243	846	8	0	1097
	Tot.	754	1121	129	1116	3120

Traffic Lane Flows

Lane	Scenario 6: PM DS Residential
Junction: Bath Road / Stoke Poges Ln	
1/1	109
1/2	706
1/3	283
2/1	100
2/2	1021
3/1	228
3/2	193
4/1	129
5/1	754
6/1	194
6/2	310
7/1	343
7/2	746
7/3	8
8/1	100
8/2	1016
9/1	421
10/1	815
10/2	283
11/1	1097

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Lane Saturation Flows

Junction: Bath Road / Stoke Poges Ln								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Bath Rd WB Entry)	3.00	0.00	Y	Arm 4 Left	16.00	8.3 %	1900	1900
				Arm 8 Ahead	Inf	91.7 %		
1/2 (Bath Rd WB Entry)	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
1/3 (Bath Rd WB Entry)	3.00	0.00	Y	Arm 5 Right	18.00	100.0 %	1768	1768
2/1 (Bath Rd EB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (Bath Rd EB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (Ledgers Rd Entry)	3.00	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1915	1915
				Arm 8 Left	17.47	0.0 %		
3/2 (Ledgers Rd Entry)	3.00	0.00	Y	Arm 2 Right	25.00	100.0 %	1807	1807
4/1 (Ledgers Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Stoke Poges Ln Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Stoke Poges Ln Entry)	3.00	0.00	Y	Arm 2 Left	13.00	42.3 %	1826	1826
				Arm 4 Ahead	Inf	57.7 %		
6/2 (Stoke Poges Ln Entry)	3.00	0.00	Y	Arm 8 Right	20.00	100.0 %	1781	1781
7/1 (Bath Rd EB Entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	29.2 %	1731	1731
				Arm 5 Left	10.00	70.8 %		
7/2 (Bath Rd EB Entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
7/3 (Bath Rd EB Entry)	3.00	0.00	Y	Arm 4 Right	13.00	100.0 %	1717	1717
8/1 (Bath Rd W Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (Bath Rd W Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (Ledgers Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (Bath Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (Bath Rd Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1 (Bath Rd Lane 1)	Infinite Saturation Flow						Inf	Inf

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Scenario 7: 'AM DS Commercial' (FG7: 'AM DS Commercial', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	148	200	343	691
	B	222	0	10	915	1147
	C	264	219	0	0	483
	D	213	710	19	0	942
	Tot.	699	1077	229	1258	3263

Traffic Lane Flows

Lane	Scenario 7: AM DS Commercial
Junction: Bath Road / Stoke Poges Ln	
1/1	110
1/2	815
1/3	222
2/1	100
2/2	977
3/1	264
3/2	219
4/1	229
5/1	699
6/1	348
6/2	343
7/1	313
7/2	610
7/3	19
8/1	100
8/2	1158
9/1	483
10/1	925
10/2	222
11/1	942

Lane Saturation Flows

Junction: Bath Road / Stoke Poges Ln

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Bath Rd WB Entry)	3.00	0.00	Y	Arm 4 Left	16.00	9.1 %	1899	1899
				Arm 8 Ahead	Inf	90.9 %		
1/2 (Bath Rd WB Entry)	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
1/3 (Bath Rd WB Entry)	3.00	0.00	Y	Arm 5 Right	18.00	100.0 %	1768	1768
2/1 (Bath Rd EB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (Bath Rd EB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (Ledgers Rd Entry)	3.00	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1915	1915
				Arm 8 Left	17.47	0.0 %		
3/2 (Ledgers Rd Entry)	3.00	0.00	Y	Arm 2 Right	25.00	100.0 %	1807	1807
4/1 (Ledgers Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Stoke Poges Ln Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Stoke Poges Ln Entry)	3.00	0.00	Y	Arm 2 Left	13.00	42.5 %	1825	1825
				Arm 4 Ahead	Inf	57.5 %		
6/2 (Stoke Poges Ln Entry)	3.00	0.00	Y	Arm 8 Right	20.00	100.0 %	1781	1781
7/1 (Bath Rd EB Entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	31.9 %	1738	1738
				Arm 5 Left	10.00	68.1 %		
7/2 (Bath Rd EB Entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
7/3 (Bath Rd EB Entry)	3.00	0.00	Y	Arm 4 Right	13.00	100.0 %	1717	1717
8/1 (Bath Rd W Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (Bath Rd W Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (Ledgers Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (Bath Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (Bath Rd Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1 (Bath Rd Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 8: 'PM DS Commercial' (FG8: 'PM DS Commercial', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	78	111	309	498
	B	286	0	9	817	1112
	C	227	195	0	0	422
	D	244	844	8	0	1096
	Tot.	757	1117	128	1126	3128

Traffic Lane Flows

Lane	Scenario 8: PM DS Commercial
Junction: Bath Road / Stoke Poges Ln	
1/1	109
1/2	717
1/3	286
2/1	100
2/2	1017
3/1	227
3/2	195
4/1	128
5/1	757
6/1	189
6/2	309
7/1	344
7/2	744
7/3	8
8/1	100
8/2	1026
9/1	422
10/1	826
10/2	286
11/1	1096

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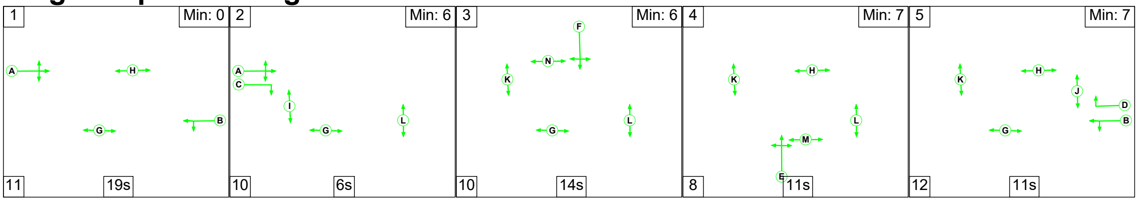
Lane Saturation Flows

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
Junction: Bath Road / Stoke Poges Ln								
1/1 (Bath Rd WB Entry)	3.00	0.00	Y	Arm 4 Left	16.00	8.3 %	1900	1900
				Arm 8 Ahead	Inf	91.7 %		
1/2 (Bath Rd WB Entry)	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
1/3 (Bath Rd WB Entry)	3.00	0.00	Y	Arm 5 Right	18.00	100.0 %	1768	1768
2/1 (Bath Rd EB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (Bath Rd EB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (Ledgers Rd Entry)	3.00	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1915	1915
				Arm 8 Left	17.47	0.0 %		
3/2 (Ledgers Rd Entry)	3.00	0.00	Y	Arm 2 Right	25.00	100.0 %	1807	1807
4/1 (Ledgers Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Stoke Poges Ln Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Stoke Poges Ln Entry)	3.00	0.00	Y	Arm 2 Left	13.00	41.3 %	1828	1828
				Arm 4 Ahead	Inf	58.7 %		
6/2 (Stoke Poges Ln Entry)	3.00	0.00	Y	Arm 8 Right	20.00	100.0 %	1781	1781
7/1 (Bath Rd EB Entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	29.1 %	1731	1731
				Arm 5 Left	10.00	70.9 %		
7/2 (Bath Rd EB Entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
7/3 (Bath Rd EB Entry)	3.00	0.00	Y	Arm 4 Right	13.00	100.0 %	1717	1717
8/1 (Bath Rd W Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (Bath Rd W Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (Ledgers Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (Bath Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (Bath Rd Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1 (Bath Rd Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

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

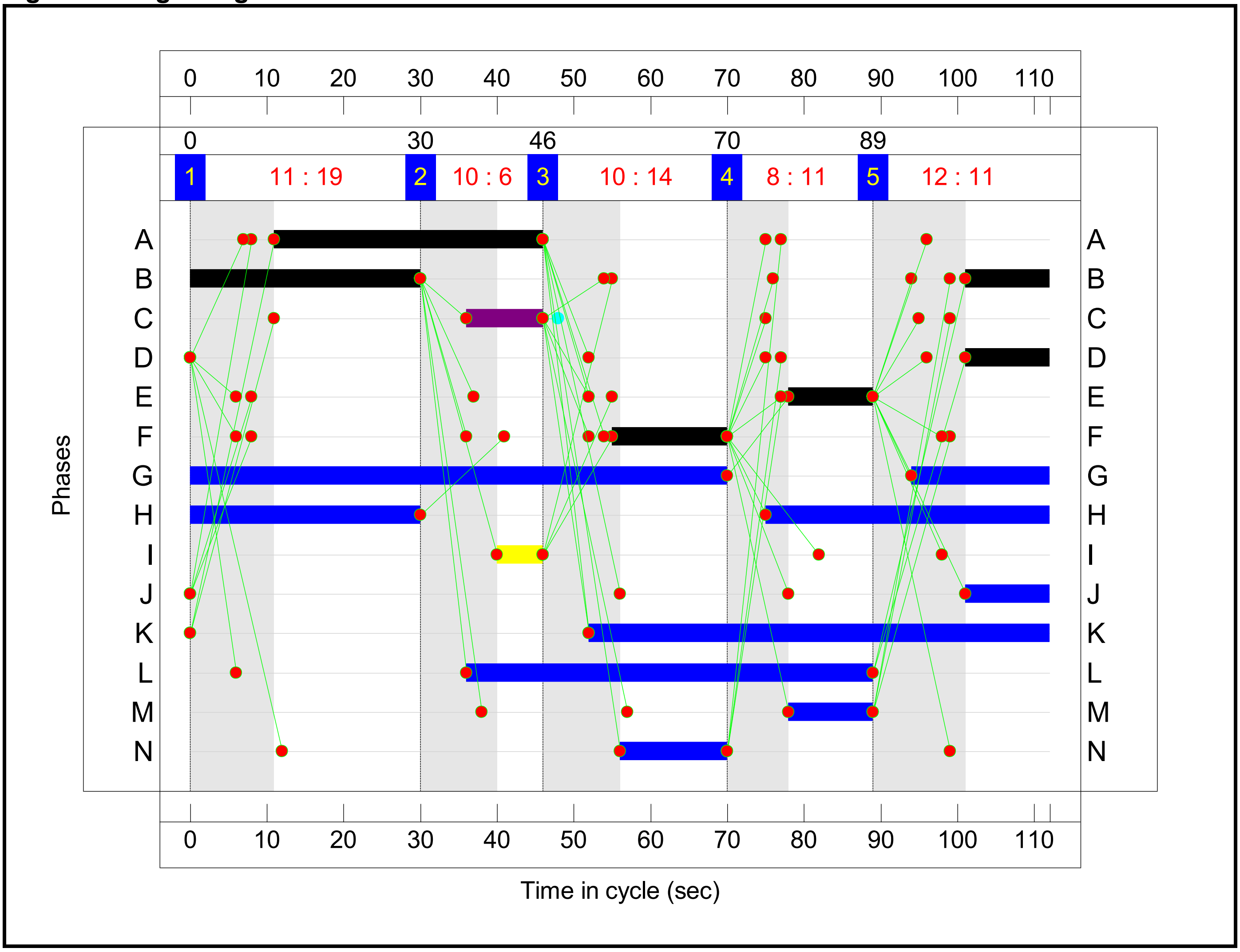
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	19	6	14	11	11
Change Point	0	30	46	70	89

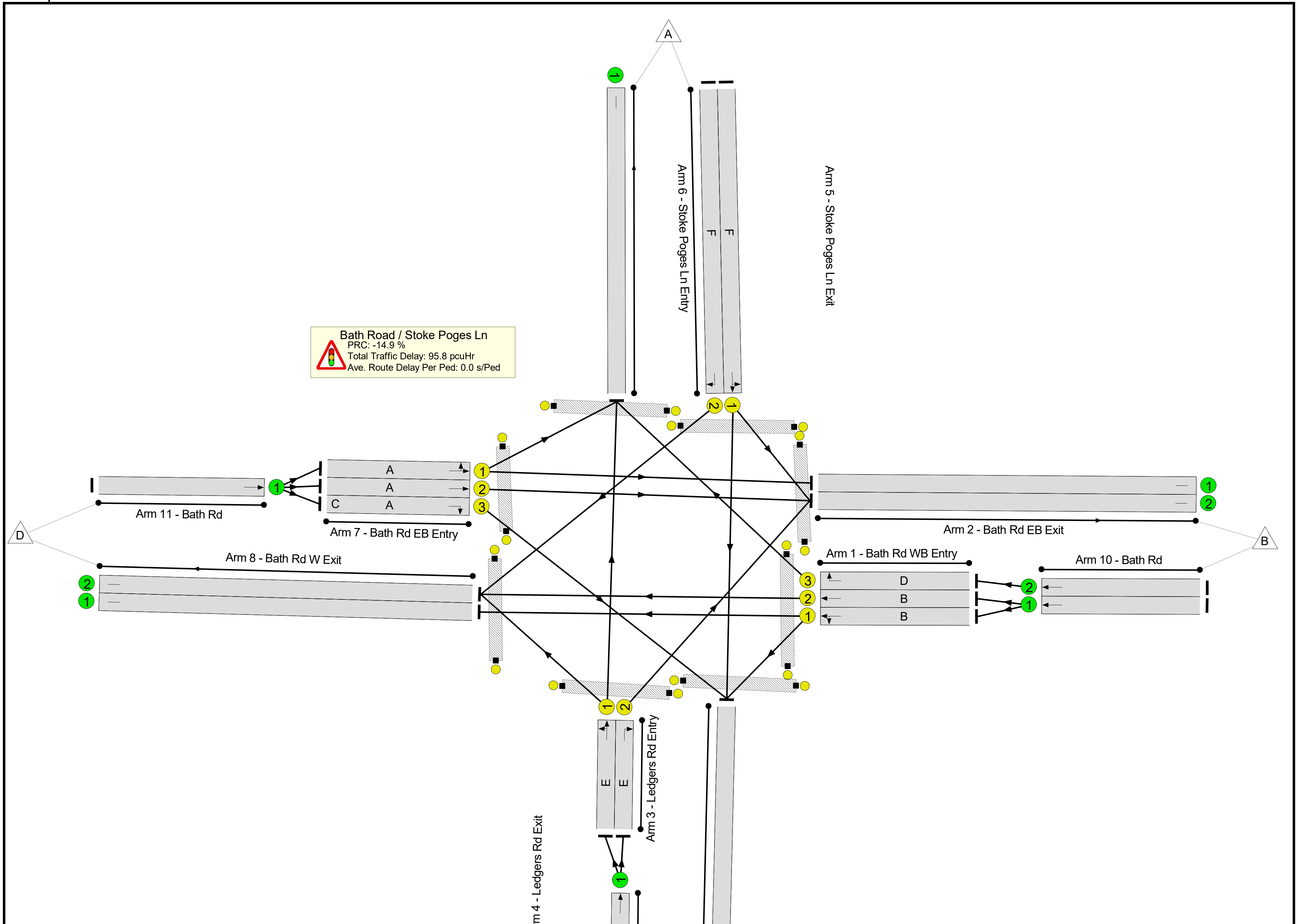
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



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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**	-	-		-	-	-	-	-	-	**103.4%**
Bath Road / Stoke Poges Ln	-	-	**N/A**	-	-		-	-	-	-	-	-	**103.4%**
1/1	Bath Rd WB Entry Left Ahead	U	N/A	N/A	B		1	41	-	106	1905	714	14.8%
1/2	Bath Rd WB Entry Ahead	U	N/A	N/A	B		1	41	-	677	1915	718	94.3%
1/3	Bath Rd WB Entry Right	U	N/A	N/A	D		1	11	-	195	1768	189	102.9%
2/1	Bath Rd EB Exit	U	N/A	N/A	-		-	-	-	100	Inf	Inf	0.0%
2/2	Bath Rd EB Exit	U	N/A	N/A	-		-	-	-	940	Inf	Inf	0.0%
3/1	Ledgers Rd Entry Ahead Left	U	N/A	N/A	E		1	11	-	211	1915	205	102.8%
3/2	Ledgers Rd Entry Right	U	N/A	N/A	E		1	11	-	171	1807	194	88.3%
4/1	Ledgers Rd Exit	U	N/A	N/A	-		-	-	-	133	Inf	Inf	0.0%
5/1	Stoke Poges Ln Exit	U	N/A	N/A	-		-	-	-	596	Inf	Inf	0.0%
6/1	Stoke Poges Ln Entry Left Ahead	U	N/A	N/A	F		1	15	-	256	1804	258	99.3%
6/2	Stoke Poges Ln Entry Right	U	N/A	N/A	F		1	15	-	263	1781	254	103.4%
7/1	Bath Rd EB Entry Ahead Left	U	N/A	N/A	A		1	35	-	290	1744	561	51.7%
7/2	Bath Rd EB Entry Ahead	U	N/A	N/A	A		1	35	-	632	1915	616	102.7%
7/3	Bath Rd EB Entry Right	U	N/A	N/A	A	C	1	35	10	8	1717	552	1.4%
8/1	Bath Rd W Exit	U	N/A	N/A	-		-	-	-	100	Inf	Inf	0.0%
8/2	Bath Rd W Exit	U	N/A	N/A	-		-	-	-	940	Inf	Inf	0.0%
9/1	Ledgers Rd Ahead	U	N/A	N/A	-		-	-	-	382	Inf	Inf	0.0%

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Full Input Data And Results

10/1	Bath Rd Ahead	U	N/A	N/A	-		-	-	-	783	Inf	Inf	0.0%
10/2	Bath Rd Ahead	U	N/A	N/A	-		-	-	-	195	Inf	Inf	0.0%
11/1	Bath Rd Ahead	U	N/A	N/A	-		-	-	-	930	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	L		1	53	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	N		1	14	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	H		1	67	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	J		1	11	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	G		1	88	-	0	-	0	0.0%
Ped Link: P6	Unnamed Ped Link	-	N/A	-	M		1	11	-	0	-	0	0.0%
Ped Link: P7	Unnamed Ped Link	-	N/A	-	K		1	60	-	0	-	0	0.0%
Ped Link: P8	Unnamed Ped Link	-	N/A	-	I		1	6	-	0	-	0	0.0%

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Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**33.0**	**62.8**	**0.0**	**95.8**	**-**	**-**	**-**	**-**
Bath Road / Stoke Poges Ln	**-**	**-**	**0**	**0**	**0**	**33.0**	**62.8**	**0.0**	**95.8**	**-**	**-**	**-**	**-**
1/1	106	106	-	-	-	0.7	0.1	-	0.8	26.1	2.2	0.1	2.3
1/2	677	677	-	-	-	6.4	6.3	-	12.7	67.3	20.3	6.3	26.6
1/3	195	189	-	-	-	3.1	8.5	-	11.6	213.7	6.3	8.5	14.8
2/1	100	100	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	924	924	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	211	205	-	-	-	3.2	8.9	-	12.0	205.0	6.7	8.9	15.6
3/2	171	171	-	-	-	2.3	3.0	-	5.3	112.3	5.2	3.0	8.2
4/1	133	133	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	585	585	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	256	256	-	-	-	3.4	7.6	-	11.0	154.6	7.9	7.6	15.5
6/2	263	254	-	-	-	3.9	10.5	-	14.4	197.3	8.4	10.5	19.0
7/1	290	290	-	-	-	2.5	0.5	-	3.0	37.6	7.3	0.5	7.9
7/2	632	616	-	-	-	7.6	17.3	-	24.9	141.8	20.2	17.3	37.5
7/3	8	8	-	-	-	0.1	0.0	-	0.1	29.4	0.2	0.0	0.2
8/1	100	100	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	931	931	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	382	382	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	783	783	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	195	195	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	930	930	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

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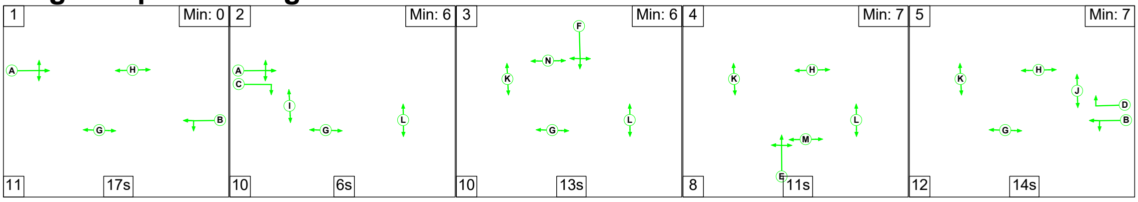
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -14.9 Total Delay for Signalled Lanes (pcuHr): 95.76 Cycle Time (s): 112
PRC Over All Lanes (%): -14.9 Total Delay Over All Lanes(pcuHr): 95.76

Full Input Data And Results

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

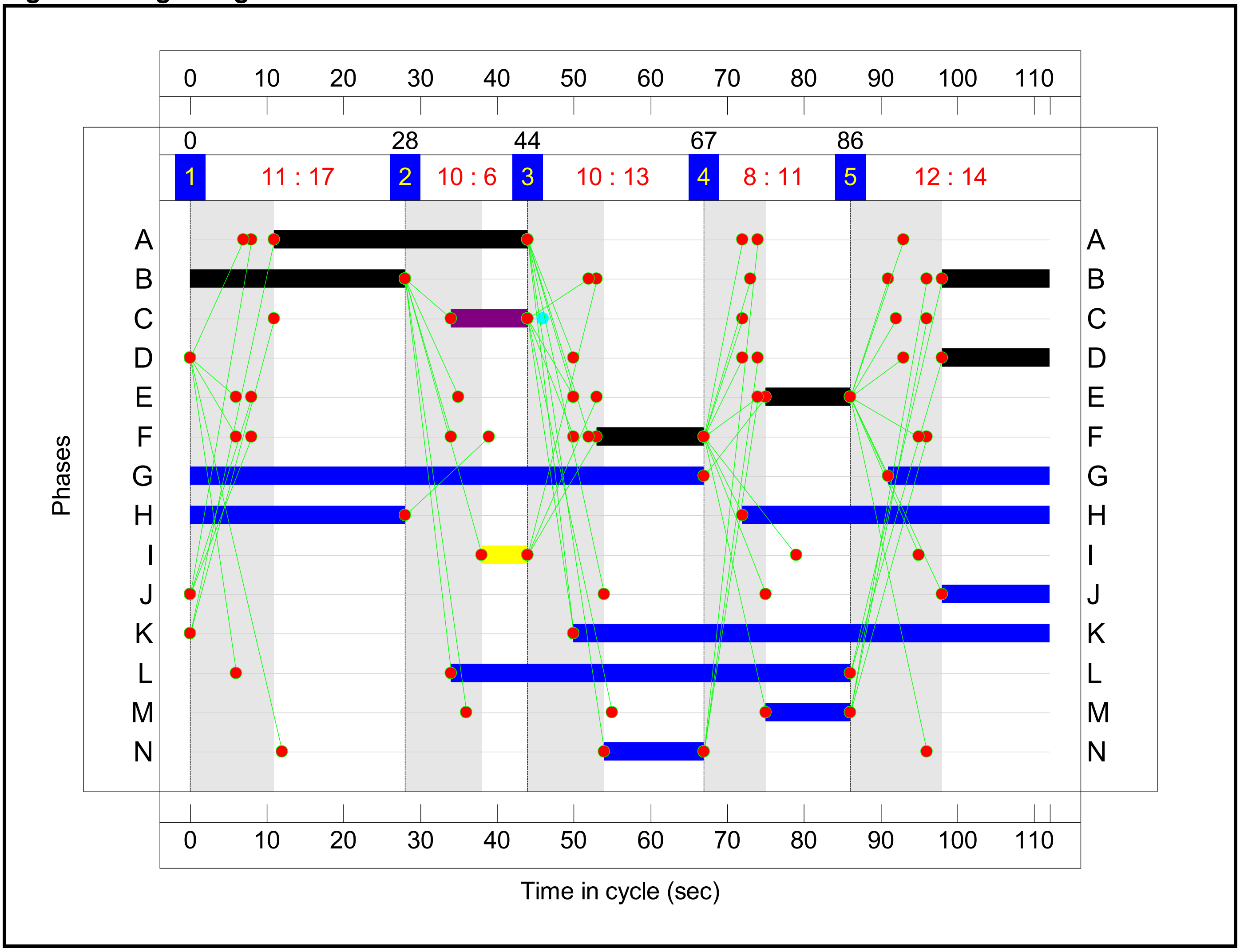
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	17	6	13	11	14
Change Point	0	28	44	67	86

Signal Timings Diagram



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Network Layout Diagram

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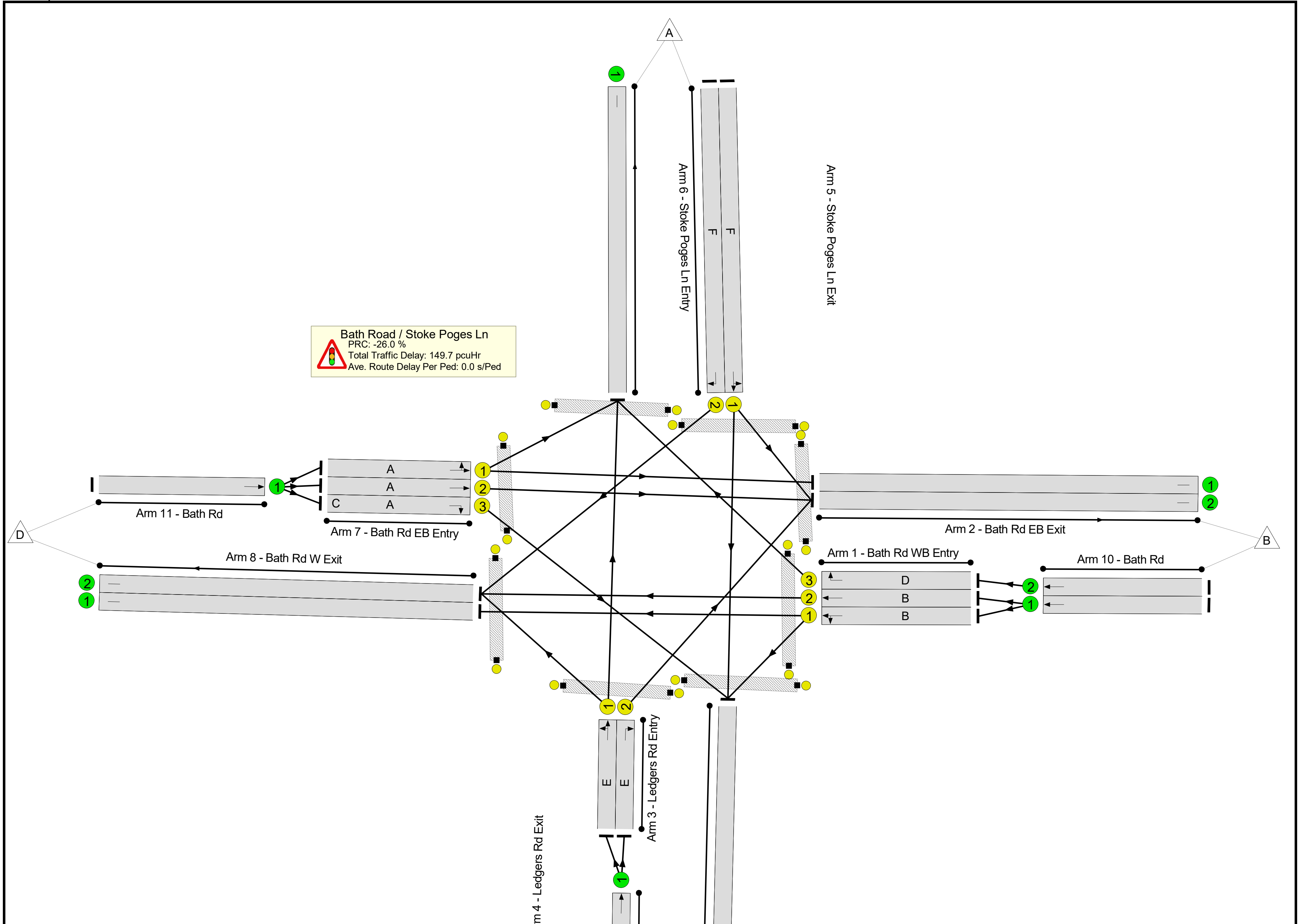

Full Input Data And Results

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**	-	-		-	-	-	-	-	-	**113.4%**
Bath Road / Stoke Poges Ln	-	-	**N/A**	-	-		-	-	-	-	-	-	**113.4%**
1/1	Bath Rd WB Entry Left Ahead	U	N/A	N/A	B		1	42	-	106	1905	731	14.5%
1/2	Bath Rd WB Entry Ahead	U	N/A	N/A	B		1	42	-	632	1915	735	86.0%
1/3	Bath Rd WB Entry Right	U	N/A	N/A	D		1	14	-	268	1768	237	113.2%
2/1	Bath Rd EB Exit	U	N/A	N/A	-		-	-	-	100	Inf	Inf	0.0%
2/2	Bath Rd EB Exit	U	N/A	N/A	-		-	-	-	926	Inf	Inf	0.0%
3/1	Ledgers Rd Entry Ahead Left	U	N/A	N/A	E		1	11	-	227	1915	205	110.6%
3/2	Ledgers Rd Entry Right	U	N/A	N/A	E		1	11	-	194	1807	194	100.2%
4/1	Ledgers Rd Exit	U	N/A	N/A	-		-	-	-	158	Inf	Inf	0.0%
5/1	Stoke Poges Ln Exit	U	N/A	N/A	-		-	-	-	704	Inf	Inf	0.0%
6/1	Stoke Poges Ln Entry Left Ahead	U	N/A	N/A	F		1	14	-	221	1845	247	89.4%
6/2	Stoke Poges Ln Entry Right	U	N/A	N/A	F		1	14	-	268	1781	239	112.4%
7/1	Bath Rd EB Entry Ahead Left	U	N/A	N/A	A		1	33	-	309	1739	528	58.5%
7/2	Bath Rd EB Entry Ahead	U	N/A	N/A	A		1	33	-	659	1915	581	113.4%
7/3	Bath Rd EB Entry Right	U	N/A	N/A	A	C	1	33	10	4	1717	521	0.8%
8/1	Bath Rd W Exit	U	N/A	N/A	-		-	-	-	100	Inf	Inf	0.0%
8/2	Bath Rd W Exit	U	N/A	N/A	-		-	-	-	900	Inf	Inf	0.0%
9/1	Ledgers Rd Ahead	U	N/A	N/A	-		-	-	-	421	Inf	Inf	0.0%

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10/1	Bath Rd Ahead	U	N/A	N/A	-		-	-	-	738	Inf	Inf	0.0%
10/2	Bath Rd Ahead	U	N/A	N/A	-		-	-	-	268	Inf	Inf	0.0%
11/1	Bath Rd Ahead	U	N/A	N/A	-		-	-	-	972	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	L		1	52	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	N		1	13	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	H		1	68	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	J		1	14	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	G		1	88	-	0	-	0	0.0%
Ped Link: P6	Unnamed Ped Link	-	N/A	-	M		1	11	-	0	-	0	0.0%
Ped Link: P7	Unnamed Ped Link	-	N/A	-	K		1	62	-	0	-	0	0.0%
Ped Link: P8	Unnamed Ped Link	-	N/A	-	I		1	6	-	0	-	0	0.0%

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Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**40.6**	**109.1**	**0.0**	**149.7**	**-**	**-**	**-**	**-**
Bath Road / Stoke Poges Ln	**-**	**-**	**0**	**0**	**0**	**40.6**	**109.1**	**0.0**	**149.7**	**-**	**-**	**-**	**-**
1/1	106	106	-	-	-	0.7	0.1	-	0.7	25.4	2.1	0.1	2.2
1/2	632	632	-	-	-	5.6	2.9	-	8.5	48.2	17.9	2.9	20.8
1/3	268	237	-	-	-	5.6	19.1	-	24.7	331.9	10.1	19.1	29.2
2/1	100	100	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	848	848	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	227	205	-	-	-	4.0	14.8	-	18.8	297.6	7.7	14.8	22.5
3/2	194	194	-	-	-	2.7	7.1	-	9.8	181.4	6.0	7.1	13.1
4/1	158	158	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	651	651	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	221	221	-	-	-	2.9	3.4	-	6.3	102.6	6.8	3.4	10.1
6/2	268	239	-	-	-	4.9	18.4	-	23.3	313.2	9.3	18.4	27.6
7/1	309	309	-	-	-	2.8	0.7	-	3.5	41.2	8.1	0.7	8.8
7/2	659	581	-	-	-	11.3	42.7	-	54.0	295.1	22.9	42.7	65.6
7/3	4	4	-	-	-	0.0	0.0	-	0.0	31.0	0.1	0.0	0.1
8/1	100	100	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	871	871	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	421	421	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	738	738	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	268	268	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	972	972	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

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Full Input Data And Results

Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -26.0 Total Delay for Signalled Lanes (pcuHr): 149.67 Cycle Time (s): 112
PRC Over All Lanes (%): -26.0 Total Delay Over All Lanes(pcuHr): 149.67

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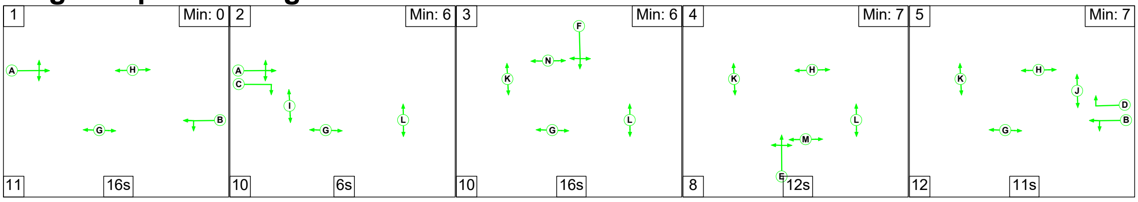
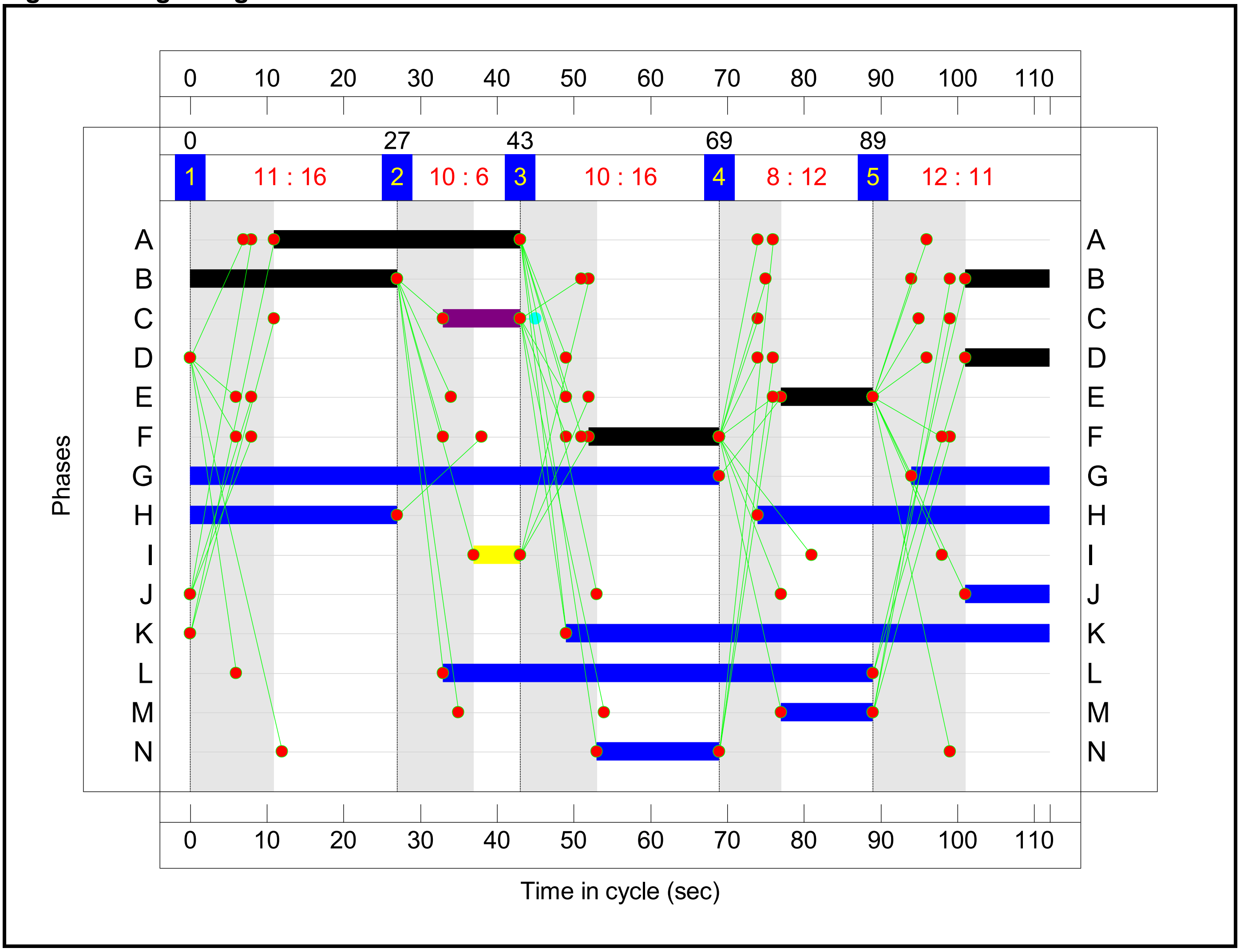
Full Input Data And Results
Scenario 3: 'AM DM' (FG3: 'AM DM', Plan 1: 'Network Control Plan 1')
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	16	6	16	12	11
Change Point	0	27	43	69	89

Signal Timings Diagram



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Full Input Data And Results

Network Layout Diagram

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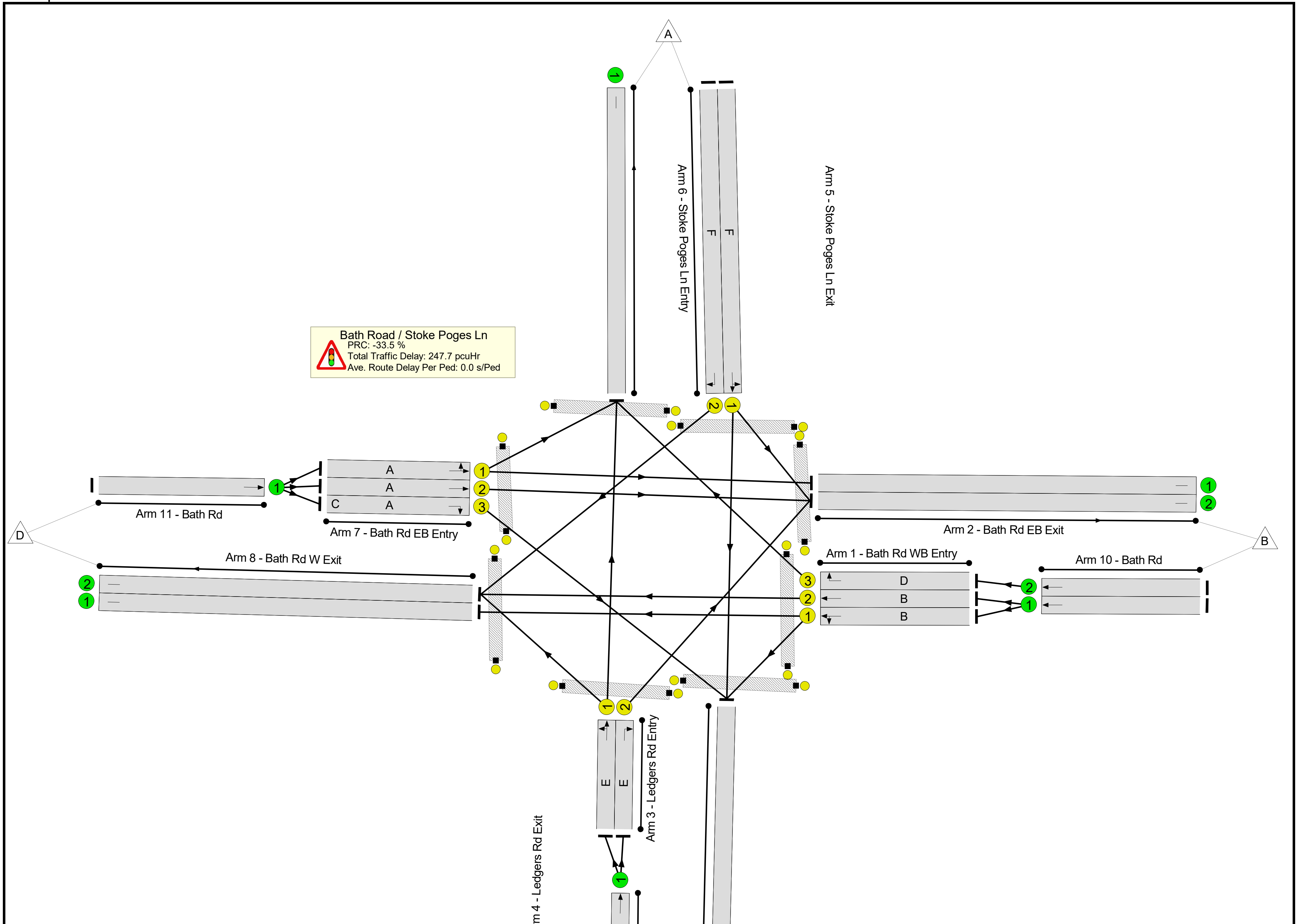
Full Input Data And Results



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Full Input Data And Results

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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**	-	-		-	-	-	-	-	-	**120.2%**
Bath Road / Stoke Poges Ln	-	-	**N/A**	-	-		-	-	-	-	-	-	**120.2%**
1/1	Bath Rd WB Entry Left Ahead	U	N/A	N/A	B		1	38	-	109	1900	662	16.5%
1/2	Bath Rd WB Entry Ahead	U	N/A	N/A	B		1	38	-	790	1915	667	118.5%
1/3	Bath Rd WB Entry Right	U	N/A	N/A	D		1	11	-	218	1768	189	115.1%
2/1	Bath Rd EB Exit	U	N/A	N/A	-		-	-	-	100	Inf	Inf	0.0%
2/2	Bath Rd EB Exit	U	N/A	N/A	-		-	-	-	952	Inf	Inf	0.0%
3/1	Ledgers Rd Entry Ahead Left	U	N/A	N/A	E		1	12	-	262	1915	222	117.9%
3/2	Ledgers Rd Entry Right	U	N/A	N/A	E		1	12	-	214	1807	210	102.0%
4/1	Ledgers Rd Exit	U	N/A	N/A	-		-	-	-	221	Inf	Inf	0.0%
5/1	Stoke Poges Ln Exit	U	N/A	N/A	-		-	-	-	713	Inf	Inf	0.0%
6/1	Stoke Poges Ln Entry Left Ahead	U	N/A	N/A	F		1	17	-	348	1821	293	118.9%
6/2	Stoke Poges Ln Entry Right	U	N/A	N/A	F		1	17	-	344	1781	286	120.2%
7/1	Bath Rd EB Entry Ahead Left	U	N/A	N/A	A		1	32	-	333	1733	511	65.2%
7/2	Bath Rd EB Entry Ahead	U	N/A	N/A	A		1	32	-	582	1915	564	103.1%
7/3	Bath Rd EB Entry Right	U	N/A	N/A	A	C	1	32	10	20	1717	506	4.0%
8/1	Bath Rd W Exit	U	N/A	N/A	-		-	-	-	100	Inf	Inf	0.0%
8/2	Bath Rd W Exit	U	N/A	N/A	-		-	-	-	1134	Inf	Inf	0.0%
9/1	Ledgers Rd Ahead	U	N/A	N/A	-		-	-	-	476	Inf	Inf	0.0%

Full Input Data And Results

10/1	Bath Rd Ahead	U	N/A	N/A	-		-	-	-	899	Inf	Inf	0.0%
10/2	Bath Rd Ahead	U	N/A	N/A	-		-	-	-	218	Inf	Inf	0.0%
11/1	Bath Rd Ahead	U	N/A	N/A	-		-	-	-	935	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	L		1	56	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	N		1	16	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	H		1	65	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	J		1	11	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	G		1	87	-	0	-	0	0.0%
Ped Link: P6	Unnamed Ped Link	-	N/A	-	M		1	12	-	0	-	0	0.0%
Ped Link: P7	Unnamed Ped Link	-	N/A	-	K		1	63	-	0	-	0	0.0%
Ped Link: P8	Unnamed Ped Link	-	N/A	-	I		1	6	-	0	-	0	0.0%

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Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**54.0**	**193.7**	**0.0**	**247.7**	**-**	**-**	**-**	**-**
Bath Road / Stoke Poges Ln	**-**	**-**	**0**	**0**	**0**	**54.0**	**193.7**	**0.0**	**247.7**	**-**	**-**	**-**	**-**
1/1	109	109	-	-	-	0.8	0.1	-	0.9	28.5	2.3	0.1	2.4
1/2	790	667	-	-	-	15.3	64.6	-	80.0	364.4	28.4	64.6	93.0
1/3	218	189	-	-	-	4.8	17.4	-	22.2	367.4	8.4	17.4	25.8
2/1	100	100	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	905	905	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	262	222	-	-	-	5.1	22.7	-	27.9	383.1	9.4	22.7	32.1
3/2	214	210	-	-	-	3.1	8.5	-	11.6	194.5	6.8	8.5	15.2
4/1	190	190	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	645	645	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	348	293	-	-	-	7.0	30.5	-	37.5	388.4	12.5	30.5	43.1
6/2	344	286	-	-	-	7.1	31.6	-	38.7	404.9	12.5	31.6	44.1
7/1	333	333	-	-	-	3.2	0.9	-	4.1	44.5	9.0	0.9	9.9
7/2	582	564	-	-	-	7.3	17.3	-	24.6	152.4	18.7	17.3	36.0
7/3	20	20	-	-	-	0.2	0.0	-	0.2	31.9	0.4	0.0	0.5
8/1	100	100	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	953	953	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	476	476	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	899	899	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	218	218	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	935	935	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

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Full Input Data And Results

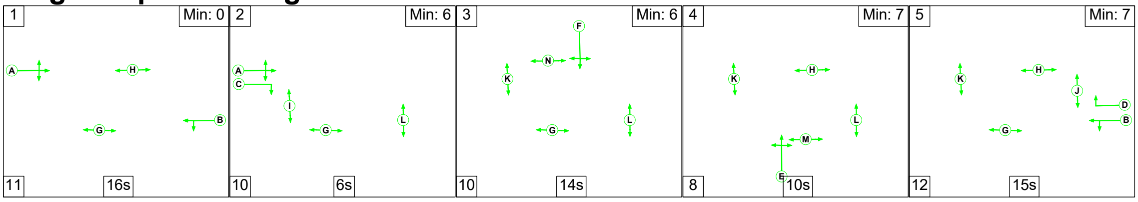
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -33.5 Total Delay for Signalled Lanes (pcuHr): 247.69 Cycle Time (s): 112
PRC Over All Lanes (%): -33.5 Total Delay Over All Lanes(pcuHr): 247.69

Full Input Data And Results

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

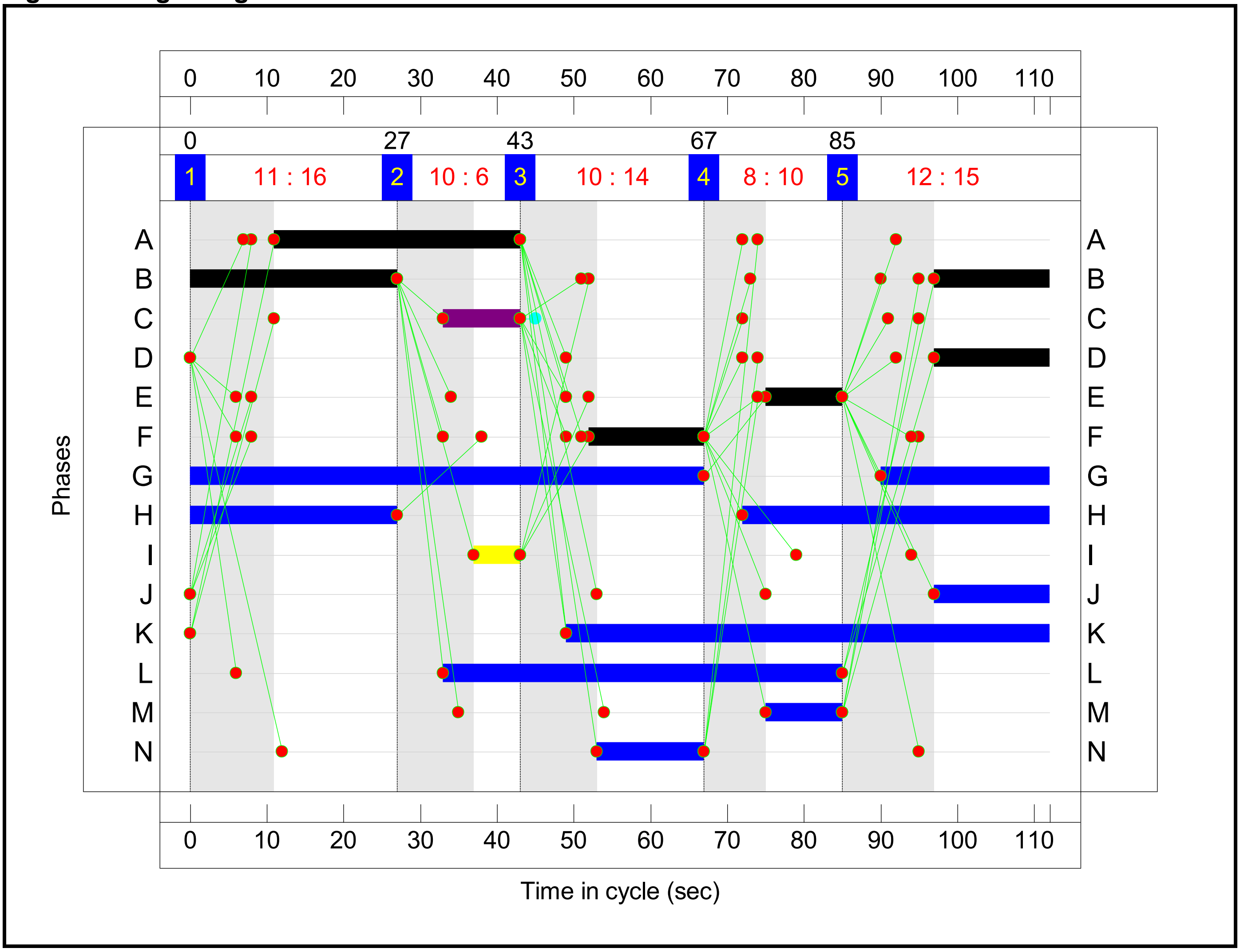
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	16	6	14	10	15
Change Point	0	27	43	67	85

Signal Timings Diagram



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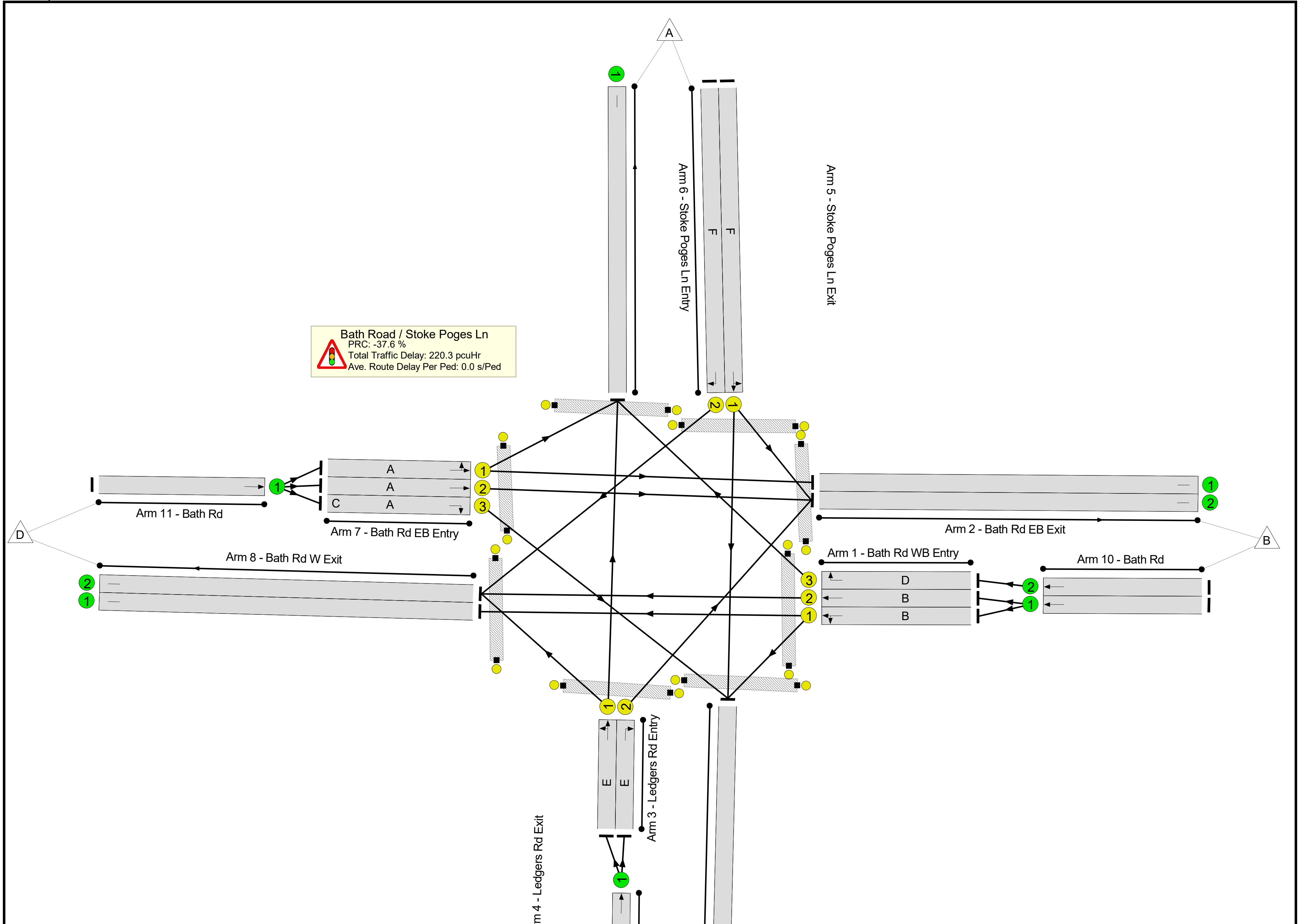
Full Input Data And Results
Network Layout Diagram

Full Input Data And Results



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Full Input Data And Results

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**	-	-		-	-	-	-	-	-	**123.8%**
Bath Road / Stoke Poges Ln	-	-	**N/A**	-	-		-	-	-	-	-	-	**123.8%**
1/1	Bath Rd WB Entry Left Ahead	U	N/A	N/A	B		1	42	-	109	1900	729	14.9%
1/2	Bath Rd WB Entry Ahead	U	N/A	N/A	B		1	42	-	714	1915	735	97.1%
1/3	Bath Rd WB Entry Right	U	N/A	N/A	D		1	15	-	301	1768	253	119.2%
2/1	Bath Rd EB Exit	U	N/A	N/A	-		-	-	-	100	Inf	Inf	0.0%
2/2	Bath Rd EB Exit	U	N/A	N/A	-		-	-	-	963	Inf	Inf	0.0%
3/1	Ledgers Rd Entry Ahead Left	U	N/A	N/A	E		1	10	-	229	1915	188	121.8%
3/2	Ledgers Rd Entry Right	U	N/A	N/A	E		1	10	-	194	1807	177	109.3%
4/1	Ledgers Rd Exit	U	N/A	N/A	-		-	-	-	130	Inf	Inf	0.0%
5/1	Stoke Poges Ln Exit	U	N/A	N/A	-		-	-	-	832	Inf	Inf	0.0%
6/1	Stoke Poges Ln Entry Left Ahead	U	N/A	N/A	F		1	15	-	198	1825	261	75.9%
6/2	Stoke Poges Ln Entry Right	U	N/A	N/A	F		1	15	-	315	1781	254	123.8%
7/1	Bath Rd EB Entry Ahead Left	U	N/A	N/A	A		1	32	-	402	1721	507	79.3%
7/2	Bath Rd EB Entry Ahead	U	N/A	N/A	A		1	32	-	684	1915	564	121.2%
7/3	Bath Rd EB Entry Right	U	N/A	N/A	A	C	1	32	10	8	1717	506	1.6%
8/1	Bath Rd W Exit	U	N/A	N/A	-		-	-	-	100	Inf	Inf	0.0%
8/2	Bath Rd W Exit	U	N/A	N/A	-		-	-	-	1029	Inf	Inf	0.0%
9/1	Ledgers Rd Ahead	U	N/A	N/A	-		-	-	-	423	Inf	Inf	0.0%

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Full Input Data And Results

10/1	Bath Rd Ahead	U	N/A	N/A	-		-	-	-	823	Inf	Inf	0.0%
10/2	Bath Rd Ahead	U	N/A	N/A	-		-	-	-	301	Inf	Inf	0.0%
11/1	Bath Rd Ahead	U	N/A	N/A	-		-	-	-	1094	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	L		1	52	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	N		1	14	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	H		1	67	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	J		1	15	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	G		1	89	-	0	-	0	0.0%
Ped Link: P6	Unnamed Ped Link	-	N/A	-	M		1	10	-	0	-	0	0.0%
Ped Link: P7	Unnamed Ped Link	-	N/A	-	K		1	63	-	0	-	0	0.0%
Ped Link: P8	Unnamed Ped Link	-	N/A	-	I		1	6	-	0	-	0	0.0%

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Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**50.3**	**170.0**	**0.0**	**220.3**	**-**	**-**	**-**	**-**
Bath Road / Stoke Poges Ln	**-**	**-**	**0**	**0**	**0**	**50.3**	**170.0**	**0.0**	**220.3**	**-**	**-**	**-**	**-**
1/1	109	109	-	-	-	0.7	0.1	-	0.8	25.5	2.2	0.1	2.3
1/2	714	714	-	-	-	6.7	9.1	-	15.8	79.6	21.8	9.1	30.9
1/3	301	253	-	-	-	7.1	27.0	-	34.1	407.9	12.1	27.0	39.1
2/1	100	100	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	827	827	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	229	188	-	-	-	4.8	23.0	-	27.8	436.7	8.4	23.0	31.4
3/2	194	177	-	-	-	3.4	12.2	-	15.6	289.5	6.5	12.2	18.8
4/1	130	130	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	743	743	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	198	198	-	-	-	2.5	1.5	-	4.0	73.5	5.9	1.5	7.4
6/2	315	254	-	-	-	6.9	32.7	-	39.6	452.9	11.7	32.7	44.4
7/1	402	402	-	-	-	4.1	1.8	-	5.9	52.9	11.5	1.8	13.3
7/2	684	564	-	-	-	14.0	62.6	-	76.6	403.2	25.0	62.6	87.6
7/3	8	8	-	-	-	0.1	0.0	-	0.1	31.8	0.2	0.0	0.2
8/1	100	100	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	968	968	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	423	423	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	823	823	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	301	301	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	1094	1094	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

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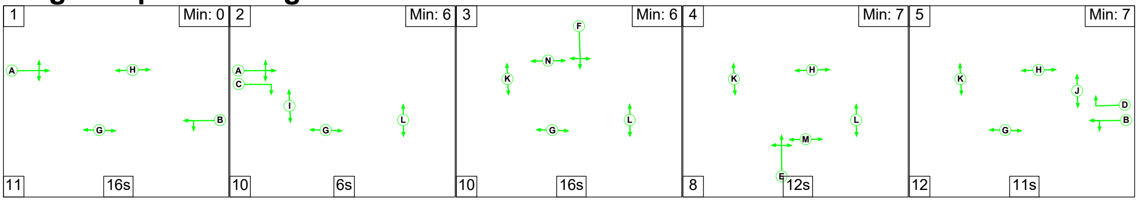
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	-	-	-	-	-

C1	PRC for Signalled Lanes (%):	-37.6	Total Delay for Signalled Lanes (pcuHr):	220.30	Cycle Time (s):	112
	PRC Over All Lanes (%):	-37.6	Total Delay Over All Lanes(pcuHr):	220.30		

Full Input Data And Results

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

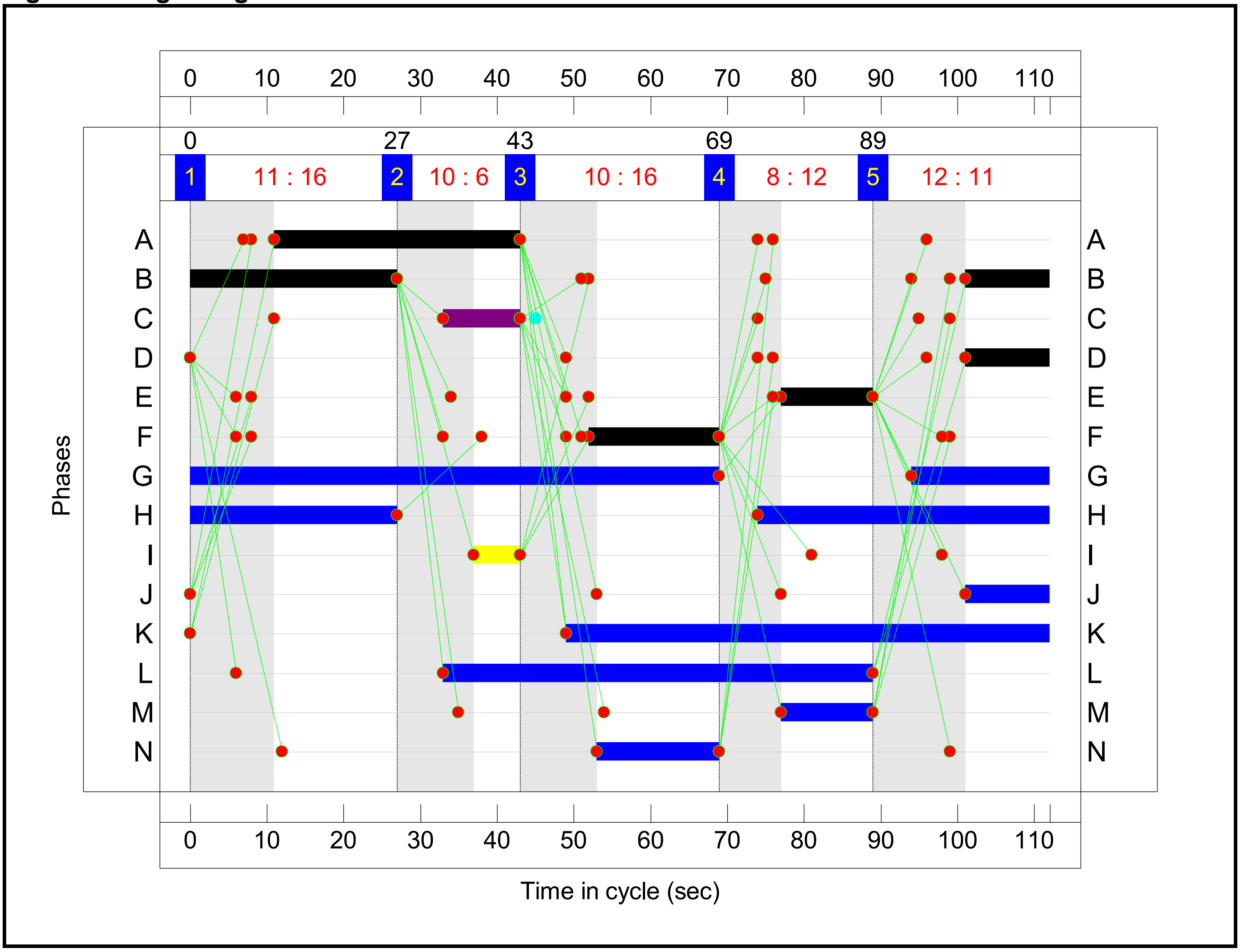
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	16	6	16	12	11
Change Point	0	27	43	69	89

Signal Timings Diagram



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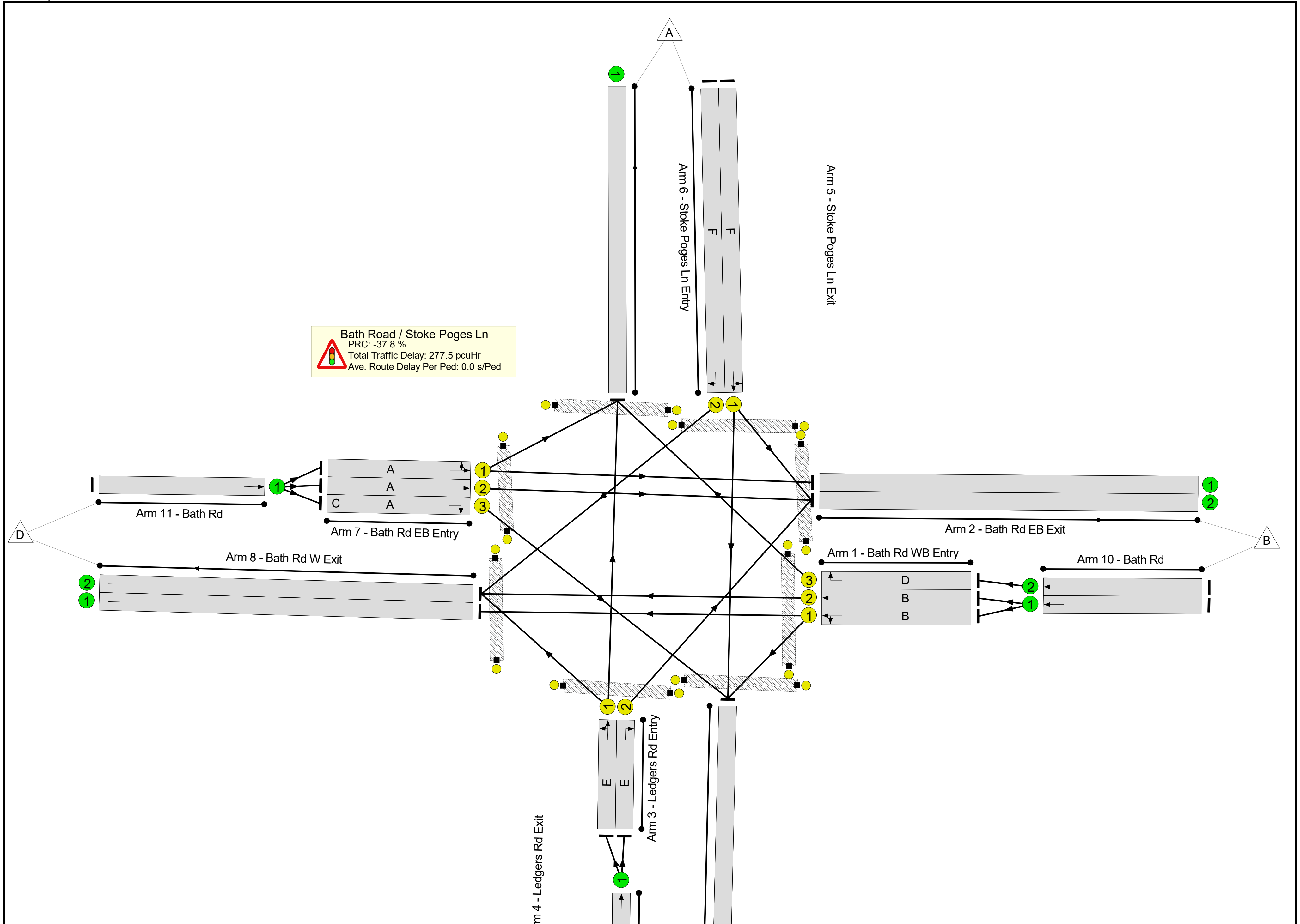
Full Input Data And Results
Network Layout Diagram

Full Input Data And Results



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Full Input Data And Results

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**	-	-		-	-	-	-	-	-	**124.0%**
Bath Road / Stoke Poges Ln	-	-	**N/A**	-	-		-	-	-	-	-	-	**124.0%**
1/1	Bath Rd WB Entry Left Ahead	U	N/A	N/A	B		1	38	-	110	1899	661	16.6%
1/2	Bath Rd WB Entry Ahead	U	N/A	N/A	B		1	38	-	827	1915	667	124.0%
1/3	Bath Rd WB Entry Right	U	N/A	N/A	D		1	11	-	222	1768	189	117.2%
2/1	Bath Rd EB Exit	U	N/A	N/A	-		-	-	-	100	Inf	Inf	0.0%
2/2	Bath Rd EB Exit	U	N/A	N/A	-		-	-	-	960	Inf	Inf	0.0%
3/1	Ledgers Rd Entry Ahead Left	U	N/A	N/A	E		1	12	-	265	1915	222	119.2%
3/2	Ledgers Rd Entry Right	U	N/A	N/A	E		1	12	-	220	1807	210	104.9%
4/1	Ledgers Rd Exit	U	N/A	N/A	-		-	-	-	231	Inf	Inf	0.0%
5/1	Stoke Poges Ln Exit	U	N/A	N/A	-		-	-	-	700	Inf	Inf	0.0%
6/1	Stoke Poges Ln Entry Left Ahead	U	N/A	N/A	F		1	17	-	348	1826	293	118.6%
6/2	Stoke Poges Ln Entry Right	U	N/A	N/A	F		1	17	-	343	1781	286	119.8%
7/1	Bath Rd EB Entry Ahead Left	U	N/A	N/A	A		1	32	-	313	1738	512	61.1%
7/2	Bath Rd EB Entry Ahead	U	N/A	N/A	A		1	32	-	593	1915	564	105.1%
7/3	Bath Rd EB Entry Right	U	N/A	N/A	A	C	1	32	10	20	1717	506	4.0%
8/1	Bath Rd W Exit	U	N/A	N/A	-		-	-	-	100	Inf	Inf	0.0%
8/2	Bath Rd W Exit	U	N/A	N/A	-		-	-	-	1170	Inf	Inf	0.0%
9/1	Ledgers Rd Ahead	U	N/A	N/A	-		-	-	-	485	Inf	Inf	0.0%

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Full Input Data And Results

10/1	Bath Rd Ahead	U	N/A	N/A	-		-	-	-	937	Inf	Inf	0.0%
10/2	Bath Rd Ahead	U	N/A	N/A	-		-	-	-	222	Inf	Inf	0.0%
11/1	Bath Rd Ahead	U	N/A	N/A	-		-	-	-	926	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	L		1	56	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	N		1	16	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	H		1	65	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	J		1	11	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	G		1	87	-	0	-	0	0.0%
Ped Link: P6	Unnamed Ped Link	-	N/A	-	M		1	12	-	0	-	0	0.0%
Ped Link: P7	Unnamed Ped Link	-	N/A	-	K		1	63	-	0	-	0	0.0%
Ped Link: P8	Unnamed Ped Link	-	N/A	-	I		1	6	-	0	-	0	0.0%

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Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**57.7**	**219.8**	**0.0**	**277.5**	**-**	**-**	**-**	**-**
Bath Road / Stoke Poges Ln	**-**	**-**	**0**	**0**	**0**	**57.7**	**219.8**	**0.0**	**277.5**	**-**	**-**	**-**	**-**
1/1	110	110	-	-	-	0.8	0.1	-	0.9	28.5	2.4	0.1	2.5
1/2	827	667	-	-	-	17.9	82.6	-	100.5	437.5	30.7	82.6	113.3
1/3	222	189	-	-	-	5.1	19.2	-	24.3	394.4	8.7	19.2	27.9
2/1	100	100	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	898	898	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	265	222	-	-	-	5.3	24.1	-	29.4	399.4	9.6	24.1	33.7
3/2	220	210	-	-	-	3.4	10.4	-	13.8	226.4	7.2	10.4	17.6
4/1	200	200	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	625	625	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	348	293	-	-	-	7.0	30.2	-	37.1	384.2	12.5	30.2	42.7
6/2	343	286	-	-	-	7.0	31.1	-	38.2	400.5	12.4	31.1	43.6
7/1	313	313	-	-	-	3.0	0.8	-	3.7	43.0	8.3	0.8	9.1
7/2	593	564	-	-	-	8.1	21.3	-	29.4	178.4	19.3	21.3	40.7
7/3	20	20	-	-	-	0.2	0.0	-	0.2	31.9	0.4	0.0	0.5
8/1	100	100	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	953	953	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	485	485	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	937	937	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	222	222	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	926	926	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

Full Input Data And Results

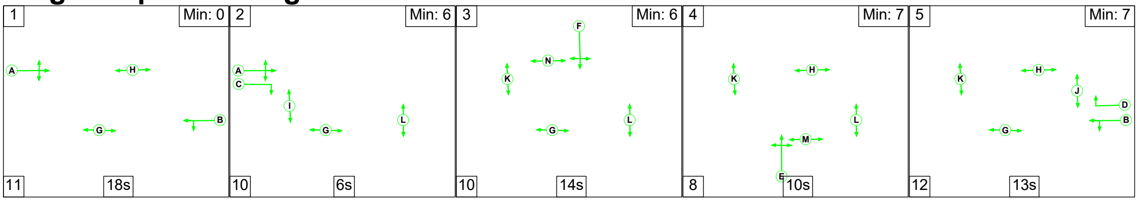
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -37.8 Total Delay for Signalled Lanes (pcuHr): 277.53 Cycle Time (s): 112
PRC Over All Lanes (%): -37.8 Total Delay Over All Lanes(pcuHr): 277.53

Full Input Data And Results

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

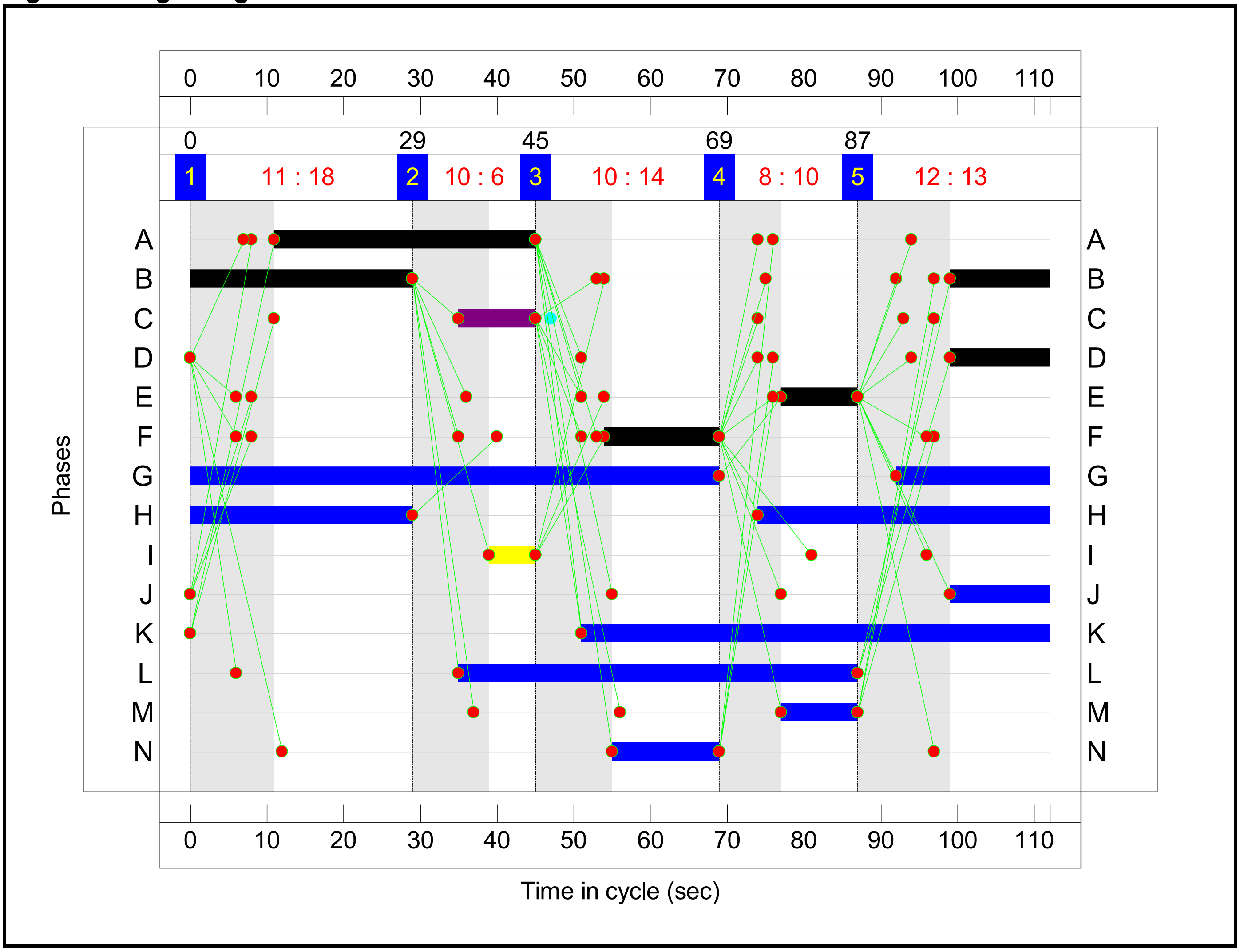
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	18	6	14	10	13
Change Point	0	29	45	69	87

Signal Timings Diagram



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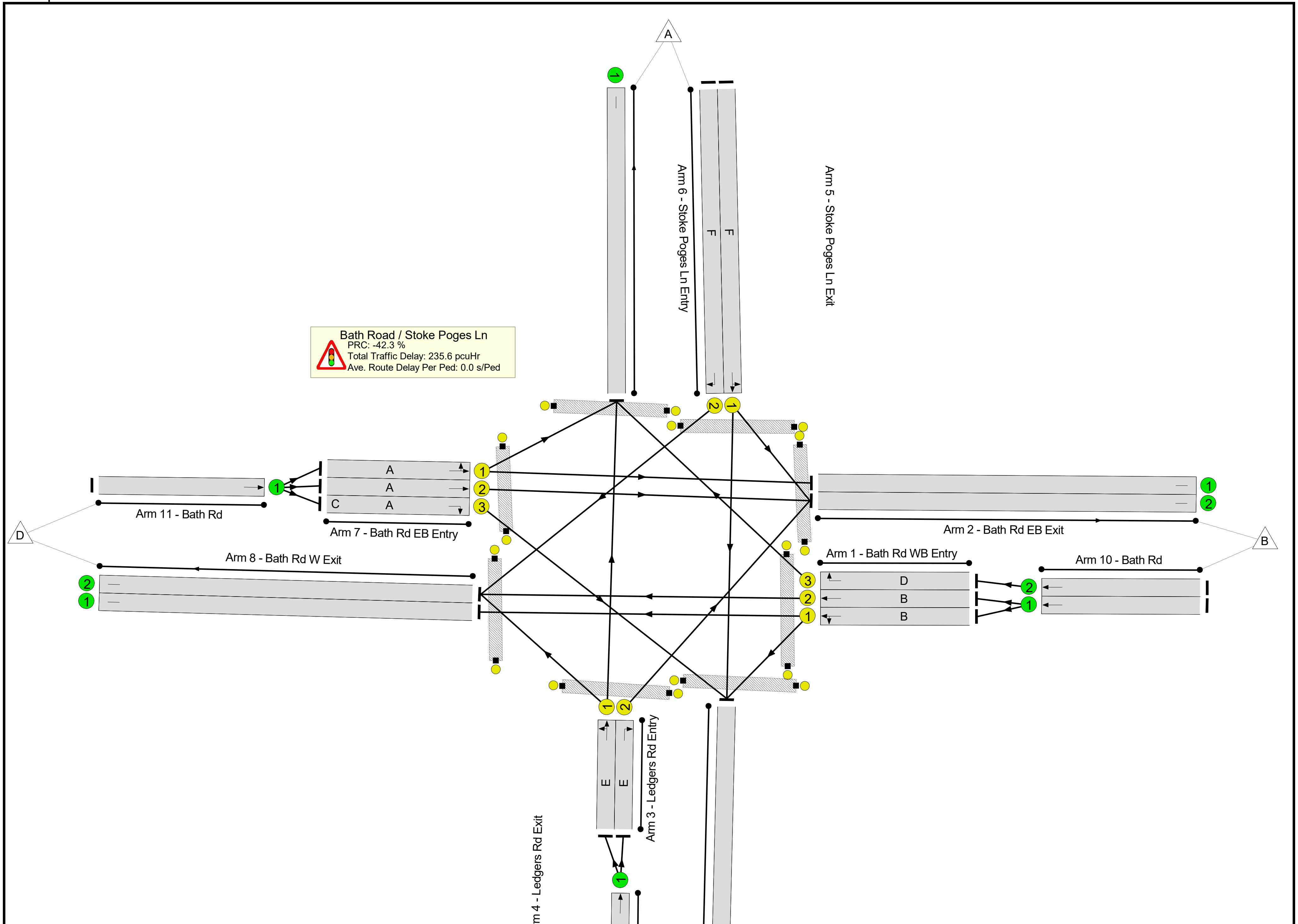
Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

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**	-	-		-	-	-	-	-	-	**128.1%**
Bath Road / Stoke Poges Ln	-	-	**N/A**	-	-		-	-	-	-	-	-	**128.1%**
1/1	Bath Rd WB Entry Left Ahead	U	N/A	N/A	B		1	42	-	109	1900	729	14.9%
1/2	Bath Rd WB Entry Ahead	U	N/A	N/A	B		1	42	-	706	1915	735	96.0%
1/3	Bath Rd WB Entry Right	U	N/A	N/A	D		1	13	-	283	1768	221	128.1%
2/1	Bath Rd EB Exit	U	N/A	N/A	-		-	-	-	100	Inf	Inf	0.0%
2/2	Bath Rd EB Exit	U	N/A	N/A	-		-	-	-	1021	Inf	Inf	0.0%
3/1	Ledgers Rd Entry Ahead Left	U	N/A	N/A	E		1	10	-	228	1915	188	121.2%
3/2	Ledgers Rd Entry Right	U	N/A	N/A	E		1	10	-	193	1807	177	108.7%
4/1	Ledgers Rd Exit	U	N/A	N/A	-		-	-	-	129	Inf	Inf	0.0%
5/1	Stoke Poges Ln Exit	U	N/A	N/A	-		-	-	-	754	Inf	Inf	0.0%
6/1	Stoke Poges Ln Entry Left Ahead	U	N/A	N/A	F		1	15	-	194	1826	261	74.4%
6/2	Stoke Poges Ln Entry Right	U	N/A	N/A	F		1	15	-	310	1781	254	121.8%
7/1	Bath Rd EB Entry Ahead Left	U	N/A	N/A	A		1	34	-	343	1731	541	63.4%
7/2	Bath Rd EB Entry Ahead	U	N/A	N/A	A		1	34	-	746	1915	598	124.7%
7/3	Bath Rd EB Entry Right	U	N/A	N/A	A	C	1	34	10	8	1717	537	1.5%
8/1	Bath Rd W Exit	U	N/A	N/A	-		-	-	-	100	Inf	Inf	0.0%
8/2	Bath Rd W Exit	U	N/A	N/A	-		-	-	-	1016	Inf	Inf	0.0%
9/1	Ledgers Rd Ahead	U	N/A	N/A	-		-	-	-	421	Inf	Inf	0.0%

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Full Input Data And Results

10/1	Bath Rd Ahead	U	N/A	N/A	-		-	-	-	815	Inf	Inf	0.0%
10/2	Bath Rd Ahead	U	N/A	N/A	-		-	-	-	283	Inf	Inf	0.0%
11/1	Bath Rd Ahead	U	N/A	N/A	-		-	-	-	1097	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	L		1	52	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	N		1	14	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	H		1	67	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	J		1	13	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	G		1	89	-	0	-	0	0.0%
Ped Link: P6	Unnamed Ped Link	-	N/A	-	M		1	10	-	0	-	0	0.0%
Ped Link: P7	Unnamed Ped Link	-	N/A	-	K		1	61	-	0	-	0	0.0%
Ped Link: P8	Unnamed Ped Link	-	N/A	-	I		1	6	-	0	-	0	0.0%

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Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**51.4**	**184.2**	**0.0**	**235.6**	**-**	**-**	**-**	**-**
Bath Road / Stoke Poges Ln	**-**	**-**	**0**	**0**	**0**	**51.4**	**184.2**	**0.0**	**235.6**	**-**	**-**	**-**	**-**
1/1	109	109	-	-	-	0.7	0.1	-	0.8	25.5	2.2	0.1	2.3
1/2	706	706	-	-	-	6.6	7.9	-	14.5	73.7	21.4	7.9	29.2
1/3	283	221	-	-	-	7.8	33.1	-	40.9	520.6	12.4	33.1	45.6
2/1	100	100	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	858	858	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	228	188	-	-	-	4.8	22.5	-	27.2	430.2	8.3	22.5	30.8
3/2	193	177	-	-	-	3.3	11.8	-	15.2	282.6	6.5	11.8	18.3
4/1	129	129	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	652	652	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	194	194	-	-	-	2.5	1.4	-	3.9	71.9	5.8	1.4	7.2
6/2	310	254	-	-	-	6.6	30.3	-	37.0	429.1	11.4	30.3	41.7
7/1	343	343	-	-	-	3.1	0.9	-	4.0	42.0	9.1	0.9	10.0
7/2	746	598	-	-	-	15.9	76.2	-	92.2	444.7	27.8	76.2	104.0
7/3	8	8	-	-	-	0.1	0.0	-	0.1	30.2	0.2	0.0	0.2
8/1	100	100	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	960	960	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	421	421	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	815	815	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	283	283	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	1097	1097	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

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Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -42.3 Total Delay for Signalled Lanes (pcuHr): 235.60 Cycle Time (s): 112
PRC Over All Lanes (%): -42.3 Total Delay Over All Lanes(pcuHr): 235.60

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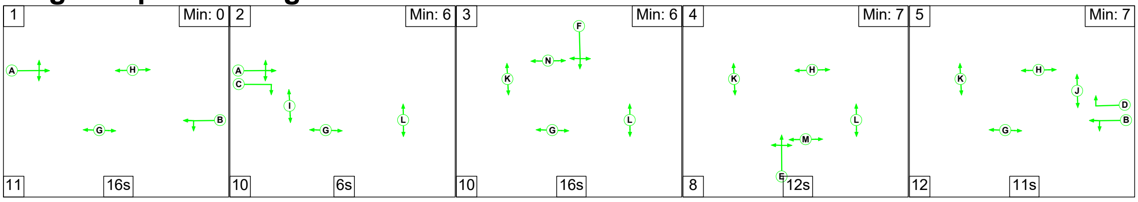
Full Input Data And Results

Scenario 7: 'AM DS Commercial' (FG7: 'AM DS Commercial', Plan 1: 'Network Control Plan 1')

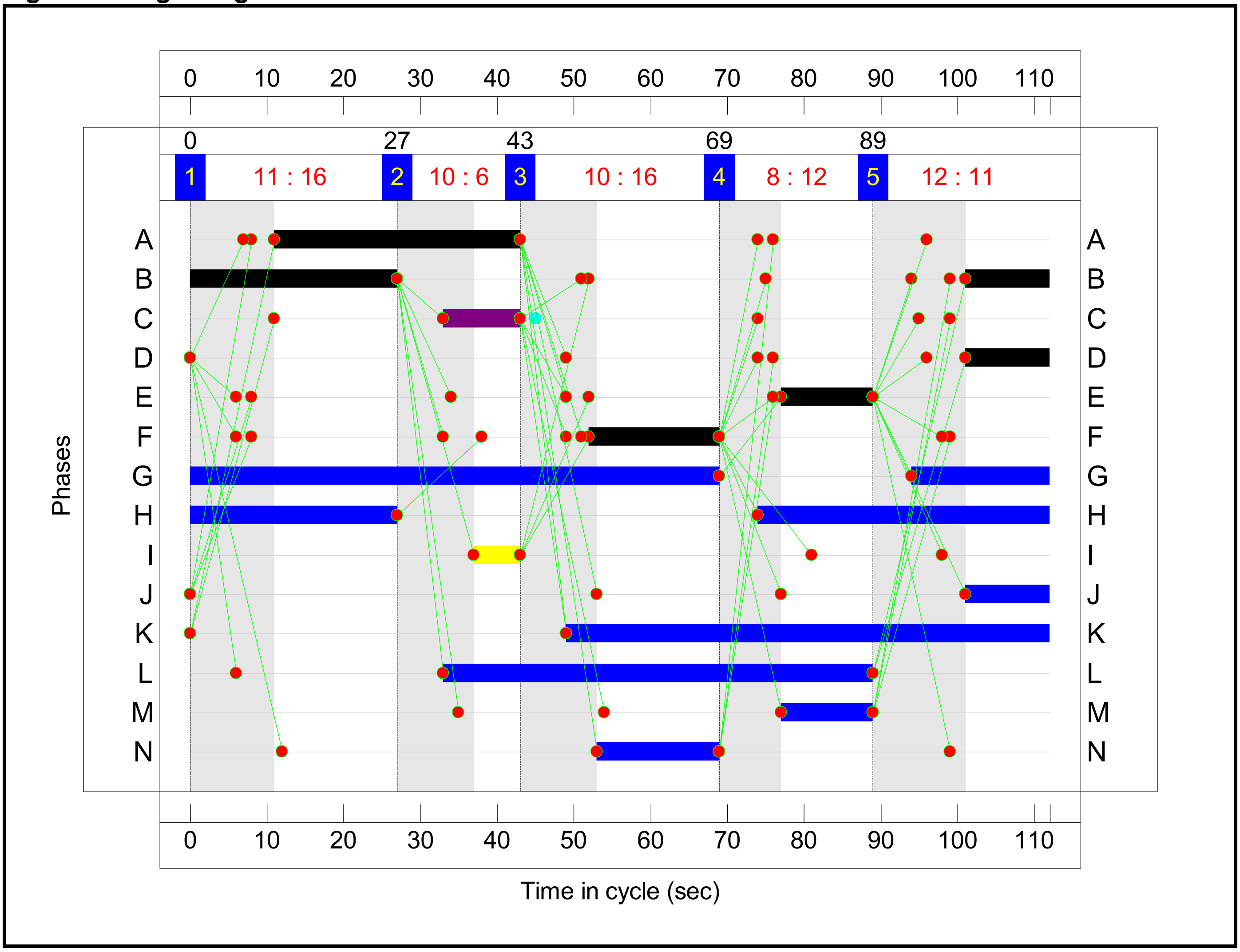
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	16	6	16	12	11
Change Point	0	27	43	69	89

Signal Timings Diagram



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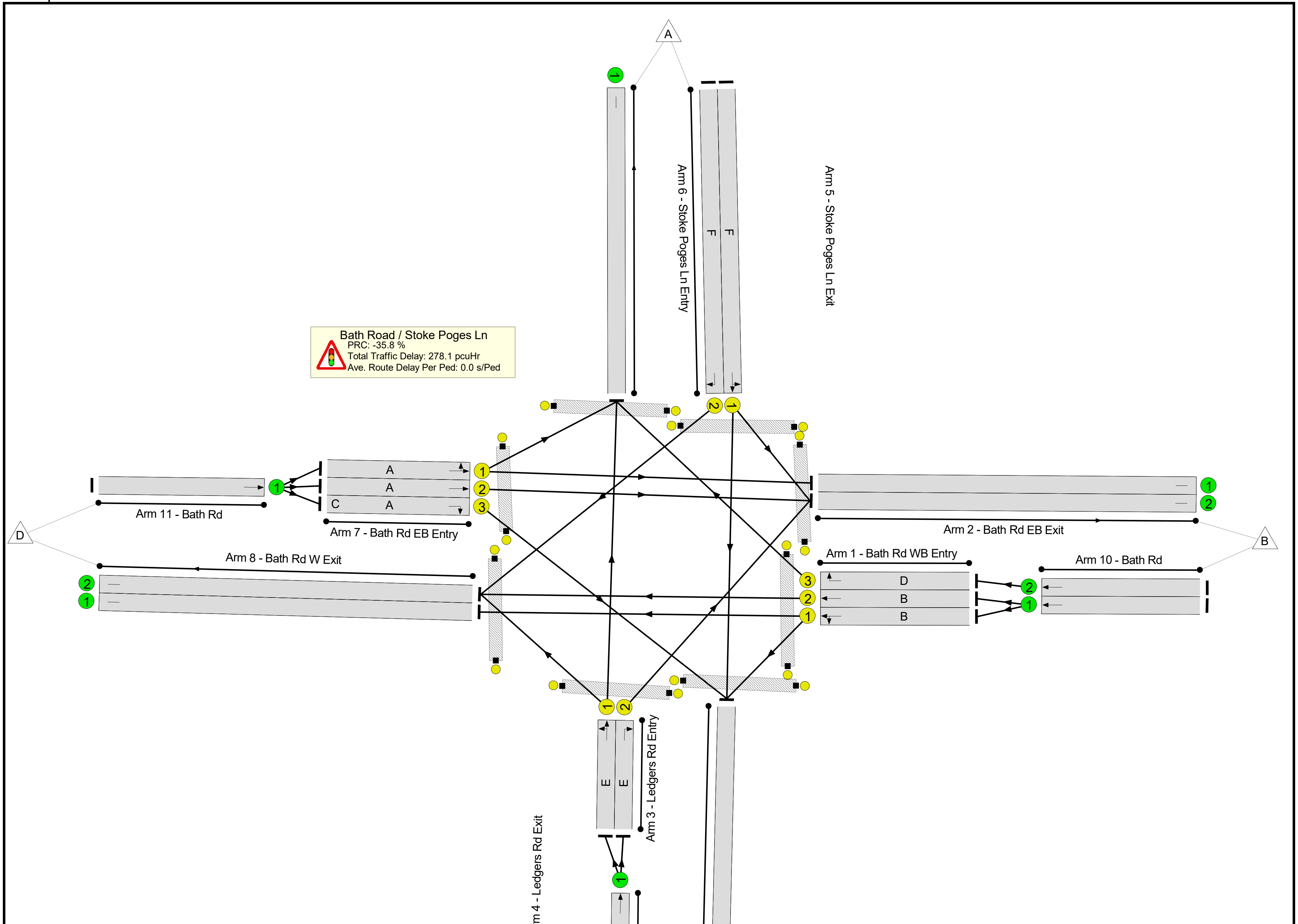
Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

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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**	-	-		-	-	-	-	-	-	**122.2%**
Bath Road / Stoke Poges Ln	-	-	**N/A**	-	-		-	-	-	-	-	-	**122.2%**
1/1	Bath Rd WB Entry Left Ahead	U	N/A	N/A	B		1	38	-	110	1899	661	16.6%
1/2	Bath Rd WB Entry Ahead	U	N/A	N/A	B		1	38	-	815	1915	667	122.2%
1/3	Bath Rd WB Entry Right	U	N/A	N/A	D		1	11	-	222	1768	189	117.2%
2/1	Bath Rd EB Exit	U	N/A	N/A	-		-	-	-	100	Inf	Inf	0.0%
2/2	Bath Rd EB Exit	U	N/A	N/A	-		-	-	-	977	Inf	Inf	0.0%
3/1	Ledgers Rd Entry Ahead Left	U	N/A	N/A	E		1	12	-	264	1915	222	118.8%
3/2	Ledgers Rd Entry Right	U	N/A	N/A	E		1	12	-	219	1807	210	104.4%
4/1	Ledgers Rd Exit	U	N/A	N/A	-		-	-	-	229	Inf	Inf	0.0%
5/1	Stoke Poges Ln Exit	U	N/A	N/A	-		-	-	-	699	Inf	Inf	0.0%
6/1	Stoke Poges Ln Entry Left Ahead	U	N/A	N/A	F		1	17	-	348	1825	293	118.6%
6/2	Stoke Poges Ln Entry Right	U	N/A	N/A	F		1	17	-	343	1781	286	119.8%
7/1	Bath Rd EB Entry Ahead Left	U	N/A	N/A	A		1	32	-	313	1738	512	61.1%
7/2	Bath Rd EB Entry Ahead	U	N/A	N/A	A		1	32	-	610	1915	564	108.1%
7/3	Bath Rd EB Entry Right	U	N/A	N/A	A	C	1	32	10	19	1717	506	3.8%
8/1	Bath Rd W Exit	U	N/A	N/A	-		-	-	-	100	Inf	Inf	0.0%
8/2	Bath Rd W Exit	U	N/A	N/A	-		-	-	-	1158	Inf	Inf	0.0%
9/1	Ledgers Rd Ahead	U	N/A	N/A	-		-	-	-	483	Inf	Inf	0.0%

Full Input Data And Results

10/1	Bath Rd Ahead	U	N/A	N/A	-		-	-	-	925	Inf	Inf	0.0%
10/2	Bath Rd Ahead	U	N/A	N/A	-		-	-	-	222	Inf	Inf	0.0%
11/1	Bath Rd Ahead	U	N/A	N/A	-		-	-	-	942	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	L		1	56	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	N		1	16	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	H		1	65	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	J		1	11	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	G		1	87	-	0	-	0	0.0%
Ped Link: P6	Unnamed Ped Link	-	N/A	-	M		1	12	-	0	-	0	0.0%
Ped Link: P7	Unnamed Ped Link	-	N/A	-	K		1	63	-	0	-	0	0.0%
Ped Link: P8	Unnamed Ped Link	-	N/A	-	I		1	6	-	0	-	0	0.0%

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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	**-**	**-**	**0**	**0**	**0**	**57.9**	**220.2**	**0.0**	**278.1**	**-**	**-**	**-**	**-**
Bath Road / Stoke Poges Ln	**-**	**-**	**0**	**0**	**0**	**57.9**	**220.2**	**0.0**	**278.1**	**-**	**-**	**-**	**-**
1/1	110	110	-	-	-	0.8	0.1	-	0.9	28.5	2.4	0.1	2.5
1/2	815	667	-	-	-	17.1	76.7	-	93.8	414.4	30.0	76.7	106.7
1/3	222	189	-	-	-	5.1	19.2	-	24.3	394.4	8.7	19.2	27.9
2/1	100	100	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	899	899	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	264	222	-	-	-	5.2	23.7	-	28.9	394.0	9.5	23.7	33.2
3/2	219	210	-	-	-	3.4	10.1	-	13.4	220.9	7.1	10.1	17.2
4/1	198	198	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	625	625	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	348	293	-	-	-	7.0	30.2	-	37.2	385.1	12.5	30.2	42.8
6/2	343	286	-	-	-	7.0	31.1	-	38.2	400.5	12.4	31.1	43.6
7/1	313	313	-	-	-	3.0	0.8	-	3.7	43.0	8.3	0.8	9.1
7/2	610	564	-	-	-	9.2	28.3	-	37.4	221.0	20.4	28.3	48.7
7/3	19	19	-	-	-	0.1	0.0	-	0.2	31.9	0.4	0.0	0.4
8/1	100	100	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	953	953	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	483	483	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	925	925	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	222	222	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	942	942	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

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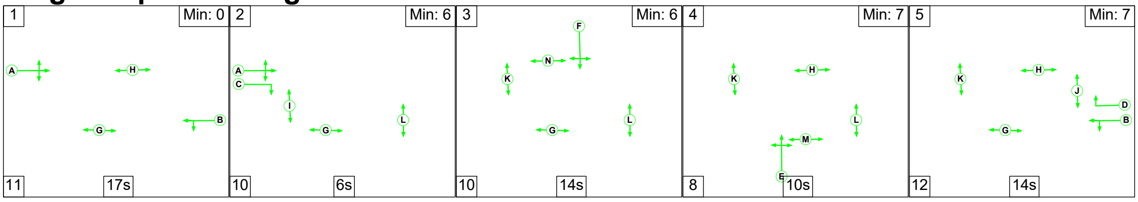
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -35.8 Total Delay for Signalled Lanes (pcuHr): 278.07 Cycle Time (s): 112
PRC Over All Lanes (%): -35.8 Total Delay Over All Lanes(pcuHr): 278.07

Full Input Data And Results

Scenario 8: 'PM DS Commercial' (FG8: 'PM DS Commercial', Plan 1: 'Network Control Plan 1')

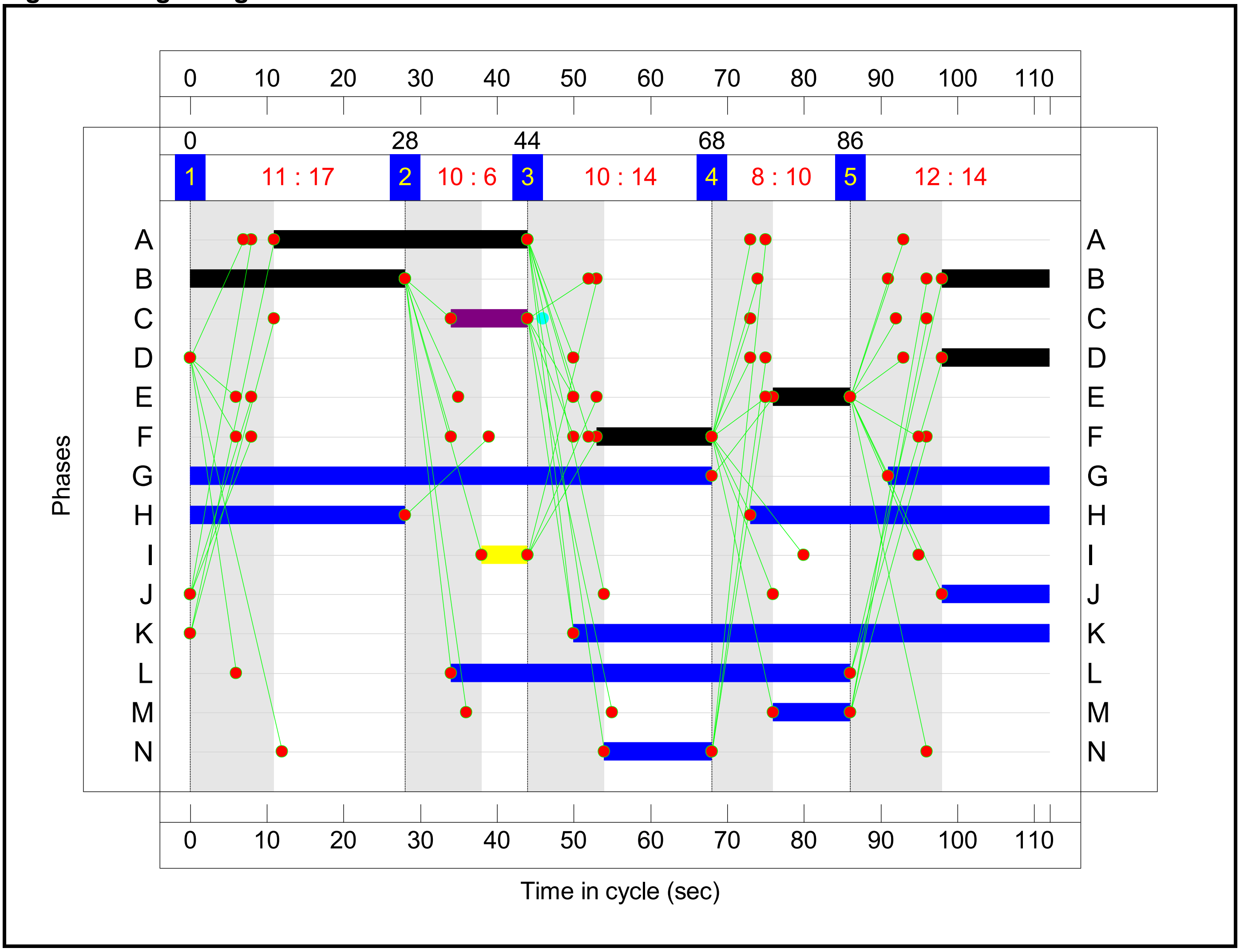
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	17	6	14	10	14
Change Point	0	28	44	68	86

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

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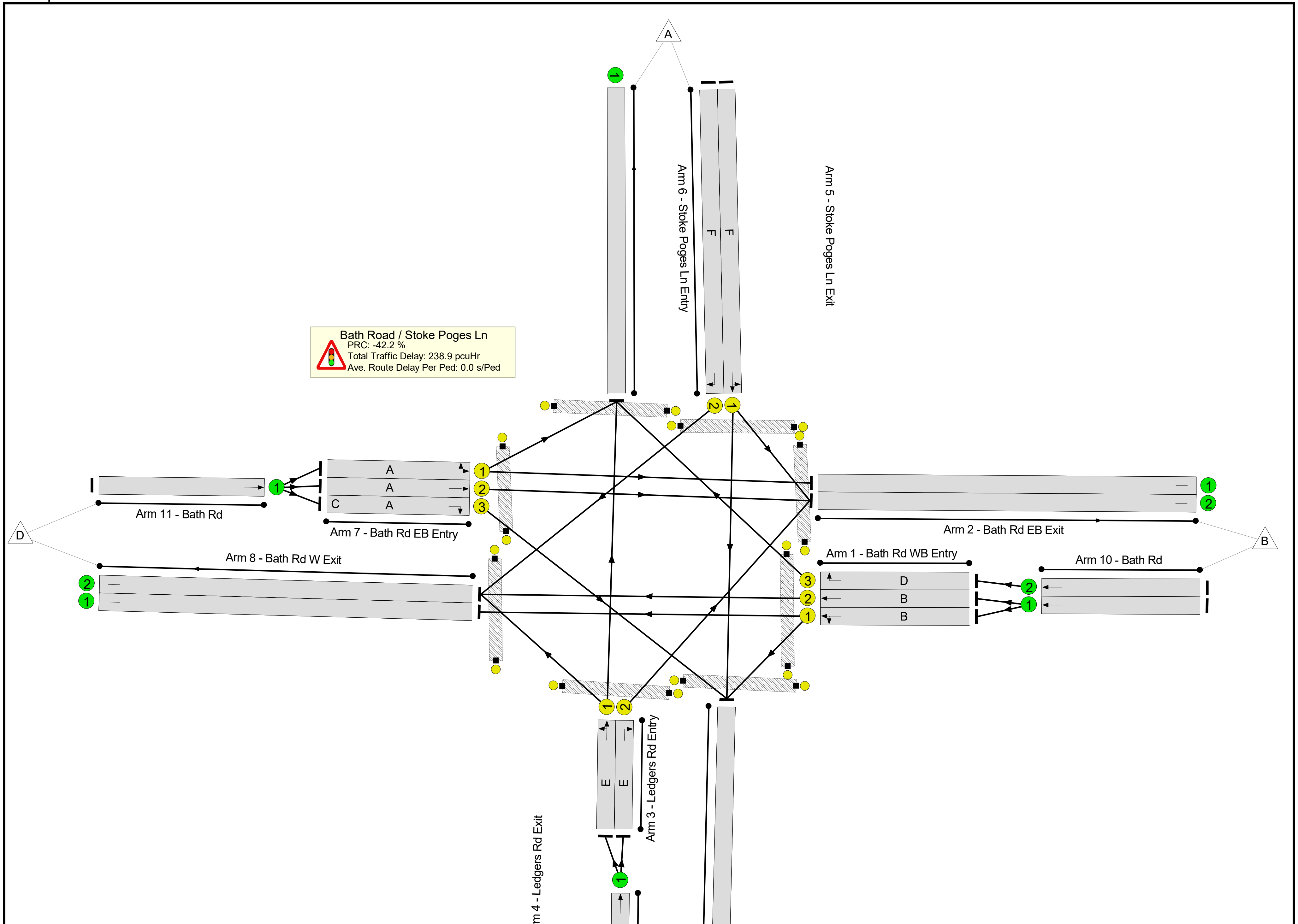
Full Input Data And Results



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Full Input Data And Results

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**	-	-		-	-	-	-	-	-	**128.0%**
Bath Road / Stoke Poges Ln	-	-	**N/A**	-	-		-	-	-	-	-	-	**128.0%**
1/1	Bath Rd WB Entry Left Ahead	U	N/A	N/A	B		1	42	-	109	1900	729	14.9%
1/2	Bath Rd WB Entry Ahead	U	N/A	N/A	B		1	42	-	717	1915	735	97.5%
1/3	Bath Rd WB Entry Right	U	N/A	N/A	D		1	14	-	286	1768	237	120.8%
2/1	Bath Rd EB Exit	U	N/A	N/A	-		-	-	-	100	Inf	Inf	0.0%
2/2	Bath Rd EB Exit	U	N/A	N/A	-		-	-	-	1017	Inf	Inf	0.0%
3/1	Ledgers Rd Entry Ahead Left	U	N/A	N/A	E		1	10	-	227	1915	188	120.7%
3/2	Ledgers Rd Entry Right	U	N/A	N/A	E		1	10	-	195	1807	177	109.9%
4/1	Ledgers Rd Exit	U	N/A	N/A	-		-	-	-	128	Inf	Inf	0.0%
5/1	Stoke Poges Ln Exit	U	N/A	N/A	-		-	-	-	757	Inf	Inf	0.0%
6/1	Stoke Poges Ln Entry Left Ahead	U	N/A	N/A	F		1	15	-	189	1828	261	72.4%
6/2	Stoke Poges Ln Entry Right	U	N/A	N/A	F		1	15	-	309	1781	254	121.4%
7/1	Bath Rd EB Entry Ahead Left	U	N/A	N/A	A		1	33	-	344	1731	525	65.5%
7/2	Bath Rd EB Entry Ahead	U	N/A	N/A	A		1	33	-	744	1915	581	128.0%
7/3	Bath Rd EB Entry Right	U	N/A	N/A	A	C	1	33	10	8	1717	521	1.5%
8/1	Bath Rd W Exit	U	N/A	N/A	-		-	-	-	100	Inf	Inf	0.0%
8/2	Bath Rd W Exit	U	N/A	N/A	-		-	-	-	1026	Inf	Inf	0.0%
9/1	Ledgers Rd Ahead	U	N/A	N/A	-		-	-	-	422	Inf	Inf	0.0%

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Full Input Data And Results

10/1	Bath Rd Ahead	U	N/A	N/A	-		-	-	-	826	Inf	Inf	0.0%
10/2	Bath Rd Ahead	U	N/A	N/A	-		-	-	-	286	Inf	Inf	0.0%
11/1	Bath Rd Ahead	U	N/A	N/A	-		-	-	-	1096	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	L		1	52	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	N		1	14	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	H		1	67	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	J		1	14	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	G		1	89	-	0	-	0	0.0%
Ped Link: P6	Unnamed Ped Link	-	N/A	-	M		1	10	-	0	-	0	0.0%
Ped Link: P7	Unnamed Ped Link	-	N/A	-	K		1	62	-	0	-	0	0.0%
Ped Link: P8	Unnamed Ped Link	-	N/A	-	I		1	6	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**51.7**	**187.2**	**0.0**	**238.9**	**-**	**-**	**-**	**-**
Bath Road / Stoke Poges Ln	**-**	**-**	**0**	**0**	**0**	**51.7**	**187.2**	**0.0**	**238.9**	**-**	**-**	**-**	**-**
1/1	109	109	-	-	-	0.7	0.1	-	0.8	25.5	2.2	0.1	2.3
1/2	717	717	-	-	-	6.8	9.6	-	16.4	82.1	21.9	9.6	31.5
1/3	286	237	-	-	-	7.0	27.2	-	34.2	430.7	11.7	27.2	39.0
2/1	100	100	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	837	837	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	227	188	-	-	-	4.7	22.0	-	26.7	424.1	8.3	22.0	30.3
3/2	195	177	-	-	-	3.4	12.6	-	16.0	296.2	6.6	12.6	19.2
4/1	128	128	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	669	669	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	189	189	-	-	-	2.4	1.3	-	3.7	70.0	5.6	1.3	6.9
6/2	309	254	-	-	-	6.6	29.9	-	36.4	424.5	11.3	29.9	41.2
7/1	344	344	-	-	-	3.2	0.9	-	4.2	43.7	9.3	0.9	10.2
7/2	744	581	-	-	-	16.8	83.6	-	100.4	485.8	28.2	83.6	111.8
7/3	8	8	-	-	-	0.1	0.0	-	0.1	31.0	0.2	0.0	0.2
8/1	100	100	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	971	971	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	422	422	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	826	826	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	286	286	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	1096	1096	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

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Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -42.2 Total Delay for Signalled Lanes (pcuHr): 238.90 Cycle Time (s): 112
PRC Over All Lanes (%): -42.2 Total Delay Over All Lanes(pcuHr): 238.90

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Full Input Data And Results

User and Project Details

Project:	
Title:	
Location:	
Additional detail:	
File name:	Windsor Rd_Herschel St.lsg3x
Author:	
Company:	
Address:	

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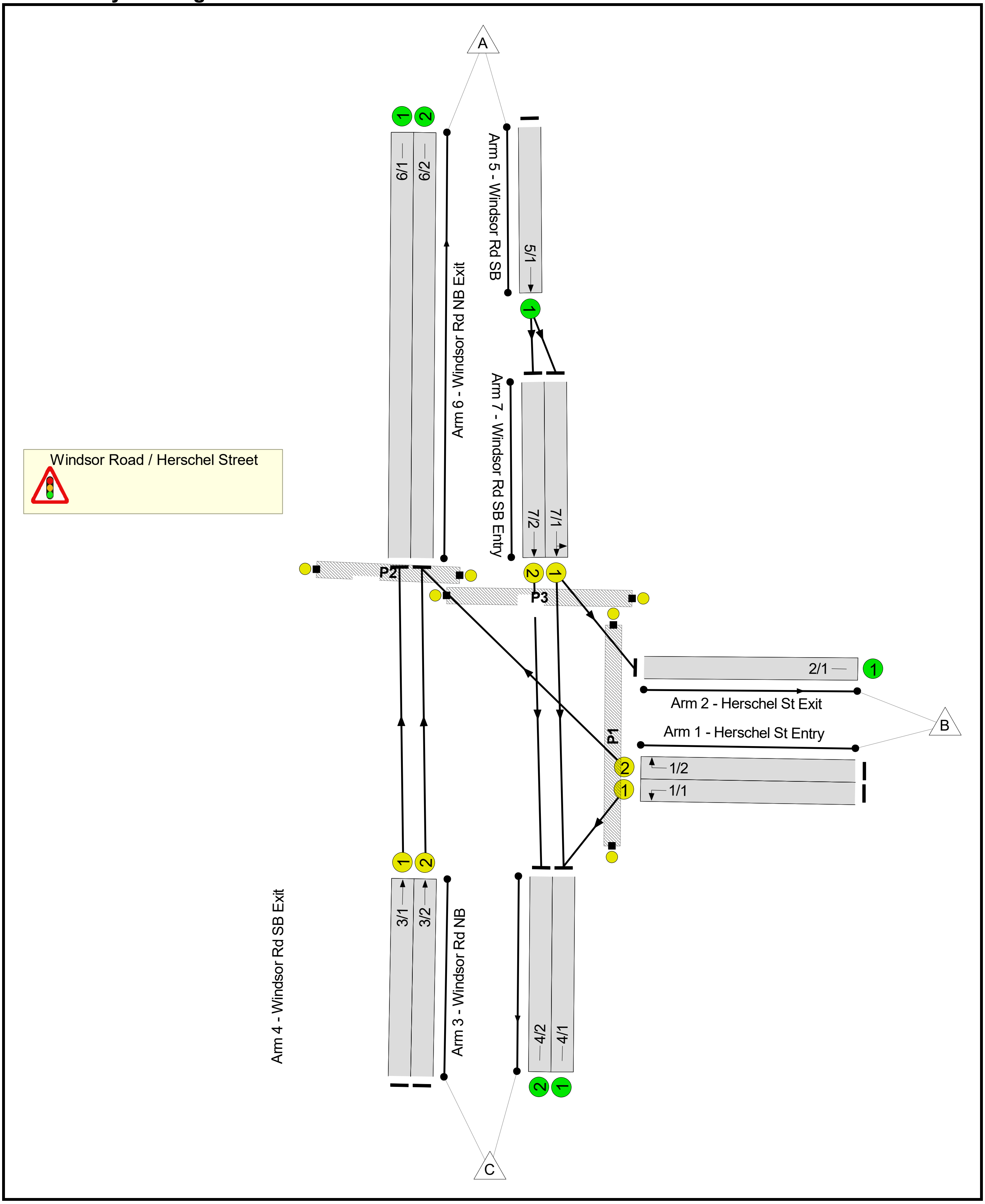
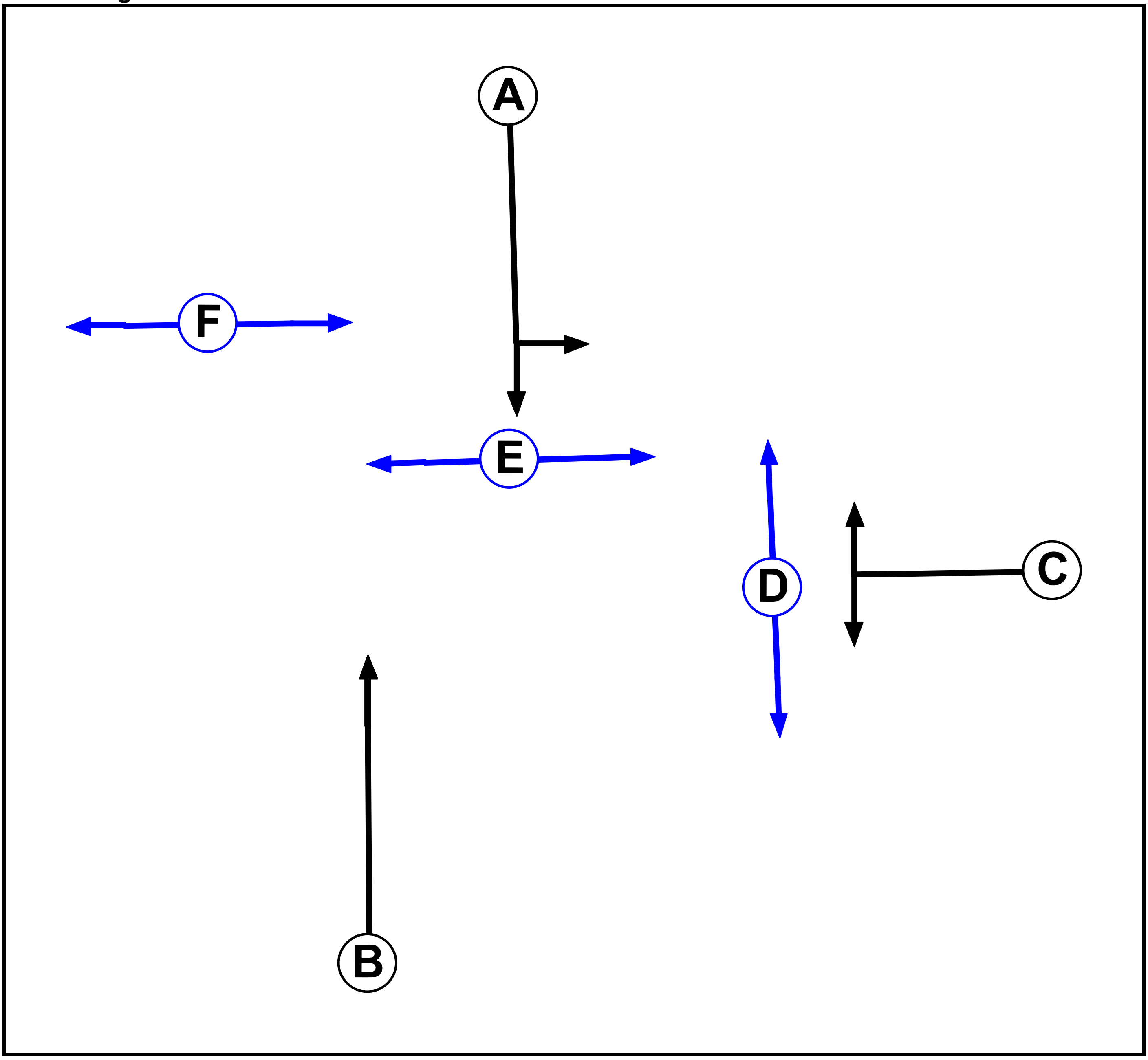
Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Phase Input Data

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

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Full Input Data And Results

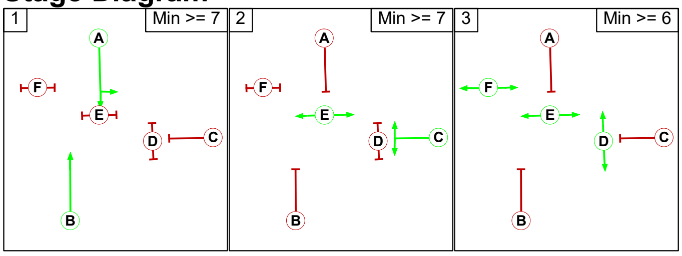
Phase Intergreens Matrix

	Starting Phase						
Terminating Phase		A	B	C	D	E	F
	A		-	6	8	5	-
	B	-		5	-	-	9
	C	5	5		5	-	9
	D	11	-	11		-	-
	E	8	-	-	-		-
	F	-	8	8	-	-	

Phases in Stage

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

Stage Diagram



Phase Delays

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

Prohibited Stage Change

	To Stage			
From Stage		1	2	3
	1		6	9
	2	8		9
	3	11	11	

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Full Input Data And Results

Give-Way Lane Input Data

Junction: Windsor Road / Herschel Street
There are no Opposed Lanes in this Junction

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Lane Input Data

Junction: Windsor Road / Herschel Street												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
1/1 (Herschel St Entry)	U	C	2	3	4.2	Geom	-	2.85	0.00	Y	Arm 4 Left	10.50
1/2 (Herschel St Entry)	U	C	2	3	4.2	Geom	-	2.85	0.00	Y	Arm 6 Right	12.00
2/1 (Herschel St Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
3/1 (Windsor Rd NB)	U	B	2	3	15.0	Geom	-	2.75	0.00	Y	Arm 6 Ahead	Inf
3/2 (Windsor Rd NB)	U	B	2	3	15.0	Geom	-	2.75	0.00	Y	Arm 6 Ahead	Inf
4/1 (Windsor Rd SB Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
4/2 (Windsor Rd SB Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Windsor Rd SB)	U		2	3	11.5	Inf	-	-	-	-	-	-
6/1 (Windsor Rd NB Exit)	U		2	3	16.7	Inf	-	-	-	-	-	-
6/2 (Windsor Rd NB Exit)	U		2	3	16.7	Inf	-	-	-	-	-	-
7/1 (Windsor Rd SB Entry)	U	A	2	3	6.1	Geom	-	3.00	0.00	Y	Arm 2 Left	15.00
											Arm 4 Ahead	Inf
7/2 (Windsor Rd SB Entry)	U	A	2	3	6.1	Geom	-	3.00	0.00	Y	Arm 4 Ahead	Inf

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM Base'	08:00	09:00	01:00	
2: 'PM Base'	17:00	18:00	01:00	
3: 'AM DM'	08:00	09:00	01:00	
4: 'PM DM'	17:00	18:00	01:00	
5: 'AM DS Residential'	08:00	09:00	01:00	
6: 'PM DS Residential'	17:00	18:00	01:00	
7: 'AM DS Commercial'	08:00	09:00	01:00	
8: 'PM DS Commercial'	17:00	18:00	01:00	

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

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	239	415	654
	B	268	0	54	322
	C	332	0	0	332
	Tot.	600	239	469	1308

Traffic Lane Flows

Lane	Scenario 1: AM Base
Junction: Windsor Road / Herschel Street	
1/1	54
1/2	268
2/1	239
3/1	166
3/2	166
4/1	123
4/2	346
5/1	654
6/1	166
6/2	434
7/1	308
7/2	346

Full Input Data And Results

Lane Saturation Flows

Junction: Windsor Road / Herschel Street								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Herschel St Entry)	2.85	0.00	Y	Arm 4 Left	10.50	100.0 %	1663	1663
1/2 (Herschel St Entry)	2.85	0.00	Y	Arm 6 Right	12.00	100.0 %	1689	1689
2/1 (Herschel St Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (Windsor Rd NB)	2.75	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1890	1890
3/2 (Windsor Rd NB)	2.75	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1890	1890
4/1 (Windsor Rd SB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (Windsor Rd SB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (Windsor Rd SB Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Windsor Rd NB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (Windsor Rd NB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Windsor Rd SB Entry)	3.00	0.00	Y	Arm 2 Left	15.00	77.6 %	1777	1777
				Arm 4 Ahead	Inf	22.4 %		
7/2 (Windsor Rd SB Entry)	3.00	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1915	1915

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

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	271	240	511
	B	282	0	90	372
	C	320	0	0	320
	Tot.	602	271	330	1203

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Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: PM Base
Junction: Windsor Road / Herschel Street	
1/1	90
1/2	282
2/1	271
3/1	160
3/2	160
4/1	90
4/2	240
5/1	511
6/1	160
6/2	442
7/1	271
7/2	240

Lane Saturation Flows

Junction: Windsor Road / Herschel Street								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Herschel St Entry)	2.85	0.00	Y	Arm 4 Left	10.50	100.0 %	1663	1663
1/2 (Herschel St Entry)	2.85	0.00	Y	Arm 6 Right	12.00	100.0 %	1689	1689
2/1 (Herschel St Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (Windsor Rd NB)	2.75	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1890	1890
3/2 (Windsor Rd NB)	2.75	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1890	1890
4/1 (Windsor Rd SB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (Windsor Rd SB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (Windsor Rd SB Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Windsor Rd NB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (Windsor Rd NB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Windsor Rd SB Entry)	3.00	0.00	Y	Arm 2 Left	15.00	100.0 %	1741	1741
				Arm 4 Ahead	Inf	0.0 %		
7/2 (Windsor Rd SB Entry)	3.00	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1915	1915

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Full Input Data And Results

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

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	397	415	812
	B	300	0	59	359
	C	354	0	0	354
	Tot.	654	397	474	1525

Traffic Lane Flows

Lane	Scenario 3: AM DM
Junction: Windsor Road / Herschel Street	
1/1	59
1/2	300
2/1	397
3/1	177
3/2	177
4/1	59
4/2	415
5/1	812
6/1	177
6/2	477
7/1	397
7/2	415

Full Input Data And Results

Lane Saturation Flows

Junction: Windsor Road / Herschel Street								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Herschel St Entry)	2.85	0.00	Y	Arm 4 Left	10.50	100.0 %	1663	1663
1/2 (Herschel St Entry)	2.85	0.00	Y	Arm 6 Right	12.00	100.0 %	1689	1689
2/1 (Herschel St Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (Windsor Rd NB)	2.75	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1890	1890
3/2 (Windsor Rd NB)	2.75	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1890	1890
4/1 (Windsor Rd SB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (Windsor Rd SB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (Windsor Rd SB Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Windsor Rd NB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (Windsor Rd NB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Windsor Rd SB Entry)	3.00	0.00	Y	Arm 2 Left	15.00	100.0 %	1741	1741
				Arm 4 Ahead	Inf	0.0 %		
7/2 (Windsor Rd SB Entry)	3.00	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1915	1915

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

Traffic Flows, Desired

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	432	495	927
	B	320	0	41	361
	C	394	0	0	394
	Tot.	714	432	536	1682

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Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: PM DM
Junction: Windsor Road / Herschel Street	
1/1	41
1/2	320
2/1	432
3/1	197
3/2	197
4/1	45
4/2	491
5/1	927
6/1	197
6/2	517
7/1	436
7/2	491

Lane Saturation Flows

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
Junction: Windsor Road / Herschel Street								
1/1 (Herschel St Entry)	2.85	0.00	Y	Arm 4 Left	10.50	100.0 %	1663	1663
1/2 (Herschel St Entry)	2.85	0.00	Y	Arm 6 Right	12.00	100.0 %	1689	1689
2/1 (Herschel St Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (Windsor Rd NB)	2.75	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1890	1890
3/2 (Windsor Rd NB)	2.75	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1890	1890
4/1 (Windsor Rd SB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (Windsor Rd SB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (Windsor Rd SB Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Windsor Rd NB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (Windsor Rd NB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Windsor Rd SB Entry)	3.00	0.00	Y	Arm 2 Left	15.00	99.1 %	1742	1742
				Arm 4 Ahead	Inf	0.9 %		
7/2 (Windsor Rd SB Entry)	3.00	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1915	1915

Full Input Data And Results

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

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	407	428	835
	B	300	0	59	359
	C	346	0	0	346
	Tot.	646	407	487	1540

Traffic Lane Flows

Lane	Scenario 5: AM DS Residential
Junction: Windsor Road / Herschel Street	
1/1	59
1/2	300
2/1	407
3/1	173
3/2	173
4/1	59
4/2	428
5/1	835
6/1	173
6/2	473
7/1	407
7/2	428

Full Input Data And Results

Lane Saturation Flows

Junction: Windsor Road / Herschel Street								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Herschel St Entry)	2.85	0.00	Y	Arm 4 Left	10.50	100.0 %	1663	1663
1/2 (Herschel St Entry)	2.85	0.00	Y	Arm 6 Right	12.00	100.0 %	1689	1689
2/1 (Herschel St Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (Windsor Rd NB)	2.75	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1890	1890
3/2 (Windsor Rd NB)	2.75	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1890	1890
4/1 (Windsor Rd SB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (Windsor Rd SB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (Windsor Rd SB Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Windsor Rd NB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (Windsor Rd NB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Windsor Rd SB Entry)	3.00	0.00	Y	Arm 2 Left	15.00	100.0 %	1741	1741
				Arm 4 Ahead	Inf	0.0 %		
7/2 (Windsor Rd SB Entry)	3.00	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1915	1915

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

Traffic Flows, Desired

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	362	360	722
	B	321	0	41	362
	C	406	0	0	406
	Tot.	727	362	401	1490

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Traffic Lane Flows

Lane	Scenario 6: PM DS Residential
Junction: Windsor Road / Herschel Street	
1/1	41
1/2	321
2/1	362
3/1	203
3/2	203
4/1	41
4/2	360
5/1	722
6/1	203
6/2	524
7/1	362
7/2	360

Lane Saturation Flows

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
Junction: Windsor Road / Herschel Street								
1/1 (Herschel St Entry)	2.85	0.00	Y	Arm 4 Left	10.50	100.0 %	1663	1663
1/2 (Herschel St Entry)	2.85	0.00	Y	Arm 6 Right	12.00	100.0 %	1689	1689
2/1 (Herschel St Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (Windsor Rd NB)	2.75	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1890	1890
3/2 (Windsor Rd NB)	2.75	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1890	1890
4/1 (Windsor Rd SB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (Windsor Rd SB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (Windsor Rd SB Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Windsor Rd NB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (Windsor Rd NB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Windsor Rd SB Entry)	3.00	0.00	Y	Arm 2 Left	15.00	100.0 %	1741	1741
				Arm 4 Ahead	Inf	0.0 %		
7/2 (Windsor Rd SB Entry)	3.00	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1915	1915

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Scenario 7: 'AM DS Commercial' (FG7: 'AM DS Commercial', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	405	422	827
	B	301	0	59	360
	C	355	0	0	355
	Tot.	656	405	481	1542

Traffic Lane Flows

Lane	Scenario 7: AM DS Commercial
Junction: Windsor Road / Herschel Street	
1/1	59
1/2	301
2/1	405
3/1	177
3/2	178
4/1	59
4/2	422
5/1	827
6/1	177
6/2	479
7/1	405
7/2	422

Full Input Data And Results

Lane Saturation Flows

Junction: Windsor Road / Herschel Street								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Herschel St Entry)	2.85	0.00	Y	Arm 4 Left	10.50	100.0 %	1663	1663
1/2 (Herschel St Entry)	2.85	0.00	Y	Arm 6 Right	12.00	100.0 %	1689	1689
2/1 (Herschel St Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (Windsor Rd NB)	2.75	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1890	1890
3/2 (Windsor Rd NB)	2.75	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1890	1890
4/1 (Windsor Rd SB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (Windsor Rd SB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (Windsor Rd SB Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Windsor Rd NB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (Windsor Rd NB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Windsor Rd SB Entry)	3.00	0.00	Y	Arm 2 Left	15.00	100.0 %	1741	1741
				Arm 4 Ahead	Inf	0.0 %		
7/2 (Windsor Rd SB Entry)	3.00	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1915	1915

Scenario 8: 'PM DS Commercial' (FG8: 'PM DS Commercial', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	375	365	740
	B	316	0	41	357
	C	408	0	0	408
	Tot.	724	375	406	1505

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Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 8: PM DS Commercial
Junction: Windsor Road / Herschel Street	
1/1	41
1/2	316
2/1	375
3/1	204
3/2	204
4/1	41
4/2	365
5/1	740
6/1	204
6/2	520
7/1	375
7/2	365

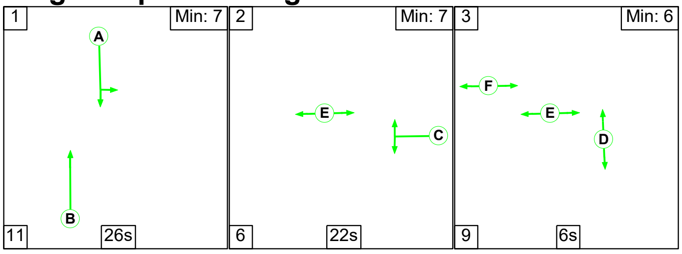
Lane Saturation Flows

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
Junction: Windsor Road / Herschel Street								
1/1 (Herschel St Entry)	2.85	0.00	Y	Arm 4 Left	10.50	100.0 %	1663	1663
1/2 (Herschel St Entry)	2.85	0.00	Y	Arm 6 Right	12.00	100.0 %	1689	1689
2/1 (Herschel St Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (Windsor Rd NB)	2.75	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1890	1890
3/2 (Windsor Rd NB)	2.75	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1890	1890
4/1 (Windsor Rd SB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (Windsor Rd SB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (Windsor Rd SB Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Windsor Rd NB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (Windsor Rd NB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Windsor Rd SB Entry)	3.00	0.00	Y	Arm 2 Left	15.00	100.0 %	1741	1741
				Arm 4 Ahead	Inf	0.0 %		
7/2 (Windsor Rd SB Entry)	3.00	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1915	1915

Full Input Data And Results

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

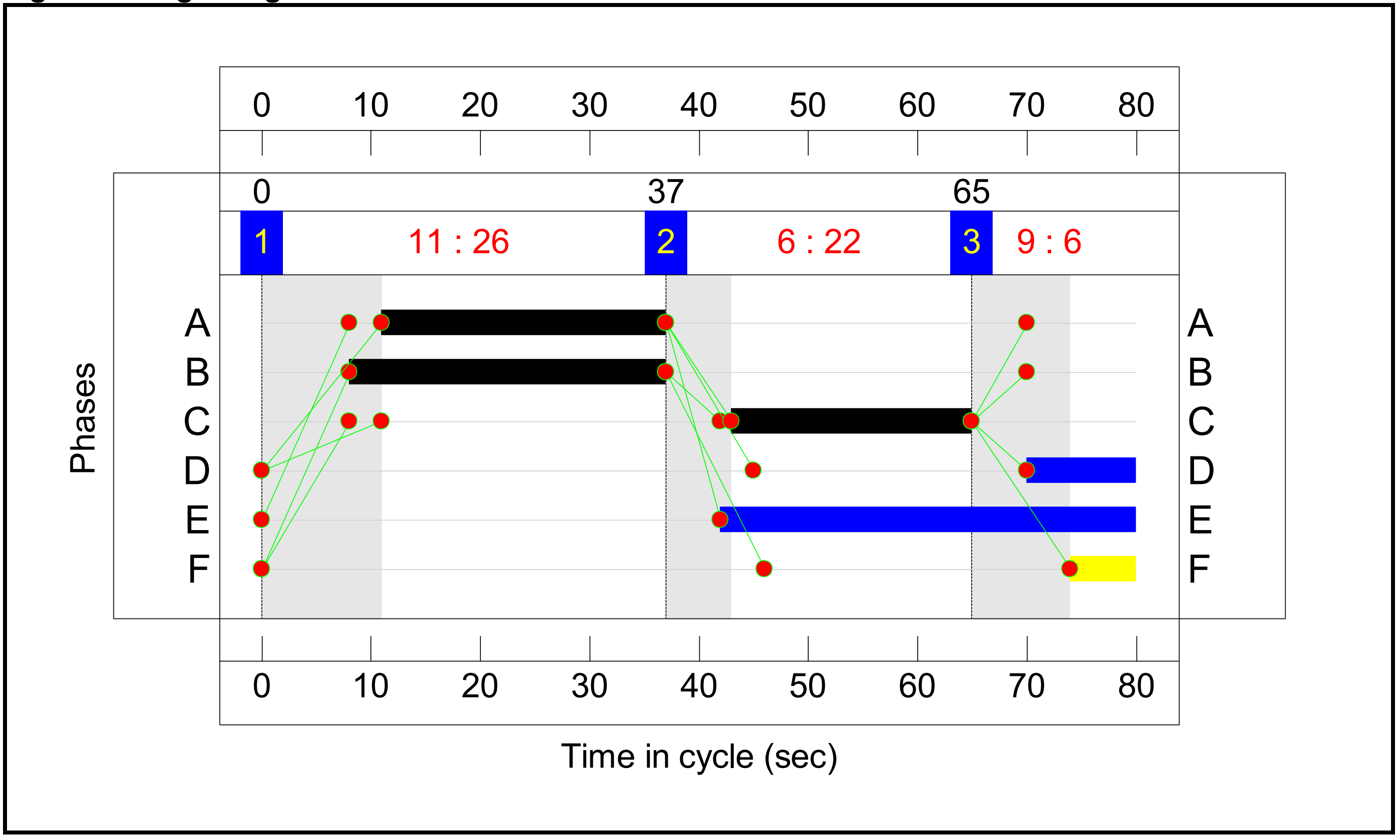
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	26	22	6
Change Point	0	37	65

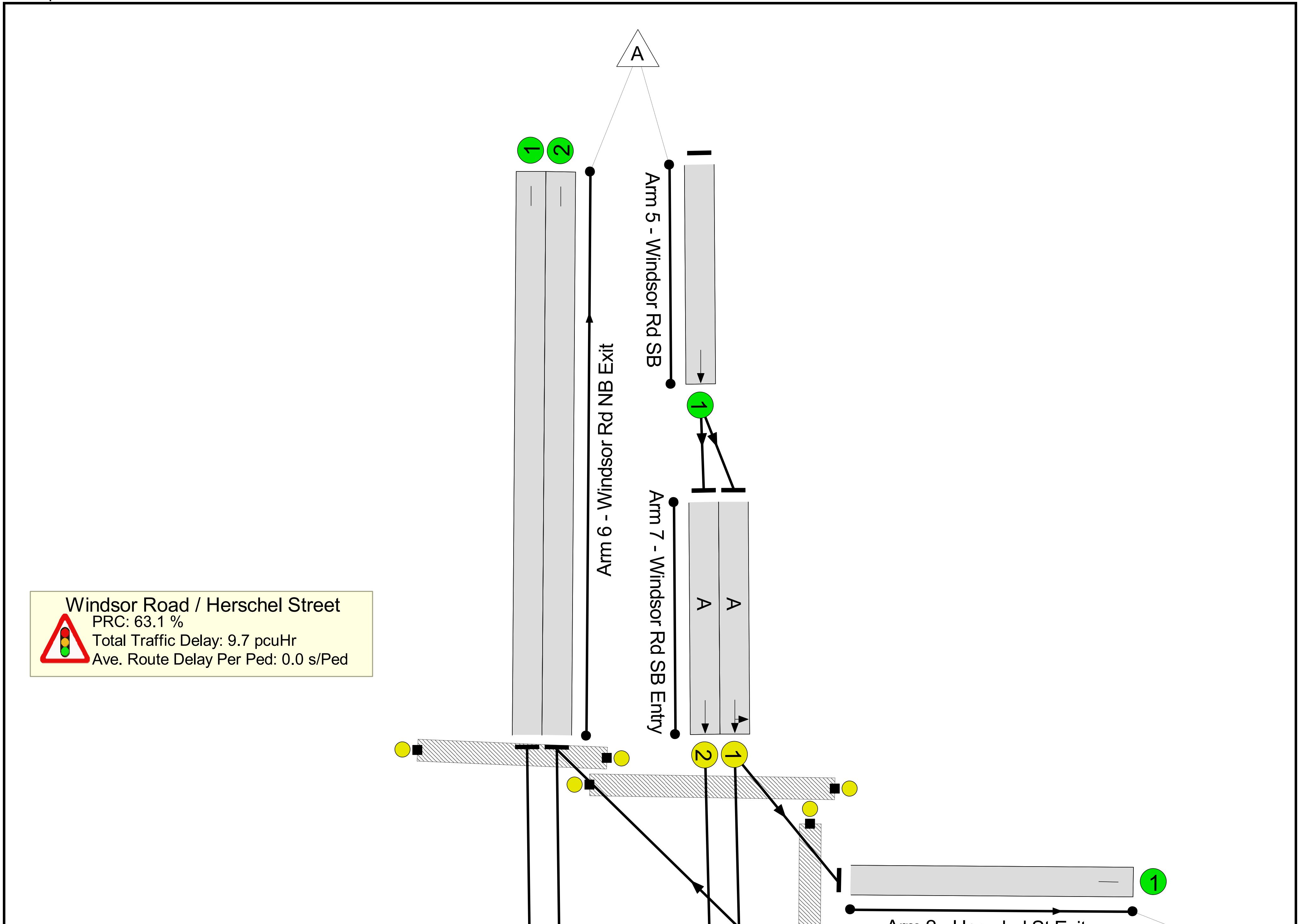
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

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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**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**55.2%**
Windsor Road / Herschel Street	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**55.2%**
1/1	Herschel St Entry Left	U	N/A	N/A	C		1	22	-	54	1663	478	11.3%
1/2	Herschel St Entry Right	U	N/A	N/A	C		1	22	-	268	1689	486	55.2%
2/1	Herschel St Exit	U	N/A	N/A	-		-	-	-	239	Inf	Inf	0.0%
3/1	Windsor Rd NB Ahead	U	N/A	N/A	B		1	29	-	166	1890	709	23.4%
3/2	Windsor Rd NB Ahead	U	N/A	N/A	B		1	29	-	166	1890	709	23.4%
4/1	Windsor Rd SB Exit	U	N/A	N/A	-		-	-	-	123	Inf	Inf	0.0%
4/2	Windsor Rd SB Exit	U	N/A	N/A	-		-	-	-	346	Inf	Inf	0.0%
5/1	Windsor Rd SB Ahead	U	N/A	N/A	-		-	-	-	654	Inf	Inf	0.0%
6/1	Windsor Rd NB Exit	U	N/A	N/A	-		-	-	-	166	Inf	Inf	0.0%
6/2	Windsor Rd NB Exit	U	N/A	N/A	-		-	-	-	434	Inf	Inf	0.0%
7/1	Windsor Rd SB Entry Left Ahead	U	N/A	N/A	A		1	26	-	308	1777	600	51.4%
7/2	Windsor Rd SB Entry Ahead	U	N/A	N/A	A		1	26	-	346	1915	646	53.5%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	D		1	10	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	F		1	6	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	38	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**7.6**	**2.1**	**0.0**	**9.7**	**-**	**-**	**-**	**-**
Windsor Road / Herschel Street	**-**	**-**	**0**	**0**	**0**	**7.6**	**2.1**	**0.0**	**9.7**	**-**	**-**	**-**	**-**
1/1	54	54	-	-	-	0.3	0.1	-	0.4	25.2	0.9	0.1	0.9
1/2	268	268	-	-	-	1.8	0.6	-	2.4	32.4	5.0	0.6	5.6
2/1	239	239	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	166	166	-	-	-	0.8	0.2	-	0.9	20.5	2.5	0.2	2.6
3/2	166	166	-	-	-	0.8	0.2	-	0.9	20.5	2.5	0.2	2.6
4/1	123	123	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	346	346	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	654	654	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	166	166	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	434	434	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	308	308	-	-	-	1.8	0.5	-	2.3	27.4	5.5	0.5	6.0
7/2	346	346	-	-	-	2.1	0.6	-	2.6	27.4	6.2	0.6	6.7
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 63.1 Total Delay for Signalled Lanes (pcuHr): 9.65 Cycle Time (s): 80
PRC Over All Lanes (%): 63.1 Total Delay Over All Lanes(pcuHr): 9.65

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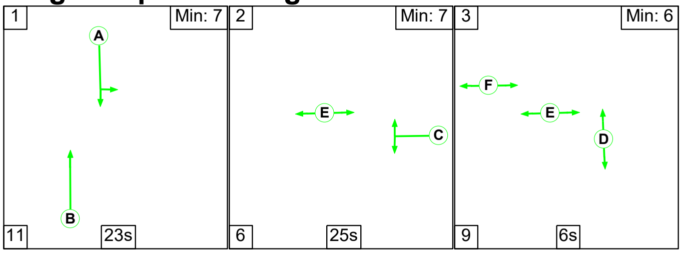
Scenario 2: 'PM Base' (FG2: 'PM Base', Plan 1: 'Network Control Plan 1')

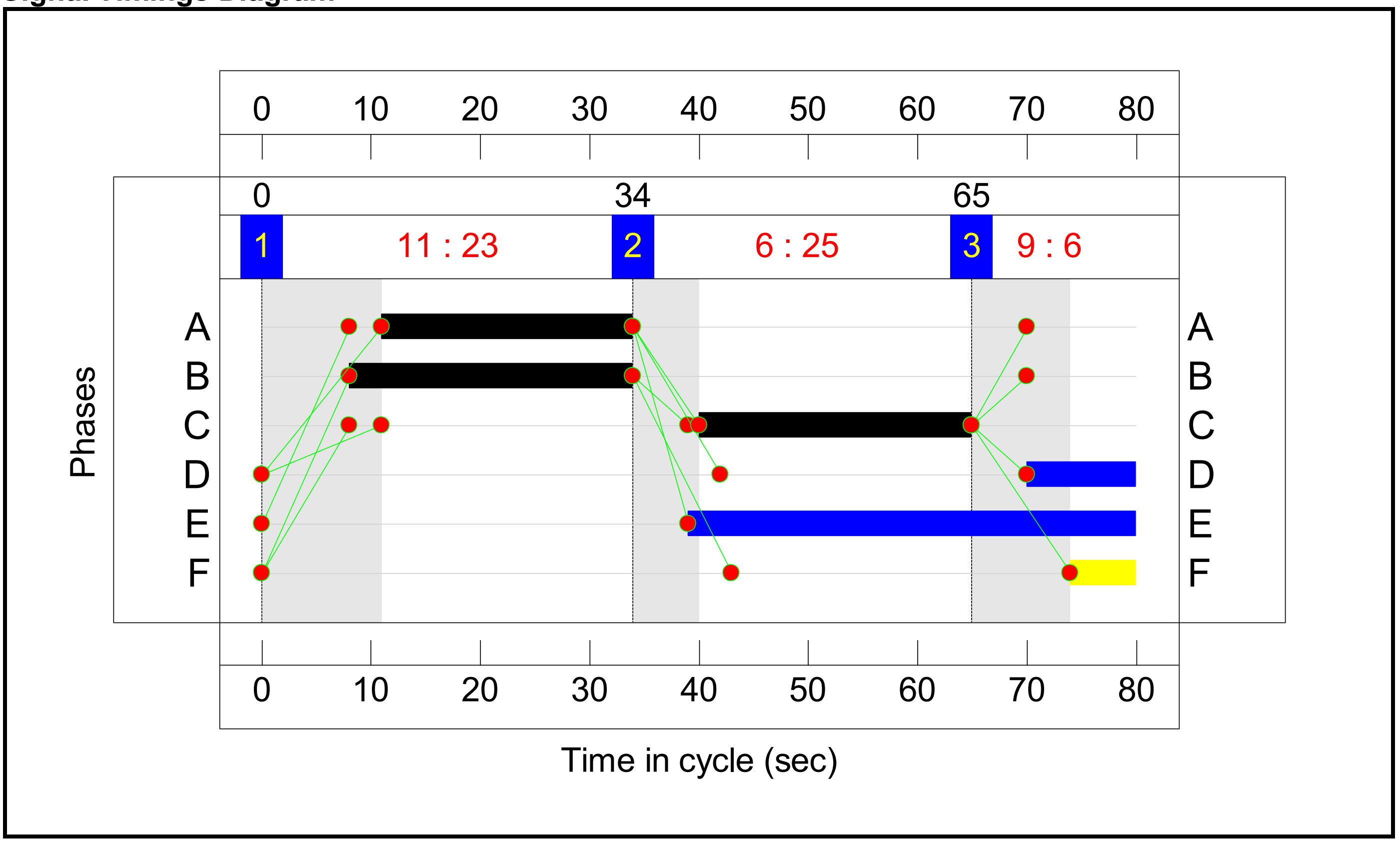
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	23	25	6
Change Point	0	34	65

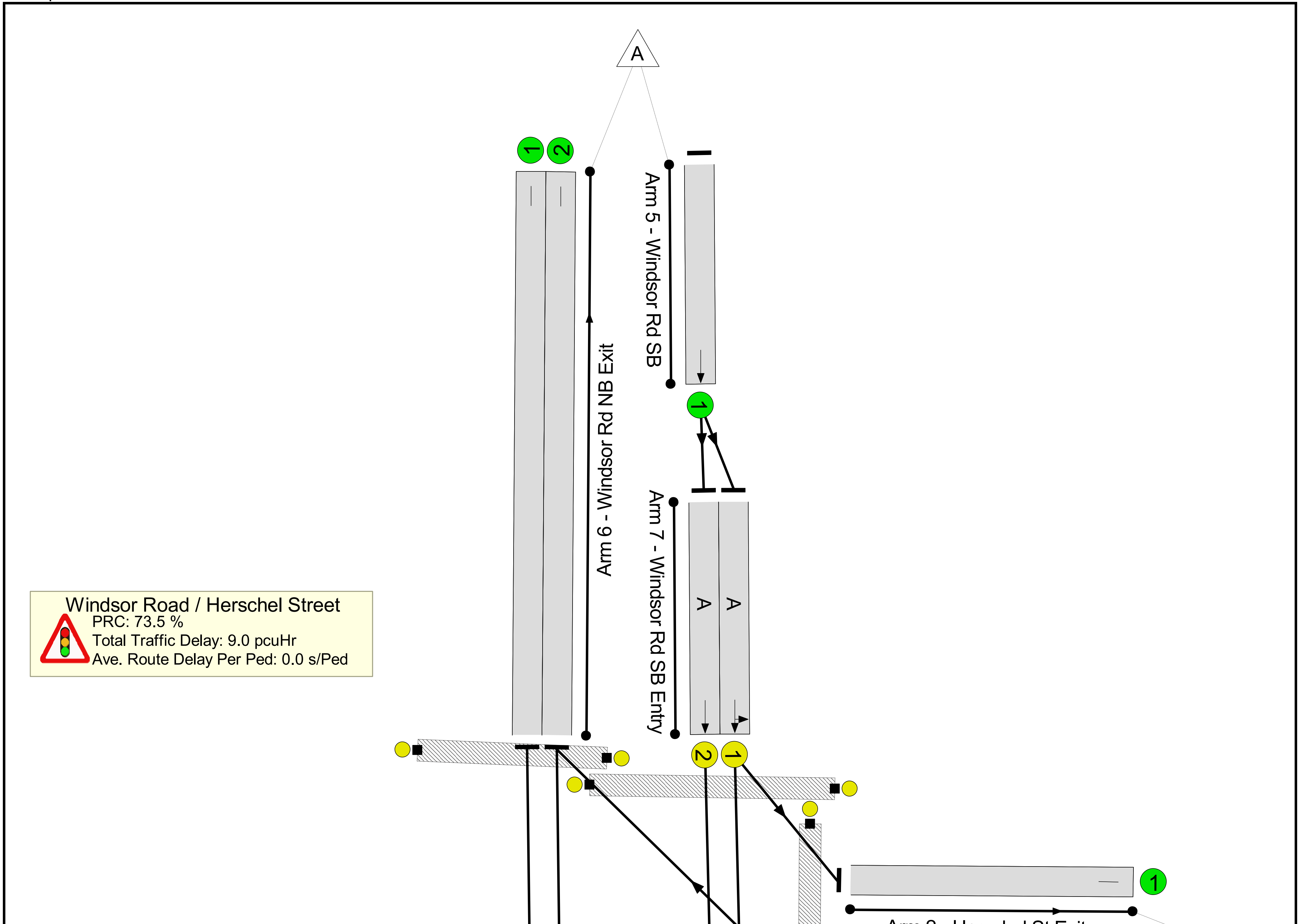
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



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Full Input Data And Results

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**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**51.9%**
Windsor Road / Herschel Street	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**51.9%**
1/1	Herschel St Entry Left	U	N/A	N/A	C		1	25	-	90	1663	540	16.7%
1/2	Herschel St Entry Right	U	N/A	N/A	C		1	25	-	282	1689	549	51.4%
2/1	Herschel St Exit	U	N/A	N/A	-		-	-	-	271	Inf	Inf	0.0%
3/1	Windsor Rd NB Ahead	U	N/A	N/A	B		1	26	-	160	1890	638	25.1%
3/2	Windsor Rd NB Ahead	U	N/A	N/A	B		1	26	-	160	1890	638	25.1%
4/1	Windsor Rd SB Exit	U	N/A	N/A	-		-	-	-	90	Inf	Inf	0.0%
4/2	Windsor Rd SB Exit	U	N/A	N/A	-		-	-	-	240	Inf	Inf	0.0%
5/1	Windsor Rd SB Ahead	U	N/A	N/A	-		-	-	-	511	Inf	Inf	0.0%
6/1	Windsor Rd NB Exit	U	N/A	N/A	-		-	-	-	160	Inf	Inf	0.0%
6/2	Windsor Rd NB Exit	U	N/A	N/A	-		-	-	-	442	Inf	Inf	0.0%
7/1	Windsor Rd SB Entry Left Ahead	U	N/A	N/A	A		1	23	-	271	1741	522	51.9%
7/2	Windsor Rd SB Entry Ahead	U	N/A	N/A	A		1	23	-	240	1915	574	41.8%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	D		1	10	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	F		1	6	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	41	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**7.1**	**1.9**	**0.0**	**9.0**	**-**	**-**	**-**	**-**
Windsor Road / Herschel Street	**-**	**-**	**0**	**0**	**0**	**7.1**	**1.9**	**0.0**	**9.0**	**-**	**-**	**-**	**-**
1/1	90	90	-	-	-	0.5	0.1	-	0.6	23.3	1.4	0.1	1.5
1/2	282	282	-	-	-	1.7	0.5	-	2.2	28.6	5.0	0.5	5.5
2/1	271	271	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	160	160	-	-	-	0.9	0.2	-	1.0	23.0	2.5	0.2	2.7
3/2	160	160	-	-	-	0.9	0.2	-	1.0	23.0	2.5	0.2	2.7
4/1	90	90	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	240	240	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	511	511	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	160	160	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	442	442	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	271	271	-	-	-	1.7	0.5	-	2.3	30.4	5.0	0.5	5.5
7/2	240	240	-	-	-	1.5	0.4	-	1.9	27.8	4.3	0.4	4.6
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 73.5 Total Delay for Signalled Lanes (pcuHr): 9.00 Cycle Time (s): 80
PRC Over All Lanes (%): 73.5 Total Delay Over All Lanes(pcuHr): 9.00

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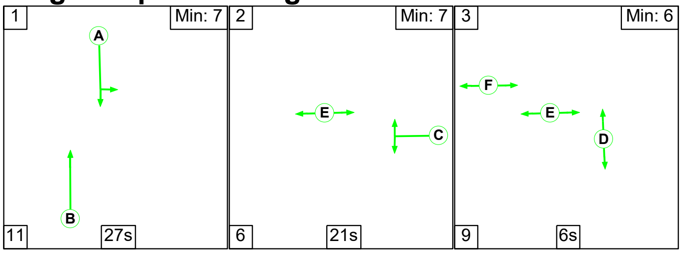
Full Input Data And Results

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

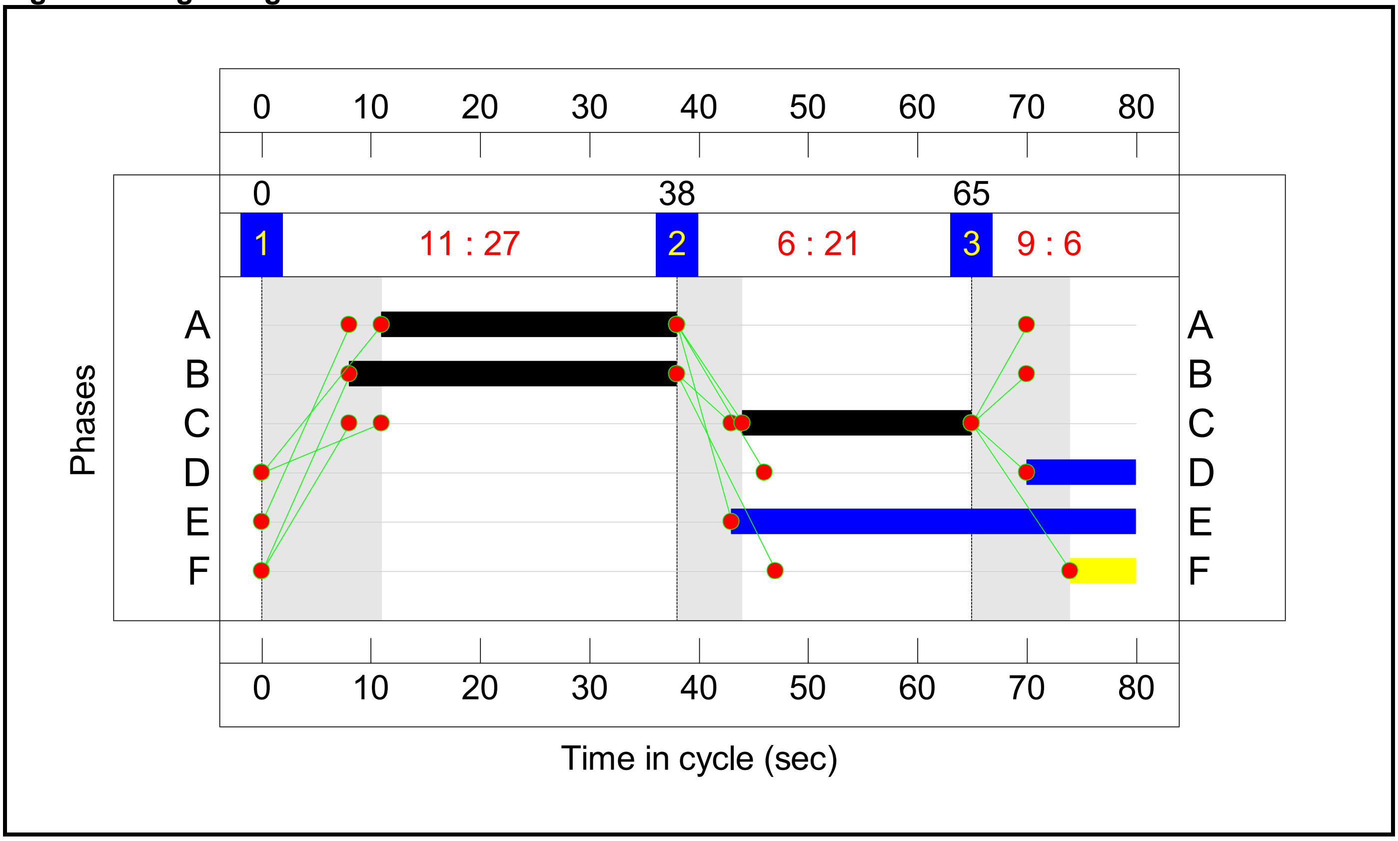
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	27	21	6
Change Point	0	38	65

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

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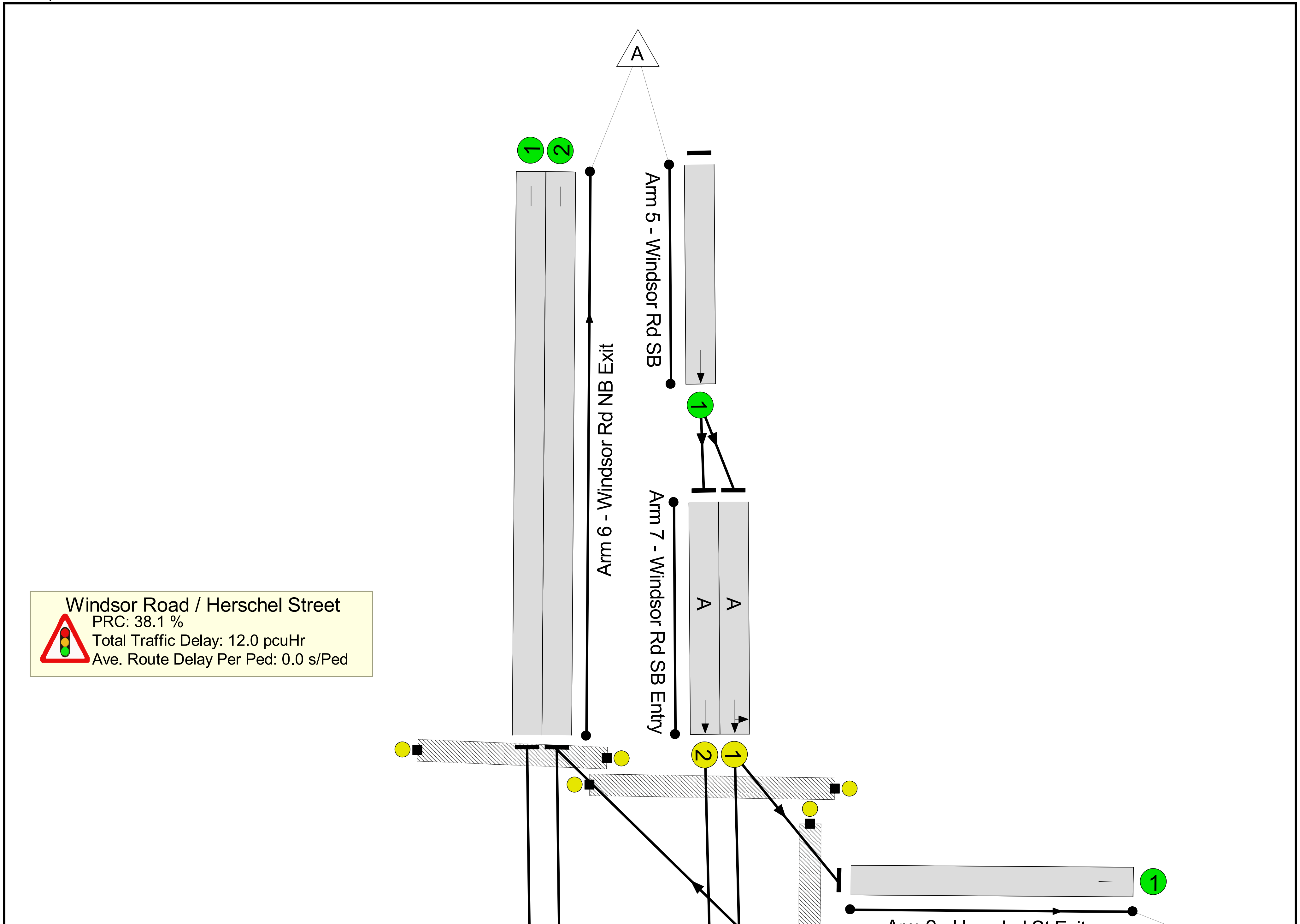
Full Input Data And Results



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Full Input Data And Results

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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**	-	-		-	-	-	-	-	-	**65.2%**
Windsor Road / Herschel Street	-	-	**N/A**	-	-		-	-	-	-	-	-	**65.2%**
1/1	Herschel St Entry Left	U	N/A	N/A	C		1	21	-	59	1663	457	12.9%
1/2	Herschel St Entry Right	U	N/A	N/A	C		1	21	-	300	1689	464	64.6%
2/1	Herschel St Exit	U	N/A	N/A	-		-	-	-	397	Inf	Inf	0.0%
3/1	Windsor Rd NB Ahead	U	N/A	N/A	B		1	30	-	177	1890	732	24.2%
3/2	Windsor Rd NB Ahead	U	N/A	N/A	B		1	30	-	177	1890	732	24.2%
4/1	Windsor Rd SB Exit	U	N/A	N/A	-		-	-	-	59	Inf	Inf	0.0%
4/2	Windsor Rd SB Exit	U	N/A	N/A	-		-	-	-	415	Inf	Inf	0.0%
5/1	Windsor Rd SB Ahead	U	N/A	N/A	-		-	-	-	812	Inf	Inf	0.0%
6/1	Windsor Rd NB Exit	U	N/A	N/A	-		-	-	-	177	Inf	Inf	0.0%
6/2	Windsor Rd NB Exit	U	N/A	N/A	-		-	-	-	477	Inf	Inf	0.0%
7/1	Windsor Rd SB Entry Left Ahead	U	N/A	N/A	A		1	27	-	397	1741	609	65.2%
7/2	Windsor Rd SB Entry Ahead	U	N/A	N/A	A		1	27	-	415	1915	670	61.9%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	D		1	10	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	F		1	6	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	37	-	0	-	0	0.0%

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Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**9.0**	**3.0**	**0.0**	**12.0**	**-**	**-**	**-**	**-**
Windsor Road / Herschel Street	**-**	**-**	**0**	**0**	**0**	**9.0**	**3.0**	**0.0**	**12.0**	**-**	**-**	**-**	**-**
1/1	59	59	-	-	-	0.4	0.1	-	0.4	26.3	1.0	0.1	1.1
1/2	300	300	-	-	-	2.1	0.9	-	3.0	36.4	5.8	0.9	6.7
2/1	397	397	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	177	177	-	-	-	0.8	0.2	-	1.0	19.8	2.7	0.2	2.8
3/2	177	177	-	-	-	0.8	0.2	-	1.0	19.8	2.7	0.2	2.8
4/1	59	59	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	415	415	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	812	812	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	177	177	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	477	477	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	397	397	-	-	-	2.4	0.9	-	3.3	30.3	7.4	0.9	8.3
7/2	415	415	-	-	-	2.5	0.8	-	3.3	28.6	7.6	0.8	8.4
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 38.1 Total Delay for Signalled Lanes (pcuHr): 12.05 Cycle Time (s): 80
PRC Over All Lanes (%): 38.1 Total Delay Over All Lanes(pcuHr): 12.05

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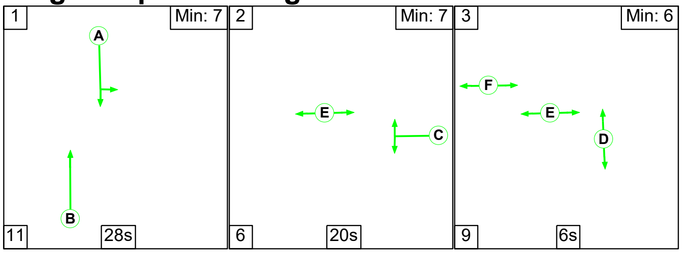
Full Input Data And Results

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

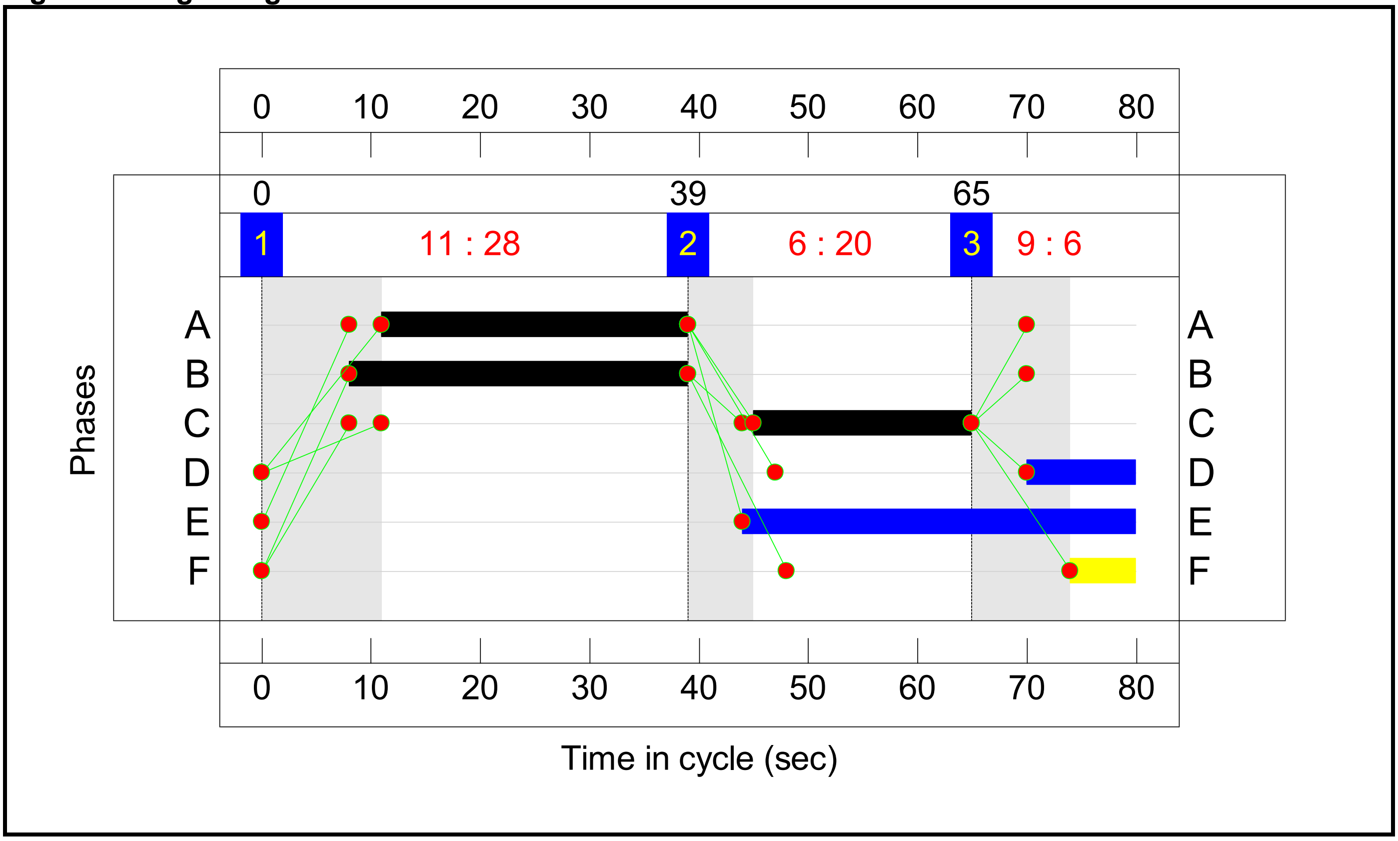
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	28	20	6
Change Point	0	39	65

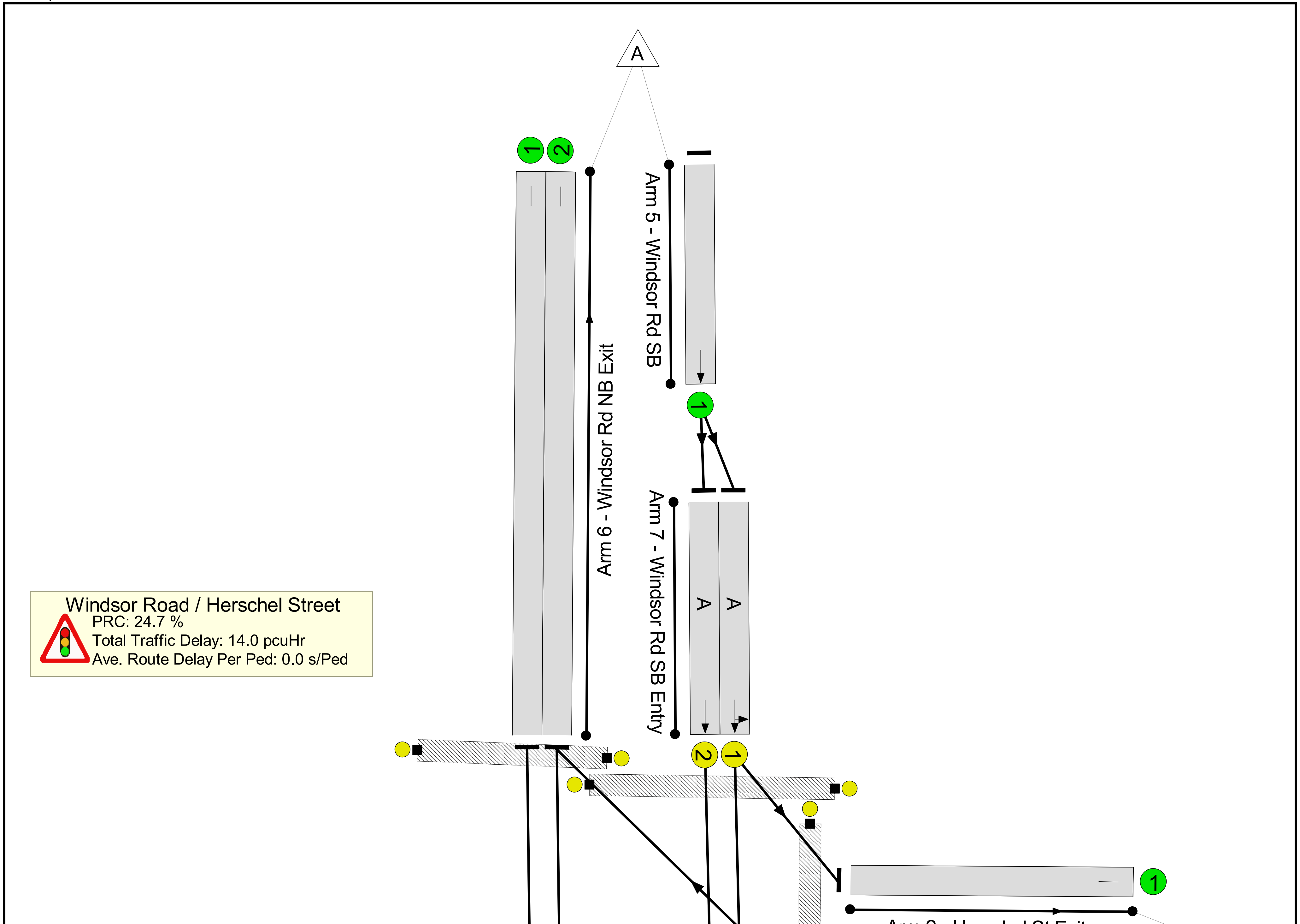
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



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Full Input Data And Results

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**	-	-		-	-	-	-	-	-	**72.2%**
Windsor Road / Herschel Street	-	-	**N/A**	-	-		-	-	-	-	-	-	**72.2%**
1/1	Herschel St Entry Left	U	N/A	N/A	C		1	20	-	41	1663	437	9.4%
1/2	Herschel St Entry Right	U	N/A	N/A	C		1	20	-	320	1689	443	72.2%
2/1	Herschel St Exit	U	N/A	N/A	-		-	-	-	432	Inf	Inf	0.0%
3/1	Windsor Rd NB Ahead	U	N/A	N/A	B		1	31	-	197	1890	756	26.1%
3/2	Windsor Rd NB Ahead	U	N/A	N/A	B		1	31	-	197	1890	756	26.1%
4/1	Windsor Rd SB Exit	U	N/A	N/A	-		-	-	-	45	Inf	Inf	0.0%
4/2	Windsor Rd SB Exit	U	N/A	N/A	-		-	-	-	491	Inf	Inf	0.0%
5/1	Windsor Rd SB Ahead	U	N/A	N/A	-		-	-	-	927	Inf	Inf	0.0%
6/1	Windsor Rd NB Exit	U	N/A	N/A	-		-	-	-	197	Inf	Inf	0.0%
6/2	Windsor Rd NB Exit	U	N/A	N/A	-		-	-	-	517	Inf	Inf	0.0%
7/1	Windsor Rd SB Entry Left Ahead	U	N/A	N/A	A		1	28	-	436	1742	631	69.0%
7/2	Windsor Rd SB Entry Ahead	U	N/A	N/A	A		1	28	-	491	1915	694	70.7%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	D		1	10	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	F		1	6	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	36	-	0	-	0	0.0%

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Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**10.0**	**4.0**	**0.0**	**14.0**	**-**	**-**	**-**	**-**
Windsor Road / Herschel Street	**-**	**-**	**0**	**0**	**0**	**10.0**	**4.0**	**0.0**	**14.0**	**-**	**-**	**-**	**-**
1/1	41	41	-	-	-	0.3	0.1	-	0.3	26.9	0.7	0.1	0.7
1/2	320	320	-	-	-	2.4	1.3	-	3.7	41.1	6.4	1.3	7.7
2/1	432	432	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	197	197	-	-	-	0.9	0.2	-	1.1	19.3	2.9	0.2	3.1
3/2	197	197	-	-	-	0.9	0.2	-	1.1	19.3	2.9	0.2	3.1
4/1	45	45	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	491	491	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	927	927	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	197	197	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	517	517	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	436	436	-	-	-	2.6	1.1	-	3.7	30.8	8.2	1.1	9.3
7/2	491	491	-	-	-	3.0	1.2	-	4.2	30.6	9.3	1.2	10.5
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 24.7 Total Delay for Signalled Lanes (pcuHr): 13.98 Cycle Time (s): 80
PRC Over All Lanes (%): 24.7 Total Delay Over All Lanes(pcuHr): 13.98

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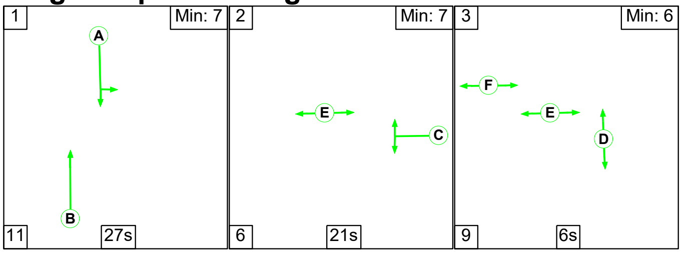
Full Input Data And Results

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

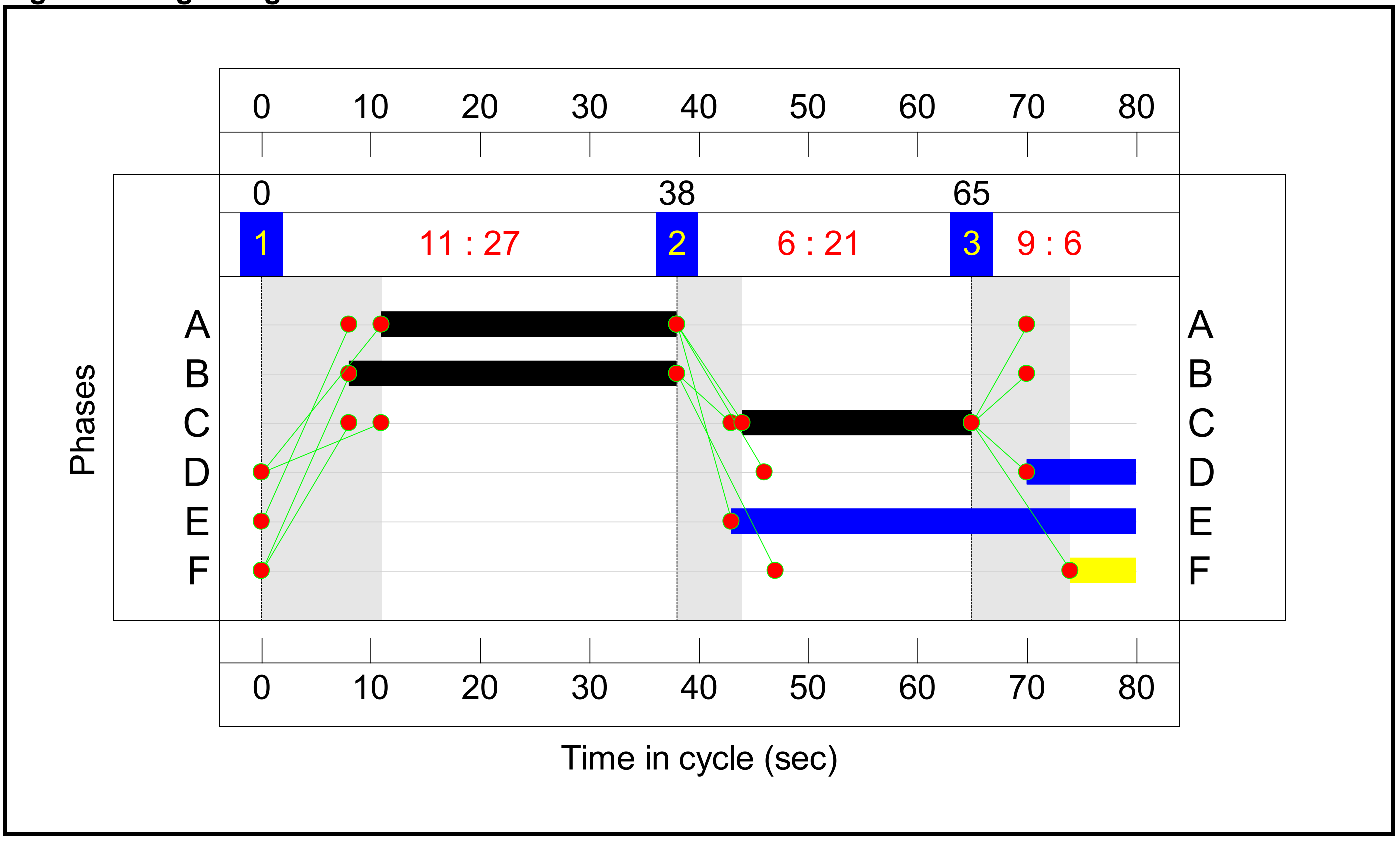
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	27	21	6
Change Point	0	38	65

Signal Timings Diagram



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Full Input Data And Results

Network Layout Diagram

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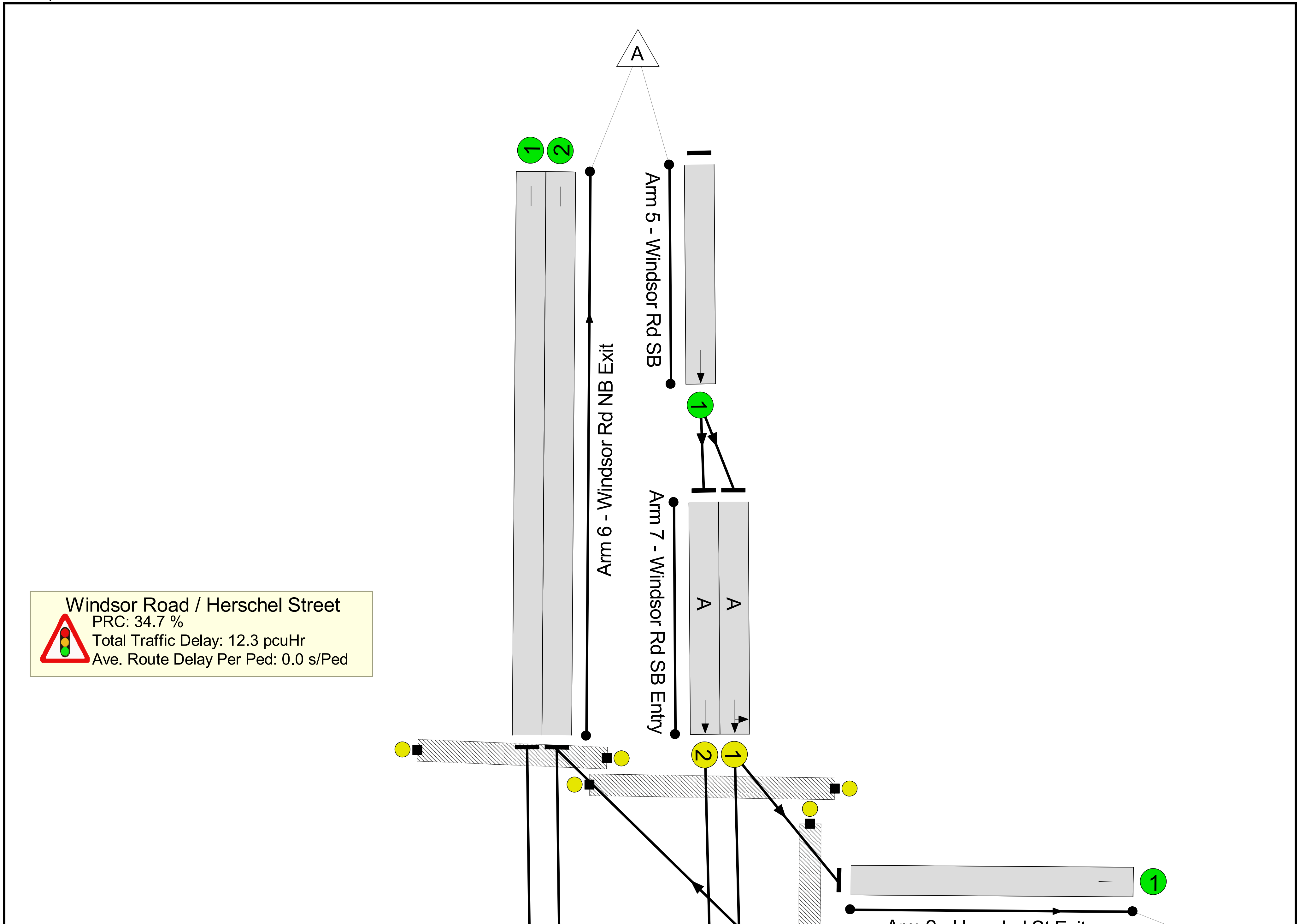
Full Input Data And Results



Full Input Data And Results

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**	-	-		-	-	-	-	-	-	**66.8%**
Windsor Road / Herschel Street	-	-	**N/A**	-	-		-	-	-	-	-	-	**66.8%**
1/1	Herschel St Entry Left	U	N/A	N/A	C		1	21	-	59	1663	457	12.9%
1/2	Herschel St Entry Right	U	N/A	N/A	C		1	21	-	300	1689	464	64.6%
2/1	Herschel St Exit	U	N/A	N/A	-		-	-	-	407	Inf	Inf	0.0%
3/1	Windsor Rd NB Ahead	U	N/A	N/A	B		1	30	-	173	1890	732	23.6%
3/2	Windsor Rd NB Ahead	U	N/A	N/A	B		1	30	-	173	1890	732	23.6%
4/1	Windsor Rd SB Exit	U	N/A	N/A	-		-	-	-	59	Inf	Inf	0.0%
4/2	Windsor Rd SB Exit	U	N/A	N/A	-		-	-	-	428	Inf	Inf	0.0%
5/1	Windsor Rd SB Ahead	U	N/A	N/A	-		-	-	-	835	Inf	Inf	0.0%
6/1	Windsor Rd NB Exit	U	N/A	N/A	-		-	-	-	173	Inf	Inf	0.0%
6/2	Windsor Rd NB Exit	U	N/A	N/A	-		-	-	-	473	Inf	Inf	0.0%
7/1	Windsor Rd SB Entry Left Ahead	U	N/A	N/A	A		1	27	-	407	1741	609	66.8%
7/2	Windsor Rd SB Entry Ahead	U	N/A	N/A	A		1	27	-	428	1915	670	63.9%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	D		1	10	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	F		1	6	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	37	-	0	-	0	0.0%

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Full Input Data And Results

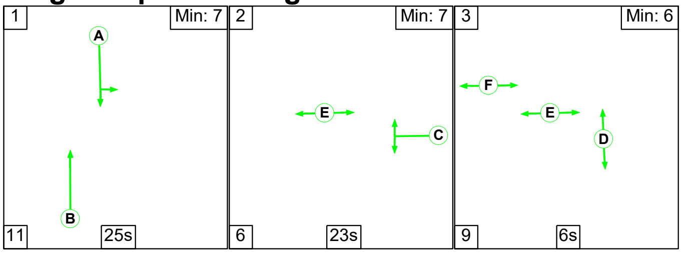
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**9.2**	**3.2**	**0.0**	**12.3**	**-**	**-**	**-**	**-**
Windsor Road / Herschel Street	**-**	**-**	**0**	**0**	**0**	**9.2**	**3.2**	**0.0**	**12.3**	**-**	**-**	**-**	**-**
1/1	59	59	-	-	-	0.4	0.1	-	0.4	26.3	1.0	0.1	1.1
1/2	300	300	-	-	-	2.1	0.9	-	3.0	36.4	5.8	0.9	6.7
2/1	407	407	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	173	173	-	-	-	0.8	0.2	-	0.9	19.7	2.5	0.2	2.7
3/2	173	173	-	-	-	0.8	0.2	-	0.9	19.7	2.5	0.2	2.7
4/1	59	59	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	428	428	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	835	835	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	173	173	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	473	473	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	407	407	-	-	-	2.5	1.0	-	3.5	30.9	7.6	1.0	8.6
7/2	428	428	-	-	-	2.6	0.9	-	3.5	29.1	7.8	0.9	8.7
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 34.7 Total Delay for Signalled Lanes (pcuHr): 12.32 Cycle Time (s): 80
PRC Over All Lanes (%): 34.7 Total Delay Over All Lanes(pcuHr): 12.32

Full Input Data And Results

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

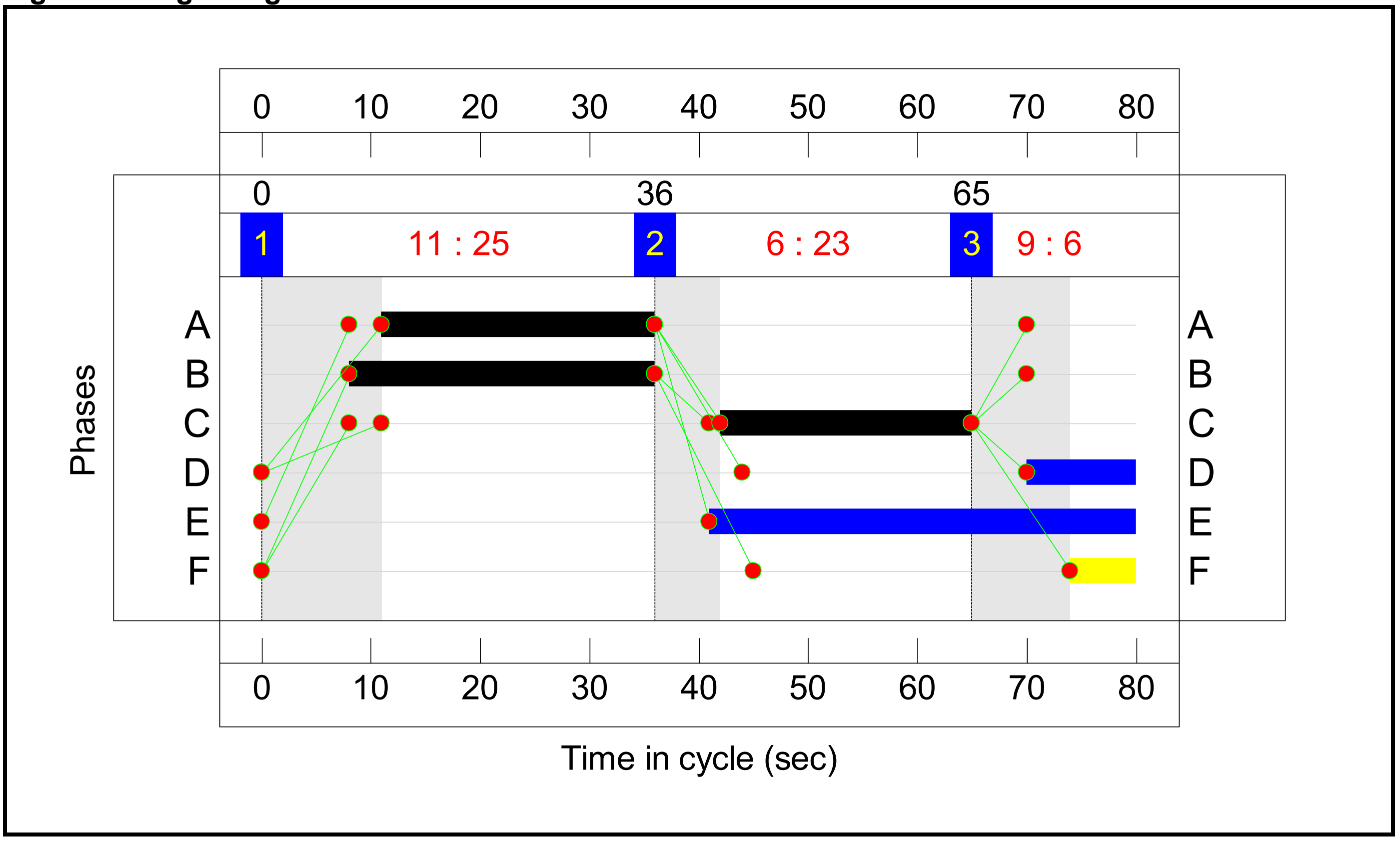
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	25	23	6
Change Point	0	36	65

Signal Timings Diagram



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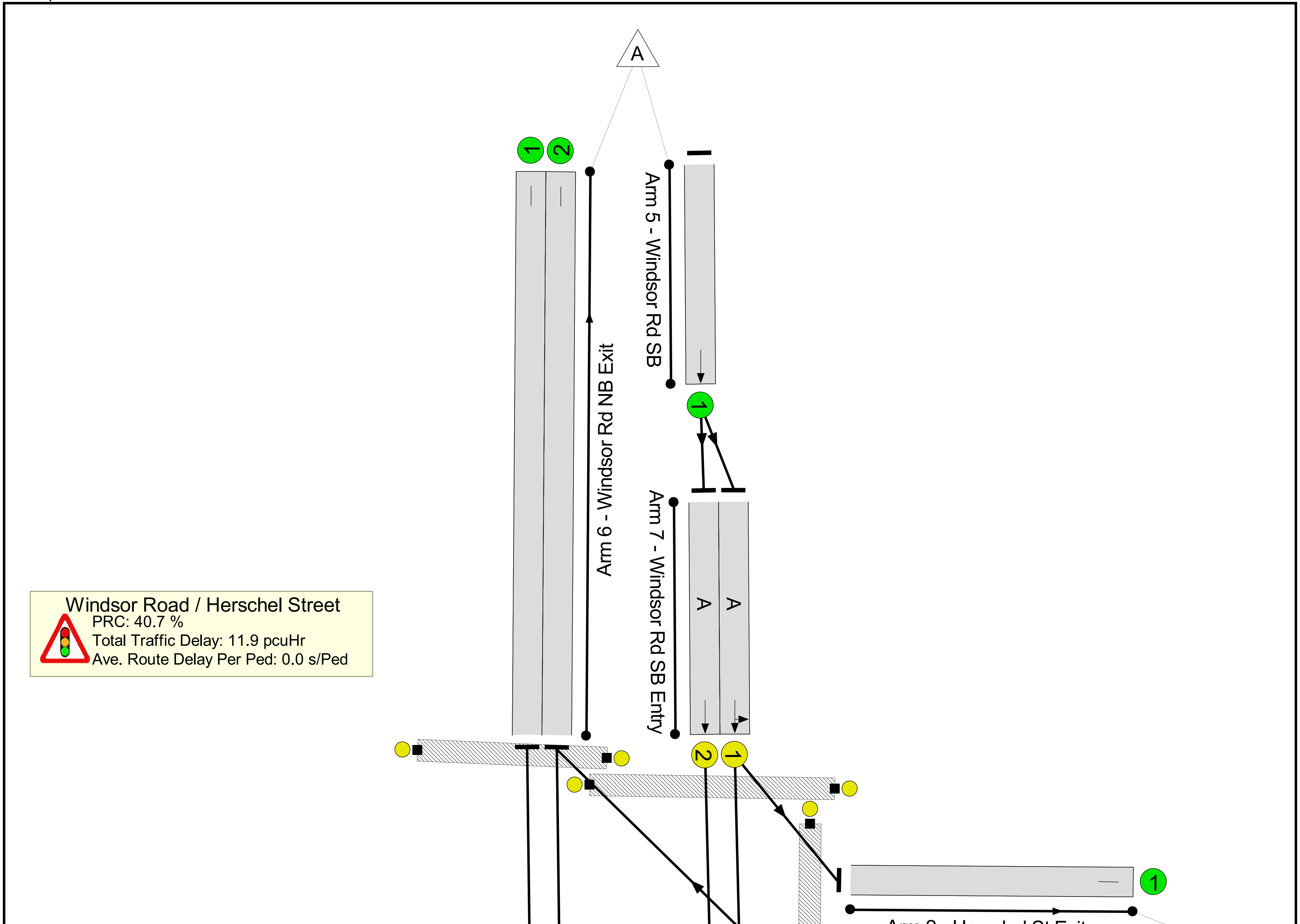
Full Input Data And Results
Network Layout Diagram

Full Input Data And Results



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Full Input Data And Results

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**	-	-		-	-	-	-	-	-	**64.0%**
Windsor Road / Herschel Street	-	-	**N/A**	-	-		-	-	-	-	-	-	**64.0%**
1/1	Herschel St Entry Left	U	N/A	N/A	C		1	23	-	41	1663	499	8.2%
1/2	Herschel St Entry Right	U	N/A	N/A	C		1	23	-	321	1689	507	63.4%
2/1	Herschel St Exit	U	N/A	N/A	-		-	-	-	362	Inf	Inf	0.0%
3/1	Windsor Rd NB Ahead	U	N/A	N/A	B		1	28	-	203	1890	685	29.6%
3/2	Windsor Rd NB Ahead	U	N/A	N/A	B		1	28	-	203	1890	685	29.6%
4/1	Windsor Rd SB Exit	U	N/A	N/A	-		-	-	-	41	Inf	Inf	0.0%
4/2	Windsor Rd SB Exit	U	N/A	N/A	-		-	-	-	360	Inf	Inf	0.0%
5/1	Windsor Rd SB Ahead	U	N/A	N/A	-		-	-	-	722	Inf	Inf	0.0%
6/1	Windsor Rd NB Exit	U	N/A	N/A	-		-	-	-	203	Inf	Inf	0.0%
6/2	Windsor Rd NB Exit	U	N/A	N/A	-		-	-	-	524	Inf	Inf	0.0%
7/1	Windsor Rd SB Entry Left Ahead	U	N/A	N/A	A		1	25	-	362	1741	566	64.0%
7/2	Windsor Rd SB Entry Ahead	U	N/A	N/A	A		1	25	-	360	1915	622	57.8%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	D		1	10	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	F		1	6	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	39	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**9.0**	**2.9**	**0.0**	**11.9**	**-**	**-**	**-**	**-**
Windsor Road / Herschel Street	**-**	**-**	**0**	**0**	**0**	**9.0**	**2.9**	**0.0**	**11.9**	**-**	**-**	**-**	**-**
1/1	41	41	-	-	-	0.2	0.0	-	0.3	24.1	0.6	0.0	0.7
1/2	321	321	-	-	-	2.2	0.9	-	3.0	33.8	6.2	0.9	7.0
2/1	362	362	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	203	203	-	-	-	1.0	0.2	-	1.2	21.9	3.2	0.2	3.4
3/2	203	203	-	-	-	1.0	0.2	-	1.2	21.9	3.2	0.2	3.4
4/1	41	41	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	360	360	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	722	722	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	203	203	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	524	524	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	362	362	-	-	-	2.3	0.9	-	3.2	31.8	6.8	0.9	7.7
7/2	360	360	-	-	-	2.2	0.7	-	2.9	29.3	6.6	0.7	7.3
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 40.7 Total Delay for Signalled Lanes (pcuHr): 11.89 Cycle Time (s): 80
PRC Over All Lanes (%): 40.7 Total Delay Over All Lanes(pcuHr): 11.89

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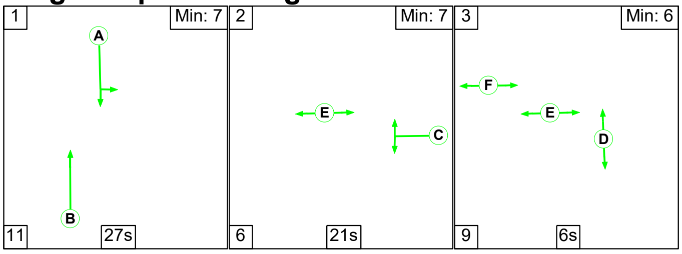
Full Input Data And Results

Scenario 7: 'AM DS Commercial' (FG7: 'AM DS Commercial', Plan 1: 'Network Control Plan 1')

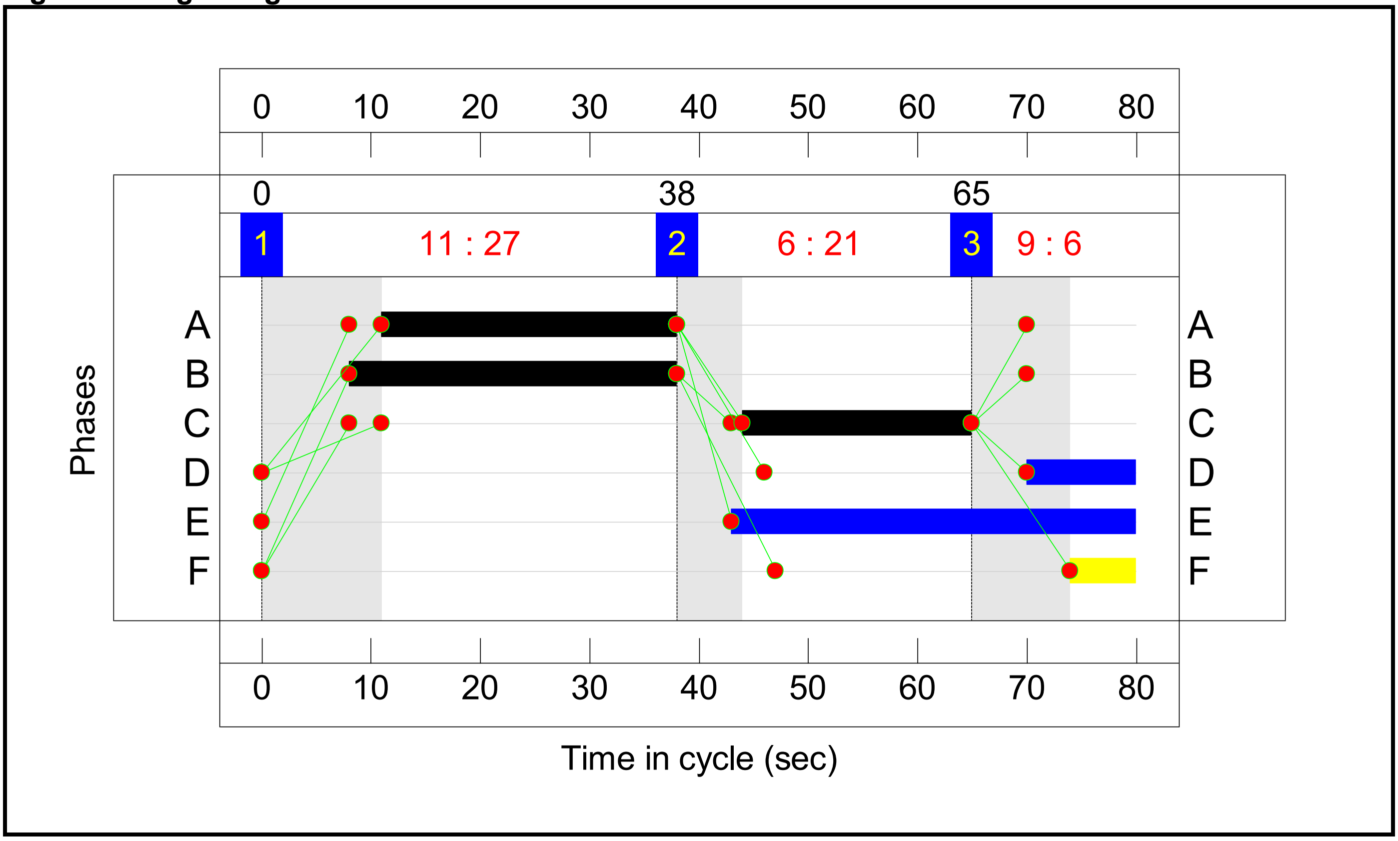
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	27	21	6
Change Point	0	38	65

Signal Timings Diagram



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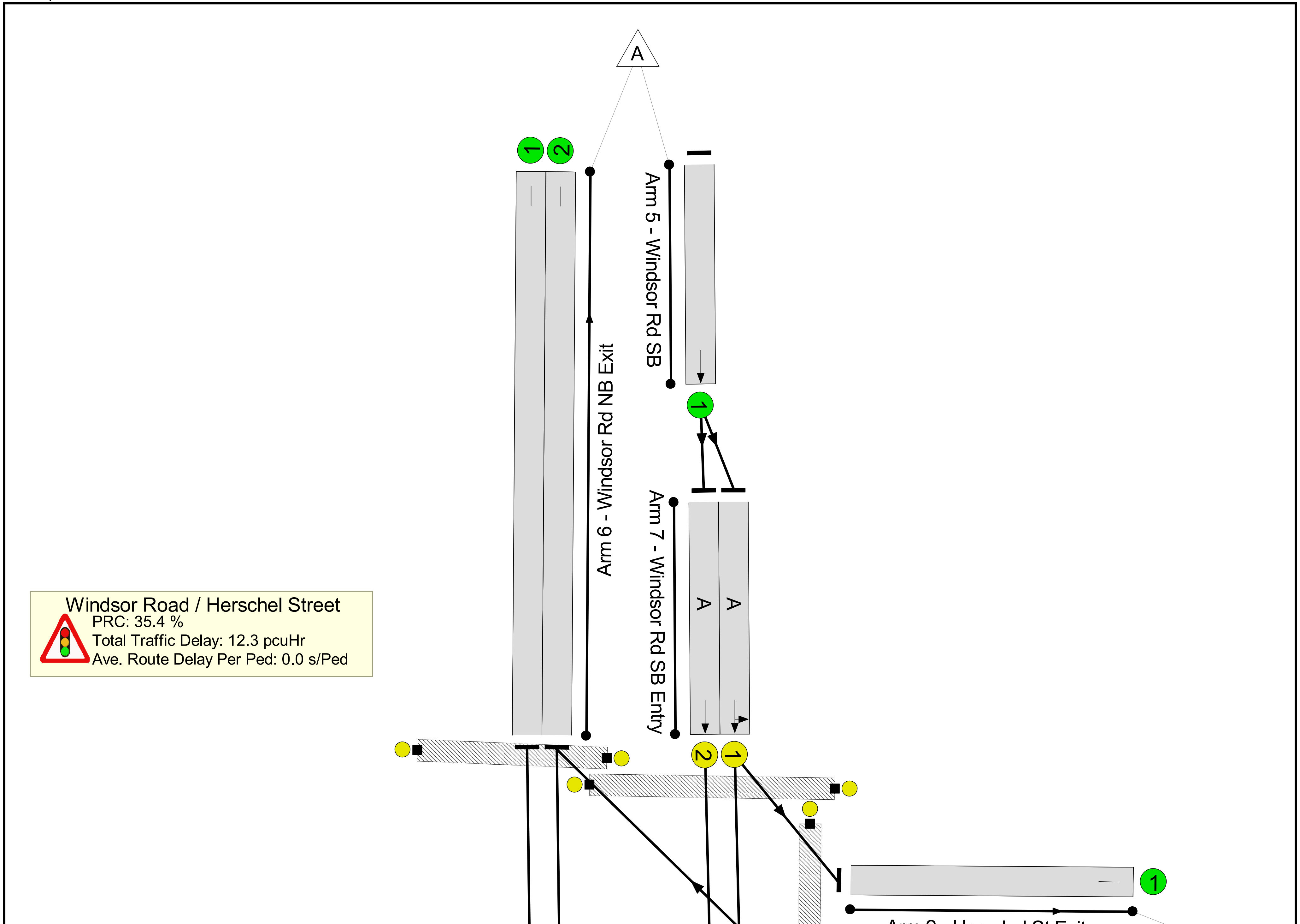
Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



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Full Input Data And Results

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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**	-	-		-	-	-	-	-	-	**66.5%**
Windsor Road / Herschel Street	-	-	**N/A**	-	-		-	-	-	-	-	-	**66.5%**
1/1	Herschel St Entry Left	U	N/A	N/A	C		1	21	-	59	1663	457	12.9%
1/2	Herschel St Entry Right	U	N/A	N/A	C		1	21	-	301	1689	464	64.8%
2/1	Herschel St Exit	U	N/A	N/A	-		-	-	-	405	Inf	Inf	0.0%
3/1	Windsor Rd NB Ahead	U	N/A	N/A	B		1	30	-	177	1890	732	24.2%
3/2	Windsor Rd NB Ahead	U	N/A	N/A	B		1	30	-	178	1890	732	24.3%
4/1	Windsor Rd SB Exit	U	N/A	N/A	-		-	-	-	59	Inf	Inf	0.0%
4/2	Windsor Rd SB Exit	U	N/A	N/A	-		-	-	-	422	Inf	Inf	0.0%
5/1	Windsor Rd SB Ahead	U	N/A	N/A	-		-	-	-	827	Inf	Inf	0.0%
6/1	Windsor Rd NB Exit	U	N/A	N/A	-		-	-	-	177	Inf	Inf	0.0%
6/2	Windsor Rd NB Exit	U	N/A	N/A	-		-	-	-	479	Inf	Inf	0.0%
7/1	Windsor Rd SB Entry Left Ahead	U	N/A	N/A	A		1	27	-	405	1741	609	66.5%
7/2	Windsor Rd SB Entry Ahead	U	N/A	N/A	A		1	27	-	422	1915	670	63.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	D		1	10	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	F		1	6	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	37	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**9.2**	**3.1**	**0.0**	**12.3**	**-**	**-**	**-**	**-**
Windsor Road / Herschel Street	**-**	**-**	**0**	**0**	**0**	**9.2**	**3.1**	**0.0**	**12.3**	**-**	**-**	**-**	**-**
1/1	59	59	-	-	-	0.4	0.1	-	0.4	26.3	1.0	0.1	1.1
1/2	301	301	-	-	-	2.1	0.9	-	3.1	36.5	5.9	0.9	6.8
2/1	405	405	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	177	177	-	-	-	0.8	0.2	-	1.0	19.8	2.7	0.2	2.8
3/2	178	178	-	-	-	0.8	0.2	-	1.0	19.8	2.7	0.2	2.8
4/1	59	59	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	422	422	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	827	827	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	177	177	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	479	479	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	405	405	-	-	-	2.5	1.0	-	3.5	30.8	7.5	1.0	8.5
7/2	422	422	-	-	-	2.5	0.8	-	3.4	28.9	7.7	0.8	8.6
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 35.4 Total Delay for Signalled Lanes (pcuHr): 12.28 Cycle Time (s): 80
PRC Over All Lanes (%): 35.4 Total Delay Over All Lanes(pcuHr): 12.28

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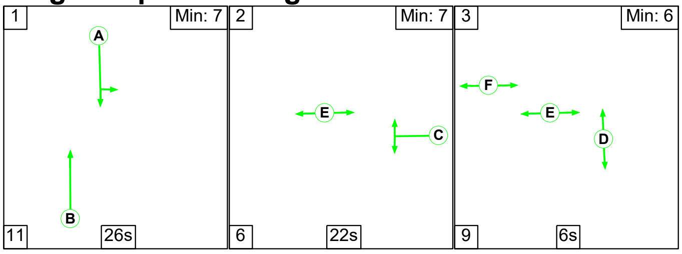
Full Input Data And Results

Scenario 8: 'PM DS Commercial' (FG8: 'PM DS Commercial', Plan 1: 'Network Control Plan 1')

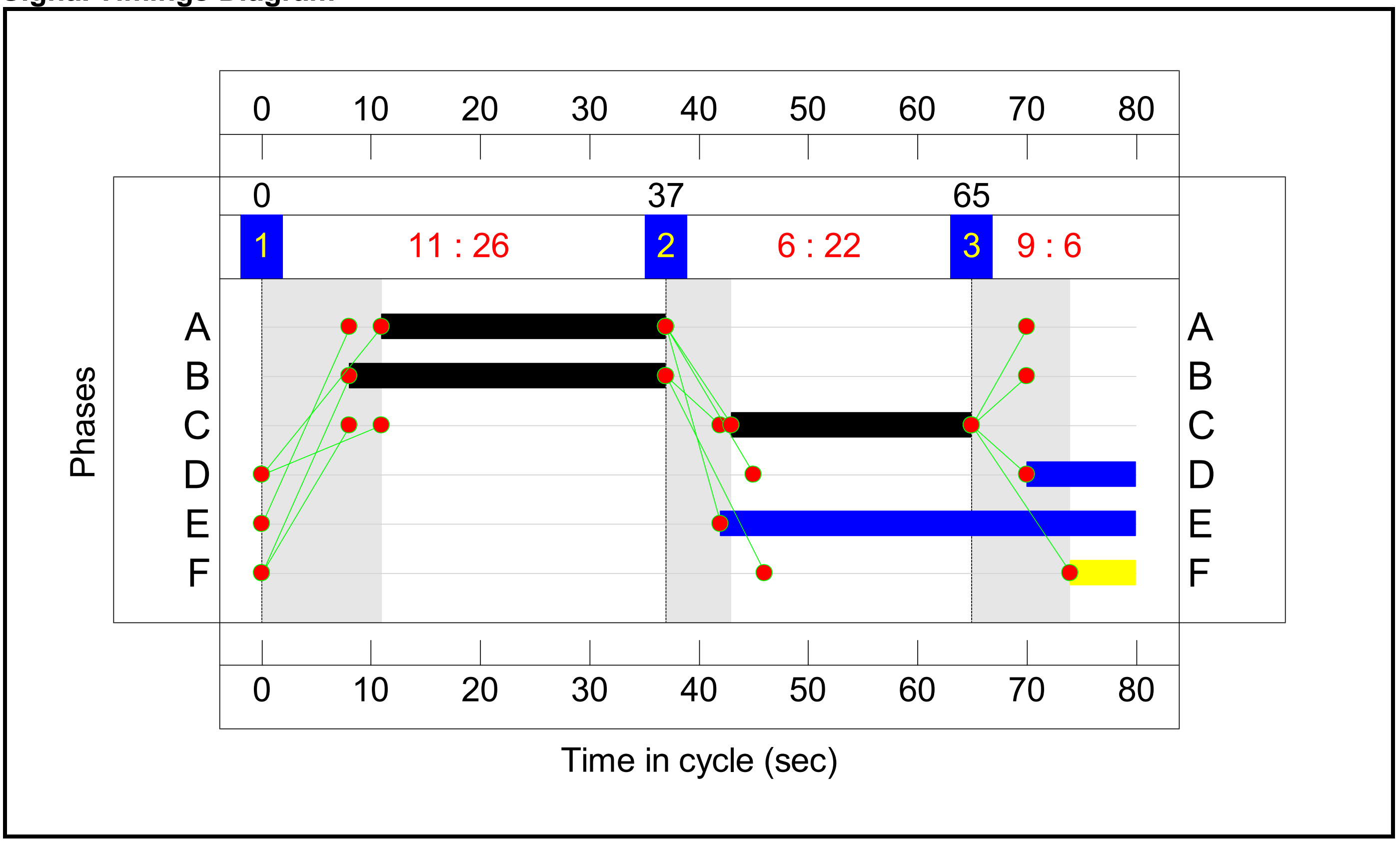
Stage Sequence Diagram



Stage Timings

Stage	1	2	3
Duration	26	22	6
Change Point	0	37	65

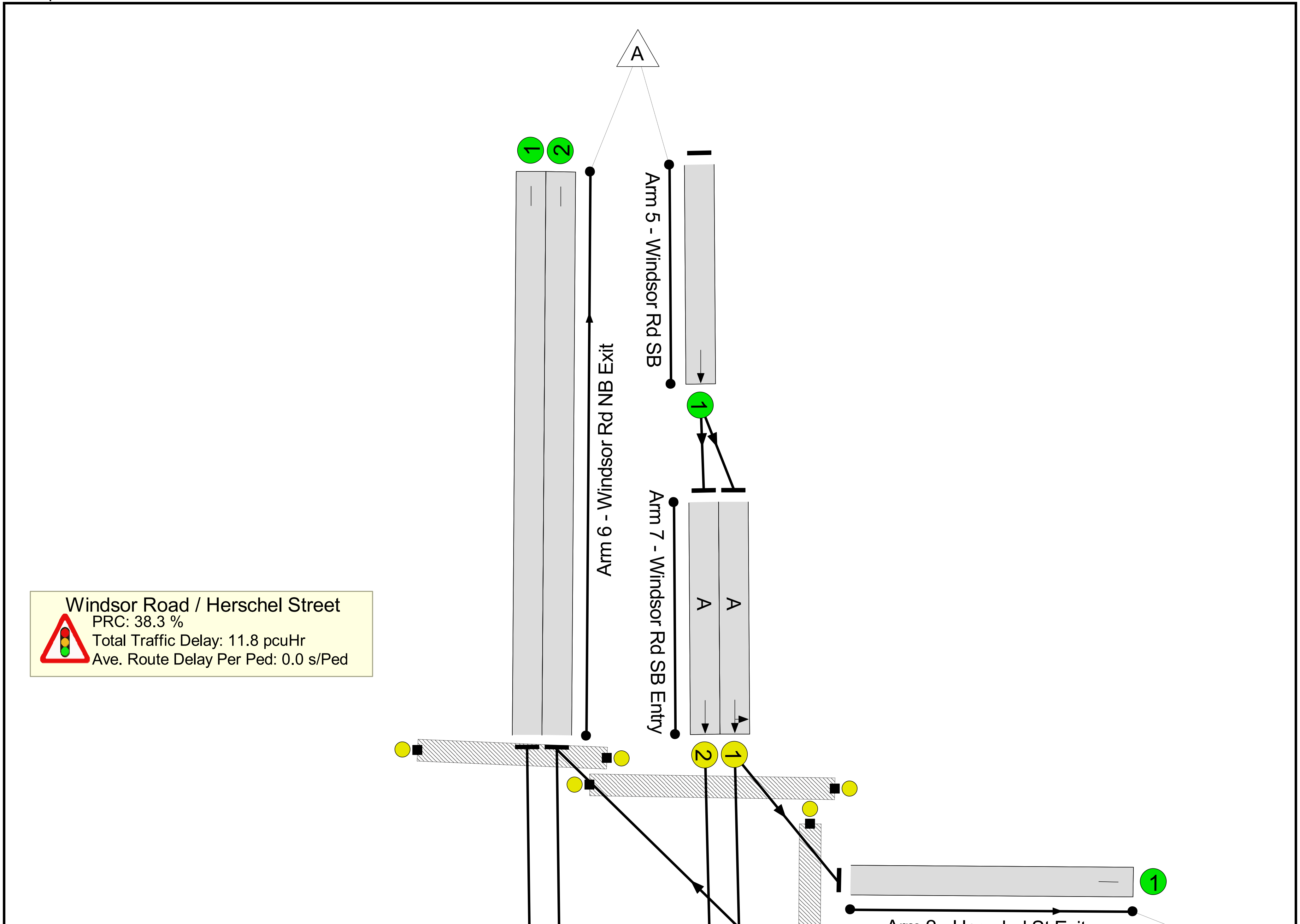
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



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Full Input Data And Results

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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**	-	-		-	-	-	-	-	-	**65.1%**
Windsor Road / Herschel Street	-	-	**N/A**	-	-		-	-	-	-	-	-	**65.1%**
1/1	Herschel St Entry Left	U	N/A	N/A	C		1	22	-	41	1663	478	8.6%
1/2	Herschel St Entry Right	U	N/A	N/A	C		1	22	-	316	1689	486	65.1%
2/1	Herschel St Exit	U	N/A	N/A	-		-	-	-	375	Inf	Inf	0.0%
3/1	Windsor Rd NB Ahead	U	N/A	N/A	B		1	29	-	204	1890	709	28.8%
3/2	Windsor Rd NB Ahead	U	N/A	N/A	B		1	29	-	204	1890	709	28.8%
4/1	Windsor Rd SB Exit	U	N/A	N/A	-		-	-	-	41	Inf	Inf	0.0%
4/2	Windsor Rd SB Exit	U	N/A	N/A	-		-	-	-	365	Inf	Inf	0.0%
5/1	Windsor Rd SB Ahead	U	N/A	N/A	-		-	-	-	740	Inf	Inf	0.0%
6/1	Windsor Rd NB Exit	U	N/A	N/A	-		-	-	-	204	Inf	Inf	0.0%
6/2	Windsor Rd NB Exit	U	N/A	N/A	-		-	-	-	520	Inf	Inf	0.0%
7/1	Windsor Rd SB Entry Left Ahead	U	N/A	N/A	A		1	26	-	375	1741	588	63.8%
7/2	Windsor Rd SB Entry Ahead	U	N/A	N/A	A		1	26	-	365	1915	646	56.5%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	D		1	10	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	F		1	6	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	38	-	0	-	0	0.0%

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Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**8.9**	**2.9**	**0.0**	**11.8**	**-**	**-**	**-**	**-**
Windsor Road / Herschel Street	**-**	**-**	**0**	**0**	**0**	**8.9**	**2.9**	**0.0**	**11.8**	**-**	**-**	**-**	**-**
1/1	41	41	-	-	-	0.2	0.0	-	0.3	25.0	0.7	0.0	0.7
1/2	316	316	-	-	-	2.2	0.9	-	3.1	35.5	6.1	0.9	7.1
2/1	375	375	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	204	204	-	-	-	1.0	0.2	-	1.2	21.1	3.2	0.2	3.4
3/2	204	204	-	-	-	1.0	0.2	-	1.2	21.1	3.2	0.2	3.4
4/1	41	41	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	365	365	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	740	740	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	204	204	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	520	520	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	375	375	-	-	-	2.3	0.9	-	3.2	30.8	7.0	0.9	7.9
7/2	365	365	-	-	-	2.2	0.6	-	2.8	28.1	6.6	0.6	7.2
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 38.3 Total Delay for Signalled Lanes (pcuHr): 11.84 Cycle Time (s): 80
PRC Over All Lanes (%): 38.3 Total Delay Over All Lanes(pcuHr): 11.84

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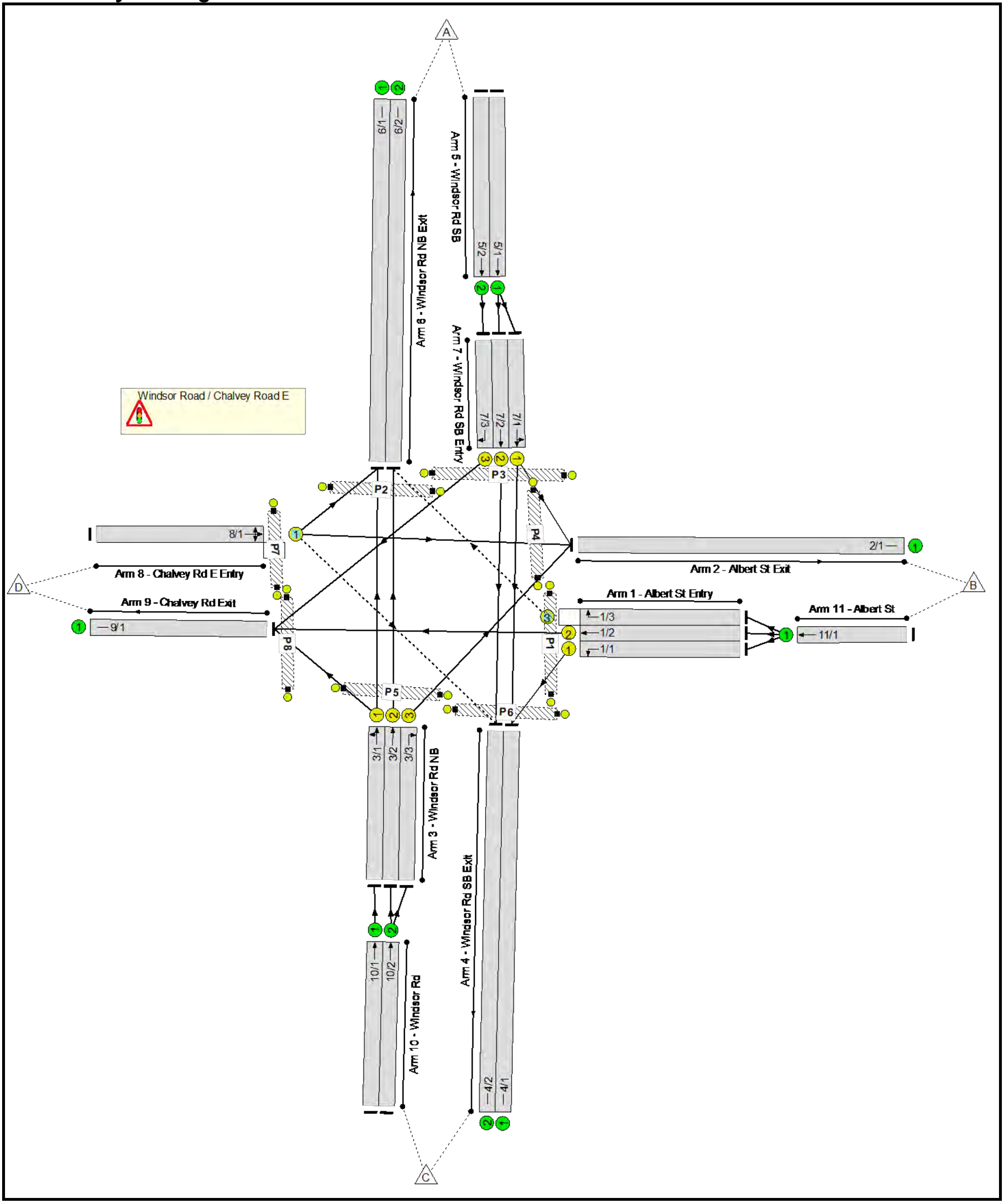
Full Input Data And Results

User and Project Details

Project:	
Title:	
Location:	
Additional detail:	
File name:	Windsor Rd_Chalvey Rd E.lsg3x
Author:	
Company:	
Address:	

Full Input Data And Results

Network Layout Diagram



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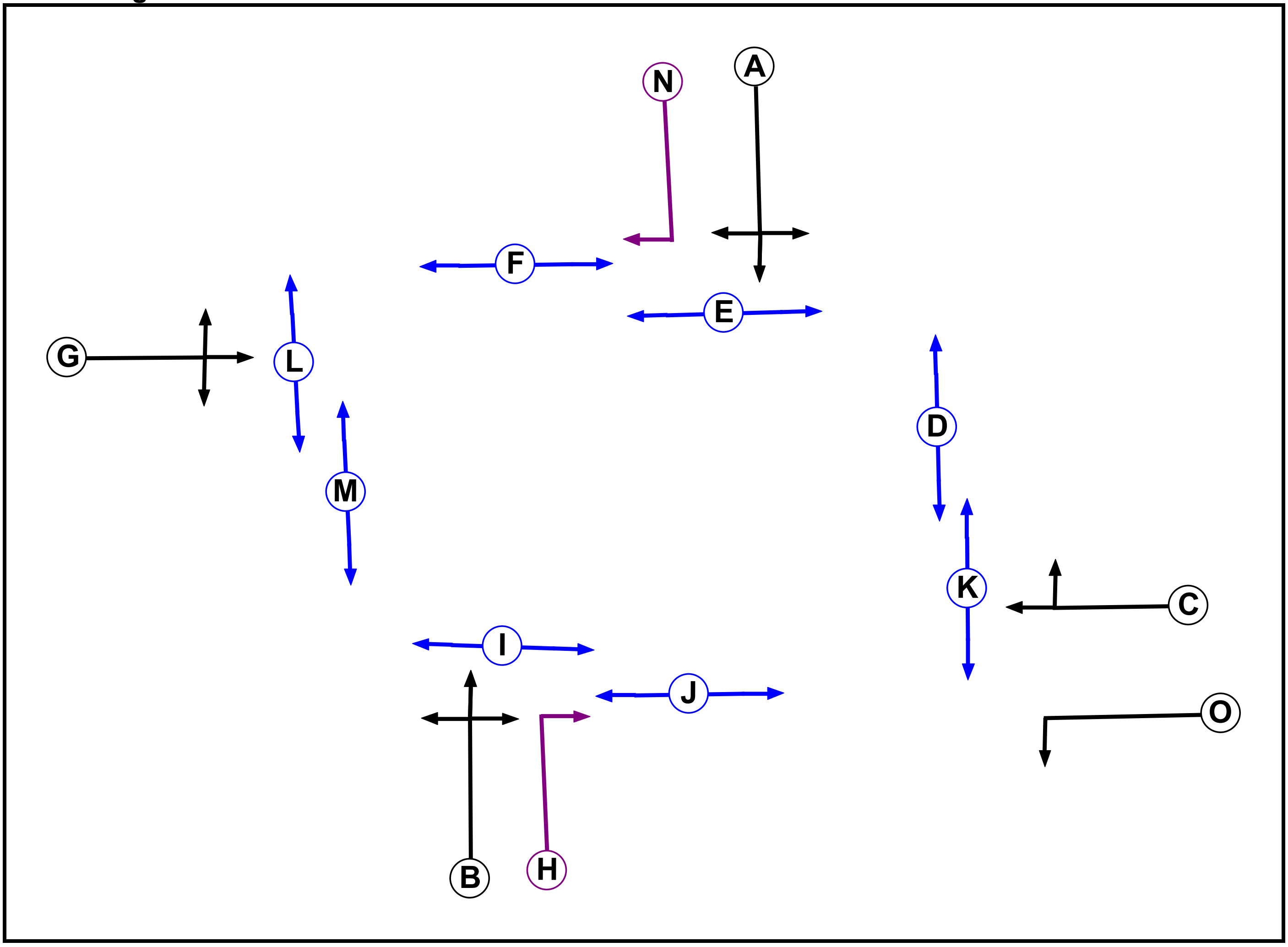
Full Input Data And Results

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Pedestrian		6	6
E	Pedestrian		6	6
F	Pedestrian		6	6
G	Traffic		7	7
H	Ind. Arrow	B	4	4
I	Pedestrian		6	6
J	Pedestrian		6	6
K	Pedestrian		6	6
L	Pedestrian		6	6
M	Pedestrian		6	6
N	Ind. Arrow	A	4	4
O	Traffic		7	7

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Full Input Data And Results

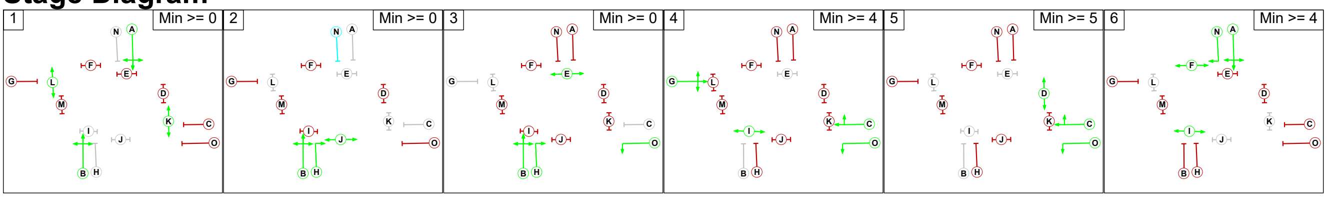
Phase Intergreens Matrix

	Starting Phase															
Terminating Phase		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
	A		-	6	9	5	-	-	-	-	-	-	-	-	-	5
	B	-		-	-	-	5	-	-	-	-	-	-	8	-	-
	C	5	-		-	-	13	-	-	-	-	5	-	11	7	-
	D	8	-	-		-	-	8	8	-	-	-	-	-	-	-
	E	10	-	-	-		-	-	-	-	-	-	-	-	10	-
	F	-	8	8	-	-		8	-	-	-	-	-	-	-	-
	G	-	-	-	10	-	9		-	-	13	-	5	-	-	-
	H	-	-	-	12	-	-	-		5	-	-	-	-	-	-
	I	-	-	-	-	-	-	-	10		-	-	-	-	-	-
	J	-	-	-	-	-	-	8	-	-		-	-	-	-	8
	K	-	-	10	-	-	-	-	-	-	-		-	-	-	10
	L	-	-	-	-	-	-	8	-	-	-	-		-	-	-
	M	-	8	8	-	-	-	-	-	-	-	-	-		8	-
	N	-	-	5	-	5	-	-	-	-	-	-	-	12		-
	O	5	-	-	-	-	-	-	-	-	11	5	-	-	-	

Phases in Stage

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

Stage Diagram



Phase Delays

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

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Prohibited Stage Change

	To Stage						
		1	2	3	4	5	6
From Stage	1		0	10	10	10	5
	2	2		8	8	12	X
	3	10	11		5	12	10
	4	5	13	10		10	13
	5	8	11	8	8		X
	6	8	10	10	8	9	

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Give-Way Lane Input Data

Junction: Windsor Road / Chalvey Road E											
Lane	**Movement**	**Max Flow when Giving Way (PCU/Hr)**	**Min Flow when Giving Way (PCU/Hr)**	**Opposing Lane**	**Opp. Lane Coeff.**	**Opp. Mvmnts.**	**Right Turn Storage (PCU)**	**Non-Blocking Storage (PCU)**	**RTF**	**Right Turn Move up (s)**	**Max Turns in Intergreen (PCU)**
1/3 (Albert St Entry)	6/2 (Right)	1439	0	8/1	1.09	To 2/1 (Ahead) To 6/1 (Left)	2.00	-	0.50	2	2.00
8/1 (Chalvey Rd E Entry)	4/2 (Right)	1439	0	1/2	1.09	To 9/1 (Ahead)	2.00	2.00	0.50	2	2.00
				1/1	1.09	To 4/1 (Left)					

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Lane Input Data

Junction: Windsor Road / Chalvey Road E												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Albert St Entry)	U	O	2	3	4.2	Geom	-	2.75	0.00	Y	Arm 4 Left	16.35
1/2 (Albert St Entry)	U	C	2	3	4.2	Geom	-	2.75	0.00	Y	Arm 9 Ahead	Inf
1/3 (Albert St Entry)	O	C	2	3	4.2	Geom	-	2.75	0.00	Y	Arm 6 Right	16.84
2/1 (Albert St Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
3/1 (Windsor Rd NB)	U	B	2	3	11.3	Geom	-	2.85	0.00	Y	Arm 6 Ahead	Inf
											Arm 9 Left	17.47
3/2 (Windsor Rd NB)	U	B	2	3	11.3	Geom	-	2.85	0.00	Y	Arm 6 Ahead	Inf
3/3 (Windsor Rd NB)	U	B H	2	3	11.3	Geom	-	2.85	0.00	Y	Arm 2 Right	28.62
4/1 (Windsor Rd SB Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
4/2 (Windsor Rd SB Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Windsor Rd SB)	U		2	3	15.0	Inf	-	-	-	-	-	-
5/2 (Windsor Rd SB)	U		2	3	15.0	Inf	-	-	-	-	-	-
6/1 (Windsor Rd NB Exit)	U		2	3	20.2	Inf	-	-	-	-	-	-
6/2 (Windsor Rd NB Exit)	U		2	3	20.2	Inf	-	-	-	-	-	-
7/1 (Windsor Rd SB Entry)	U	A	2	3	5.2	Geom	-	2.85	0.00	Y	Arm 2 Left	13.00
											Arm 4 Ahead	Inf
7/2 (Windsor Rd SB Entry)	U	A	2	3	5.2	Geom	-	2.85	0.00	Y	Arm 4 Ahead	Inf
7/3 (Windsor Rd SB Entry)	U	A N	2	3	5.2	Geom	-	2.85	0.00	Y	Arm 9 Right	30.00

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8/1 (Chalvey Rd E Entry)	O	G	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 2 Ahead	Inf
											Arm 4 Right	25.00
											Arm 6 Left	11.90
9/1 (Chalvey Rd Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
10/1 (Windsor Rd)	U		2	3	60.0	Inf	-	-	-	-	-	-
10/2 (Windsor Rd)	U		2	3	60.0	Inf	-	-	-	-	-	-
11/1 (Albert St)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM Base'	08:00	09:00	01:00	
2: 'PM Base'	17:00	18:00	01:00	
3: 'AM DM'	08:00	09:00	01:00	
4: 'PM DM'	17:00	18:00	01:00	
5: 'AM DS Residential'	08:00	09:00	01:00	
6: 'PM DS Residential'	17:00	18:00	01:00	
7: 'AM DS Commercial'	08:00	09:00	01:00	
8: 'PM DS Commercial'	17:00	18:00	01:00	

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

Traffic Flows, Desired

Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	168	181	43	392
	B	47	0	509	318	874
	C	332	341	0	249	922
	D	6	130	45	0	181
	Tot.	385	639	735	610	2369

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Traffic Lane Flows

Lane	Scenario 1: AM Base
Junction: Windsor Road / Chalvey Road E	
1/1	509
1/2	318
1/3	47
2/1	639
3/1	273
3/2	308
3/3	341
4/1	509
4/2	226
5/1	349
5/2	43
6/1	30
6/2	355
7/1	168
7/2	181
7/3	43
8/1	181
9/1	610
10/1	273
10/2	649
11/1	874

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Lane Saturation Flows

Junction: Windsor Road / Chalvey Road E								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Albert St Entry)	2.75	0.00	Y	Arm 4 Left	16.35	100.0 %	1731	1731
1/2 (Albert St Entry)	2.75	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1890	1890
1/3 (Albert St Entry)	2.75	0.00	Y	Arm 6 Right	16.84	100.0 %	1735	1735
2/1 (Albert St Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (Windsor Rd NB)	2.85	0.00	Y	Arm 6 Ahead	Inf	8.8 %	1762	1762
				Arm 9 Left	17.47	91.2 %		
3/2 (Windsor Rd NB)	2.85	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1900	1900
3/3 (Windsor Rd NB)	2.85	0.00	Y	Arm 2 Right	28.62	100.0 %	1805	1805
4/1 (Windsor Rd SB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (Windsor Rd SB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (Windsor Rd SB Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (Windsor Rd SB Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Windsor Rd NB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (Windsor Rd NB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Windsor Rd SB Entry)	2.85	0.00	Y	Arm 2 Left	13.00	100.0 %	1703	1703
				Arm 4 Ahead	Inf	0.0 %		
7/2 (Windsor Rd SB Entry)	2.85	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1900	1900
7/3 (Windsor Rd SB Entry)	2.85	0.00	Y	Arm 9 Right	30.00	100.0 %	1810	1810
8/1 (Chalvey Rd E Entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	71.8 %	1879	1879
				Arm 4 Right	25.00	24.9 %		
				Arm 6 Left	11.90	3.3 %		
9/1 (Chalvey Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (Windsor Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (Windsor Rd Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1 (Albert St Lane 1)	Infinite Saturation Flow						Inf	Inf

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

Traffic Flows, Desired

Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	127	174	43	344
	B	20	0	551	313	884
	C	273	411	0	101	785
	D	51	165	34	0	250
	Tot.	344	703	759	457	2263

Traffic Lane Flows

Lane	Scenario 2: PM Base
Junction: Windsor Road / Chalvey Road E	
1/1	551
1/2	313
1/3	20
2/1	703
3/1	179
3/2	195
3/3	411
4/1	558
4/2	201
5/1	301
5/2	43
6/1	129
6/2	215
7/1	134
7/2	167
7/3	43
8/1	250
9/1	457
10/1	179
10/2	606
11/1	884

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Lane Saturation Flows

Junction: Windsor Road / Chalvey Road E								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Albert St Entry)	2.75	0.00	Y	Arm 4 Left	16.35	100.0 %	1731	1731
1/2 (Albert St Entry)	2.75	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1890	1890
1/3 (Albert St Entry)	2.75	0.00	Y	Arm 6 Right	16.84	100.0 %	1735	1735
2/1 (Albert St Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (Windsor Rd NB)	2.85	0.00	Y	Arm 6 Ahead	Inf	43.6 %	1812	1812
				Arm 9 Left	17.47	56.4 %		
3/2 (Windsor Rd NB)	2.85	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1900	1900
3/3 (Windsor Rd NB)	2.85	0.00	Y	Arm 2 Right	28.62	100.0 %	1805	1805
4/1 (Windsor Rd SB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (Windsor Rd SB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (Windsor Rd SB Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (Windsor Rd SB Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Windsor Rd NB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (Windsor Rd NB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Windsor Rd SB Entry)	2.85	0.00	Y	Arm 2 Left	13.00	94.8 %	1713	1713
				Arm 4 Ahead	Inf	5.2 %		
7/2 (Windsor Rd SB Entry)	2.85	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1900	1900
7/3 (Windsor Rd SB Entry)	2.85	0.00	Y	Arm 9 Right	30.00	100.0 %	1810	1810
8/1 (Chalvey Rd E Entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	66.0 %	1852	1852
				Arm 4 Right	25.00	13.6 %		
				Arm 6 Left	11.90	20.4 %		
9/1 (Chalvey Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (Windsor Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (Windsor Rd Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1 (Albert St Lane 1)	Infinite Saturation Flow						Inf	Inf

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

Traffic Flows, Desired

Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	170	216	49	435
	B	73	0	574	373	1020
	C	345	561	0	314	1220
	D	6	125	37	0	168
	Tot.	424	856	827	736	2843

Traffic Lane Flows

Lane	Scenario 3: AM DM
Junction: Windsor Road / Chalvey Road E	
1/1	574
1/2	373
1/3	73
2/1	856
3/1	314
3/2	345
3/3	561
4/1	578
4/2	249
5/1	386
5/2	49
6/1	6
6/2	418
7/1	174
7/2	212
7/3	49
8/1	168
9/1	736
10/1	314
10/2	906
11/1	1020

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Lane Saturation Flows

Junction: Windsor Road / Chalvey Road E								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Albert St Entry)	2.75	0.00	Y	Arm 4 Left	16.35	100.0 %	1731	1731
1/2 (Albert St Entry)	2.75	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1890	1890
1/3 (Albert St Entry)	2.75	0.00	Y	Arm 6 Right	16.84	100.0 %	1735	1735
2/1 (Albert St Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (Windsor Rd NB)	2.85	0.00	Y	Arm 6 Ahead	Inf	0.0 %	1750	1750
				Arm 9 Left	17.47	100.0 %		
3/2 (Windsor Rd NB)	2.85	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1900	1900
3/3 (Windsor Rd NB)	2.85	0.00	Y	Arm 2 Right	28.62	100.0 %	1805	1805
4/1 (Windsor Rd SB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (Windsor Rd SB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (Windsor Rd SB Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (Windsor Rd SB Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Windsor Rd NB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (Windsor Rd NB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Windsor Rd SB Entry)	2.85	0.00	Y	Arm 2 Left	13.00	97.7 %	1708	1708
				Arm 4 Ahead	Inf	2.3 %		
7/2 (Windsor Rd SB Entry)	2.85	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1900	1900
7/3 (Windsor Rd SB Entry)	2.85	0.00	Y	Arm 9 Right	30.00	100.0 %	1810	1810
8/1 (Chalvey Rd E Entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	74.4 %	1882	1882
				Arm 4 Right	25.00	22.0 %		
				Arm 6 Left	11.90	3.6 %		
9/1 (Chalvey Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (Windsor Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (Windsor Rd Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1 (Albert St Lane 1)	Infinite Saturation Flow						Inf	Inf

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Scenario 4: 'PM DM' (FG4: 'PM DM', Plan 1: 'Network Control Plan 1')
Traffic Flows, Desired
Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	187	224	53	464
	B	32	0	577	346	955
	C	382	483	0	117	982
	D	32	215	29	0	276
	Tot.	446	885	830	516	2677

Traffic Lane Flows

Lane	Scenario 4: PM DM
Junction: Windsor Road / Chalvey Road E	
1/1	577
1/2	346
1/3	32
2/1	885
3/1	241
3/2	258
3/3	483
4/1	577
4/2	253
5/1	411
5/2	53
6/1	156
6/2	290
7/1	187
7/2	224
7/3	53
8/1	276
9/1	516
10/1	241
10/2	741
11/1	955

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Lane Saturation Flows

Junction: Windsor Road / Chalvey Road E

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Albert St Entry)	2.75	0.00	Y	Arm 4 Left	16.35	100.0 %	1731	1731
1/2 (Albert St Entry)	2.75	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1890	1890
1/3 (Albert St Entry)	2.75	0.00	Y	Arm 6 Right	16.84	100.0 %	1735	1735
2/1 (Albert St Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (Windsor Rd NB)	2.85	0.00	Y	Arm 6 Ahead	Inf	51.5 %	1824	1824
				Arm 9 Left	17.47	48.5 %		
3/2 (Windsor Rd NB)	2.85	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1900	1900
3/3 (Windsor Rd NB)	2.85	0.00	Y	Arm 2 Right	28.62	100.0 %	1805	1805
4/1 (Windsor Rd SB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (Windsor Rd SB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (Windsor Rd SB Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (Windsor Rd SB Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Windsor Rd NB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (Windsor Rd NB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Windsor Rd SB Entry)	2.85	0.00	Y	Arm 2 Left	13.00	100.0 %	1703	1703
				Arm 4 Ahead	Inf	0.0 %		
7/2 (Windsor Rd SB Entry)	2.85	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1900	1900
7/3 (Windsor Rd SB Entry)	2.85	0.00	Y	Arm 9 Right	30.00	100.0 %	1810	1810
8/1 (Chalvey Rd E Entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	77.9 %	1876	1876
				Arm 4 Right	25.00	10.5 %		
				Arm 6 Left	11.90	11.6 %		
9/1 (Chalvey Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (Windsor Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (Windsor Rd Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1 (Albert St Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

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

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	172	220	50	442
	B	73	0	575	375	1023
	C	339	562	0	319	1220
	D	7	124	38	0	169
	Tot.	419	858	833	744	2854

Traffic Lane Flows

Lane	Scenario 5: AM DS Residential
Junction: Windsor Road / Chalvey Road E	
1/1	575
1/2	375
1/3	73
2/1	858
3/1	319
3/2	339
3/3	562
4/1	575
4/2	258
5/1	392
5/2	50
6/1	7
6/2	412
7/1	172
7/2	220
7/3	50
8/1	169
9/1	744
10/1	319
10/2	901
11/1	1023

Full Input Data And Results

Lane Saturation Flows

Junction: Windsor Road / Chalvey Road E								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Albert St Entry)	2.75	0.00	Y	Arm 4 Left	16.35	100.0 %	1731	1731
1/2 (Albert St Entry)	2.75	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1890	1890
1/3 (Albert St Entry)	2.75	0.00	Y	Arm 6 Right	16.84	100.0 %	1735	1735
2/1 (Albert St Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (Windsor Rd NB)	2.85	0.00	Y	Arm 6 Ahead	Inf	0.0 %	1750	1750
				Arm 9 Left	17.47	100.0 %		
3/2 (Windsor Rd NB)	2.85	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1900	1900
3/3 (Windsor Rd NB)	2.85	0.00	Y	Arm 2 Right	28.62	100.0 %	1805	1805
4/1 (Windsor Rd SB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (Windsor Rd SB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (Windsor Rd SB Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (Windsor Rd SB Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Windsor Rd NB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (Windsor Rd NB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Windsor Rd SB Entry)	2.85	0.00	Y	Arm 2 Left	13.00	100.0 %	1703	1703
				Arm 4 Ahead	Inf	0.0 %		
7/2 (Windsor Rd SB Entry)	2.85	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1900	1900
7/3 (Windsor Rd SB Entry)	2.85	0.00	Y	Arm 9 Right	30.00	100.0 %	1810	1810
8/1 (Chalvey Rd E Entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	73.4 %	1880	1880
				Arm 4 Right	25.00	22.5 %		
				Arm 6 Left	11.90	4.1 %		
9/1 (Chalvey Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (Windsor Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (Windsor Rd Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1 (Albert St Lane 1)	Infinite Saturation Flow						Inf	Inf

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

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	138	204	48	390
	B	32	0	560	317	909
	C	395	454	0	120	969
	D	32	159	45	0	236
	Tot.	459	751	809	485	2504

Traffic Lane Flows

Lane	Scenario 6: PM DS Residential
Junction: Windsor Road / Chalvey Road E	
1/1	560
1/2	317
1/3	32
2/1	751
3/1	248
3/2	267
3/3	454
4/1	572
4/2	237
5/1	342
5/2	48
6/1	160
6/2	299
7/1	150
7/2	192
7/3	48
8/1	236
9/1	485
10/1	248
10/2	721
11/1	909

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Lane Saturation Flows

Junction: Windsor Road / Chalvey Road E								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Albert St Entry)	2.75	0.00	Y	Arm 4 Left	16.35	100.0 %	1731	1731
1/2 (Albert St Entry)	2.75	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1890	1890
1/3 (Albert St Entry)	2.75	0.00	Y	Arm 6 Right	16.84	100.0 %	1735	1735
2/1 (Albert St Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (Windsor Rd NB)	2.85	0.00	Y	Arm 6 Ahead	Inf	51.6 %	1824	1824
				Arm 9 Left	17.47	48.4 %		
3/2 (Windsor Rd NB)	2.85	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1900	1900
3/3 (Windsor Rd NB)	2.85	0.00	Y	Arm 2 Right	28.62	100.0 %	1805	1805
4/1 (Windsor Rd SB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (Windsor Rd SB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (Windsor Rd SB Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (Windsor Rd SB Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Windsor Rd NB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (Windsor Rd NB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Windsor Rd SB Entry)	2.85	0.00	Y	Arm 2 Left	13.00	92.0 %	1718	1718
				Arm 4 Ahead	Inf	8.0 %		
7/2 (Windsor Rd SB Entry)	2.85	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1900	1900
7/3 (Windsor Rd SB Entry)	2.85	0.00	Y	Arm 9 Right	30.00	100.0 %	1810	1810
8/1 (Chalvey Rd E Entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	67.4 %	1862	1862
				Arm 4 Right	25.00	19.1 %		
				Arm 6 Left	11.90	13.6 %		
9/1 (Chalvey Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (Windsor Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (Windsor Rd Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1 (Albert St Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 7: 'AM DS Commercial' (FG7: 'AM DS Commercial', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	170	219	50	439
	B	73	0	578	374	1025
	C	344	577	0	320	1241
	D	7	125	37	0	169
	Tot.	424	872	834	744	2874

Traffic Lane Flows

Lane	Scenario 7: AM DS Commercial
Junction: Windsor Road / Chalvey Road E	
1/1	578
1/2	374
1/3	73
2/1	872
3/1	320
3/2	344
3/3	577
4/1	579
4/2	255
5/1	389
5/2	50
6/1	7
6/2	417
7/1	171
7/2	218
7/3	50
8/1	169
9/1	744
10/1	320
10/2	921
11/1	1025

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Lane Saturation Flows

Junction: Windsor Road / Chalvey Road E								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Albert St Entry)	2.75	0.00	Y	Arm 4 Left	16.35	100.0 %	1731	1731
1/2 (Albert St Entry)	2.75	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1890	1890
1/3 (Albert St Entry)	2.75	0.00	Y	Arm 6 Right	16.84	100.0 %	1735	1735
2/1 (Albert St Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (Windsor Rd NB)	2.85	0.00	Y	Arm 6 Ahead	Inf	0.0 %	1750	1750
				Arm 9 Left	17.47	100.0 %		
3/2 (Windsor Rd NB)	2.85	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1900	1900
3/3 (Windsor Rd NB)	2.85	0.00	Y	Arm 2 Right	28.62	100.0 %	1805	1805
4/1 (Windsor Rd SB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (Windsor Rd SB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (Windsor Rd SB Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (Windsor Rd SB Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Windsor Rd NB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (Windsor Rd NB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Windsor Rd SB Entry)	2.85	0.00	Y	Arm 2 Left	13.00	99.4 %	1704	1704
				Arm 4 Ahead	Inf	0.6 %		
7/2 (Windsor Rd SB Entry)	2.85	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1900	1900
7/3 (Windsor Rd SB Entry)	2.85	0.00	Y	Arm 9 Right	30.00	100.0 %	1810	1810
8/1 (Chalvey Rd E Entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	74.0 %	1880	1880
				Arm 4 Right	25.00	21.9 %		
				Arm 6 Left	11.90	4.1 %		
9/1 (Chalvey Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (Windsor Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (Windsor Rd Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1 (Albert St Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 8: 'PM DS Commercial' (FG8: 'PM DS Commercial', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	138	207	49	394
	B	32	0	567	321	920
	C	397	444	0	120	961
	D	32	158	45	0	235
	Tot.	461	740	819	490	2510

Traffic Lane Flows

Lane	Scenario 8: PM DS Commercial
Junction: Windsor Road / Chalvey Road E	
1/1	567
1/2	321
1/3	32
2/1	740
3/1	249
3/2	268
3/3	444
4/1	581
4/2	238
5/1	345
5/2	49
6/1	161
6/2	300
7/1	152
7/2	193
7/3	49
8/1	235
9/1	490
10/1	249
10/2	712
11/1	920

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Full Input Data And Results

Lane Saturation Flows

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
Junction: Windsor Road / Chalvey Road E								
1/1 (Albert St Entry)	2.75	0.00	Y	Arm 4 Left	16.35	100.0 %	1731	1731
1/2 (Albert St Entry)	2.75	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1890	1890
1/3 (Albert St Entry)	2.75	0.00	Y	Arm 6 Right	16.84	100.0 %	1735	1735
2/1 (Albert St Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
3/1 (Windsor Rd NB)	2.85	0.00	Y	Arm 6 Ahead	Inf	51.8 %	1825	1825
				Arm 9 Left	17.47	48.2 %		
3/2 (Windsor Rd NB)	2.85	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1900	1900
3/3 (Windsor Rd NB)	2.85	0.00	Y	Arm 2 Right	28.62	100.0 %	1805	1805
4/1 (Windsor Rd SB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (Windsor Rd SB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
5/1 (Windsor Rd SB Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (Windsor Rd SB Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Windsor Rd NB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (Windsor Rd NB Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Windsor Rd SB Entry)	2.85	0.00	Y	Arm 2 Left	13.00	90.8 %	1720	1720
				Arm 4 Ahead	Inf	9.2 %		
7/2 (Windsor Rd SB Entry)	2.85	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1900	1900
7/3 (Windsor Rd SB Entry)	2.85	0.00	Y	Arm 9 Right	30.00	100.0 %	1810	1810
8/1 (Chalvey Rd E Entry)	3.00	0.00	Y	Arm 2 Ahead	Inf	67.2 %	1862	1862
				Arm 4 Right	25.00	19.1 %		
				Arm 6 Left	11.90	13.6 %		
9/1 (Chalvey Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (Windsor Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (Windsor Rd Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1 (Albert St Lane 1)	Infinite Saturation Flow						Inf	Inf

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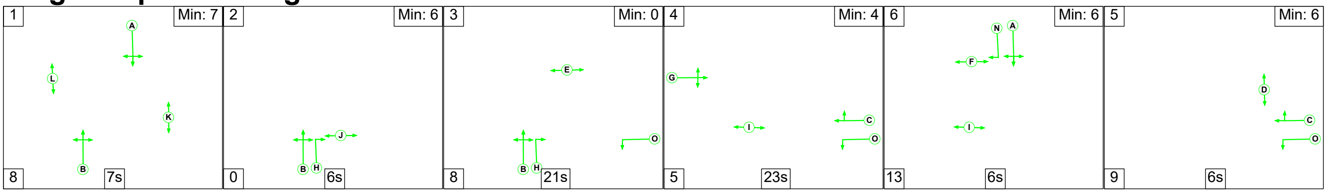
Full Input Data And Results

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

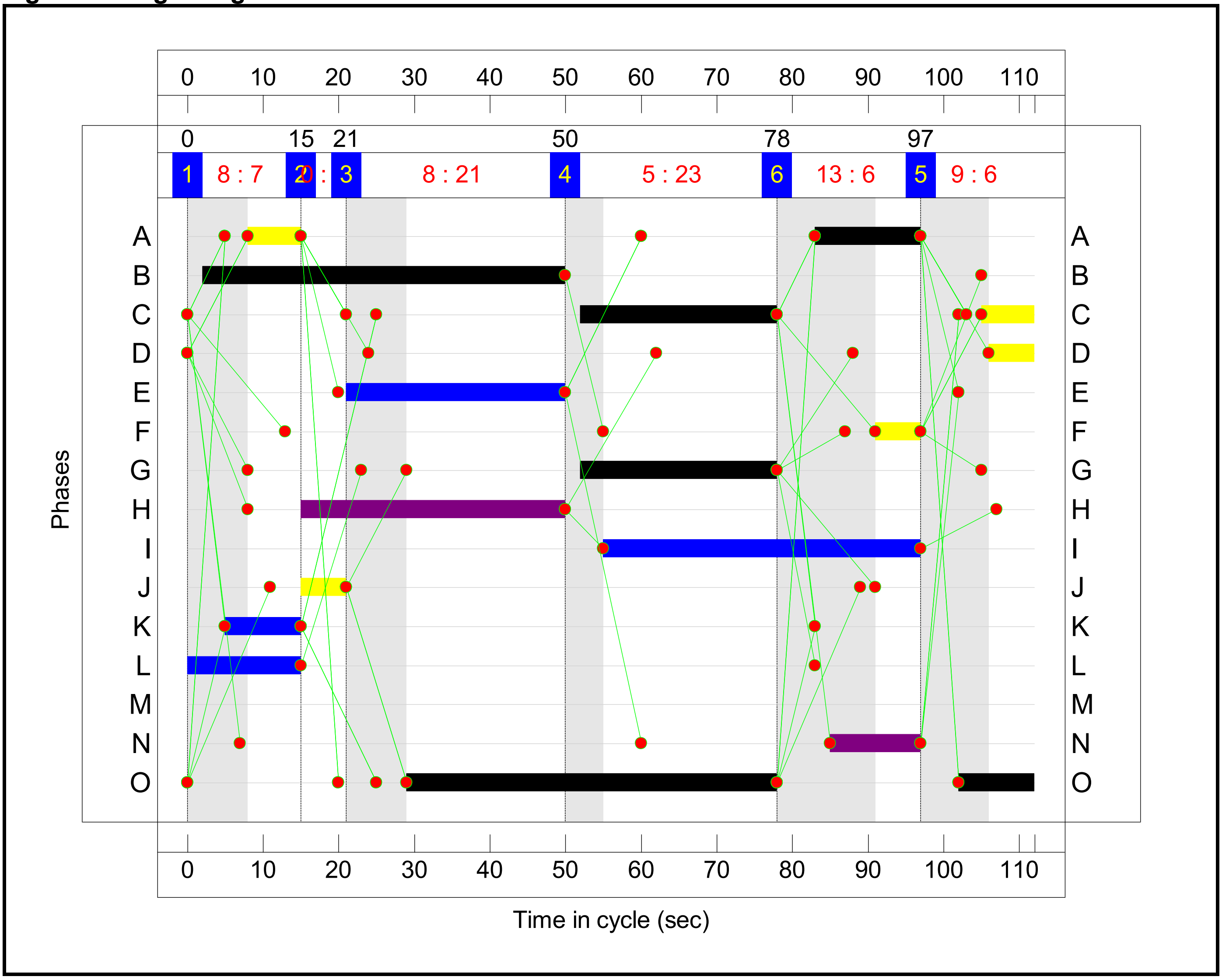
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	6	5
Duration	7	6	21	23	6	6
Change Point	0	15	21	50	78	97

Signal Timings Diagram



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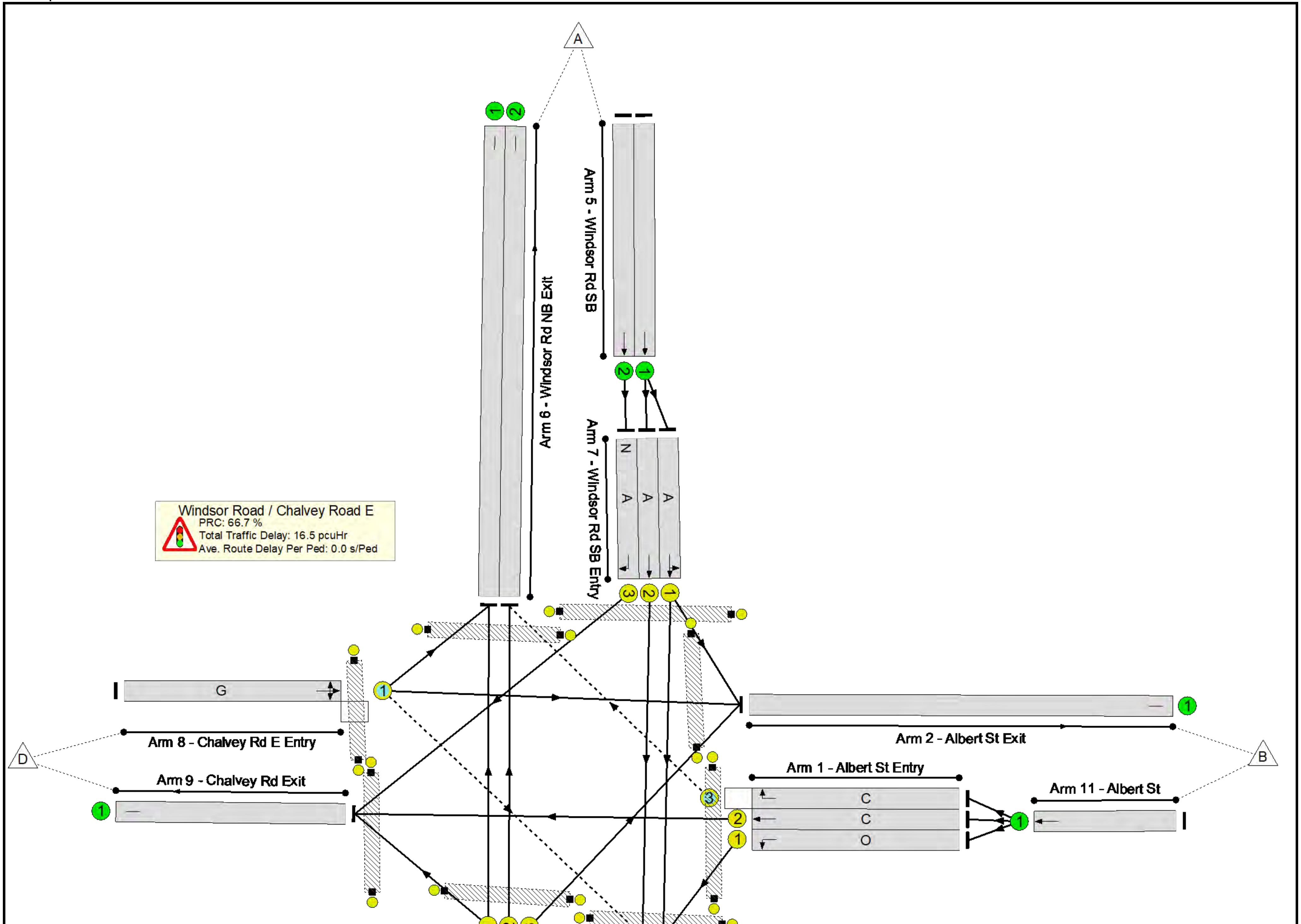
Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



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Full Input Data And Results

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**	-	-		-	-	-	-	-	-	**54.0%**
Windsor Road / Chalvey Road E	-	-	**N/A**	-	-		-	-	-	-	-	-	**54.0%**
1/1	Albert St Entry Left	U	N/A	N/A	O		2	59	-	509	1731	943	54.0%
1/2	Albert St Entry Ahead	U	N/A	N/A	C		2	33	-	318	1890	591	53.8%
1/3	Albert St Entry Right	O	N/A	N/A	C		2	33	-	47	1735	372	12.6%
2/1	Albert St Exit	U	N/A	N/A	-		-	-	-	639	Inf	Inf	0.0%
3/1	Windsor Rd NB Ahead Left	U	N/A	N/A	B		1	48	-	273	1762	771	35.4%
3/2	Windsor Rd NB Ahead	U	N/A	N/A	B		1	48	-	308	1900	831	37.1%
3/3	Windsor Rd NB Right	U	N/A	N/A	B	H	1	48	35	341	1805	790	43.2%
4/1	Windsor Rd SB Exit	U	N/A	N/A	-		-	-	-	509	Inf	Inf	0.0%
4/2	Windsor Rd SB Exit	U	N/A	N/A	-		-	-	-	226	Inf	Inf	0.0%
5/1	Windsor Rd SB Ahead	U	N/A	N/A	-		-	-	-	349	Inf	Inf	0.0%
5/2	Windsor Rd SB Ahead	U	N/A	N/A	-		-	-	-	43	Inf	Inf	0.0%
6/1	Windsor Rd NB Exit	U	N/A	N/A	-		-	-	-	30	Inf	Inf	0.0%
6/2	Windsor Rd NB Exit	U	N/A	N/A	-		-	-	-	355	Inf	Inf	0.0%
7/1	Windsor Rd SB Entry Left Ahead	U	N/A	N/A	A		2	21	-	168	1703	350	48.0%
7/2	Windsor Rd SB Entry Ahead	U	N/A	N/A	A		2	21	-	181	1900	390	46.4%

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Full Input Data And Results

7/3	Windsor Rd SB Entry Right	U	N/A	N/A	A	N	2	21	12	43	1810	372	11.6%
8/1	Chalvey Rd E Entry Ahead Right Left	O	N/A	N/A	G		1	26	-	181	1879	429	42.2%
9/1	Chalvey Rd Exit	U	N/A	N/A	-		-	-	-	610	Inf	Inf	0.0%
10/1	Windsor Rd Ahead	U	N/A	N/A	-		-	-	-	273	Inf	Inf	0.0%
10/2	Windsor Rd Ahead	U	N/A	N/A	-		-	-	-	649	Inf	Inf	0.0%
11/1	Albert St Ahead	U	N/A	N/A	-		-	-	-	874	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	K		1	10	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	F		1	6	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	29	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	D		1	6	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	I		1	42	-	0	-	0	0.0%
Ped Link: P6	Unnamed Ped Link	-	N/A	-	J		1	6	-	0	-	0	0.0%
Ped Link: P7	Unnamed Ped Link	-	N/A	-	L		1	15	-	0	-	0	0.0%
Ped Link: P8	Unnamed Ped Link	-	N/A	-	M		0	0	-	0	-	0	0.0%

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Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**78**	**13**	**1**	**12.8**	**3.5**	**0.2**	**16.5**	**-**	**-**	**-**	**-**
Windsor Road / Chalvey Road E	**-**	**-**	**78**	**13**	**1**	**12.8**	**3.5**	**0.2**	**16.5**	**-**	**-**	**-**	**-**
1/1	509	509	-	-	-	1.2	0.6	-	1.8	12.4	5.5	0.6	6.1
1/2	318	318	-	-	-	1.6	0.6	-	2.1	24.2	5.4	0.6	6.0
1/3	47	47	33	13	1	0.2	0.1	0.1	0.3	25.4	0.7	0.1	0.8
2/1	639	639	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	273	273	-	-	-	1.6	0.3	-	1.9	24.6	5.6	0.3	5.9
3/2	308	308	-	-	-	1.8	0.3	-	2.1	24.6	6.4	0.3	6.7
3/3	341	341	-	-	-	2.1	0.4	-	2.4	25.9	7.3	0.4	7.7
4/1	509	509	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	226	226	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	349	349	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	43	43	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	30	30	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	355	355	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	168	168	-	-	-	1.2	0.5	-	1.6	34.5	3.5	0.5	3.9
7/2	181	181	-	-	-	1.2	0.4	-	1.7	33.1	3.7	0.4	4.2
7/3	43	43	-	-	-	0.3	0.1	-	0.3	28.3	0.8	0.1	0.9
8/1	181	181	45	0	0	1.8	0.4	0.1	2.3	45.2	4.7	0.4	5.1
9/1	610	610	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	273	273	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	649	649	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	874	874	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-

Full Input Data And Results

Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf

C1 PRC for Signalled Lanes (%): 66.7 Total Delay for Signalled Lanes (pcuHr): 16.53 Cycle Time (s): 112
PRC Over All Lanes (%): 66.7 Total Delay Over All Lanes(pcuHr): 16.53

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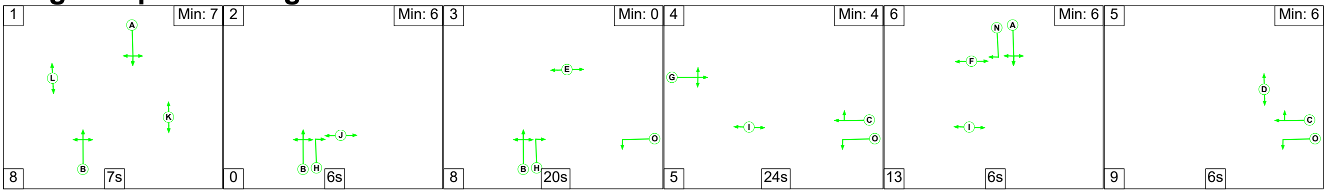
Full Input Data And Results

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

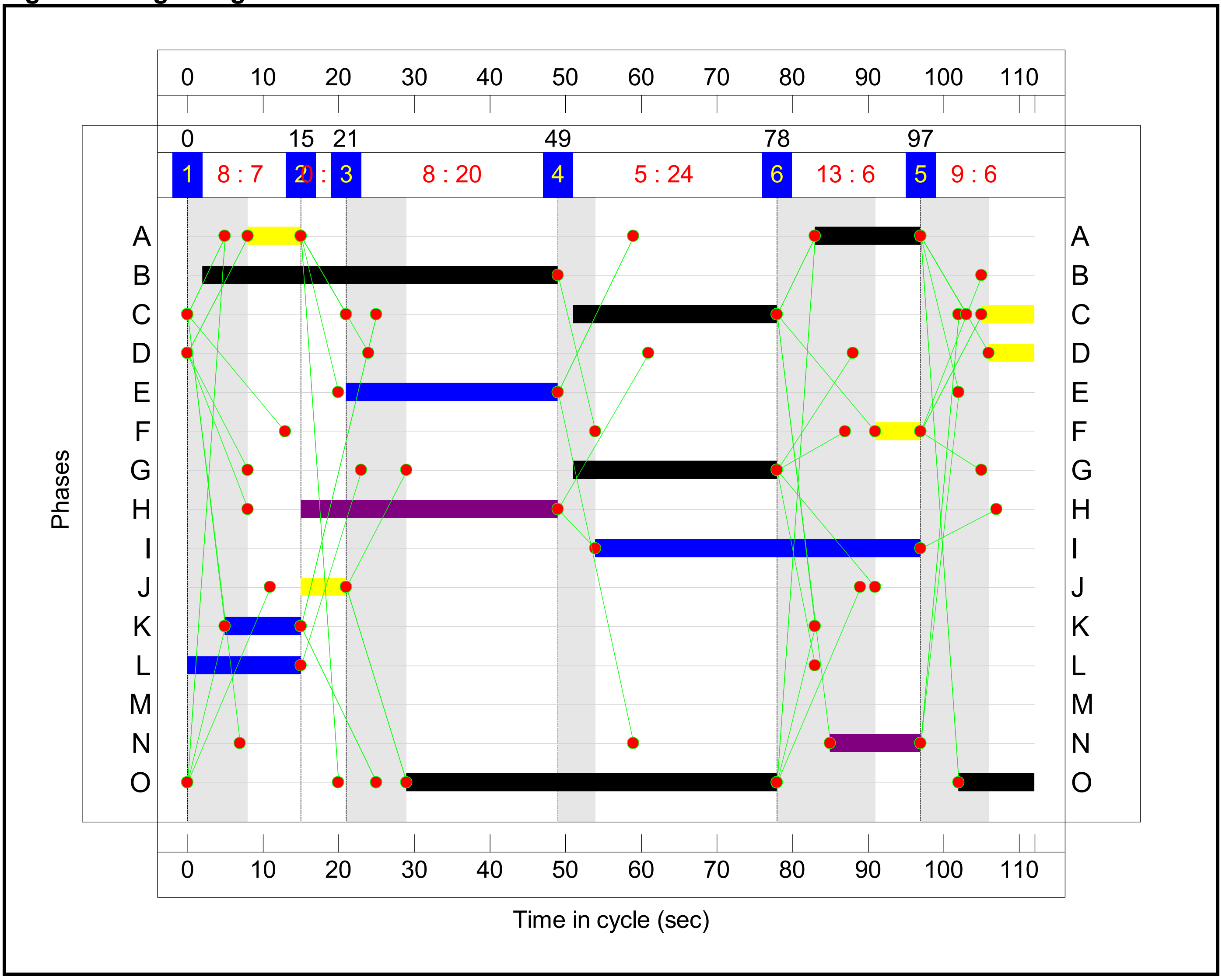
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	6	5
Duration	7	6	20	24	6	6
Change Point	0	15	21	49	78	97

Signal Timings Diagram



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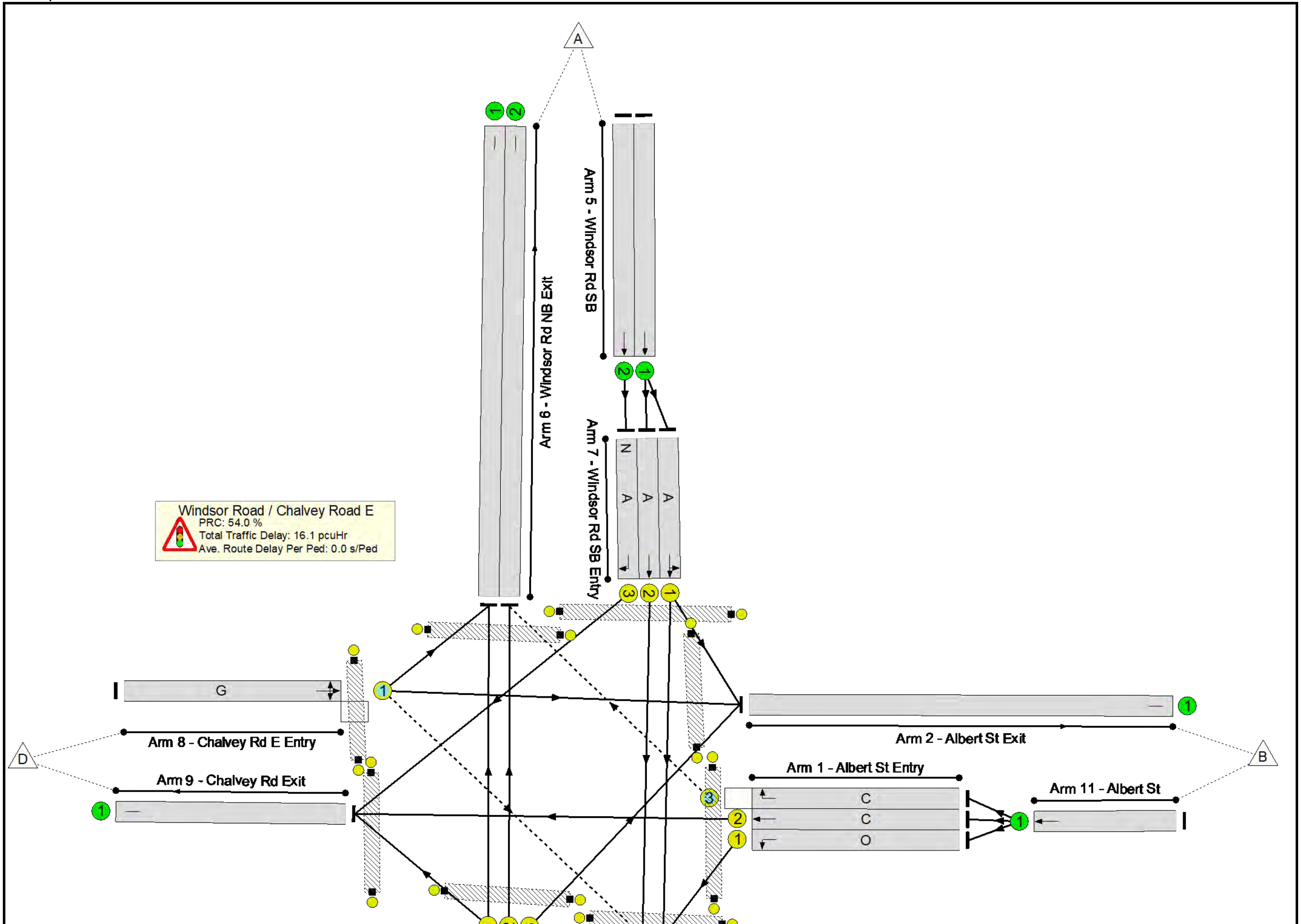
Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



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Full Input Data And Results

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**	-	-		-	-	-	-	-	-	**58.4%**
Windsor Road / Chalvey Road E	-	-	**N/A**	-	-		-	-	-	-	-	-	**58.4%**
1/1	Albert St Entry Left	U	N/A	N/A	O		2	59	-	551	1731	943	58.4%
1/2	Albert St Entry Ahead	U	N/A	N/A	C		2	34	-	313	1890	608	51.5%
1/3	Albert St Entry Right	O	N/A	N/A	C		2	34	-	20	1735	326	6.1%
2/1	Albert St Exit	U	N/A	N/A	-		-	-	-	703	Inf	Inf	0.0%
3/1	Windsor Rd NB Ahead Left	U	N/A	N/A	B		1	47	-	179	1812	777	23.1%
3/2	Windsor Rd NB Ahead	U	N/A	N/A	B		1	47	-	195	1900	814	23.9%
3/3	Windsor Rd NB Right	U	N/A	N/A	B	H	1	47	34	411	1805	774	53.1%
4/1	Windsor Rd SB Exit	U	N/A	N/A	-		-	-	-	558	Inf	Inf	0.0%
4/2	Windsor Rd SB Exit	U	N/A	N/A	-		-	-	-	201	Inf	Inf	0.0%
5/1	Windsor Rd SB Ahead	U	N/A	N/A	-		-	-	-	301	Inf	Inf	0.0%
5/2	Windsor Rd SB Ahead	U	N/A	N/A	-		-	-	-	43	Inf	Inf	0.0%
6/1	Windsor Rd NB Exit	U	N/A	N/A	-		-	-	-	129	Inf	Inf	0.0%
6/2	Windsor Rd NB Exit	U	N/A	N/A	-		-	-	-	215	Inf	Inf	0.0%
7/1	Windsor Rd SB Entry Left Ahead	U	N/A	N/A	A		2	21	-	134	1713	352	38.1%
7/2	Windsor Rd SB Entry Ahead	U	N/A	N/A	A		2	21	-	167	1900	390	42.8%

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7/3	Windsor Rd SB Entry Right	U	N/A	N/A	A	N	2	21	12	43	1810	372	11.6%
8/1	Chalvey Rd E Entry Ahead Right Left	O	N/A	N/A	G		1	27	-	250	1852	463	54.0%
9/1	Chalvey Rd Exit	U	N/A	N/A	-		-	-	-	457	Inf	Inf	0.0%
10/1	Windsor Rd Ahead	U	N/A	N/A	-		-	-	-	179	Inf	Inf	0.0%
10/2	Windsor Rd Ahead	U	N/A	N/A	-		-	-	-	606	Inf	Inf	0.0%
11/1	Albert St Ahead	U	N/A	N/A	-		-	-	-	884	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	K		1	10	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	F		1	6	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	28	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	D		1	6	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	I		1	43	-	0	-	0	0.0%
Ped Link: P6	Unnamed Ped Link	-	N/A	-	J		1	6	-	0	-	0	0.0%
Ped Link: P7	Unnamed Ped Link	-	N/A	-	L		1	15	-	0	-	0	0.0%
Ped Link: P8	Unnamed Ped Link	-	N/A	-	M		0	0	-	0	-	0	0.0%

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Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**48**	**6**	**0**	**12.5**	**3.5**	**0.1**	**16.1**	**-**	**-**	**-**	**-**
Windsor Road / Chalvey Road E	**-**	**-**	**48**	**6**	**0**	**12.5**	**3.5**	**0.1**	**16.1**	**-**	**-**	**-**	**-**
1/1	551	551	-	-	-	1.3	0.7	-	2.0	13.2	6.3	0.7	7.0
1/2	313	313	-	-	-	1.5	0.5	-	2.0	23.1	5.1	0.5	5.7
1/3	20	20	14	6	0	0.1	0.0	0.0	0.2	27.1	0.3	0.0	0.3
2/1	703	703	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	179	179	-	-	-	1.0	0.1	-	1.2	23.3	3.5	0.1	3.7
3/2	195	195	-	-	-	1.1	0.2	-	1.3	23.3	3.8	0.2	4.0
3/3	411	411	-	-	-	2.7	0.6	-	3.3	28.6	9.4	0.6	9.9
4/1	558	558	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	201	201	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	301	301	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	43	43	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	129	129	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	215	215	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	134	134	-	-	-	0.9	0.3	-	1.2	32.3	2.7	0.3	3.0
7/2	167	167	-	-	-	1.1	0.4	-	1.5	32.4	3.4	0.4	3.8
7/3	43	43	-	-	-	0.3	0.1	-	0.3	28.3	0.8	0.1	0.9
8/1	250	250	34	0	0	2.5	0.6	0.1	3.2	45.6	6.7	0.6	7.3
9/1	457	457	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	179	179	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	606	606	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	884	884	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-

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Full Input Data And Results

Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf

C1 PRC for Signalled Lanes (%): 54.0 Total Delay for Signalled Lanes (pcuHr): 16.08 Cycle Time (s): 112
PRC Over All Lanes (%): 54.0 Total Delay Over All Lanes(pcuHr): 16.08

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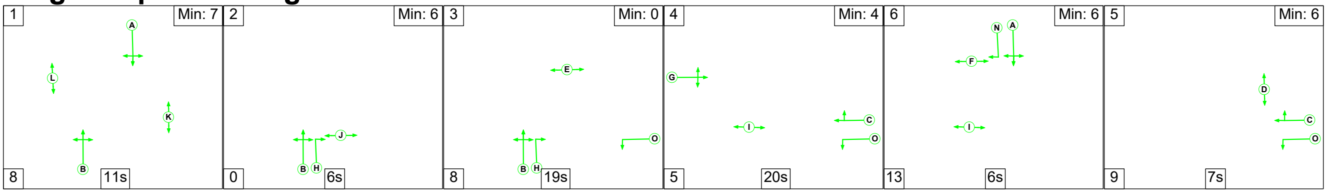
Full Input Data And Results

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

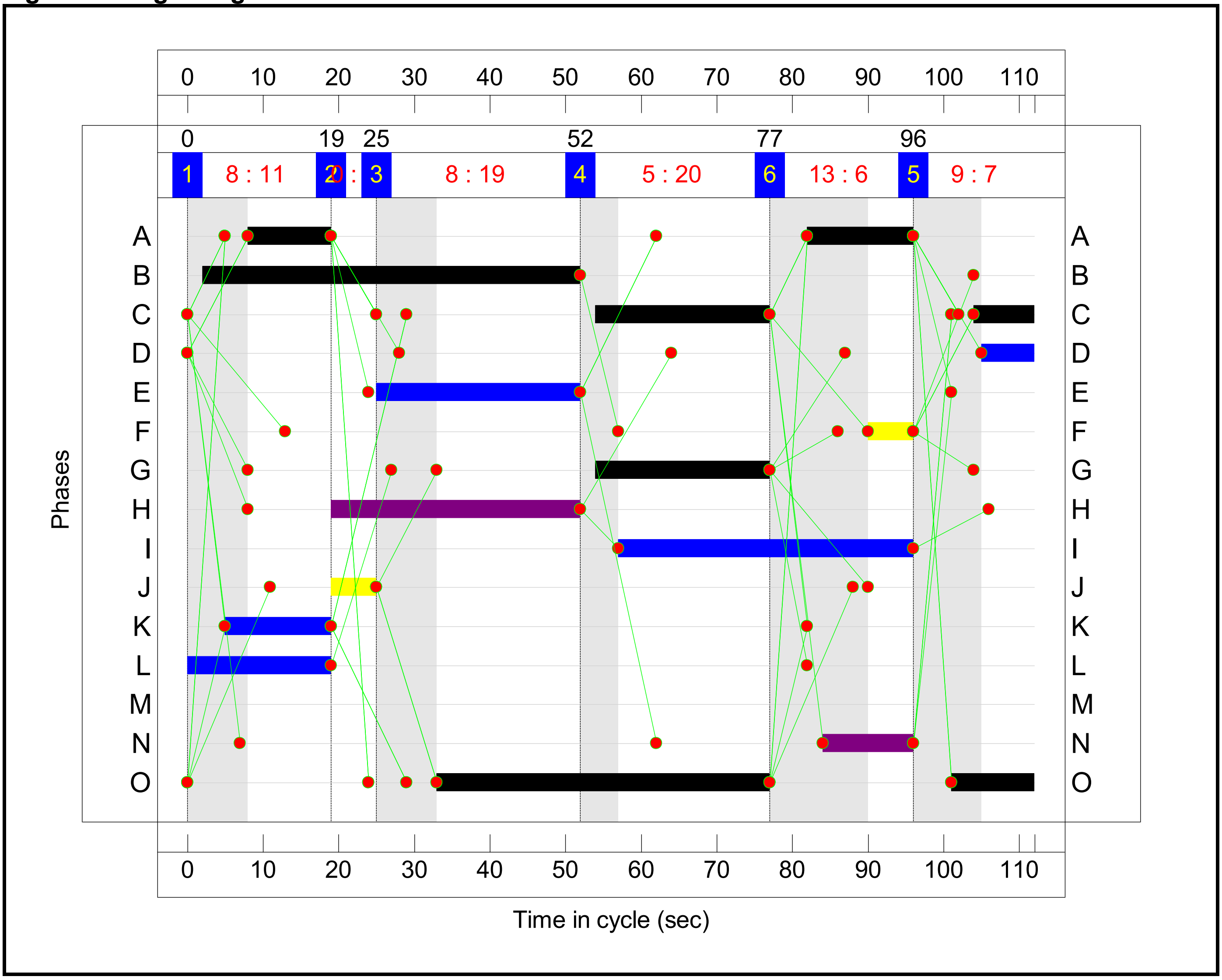
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	6	5
Duration	11	6	19	20	6	7
Change Point	0	19	25	52	77	96

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

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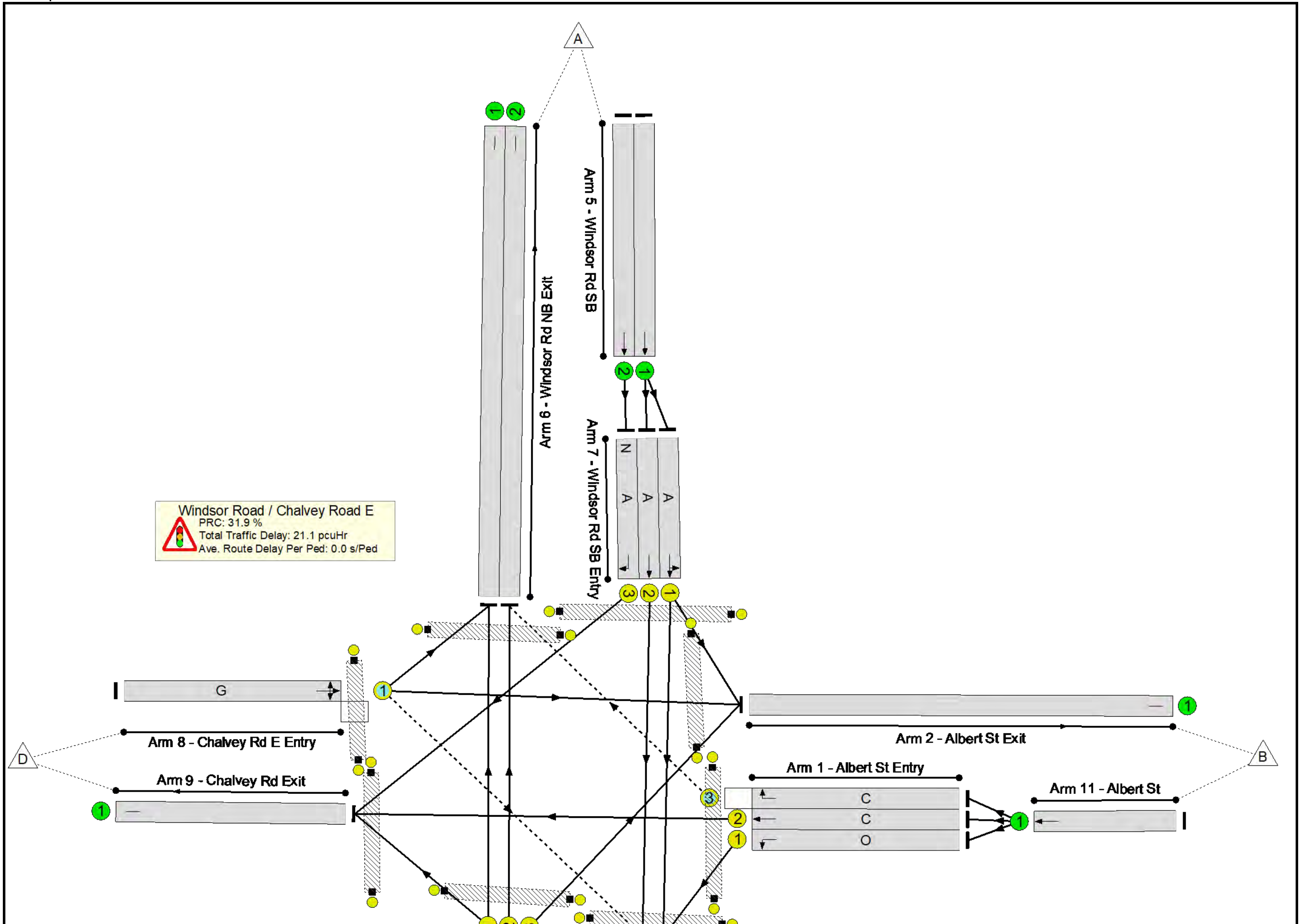
Full Input Data And Results



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Full Input Data And Results

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**	-	-		-	-	-	-	-	-	**68.3%**
Windsor Road / Chalvey Road E	-	-	**N/A**	-	-		-	-	-	-	-	-	**68.3%**
1/1	Albert St Entry Left	U	N/A	N/A	O		2	55	-	574	1731	881	65.2%
1/2	Albert St Entry Ahead	U	N/A	N/A	C		2	31	-	373	1890	557	67.0%
1/3	Albert St Entry Right	O	N/A	N/A	C		2	31	-	73	1735	358	20.4%
2/1	Albert St Exit	U	N/A	N/A	-		-	-	-	856	Inf	Inf	0.0%
3/1	Windsor Rd NB Ahead Left	U	N/A	N/A	B		1	50	-	314	1750	797	39.4%
3/2	Windsor Rd NB Ahead	U	N/A	N/A	B		1	50	-	345	1900	865	39.9%
3/3	Windsor Rd NB Right	U	N/A	N/A	B	H	1	50	33	561	1805	822	68.3%
4/1	Windsor Rd SB Exit	U	N/A	N/A	-		-	-	-	578	Inf	Inf	0.0%
4/2	Windsor Rd SB Exit	U	N/A	N/A	-		-	-	-	249	Inf	Inf	0.0%
5/1	Windsor Rd SB Ahead	U	N/A	N/A	-		-	-	-	386	Inf	Inf	0.0%
5/2	Windsor Rd SB Ahead	U	N/A	N/A	-		-	-	-	49	Inf	Inf	0.0%
6/1	Windsor Rd NB Exit	U	N/A	N/A	-		-	-	-	6	Inf	Inf	0.0%
6/2	Windsor Rd NB Exit	U	N/A	N/A	-		-	-	-	418	Inf	Inf	0.0%
7/1	Windsor Rd SB Entry Left Ahead	U	N/A	N/A	A		2	25	-	174	1708	412	42.3%
7/2	Windsor Rd SB Entry Ahead	U	N/A	N/A	A		2	25	-	212	1900	458	46.3%

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Full Input Data And Results

7/3	Windsor Rd SB Entry Right	U	N/A	N/A	A	N	2	25	12	49	1810	436	11.2%
8/1	Chalvey Rd E Entry Ahead Right Left	O	N/A	N/A	G		1	23	-	168	1882	377	44.5%
9/1	Chalvey Rd Exit	U	N/A	N/A	-		-	-	-	736	Inf	Inf	0.0%
10/1	Windsor Rd Ahead	U	N/A	N/A	-		-	-	-	314	Inf	Inf	0.0%
10/2	Windsor Rd Ahead	U	N/A	N/A	-		-	-	-	906	Inf	Inf	0.0%
11/1	Albert St Ahead	U	N/A	N/A	-		-	-	-	1020	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	K		1	14	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	F		1	6	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	27	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	D		1	7	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	I		1	39	-	0	-	0	0.0%
Ped Link: P6	Unnamed Ped Link	-	N/A	-	J		1	6	-	0	-	0	0.0%
Ped Link: P7	Unnamed Ped Link	-	N/A	-	L		1	19	-	0	-	0	0.0%
Ped Link: P8	Unnamed Ped Link	-	N/A	-	M		0	0	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**87**	**22**	**1**	**15.9**	**5.0**	**0.2**	**21.1**	**-**	**-**	**-**	**-**
Windsor Road / Chalvey Road E	**-**	**-**	**87**	**22**	**1**	**15.9**	**5.0**	**0.2**	**21.1**	**-**	**-**	**-**	**-**
1/1	574	574	-	-	-	1.7	0.9	-	2.6	16.2	7.5	0.9	8.4
1/2	373	373	-	-	-	2.0	1.0	-	3.0	29.1	6.8	1.0	7.8
1/3	73	73	50	22	1	0.3	0.1	0.1	0.6	27.5	1.1	0.1	1.2
2/1	856	856	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	314	314	-	-	-	1.8	0.3	-	2.1	24.0	6.5	0.3	6.8
3/2	345	345	-	-	-	1.9	0.3	-	2.3	23.8	7.1	0.3	7.4
3/3	561	561	-	-	-	3.8	1.1	-	4.8	30.9	13.7	1.1	14.8
4/1	578	578	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	249	249	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	386	386	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	49	49	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	6	6	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	418	418	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	174	174	-	-	-	1.1	0.4	-	1.4	29.3	3.3	0.4	3.7
7/2	212	212	-	-	-	1.3	0.4	-	1.7	29.3	4.1	0.4	4.5
7/3	49	49	-	-	-	0.3	0.1	-	0.3	24.8	0.9	0.1	0.9
8/1	168	168	37	0	0	1.8	0.4	0.1	2.3	49.2	4.5	0.4	4.9
9/1	736	736	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	314	314	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	906	906	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	1020	1020	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-

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Full Input Data And Results

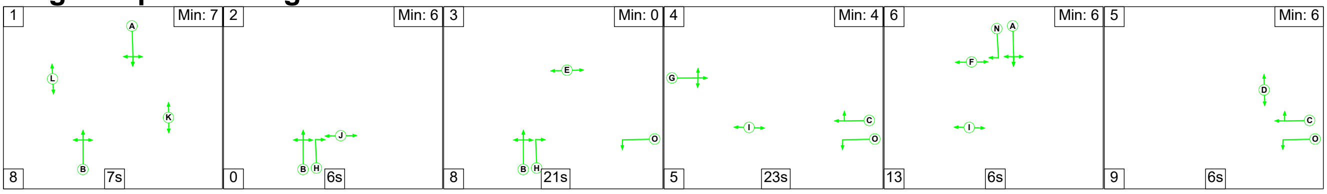
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf

C1 PRC for Signalled Lanes (%): 31.9 Total Delay for Signalled Lanes (pcuHr): 21.12 Cycle Time (s): 112
PRC Over All Lanes (%): 31.9 Total Delay Over All Lanes(pcuHr): 21.12

Full Input Data And Results

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

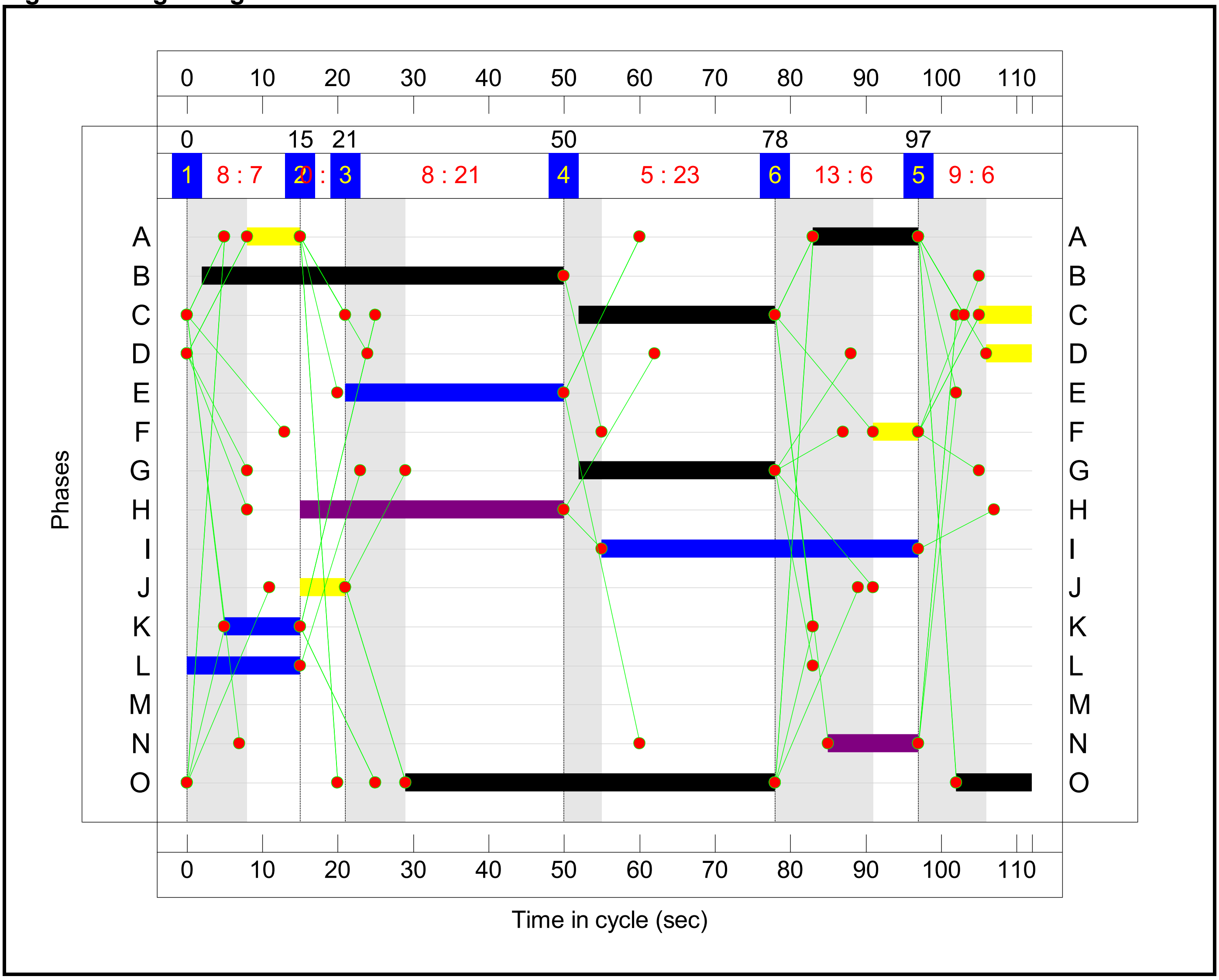
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	6	5
Duration	7	6	21	23	6	6
Change Point	0	15	21	50	78	97

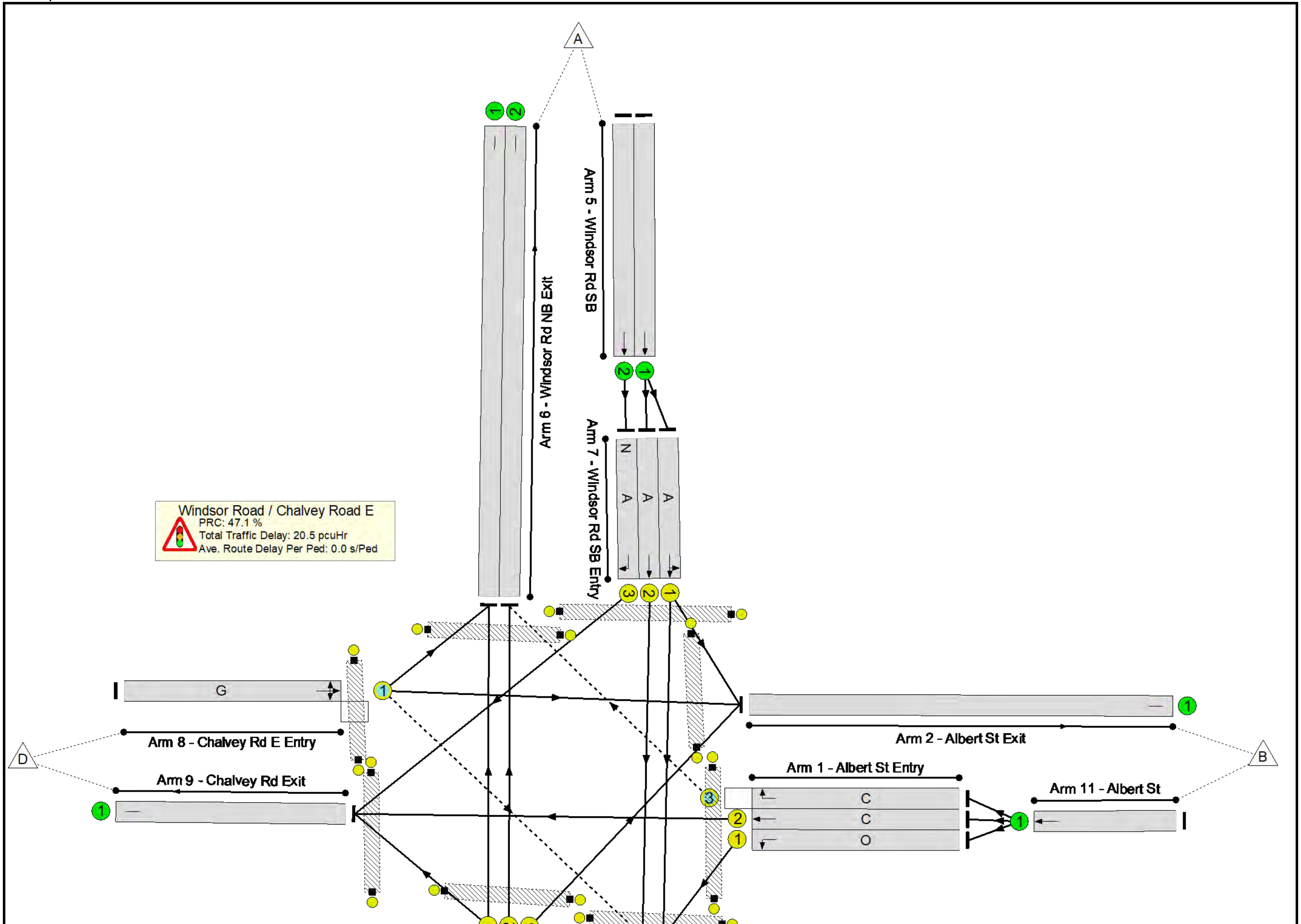
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

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**	-	-		-	-	-	-	-	-	**61.2%**
Windsor Road / Chalvey Road E	-	-	**N/A**	-	-		-	-	-	-	-	-	**61.2%**
1/1	Albert St Entry Left	U	N/A	N/A	O		2	59	-	577	1731	943	61.2%
1/2	Albert St Entry Ahead	U	N/A	N/A	C		2	33	-	346	1890	591	58.6%
1/3	Albert St Entry Right	O	N/A	N/A	C		2	33	-	32	1735	294	10.9%
2/1	Albert St Exit	U	N/A	N/A	-		-	-	-	885	Inf	Inf	0.0%
3/1	Windsor Rd NB Ahead Left	U	N/A	N/A	B		1	48	-	241	1824	798	30.2%
3/2	Windsor Rd NB Ahead	U	N/A	N/A	B		1	48	-	258	1900	831	31.0%
3/3	Windsor Rd NB Right	U	N/A	N/A	B	H	1	48	35	483	1805	790	61.2%
4/1	Windsor Rd SB Exit	U	N/A	N/A	-		-	-	-	577	Inf	Inf	0.0%
4/2	Windsor Rd SB Exit	U	N/A	N/A	-		-	-	-	253	Inf	Inf	0.0%
5/1	Windsor Rd SB Ahead	U	N/A	N/A	-		-	-	-	411	Inf	Inf	0.0%
5/2	Windsor Rd SB Ahead	U	N/A	N/A	-		-	-	-	53	Inf	Inf	0.0%
6/1	Windsor Rd NB Exit	U	N/A	N/A	-		-	-	-	156	Inf	Inf	0.0%
6/2	Windsor Rd NB Exit	U	N/A	N/A	-		-	-	-	290	Inf	Inf	0.0%
7/1	Windsor Rd SB Entry Left Ahead	U	N/A	N/A	A		2	21	-	187	1703	350	53.5%
7/2	Windsor Rd SB Entry Ahead	U	N/A	N/A	A		2	21	-	224	1900	390	57.4%

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7/3	Windsor Rd SB Entry Right	U	N/A	N/A	A	N	2	21	12	53	1810	372	14.3%
8/1	Chalvey Rd E Entry Ahead Right Left	O	N/A	N/A	G		1	26	-	276	1876	452	61.0%
9/1	Chalvey Rd Exit	U	N/A	N/A	-		-	-	-	516	Inf	Inf	0.0%
10/1	Windsor Rd Ahead	U	N/A	N/A	-		-	-	-	241	Inf	Inf	0.0%
10/2	Windsor Rd Ahead	U	N/A	N/A	-		-	-	-	741	Inf	Inf	0.0%
11/1	Albert St Ahead	U	N/A	N/A	-		-	-	-	955	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	K		1	10	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	F		1	6	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	29	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	D		1	6	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	I		1	42	-	0	-	0	0.0%
Ped Link: P6	Unnamed Ped Link	-	N/A	-	J		1	6	-	0	-	0	0.0%
Ped Link: P7	Unnamed Ped Link	-	N/A	-	L		1	15	-	0	-	0	0.0%
Ped Link: P8	Unnamed Ped Link	-	N/A	-	M		0	0	-	0	-	0	0.0%

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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	**-**	**-**	**51**	**9**	**1**	**15.5**	**4.9**	**0.1**	**20.5**	**-**	**-**	**-**	**-**
Windsor Road / Chalvey Road E	**-**	**-**	**51**	**9**	**1**	**15.5**	**4.9**	**0.1**	**20.5**	**-**	**-**	**-**	**-**
1/1	577	577	-	-	-	1.5	0.8	-	2.3	14.1	6.9	0.8	7.7
1/2	346	346	-	-	-	1.7	0.7	-	2.4	25.2	6.0	0.7	6.7
1/3	32	32	22	9	1	0.1	0.1	0.1	0.3	29.9	0.5	0.1	0.5
2/1	885	885	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	241	241	-	-	-	1.4	0.2	-	1.6	23.7	4.8	0.2	5.0
3/2	258	258	-	-	-	1.5	0.2	-	1.7	23.6	5.2	0.2	5.4
3/3	483	483	-	-	-	3.2	0.8	-	4.0	30.0	11.5	0.8	12.3
4/1	577	577	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	253	253	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	411	411	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	53	53	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	156	156	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	290	290	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	187	187	-	-	-	1.3	0.6	-	1.9	35.9	3.9	0.6	4.5
7/2	224	224	-	-	-	1.6	0.7	-	2.2	35.9	4.7	0.7	5.3
7/3	53	53	-	-	-	0.3	0.1	-	0.4	28.6	1.0	0.1	1.1
8/1	276	276	29	0	0	2.9	0.8	0.1	3.7	48.7	7.6	0.8	8.4
9/1	516	516	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	241	241	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	741	741	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	955	955	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-

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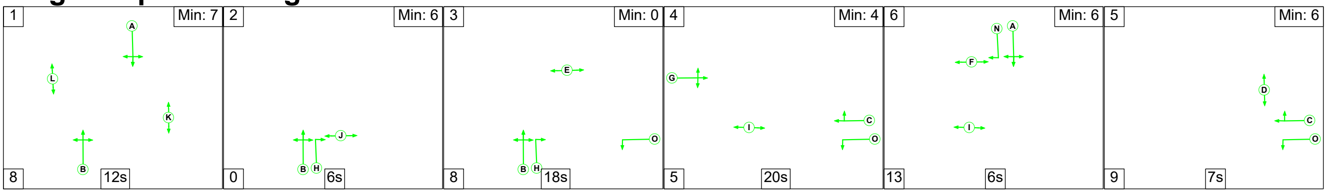
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf

C1 PRC for Signalled Lanes (%): 47.1 Total Delay for Signalled Lanes (pcuHr): 20.51 Cycle Time (s): 112
PRC Over All Lanes (%): 47.1 Total Delay Over All Lanes(pcuHr): 20.51

Full Input Data And Results

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

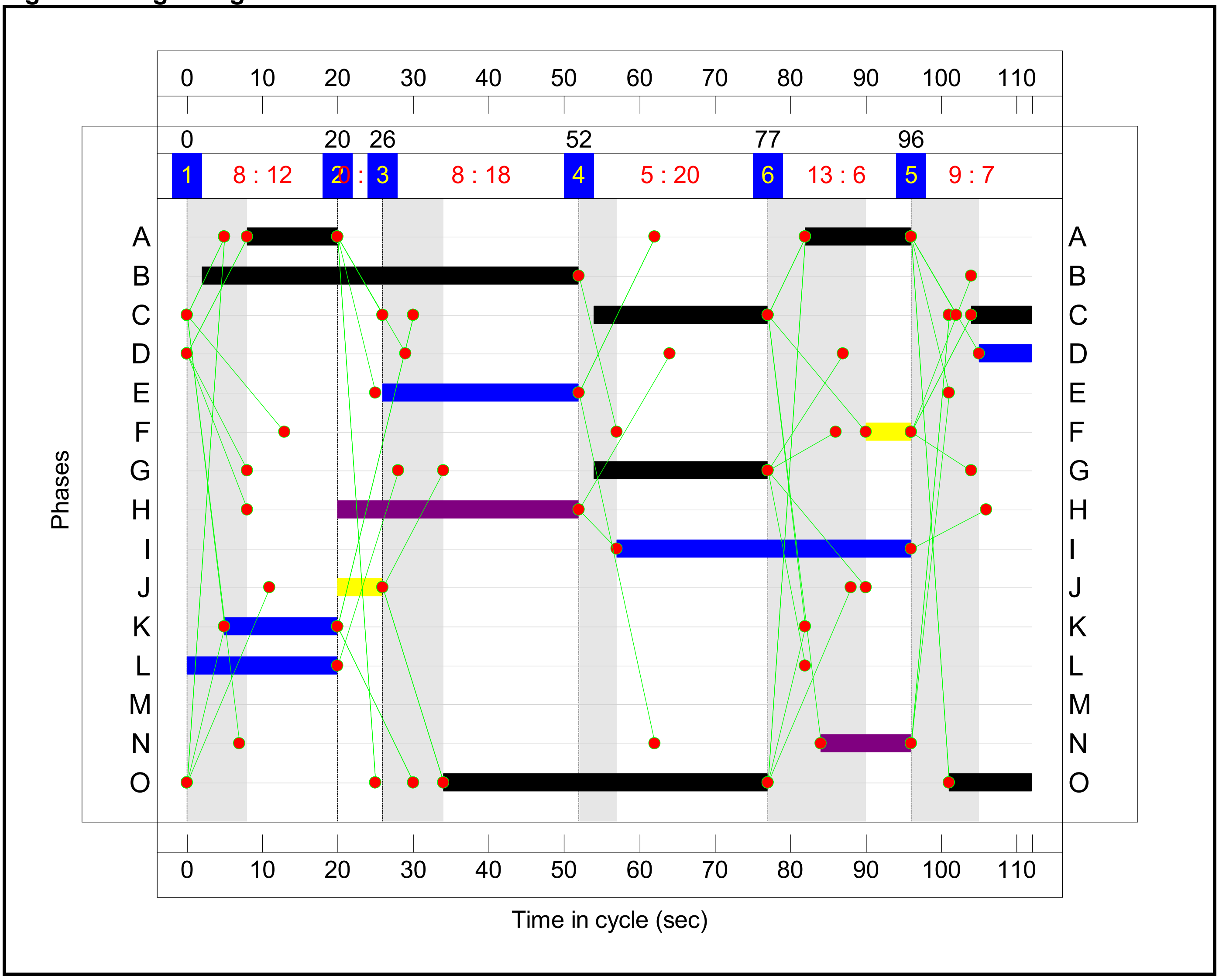
Stage Sequence Diagram



Stage Timings

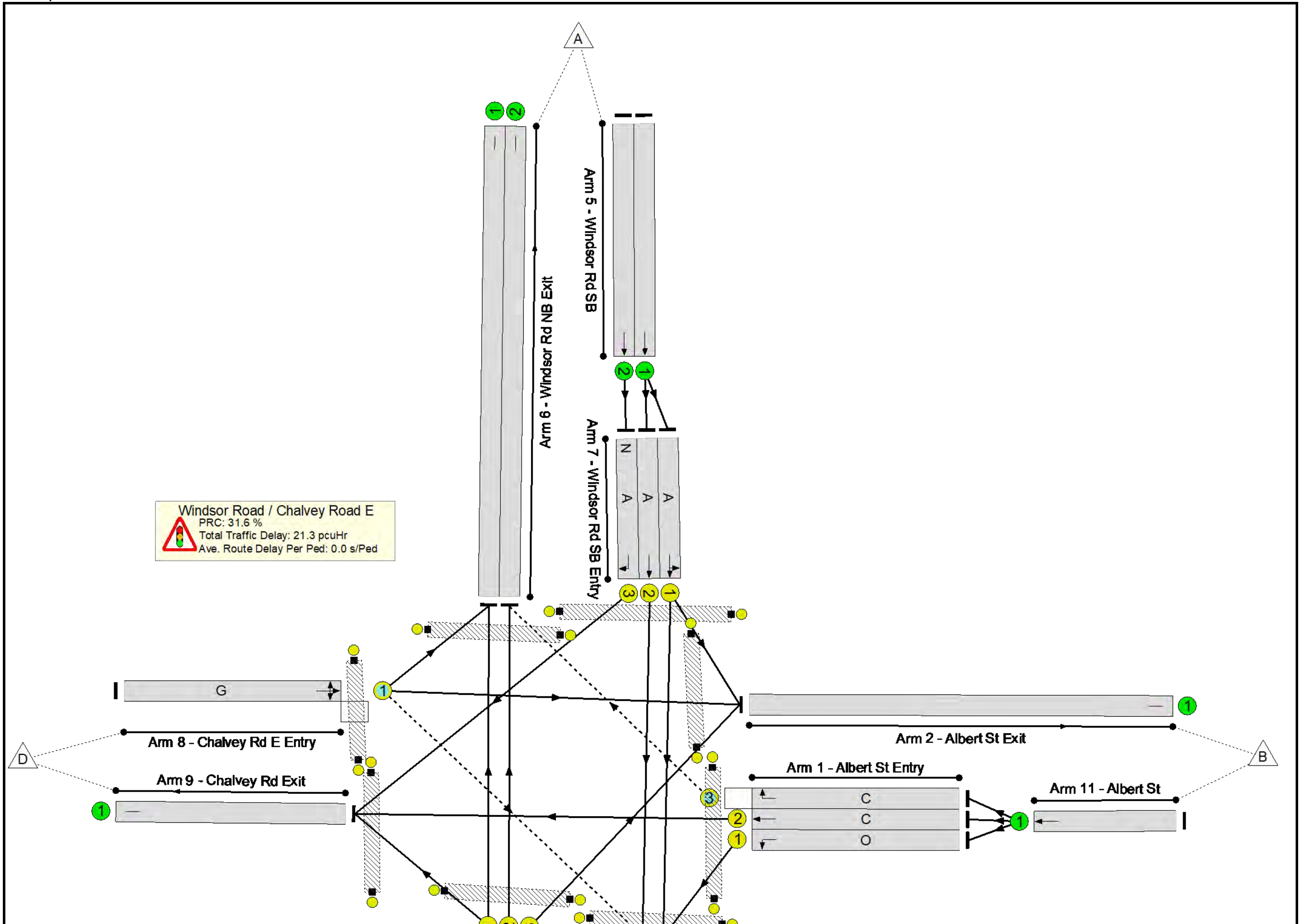
Stage	1	2	3	4	6	5
Duration	12	6	18	20	6	7
Change Point	0	20	26	52	77	96

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

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**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**68.4%**
Windsor Road / Chalvey Road E	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**68.4%**
1/1	Albert St Entry Left	U	N/A	N/A	O		2	54	-	575	1731	865	66.4%
1/2	Albert St Entry Ahead	U	N/A	N/A	C		2	31	-	375	1890	557	67.3%
1/3	Albert St Entry Right	O	N/A	N/A	C		2	31	-	73	1735	357	20.5%
2/1	Albert St Exit	U	N/A	N/A	-		-	-	-	858	Inf	Inf	0.0%
3/1	Windsor Rd NB Ahead Left	U	N/A	N/A	B		1	50	-	319	1750	797	40.0%
3/2	Windsor Rd NB Ahead	U	N/A	N/A	B		1	50	-	339	1900	865	39.2%
3/3	Windsor Rd NB Right	U	N/A	N/A	B	H	1	50	32	562	1805	822	68.4%
4/1	Windsor Rd SB Exit	U	N/A	N/A	-		-	-	-	575	Inf	Inf	0.0%
4/2	Windsor Rd SB Exit	U	N/A	N/A	-		-	-	-	258	Inf	Inf	0.0%
5/1	Windsor Rd SB Ahead	U	N/A	N/A	-		-	-	-	392	Inf	Inf	0.0%
5/2	Windsor Rd SB Ahead	U	N/A	N/A	-		-	-	-	50	Inf	Inf	0.0%
6/1	Windsor Rd NB Exit	U	N/A	N/A	-		-	-	-	7	Inf	Inf	0.0%
6/2	Windsor Rd NB Exit	U	N/A	N/A	-		-	-	-	412	Inf	Inf	0.0%
7/1	Windsor Rd SB Entry Left Ahead	U	N/A	N/A	A		2	26	-	172	1703	426	40.4%
7/2	Windsor Rd SB Entry Ahead	U	N/A	N/A	A		2	26	-	220	1900	475	46.3%

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Full Input Data And Results

7/3	Windsor Rd SB Entry Right	U	N/A	N/A	A	N	2	26	12	50	1810	453	11.0%
8/1	Chalvey Rd E Entry Ahead Right Left	O	N/A	N/A	G		1	23	-	169	1880	373	45.4%
9/1	Chalvey Rd Exit	U	N/A	N/A	-		-	-	-	744	Inf	Inf	0.0%
10/1	Windsor Rd Ahead	U	N/A	N/A	-		-	-	-	319	Inf	Inf	0.0%
10/2	Windsor Rd Ahead	U	N/A	N/A	-		-	-	-	901	Inf	Inf	0.0%
11/1	Albert St Ahead	U	N/A	N/A	-		-	-	-	1023	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	K		1	15	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	F		1	6	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	26	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	D		1	7	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	I		1	39	-	0	-	0	0.0%
Ped Link: P6	Unnamed Ped Link	-	N/A	-	J		1	6	-	0	-	0	0.0%
Ped Link: P7	Unnamed Ped Link	-	N/A	-	L		1	20	-	0	-	0	0.0%
Ped Link: P8	Unnamed Ped Link	-	N/A	-	M		0	0	-	0	-	0	0.0%

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Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**88**	**22**	**1**	**15.9**	**5.1**	**0.2**	**21.3**	**-**	**-**	**-**	**-**
Windsor Road / Chalvey Road E	**-**	**-**	**88**	**22**	**1**	**15.9**	**5.1**	**0.2**	**21.3**	**-**	**-**	**-**	**-**
1/1	575	575	-	-	-	1.7	1.0	-	2.7	17.0	7.8	1.0	8.8
1/2	375	375	-	-	-	2.0	1.0	-	3.0	29.2	6.9	1.0	7.9
1/3	73	73	50	22	1	0.3	0.1	0.1	0.6	27.6	1.1	0.1	1.2
2/1	858	858	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	319	319	-	-	-	1.8	0.3	-	2.1	24.1	6.6	0.3	6.9
3/2	339	339	-	-	-	1.9	0.3	-	2.2	23.6	7.0	0.3	7.3
3/3	562	562	-	-	-	3.8	1.1	-	4.8	31.0	13.7	1.1	14.8
4/1	575	575	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	258	258	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	392	392	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	50	50	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	7	7	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	412	412	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	172	172	-	-	-	1.0	0.3	-	1.3	28.2	3.2	0.3	3.5
7/2	220	220	-	-	-	1.3	0.4	-	1.7	28.5	4.2	0.4	4.6
7/3	50	50	-	-	-	0.3	0.1	-	0.3	24.0	0.9	0.1	0.9
8/1	169	169	38	0	0	1.8	0.4	0.1	2.3	49.7	4.5	0.4	4.9
9/1	744	744	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	319	319	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	901	901	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	1023	1023	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-

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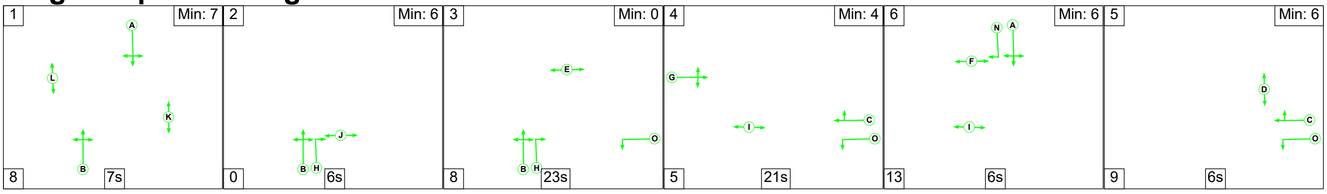
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf

C1 PRC for Signalled Lanes (%): 31.6 Total Delay for Signalled Lanes (pcuHr): 21.26 Cycle Time (s): 112
PRC Over All Lanes (%): 31.6 Total Delay Over All Lanes(pcuHr): 21.26

Full Input Data And Results

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

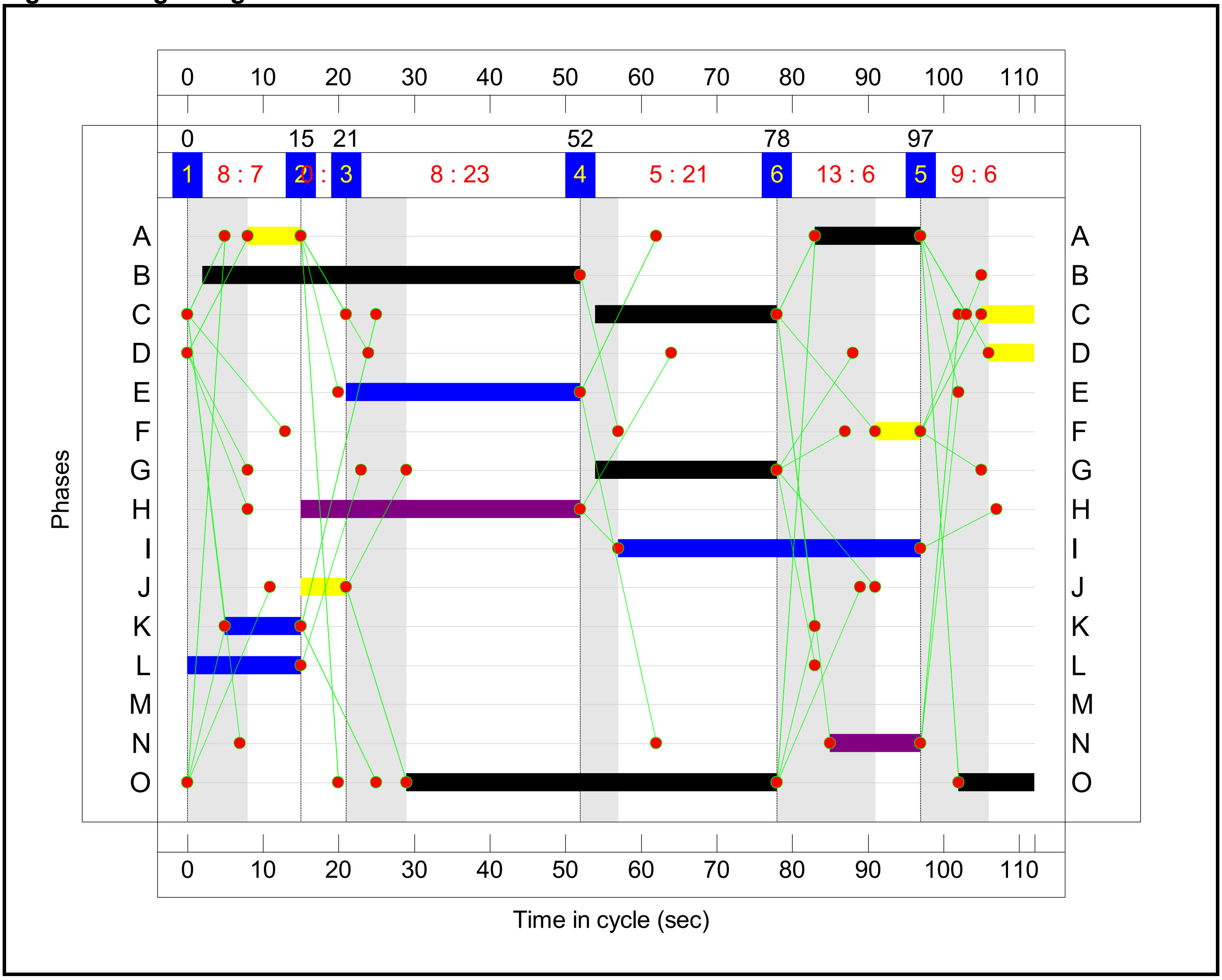
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	6	5
Duration	7	6	23	21	6	6
Change Point	0	15	21	52	78	97

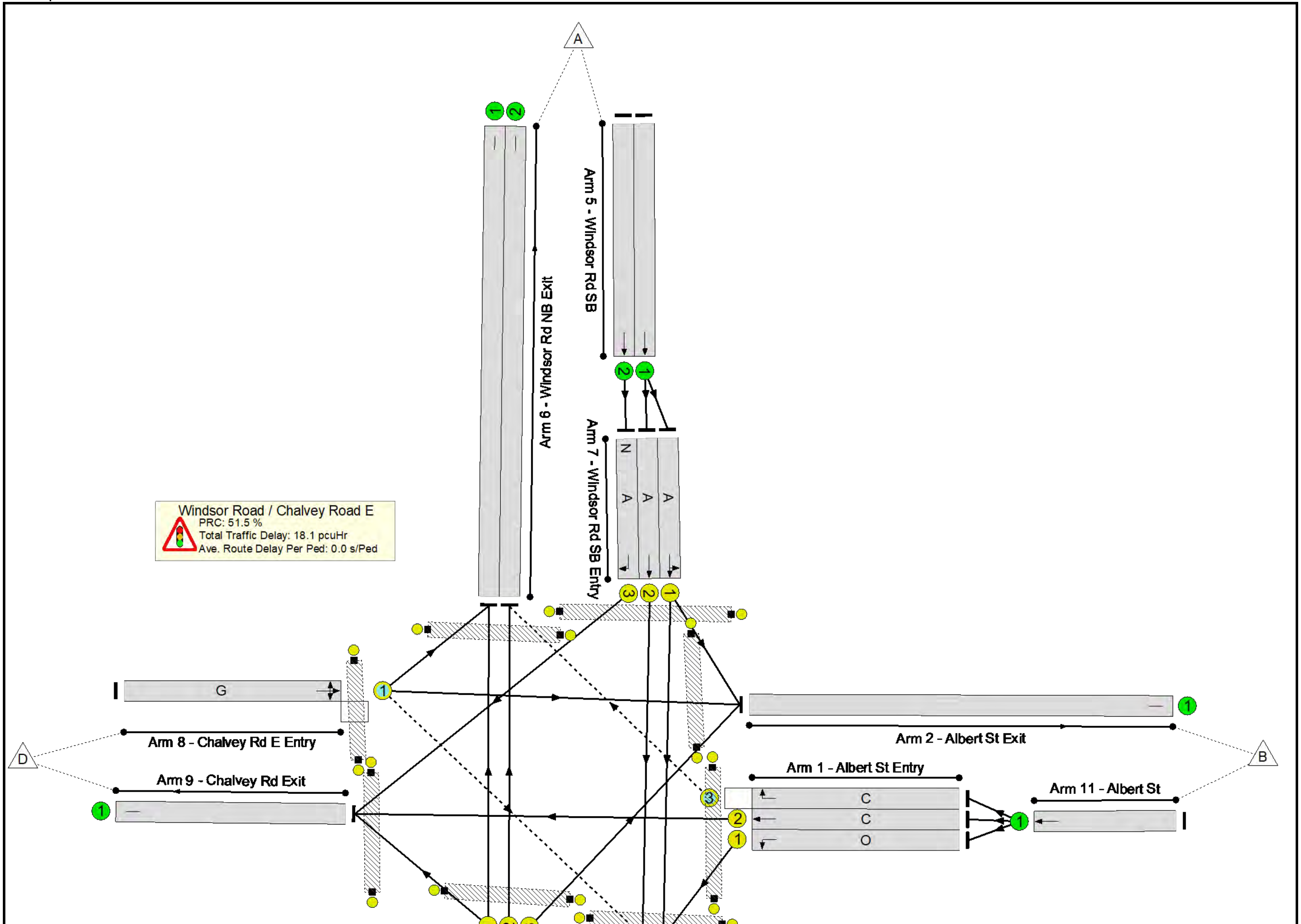
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



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Full Input Data And Results

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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**	-	-		-	-	-	-	-	-	**59.4%**
Windsor Road / Chalvey Road E	-	-	**N/A**	-	-		-	-	-	-	-	-	**59.4%**
1/1	Albert St Entry Left	U	N/A	N/A	O		2	59	-	560	1731	943	59.4%
1/2	Albert St Entry Ahead	U	N/A	N/A	C		2	31	-	317	1890	557	56.9%
1/3	Albert St Entry Right	O	N/A	N/A	C		2	31	-	32	1735	301	10.6%
2/1	Albert St Exit	U	N/A	N/A	-		-	-	-	751	Inf	Inf	0.0%
3/1	Windsor Rd NB Ahead Left	U	N/A	N/A	B		1	50	-	248	1824	831	29.9%
3/2	Windsor Rd NB Ahead	U	N/A	N/A	B		1	50	-	267	1900	865	30.9%
3/3	Windsor Rd NB Right	U	N/A	N/A	B	H	1	50	37	454	1805	822	55.2%
4/1	Windsor Rd SB Exit	U	N/A	N/A	-		-	-	-	572	Inf	Inf	0.0%
4/2	Windsor Rd SB Exit	U	N/A	N/A	-		-	-	-	237	Inf	Inf	0.0%
5/1	Windsor Rd SB Ahead	U	N/A	N/A	-		-	-	-	342	Inf	Inf	0.0%
5/2	Windsor Rd SB Ahead	U	N/A	N/A	-		-	-	-	48	Inf	Inf	0.0%
6/1	Windsor Rd NB Exit	U	N/A	N/A	-		-	-	-	160	Inf	Inf	0.0%
6/2	Windsor Rd NB Exit	U	N/A	N/A	-		-	-	-	299	Inf	Inf	0.0%
7/1	Windsor Rd SB Entry Left Ahead	U	N/A	N/A	A		2	21	-	150	1718	353	42.5%
7/2	Windsor Rd SB Entry Ahead	U	N/A	N/A	A		2	21	-	192	1900	390	49.2%

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Full Input Data And Results

7/3	Windsor Rd SB Entry Right	U	N/A	N/A	A	N	2	21	12	48	1810	372	12.9%
8/1	Chalvey Rd E Entry Ahead Right Left	O	N/A	N/A	G		1	24	-	236	1862	409	57.7%
9/1	Chalvey Rd Exit	U	N/A	N/A	-		-	-	-	485	Inf	Inf	0.0%
10/1	Windsor Rd Ahead	U	N/A	N/A	-		-	-	-	248	Inf	Inf	0.0%
10/2	Windsor Rd Ahead	U	N/A	N/A	-		-	-	-	721	Inf	Inf	0.0%
11/1	Albert St Ahead	U	N/A	N/A	-		-	-	-	909	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	K		1	10	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	F		1	6	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	31	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	D		1	6	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	I		1	40	-	0	-	0	0.0%
Ped Link: P6	Unnamed Ped Link	-	N/A	-	J		1	6	-	0	-	0	0.0%
Ped Link: P7	Unnamed Ped Link	-	N/A	-	L		1	15	-	0	-	0	0.0%
Ped Link: P8	Unnamed Ped Link	-	N/A	-	M		0	0	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**67**	**9**	**1**	**13.9**	**4.1**	**0.2**	**18.1**	**-**	**-**	**-**	**-**
Windsor Road / Chalvey Road E	**-**	**-**	**67**	**9**	**1**	**13.9**	**4.1**	**0.2**	**18.1**	**-**	**-**	**-**	**-**
1/1	560	560	-	-	-	1.3	0.7	-	2.1	13.4	6.4	0.7	7.1
1/2	317	317	-	-	-	1.6	0.7	-	2.3	26.2	5.5	0.7	6.2
1/3	32	32	22	9	1	0.1	0.1	0.1	0.3	29.6	0.5	0.1	0.5
2/1	751	751	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	248	248	-	-	-	1.3	0.2	-	1.5	22.3	4.8	0.2	5.0
3/2	267	267	-	-	-	1.4	0.2	-	1.7	22.3	5.2	0.2	5.4
3/3	454	454	-	-	-	2.8	0.6	-	3.4	27.1	10.2	0.6	10.8
4/1	572	572	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	237	237	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	342	342	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	48	48	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	160	160	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	299	299	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	150	150	-	-	-	1.0	0.4	-	1.4	33.2	3.0	0.4	3.4
7/2	192	192	-	-	-	1.3	0.5	-	1.8	33.8	3.9	0.5	4.4
7/3	48	48	-	-	-	0.3	0.1	-	0.4	28.4	0.9	0.1	1.0
8/1	236	236	45	0	0	2.5	0.7	0.1	3.3	50.7	6.5	0.7	7.2
9/1	485	485	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	248	248	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	721	721	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	909	909	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-

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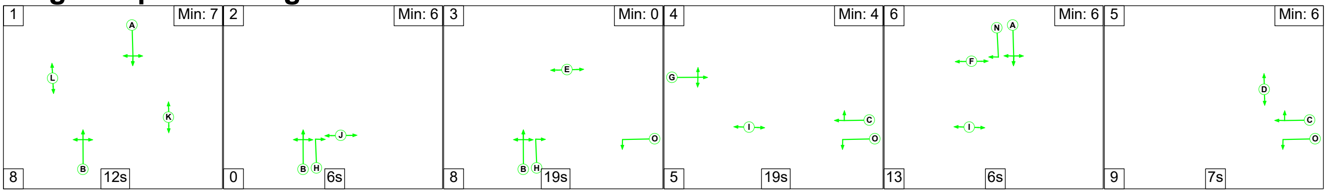
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf

C1 PRC for Signalled Lanes (%): 51.5 Total Delay for Signalled Lanes (pcuHr): 18.14 Cycle Time (s): 112
PRC Over All Lanes (%): 51.5 Total Delay Over All Lanes(pcuHr): 18.14

Full Input Data And Results

Scenario 7: 'AM DS Commercial' (FG7: 'AM DS Commercial', Plan 1: 'Network Control Plan 1')

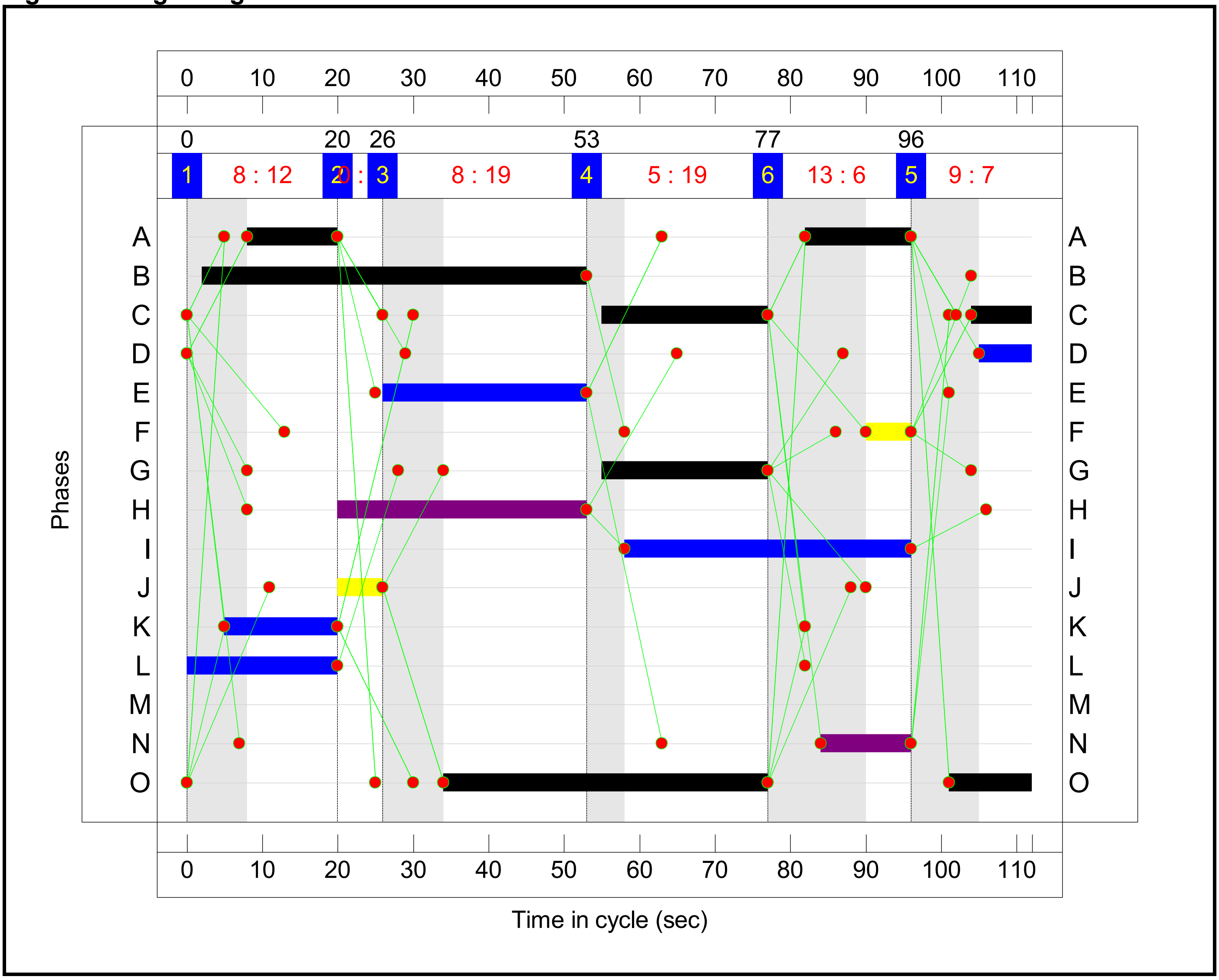
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	6	5
Duration	12	6	19	19	6	7
Change Point	0	20	26	53	77	96

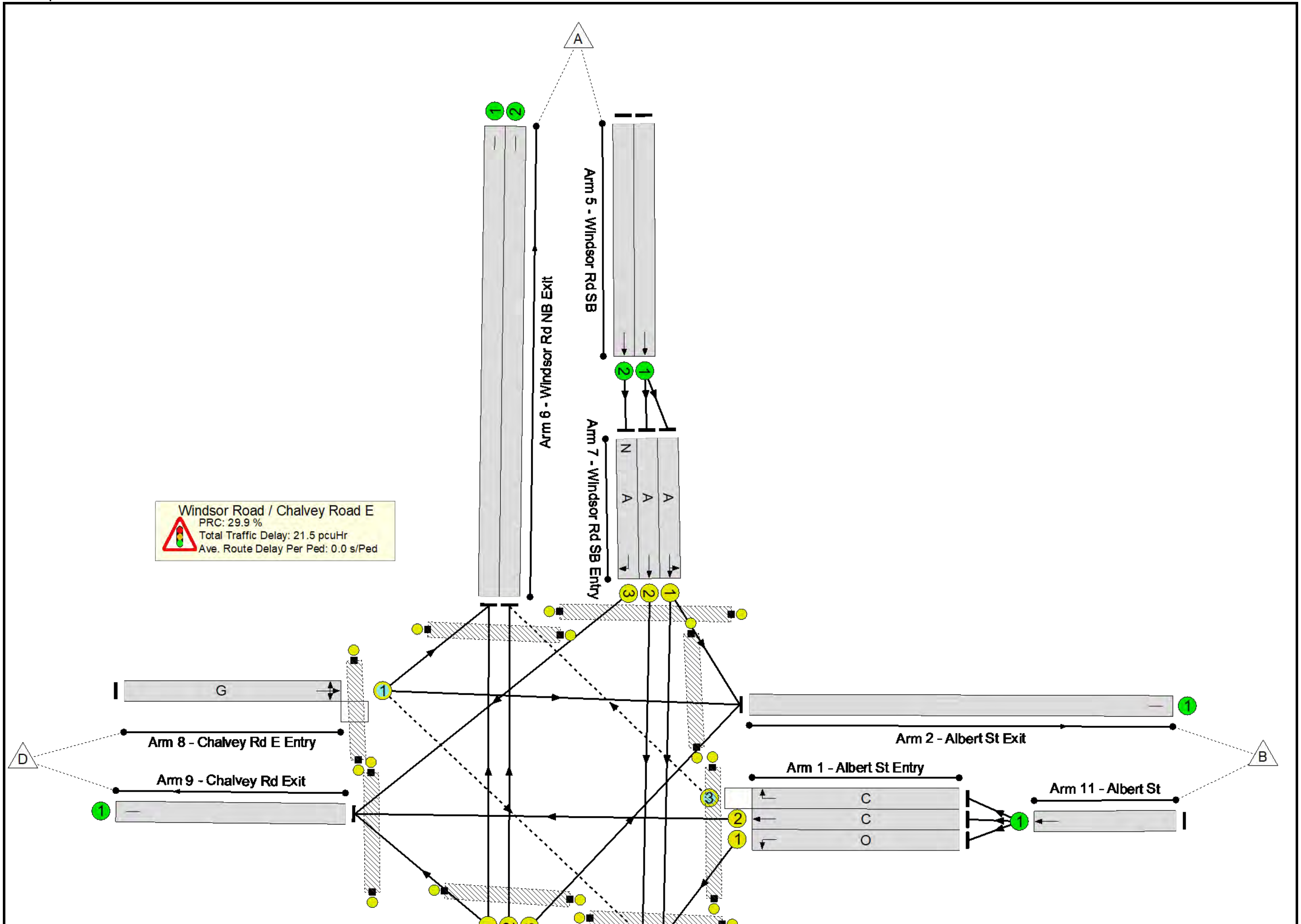
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

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**	-	-		-	-	-	-	-	-	**69.3%**
Windsor Road / Chalvey Road E	-	-	**N/A**	-	-		-	-	-	-	-	-	**69.3%**
1/1	Albert St Entry Left	U	N/A	N/A	O		2	54	-	578	1731	865	66.8%
1/2	Albert St Entry Ahead	U	N/A	N/A	C		2	30	-	374	1890	540	69.3%
1/3	Albert St Entry Right	O	N/A	N/A	C		2	30	-	73	1735	344	21.2%
2/1	Albert St Exit	U	N/A	N/A	-		-	-	-	872	Inf	Inf	0.0%
3/1	Windsor Rd NB Ahead Left	U	N/A	N/A	B		1	51	-	320	1750	812	39.4%
3/2	Windsor Rd NB Ahead	U	N/A	N/A	B		1	51	-	344	1900	882	39.0%
3/3	Windsor Rd NB Right	U	N/A	N/A	B	H	1	51	33	577	1805	838	68.9%
4/1	Windsor Rd SB Exit	U	N/A	N/A	-		-	-	-	579	Inf	Inf	0.0%
4/2	Windsor Rd SB Exit	U	N/A	N/A	-		-	-	-	255	Inf	Inf	0.0%
5/1	Windsor Rd SB Ahead	U	N/A	N/A	-		-	-	-	389	Inf	Inf	0.0%
5/2	Windsor Rd SB Ahead	U	N/A	N/A	-		-	-	-	50	Inf	Inf	0.0%
6/1	Windsor Rd NB Exit	U	N/A	N/A	-		-	-	-	7	Inf	Inf	0.0%
6/2	Windsor Rd NB Exit	U	N/A	N/A	-		-	-	-	417	Inf	Inf	0.0%
7/1	Windsor Rd SB Entry Left Ahead	U	N/A	N/A	A		2	26	-	171	1704	426	40.1%
7/2	Windsor Rd SB Entry Ahead	U	N/A	N/A	A		2	26	-	218	1900	475	45.9%

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7/3	Windsor Rd SB Entry Right	U	N/A	N/A	A	N	2	26	12	50	1810	453	11.0%
8/1	Chalvey Rd E Entry Ahead Right Left	O	N/A	N/A	G		1	22	-	169	1880	354	47.8%
9/1	Chalvey Rd Exit	U	N/A	N/A	-		-	-	-	744	Inf	Inf	0.0%
10/1	Windsor Rd Ahead	U	N/A	N/A	-		-	-	-	320	Inf	Inf	0.0%
10/2	Windsor Rd Ahead	U	N/A	N/A	-		-	-	-	921	Inf	Inf	0.0%
11/1	Albert St Ahead	U	N/A	N/A	-		-	-	-	1025	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	K		1	15	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	F		1	6	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	27	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	D		1	7	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	I		1	38	-	0	-	0	0.0%
Ped Link: P6	Unnamed Ped Link	-	N/A	-	J		1	6	-	0	-	0	0.0%
Ped Link: P7	Unnamed Ped Link	-	N/A	-	L		1	20	-	0	-	0	0.0%
Ped Link: P8	Unnamed Ped Link	-	N/A	-	M		0	0	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**82**	**22**	**6**	**16.0**	**5.3**	**0.2**	**21.5**	**-**	**-**	**-**	**-**
Windsor Road / Chalvey Road E	**-**	**-**	**82**	**22**	**6**	**16.0**	**5.3**	**0.2**	**21.5**	**-**	**-**	**-**	**-**
1/1	578	578	-	-	-	1.7	1.0	-	2.7	17.1	7.9	1.0	8.9
1/2	374	374	-	-	-	2.1	1.1	-	3.2	30.7	7.0	1.1	8.1
1/3	73	73	50	22	1	0.3	0.1	0.1	0.6	28.5	1.1	0.1	1.3
2/1	872	872	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	320	320	-	-	-	1.7	0.3	-	2.1	23.3	6.5	0.3	6.8
3/2	344	344	-	-	-	1.9	0.3	-	2.2	23.0	7.0	0.3	7.3
3/3	577	577	-	-	-	3.8	1.1	-	4.9	30.5	14.1	1.1	15.2
4/1	579	579	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	255	255	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	389	389	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	50	50	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	7	7	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	417	417	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	171	171	-	-	-	1.0	0.3	-	1.3	28.1	3.2	0.3	3.5
7/2	218	218	-	-	-	1.3	0.4	-	1.7	28.4	4.1	0.4	4.5
7/3	50	50	-	-	-	0.3	0.1	-	0.3	24.0	0.9	0.1	0.9
8/1	169	169	32	0	5	1.8	0.5	0.1	2.4	51.5	4.6	0.5	5.0
9/1	744	744	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	320	320	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	921	921	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	1025	1025	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-

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Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf

C1	PRC for Signalled Lanes (%):	29.9	Total Delay for Signalled Lanes (pcuHr):	21.47	Cycle Time (s):	112
	PRC Over All Lanes (%):	29.9	Total Delay Over All Lanes(pcuHr):	21.47		

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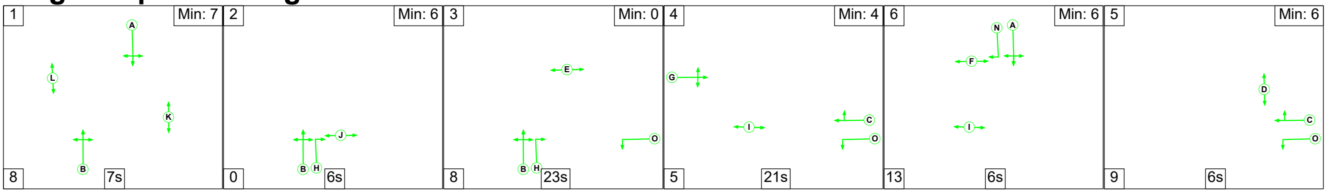
Full Input Data And Results

Scenario 8: 'PM DS Commercial' (FG8: 'PM DS Commercial', Plan 1: 'Network Control Plan 1')

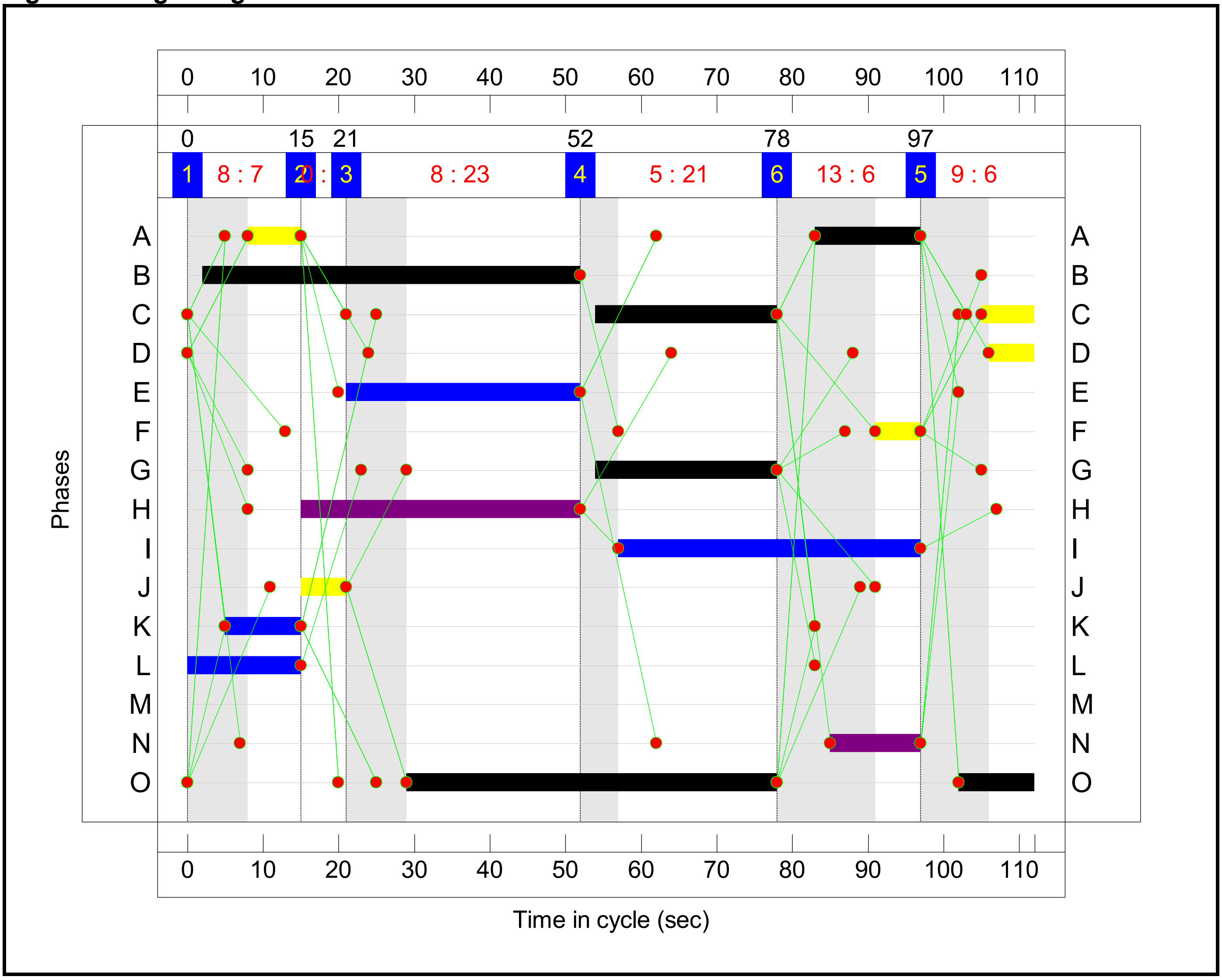
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	6	5
Duration	7	6	23	21	6	6
Change Point	0	15	21	52	78	97

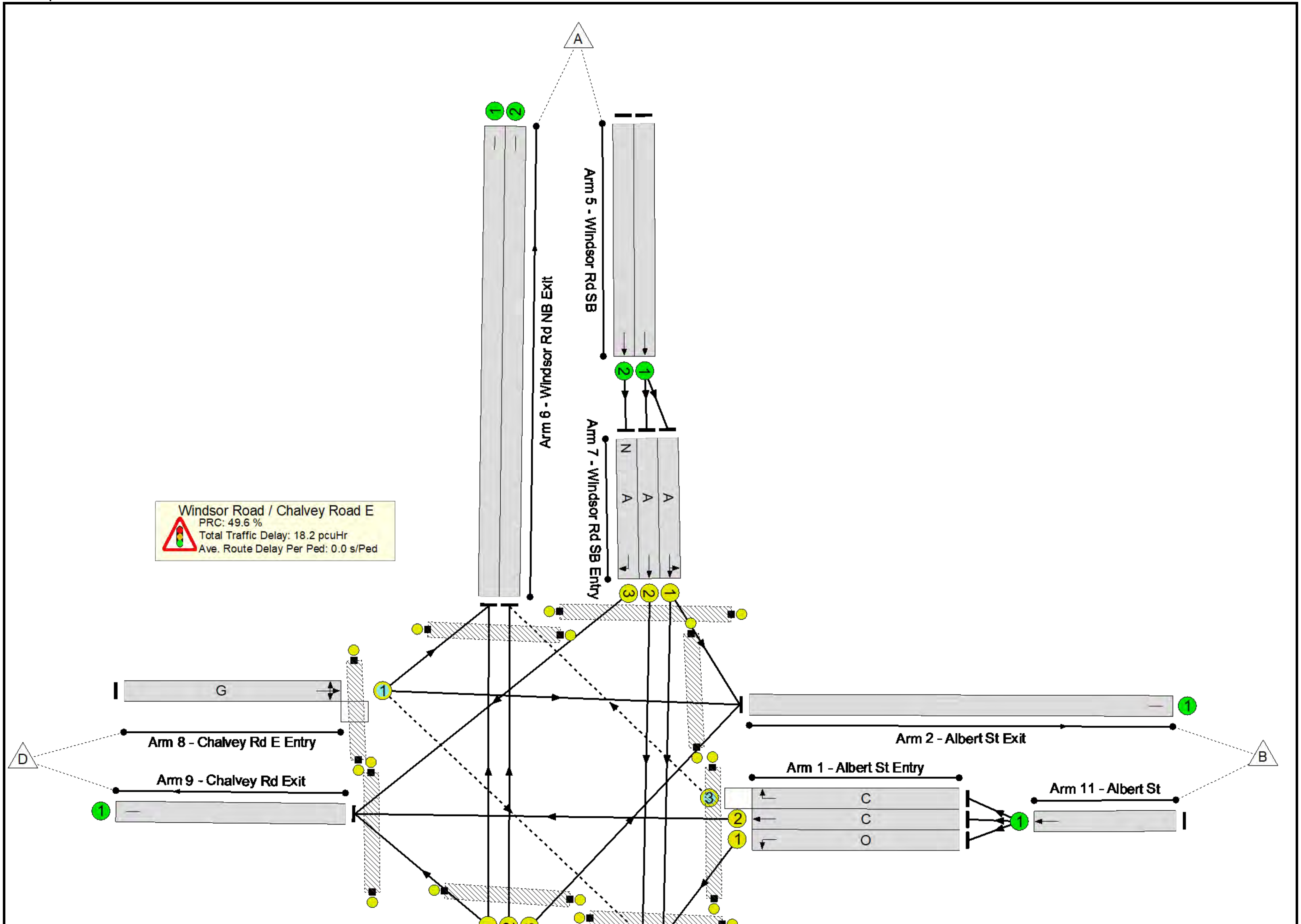
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



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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**	-	-		-	-	-	-	-	-	**60.1%**
Windsor Road / Chalvey Road E	-	-	**N/A**	-	-		-	-	-	-	-	-	**60.1%**
1/1	Albert St Entry Left	U	N/A	N/A	O		2	59	-	567	1731	943	60.1%
1/2	Albert St Entry Ahead	U	N/A	N/A	C		2	31	-	321	1890	557	57.6%
1/3	Albert St Entry Right	O	N/A	N/A	C		2	31	-	32	1735	302	10.6%
2/1	Albert St Exit	U	N/A	N/A	-		-	-	-	740	Inf	Inf	0.0%
3/1	Windsor Rd NB Ahead Left	U	N/A	N/A	B		1	50	-	249	1825	831	30.0%
3/2	Windsor Rd NB Ahead	U	N/A	N/A	B		1	50	-	268	1900	865	31.0%
3/3	Windsor Rd NB Right	U	N/A	N/A	B	H	1	50	37	444	1805	822	54.0%
4/1	Windsor Rd SB Exit	U	N/A	N/A	-		-	-	-	581	Inf	Inf	0.0%
4/2	Windsor Rd SB Exit	U	N/A	N/A	-		-	-	-	238	Inf	Inf	0.0%
5/1	Windsor Rd SB Ahead	U	N/A	N/A	-		-	-	-	345	Inf	Inf	0.0%
5/2	Windsor Rd SB Ahead	U	N/A	N/A	-		-	-	-	49	Inf	Inf	0.0%
6/1	Windsor Rd NB Exit	U	N/A	N/A	-		-	-	-	161	Inf	Inf	0.0%
6/2	Windsor Rd NB Exit	U	N/A	N/A	-		-	-	-	300	Inf	Inf	0.0%
7/1	Windsor Rd SB Entry Left Ahead	U	N/A	N/A	A		2	21	-	152	1720	353	43.0%
7/2	Windsor Rd SB Entry Ahead	U	N/A	N/A	A		2	21	-	193	1900	390	49.5%

Full Input Data And Results

7/3	Windsor Rd SB Entry Right	U	N/A	N/A	A	N	2	21	12	49	1810	372	13.2%
8/1	Chalvey Rd E Entry Ahead Right Left	O	N/A	N/A	G		1	24	-	235	1862	409	57.5%
9/1	Chalvey Rd Exit	U	N/A	N/A	-		-	-	-	490	Inf	Inf	0.0%
10/1	Windsor Rd Ahead	U	N/A	N/A	-		-	-	-	249	Inf	Inf	0.0%
10/2	Windsor Rd Ahead	U	N/A	N/A	-		-	-	-	712	Inf	Inf	0.0%
11/1	Albert St Ahead	U	N/A	N/A	-		-	-	-	920	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	K		1	10	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	F		1	6	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	E		1	31	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	D		1	6	-	0	-	0	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	I		1	40	-	0	-	0	0.0%
Ped Link: P6	Unnamed Ped Link	-	N/A	-	J		1	6	-	0	-	0	0.0%
Ped Link: P7	Unnamed Ped Link	-	N/A	-	L		1	15	-	0	-	0	0.0%
Ped Link: P8	Unnamed Ped Link	-	N/A	-	M		0	0	-	0	-	0	0.0%

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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	**-**	**-**	**67**	**9**	**1**	**13.9**	**4.1**	**0.2**	**18.2**	**-**	**-**	**-**	**-**
Windsor Road / Chalvey Road E	**-**	**-**	**67**	**9**	**1**	**13.9**	**4.1**	**0.2**	**18.2**	**-**	**-**	**-**	**-**
1/1	567	567	-	-	-	1.4	0.8	-	2.1	13.6	6.5	0.8	7.3
1/2	321	321	-	-	-	1.7	0.7	-	2.3	26.3	5.6	0.7	6.3
1/3	32	32	22	9	1	0.1	0.1	0.1	0.3	29.6	0.5	0.1	0.5
2/1	740	740	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	249	249	-	-	-	1.3	0.2	-	1.5	22.3	4.8	0.2	5.1
3/2	268	268	-	-	-	1.4	0.2	-	1.7	22.4	5.3	0.2	5.5
3/3	444	444	-	-	-	2.7	0.6	-	3.3	26.8	9.9	0.6	10.5
4/1	581	581	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	238	238	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	345	345	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	49	49	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	161	161	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	300	300	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	152	152	-	-	-	1.0	0.4	-	1.4	33.3	3.1	0.4	3.5
7/2	193	193	-	-	-	1.3	0.5	-	1.8	33.8	4.0	0.5	4.5
7/3	49	49	-	-	-	0.3	0.1	-	0.4	28.5	0.9	0.1	1.0
8/1	235	235	45	0	0	2.5	0.7	0.1	3.3	50.6	6.5	0.7	7.1
9/1	490	490	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	249	249	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	712	712	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	920	920	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-

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Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P5	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P6	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P7	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P8	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf

C1 PRC for Signalled Lanes (%): 49.6 Total Delay for Signalled Lanes (pcuHr): 18.18 Cycle Time (s): 112
PRC Over All Lanes (%): 49.6 Total Delay Over All Lanes(pcuHr): 18.18

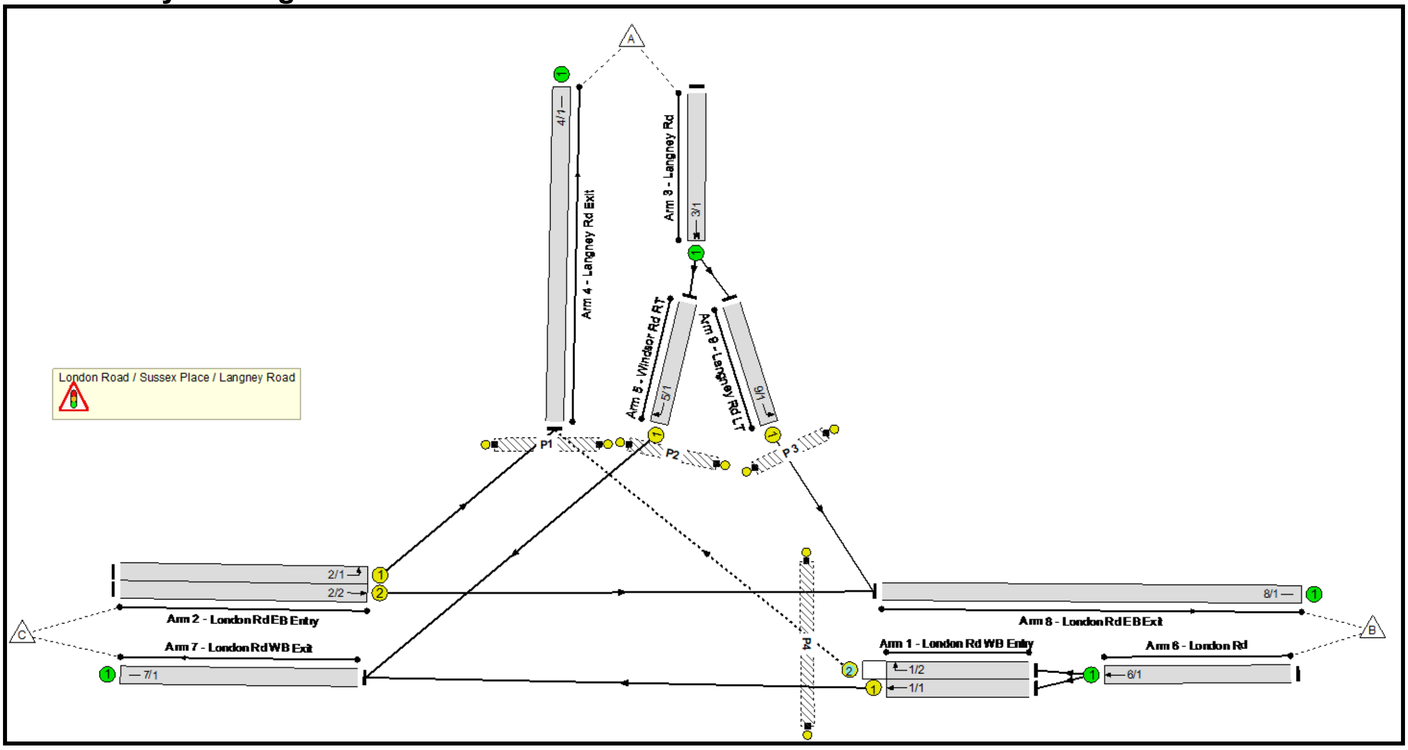
Full Input Data And Results

Full Input Data And Results

User and Project Details

Project:	
Title:	
Location:	
Additional detail:	
File name:	London Rd_Sussex Pl_Langney Rd.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



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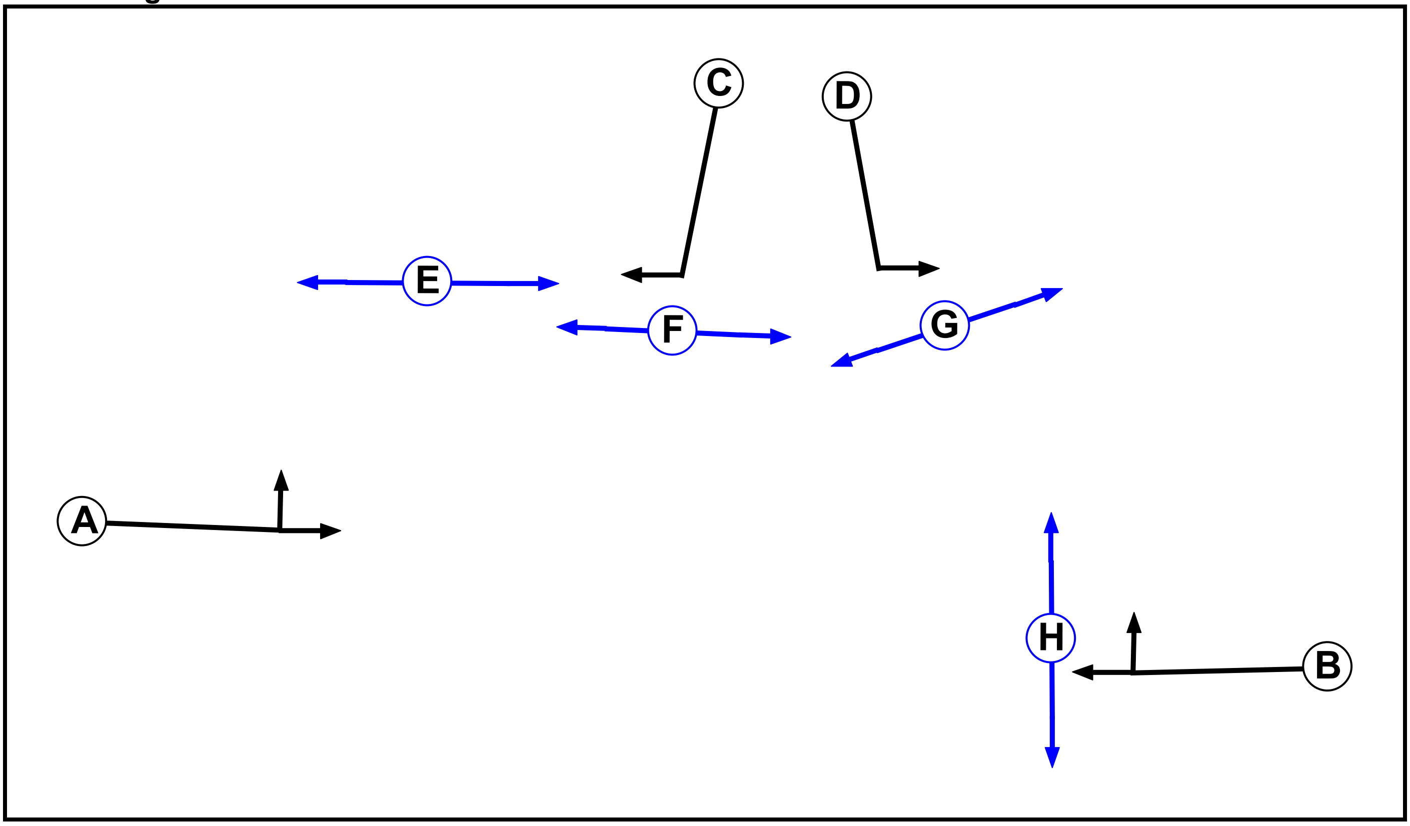
Full Input Data And Results

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Pedestrian		6	6
F	Pedestrian		6	6
G	Pedestrian		6	6
H	Pedestrian		6	6

Full Input Data And Results

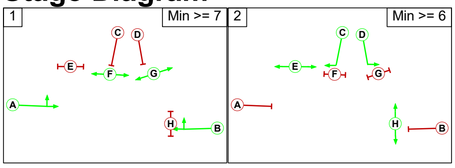
Phase Intergreens Matrix

		Starting Phase							
		A	B	C	D	E	F	G	H
Terminating Phase	A		-	5	8	7	-	-	8
	B	-		5	-	9	-	-	5
	C	5	5		-	-	5	-	-
	D	5	-	-		-	-	5	-
	E	8	8	-	-		-	-	-
	F	-	-	8	-	-		-	-
	G	-	-	-	8	-	-		-
	H	12	12	-	-	-	-	-	

Phases in Stage

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

Stage Diagram



Phase Delays

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

Prohibited Stage Change

		To Stage	
		1	2
From Stage	1		9
	2	12	

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Full Input Data And Results

Give-Way Lane Input Data

Junction: London Road / Sussex Place / Langney Road											
Lane	**Movement**	**Max Flow when Giving Way (PCU/Hr)**	**Min Flow when Giving Way (PCU/Hr)**	**Opposing Lane**	**Opp. Lane Coeff.**	**Opp. Mvmnts.**	**Right Turn Storage (PCU)**	**Non-Blocking Storage (PCU)**	**RTF**	**Right Turn Move up (s)**	**Max Turns in Intergreen (PCU)**
1/2 (London Rd WB Entry)	4/1 (Right)	1439	0	2/2	1.09	All	2.00	-	0.50	2	2.00
				2/1	1.09	All					

Full Input Data And Results

Lane Input Data

Junction: London Road / Sussex Place / Langney 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)**
1/1 (London Rd WB Entry)	U	B	2	3	4.7	Geom	-	3.00	0.00	Y	Arm 7 Ahead	Inf
1/2 (London Rd WB Entry)	O	B	2	3	4.7	Geom	-	3.00	0.00	Y	Arm 4 Right	18.00
2/1 (London Rd EB Entry)	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 4 Left	12.00
2/2 (London Rd EB Entry)	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 8 Ahead	Inf
3/1 (Langney Rd)	U		2	3	15.0	Inf	-	-	-	-	-	-
4/1 (Langney Rd Exit)	U		2	3	20.2	Inf	-	-	-	-	-	-
5/1 (Windsor Rd RT)	U	C	2	3	2.8	Geom	-	3.00	0.00	Y	Arm 7 Right	15.00
6/1 (London Rd)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (London Rd WB Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (London Rd EB Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
9/1 (Langney Rd LT)	U	D	2	3	2.8	Geom	-	3.00	0.00	Y	Arm 8 Left	11.00

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM Base'	08:00	09:00	01:00	
2: 'PM Base'	17:00	18:00	01:00	
3: 'AM DM'	08:00	09:00	01:00	
4: 'PM DM'	17:00	18:00	01:00	
5: 'AM DS Residential'	08:00	09:00	01:00	
6: 'PM DS Residential'	17:00	18:00	01:00	
7: 'AM DS Commercial'	08:00	09:00	01:00	
8: 'PM DS Commercial'	17:00	18:00	01:00	

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

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	3	566	569
	B	13	0	383	396
	C	531	520	0	1051
	Tot.	544	523	949	2016

Traffic Lane Flows

Lane	Scenario 1: AM Base
Junction: London Road / Sussex Place / Langney Road	
1/1	383
1/2	13
2/1	531
2/2	520
3/1	569
4/1	544
5/1	566
6/1	396
7/1	949
8/1	523
9/1	3

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Full Input Data And Results

Lane Saturation Flows

Junction: London Road / Sussex Place / Langney Road								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (London Rd WB Entry)	3.00	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1915	1915
1/2 (London Rd WB Entry)	3.00	0.00	Y	Arm 4 Right	18.00	100.0 %	1768	1768
2/1 (London Rd EB Entry)	3.00	0.00	Y	Arm 4 Left	12.00	100.0 %	1702	1702
2/2 (London Rd EB Entry)	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
3/1 (Langney Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
4/1 (Langney Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Windsor Rd RT)	3.00	0.00	Y	Arm 7 Right	15.00	100.0 %	1741	1741
6/1 (London Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (London Rd WB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (London Rd EB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (Langney Rd LT)	3.00	0.00	Y	Arm 8 Left	11.00	100.0 %	1685	1685

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

Traffic Flows, Desired

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	8	561	569
	B	0	0	536	536
	C	574	480	0	1054
	Tot.	574	488	1097	2159

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Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: PM Base
Junction: London Road / Sussex Place / Langney Road	
1/1	536
1/2	0
2/1	574
2/2	480
3/1	569
4/1	574
5/1	561
6/1	536
7/1	1097
8/1	488
9/1	8

Lane Saturation Flows

Junction: London Road / Sussex Place / Langney Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (London Rd WB Entry)	3.00	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1915	1915
1/2 (London Rd WB Entry)	3.00	0.00	Y	Arm 4 Right	18.00	0.0 %	1915	1915
2/1 (London Rd EB Entry)	3.00	0.00	Y	Arm 4 Left	12.00	100.0 %	1702	1702
2/2 (London Rd EB Entry)	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
3/1 (Langney Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
4/1 (Langney Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Windsor Rd RT)	3.00	0.00	Y	Arm 7 Right	15.00	100.0 %	1741	1741
6/1 (London Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (London Rd WB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (London Rd EB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (Langney Rd LT)	3.00	0.00	Y	Arm 8 Left	11.00	100.0 %	1685	1685

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Full Input Data And Results

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

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	2	479	481
	B	18	0	440	458
	C	569	638	0	1207
	Tot.	587	640	919	2146

Traffic Lane Flows

Lane	Scenario 3: AM DM
Junction: London Road / Sussex Place / Langney Road	
1/1	440
1/2	18
2/1	569
2/2	638
3/1	481
4/1	587
5/1	479
6/1	458
7/1	919
8/1	640
9/1	2

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Full Input Data And Results

Lane Saturation Flows

Junction: London Road / Sussex Place / Langney Road								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (London Rd WB Entry)	3.00	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1915	1915
1/2 (London Rd WB Entry)	3.00	0.00	Y	Arm 4 Right	18.00	100.0 %	1768	1768
2/1 (London Rd EB Entry)	3.00	0.00	Y	Arm 4 Left	12.00	100.0 %	1702	1702
2/2 (London Rd EB Entry)	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
3/1 (Langney Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
4/1 (Langney Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Windsor Rd RT)	3.00	0.00	Y	Arm 7 Right	15.00	100.0 %	1741	1741
6/1 (London Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (London Rd WB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (London Rd EB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (Langney Rd LT)	3.00	0.00	Y	Arm 8 Left	11.00	100.0 %	1685	1685

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

Traffic Flows, Desired

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	7	553	560
	B	8	0	602	610
	C	531	702	0	1233
	Tot.	539	709	1155	2403

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: PM DM
Junction: London Road / Sussex Place / Langney Road	
1/1	602
1/2	8
2/1	531
2/2	702
3/1	560
4/1	539
5/1	553
6/1	610
7/1	1155
8/1	709
9/1	7

Lane Saturation Flows

Junction: London Road / Sussex Place / Langney Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (London Rd WB Entry)	3.00	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1915	1915
1/2 (London Rd WB Entry)	3.00	0.00	Y	Arm 4 Right	18.00	100.0 %	1768	1768
2/1 (London Rd EB Entry)	3.00	0.00	Y	Arm 4 Left	12.00	100.0 %	1702	1702
2/2 (London Rd EB Entry)	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
3/1 (Langney Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
4/1 (Langney Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Windsor Rd RT)	3.00	0.00	Y	Arm 7 Right	15.00	100.0 %	1741	1741
6/1 (London Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (London Rd WB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (London Rd EB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (Langney Rd LT)	3.00	0.00	Y	Arm 8 Left	11.00	100.0 %	1685	1685

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

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	2	479	481
	B	18	0	440	458
	C	571	640	0	1211
	Tot.	589	642	919	2150

Traffic Lane Flows

Lane	Scenario 5: AM DS Residential
Junction: London Road / Sussex Place / Langney Road	
1/1	440
1/2	18
2/1	571
2/2	640
3/1	481
4/1	589
5/1	479
6/1	458
7/1	919
8/1	642
9/1	2

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Lane Saturation Flows

Junction: London Road / Sussex Place / Langney Road								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (London Rd WB Entry)	3.00	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1915	1915
1/2 (London Rd WB Entry)	3.00	0.00	Y	Arm 4 Right	18.00	100.0 %	1768	1768
2/1 (London Rd EB Entry)	3.00	0.00	Y	Arm 4 Left	12.00	100.0 %	1702	1702
2/2 (London Rd EB Entry)	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
3/1 (Langney Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
4/1 (Langney Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Windsor Rd RT)	3.00	0.00	Y	Arm 7 Right	15.00	100.0 %	1741	1741
6/1 (London Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (London Rd WB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (London Rd EB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (Langney Rd LT)	3.00	0.00	Y	Arm 8 Left	11.00	100.0 %	1685	1685

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

Traffic Flows, Desired

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	7	555	562
	B	8	0	602	610
	C	523	691	0	1214
	Tot.	531	698	1157	2386

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Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 6: PM DS Residential
Junction: London Road / Sussex Place / Langney Road	
1/1	602
1/2	8
2/1	523
2/2	691
3/1	562
4/1	531
5/1	555
6/1	610
7/1	1157
8/1	698
9/1	7

Lane Saturation Flows

Junction: London Road / Sussex Place / Langney Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (London Rd WB Entry)	3.00	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1915	1915
1/2 (London Rd WB Entry)	3.00	0.00	Y	Arm 4 Right	18.00	100.0 %	1768	1768
2/1 (London Rd EB Entry)	3.00	0.00	Y	Arm 4 Left	12.00	100.0 %	1702	1702
2/2 (London Rd EB Entry)	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
3/1 (Langney Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
4/1 (Langney Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Windsor Rd RT)	3.00	0.00	Y	Arm 7 Right	15.00	100.0 %	1741	1741
6/1 (London Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (London Rd WB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (London Rd EB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (Langney Rd LT)	3.00	0.00	Y	Arm 8 Left	11.00	100.0 %	1685	1685

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Scenario 7: 'AM DS Commercial' (FG7: 'AM DS Commercial', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	2	482	484
	B	18	0	441	459
	C	570	639	0	1209
	Tot.	588	641	923	2152

Traffic Lane Flows

Lane	Scenario 7: AM DS Commercial
Junction: London Road / Sussex Place / Langney Road	
1/1	441
1/2	18
2/1	570
2/2	639
3/1	484
4/1	588
5/1	482
6/1	459
7/1	923
8/1	641
9/1	2

Full Input Data And Results

Lane Saturation Flows

Junction: London Road / Sussex Place / Langney Road								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (London Rd WB Entry)	3.00	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1915	1915
1/2 (London Rd WB Entry)	3.00	0.00	Y	Arm 4 Right	18.00	100.0 %	1768	1768
2/1 (London Rd EB Entry)	3.00	0.00	Y	Arm 4 Left	12.00	100.0 %	1702	1702
2/2 (London Rd EB Entry)	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
3/1 (Langney Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
4/1 (Langney Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Windsor Rd RT)	3.00	0.00	Y	Arm 7 Right	15.00	100.0 %	1741	1741
6/1 (London Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (London Rd WB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (London Rd EB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (Langney Rd LT)	3.00	0.00	Y	Arm 8 Left	11.00	100.0 %	1685	1685

Scenario 8: 'PM DS Commercial' (FG8: 'PM DS Commercial', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	7	555	562
	B	8	0	602	610
	C	523	690	0	1213
	Tot.	531	697	1157	2385

Full Input Data And Results

Traffic Lane Flows

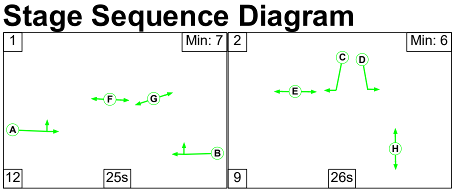
Lane	Scenario 8: PM DS Commercial
Junction: London Road / Sussex Place / Langney Road	
1/1	602
1/2	8
2/1	523
2/2	690
3/1	562
4/1	531
5/1	555
6/1	610
7/1	1157
8/1	697
9/1	7

Lane Saturation Flows

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
Junction: London Road / Sussex Place / Langney Road								
1/1 (London Rd WB Entry)	3.00	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1915	1915
1/2 (London Rd WB Entry)	3.00	0.00	Y	Arm 4 Right	18.00	100.0 %	1768	1768
2/1 (London Rd EB Entry)	3.00	0.00	Y	Arm 4 Left	12.00	100.0 %	1702	1702
2/2 (London Rd EB Entry)	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
3/1 (Langney Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
4/1 (Langney Rd Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Windsor Rd RT)	3.00	0.00	Y	Arm 7 Right	15.00	100.0 %	1741	1741
6/1 (London Rd Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (London Rd WB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (London Rd EB Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (Langney Rd LT)	3.00	0.00	Y	Arm 8 Left	11.00	100.0 %	1685	1685

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

Stage Sequence Diagram



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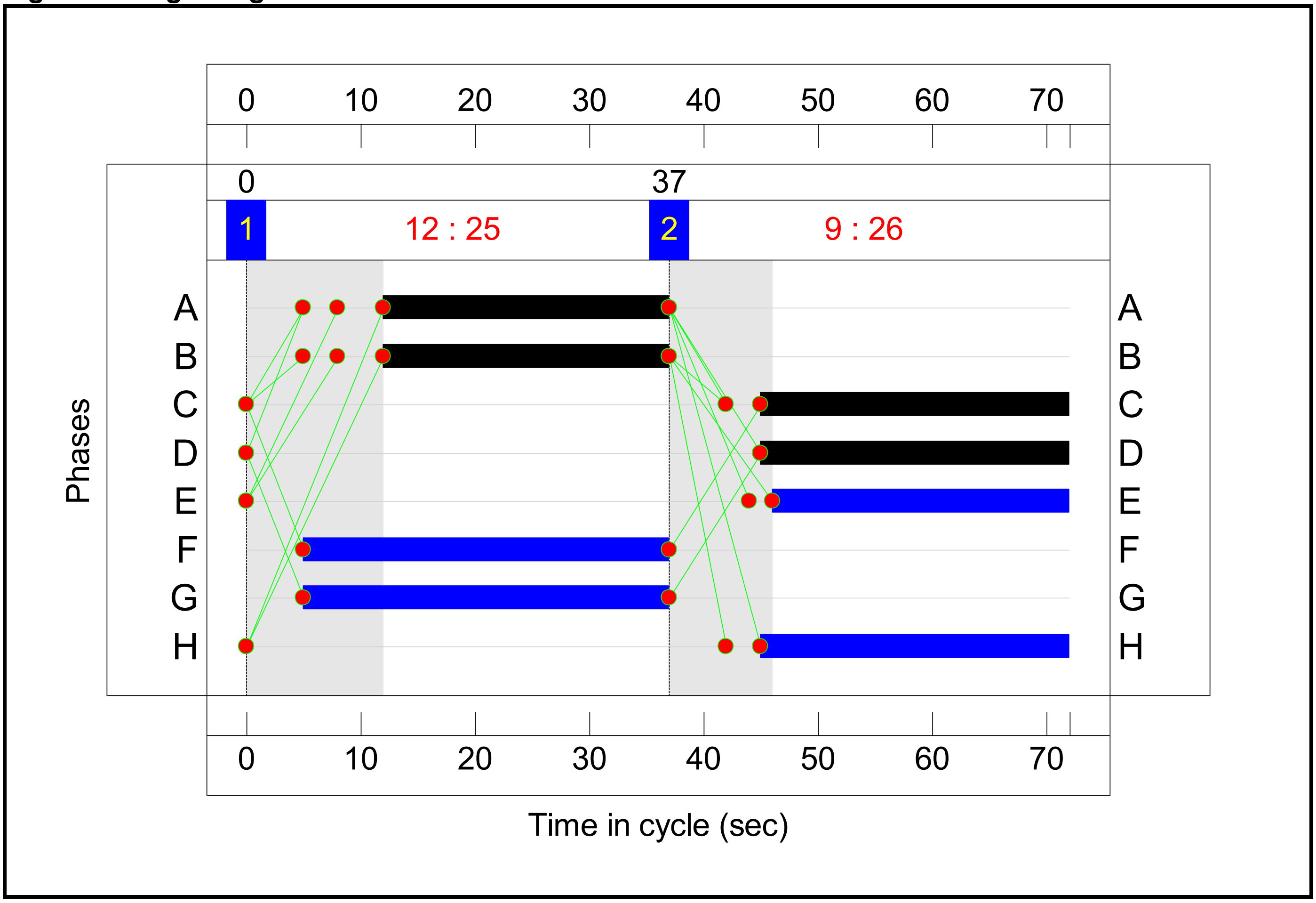
Full Input Data And Results

Stage Timings

Stage	1	2
Duration	25	26
Change Point	0	37

Signal Timings Diagram



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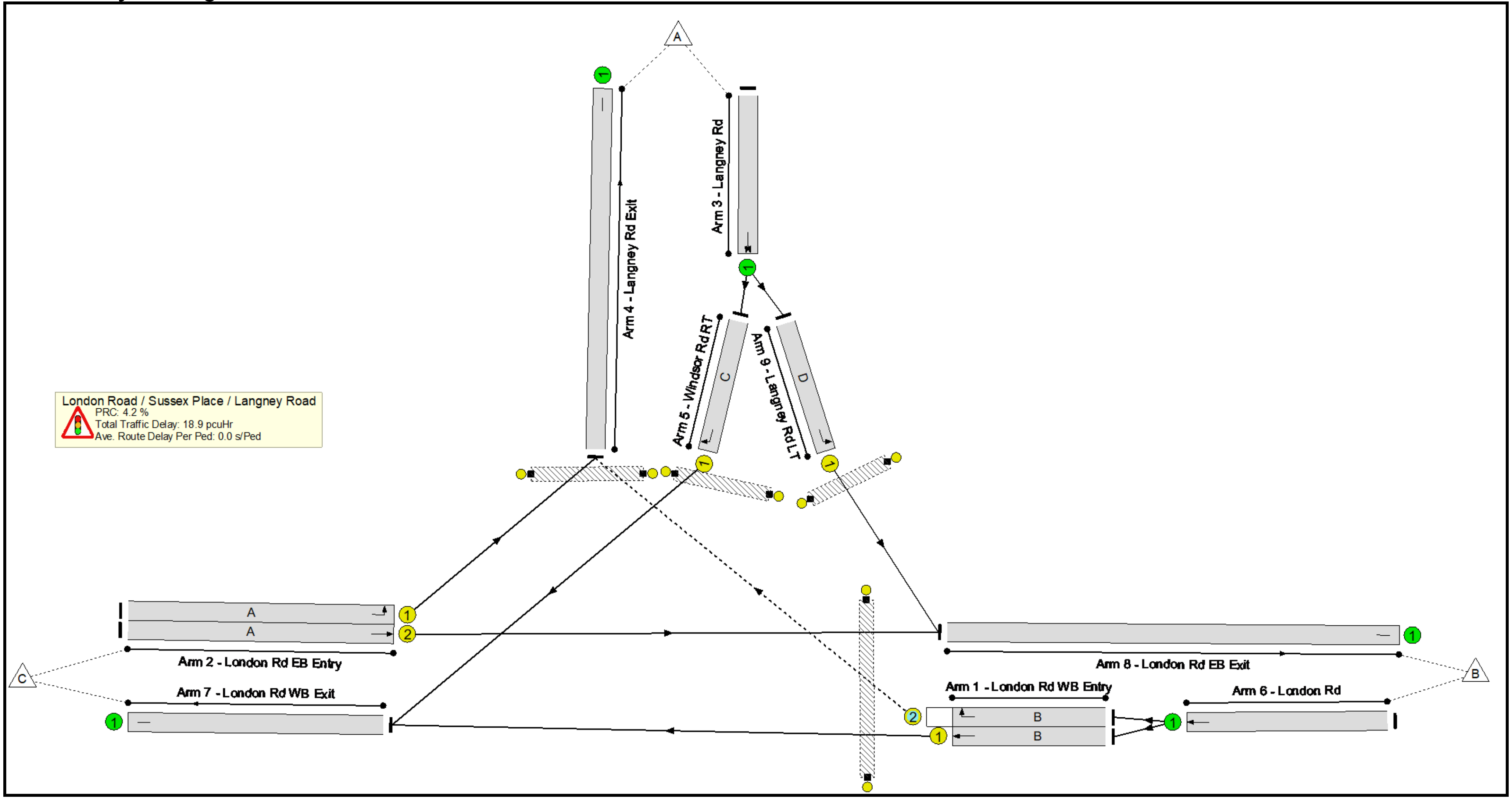
Network Layout Diagram



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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**	-	-		-	-	-	-	-	-	**86.4%**
London Road / Sussex Place / Langney Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**86.4%**
1/1	London Rd WB Entry Ahead	U	N/A	N/A	B		1	25	-	383	1915	692	55.4%
1/2	London Rd WB Entry Right	O	N/A	N/A	B		1	25	-	13	1768	112	11.6%
2/1	London Rd EB Entry Left	U	N/A	N/A	A		1	25	-	531	1702	615	86.4%
2/2	London Rd EB Entry Ahead	U	N/A	N/A	A		1	25	-	520	1915	692	75.2%
3/1	Langney Rd Ahead Ahead2	U	N/A	N/A	-		-	-	-	569	Inf	Inf	0.0%
4/1	Langney Rd Exit	U	N/A	N/A	-		-	-	-	544	Inf	Inf	0.0%
5/1	Windsor Rd RT Right	U	N/A	N/A	C		1	27	-	566	1741	677	83.6%
6/1	London Rd Ahead	U	N/A	N/A	-		-	-	-	396	Inf	Inf	0.0%
7/1	London Rd WB Exit	U	N/A	N/A	-		-	-	-	949	Inf	Inf	0.0%
8/1	London Rd EB Exit	U	N/A	N/A	-		-	-	-	523	Inf	Inf	0.0%
9/1	Langney Rd LT Left	U	N/A	N/A	D		1	27	-	3	1685	655	0.5%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	26	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	F		1	32	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	G		1	32	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	H		1	27	-	0	-	0	0.0%

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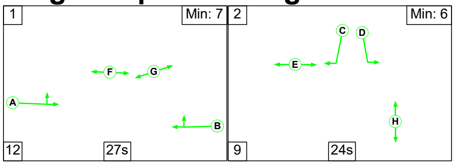
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**13**	**0**	**0**	**11.2**	**7.6**	**0.1**	**18.9**	**-**	**-**	**-**	**-**
London Road / Sussex Place / Langney Road	**-**	**-**	**13**	**0**	**0**	**11.2**	**7.6**	**0.1**	**18.9**	**-**	**-**	**-**	**-**
1/1	383	383	-	-	-	2.0	0.6	-	2.6	24.2	6.1	0.6	6.7
1/2	13	13	13	0	0	0.1	0.1	0.1	0.2	50.8	0.2	0.1	0.2
2/1	531	531	-	-	-	3.2	3.0	-	6.1	41.5	9.7	3.0	12.7
2/2	520	520	-	-	-	2.9	1.5	-	4.4	30.5	9.1	1.5	10.6
3/1	569	569	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	544	544	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	566	566	-	-	-	3.1	2.4	-	5.6	35.4	10.2	2.4	12.7
6/1	396	396	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	949	949	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	523	523	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	3	3	-	-	-	0.0	0.0	-	0.0	16.5	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 4.2 Total Delay for Signalled Lanes (pcuHr): 18.86 Cycle Time (s): 72
PRC Over All Lanes (%): 4.2 Total Delay Over All Lanes(pcuHr): 18.86

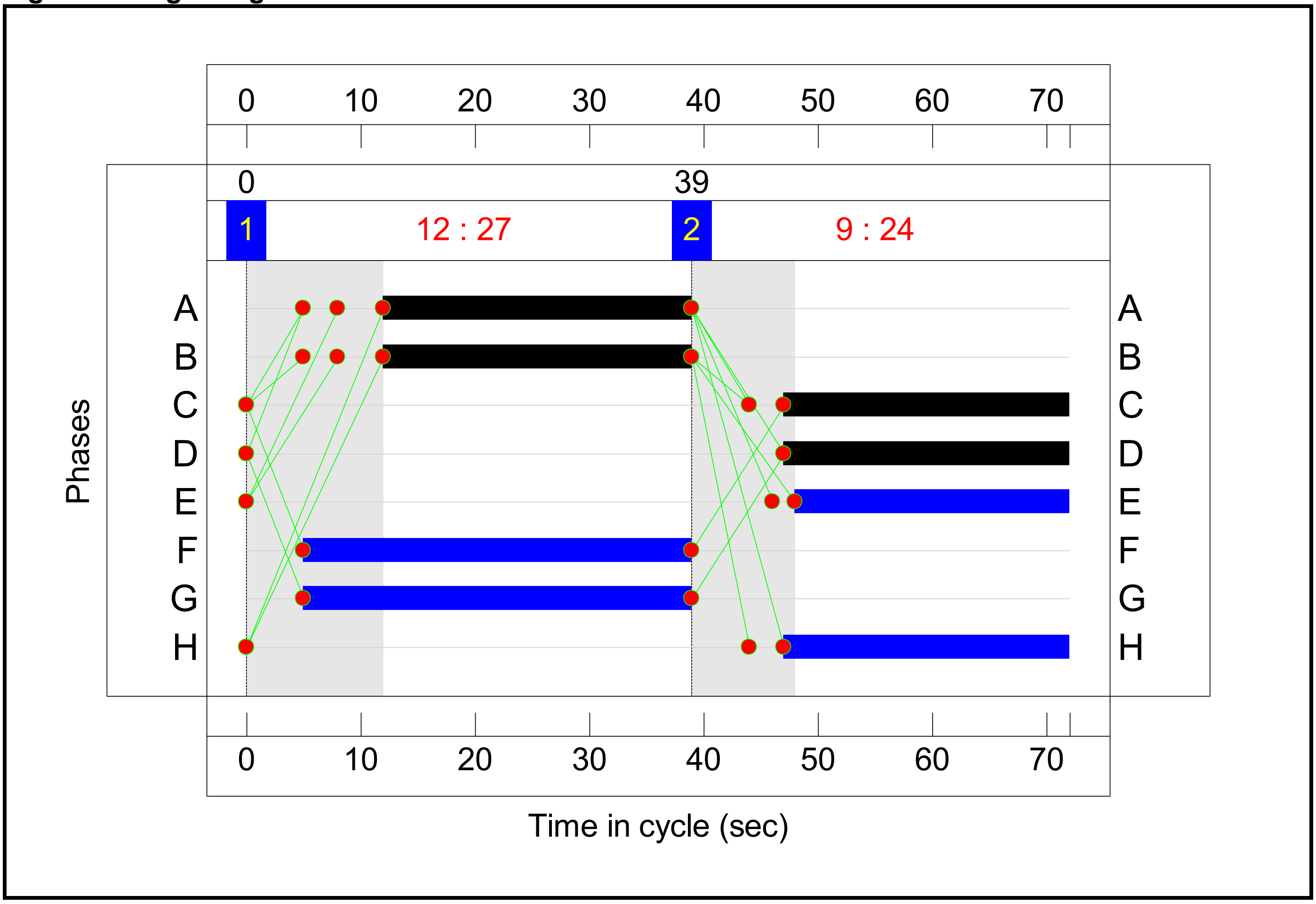
Full Input Data And Results
Scenario 2: 'PM Base' (FG2: 'PM Base', Plan 1: 'Network Control Plan 1')
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	27	24
Change Point	0	39

Signal Timings Diagram



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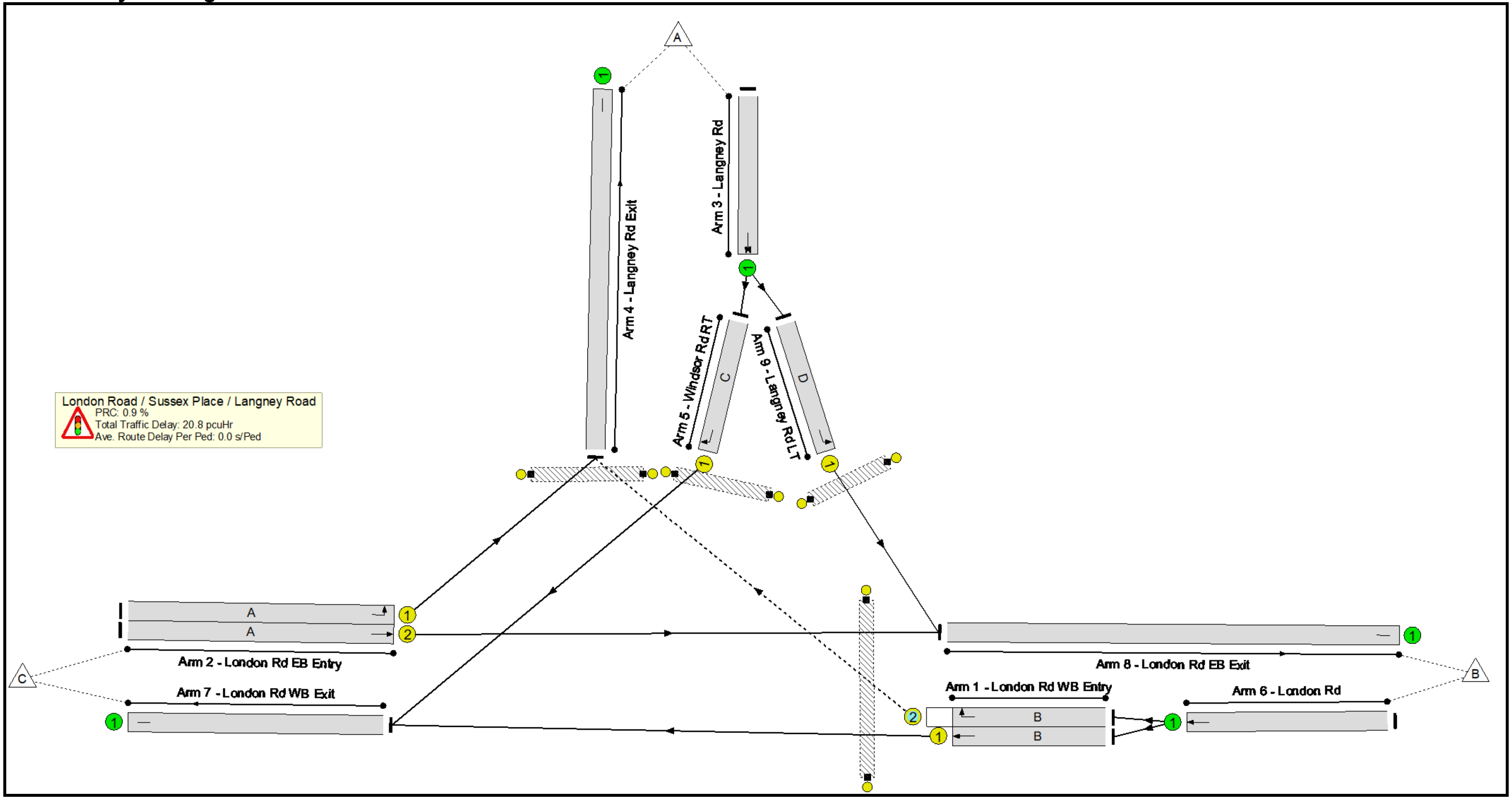
Full Input Data And Results

Network Layout Diagram



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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**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**89.2%**
London Road / Sussex Place / Langney Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**89.2%**
1/1	London Rd WB Entry Ahead	U	N/A	N/A	B		1	27	-	536	1915	745	72.0%
1/2	London Rd WB Entry Right	O	N/A	N/A	B		1	27	-	0	1915	112	0.0%
2/1	London Rd EB Entry Left	U	N/A	N/A	A		1	27	-	574	1702	662	86.7%
2/2	London Rd EB Entry Ahead	U	N/A	N/A	A		1	27	-	480	1915	745	64.5%
3/1	Langney Rd Ahead Ahead2	U	N/A	N/A	-		-	-	-	569	Inf	Inf	0.0%
4/1	Langney Rd Exit	U	N/A	N/A	-		-	-	-	574	Inf	Inf	0.0%
5/1	Windsor Rd RT Right	U	N/A	N/A	C		1	25	-	561	1741	629	89.2%
6/1	London Rd Ahead	U	N/A	N/A	-		-	-	-	536	Inf	Inf	0.0%
7/1	London Rd WB Exit	U	N/A	N/A	-		-	-	-	1097	Inf	Inf	0.0%
8/1	London Rd EB Exit	U	N/A	N/A	-		-	-	-	488	Inf	Inf	0.0%
9/1	Langney Rd LT Left	U	N/A	N/A	D		1	25	-	8	1685	608	1.3%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	24	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	F		1	34	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	G		1	34	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	H		1	25	-	0	-	0	0.0%

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Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**0**	**0**	**0**	**11.8**	**9.0**	**0.0**	**20.8**	**-**	**-**	**-**	**-**
London Road / Sussex Place / Langney Road	**-**	**-**	**0**	**0**	**0**	**11.8**	**9.0**	**0.0**	**20.8**	**-**	**-**	**-**	**-**
1/1	536	536	-	-	-	2.8	1.3	-	4.0	27.2	9.1	1.3	10.4
1/2	0	0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2/1	574	574	-	-	-	3.2	3.1	-	6.3	39.4	10.5	3.1	13.6
2/2	480	480	-	-	-	2.4	0.9	-	3.3	24.7	7.7	0.9	8.6
3/1	569	569	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	574	574	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	561	561	-	-	-	3.4	3.7	-	7.1	45.6	10.4	3.7	14.2
6/1	536	536	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1097	1097	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	488	488	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	8	8	-	-	-	0.0	0.0	-	0.0	18.0	0.1	0.0	0.1
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 0.9 Total Delay for Signalled Lanes (pcuHr): 20.78 Cycle Time (s): 72
PRC Over All Lanes (%): 0.9 Total Delay Over All Lanes(pcuHr): 20.78

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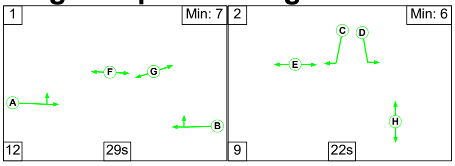
Full Input Data And Results

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

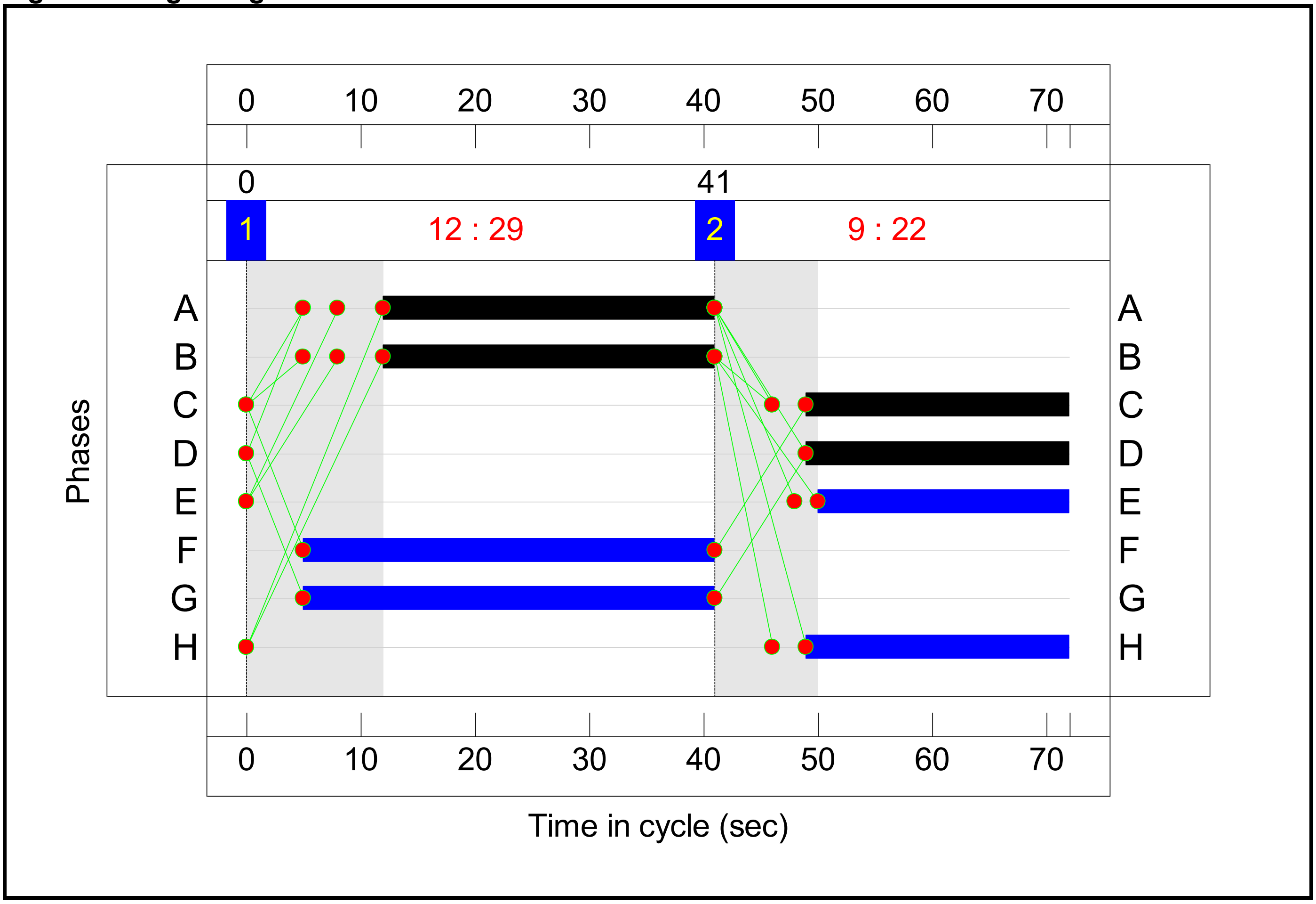
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	29	22
Change Point	0	41

Signal Timings Diagram



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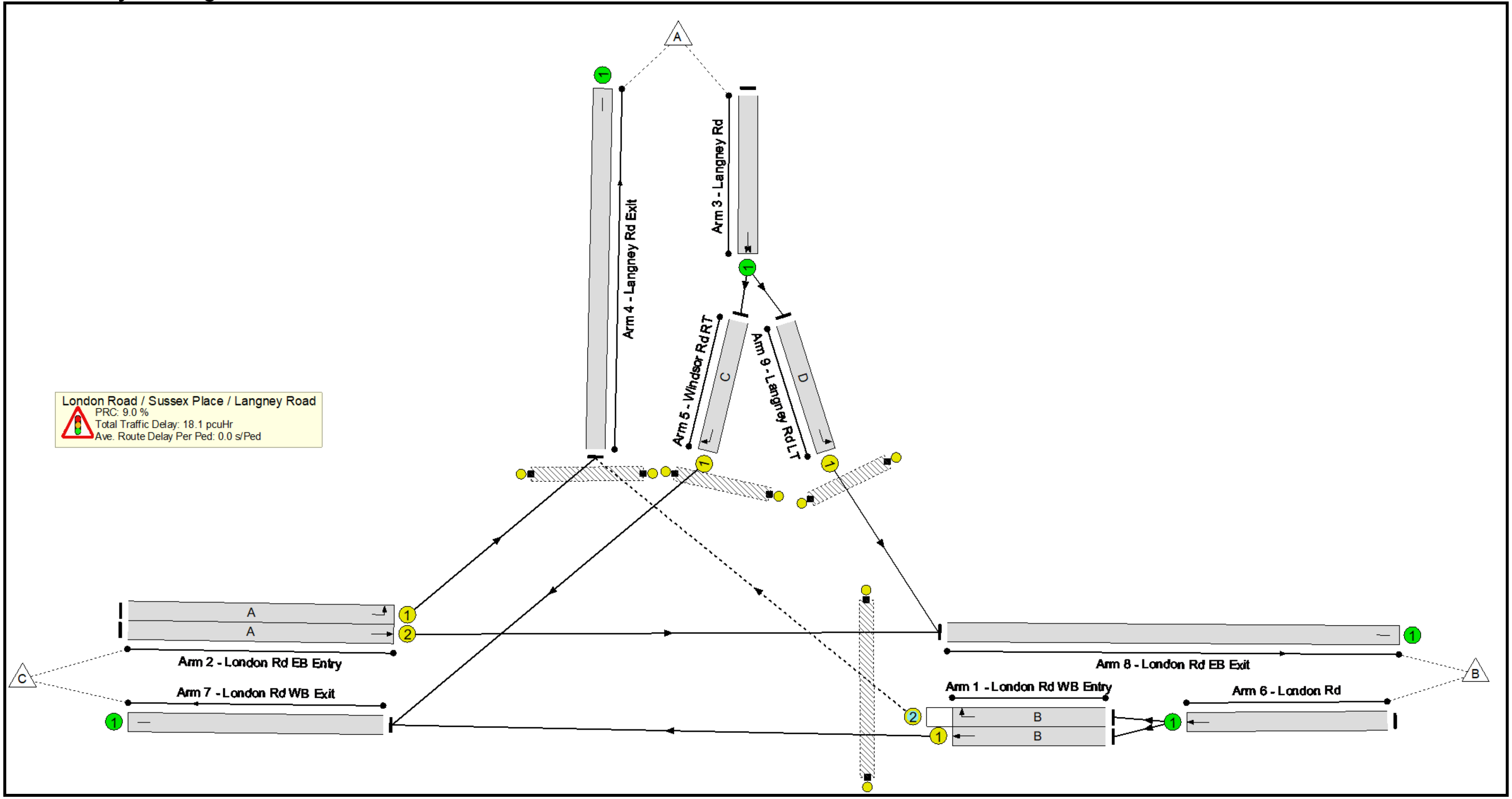
Full Input Data And Results

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**	-	-		-	-	-	-	-	-	**82.5%**
London Road / Sussex Place / Langney Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**82.5%**
1/1	London Rd WB Entry Ahead	U	N/A	N/A	B		1	29	-	440	1915	798	55.1%
1/2	London Rd WB Entry Right	O	N/A	N/A	B		1	29	-	18	1768	110	16.3%
2/1	London Rd EB Entry Left	U	N/A	N/A	A		1	29	-	569	1702	709	80.2%
2/2	London Rd EB Entry Ahead	U	N/A	N/A	A		1	29	-	638	1915	798	80.0%
3/1	Langney Rd Ahead Ahead2	U	N/A	N/A	-		-	-	-	481	Inf	Inf	0.0%
4/1	Langney Rd Exit	U	N/A	N/A	-		-	-	-	587	Inf	Inf	0.0%
5/1	Windsor Rd RT Right	U	N/A	N/A	C		1	23	-	479	1741	580	82.5%
6/1	London Rd Ahead	U	N/A	N/A	-		-	-	-	458	Inf	Inf	0.0%
7/1	London Rd WB Exit	U	N/A	N/A	-		-	-	-	919	Inf	Inf	0.0%
8/1	London Rd EB Exit	U	N/A	N/A	-		-	-	-	640	Inf	Inf	0.0%
9/1	Langney Rd LT Left	U	N/A	N/A	D		1	23	-	2	1685	562	0.4%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	22	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	F		1	36	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	G		1	36	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	H		1	23	-	0	-	0	0.0%

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Full Input Data And Results

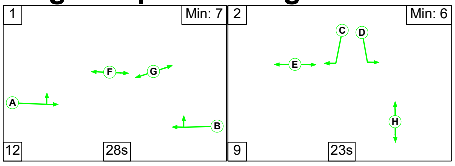
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**14**	**0**	**4**	**11.1**	**6.9**	**0.1**	**18.1**	**-**	**-**	**-**	**-**
London Road / Sussex Place / Langney Road	**-**	**-**	**14**	**0**	**4**	**11.1**	**6.9**	**0.1**	**18.1**	**-**	**-**	**-**	**-**
1/1	440	440	-	-	-	1.9	0.6	-	2.6	20.9	6.6	0.6	7.2
1/2	18	18	14	0	4	0.1	0.1	0.1	0.3	52.5	0.2	0.1	0.3
2/1	569	569	-	-	-	2.9	2.0	-	4.9	30.9	10.0	2.0	11.9
2/2	638	638	-	-	-	3.3	1.9	-	5.2	29.4	11.0	1.9	12.9
3/1	481	481	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	587	587	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	479	479	-	-	-	2.9	2.3	-	5.2	39.1	8.8	2.3	11.0
6/1	458	458	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	919	919	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	640	640	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	2	2	-	-	-	0.0	0.0	-	0.0	19.5	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 9.0 Total Delay for Signalled Lanes (pcuHr): 18.12 Cycle Time (s): 72
PRC Over All Lanes (%): 9.0 Total Delay Over All Lanes(pcuHr): 18.12

Full Input Data And Results

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

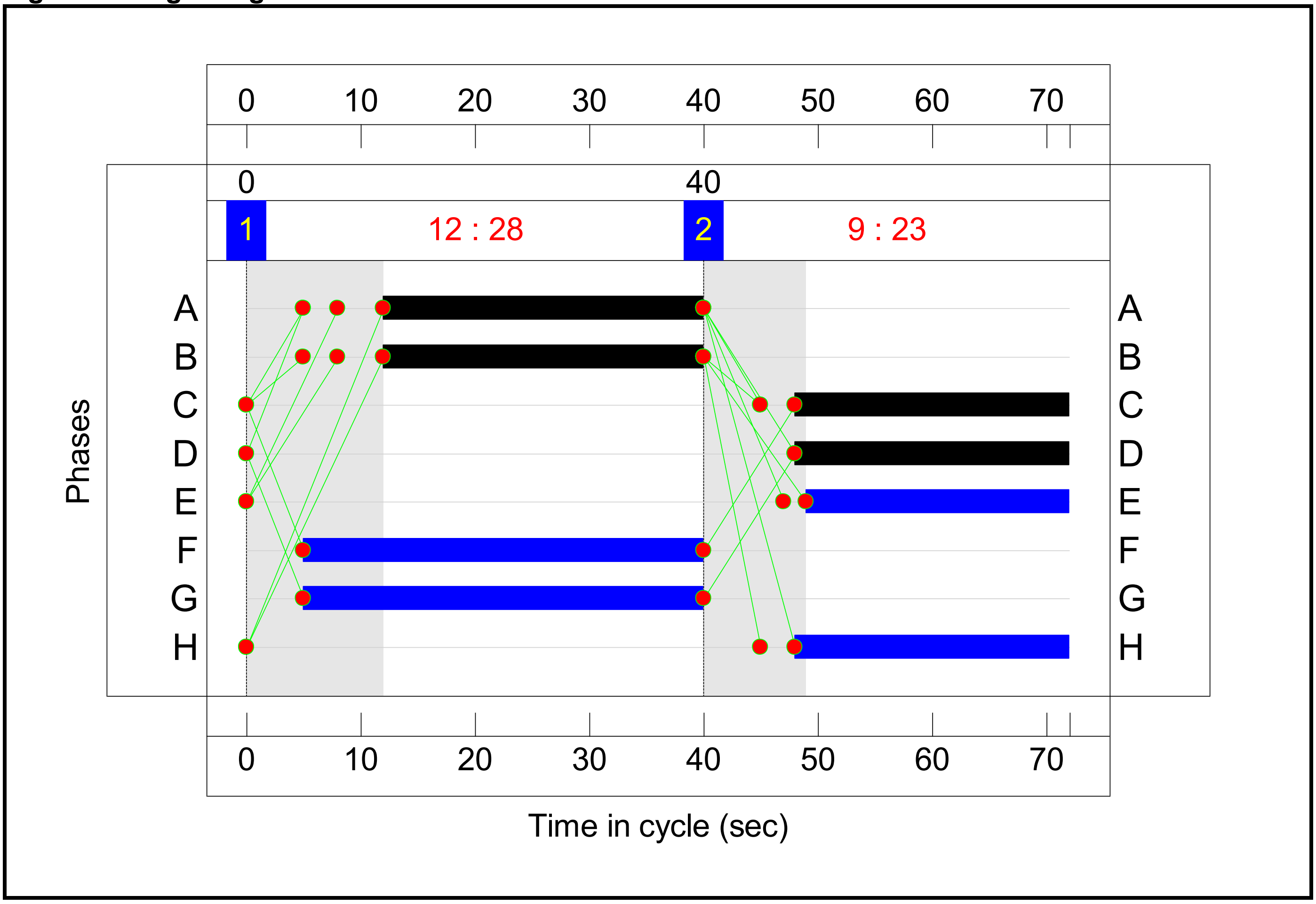
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	28	23
Change Point	0	40

Signal Timings Diagram



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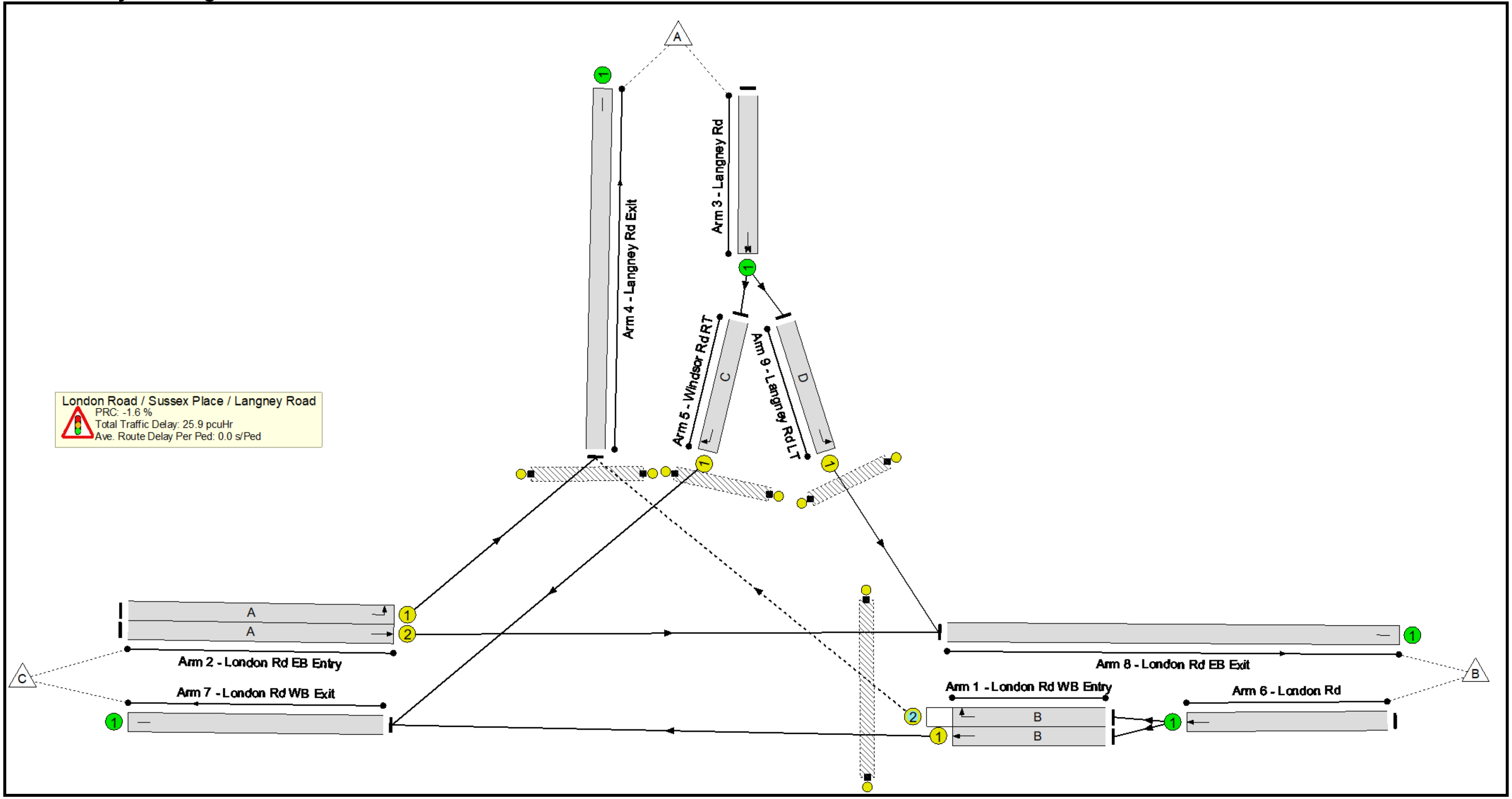
Full Input Data And Results

Network Layout Diagram



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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**	-	-		-	-	-	-	-	-	**91.5%**
London Road / Sussex Place / Langney Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**91.5%**
1/1	London Rd WB Entry Ahead	U	N/A	N/A	B		1	28	-	602	1915	771	78.0%
1/2	London Rd WB Entry Right	O	N/A	N/A	B		1	28	-	8	1768	100	8.0%
2/1	London Rd EB Entry Left	U	N/A	N/A	A		1	28	-	531	1702	686	77.5%
2/2	London Rd EB Entry Ahead	U	N/A	N/A	A		1	28	-	702	1915	771	91.0%
3/1	Langney Rd Ahead Ahead2	U	N/A	N/A	-		-	-	-	560	Inf	Inf	0.0%
4/1	Langney Rd Exit	U	N/A	N/A	-		-	-	-	539	Inf	Inf	0.0%
5/1	Windsor Rd RT Right	U	N/A	N/A	C		1	24	-	553	1741	605	91.5%
6/1	London Rd Ahead	U	N/A	N/A	-		-	-	-	610	Inf	Inf	0.0%
7/1	London Rd WB Exit	U	N/A	N/A	-		-	-	-	1155	Inf	Inf	0.0%
8/1	London Rd EB Exit	U	N/A	N/A	-		-	-	-	709	Inf	Inf	0.0%
9/1	Langney Rd LT Left	U	N/A	N/A	D		1	24	-	7	1685	585	1.2%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	23	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	F		1	35	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	G		1	35	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	H		1	24	-	0	-	0	0.0%

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Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**5**	**0**	**3**	**13.4**	**12.5**	**0.0**	**25.9**	**-**	**-**	**-**	**-**
London Road / Sussex Place / Langney Road	**-**	**-**	**5**	**0**	**3**	**13.4**	**12.5**	**0.0**	**25.9**	**-**	**-**	**-**	**-**
1/1	602	602	-	-	-	3.1	1.7	-	4.9	29.1	10.4	1.7	12.1
1/2	8	8	5	0	3	0.0	0.0	0.0	0.1	54.4	0.1	0.0	0.1
2/1	531	531	-	-	-	2.8	1.7	-	4.4	30.1	9.1	1.7	10.8
2/2	702	702	-	-	-	4.0	4.5	-	8.4	43.3	13.1	4.5	17.5
3/1	560	560	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	539	539	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	553	553	-	-	-	3.5	4.6	-	8.0	52.2	10.4	4.6	15.0
6/1	610	610	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1155	1155	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	709	709	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	7	7	-	-	-	0.0	0.0	-	0.0	18.8	0.1	0.0	0.1
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -1.6 Total Delay for Signalled Lanes (pcuHr): 25.92 Cycle Time (s): 72
PRC Over All Lanes (%): -1.6 Total Delay Over All Lanes(pcuHr): 25.92

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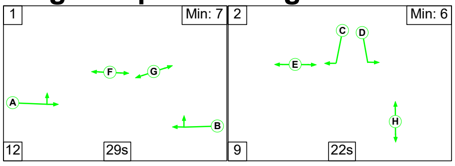
Full Input Data And Results

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

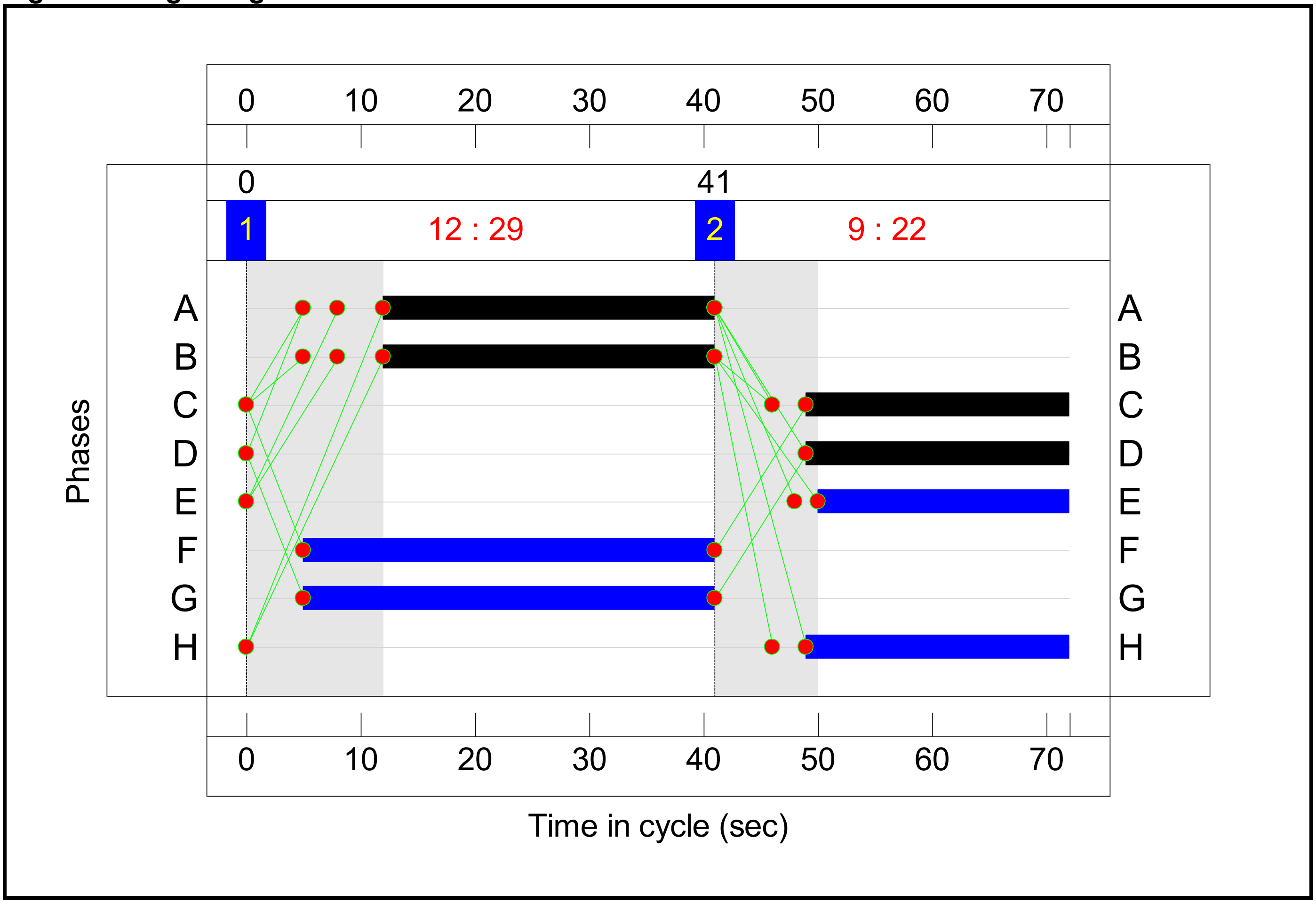
Stage Sequence Diagram



Stage Timings

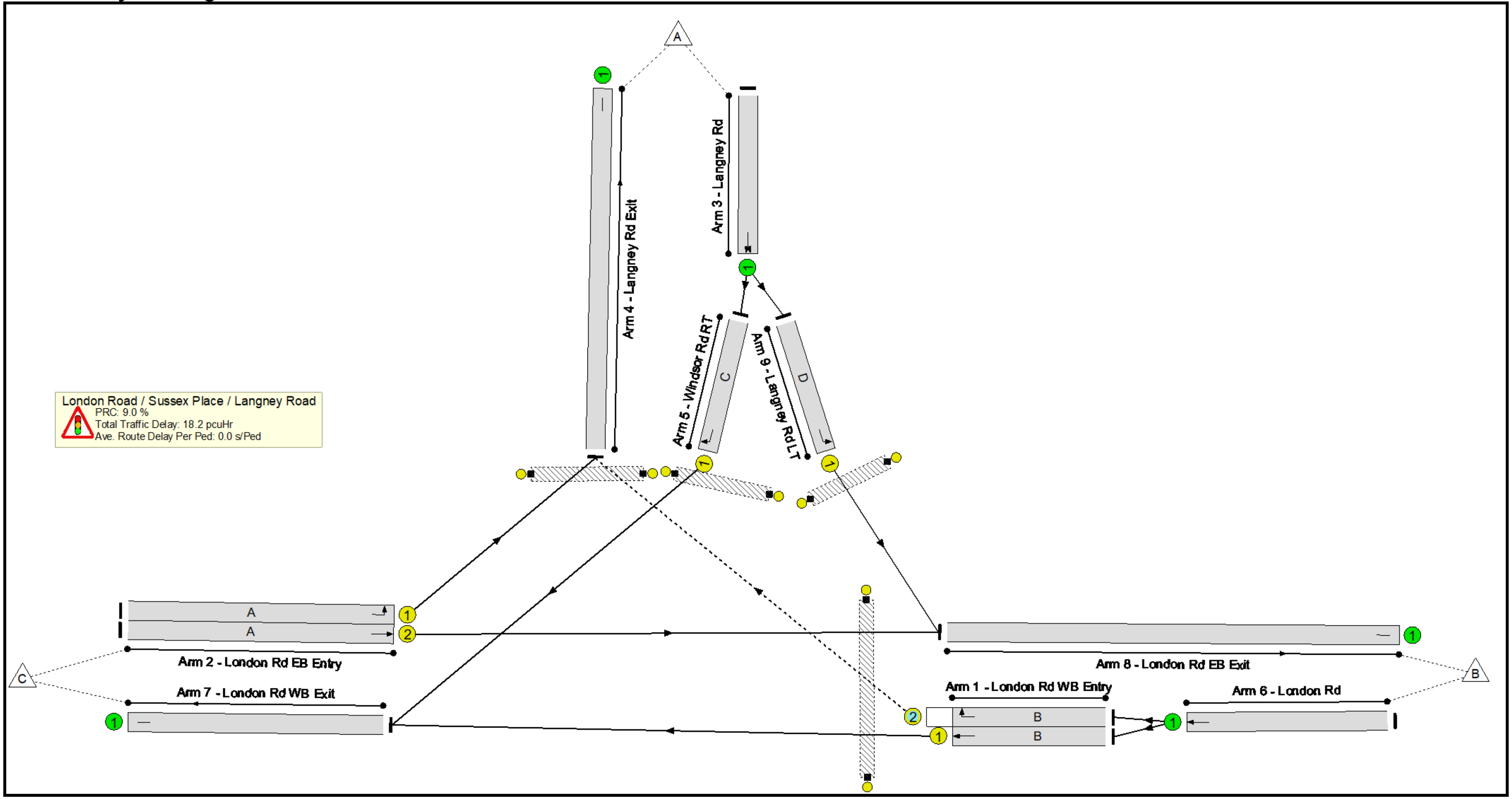
Stage	1	2
Duration	29	22
Change Point	0	41

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



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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**	-	-		-	-	-	-	-	-	**82.5%**
London Road / Sussex Place / Langney Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**82.5%**
1/1	London Rd WB Entry Ahead	U	N/A	N/A	B		1	29	-	440	1915	798	55.1%
1/2	London Rd WB Entry Right	O	N/A	N/A	B		1	29	-	18	1768	110	16.4%
2/1	London Rd EB Entry Left	U	N/A	N/A	A		1	29	-	571	1702	709	80.5%
2/2	London Rd EB Entry Ahead	U	N/A	N/A	A		1	29	-	640	1915	798	80.2%
3/1	Langney Rd Ahead Ahead2	U	N/A	N/A	-		-	-	-	481	Inf	Inf	0.0%
4/1	Langney Rd Exit	U	N/A	N/A	-		-	-	-	589	Inf	Inf	0.0%
5/1	Windsor Rd RT Right	U	N/A	N/A	C		1	23	-	479	1741	580	82.5%
6/1	London Rd Ahead	U	N/A	N/A	-		-	-	-	458	Inf	Inf	0.0%
7/1	London Rd WB Exit	U	N/A	N/A	-		-	-	-	919	Inf	Inf	0.0%
8/1	London Rd EB Exit	U	N/A	N/A	-		-	-	-	642	Inf	Inf	0.0%
9/1	Langney Rd LT Left	U	N/A	N/A	D		1	23	-	2	1685	562	0.4%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	22	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	F		1	36	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	G		1	36	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	H		1	23	-	0	-	0	0.0%

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Full Input Data And Results

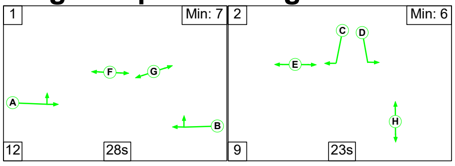
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**13**	**0**	**5**	**11.1**	**7.0**	**0.1**	**18.2**	**-**	**-**	**-**	**-**
London Road / Sussex Place / Langney Road	**-**	**-**	**13**	**0**	**5**	**11.1**	**7.0**	**0.1**	**18.2**	**-**	**-**	**-**	**-**
1/1	440	440	-	-	-	1.9	0.6	-	2.6	20.9	6.6	0.6	7.2
1/2	18	18	13	0	5	0.1	0.1	0.1	0.3	52.7	0.2	0.1	0.3
2/1	571	571	-	-	-	2.9	2.0	-	4.9	31.1	10.0	2.0	12.0
2/2	640	640	-	-	-	3.3	2.0	-	5.2	29.5	11.2	2.0	13.2
3/1	481	481	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	589	589	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	479	479	-	-	-	2.9	2.3	-	5.2	39.1	8.8	2.3	11.0
6/1	458	458	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	919	919	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	642	642	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	2	2	-	-	-	0.0	0.0	-	0.0	19.5	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 9.0 Total Delay for Signalled Lanes (pcuHr): 18.21 Cycle Time (s): 72
PRC Over All Lanes (%): 9.0 Total Delay Over All Lanes(pcuHr): 18.21

Full Input Data And Results

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

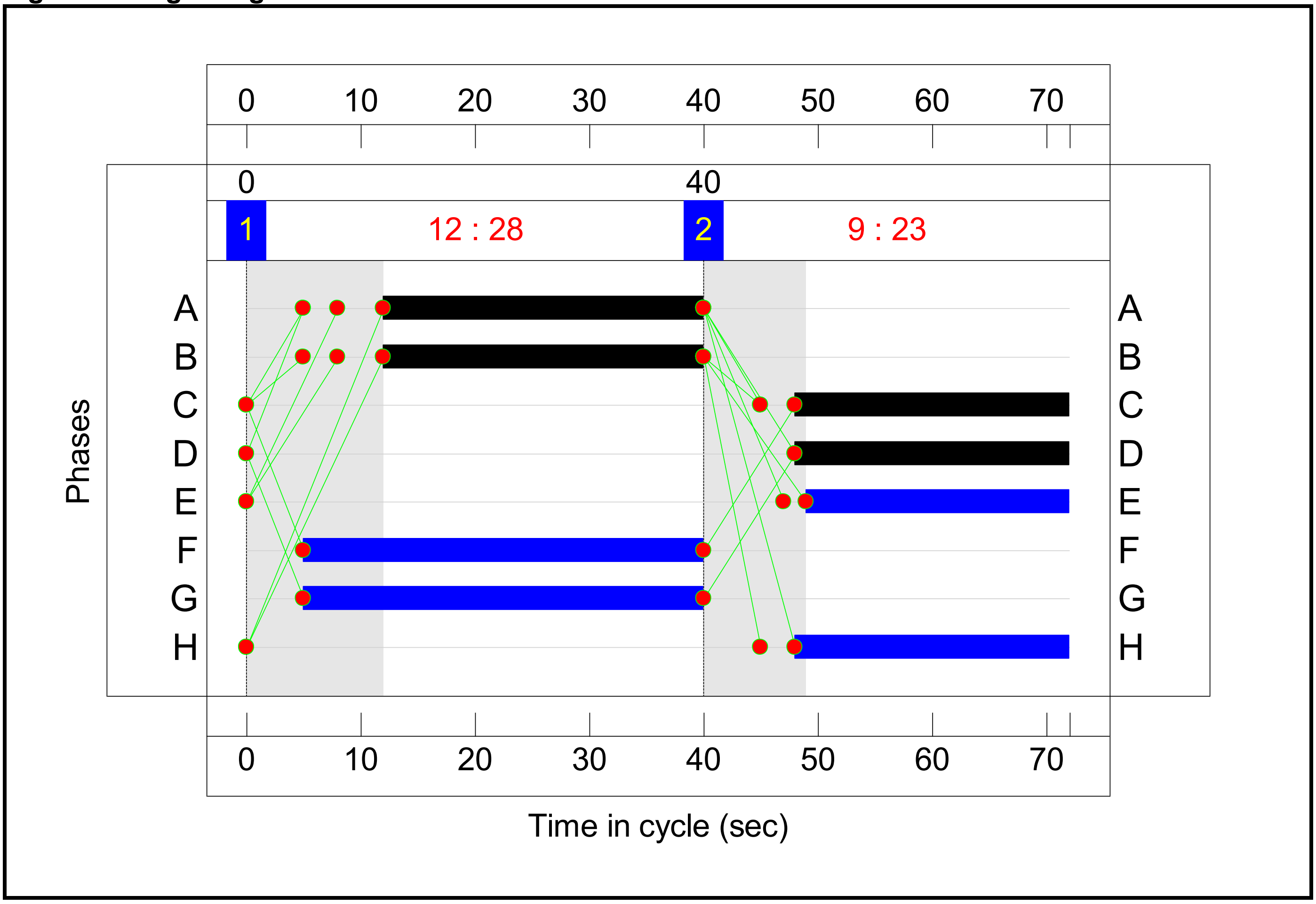
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	28	23
Change Point	0	40

Signal Timings Diagram



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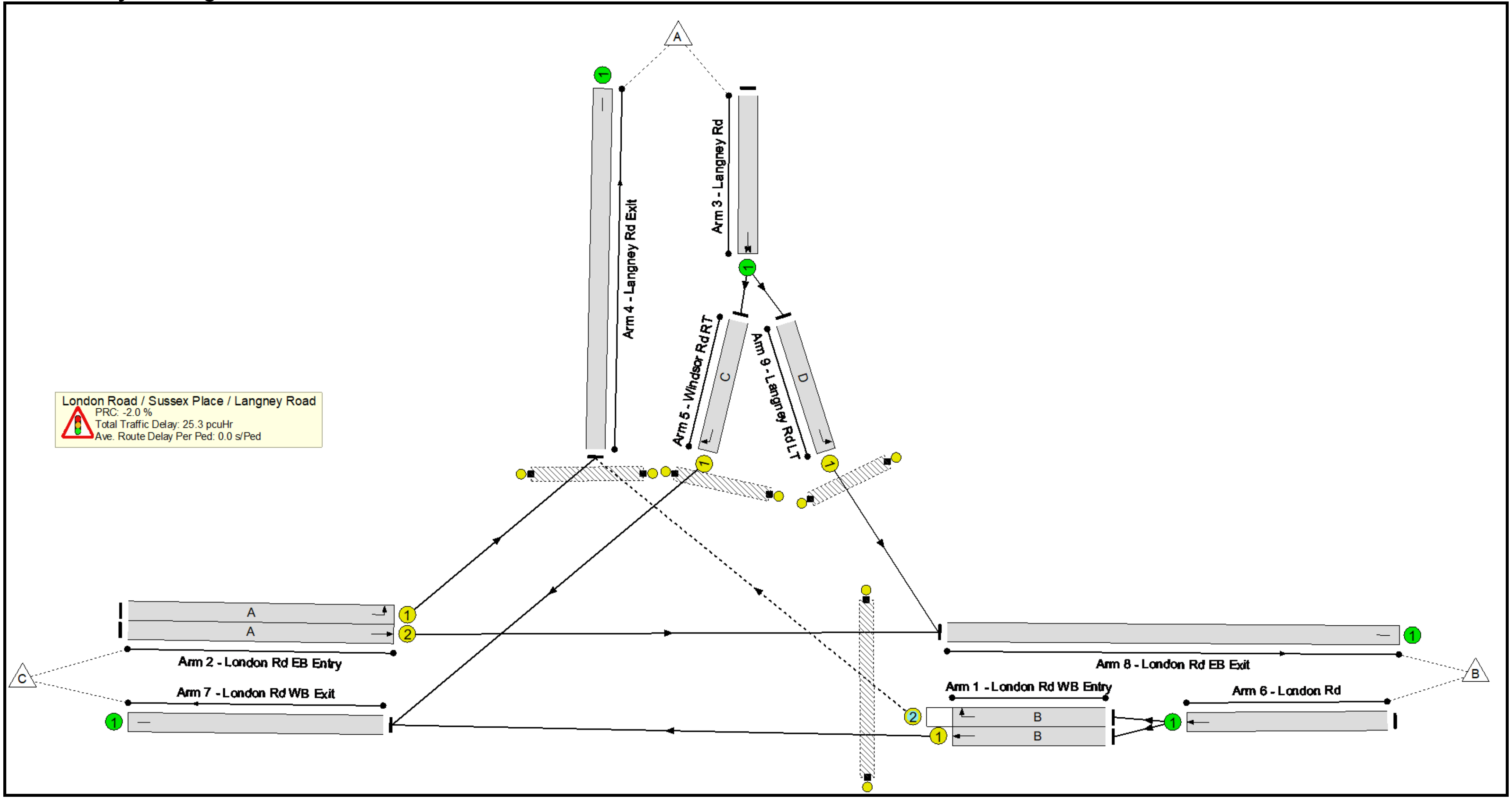
Full Input Data And Results

Network Layout Diagram



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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**	-	-		-	-	-	-	-	-	**91.8%**
London Road / Sussex Place / Langney Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**91.8%**
1/1	London Rd WB Entry Ahead	U	N/A	N/A	B		1	28	-	602	1915	771	78.0%
1/2	London Rd WB Entry Right	O	N/A	N/A	B		1	28	-	8	1768	100	8.0%
2/1	London Rd EB Entry Left	U	N/A	N/A	A		1	28	-	523	1702	686	76.3%
2/2	London Rd EB Entry Ahead	U	N/A	N/A	A		1	28	-	691	1915	771	89.6%
3/1	Langney Rd Ahead Ahead2	U	N/A	N/A	-		-	-	-	562	Inf	Inf	0.0%
4/1	Langney Rd Exit	U	N/A	N/A	-		-	-	-	531	Inf	Inf	0.0%
5/1	Windsor Rd RT Right	U	N/A	N/A	C		1	24	-	555	1741	605	91.8%
6/1	London Rd Ahead	U	N/A	N/A	-		-	-	-	610	Inf	Inf	0.0%
7/1	London Rd WB Exit	U	N/A	N/A	-		-	-	-	1157	Inf	Inf	0.0%
8/1	London Rd EB Exit	U	N/A	N/A	-		-	-	-	698	Inf	Inf	0.0%
9/1	Langney Rd LT Left	U	N/A	N/A	D		1	24	-	7	1685	585	1.2%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	23	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	F		1	35	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	G		1	35	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	H		1	24	-	0	-	0	0.0%

Full Input Data And Results

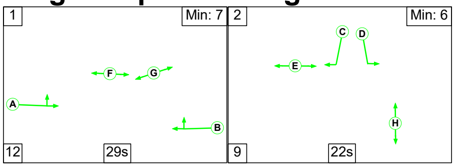
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**6**	**0**	**2**	**13.2**	**12.0**	**0.0**	**25.3**	**-**	**-**	**-**	**-**
London Road / Sussex Place / Langney Road	**-**	**-**	**6**	**0**	**2**	**13.2**	**12.0**	**0.0**	**25.3**	**-**	**-**	**-**	**-**
1/1	602	602	-	-	-	3.1	1.7	-	4.9	29.1	10.4	1.7	12.1
1/2	8	8	6	0	2	0.0	0.0	0.0	0.1	54.0	0.1	0.0	0.1
2/1	523	523	-	-	-	2.7	1.6	-	4.3	29.4	9.0	1.6	10.6
2/2	691	691	-	-	-	3.9	3.9	-	7.8	40.5	12.9	3.9	16.8
3/1	562	562	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	531	531	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	555	555	-	-	-	3.5	4.7	-	8.2	53.1	10.5	4.7	15.2
6/1	610	610	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1157	1157	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	698	698	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	7	7	-	-	-	0.0	0.0	-	0.0	18.8	0.1	0.0	0.1
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -2.0 Total Delay for Signalled Lanes (pcuHr): 25.26 Cycle Time (s): 72
PRC Over All Lanes (%): -2.0 Total Delay Over All Lanes(pcuHr): 25.26

Full Input Data And Results

Scenario 7: 'AM DS Commercial' (FG7: 'AM DS Commercial', Plan 1: 'Network Control Plan 1')

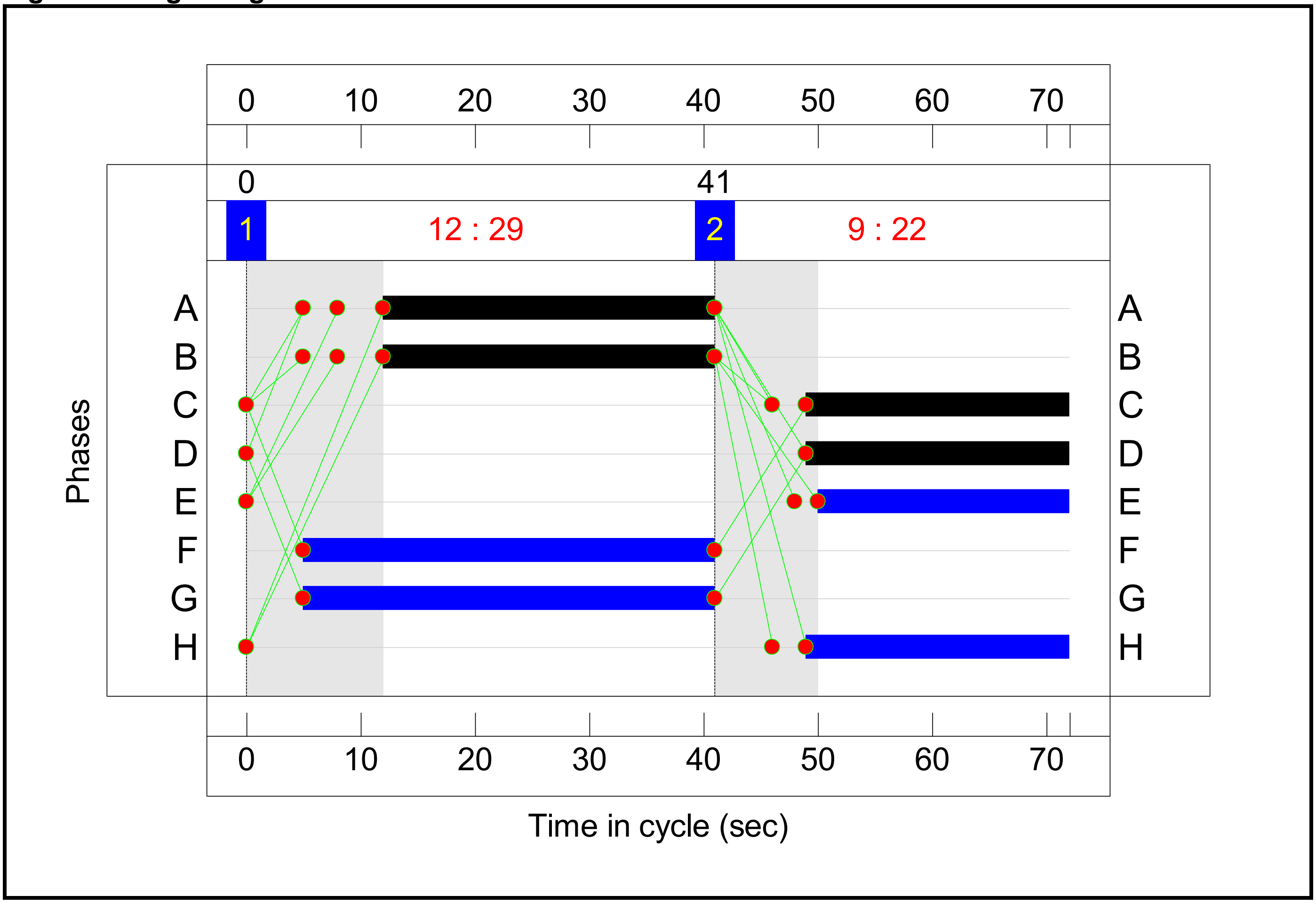
Stage Sequence Diagram



Stage Timings

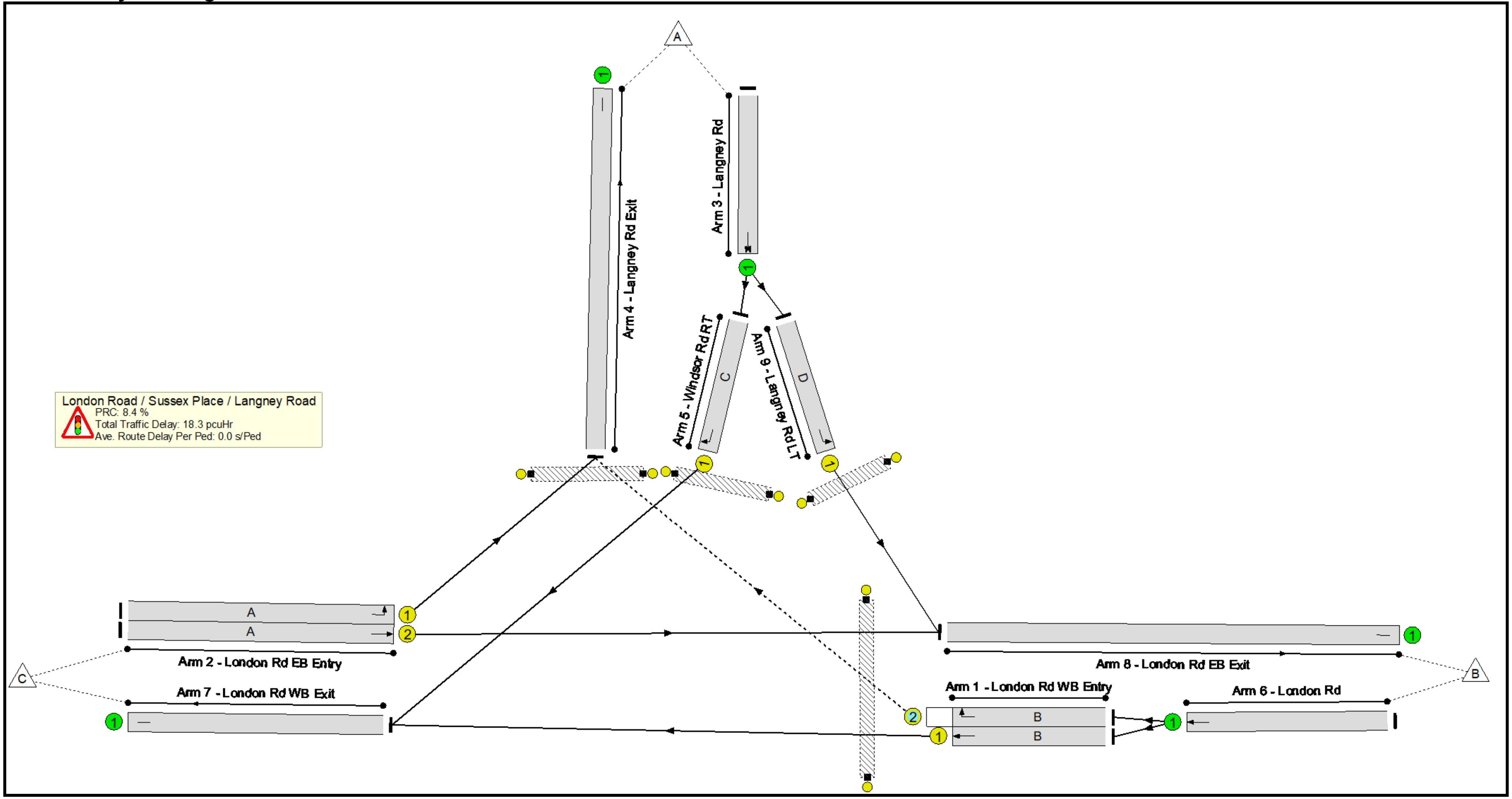
Stage	1	2
Duration	29	22
Change Point	0	41

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



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Full Input Data And Results

Network Results

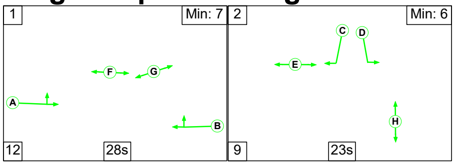
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	**N/A**	-	-		-	-	-	-	-	-	**83.1%**
London Road / Sussex Place / Langney Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**83.1%**
1/1	London Rd WB Entry Ahead	U	N/A	N/A	B		1	29	-	441	1915	798	55.3%
1/2	London Rd WB Entry Right	O	N/A	N/A	B		1	29	-	18	1768	110	16.3%
2/1	London Rd EB Entry Left	U	N/A	N/A	A		1	29	-	570	1702	709	80.4%
2/2	London Rd EB Entry Ahead	U	N/A	N/A	A		1	29	-	639	1915	798	80.1%
3/1	Langney Rd Ahead Ahead2	U	N/A	N/A	-		-	-	-	484	Inf	Inf	0.0%
4/1	Langney Rd Exit	U	N/A	N/A	-		-	-	-	588	Inf	Inf	0.0%
5/1	Windsor Rd RT Right	U	N/A	N/A	C		1	23	-	482	1741	580	83.1%
6/1	London Rd Ahead	U	N/A	N/A	-		-	-	-	459	Inf	Inf	0.0%
7/1	London Rd WB Exit	U	N/A	N/A	-		-	-	-	923	Inf	Inf	0.0%
8/1	London Rd EB Exit	U	N/A	N/A	-		-	-	-	641	Inf	Inf	0.0%
9/1	Langney Rd LT Left	U	N/A	N/A	D		1	23	-	2	1685	562	0.4%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	22	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	F		1	36	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	G		1	36	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	H		1	23	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**13**	**0**	**5**	**11.2**	**7.0**	**0.1**	**18.3**	**-**	**-**	**-**	**-**
London Road / Sussex Place / Langney Road	**-**	**-**	**13**	**0**	**5**	**11.2**	**7.0**	**0.1**	**18.3**	**-**	**-**	**-**	**-**
1/1	441	441	-	-	-	2.0	0.6	-	2.6	20.9	6.6	0.6	7.2
1/2	18	18	13	0	5	0.1	0.1	0.1	0.3	52.6	0.2	0.1	0.3
2/1	570	570	-	-	-	2.9	2.0	-	4.9	31.0	10.0	2.0	12.0
2/2	639	639	-	-	-	3.3	2.0	-	5.2	29.4	11.2	2.0	13.1
3/1	484	484	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	588	588	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	482	482	-	-	-	3.0	2.3	-	5.3	39.6	8.8	2.3	11.2
6/1	459	459	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	923	923	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	641	641	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	2	2	-	-	-	0.0	0.0	-	0.0	19.5	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 8.4 Total Delay for Signalled Lanes (pcuHr): 18.28 Cycle Time (s): 72
PRC Over All Lanes (%): 8.4 Total Delay Over All Lanes(pcuHr): 18.28

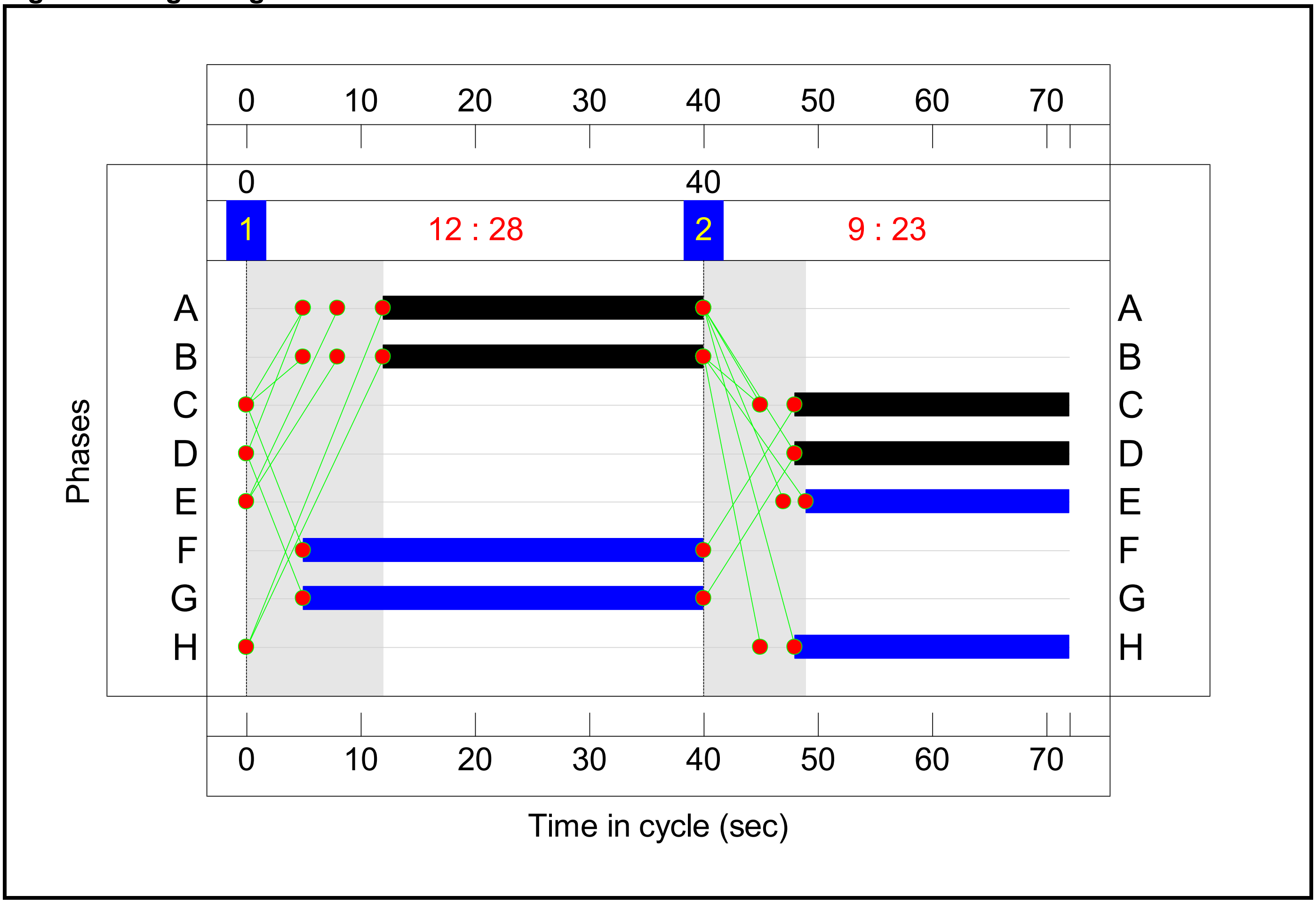
Full Input Data And Results
Scenario 8: 'PM DS Commercial' (FG8: 'PM DS Commercial', Plan 1: 'Network Control Plan 1')
Stage Sequence Diagram



Stage Timings

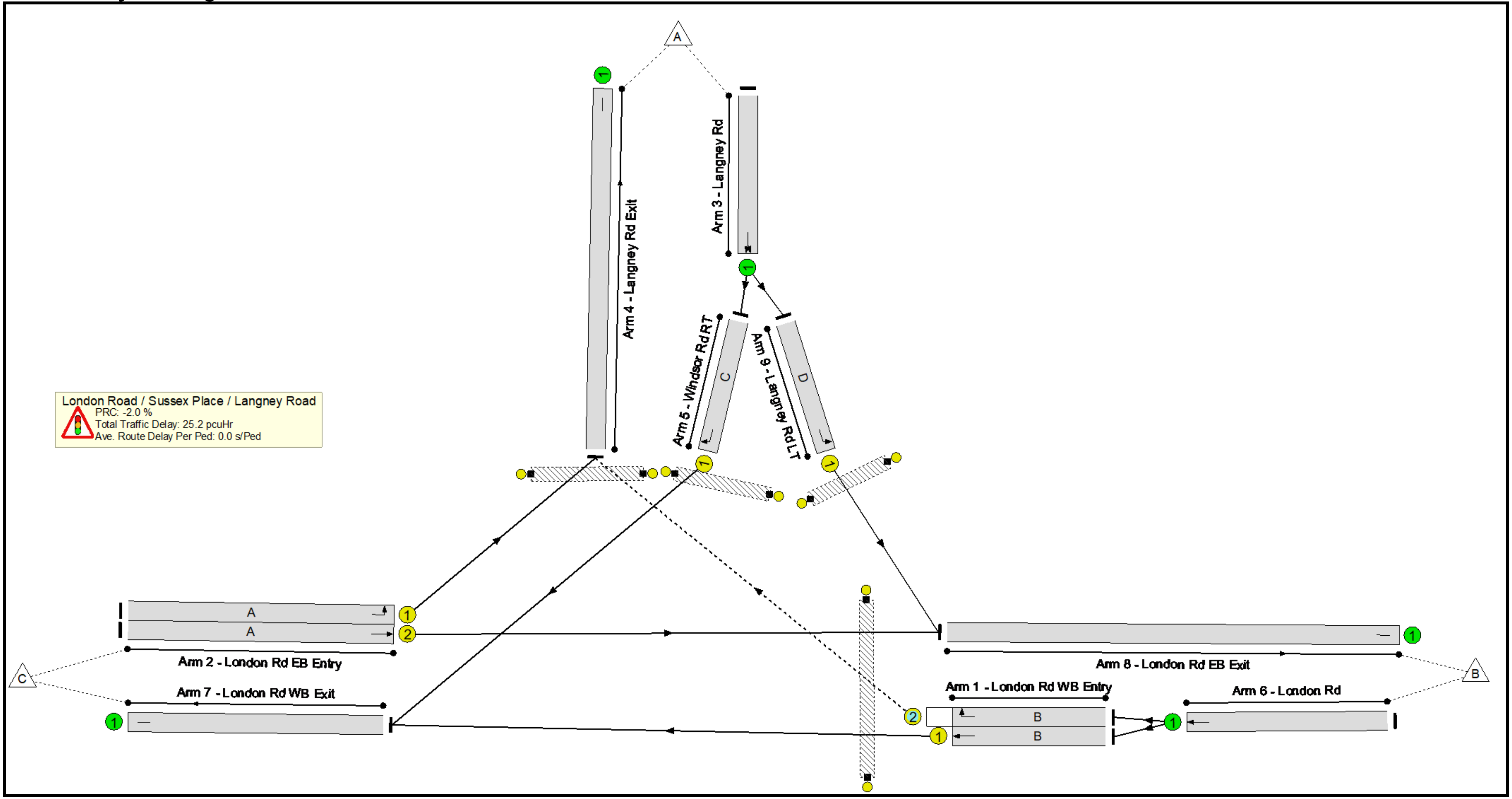
Stage	1	2
Duration	28	23
Change Point	0	40

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



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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**	-	-		-	-	-	-	-	-	**91.8%**
London Road / Sussex Place / Langney Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**91.8%**
1/1	London Rd WB Entry Ahead	U	N/A	N/A	B		1	28	-	602	1915	771	78.0%
1/2	London Rd WB Entry Right	O	N/A	N/A	B		1	28	-	8	1768	100	8.0%
2/1	London Rd EB Entry Left	U	N/A	N/A	A		1	28	-	523	1702	686	76.3%
2/2	London Rd EB Entry Ahead	U	N/A	N/A	A		1	28	-	690	1915	771	89.5%
3/1	Langney Rd Ahead Ahead2	U	N/A	N/A	-		-	-	-	562	Inf	Inf	0.0%
4/1	Langney Rd Exit	U	N/A	N/A	-		-	-	-	531	Inf	Inf	0.0%
5/1	Windsor Rd RT Right	U	N/A	N/A	C		1	24	-	555	1741	605	91.8%
6/1	London Rd Ahead	U	N/A	N/A	-		-	-	-	610	Inf	Inf	0.0%
7/1	London Rd WB Exit	U	N/A	N/A	-		-	-	-	1157	Inf	Inf	0.0%
8/1	London Rd EB Exit	U	N/A	N/A	-		-	-	-	697	Inf	Inf	0.0%
9/1	Langney Rd LT Left	U	N/A	N/A	D		1	24	-	7	1685	585	1.2%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	E		1	23	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	F		1	35	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	G		1	35	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	H		1	24	-	0	-	0	0.0%

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Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**6**	**0**	**2**	**13.2**	**12.0**	**0.0**	**25.2**	**-**	**-**	**-**	**-**
London Road / Sussex Place / Langney Road	**-**	**-**	**6**	**0**	**2**	**13.2**	**12.0**	**0.0**	**25.2**	**-**	**-**	**-**	**-**
1/1	602	602	-	-	-	3.1	1.7	-	4.9	29.1	10.4	1.7	12.1
1/2	8	8	6	0	2	0.0	0.0	0.0	0.1	54.0	0.1	0.0	0.1
2/1	523	523	-	-	-	2.7	1.6	-	4.3	29.4	9.0	1.6	10.6
2/2	690	690	-	-	-	3.8	3.9	-	7.7	40.3	12.8	3.9	16.7
3/1	562	562	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	531	531	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	555	555	-	-	-	3.5	4.7	-	8.2	53.1	10.5	4.7	15.2
6/1	610	610	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1157	1157	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	697	697	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	7	7	-	-	-	0.0	0.0	-	0.0	18.8	0.1	0.0	0.1
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -2.0 Total Delay for Signalled Lanes (pcuHr): 25.20 Cycle Time (s): 72
PRC Over All Lanes (%): -2.0 Total Delay Over All Lanes(pcuHr): 25.20

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Appendix F

SBC PLANNING
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Green Monarch B1 2016 Limited and Green Monarch B2 2016 Limited

QUEENSMERE SHOPPING CENTRE, SLOUGH CENTRAL

Framework Residential Travel Plan

JUNE 2022

PUBLIC

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Green Monarch B1 2016 Limited and Green Monarch B2 2016 Limited

QUEENSMERE SHOPPING CENTRE, SLOUGH CENTRAL

Framework Residential Travel Plan

TYPE OF DOCUMENT (VERSION) PUBLIC

PROJECT NO. 70060763

DATE: JUNE 2022

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RECEIVED : 24.06.2022

Green Monarch B1 2016 Limited and Green Monarch B2 2016 Limited

QUEENSMERE SHOPPING CENTRE, SLOUGH CENTRAL

Framework Residential Travel Plan

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WSP.com

PUBLIC

QUALITY CONTROL

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks				
Date				
Prepared by	LB	LB		
Signature				
Checked by	AT	AT		
Signature				
Authorised by	DMcD	AT		
Signature				
Project number	70060763	70060763		
File reference	\\uk.wspgroup.com\central data\Projects\700607xx\70060763 - Slough Town Centre\03 WIP\TP Transport Planning\05 Reports			

CONTENTS

TABLES

FIGURES

APPENDICES

No table of contents entries found.

1 INTRODUCTION

1.1 PREFACE

1.1.1. This Framework Residential Travel Plan (hereafter referred to as 'FRTP') has been prepared by WSP on behalf of Green Monarch B1 2016 Limited and Green Monarch B2 2016 Limited (the Applicant) in support of an Outline Planning Application for the redevelopment of the Queensmere Shopping Centre, High Street, Slough, SL1 1LN (The 'QM OPA').

1.1.2. Permission is sought for the proposed development through the submission of an Outline Planning Application with the following description of development:

> *Outline application (with all matters reserved) for the demolition of buildings and the phased redevelopment of the Site to provide a mixed-use scheme comprising residential floorspace (C3 use and provision for C2 use); flexible town centre uses floor space (Use Class E and Use Class F), provision for office floorspace (Use Class E (g) (i)), supporting Sui Generis town centre uses (including a range of the following uses: pubs, wine bars, hot food takeaway), Sui Generis leisure uses (provision for a cinema or live music venue); provision for the creation of basements, car and cycle parking (including provision for a Multi-Storey Car Park); site wide landscaping, new public realm including provision of a new town square and public spaces and associated servicing, associated infrastructure, energy generation requirements and highways works*.

1.1.3. The 'Slough Central' area reflects the broader regeneration area as proposed in the SBC adopted Local Plan documents and the emerging LP in the Strategic Regeneration Framework documents. These adopted and emerging documents allow for a phased redevelopment of both shopping centres to occur.

1.1.4. The scheme presented in this FRTP is illustrative and reflects one example of how the QM site could be redeveloped within the parameters of development being applied by the Parameter Plans as part of the QM OPA. The Illustrative scheme does not reflect the only solution. As such, this Illustrative scheme is not being fixed and is not submitted for approval. The purpose of this document, which is submitted as a supporting document as part of the QM OPA, is to provide an overarching indication of how sustainable travel to and from the site can be incentivised in the future, when the QM OPA is fully operational. It is expected that subsequent plot-specific reserved matters planning applications will be required to submit detailed Travel Plans for each proposed land use.

1.2 REPORT PURPOSE

1.2.1. The key aim of this Framework Residential Travel Plan is to encourage future residents to travel to and from the Site using sustainable modes. This document will provide a framework which should be followed for the preparation of the future Travel Plans related to subsequent reserved matters applications at the Site.

1.3 REPORT STRUCTURE

1.3.1. This Framework Residential Travel Plan has been prepared in accordance with Slough Borough Council (SBC)'s Travel Plan Guidance. The report is structured as follows:

- Chapter 1 - Foreword and Introduction
- Chapter 2 - Site Characteristics
- Chapter 3 - Site Accessibility
- Chapter 4 - Baseline travel information
- Chapter 5 – Objectives
- Chapter 6 - Targets
- Chapter 7 - Measures
- Chapter 8 - Travel Plan Co-ordinator and Management Support
- Chapter 9 - Monitoring and Reporting
- Chapter 10 - Action Plan

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2 SITE CHARACTERISTICS

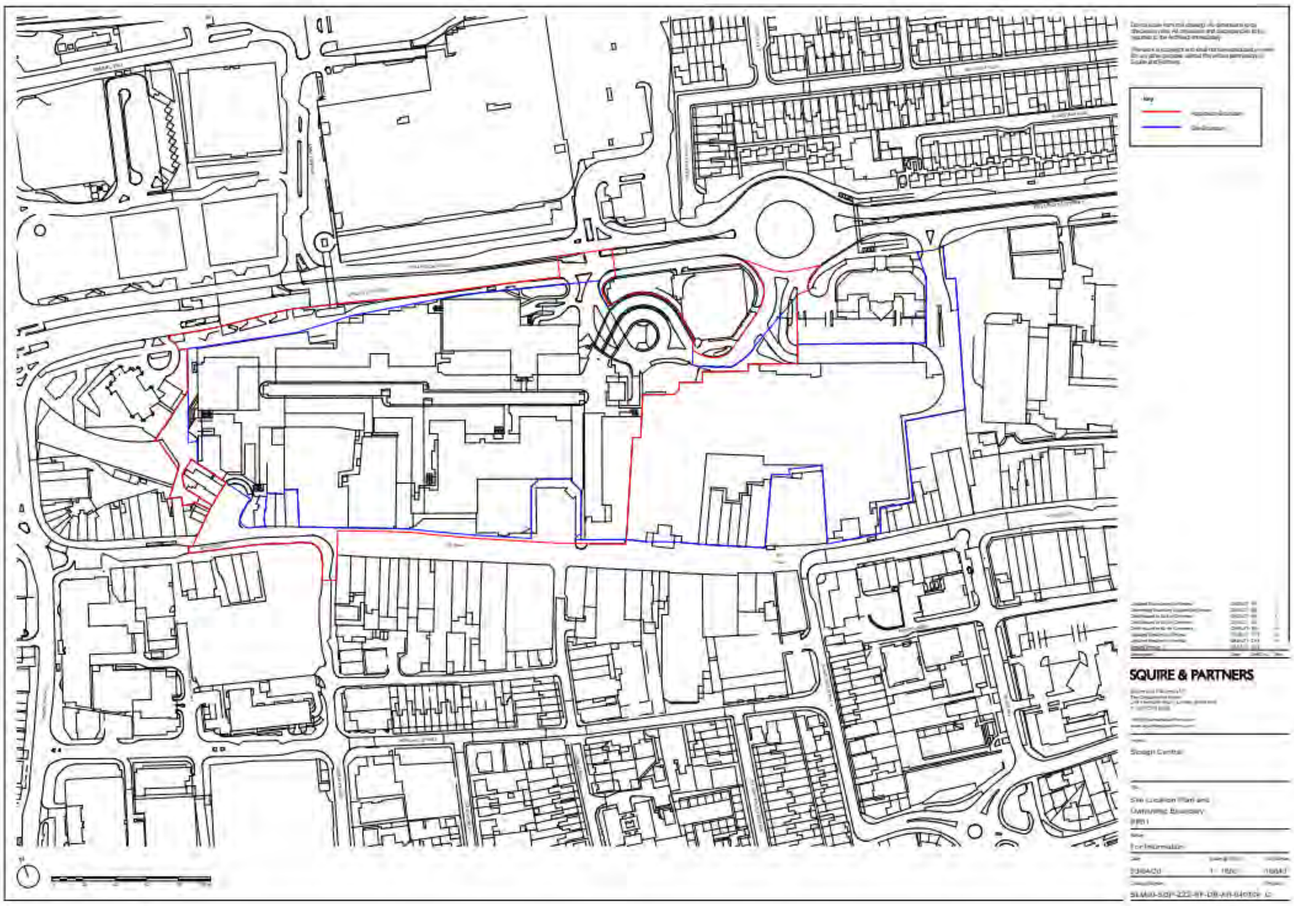
2.1 INTRODUCTION

2.1.1. This Chapter outlines the location of the existing Site and its uses as well as the uses proposed as part of the outline planning application.

2.2 EXISTING SITE

2.2.1. The Site sits at the heart of Slough Town Centre and has been identified for significant regeneration as set out within the Slough Core Strategy Development Plan Document (DPD) 2006-2026 and supported by other local documents including the Site Allocations DPD. **Figure 2-1** shows the site location.

Figure 2-1 - Site Location



2.2.2. The Site currently accommodates the Queensmere shopping centre which comprises retail outlets, restaurants, cinema, office use, and residential units. The Observatory shopping centre bounds the Site to the east and accommodates similar uses. The Site is bound by the A4 Wellington Street to the north; by High Street to the south; and by the Curve Slough cultural centre and St Ethelbert's Church to the west. The Site is located 250m to the south of Slough rail station.

2.2.3. The Site has two existing vehicle accesses via the A4 Wellington Street: the roundabout known locally as the HTC roundabout and a left-in, left out access to the Queensmere shopping centre car park as shown in **Figure 2-1**.

2.3 DEVELOPMENT PROPOSALS

2.3.1. The Queensmere outline planning application seeks permission for demolition and mixed-use redevelopment of the Site. As stated in Chapter 1 of this Report, the QM OPA is seeking consent for a series of Parameter Plans, within which there is a degree of flexibility around certain land uses, and a site wide schedule of floorspace for different land uses. The detailed design will be submitted in phases as a series of reserved matters pursuant to the Outline Planning Permission.

2.3.2. The proposals comprise the following maximum parameters that will be submitted as part of the outline planning application:

Table 2-1 – Proposed Development Quantum

Land Use	GEA (sqm) / Number of Units
Residential (C3)	Up to 1,600 units with flexibility for up to 20% as C2 Use
Office (E)	0 - 40,000sqm
Use Class E (excluding office uses), F (excluding primary and secondary schools, indoor or outdoor swimming pool or skating rink), Sui Generis (Pubs, Bars, Hot Food Take Away) and Sui Generis Leisure (Live Music/Cinema)	12,000[1]sqm of which 1,500sqm is Sui Generis Leisure (Live Music/Cinema) and 2,250sm is Sui Generis (Pubs, Bars, Hot Food Take Away)

2.3.3. However, as discussed, because the planning application will be parameter-based there is a degree of flexibility of the proposed land uses on some parts of the Site, predominantly either a Maximum Residential scenario or a Maximum Office scenario.

2.3.4. For the purpose of trip quantification, the maximum residential scenario is presented within this FRTP.

[1] Whilst the maximum floorspace cap for Class E & Class F uses is stated as 12,000 sqm (GEA) and the maximum floorspace cap for Sui Generis uses is stated as 3,750 sqm (GEA), we propose to limit the combined maximum floorspace cap across both Class E & F and Sui Generis uses to 12,000 sqm (GEA).

3 SITE ACCESSIBILITY

3.1 INTRODUCTION

3.1.1. This section presents a review of the existing transport network, including public transport accessibility and active travel routes.

3.2 PEDESTRIAN ACCESSIBILITY

3.2.1. The National Travel Survey 2015 (released in September 2016) notes that walking is the most frequent mode of travel used for short distance trips within 1 mile (1.6km). Infrastructure that supports efficient travel on foot therefore promotes walking as a viable alternative to short car trips. The pedestrian infrastructure within the vicinity of the Site and the local area is well established and provides continuous footways, footpaths, and pedestrian crossing points. These generally provide opportunities for pedestrians to access local amenities.

3.2.2. The Site is bound by the A4 Wellington Street to the north which provides good footways on the northern and southern sides of the carriageway. The footways on the A4 Wellington Street are linked by the provision of signalised crossing facilities provided at regular intervals. The pedestrian crossings provide connection from the Site to the north towards local amenities such as the Tesco supermarket or Slough rail station (via Brunel Way). Most crossing points are toucan which enable both pedestrians and cyclists to cross the road and are located at the junctions with Queensmere Road, Brunel Way and the B16 William Street.

3.2.3. The footways along the A4 Wellington Street also provide east-west connections. To the east, the footways lead to a Sainsbury's which is located within a 600m walking distance (an 8-minute walk based on a walking speed of 80m/min).

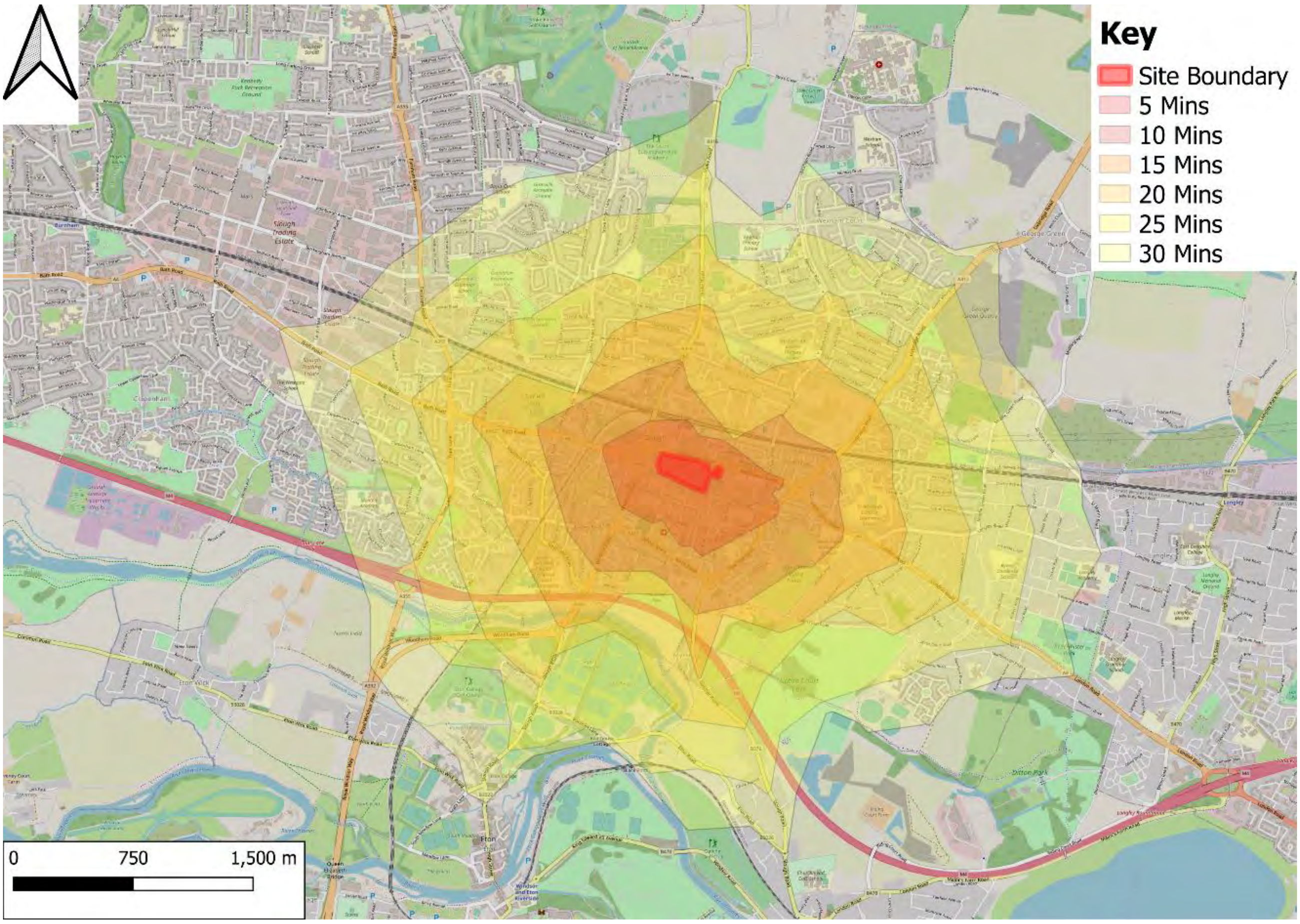
3.2.4. Brunel Way extends northbound from the junction with the A4 Wellington Street, providing a route to Slough rail station. Brunel Way has footways on both sides of the road, with a pedestrian crossing on Brunel Way at the junction with the A4 Wellington Street.

3.2.5. High Street bounds the Site to the south. It is pedestrianised between the junctions with Church Street and Alpha Street North. The west section of High Street, between Windsor Road and Church Street, has traffic restriction, with access only permitted for buses, taxis, motorcycles, and cycles. The High Street is highly permeable and provides east-west connection through the town centre and access to retail facilities, restaurants, cafes and other facilities. A number of local roads branch out southbound from the High Street and facilitate access to more local amenities to the south, including Upton Hospital.

3.2.6. The aforementioned roads provide lighting columns at regular intervals which ensure well-lit conditions at night for pedestrians.

3.2.7. **Figure 3-1** shows walking isochrones at 5-minute intervals, up to 30 minutes, from the Site.

Figure 3-1 - Pedestrian Isochrone Map



3.3 CYCLE ACCESSIBILITY

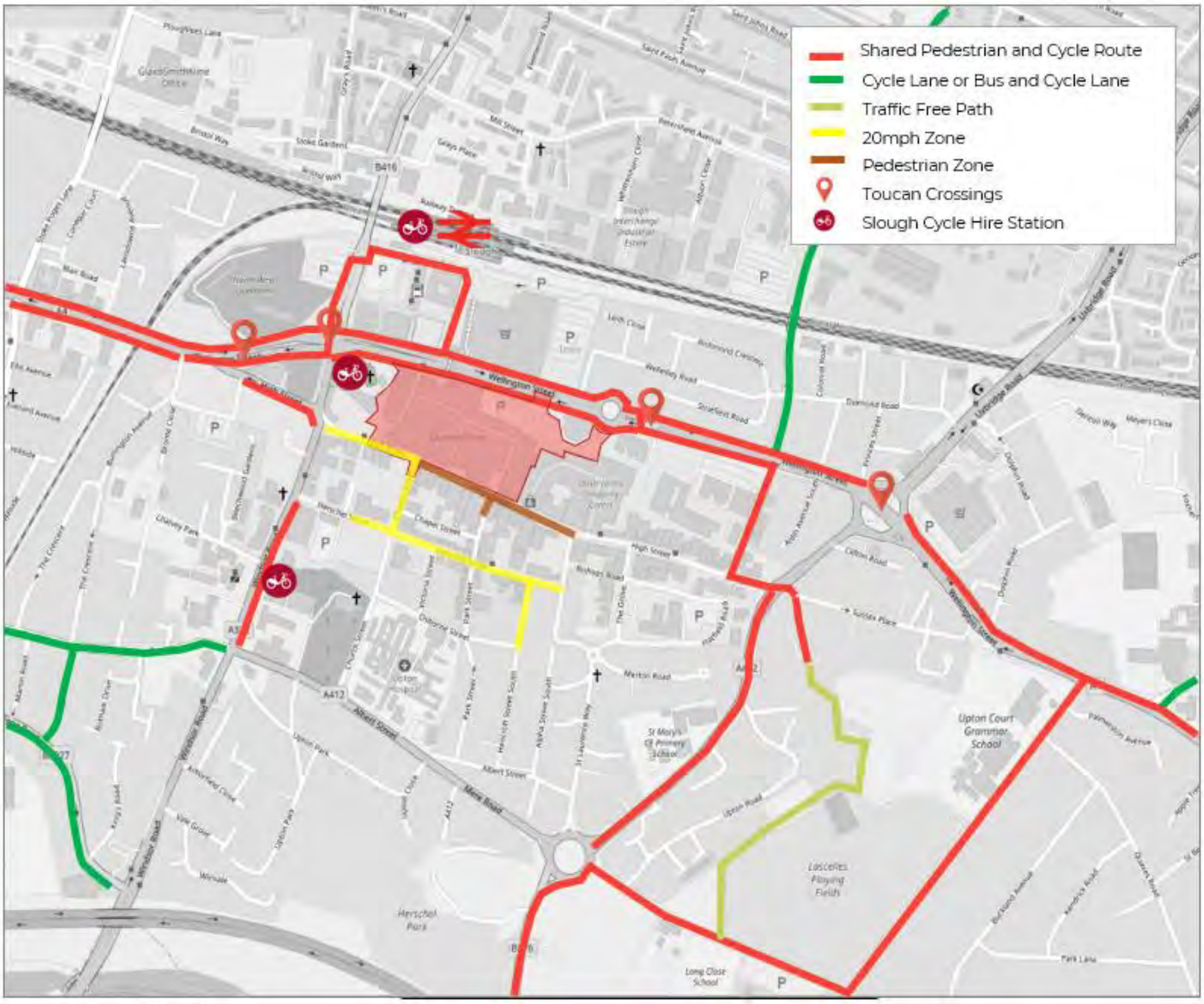
3.3.1. It is typically considered that cycling also has the potential to substitute for short car trips, particularly those journeys less than five kilometres in length. However, many people will cycle considerable distances depending on the weather, time of day, level of fitness, convenience, and real or perceived safety.

3.3.2. As illustrated in **Figure 3-2**, Slough town centre benefits from a good level of cycle connectivity and has a mix of shared pedestrian and cycle routes, dedicated cycle lanes and shared bus and cycle lanes.

3.3.3. The A4 Wellington Street, the north boundary of the Site currently provides an east-west connection via shared pedestrian and cycle routes; and toucan crossings. The A4 Wellington Street also provides connections to shared pedestrian and cycle routes on Brunel Way, offering connection to Slough rail station. The station provides cycle parking for up to 120 bicycles and has docking stations for Slough's Cycle Hire Scheme which has a capacity of 30 bicycles.

3.3.4. Wexham Road to the east of the Site provides a north-south connection for cyclists via a mix of cycle lanes to the north and shared pedestrian and cycle links to the south. Wexham Road forms part of the national cycle network, connecting Lascelles Road to the south, and onto National Cycle Route 61.

Figure 3-2 - Slough Town Centre Local Cycle Facilities

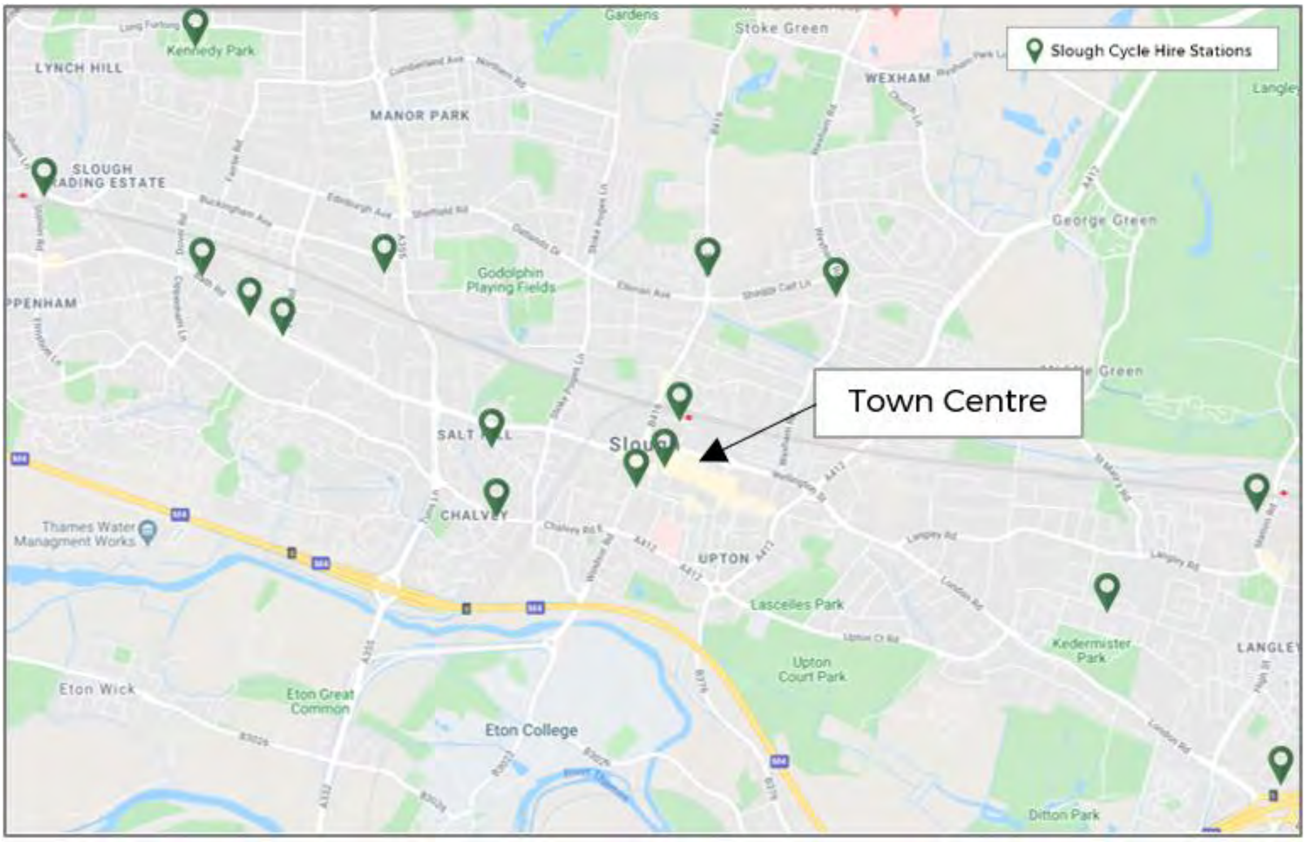


3.3.5. As mentioned above, SBC offer a cycle hire scheme specific to the borough with a total of 17 cycle-hire locations accessible on a pay as you go, weekly, monthly or annual basis. Users can register, check out a bike and return it to any dock within Slough. The facility provides an effective means of cycle connection from Slough town centre to the Trading Estate to the west and as well as some of the wider locations outside of the town centre.

3.3.6. The nearest cycle hire stations are shown on **Figure 3-3** and include:

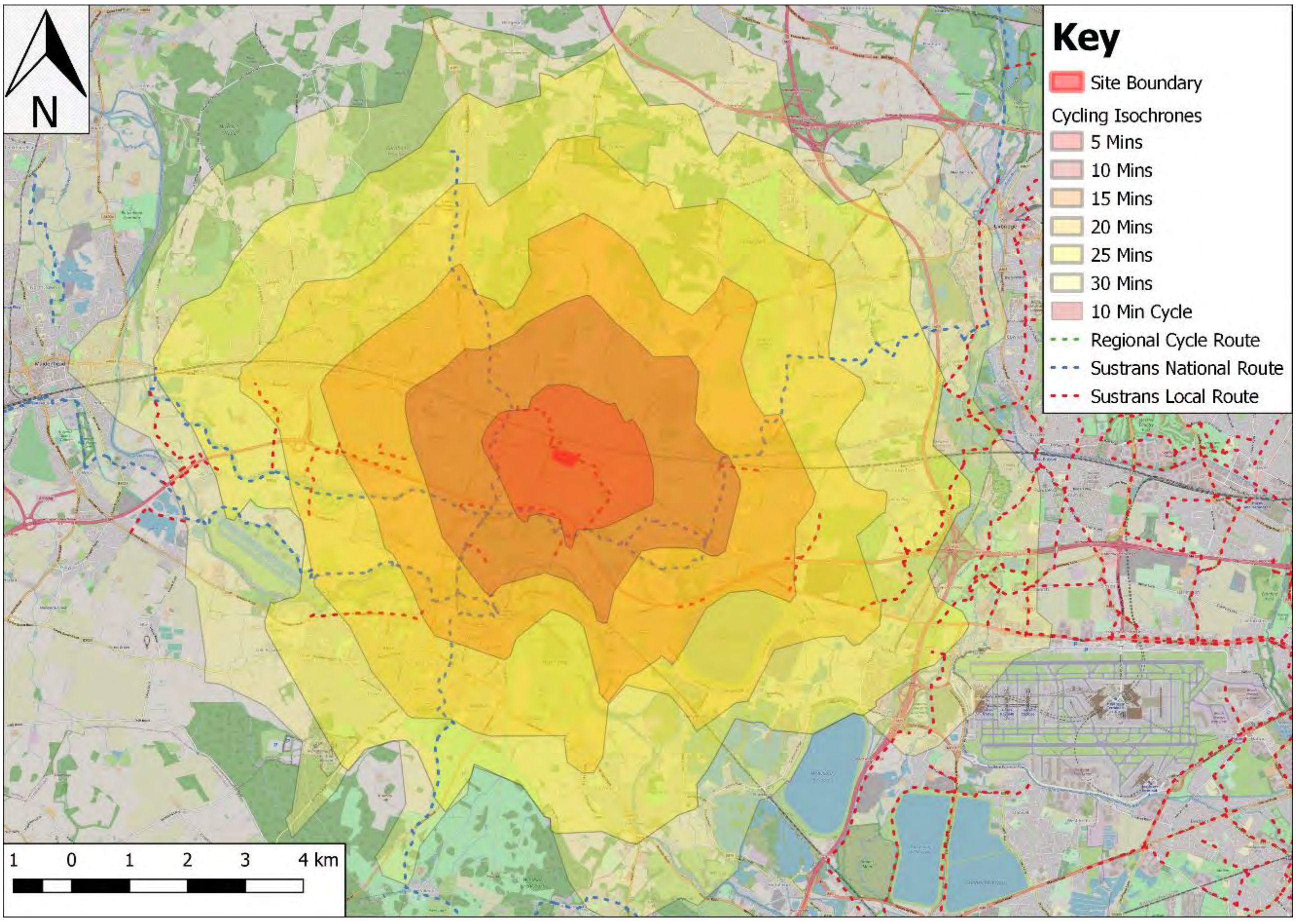
- Slough train station – 30 bikes
- The Curve – 12 bikes
- Windsor Road – 8 bikes

Figure 3-3 - Slough Town Centre Cycle Hire Locations



3.3.7. **Figure 3-4** illustrates cycling journey times from the Site, demonstrating accessibility for up to 30-minute journey times from the Site, in 5-minute intervals. Figure 3-4 shows the Site can be accessed from a far as Woodburn Green to the north, West Drayton to the east, Cranbourne and Maidens Green to the south and Maidenhead to the west.

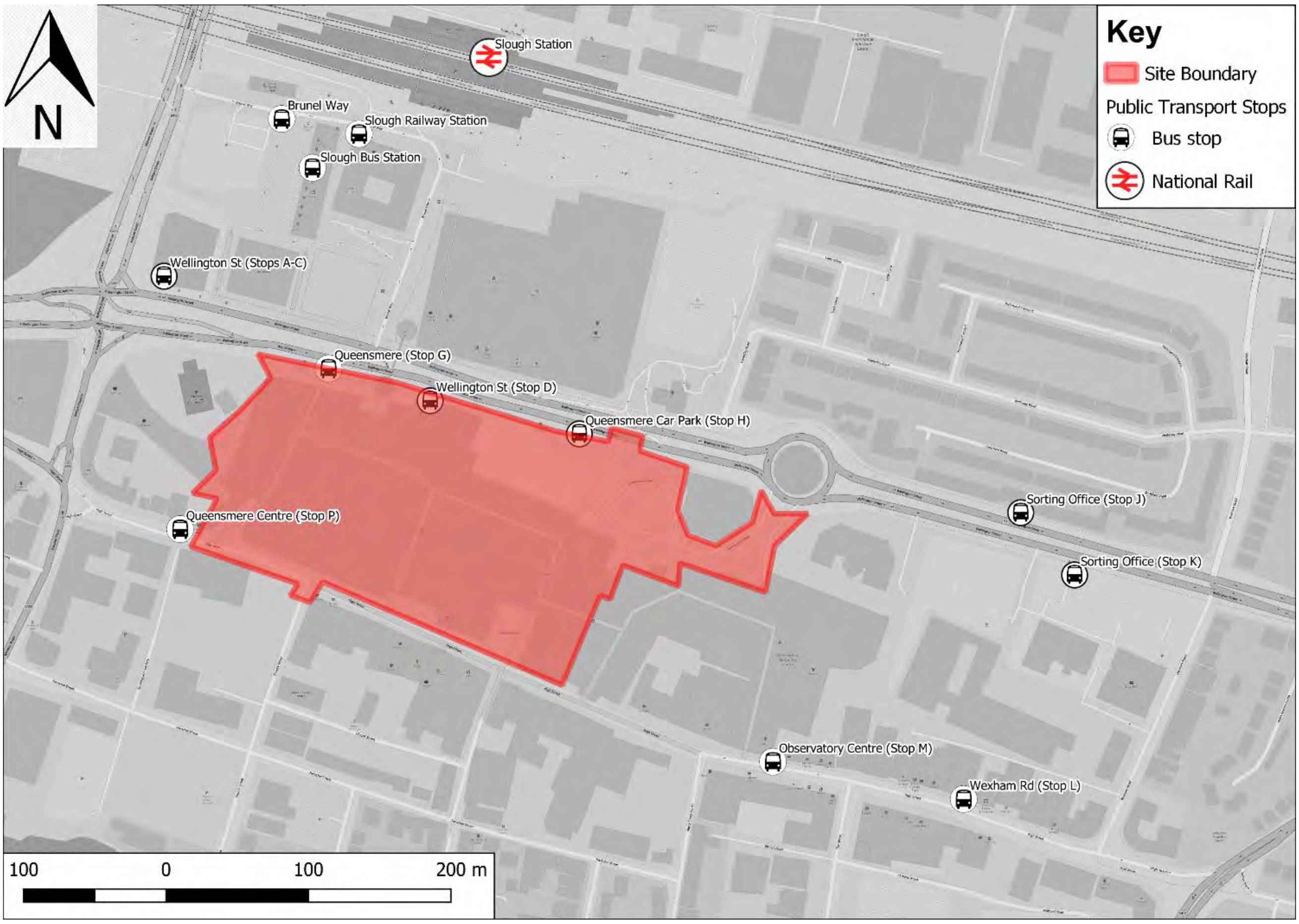
Figure 3-4 - Cycle Isochrone



3.4 PUBLIC TRANSPORT ACCESSIBILITY

3.4.1. This section summarises public transport routes and frequency of services. **Figure 3-5** shows the public transport services operating in the vicinity of the Site.

Figure 3-5 - Local Public Transport Facilities



BUS

3.4.2. The Site is approximately 300m south of Slough bus station, which is located on Brunel Way. Slough bus station provides access to the vast majority of bus routes operating across Slough.

3.4.3. **Figure 3-6** shows the Slough bus route map for the area.

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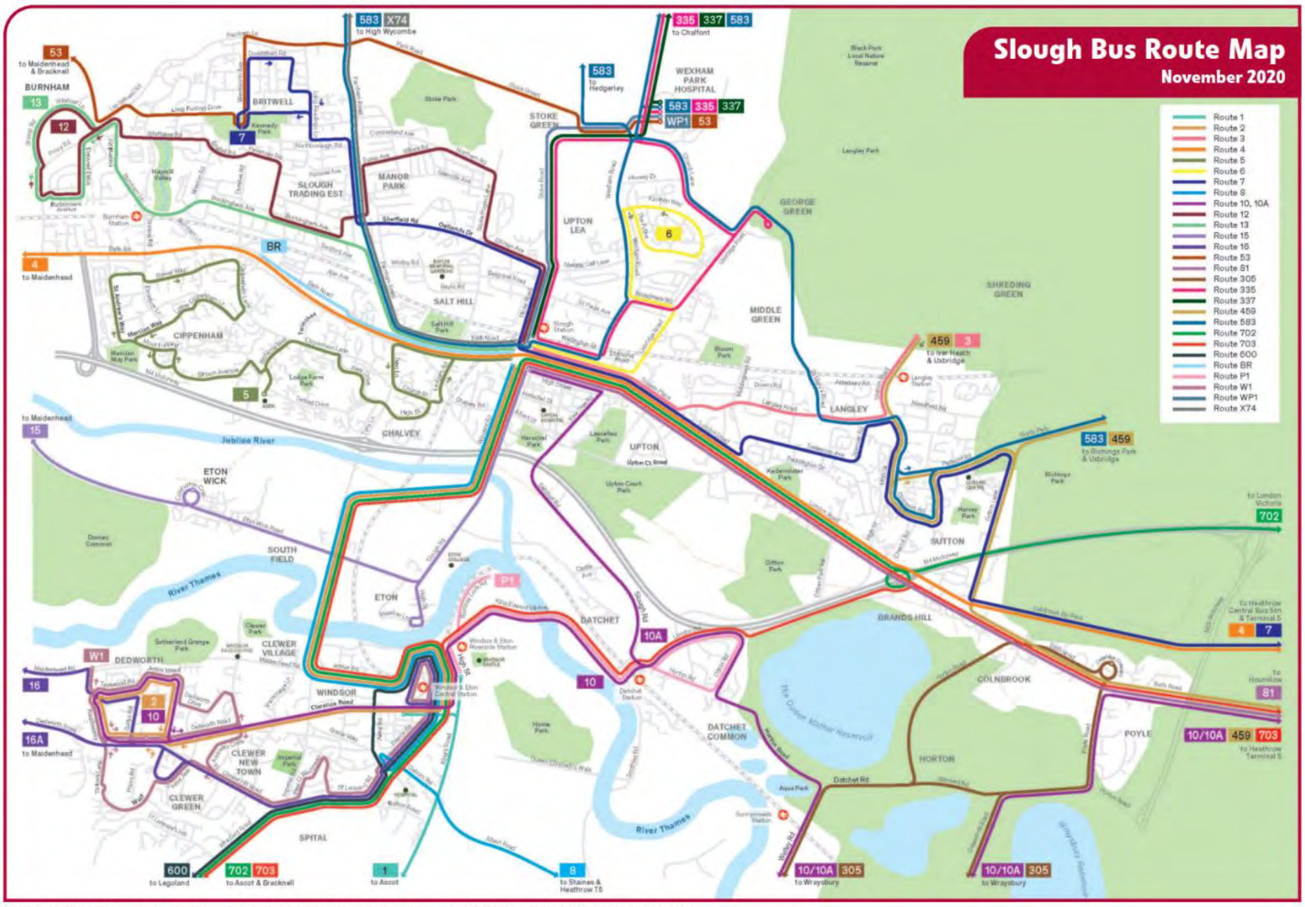
Figure 3-6 - Slough Bus Route Map



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3.4.4. A summary of the bus services available within walking distance from the site is provided in **Table 3-1.**

Table 3-1 – Bus Services Accessible from the Site

Stop	Line	Direction	AM pea hour Freq.	PM peak hour Freq.
Slough Bus Station	2	Slough Bus Station - Dedworth	1	1
	3	Slough Bus Station - Uxbridge	2	2
	4	Maidenhead - Heathrow	2	2
	5	Slough Bus Station - Cippenham	2	2
	7	Britwell - Heathrow	3	4
	337	Slough Bus Station - Old Amersham	1	0
	8/8A	Slough Bus Station - Heathrow	2	2
	15	Slough Bus Station - Heathrow	1	1
	81	Slough Bus Station – Hounslow Bus Station	6	5
	X74	Slough Bus Station – High Wycombe Bus Station	2	2

	702/703	Bracknell – Legoland	2	2
Slough Brunel Way	12	Slough - Burnham	0	2
	13	Slough - Burnham	2	0
	WP1	Slough - Wexham Park Hospital	4	4
Slough Wellington Street	3	Slough Bus Station - Uxbridge	2	2
	4	Maidenhead - Heathrow	2	2
	6	Slough Bus Station – The Frith	1	1
	7	Britwell - Heathrow	3	4
	12	Slough - Burnham	0	2
	15	Slough Bus Station - Heathrow	1	1
	81	Slough Bus Station – Hounslow Bus Station	6	5
	83	Hedgerley - Langley	1	0
	702/703	Bracknell – Legoland	2	2
Total			**48**	**48**

SLOUGH MASS RAPID TRANSIT

3.4.5. The A4 forms the spine of a 12km strategic public transport corridor that links Maidenhead, Slough, and Heathrow. The Slough Mass Rapid Transit (SMaRT) scheme aims to improve this corridor by undertaking road widening in order to facilitate dedicated bus lanes along the A4.

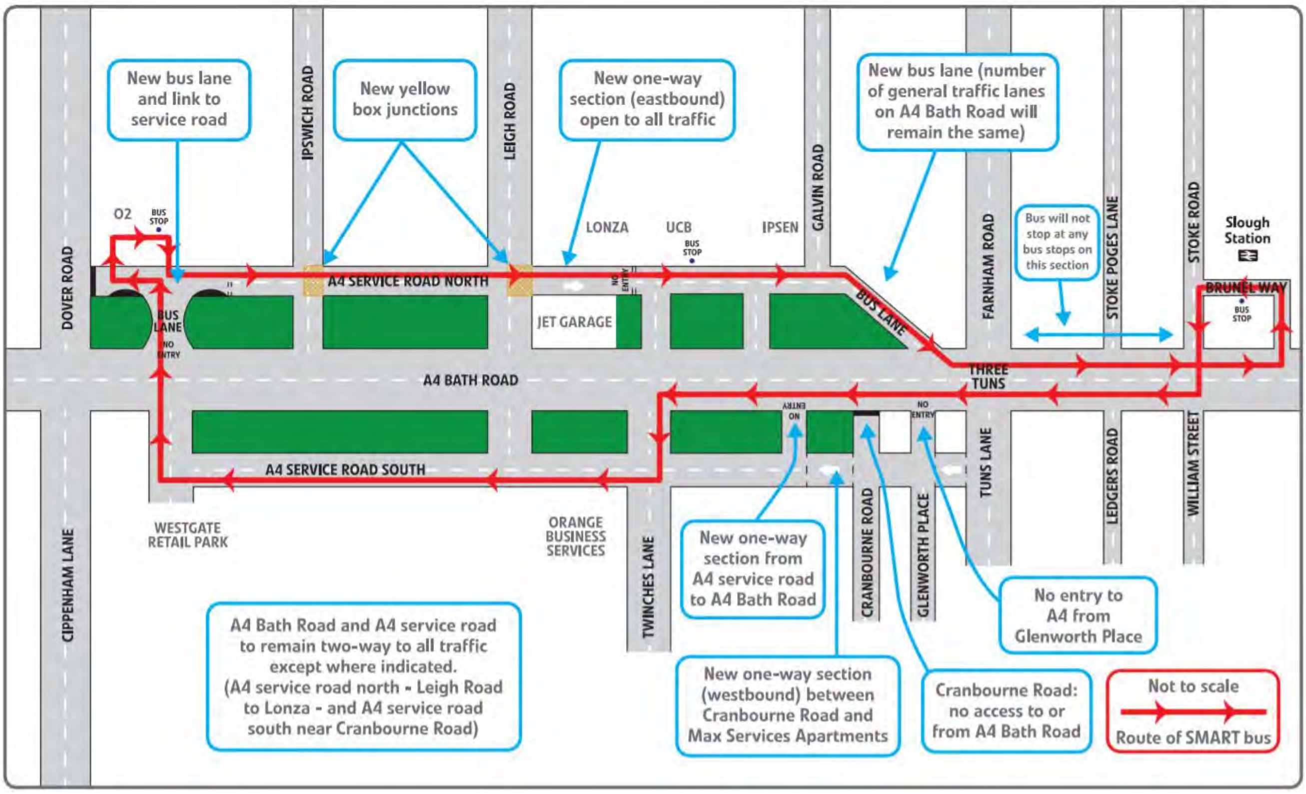
3.4.6. By widening the A4 at key points, and by utilising service roads as bus lanes, SMaRT aims to provide a bus service that is quicker, more frequent, and more reliable. In addition, by reducing congestion along this strategic route, SMaRT also aims to improve the journeys of the 20,000 vehicles that use the A4 Bath Road every day.

3.4.7. SBC completed Phase 1 of the Slough Mass Rapid Transit scheme from Dover Road to High Street Langley in 2017. The scheme has since delivered a more frequent, quicker and more reliable bus service for bus commuters travelling along the A4 Bath Road.

3.4.8. Phase 2 is still being planned, however would extend from High Street Langley to the eastern borough boundary and Heathrow. The Phase 2 scheme would encourage use of sustainable transport for commuters travelling between Slough Trading Estate, Slough train station, Langley and Heathrow airport. Phase 2 aims to improve journey times, reduce congestion, enhance transport interchanges and support regeneration in Slough.

3.4.9. Phase 1 of the SMaRT is shown in **Figure 3-7**.

Figure 3-7 – SMaRT Phase 1



NATIONAL RAIL

3.4.10. Great Western Railway and TfL Rail operate services through Slough rail station, with connections running frequently to London (London Paddington) and other destinations including Windsor & Eton Central, Reading and Didcot Parkway. A summary of the rail services from Slough rail station site are provided in **Table 3-2**.

Table 3-2 – Rail Services Accessible from the Site

Destination	AM peak hour Freq.	PM peak hour Freq.
London Paddington	6	7
Reading	3	2
Windsor & Eton Central	3	2
Oxford	1	0
Didcot Parkway	2	0
Total	**15**	**11**

ELIZABETH LINE

3.4.11. Slough rail station will provide access to Elizabeth Line services which will extend across London from east to west, extending to Reading in the west, and Shenfield and Abbey Wood in the east. The Elizabeth Line will also provide direct services to Heathrow Airport. The section of the Elizabeth Line between Reading and London Paddington is currently operational, with the remainder of the line across London up to Shenfield and Abbey Wood expected to be complete by 2022.

3.4.12. The Elizabeth Line will provide an additional train every five minutes during peak times. Journey times along the new line will be as follows:

- Slough to Heathrow Central: 15 mins
- Slough to Reading: 22 mins
- Slough to Tottenham Court Road: 32 mins
- Slough to Canary Wharf: 46 mins
- Slough to Abbey Wood: 58 mins
- Slough to Shenfield: 81 mins

Figure 3-8 – Elizabeth Line map

3.5 SUMMARY

3.5.1. The Site is located within walking distances of a number of local amenities and has easy access to cycle routes which facilitate cycle movement in the local and wider area. The Site also benefits from numerous bus services (approximately 48 during peak times) which provide connectivity across and outside Slough. The train services provided from Slough Rail Station enable access to London and represent an excellent choice for commuting to work. Public transport services are expected to be further enhanced with the introduction of SMaRT and the Elizabeth Line.

3.5.2. Based on the above, the Site has excellent accessibility in terms of active and public transport modes of transport. This represent an opportunity for the users of the development to select these modes ahead of the use of private vehicles.

4 BASELINE TRAVEL INFORMATION

4.1.1. As the proposed development has not been built yet, it is not possible to carry out a travel survey. Hence, the baseline travel patterns for the residential element of the development have been estimated using the methodology set out below. At an appropriate time following occupation of each development phase, approved under a reserved matters consent, baseline travel surveys will be undertaken to establish baseline travel patterns.

4.1.2. The trip generation forecast for the proposed residential and car home units has been derived using TRICS sites that have been deemed comparable to the proposed development. The 2011 Census mode share has been used to determine the modal split. This has been adjusted to appropriately represent the level of parking associated with the proposals. The methodology of the trip generation assessment if fully described in the Transport Assessment. The estimated multi-modal peak hour travel demand associated with the 1,600 residential units (0 - 20% C2 Class) is outlined in **Table 4-1**.

Table 4-1 – Proposed Residential Trips by Mode of Travel

Proposed Residential (1600 units, 20% C2 Class)	AM Peak hour			PM Peak hour		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Train	41	147	189	117	56	173
Bus	35	133	167	104	49	152
Taxi	1	6	7	4	2	6
Motorcycle	1	0	1	0	0	1
Car Driver	43	218	261	162	68	230
Car/ Van Passenger	6	38	43	27	10	37
Bicycle	4	18	22	14	6	19
On Foot	19	90	108	67	29	96
Total	148	651	799	495	220	716

4.1.3. It should be noted that the above multimodal trip generations are predicted and they will be recalculated following the baseline travel surveys.

5 OBJECTIVES

5.1.1. This section outlines the overarching aims and objectives of the Framework Residential Travel Plan.

5.1.2. The key aim of this document is to encourage future residents to travel to and from the site using sustainable modes. The main objectives of the Travel Plan are to:

- To raise residents' awareness of sustainable modes of travel available at the development;
- To raise residents' awareness of the health and fitness benefits of walking and cycling for short journeys;
- To reduce the number of trips by private vehicle; and
- To facilitate and encourage travel by sustainable modes.

6 TARGETS

6.1.1. Targets are tailored to deliver the objectives of the Travel Plan and must be Specific; Measurable; Achievable; Realistic; and Timed (SMART).

6.1.2. Two types of targets could be considered. 'Action' type targets are physical actions that can be achieved by a set date, for example appointing a Travel Plan Co-ordinator (TPC), whilst 'Aim' type targets are those which relate to outcomes achieved through implementation of measures, for example, achieving a change in mode split compared to a baseline. It is proposed to set both 'Action' type target and 'Aim' type targets.

6.2 ACTION TARGETS

6.2.1. The following Action type targets are proposed:

- Appoint a Travel Plan Coordinator (TPC) prior to occupation;
- Cycle parking spaces will be provided prior to occupation;
- A travel pack will be produced, promoting the range of sustainable transport modes available, health benefits of active travel and the key services provided through the travel plan; and
- Travel surveys to be undertaken in years one, three and five after occupation.

6.3 AIM TARGET

6.3.1. The following Aim target is proposed:

- **Maximise number of residents walking and cycling**
  - Increase the walking and cycle mode share by 5% within a five-year period
- **Minimise number of residents driving**
  - Decrease the car mode share by 5% within a five-year period of full Site occupation

6.3.2. The above targets link directly to the objectives outlined in the previous Chapter. The targets are indicative and will be reviewed (and may be amended) after the initial baseline surveys have been undertaken at the Site.

6.3.3. Achieving the set targets will be measured through monitoring travel surveys, the results of which will be reported to the SBC.

7 MEASURES

7.1.1. This section outlines the measures which could be implemented on site to achieve the objectives and targets. These measures form the core of the Travel Plan. The measures have been grouped into three types as follows and considered in turn in the following sections:

- 'Hard' engineering measures incorporated into the design;
- 'Key services and facilities' provided; and
- 'Soft' marketing and management measures which ensure that sustainable travel behaviour is maximised.

HARD MEASURES

7.1.2. It should be recognised that many physical aspects of the design of the Site will influence travel patterns, and will have a significant impact upon reducing dependence upon car. The hard engineering measures that will be incorporated into the design of the development are set out below.

Permeability

7.1.3. Within the Site, the pedestrian environment will be of high quality with the provision of pedestrian routes which will facilitate north-south and east-west connectivity. The pedestrian accesses are provided in suitable locations, connecting to convenient routes towards local facilities and public transport service access points. The proximity of the Site to local shops, services and facilities will provide the opportunity for residents to meet most of their daily needs on foot or bicycle, therefore reducing dependence upon the private car.

Car Parking Provision

7.1.4. The proposed residential element will provide comprise a low car parking ratio of 0.3 spaces per unit which will promote low levels of car ownership from residents, therefore reducing dependence upon private vehicles.

Cycle Parking Provision

7.1.5. Safe and secure cycle parking will be within the Proposed Development to meet the demands of residents. Short-stay provision for visitors will also be provided. The usage of cycle parking will be monitored as part of the overall monitoring strategy on the Site.

KEY SERVICES & FACILITIES

Provision of Broadband Access in Homes

7.1.6. All residential units within the development would be broadband ready, providing residents with the opportunity to sign up to an internet service provider. This would provide opportunities for both home working and home shopping, reducing the need to travel.

SOFT MEASURES

7.1.7. The location of the Site, its design and proximity to public transport services within the surrounding area will create all of the conditions to make sustainable travel choices a natural option. However, it is also recognised that a communication strategy is key to the success of the Travel Plan. The communication strategy could include a Travel Information Pack which would aim to raise awareness of sustainable travel opportunities and initiatives available to occupants. The document could include:

- Promotion of local sustainable travel networks, including available bus services, rail services and links to relevant public transport travel information websites;
- Promotion of local key amenities which can facilitate many trips by foot;
- Promotion of the local cycle network and cycle parking to encourage residents to cycle;
- Promotion of health benefits associated with alternative modes of transport, such as walking and cycling;
- Provision of details of the established 'Act on CO2 carbon calculator' and provision of information to raise awareness of the environmental and cost saving benefits associated with sustainable travel and reducing car usage;
- Promotion of car share schemes and websites;
- The availability of broadband internet and the benefits of home working and home shopping;
- The availability of the car club spaces nearby and where to find information about using the service;

7.1.8. The Travel Pack would also invite those persons wishing to raise specific transport-related matters to discuss them with the TPC for consideration.

8 TRAVEL PLAN COORDINATOR AND MANAGEMENT SUPPORT

8.1.1. This chapter outlines the strategy of the Travel Plan in terms of management and marketing.

8.2 TRAVEL PLAN CO-ORDINATOR

8.2.1. A Travel Plan Co-ordinator (TPC) could be appointed and would be responsible for implementing, managing and promoting the Travel Plan to residents. The TPC is expected to be a member of the site management team. This company would be appointed prior to the occupation of the development and the role and duties of the TPC would be outlined within the contract for the site management.

8.2.2. The roles and responsibilities of the TPC could include the following:

- Giving a 'human face' to the Travel Plan, explaining its purpose and the opportunities on offer;
- Giving advice and information on transport-related subjects to residents and visitors;
- On-site co-ordination of data collection for the plan;
- Helping establish and promoting the individual measures in the plan; and
- Implementing any additional measures.

8.3 MARKETING

8.3.1. It is recognised that a marketing and communication strategy is key to the success of the Travel Plan. The marketing strategy would aim to raise awareness of the key services and facilities implemented as part of the Travel Plan and disseminate travel information and notification of facilities provided.

8.3.2. Residents and tenants will be made aware of the Travel Plan, including its purpose and objectives, along with specific measures. Marketing would be undertaken between the point of sale and first occupation of each dwelling. Sales staff would be fully briefed on the Travel Plan.

9 MONITORING AND REVIEW

9.1.1. A programme of monitoring and review could be implemented to generate information by which the success of the Travel Plan will be evaluated. This would establish whether the agreed targets are being met. Monitoring and review would be the responsibility of the TPC.

9.2 MONITORING

ACTION TARGET MONITORING AND REPORTING

9.2.1. To measure progress against the Action target, the following monitoring regime could be implemented:

- Annual reporting
  - The number of dwellings completed and first occupied in each year will be reported to the approving authority together with confirmation that each occupier has been provided with a copy of the Travel Pack.

AIM TARGET MONITORING AND REPORTING

9.2.2. To measure progress against the Aim target, the following monitoring regime could be implemented:

- Year 0 Survey
  - A TRICS SAM (Standard Assessment Methodology) compliant monitoring survey will be undertaken during the first reasonably practicable neutral month following 75% occupation and a monitoring report setting out the surveyed results will be submitted to SBC.
- Years 1, 3 and 5 Surveys
  - A TRICS SAM compliant monitoring survey will be undertaken during the same neutral month as the year 0 survey in years 1, 3 and 5 and a monitoring report setting out the surveyed results will be submitted to the approving authority.

9.2.3. The monitoring surveys would allow the approving authority to understand emerging travel behaviour at the development and to make an informed decision about what, if any, actions should be taken.

9.3 REVIEW

9.3.1. The TPC would report the results on monitoring to the approving authority within three months of monitoring being triggered. The approving authority and relevant stakeholders would then review the results and, if appropriate, revise targets accordingly. The results of the travel survey and revised targets would be included in subsequent revisions of this Travel Plan as required.

10 ACTION PLAN

10.1.1. This section includes a check list of the potential measures detailing who would be responsible for ensuring that the actions identified in previous sections are delivered. The measures have been linked to the overall objectives of the document.

Table 10-1 – Action Plan

Action	Target (values)	Target Date	Indicator / measured by	Responsibility
Appointment of TPC	N/A	Prior to occupation	Appointment of TPC	Developer
Agree Travel Plan Objectives, Targets and Measures with SBC	N/A	Prior to occupation	Agreement being reached with SBC	TPC
Provision of car parking and cycle parking	Parking provided in line with ratios agreed with SBC	Prior to occupation	Installation of parking	Developer
Availability of broadband access in homes	N/A	Prior to first occupation of each dwelling	Availability of broadband access in homes	Developer
Provision of the Travel Pack to each dwelling	One Travel Pack per dwelling	At first occupation of each dwelling	Dissemination of the Travel Pack to each dwelling	Developer
Undertake initial travel surveys	N/A	Within 3 months of 75% occupation	Receipt of survey results	TPC
Agree target values for mode split with SBC	Target subject to negotiations with SBC	1 month after initial travel survey	Receipted of written agreement of targets	STM / TPC
Undertake travel surveys and analysis years 1, 3 and 5 and discuss results with SBC	N/A	Every other anniversary of the initial travel surveys	Receipt of survey results	TPC

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Green Monarch B1 2016 Limited and Green Monarch B2 2016 Limited

QUEENSMERE SHOPPING CENTRE, SLOUGH CENTRAL

Framework Commercial Travel Plan

JUNE 2022

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TYPE OF DOCUMENT (VERSION) PUBLIC

PROJECT NO. 70060763

DATE: JUNE 2022

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Framework Commercial Travel Plan

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SBC PLANNING
RECEIVED : 24.06.2022

QUALITY CONTROL

Issue/revision	First issue	Revision 1	Revision 2	Revision 3
Remarks				
Date				
Prepared by	LB	LB		
Signature				
Checked by	AT	AT		
Signature				
Authorised by	DMcD	AT		
Signature				
Project number	70060763	70060763		
File reference	\\uk.wspgroup.com\central data\Projects\700607xx\70060763 - Slough Town Centre\03 WIP\TP Transport Planning\05 Reports			

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1 INTRODUCTION

1.1 PREFACE

1.1.1. This Framework Commercial Travel Plan (hereafter referred to as 'FCTP') has been prepared by WSP on behalf of Green Monarch B1 2016 Limited and Green Monarch B2 2016 Limited (the Applicant) in support of an Outline Planning Application for the redevelopment of the Queensmere Shopping Centre, High Street, Slough, SL1 1LN (The 'QM OPA').

1.1.2. Permission is sought for the proposed development through the submission of an Outline Planning Application with the following description of development:

> *Outline application (with all matters reserved) for the demolition of buildings and the phased redevelopment of the Site to provide a mixed-use scheme comprising residential floorspace (C3 use and provision for C2 use); flexible town centre uses floor space (Use Class E and Use Class F), provision for office floorspace (Use Class E (g) (i)), supporting Sui Generis town centre uses (including a range of the following uses: pubs, wine bars, hot food takeaway), Sui Generis leisure uses (provision for a cinema or live music venue); provision for the creation of basements, car and cycle parking (including provision for a Multi-Storey Car Park); site wide landscaping, new public realm including provision of a new town square and public spaces and associated servicing, associated infrastructure, energy generation requirements and highways works*

1.1.3. The 'Slough Central' area reflects the broader regeneration area as proposed in the SBC adopted Local Plan documents and the emerging LP in the Strategic Regeneration Framework documents. These adopted and emerging documents allow for a phased redevelopment of both shopping centres to occur.

1.1.4. The scheme presented in this FCTP is illustrative and reflects one example of how the QM site could be redeveloped within the parameters of development being applied by the Parameter Plans as part of the QM OPA. The Illustrative scheme does not reflect the only solution. As such, this Illustrative scheme is not being fixed and is not submitted for approval. The purpose of this document, which is submitted as a supporting document as part of the QM OPA, is to provide an overarching indication of how sustainable travel to and from the site can be incentivised in the future, when the QM OPA is fully operational. It is expected that subsequent plot-specific reserved matters planning applications will be required to submit detailed Travel Plans for each proposed land use.

1.2 REPORT PURPOSE

1.2.1. The key aim of this Framework Commercial Travel Plan is to set out a series of potential measures to encourage future members of staff to travel to and from the Site using sustainable modes. This document will provide a framework which should be followed for the preparation of future Travel Plans related to subsequent reserved matters at the Site.

1.3 REPORT STRUCTURE

1.3.1. This Framework Commercial Travel Plan has been prepared in accordance with Slough Borough Council (SBC)'s Travel Plan Guidance. The report is structured as follows:

- Chapter 1 - Foreword and Introduction
- Chapter 2 - Site Characteristics
- Chapter 3 - Site Accessibility
- Chapter 4 - Baseline travel information
- Chapter 5 – Objectives
- Chapter 6 - Targets
- Chapter 7 - Measures
- Chapter 8 - Travel Plan Co-ordinator and Management Support
- Chapter 9 - Monitoring and Reporting
- Chapter 10 - Action Plan

2 SITE CHARACTERISTICS

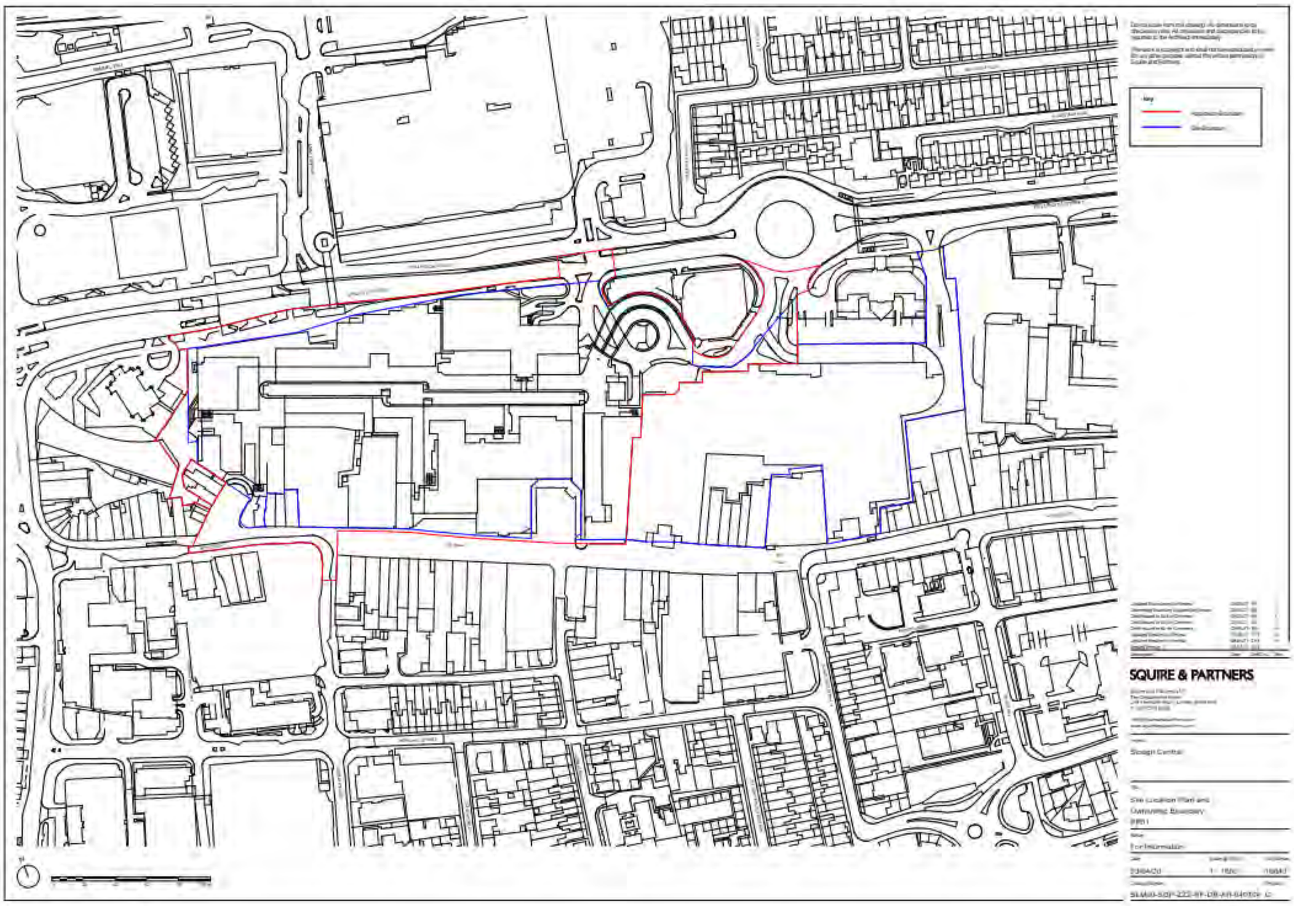
2.1 INTRODUCTION

2.1.1. This Chapter outlines the location of the existing Site and its uses as well as the uses proposed as part of the outline planning application.

2.2 EXISING SITE

2.2.1. The Site sits at the heart of Slough Town Centre and has been identified for significant regeneration as set out within the Slough Core Strategy Development Plan Document (DPD) 2006-2026 and supported by other local documents including the Site Allocations DPD. **Figure 2-1** shows the site location.

Figure 2-1 - Site Location



2.2.2. The Site currently accommodates the Queensmere shopping centre which comprises retail outlets, restaurants, cinema, office use, and residential units. The Observatory shopping centre bounds the Site to the east and accommodates similar uses. The Site is bound by the A4 Wellington Street to the north; by High Street to the south; and by the Curve Slough cultural centre and St Ethelbert's Church to the west. The Site is located 250m to the south of Slough rail station.

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2.2.3. The Site has two existing vehicle accesses via the A4 Wellington Street: the roundabout known locally as the HTC roundabout and a left-in, left out access to the Queensmere shopping centre car park as shown in **Figure 2-1**.

2.3 DEVELOPMENT PROPOSALS

2.3.1. The Queensmere outline planning application seeks permission for demolition and mixed-use redevelopment of the Site. As stated in Chapter 1 of this Report, the QM OPA is seeking consent for a series of Parameter Plans, within which there is a degree of flexibility around certain land uses, and a site wide schedule of floorspace for different land uses. The detailed design will be submitted in phases as a series of reserved matters pursuant to the Outline Planning Permission.

2.3.2. The proposals comprise the following maximum parameters that will be submitted as part of the outline planning application:

Table 2-1 – Proposed Development Quantum

Land Use	GEA (sqm) / Number of Units
Residential (C3)	Up to 1,600 units with flexibility for up to 20% as C2 Use
Office (E)	0 -40,000sqm
Use Class E (excluding office uses), F (excluding primary and secondary schools, indoor or outdoor swimming pool or skating rink), Sui Generis (Pubs, Bars, Hot Food Take Away) and Sui Generis Leisure (Live Music/Cinema)	12,000[1]sqm of which 1,500sqm is Sui Generis Leisure (Live Music/Cinema) and 2,250sm is Sui Generis (Pubs, Bars, Hot Food Take Away)

2.3.3. However, as discussed, because the planning application will be parameter-based there is a degree of flexibility of the proposed land uses on some parts of the Site, predominantly either a Maximum Residential scenario or a Maximum Office scenario.

2.3.4. For the purpose of trip quantification, the maximum commercial scenario is presented within this FCTP.

[1] Whilst the maximum floorspace cap for Class E & Class F uses is stated as 12,000 sqm (GEA) and the maximum floorspace cap for Sui Generis uses is stated as 3,750 sqm (GEA), we propose to limit the combined maximum floorspace cap across both Class E & F and Sui Generis uses to 12,000 sqm (GEA).

3 SITE ACCESSIBILITY

3.1 INTRODUCTION

3.1.1. This section presents a review of the existing transport network, including public transport accessibility and active travel routes.

3.2 PEDESTRIAN ACCESSIBILITY

3.2.1. The National Travel Survey 2015 (released in September 2016) notes that walking is the most frequent mode of travel used for short distance trips within 1 mile (1.6km). Infrastructure that supports efficient travel on foot therefore promotes walking as a viable alternative to short car trips. The pedestrian infrastructure within the vicinity of the Site and the local area is well established and provides continuous footways, footpaths, and pedestrian crossing points. These generally provide opportunities for pedestrians to access local amenities.

3.2.2. The Site is bound by the A4 Wellington Street to the north which provides good footways on the northern and southern sides of the carriageway. The footways on the A4 Wellington Street are linked by the provision of signalised crossing facilities provided at regular intervals. The pedestrian crossings provide connection from the Site to the north towards local amenities such as the Tesco supermarket or Slough rail station (via Brunel Way). Most crossing points are toucan which enable both pedestrians and cyclists to cross the road and are located at the junctions with Queensmere Road, Brunel Way and the B16 William Street.

3.2.3. The footways along the A4 Wellington Street also provide east-west connections. To the east, the footways lead to a Sainsbury's which is located within a 600m walking distance (an 8-minute walk based on a walking speed of 80m/min).

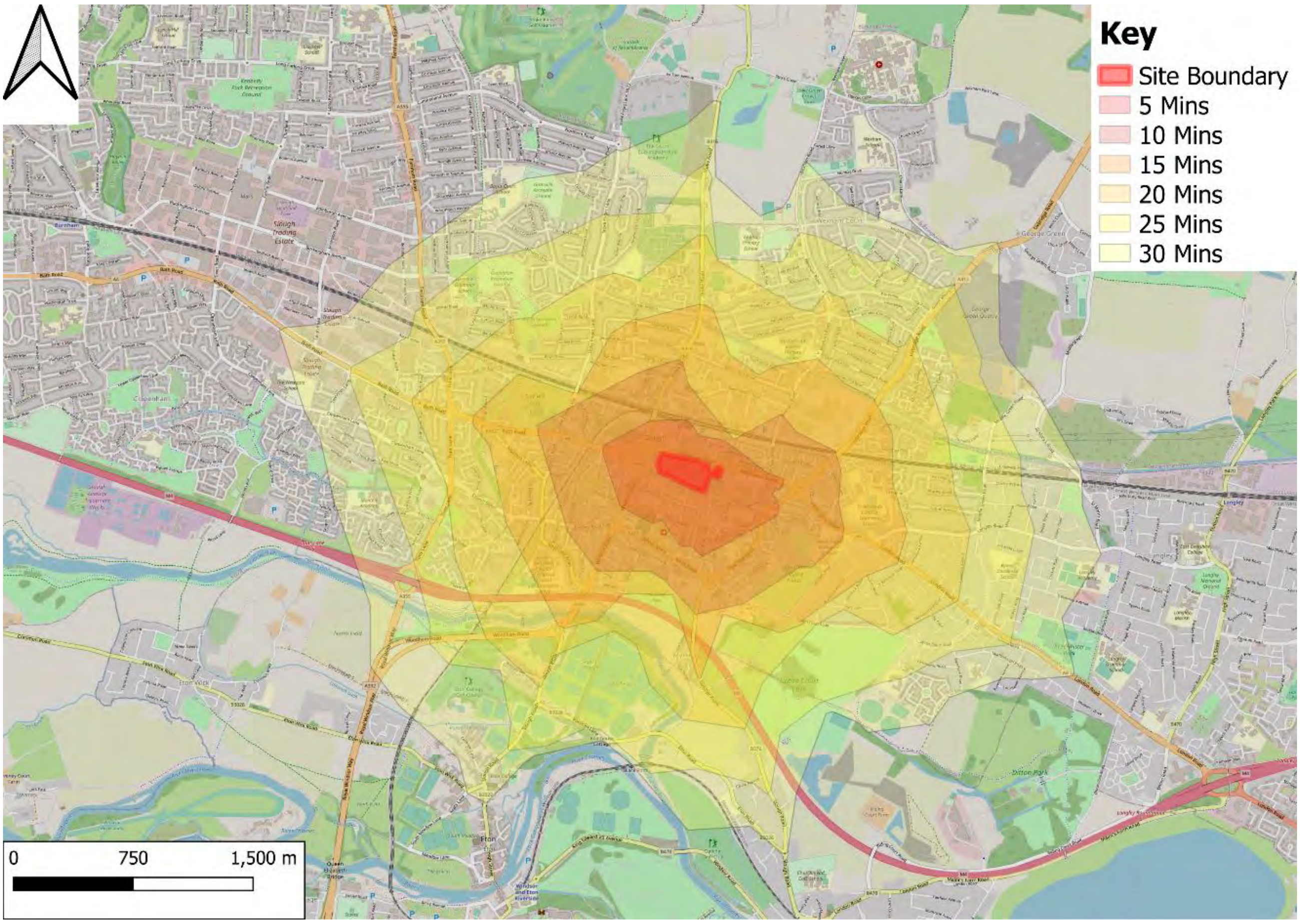
3.2.4. Brunel Way extends northbound from the junction with the A4 Wellington Street, providing a route to Slough rail station. Brunel Way has footways on both sides of the road, with a pedestrian crossing on Brunel Way at the junction with the A4 Wellington Street.

3.2.5. High Street bounds the Site to the south. It is pedestrianised between the junctions with Church Street and Alpha Street North. The west section of High Street, between Windsor Road and Church Street, has traffic restriction, with access only permitted for buses, taxis, motorcycles, and cycles. The High Street is highly permeable and provides east-west connection through the town centre and access to retail facilities, restaurants, cafes and other facilities. A number of local roads branch out southbound from the High Street and facilitate access to more local amenities to the south, including Upton Hospital.

3.2.6. The aforementioned roads provide lighting columns at regular intervals which ensure well-lit conditions at night for pedestrians.

3.2.7. **Figure 3-1** shows walking isochrones at 5-minute intervals, up to 30 minutes, from the Site.

Figure 3-1 - Pedestrian Isochrone Map



3.3 CYCLE ACCESSIBILITY

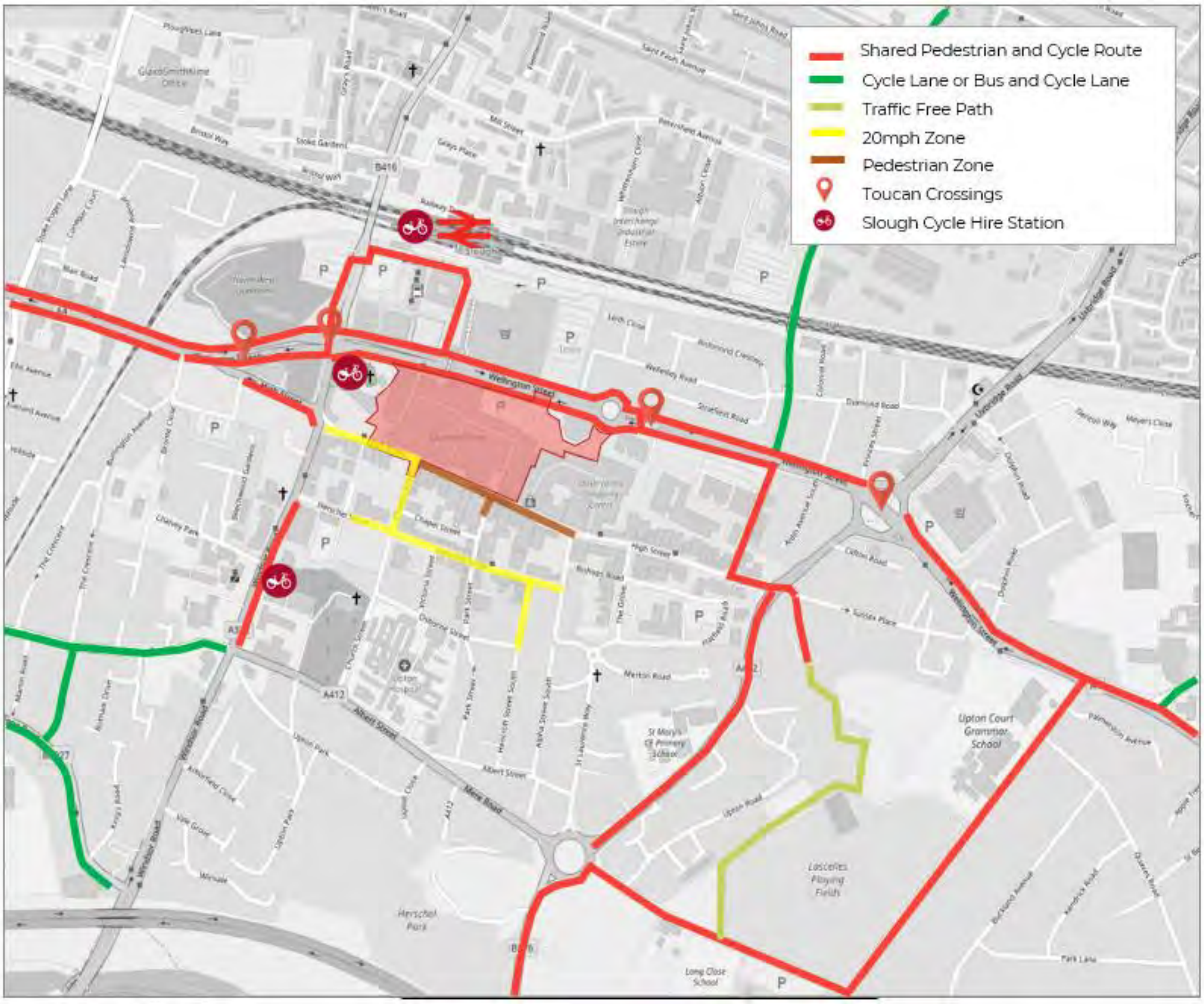
3.3.1. It is typically considered that cycling also has the potential to substitute for short car trips, particularly those journeys less than five kilometres in length. However, many people will cycle considerable distances depending on the weather, time of day, level of fitness, convenience, and real or perceived safety.

3.3.2. As illustrated in **Figure 3-2**, Slough town centre benefits from a good level of cycle connectivity and has a mix of shared pedestrian and cycle routes, dedicated cycle lanes and shared bus and cycle lanes.

3.3.3. The A4 Wellington Street, the north boundary of the Site currently provides an east-west connection via shared pedestrian and cycle routes; and toucan crossings. The A4 Wellington Street also provides connections to shared pedestrian and cycle routes on Brunel Way, offering connection to Slough rail station. The station provides cycle parking for up to 120 bicycles and has docking stations for Slough's Cycle Hire Scheme which has a capacity of 30 bicycles.

3.3.4. Wexham Road to the east of the Site provides a north-south connection for cyclists via a mix of cycle lanes to the north and shared pedestrian and cycle links to the south. Wexham Road forms part of the national cycle network, connecting Lascelles Road to the south, and onto National Cycle Route 61.

Figure 3-2 - Slough Town Centre Local Cycle Facilities

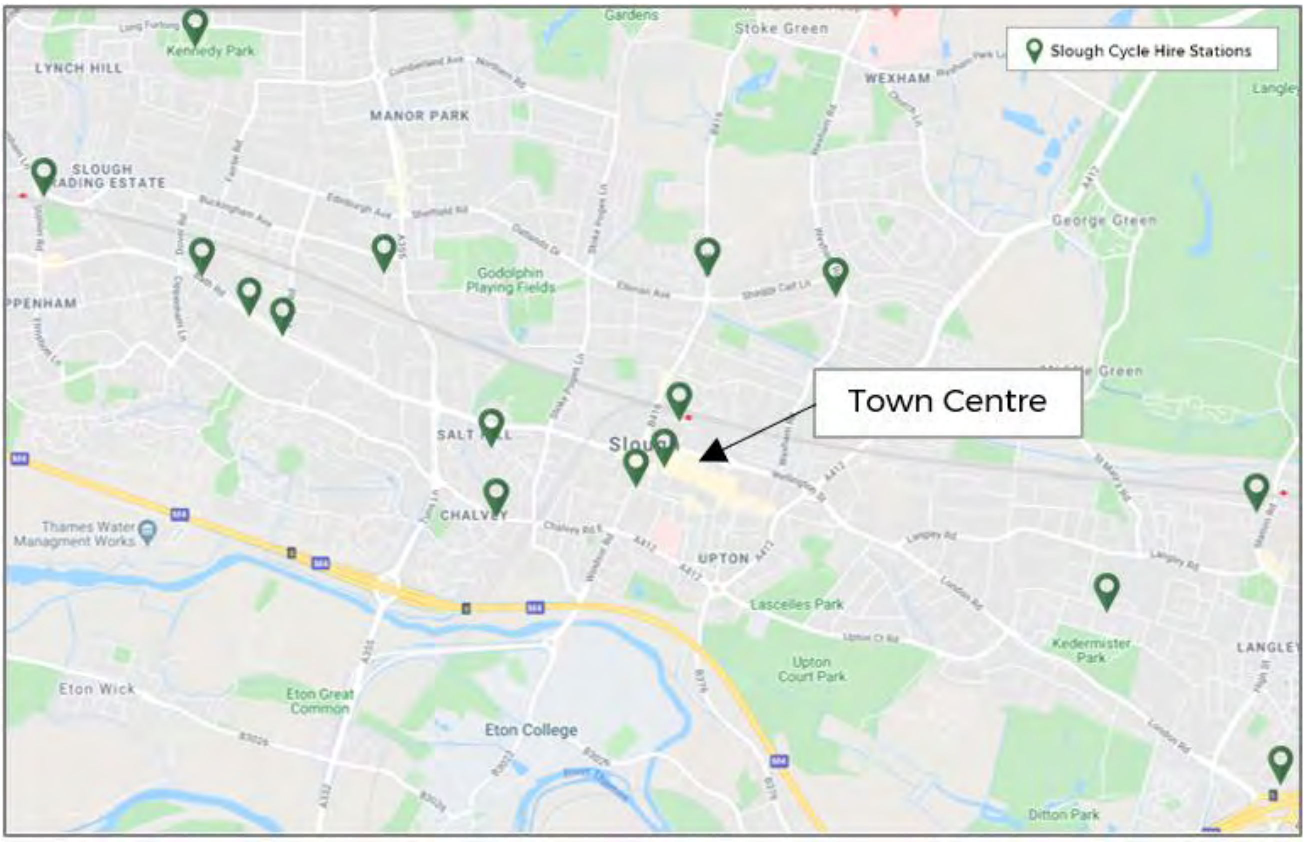


3.3.5. As mentioned above, SBC offer a cycle hire scheme specific to the borough with a total of 17 cycle-hire locations accessible on a pay as you go, weekly, monthly or annual basis. Users can register, check out a bike and return it to any dock within Slough. The facility provides an effective means of cycle connection from Slough town centre to the Trading Estate to the west and as well as some of the wider locations outside of the town centre.

3.3.6. The nearest cycle hire stations are shown on **Figure 3-3** and include:

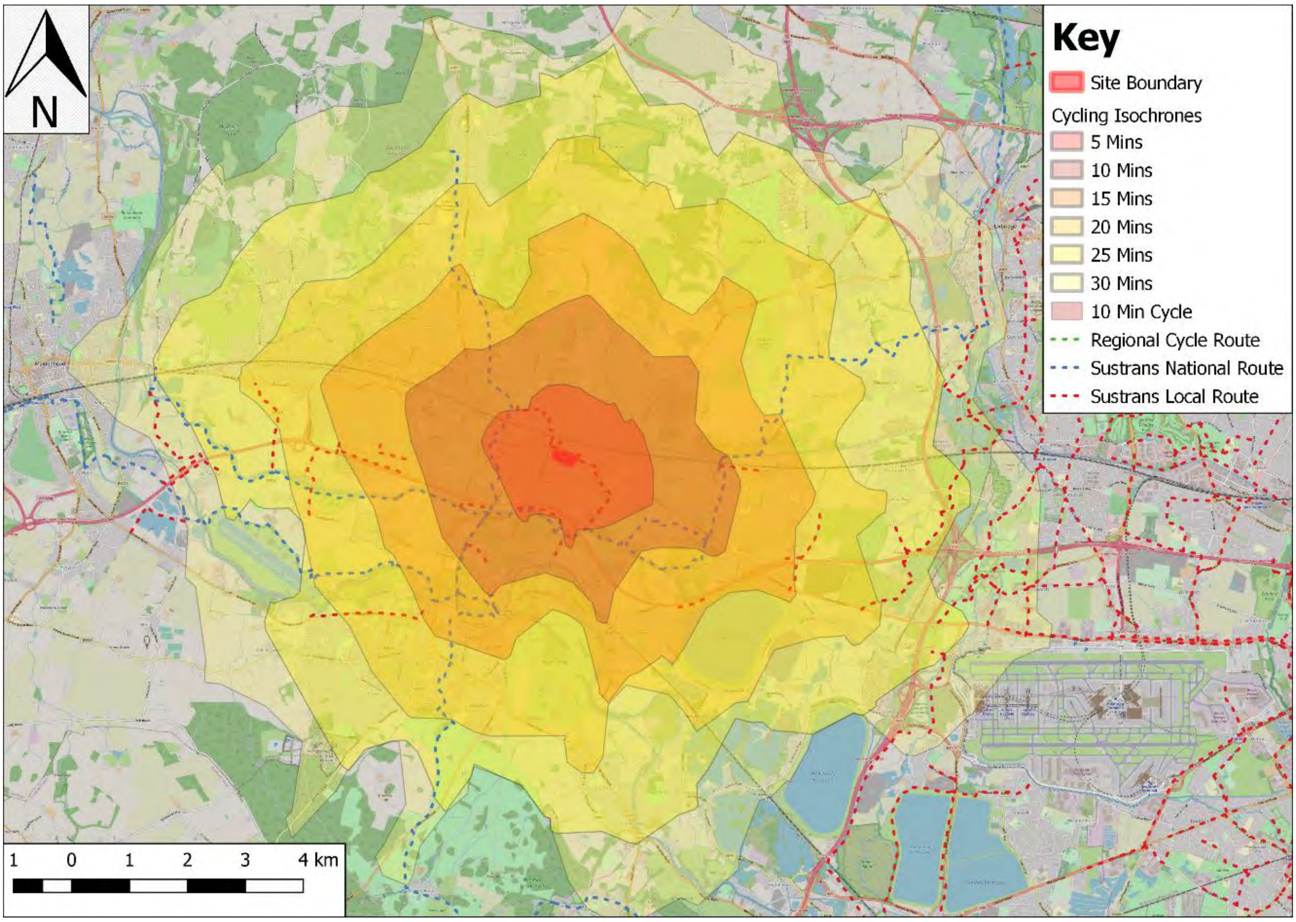
- Slough train station – 30 bikes
- The Curve – 12 bikes
- Windsor Road – 8 bikes

Figure 3-3 - Slough Town Centre Cycle Hire Locations



3.3.7. **Figure 3-4** illustrates cycling journey times from the Site, demonstrating accessibility for up to 30-minute journey times from the Site, in 5-minute intervals. Figure 3-4 shows the Site can be accessed from a far as Woodburn Green to the north, West Drayton to the east, Cranbourne and Maidens Green to the south and Maidenhead to the west.

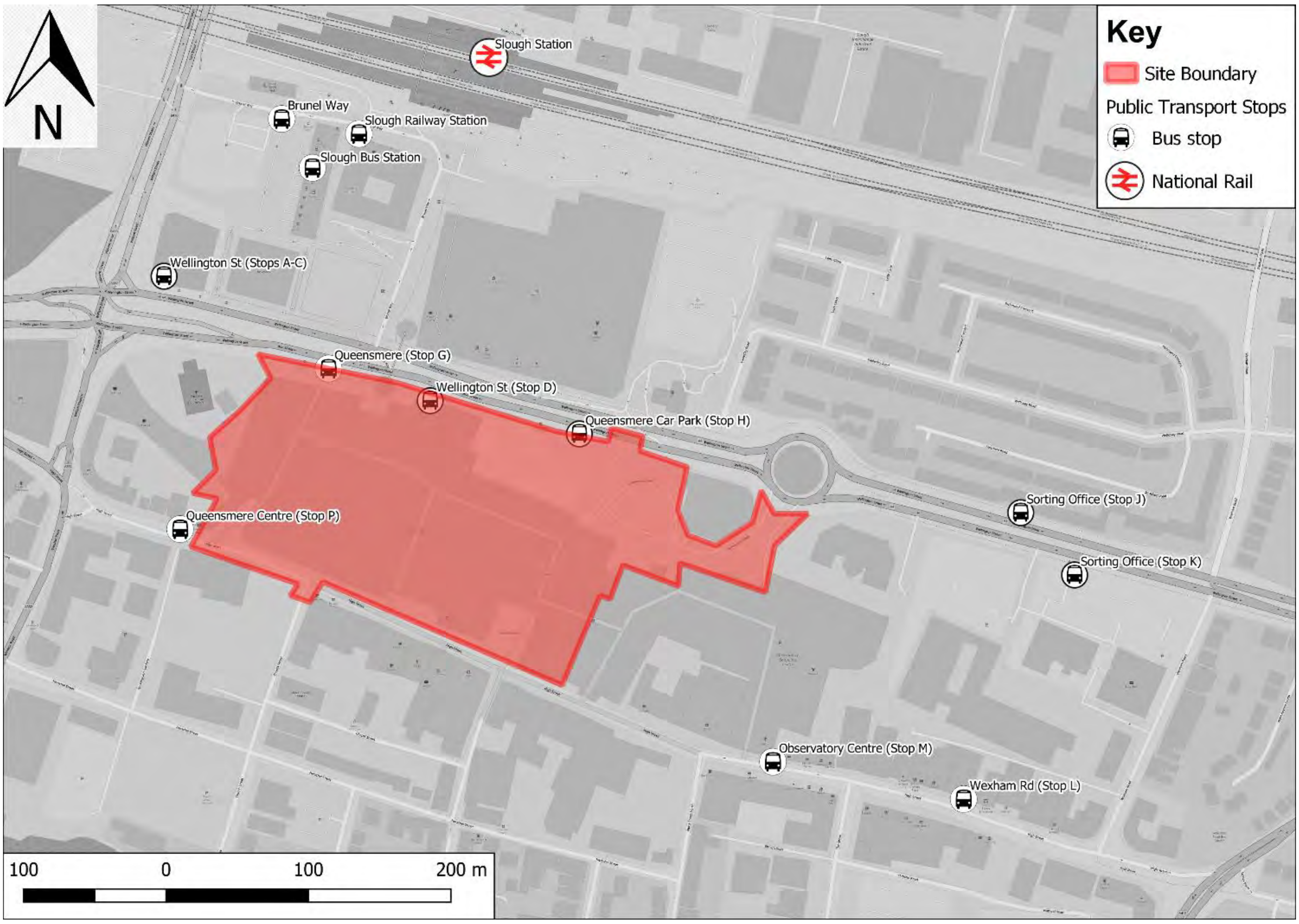
Figure 3-4 - Cycle Isochrone



3.4 PUBLIC TRANSPORT ACCESSIBILITY

3.4.1. This section summarises public transport routes and frequency of services. **Figure 3-5** shows the public transport services operating in the vicinity of the Site.

Figure 3-5 - Local Public Transport Facilities



BUS

3.4.2. The Site is approximately 300m south of Slough bus station, which is located on Brunel Way. Slough bus station provides access to the vast majority of bus routes operating across Slough.

3.4.3. **Figure 3-6** shows the Slough bus route map for the area.

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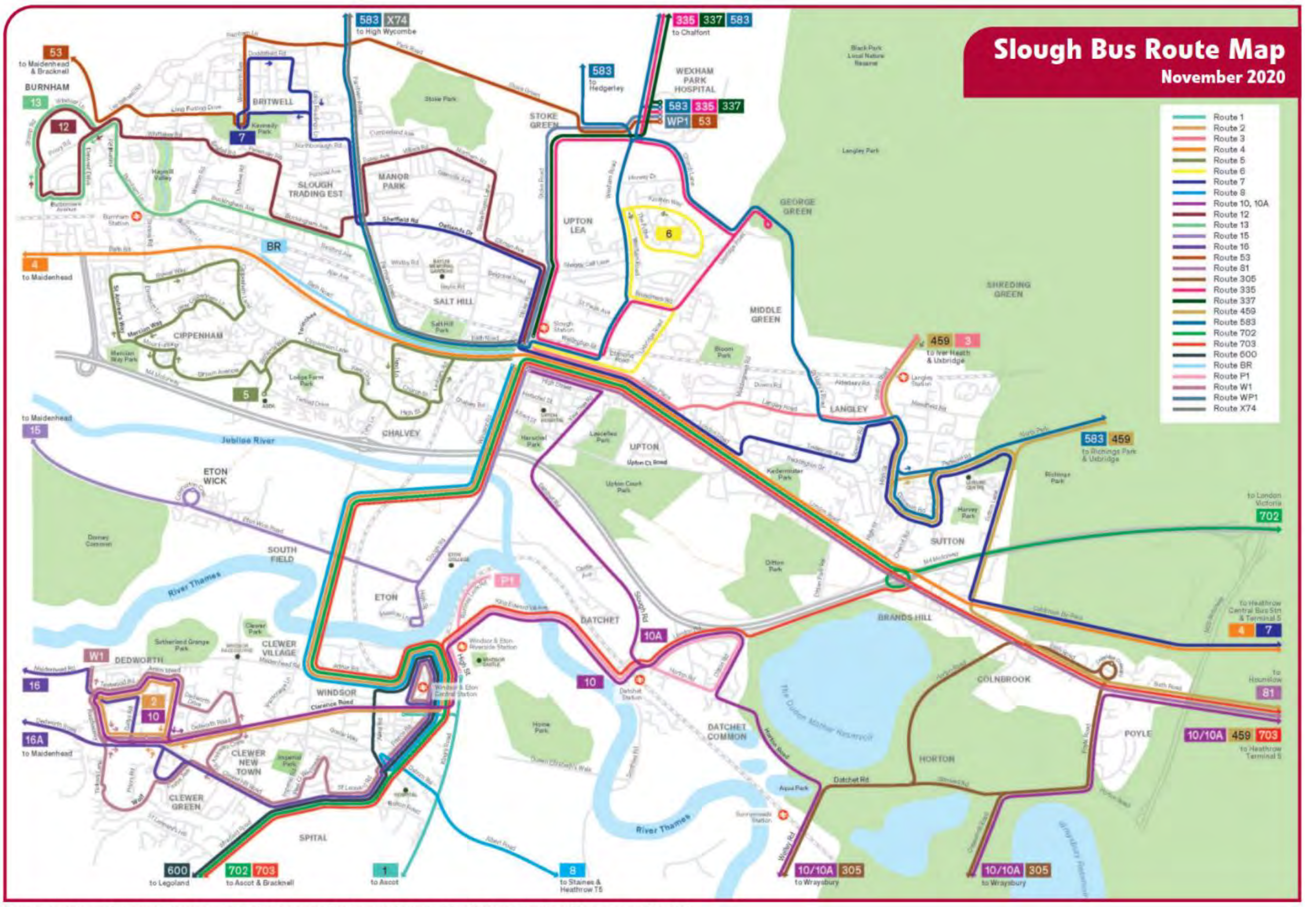
Figure 3-6 - Slough Bus Route Map



Based on the Ordnance Survey map with the permission of the Controller of her Majesty's Stationery Office (C) Crown copyright 2008. Licence no. 100019446

3.4.4. A summary of the bus services available within walking distance from the site is provided in **Table 3-1**.

Table 3-1 – Bus Services Accessible from the Site

Stop	Line	Direction	AM pea hour Freq.	PM peak hour Freq.
Slough Bus Station	2	Slough Bus Station - Dedworth	1	1
	3	Slough Bus Station - Uxbridge	2	2
	4	Maidenhead - Heathrow	2	2
	5	Slough Bus Station - Cippenham	2	2
	7	Britwell - Heathrow	3	4
	337	Slough Bus Station - Old Amersham	1	0
	8/8A	Slough Bus Station - Heathrow	2	2
	15	Slough Bus Station - Heathrow	1	1
	81	Slough Bus Station – Hounslow Bus Station	6	5
	X74	Slough Bus Station – High Wycombe Bus Station	2	2

	702/703	Bracknell – Legoland	2	2
Slough Brunel Way	12	Slough - Burnham	0	2
	13	Slough - Burnham	2	0
	WP1	Slough - Wexham Park Hospital	4	4
Slough Wellington Street	3	Slough Bus Station - Uxbridge	2	2
	4	Maidenhead - Heathrow	2	2
	6	Slough Bus Station – The Frith	1	1
	7	Britwell - Heathrow	3	4
	12	Slough - Burnham	0	2
	15	Slough Bus Station - Heathrow	1	1
	81	Slough Bus Station – Hounslow Bus Station	6	5
	83	Hedgerley - Langley	1	0
	702/703	Bracknell – Legoland	2	2
Total			**48**	**48**

SLOUGH MASS RAPID TRANSIT

3.4.5. The A4 forms the spine of a 12km strategic public transport corridor that links Maidenhead, Slough, and Heathrow. The Slough Mass Rapid Transit (SMaRT) scheme aims to improve this corridor by undertaking road widening in order to facilitate dedicated bus lanes along the A4.

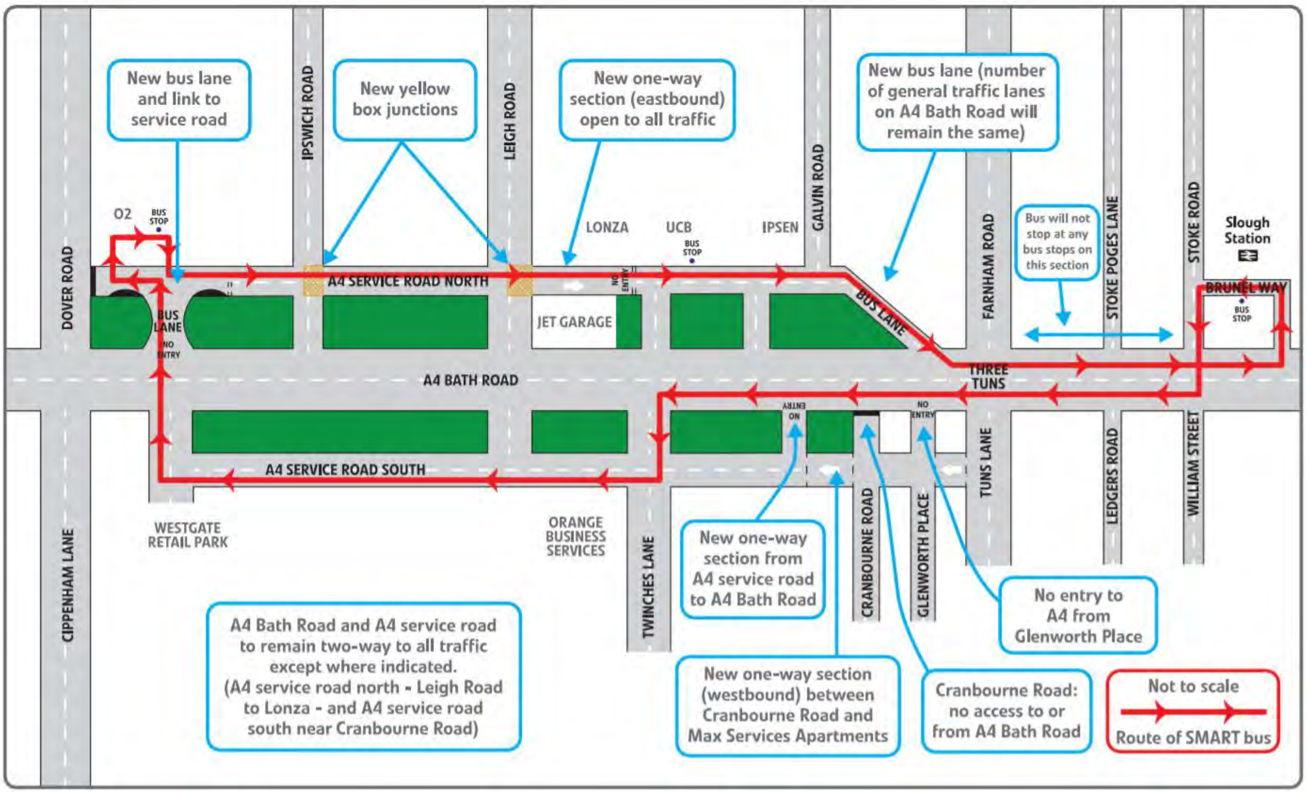
3.4.6. By widening the A4 at key points, and by utilising service roads as bus lanes, SMaRT aims to provide a bus service that is quicker, more frequent, and more reliable. In addition, by reducing congestion along this strategic route, SMaRT also aims to improve the journeys of the 20,000 vehicles that use the A4 Bath Road every day.

3.4.7. SBC completed Phase 1 of the Slough Mass Rapid Transit scheme from Dover Road to High Street Langley in 2017. The scheme has since delivered a more frequent, quicker and more reliable bus service for bus commuters travelling along the A4 Bath Road.

3.4.8. Phase 2 is still being planned, however would extend from High Street Langley to the eastern borough boundary and Heathrow. The Phase 2 scheme would encourage use of sustainable transport for commuters travelling between Slough Trading Estate, Slough train station, Langley and Heathrow airport. Phase 2 aims to improve journey times, reduce congestion, enhance transport interchanges and support regeneration in Slough.

3.4.9. Phase 1 of the SMaRT is shown in **Figure 3-7**.

Figure 3-7 – SMaRT Phase 1



NATIONAL RAIL

3.4.10. Great Western Railway and TfL Rail operate services through Slough rail station, with connections running frequently to London (London Paddington) and other destinations including Windsor & Eton Central, Reading and Didcot Parkway. A summary of the rail services from Slough rail station site are provided in **Table 3-2**.

Table 3-2 – Rail Services Accessible from the Site

Destination	AM peak hour Freq.	PM peak hour Freq.
London Paddington	6	7
Reading	3	2
Windsor & Eton Central	3	2
Oxford	1	0
Didcot Parkway	2	0
Total	**15**	**11**

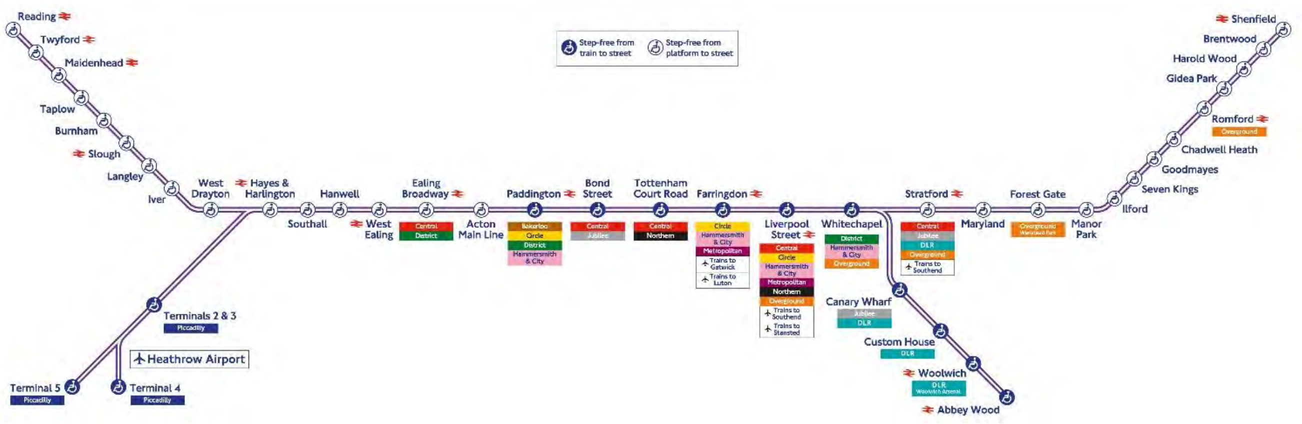
ELIZABETH LINE

3.4.11. Slough rail station will provide access to Elizabeth Line services which will extend across London from east to west, extending to Reading in the west, and Shenfield and Abbey Wood in the east. The Elizabeth Line will also provide direct services to Heathrow Airport. The section of the Elizabeth Line between Reading and London Paddington is currently operational, with the remainder of the line across London up to Shenfield and Abbey Wood expected to be complete by 2022.

3.4.12. The Elizabeth Line will provide an additional train every five minutes during peak times. Journey times along the new line will be as follows:

- Slough to Heathrow Central: 15 mins
- Slough to Reading: 22 mins
- Slough to Tottenham Court Road: 32 mins
- Slough to Canary Wharf: 46 mins
- Slough to Abbey Wood: 58 mins
- Slough to Shenfield: 81 mins

Figure 3-8 – Elizabeth Line map



3.5 SUMMARY

3.5.1. The Site is located within walking distances of a number of local amenities and has easy access to cycle routes which facilitate cycle movement in the local and wider area. The Site also benefits from numerous bus services (approximately 48 during peak times) which provide connectivity across and outside Slough. The train services provided from Slough Rail Station enable access to London and represent an excellent choice for commuting to work. Public transport services are expected to be further enhanced with the introduction of SMaRT and the Elizabeth Line.

3.5.2. Based on the above, the Site has excellent accessibility in terms of active and public transport modes of transport. This represent an opportunity for the users of the development to select these modes ahead of the use of private vehicles.

4 BASELINE TRAVEL INFORMATION

4.1.1. As the proposed development has not been built yet, it is not possible to carry out a travel survey. Hence, the baseline travel patterns for the commercial elements of the development have been estimated using the methodology set out below. At an appropriate time following occupation of each development phase, approved under a reserved matters consent, baseline travel surveys will be undertaken to establish baseline travel patterns.

4.1.2. The trip generation forecast for the office and sui generis uses has been derived using TRICS sites that have been deemed comparable to the proposed development. The 2011 Census mode share has been used to determine the modal split. The retail trip generation has been determined based on other comparable shopping centres and their data. The methodology of the trip generation assessment is fully described in the Transport Assessment. The estimated multi-modal peak hour travel demand associated with the office, retail and sui generis uses is outlined at **Table 4-1, Table 4-1** and **Table 4-1**.

Table 4-1 – Office Trips by Mode of Travel

Mode	AM Peak hour			PM Peak hour		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Train	296	23	319	15	274	290
Bus	226	18	244	12	209	221
Taxi	0	0	0	0	0	0
Motorcycle	8	1	8	0	7	8
Car Driver	156	12	168	8	144	152
Car/ Van Passenger	0	0	0	0	0	0
Bicycle	17	1	18	1	15	16
On Foot	78	6	84	4	72	76
Total	**779**	**62**	**841**	**40**	**723**	**763**

Table 4-2 –Retail / F&B Trips by Mode

Mode	AM Peak hour			PM Peak hour		
	In	Out	Total	In	Out	Total
Train	15	11	26	44	45	89
Bus	28	22	50	87	88	175
Taxi	0	0	0	0	0	0
Motorcycle	0	0	0	1	1	1
Car Driver	16	13	29	50	51	101
Car/ Van Passenger	8	6	14	24	24	48
Bicycle	0	0	1	1	1	2
On Foot	5	4	9	16	17	33

Total	**73**	**56**	**130**	**223**	**226**	**449**

Table 4-3 – Sui Generis Trips by Mode

Mode	AM Peak hour			PM Peak hour		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Train	0	0	0	33	19	51
Bus	0	0	0	64	36	100
Taxi	0	0	0	0	0	0
Motorcycle	0	0	0	0	0	1
Car Driver	0	0	0	37	21	58
Car/ Van Passenger	0	0	0	17	10	27
Bicycle	0	0	0	1	0	1
On Foot	0	0	0	12	7	19
Total	**0**	**0**	**0**	**165**	**93**	**258**

4.1.3. It should be noted that the above multimodal trip generations are predicted and they will be recalculated following the baseline travel surveys.

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5 OBJECTIVES

5.1.1. This section outlines the overarching aims and objectives of the Framework Commercial Travel Plan.

5.1.2. The key aim of this document is to encourage future users of the Site to travel using sustainable modes. The main objectives of the Travel Plan are to:

- To raise awareness of sustainable modes of travel available at the development;
- To raise awareness of the health and fitness benefits of walking and cycling;
- To reduce the number of trips by private vehicle; and
- To facilitate and encourage travel by sustainable modes.

6 TARGETS

6.1.1. Targets are tailored to deliver the objectives of the Travel Plan and must be Specific; Measurable; Achievable; Realistic; and Timed (SMART).

6.1.2. Two types of targets could be considered. 'Action' type targets are physical actions that can be achieved by a set date, for example appointing a Travel Plan Co-ordinator (TPC), whilst 'Aim' type targets are those which relate to outcomes achieved through implementation of measures, for example, achieving a change in mode split compared to a baseline. It is proposed to set both 'Action' type target and 'Aim' type targets.

6.2 ACTION TARGETS

6.2.1. The following Action type targets are proposed:

- Appoint a Travel Plan Coordinator (TPC) prior to occupation of each development zone approved under reserved matters;
- Cycle parking spaces provided prior to occupation of each building;
- A travel pack will be produced, promoting the range of sustainable transport modes available, health benefits of active travel and the key services provided through the travel plan; and
- Travel surveys to be undertaken in years one, three and five after occupation.

6.3 AIM TARGET

6.3.1. The following Aim targets are proposed:

- **Maximise number of employees walking and cycling**
  - Increase the walking and cycle mode share by 5% within a five-year period
- **Minimise number of employees driving**
  - Seek to decrease car mode share by 5% within a five-year period of full Site occupation

6.3.2. The above targets link directly to the objectives outlined in the previous Chapter. The targets are indicative and will be reviewed (and may be amended) after the initial baseline surveys have been undertaken at the Site.

6.3.3. Achieving the set targets will be measured through monitoring travel surveys, the results of which will be reported to the SBC.

7 MEASURES

7.1.1. This section outlines the measures which could be implemented on site to achieve the objectives and targets. These measures form the core of the Travel Plan. The measures for the commercial element have been grouped into two types as follows and considered in turn in the following sections:

- 'Hard' engineering measures incorporated into the design; and
- 'Soft' marketing and management measures which ensure that sustainable travel behaviour is maximised.

7.2 HARD MEASURES

7.2.1. It should be recognised that many physical aspects of the design of the Site will influence travel patterns and will have a significant impact upon reducing dependence upon car. The hard engineering measures that will be incorporated into the design of the development are set out below.

PERMEABILITY

7.2.2. Within the Site, the pedestrian environment will be of high quality with the provision of pedestrian routes which will facilitate north-south and east-west connectivity. The pedestrian accesses are provided in suitable locations, connecting to convenient routes towards public transport services. The proximity of the Site to public transport facilities will provide the opportunity for employees to access the Site by sustainable modes, therefore reducing dependence upon the private car.

CAR PARKING PROVISION

7.2.3. The proposed commercial element will be car-free, therefore reducing dependence upon private vehicles.

CYCLE PARKING PROVISION

7.2.4. Safe and secure cycle parking will be within the Proposed Development to meet the demands of employees. Short-stay provision for visitors will also be provided. The usage of cycle parking will be monitored as part of the overall monitoring strategy on the Site.

7.3 SOFT MEASURES

7.3.1. The location of the development, its design and proximity to facilities and public transport services within the surrounding area create all of the conditions to make sustainable travel choices a natural option. However, it is also recognised that a communication and strategy is key to the success of the Travel Plan. Details of the soft measures that could be implemented at the Site are set out below.

SUSTAINABLE WORKING

Employee Challenge Events

7.3.2. Employee challenge events, that typically include some form of reward or gamification, have proven a popular means in recent years to generate a quick upturn on walking and cycling to work. The desirability of such events can be tested by means of a stated preference travel survey of staff.

Flexible Working

7.3.3. Flexible working is a term that encompasses a wide range of practices aimed at providing staff with flexibility around when, where, and for how long they work. By providing staff with the opportunity to 'work from home' or work flexible hours the demand for car usage can be reduced, particularly for those who do not have an alternative way to travel to the site.

Teleconferencing Facilities

7.3.4. Business-based telecommunications software, such as Skype, GoToMeeting or WebEx are alternatives to face-to-face meeting that could reduce employees need to travel and increase their ability to work from home.

TRAVEL INFORMATION & ADVICE

Travel Pack

7.3.5. Travel Packs or email equivalents can be distributed to employees by the Travel Plan Coordinator.

7.3.6. A key role of the Travel Pack would also be to raise awareness of the sustainable travel initiatives being implemented through the Travel. The initiatives within the packs could include:

- Access initiatives: The Travel Pack could contain a high-quality map of the site vicinity, showing cycling, and walking and public transport routes to / from the site, together with the locations of key local facilities such as shops, services and restaurants all of which will be accessible on foot;
- Promotion of key services and facilities: Details of the key services and facilities such as details of the location of cycle parking / maintenance facilities provided can be included within the Travel Pack. Sources of more detailed further information could also be included;
- Promotion of health benefits associated with active modes of transport: The travel pack could provide details of the health benefits associated with walking and cycling regularly;
- The Travel Pack could also invite those persons wishing to raise specific transport-related matters to discuss them with the appropriate Travel Plan Co-ordinator for consideration. The Travel Plan Co-ordinator would also be able to provide personalised travel planning advice to employees if required;
- Promotion of Car Share / Lift Share schemes: Details of car sharing / lift sharing websites could be included within the Travel Pack;
- Promotion of smartphone apps: The Travel Pack could include information regarding a number of Smartphone applications which are free to download. These can help plan and map out journeys via foot, cycle and public transport within local areas.

Development Website

7.3.7. Links to relevant public transport travel information could be provided on the commercial occupiers' websites together with an electronic version of the welcome pack including promotional details of the key services and facilities being provided.

Employee Notice Boards

7.3.8. Employee notice boards providing travel and community information to employees and visitors could be used.

7.3.9. Maps of the immediate local area could be displayed, identifying locations of cycle routes and parking and public transport service access points. Notices could also be used to inform employees of any new travel initiatives or events organised by the Travel Plan Coordinator.

Workplace-led Rides Programme

7.3.10. A workplace led ride programme would provide an opportunity for skilled ride leaders to advise rides and generate interest amongst staff; especially those who may be relatively inexperienced.

7.3.11. Training providers, such as those affiliated with British Cycling, could be employed to provide initial training to prospective ride leaders if required. Workplace rides could then be planned and held subject to demand.

Interest-free Bicycle Loans

7.3.12. Providing interest free bicycle loans could assist employees wishing to purchase a bicycle for local commuting and business journeys.

8 TRAVEL PLAN COORDINATOR AND MANAGEMENT SUPPORT

8.1.1. This chapter outlines the strategy of the Travel Plan in terms of management and marketing.

8.2 TRAVEL PLAN CO-ORDINATOR

8.2.1. Travel Plan Coordinators (TPC) would take responsibility for the development and management of the Commercial Travel Plans for each non-residential use. The TPCs would ensure that the adoption of the Travel Plans is effective and efficient. The TPCs would be an extension to an existing role for a member of staff at the commercial uses, and will commence prior to occupation of the Site and contact details will be shared with the Local Planning Authority.

8.2.2. The role involves:

- Giving a 'human face' to the Travel Plan – explaining its purpose and the opportunities on offer;
- Helping establish and promote the individual measures in the plan;
- Administration of the Travel Plan, which involves the maintenance of necessary paperwork, consultation and promotion. This ensures the plan remains up to date and provides current information to readers; and
- Monitoring and where necessary revising Travel Plan targets and measures and reporting of the Travel Plan including liaising with the local authority as required.

8.3 MARKETING

8.3.1. It is recognised that a marketing and communication strategy is key to the success of the Travel Plan. The marketing strategy would aim to raise awareness of the key services and facilities implemented as part of the Travel Plan and disseminate travel information and notification of facilities provided.

8.3.2. Employees will be made aware of the Travel Plan, including its purpose and objectives, along with specific measures. Marketing would be undertaken before occupation and employees would be informed about the Travel Plan prior to being hired.

9 MONITORING AND REVIEW

9.1.1. A programme of monitoring and review could be implemented to generate information by which the success of the Travel Plan will be evaluated. This would establish whether the agreed targets are being met. Monitoring and review would be the responsibility of the TPC.

9.2 MONITORING

9.2.1. To measure progress against the targets set in this document, the following monitoring regime could be implemented:

- Year 0 Survey
  - A TRICS SAM (Standard Assessment Methodology) compliant monitoring survey will be undertaken during the first reasonably practicable neutral month following 75% occupation and a monitoring report setting out the surveyed results will be submitted to SBC.
- Years 1, 3 and 5 Surveys
  - A TRICS SAM compliant monitoring survey will be undertaken during the same neutral month as the year 0 survey in years 1, 3 and 5 and a monitoring report setting out the surveyed results will be submitted to the approving authority.

9.2.2. The monitoring surveys would allow the approving authority to understand emerging travel behaviour at the development and to make an informed decision about what, if any, actions should be taken.

9.3 REVIEW

9.3.1. The TPC would report the results on monitoring to the approving authority within three months of monitoring being triggered. The approving authority and relevant stakeholders would then review the results and, if appropriate, revise targets accordingly. The results of the travel survey and revised targets would be included in subsequent revisions of this Travel Plan as required.

10 ACTION PLAN

10.1.1. This section includes a check list of the potential measures detailing who would be responsible for ensuring that the actions identified in previous sections are delivered. The measures have been linked to the overall objectives of the document.

Table 10-1 – Action Plan

Action	Target (values)	Target Date	Indicator / measured by	Responsibility
Appointment of TPC	N/A	Prior to occupation	Appointment of TPC	Developer
Agree Travel Plan Objectives, Targets and Measures with SBC	N/A	Prior to occupation	Agreement being reached with SBC	TPC
Provision of cycle parking	Parking provided in line with ratios agreed with SBC	Prior to occupation	Installation of parking	Developer
Implementation of soft measures	N/A	At first occupation / ongoing	Number of soft measures implemented and their effectiveness	TPC
Provision of the Travel Pack to employees	One Travel Pack per employee	At first occupation / when hired	Dissemination of the Travel Pack to employees	TPC
Undertake initial travel surveys	N/A	Within 3 months of 75% occupation	Receipt of survey results	TPC
Agree target values for mode split with SBC	Target subject to negotiations with SBC	1 month after initial travel survey	Receipted of written agreement of targets	STM / TPC
Undertake travel surveys and analysis years 1, 3 and 5 and discuss results with SBC	N/A	Every other anniversary of the initial travel surveys	Receipt of survey results	TPC

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