

APPENDIX I

PROPOSED 120 RESIDENTIAL UNIT
DEVELOPMENT AT LAND SOUTH OF NEW
HOUSE FARM, OLD CRAWLEY ROAD,
FAYGATE
FRAMEWORK TRAVEL PLAN

DOCUMENT CONTROL

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Plans:

- Plan 1:** Site Location
- Plan 2:** Sustainable Transport Corridors
- Plan 3:** 2km and 5km Walking and Cycling Catchments

1.0 INTRODUCTION

- 1.1 SK Transport Planning Ltd (SKTP) has been commissioned by FCP Land 4 Limited to prepare a Framework Travel Plan (FTP) to support sustainable travel to and from their proposed 120 residential unit scheme on land south of New House Farm, Old Crawley Road, Faygate. The location of the development site is shown on **plan 1**.
- 1.1 This document has been prepared as supporting information for a planning application for the residential development and looks to encourage end occupiers of the development to travel as sustainably as possible. This document looks to deliver the requirements of the National Planning Policy Framework (NPPF), as well as the appropriate Horsham District Council and West Sussex County Council local highway and planning policies.

The Travel Plan Process

- 1.2 A Travel Plan is a tool for managing access to a site that aims to promote access by sustainable modes. A Travel Plan contains a package of measures designed to meet the objective to reduce car use generated from the site by supporting sustainable modes of transport.
- 1.3 A Travel Plan should outline *hard* (engineering) measures and *soft* (marketing and management) measures that will meet objectives. A successful Travel Plan will also outline methods that will be used in the future to manage the effectiveness of the plan. Within a Travel Plan there is a need to set objectives, targets and indicators. The purpose of which is to monitor change and review policies to meet the needs of the users of the site. Travel Plans are not one-off, static events but should constantly evolve to meet the changing travel patterns of the end users of the site.
- 1.4 The first step in the Travel Plan process is the production of a FTP. This document details the transport strategy to be adopted upon occupation of the development. It outlines the accessibility of the site, *hard* infrastructure measures proposed as part of the development and objectives of the Travel Plan. The Framework should also recommend possible policy measures, monitoring methods and management methods that could be adopted on occupation of the site.
- 1.5 To demonstrate the developer's commitment to encouraging sustainable travel this FTP has been prepared as supporting information to the proposed residential development. The document structure is based on previously agreed Frameworks discussed and agreed with West Sussex County Council (WSCC) on other residential schemes.
- 1.6 The next stage of the FTP process is to consider the content of the document, in advance of any planning permission being granted.

Policy Overview

- 1.7 The FTP measures have been developed in line with local and national green Travel Planning advice and best practice. The guidance referenced in the production of this document includes:
 - White Paper on the Future of Transport 'A New Deal for Transport: Better for Everyone'
 - White Paper 'Cutting Carbon, Creating Growth'
 - National Planning Policy Framework
 - The Department for Transport, Local Government & the Regions 'Walk In to Walk Out'
 - The Department for Environment, Transport & the Regions 'Preparing your Organisation for Transport in the Future: The Benefits of Green Transport Plans'
 - The Energy Efficiency Best Practice Programme 'A Travel Plan Resource Pack for Employers'

- Department for Transport 'Making Travel Plans Work'
- Department for Transport 'Making Residential Travel Plans Work'
- Department for Transport 'Essential Guide to Travel Planning'
- Department for Transport 'Effects of Smarter Choice Programme in Sustainable Travel Towns'
- Department for Transport 'Smarter Choices – Changing the Way we Travel'
- Transport for Quality of Life 'Tools for Travel Planning in Urban Areas'

- 1.8 The measures outlined in this FTP include demand management and smart travel tools. The measures include *soft* measures (such as promotion and marketing) and *hard* measures (such as cycle parking and car parking provision) in line with DfT's *Smarter Choices* and *Making Residential Travel Plans Work* documents.

The Travel Plan Objectives

- 1.9 The aims of local and national policy have been borne in mind when producing this FTP. This document identifies how the aims of local and national policy relating to sustainable travel will be addressed through the Travel Plan. The aims and objectives of the final Travel Plan for the site are summarised below. This FTP looks to:

- define the principals of the final transport strategy and Travel Plan
- outline measures to reduce the reliance on the private car
- encourage, whenever possible, all end occupiers to consider travelling sustainably to and from the site
- detail measures to encourage sustainable access to the site
- define the future management and monitoring methods to be adopted
- deliver a residential development that meets the sustainable objectives of both national and local policy guidance

- 1.10 A successful Travel Plan is initially built upon the *firm foundations* of a good location and site design. Then a combination of *soft*, *hard* and marketing measures are used to reinforce the sustainable location. To meet these objectives, the Travel Plan measures have been informed by DfT's Travel Plan pyramid, which is shown in **figure 1**.

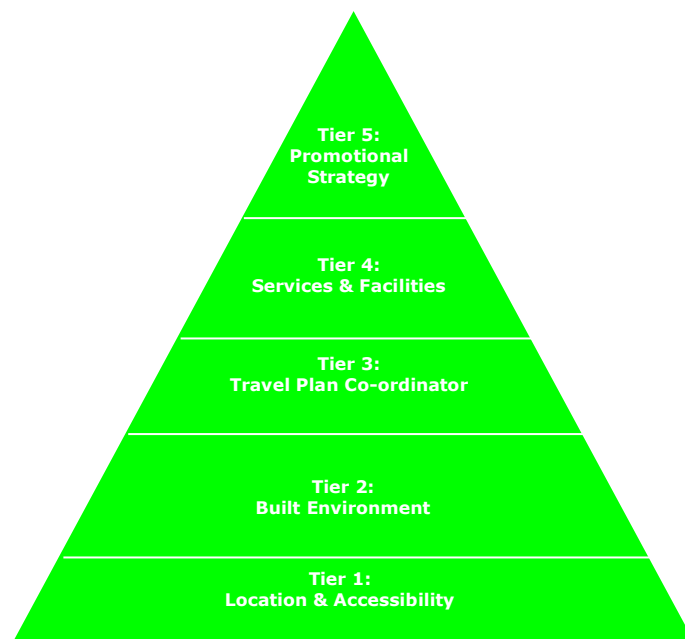


Figure 1: DfT Travel Plan Pyramid

2.0 THE PYRAMID: TRAVEL PLAN INITIATIVES

- 2.1 As outlined in **section 1.0**, this document confirms the *hard* and *soft* Travel Plan measures for the site that will be available for end occupiers upon occupation. The recommended initiatives are defined in line with the DfT Travel Plan pyramid in **figure 1**.

Tier 1: Site Location & Accessibility

- 2.2 As shown in **figure 1** the location of the site is one of the most important factors in determining the reliance on the private car. The first tier of the pyramid looks at the accessibility of the site in relation to existing sustainable transport corridors and complementary land uses.
- 2.3 The development site is located immediately to the east of Crawley Road, a 'B' classification road (the B2195), which links with the A264 Crawley Road to the north at a three-arm roundabout junction and Crawley Road/Forest Road corridor to the south at a signalised junction. The site location is shown on **plan 1**.
- 2.4 The development proposals benefit from direct pedestrian, cycle and vehicular access onto Crawley Road. These routes will offer end occupiers of the development excellent opportunities to travel sustainably to the surrounding residential areas and local amenities, as well as destinations in Horsham town centre, including the rail station for longer distance trips.
- 2.5 The documents 'PPG13 – Best Practice Guidance' and 'Creating Growth, Cutting Carbon' state that walking offers the greatest potential for replacing short car trips, particularly for journeys under 2km.
- 2.6 The IHT document, 'Guidelines for Providing for Journeys on Foot' provides further details on recommended walking distances, these are shown in **table 2.1**.

	Commuting/School (m)	Elsewhere (m)
Desirable	500	400
Acceptable	1000	800
Preferred Maximum	2000	1200

Table 2.1: IHT Acceptable Walking Distances

- 2.7 A pedestrian walking catchment plan has been produced to demonstrate the accessibility of the site by foot. The catchment, attached as **plan 3**, shows a 2km walk distance from the site.
- 2.8 **Table 2.2** provides a summary of a range of local amenities and services and their respective walk distances and cycle times from the development site.

Faygate Amenities/ Services	Location/ Address	Distance from Site Boundary (km)	Walk time from Site Boundary (min)	Cycle Time from Site Boundary (min)
Recreation & Leisure Facilities				
The Holm Bush Inn Public House	Faygate Lane, RH12 4SH	2.73	34.1	8.5
Roffey Park	Nr. Forest Road, RH12 4TB	2.47	30.9	7.7

Norfolk Arms Public House	Crawley Road, RH12 4NB	0.35	4.4	1.1
Birches Road Play Area	Off Birches Road, RH12 4NH	0.69	8.6	2.1
Roffey Cricket Club	Crawley Road, RH12 4ET	1.38	17.6	4.3
Bartholomew Way Play Area	Oldbury Close, RH12 5JZ	2.37	29.6	7.4
Roffey Football Club	Bartholomew Way, RH12 5JL	2.39	29.9	7.4
Amberley Close Play Area	Amberley Close, RH12 4LL	0.97	12.1	3.0
Amberley Road Allotments	Off Amberley Road, RH12 4	0.74	9.3	2.3
1 st Roffey Scouts	Off Crawley Road, RH12 4EY	0.67	8.4	2.1
Earles Meadow Children's Play Area	Off Earles Meadow, Rh12 4HP	0.56	7.0	1.7
Beech Road Allotments	Off Beech Road, RH12 4TY	0.41	5.1	1.3
The Roffey Sports & Social Club	Spooners Road, RH12 4DY	1.65	20.6	5.1
The Holbrook Club – Sports & Leisure	N Heath Road, RH12 5PJ	2.73	34.1	8.5
Manor Fields Play Area	Off Manor Fields, RH13 6SD	1.59	19.9	4.9
Oakleigh Road Play Area	Off Littlehaven Road, RH12 4HX	1.81	22.6	5.6
Woodside Equestrian Centre	Forest Road, RH12 4TF	2.19	27.4	6.8
The Star Inn Public House	108 Crawley Road, RH12 4DT	1.53	19.1	4.8
Frog & Nightgown Public House & Tea Room	Wimland Road, RH12 4SS	1.32	16.5	4.1
Horsham Motocross Track	Colgate, RH13 6PH	3.79	47.4	11.8
Pavilions in the Park Leisure and Pool	Hurst Road, RH12 2DF	3.08	38.5	9.6
Summerhouse Yoga	187 Comptons Lane, RH13 6BW	2.05	25.6	6.4
Harwood Road Allotments	Off Harwood Road, RH13 6	1.52	19.0	4.7
Horsham Park	Hurst Road, RH12 2DF	3.08	38.5	9.6

Employment

Horsham Enterprise Park	Parsonage Road, RH12 5AB	2.53	31.6	7.9
Blatchford Road Business Park	Blatchford Road, RH13 5QL	2.00	25.0	6.2
Foundary Lane Industrial Area	Foundary Lane, RH13 5PL	2.31	28.9	7.2

Education

Primary School – Kingslea	Kings Road, RH13 5PS	2.36	29.5	7.3
Primary School – Leechpool	Leechpool Lane, RH13 6AG	1.53	19.1	4.8
Primary School – Oaklands INFants	Leith View Road, RH12 4EA	1.26	15.8	3.9
Primary School – Oaklands Juniors	Hawkesbourne Road, RH12 4EH	1.90	23.8	5.9

Primary School – Sir Robert Southwell Catholic	Lambs Farm Road, RH12 4LP	0.83	10.4	2.6
Primary School– North Heath Community	Erica Way, RH12 5XL	3.03	37.9	9.4
Primary School– Holbrook	Holbrook School Lane, RH12 5PP	2.18	27.3	6.8
Primary School – Heron Way	Heron Way, RH13 6DJ	3.14	39.3	9.8
Primary School – All Saint’s CofE	Tylden Way, RH12 5JB	2.06	25.8	6.4
Secondary School – The Forest School (Boys)	Comptons Lane, RH13 5NT	3.27	40.9	10.2
Secondary School – Millais School (Girls)	Depot Road, RH13 5HR	2.78	34.8	8.6
Further Education – Richard Collyers College (6 th form & Adult Ed.)	Hurst Road, RH12 2EJ	3.47	43.4	10.8
Retail				
Local Convenience – Chirag Newsagent with Grocers	177 Crawley Road, RH12 4ET	1.36	17.0	4.2
Local Convenience – Co-op	2-4 Fitzalan Road, RH13 6AA	1.60	20.0	5.0
Local Convenience – New House Farm Shop	Old Crawley Road, RH12 4RU	0.48	6.0	1.5
Local Convenience – Tesco Express (at Esso)	Redkiln Way, RH13 %HQ	1.97	24.6	6.1
Local Convenience – Shelley’s Budgens	1 Coltsfoot Drive, RH12 5FN	2.83	35.4	8.8
Supermarket – Sainsburys	7 Worthing Road, RH12 1SQ	4.14	54.8	12.9
Local Services				
St Andrews Methodist Church	Crawley Road, RH12 4DX	0.16	2.0	0.5
Holbrook Youth Centre	Holbrook School Lane, RH12 5PP	2.23	27.9	6.9
Roffey Post Office	8 Fitzalan Road, RH13 6AA	1.57	19.6	4.9
All Saints Church	Crawley Road, RH12 4HF	0.76	9.5	2.4
Horsham Hospital	Hurst Road, RH12 2DR	3.40	42.5	10.6
Holbrook Doctors Surgery	Bartholomew Way, RH12 5JL	2.21	27.6	6.9
Forestmead Dental Surgery	235 Crawley Road, RH12 4HD	1.12	14.0	3.5
St, Marks Church	St. Marks Lane, RH12 5PU	2.50	31.3	7.8
ATM – Co-op	2-4 Fitzalan Road, RH13 6AA	1.60	20.0	5.0
Dental Healthcare Practice (private)	North Heath Lane, RH12 5PJ	2.81	35.1	8.7
Public Transport				
Nearest Bus Stop	Roffey adj, The Norfolk Arms	0.43	5.4	1.3

Table 2.2: Facilities within the Local Area (Walk Distances and Times)

- 2.9 With the IHT guidance presented in **table 2.1** in mind **table 2.2** demonstrates that the site is appropriately located to allow a range of local trips on foot, with the majority of local services and amenities located within a 2km walk of the site.
- 2.10 DfT guidance states that cycling has the potential to substitute for car trips under 5km and to form part of a wider public transport trip. A 5km cycling catchment covers all the local residential area, as well as a range of destinations in Horsham. Of those destinations that fall outside of a 2km catchment all are located within a 5km cycle ride of the site.
- 2.11 **Plan 2** demonstrates that the site is well located in relation to local amenities and Horsham town centre.

Accessibility by Public Transport

- 2.12 The nearest bus stops to the site are located on the B2195 Crawley Road, circa 70m south of the Norfolk Arms Public House. The bus stops provide dedicated bus laybys to allow passenger boarding/alighting off the main carriageway. Both stops also benefit from shelters, seating and timetable provision.
- 2.13 **Table 2.3** provides a summary of the bus services currently operating along this corridor.
- 2.14 The IHT document, 'Planning for Public Transport in Developments', states that 400m (a five-minute walk time) is an acceptable walking distance to local bus services. **Plan 2** and **table 2.3** shows the route and frequency of the existing local bus service routing closest to the site.

Service	Operator	First Weekday Bus	Average Weekday Daytime Frequency	Last Weekday Bus	Route
23/23X	Metrobus	0550	Every 30 minutes	2300 (last bus to Worthing 1859. 2300 service terminates at Southwater)	Crawley – Faygate – Horsham Rail Station – Horsham Bus Station – Southwater – Ashington – Washington – Worthing
200	Metrobus	0048	Every 30 minutes	2348	Gatwick Airport – Ifield – Gossops Green Shops – Kilnwood Vale – Faygate – North Heath – Horsham Railway Station – Horsham Bus Station

Table 2.3: B2195 Crawley Road Bus Services (February 2026)

- 2.15 **Table 2.3** confirms that these stops are served by two bus services. The route 23/23X service runs on a half hourly frequency between Crawley and Worthing, via Faygate, Horsham Rail and Bus Stations, Ashington and Washington. This service offers excellent accessibility from the site to Horsham town centre, including the bus and rail stations from circa 6000 to 2300 hours, as well as longer distance trips to Crawley and Worthing.
- 2.16 Alongside the route 23 service, the Crawley Road corridor also benefits from the bus service upgrades that have been delivered with the Crest Nicholson Bewbush scheme, located circa 4km to the north-east of the proposed development site. As part of this planning approval the bus service provision has been significantly upgraded, to provide a 30-minute headway service running between 0048 and 2348.

- 2.17 The route 200 service offers existing residents living on the Crawley Road corridor a high frequency, regular service between Horsham, Faygate, Bewbush and Gatwick Airport.
- 2.18 The excellent service timings of both the route 23 and 200 bus services will provide end occupiers of the proposed residential development with an alternative to the private car to make these journeys to local employment, leisure and retail destinations.
- 2.19 Notwithstanding the quality and frequency of these existing bus services, contact has been made with Metrobus, the bus service provider, to discuss whether any further enhancements can be made to encourage end occupiers of the proposed development to use these services. Commentary on these discussions is provided later in this report in the travel plan measures section.
- 2.20 Based on the findings in this section of the FTP it is considered that the proposed development site has an excellent level of bus service provision routing past the site along the Crawley Road corridor.
- 2.21 Turning to rail access the site is located 2.2km from Littlehaven railway station. A summary of the rail services is provided in **table 2.4**.

Rail Station	Service Destination	First Weekday Service	Average Weekday Daytime Frequency	Last Weekday Service	Route
Littlehaven	Horsham	0613	2 direct trains per hour	0041	Littlehaven - Horsham
Littlehaven	Peterborough	0529	1 direct train per hour	2315	Littlehaven – Ilfield – Crawley – Three Bridges – Gatwick Airport – Horley – Redhill – Merstham – Coulsdon South – East Croydon – London Bridge – London Blackfriars- City Thameslink – Farringdon – London St. Pancras – Finsbury Park – Stevenage – Hitchin – Arlsey – Biggleswade – Sandy – St. Neots – Huntingdon – Peterborough

Table 2.4: Local Rail Services (February 2026)

- 2.22 Whilst it is accepted that Littlehaven rail station is marginally outside of the recommended 2km walk catchment, it remains within an easy and direct walk from the development site and is well within a 5km cycle distance from the site.
- 2.23 The review of local bus services earlier in this section of the report also confirms that the existing 23 bus service that routes past the site provides convenient and direct access to Horsham rail station. End occupiers of the development could use the existing bus service to access Horsham rail station, as part of a longer distance trip by rail.
- 2.24 As the Horsham and Littlehaven rail stations are on the same line, end occupiers will have the choice of either walking or cycling to Littlehaven station or travelling by bus to Horsham rail station.
- 2.25 This section of the FTP confirms that the site benefits from existing pedestrian connectivity to both bus and rail halts, as well as a range of local destinations. The local residential streets are considered suitable for cyclists to use to access local destinations. The report also confirms that there are two frequent bus services that run close to the site, that already offer attractive, frequent access to a range of destinations.

Tier 2: Built Environment

- 2.26 The second tier of the pyramid looks considers the development proposals and *hard* measures that are included within the scheme to encourage sustainable access.
- 2.27 The site layout has been designed to fit well with surrounding development on the north-eastern side of the town. Pedestrian access to the site is orientated to allow direct access to Crawley Road. Cycle storage areas will be provided in the development, and garages provided with properties will be oversized to allow cycle and vehicle storage.
- 2.28 Safe access to the buildings is achieved through the treatment of the site as a pedestrian friendly environment, placing pedestrian needs first. The scheme layout has been designed to accord with the guidance contained in "Manual for Streets".

Tier 3: Travel Plan Co-ordinator

- 2.29 It is well known that an effective Travel Plan needs a clear hierarchy of responsibility. The Travel Plan Co-ordinator plays an important role in developing the plan, working with residents and ensuring that the plan evolves over time.
- 2.30 The site developer has initially nominated SK Transport Planning Limited to undertake the Travel Plan Co-ordinator role for the site. The nominated contact and their details are provided below.

Adele Tams
Travel Plan Co-ordinator
SK Transport Planning Limited
Albion Wharf
19, Albion Street
Manchester
M1 5LN
Tel: 0161 234 6509
Email: adele.tams@sktransport.co.uk

- 2.31 The Co-ordinator will be responsible for the day-to-day running of the Travel Plan and will also develop, implement and monitor the Travel Plan's effectiveness. The Travel Plan Co-ordinator will be in post through the life of the building works, up to a point three months after the final monitoring survey is undertaken.
- 2.32 The Co-ordinator will form the main point of contact for the local authority and residents. The Co-ordinator will also be responsible for raising awareness and marketing the Travel Plan and surveying its effectiveness.
- 2.33 Amongst other things, it is anticipated that the Co-ordinator will advertise and promote existing sustainable access routes in the area, enabling future residents to make informed travel choices. These recommended Travel Plan measures are detailed later in this document.

Tiers 4 & 5: Services, Facilities & Promotional Strategy

- 2.34 This tier of the FTP details specific measures that will be available for end occupiers of the development to use when considering their choice of travel mode. These measures have been drawn from best practice guidance, and case studies undertaken throughout the UK.

Travel Awareness & Promotion

- 2.35 Marketing and promotion are important components of the Travel Plan. It is essential to ensure adequate use of the services and to inform residents of the aims and objectives of the Travel Plan. Marketing the Travel Plan may also raise resident's enthusiasm for considering alternative modes of travel.

Car Sharing

- 2.36 It is recommended that the benefits of car sharing in terms of cost savings and the impact on the environment is promoted to residents. As an example WSCC already benefits from an existing car share database (https://www.westsussex.gov.uk/living/roads_and_transport/travelwise/car_sharing_car_clubs_and_ele/west_sussex_car_sharing_scheme.aspx), which will be advertised on all Travel Plan marketing literature.
- 2.37 The use of an existing, larger car share scheme will increase the attractiveness of the scheme for residents, as the use of an existing scheme will include more people and is likely to cover more destinations.

Bicycle User Group

- 2.38 A local cycle group will be set up if there are enough people interested in forming a group. This could involve other local residents near to the site. Advertisement for this club will be initiated by the TPC.
- 2.39 In addition, the WSCC's own cycle journey planner will be promoted in welcome packs and across the sites. The planner can be found at <http://cyclejourneyplanner.westsussex.gov.uk/>

Promotion of National Awareness Weeks

- 2.40 To raise the awareness of the Travel Plan the Travel Plan Co-ordinator will ensure that all national awareness events are advertised and encouraged in the Travel Plan literature. Events that will be advertised include (but are not limited to):

- National Bike Week
- Travelwise Week
- Car Free Day
- Lifeshare Week
- Walk to School Week

Taxi Sharing

- 2.41 The TPC will investigate implementing a taxi sharing scheme for residents travelling to and from home to the same, or similar destinations. For example residents working in the same area, wanting to travel home late in the evening can share a taxi. *TaxiBUDI* is a scheme operated by *Liftshare*, which is used to match potential taxi sharers.
- 2.42 *TaxiBUDI* can also be used to minimise the environmental impact of business travel. The adoption of this scheme would negate the need for residents having to drive to work, as well as addressing the need for residents taking their cars to work for business travel during the working day.

Home Delivery Network

- 2.43 Many leading supermarkets offer a home delivery service so residents can order their groceries online, and have them delivered straight to their door. If the service incurs a delivery charge, they can combine their orders and only pay one charge between them.
- 2.44 If there is a significant demand for one particular delivery service, the TPC will look to negotiate with the supermarket to get either a free or discounted delivery service for residents. Information regarding the CO2 savings, general convenience and potential financial savings will all be included in the Travel Plan documentation provided to the end occupier as part of their welcome pack.

Travel Plan Website

- 2.45 All residents will be informed of the Local Authority's sustainable travel campaigns, and will be provided with up to date timetables, route maps and journey planning facilities.

Travel Welcome Packs

- 2.46 This document confirms that the site is appropriately located in relation to existing sustainable corridors. As part of the Travel Plan process all new residents will be issued with a pack outlining the locations of amenities, walking, cycling and public transport routes, and timetables.
- 2.47 These welcome packs will also contain website addresses for WSCC's sustainable travel information, to ensure residents are able to look up the latest route information.
- 2.48 It is noted that WSCC has commissioned the PINDAR Creative Travel Mapping Solution, which has been developed to allow developers, employers and other organisations to purchase site-specific multi-modal travel maps, notice boards and interactive PDFs. The Travel Plan Co-ordinator will review the mapping solutions available via the Council and consider whether to roll these out for the development site as part of the welcome packs.

3.0 TARGETS & MONITORING METHODS

- 3.1 The effective delivery of the Travel Plan will be the key to its success. This document provides the commitment that the measures to encourage sustainable travel to and from the site will be in place for the first occupiers of the site to benefit from, and that a TPC will lead the delivery of these measures. Commentary is provided below on the monitoring and Travel Plan targets for the scheme.

Monitoring

- 3.2 The success of the Travel Plan will be monitored in accordance with the TRICS Standard Assessment Methodology (TRICS SAM). This will involve three multi-modal surveys being undertaken over a five-year period, to evaluate whether the agreed trip rate reduction has been met. These surveys will be commissioned directly by the Travel Plan Co-ordinator with the TRICS organisation.
- 3.3 It is recommended that the first round of informal surveys are undertaken three months after initial occupations at the site. The first round of TRICS surveys will take place at 50% occupation and then every two years on the anniversary of the first survey, with the final survey conducted within one month of final site occupation. The surveys will provide data relating to the effectiveness of adopted Travel Plan measures. This data will then be used to inform new measures and evolve the plan as need be.

Enforcement/Mitigation Measures

- 3.5 Whilst the client is confident that the FTP will assist with making a step-change in travel behaviour for all end occupiers, if the final Travel Plan target presented below is not met additional measures or funding will need to be implemented. Options for this could be:
- for the developer to deliver sustainable travel vouchers, to encourage sustainable trip-making behaviour
 - to agree to a Travel Plan 'Reserve' fund, to allow the Council to draw on the funds to implement additional Travel Plan measures for the site
- 3.6 The developer is happy to discuss Enforcement/Mitigation measures at the appropriate time following the second set of Travel Plan surveys.

Existing Travel Patterns

- 3.7 As outlined in the DfT document *Making Residential Travel Plans Work*, it is difficult to set targets for the Travel Plan before occupation of the development. This is because the specific future travel needs of the occupiers of the development are largely unknown.
- 3.8 It is, however possible to make some estimations of expected travel behaviour based on comparable evidence. To do this Travel Plan guidance has been reviewed to provide an initial target.

Initial Travel Plan Target

- 3.9 Considerable research has been undertaken over a number of years into the benefits and impacts of introducing Travel Plans at new and existing developments. The DfT document, *Smarter Choices – Changing the Way We Travel* examined the effects of the implementation of *soft* measures (i.e. those measures influencing change in travel behaviour that do not require infrastructure changes).
- 3.10 **Table 3.1** shows the impact of each measure on future levels of traffic reported by DfT. Further research undertaken by DfT reported in the document *Making Travel Plans Work – Lessons from UK Case Studies*, further demonstrated the significant impact that Travel Plans can have on car trips. This research demonstrates that:
- 1) between 6% and 30% reduction in car use with basic walking and cycling measures
 - 2) between 17% and 33% reduction in car use upon the introduction of car sharing initiatives
- 3.11 The Transport for Quality of Life (on behalf of DfT) looked at the best tools for Travel Planning in urban areas. Their findings were reported in the document *Tools for Travel Planning in Urban Areas*. This study found that the introduction of Travel Plans can reduce car use by between 10% and 20%.

Purpose	Soft Factor	Impact	
		Non-urban	Urban
Journey to work	Workplace Travel Plan	2% or 4%	5% or 9%
	Car sharing	0.6% to 11%	0.6% or 11%
	Teleworking	3% or 12%	3% or 12%
Journey to school	School Travel Plan	4% or 20%	4% or 20%
Business journeys	Teleconferencing	2.5% or 18%	2.5% or 18%
Shopping trips	Home shopping for groceries	1% or 4%	1% or 4%
Personal business trips	Local collection points	1.5%	1.5%
Multiple journey purposes	Personalised Travel Planning	<1%	1% or 3%
	Public transport information and marketing	0.1% or 0.3%	0.3% or 1.1%
	Travel awareness campaigns	0.1% or 1%	0.1% or 1%
	Car clubs	-	0.03% to 0.06%
Combined impact of workplace Travel Plans, car sharing and teleworking, allowing for double counting		5% or 24%	8% or 26%
Note: For car sharing, car clubs, home shopping for groceries and local collection points, impact is expressed as % reduction in car mileage. For all other measures, impact is expressed as % reduction in car trips.			

Table 3.1: Impact of Soft Measures (DfT)

- 3.12 The research findings outlined above was further strengthened by the results of the Sustainable Towns Initiatives. This initiative concentrated spending on raising awareness of sustainable modes of travel and the introduction of smarter choice measures. The DfT document, *Effects of Smarter Choice Programme in Sustainable Travel Towns*, found that the measures introduced produced an average reduction in car use of 7% over the study programme.
- 3.13 In line with DfT research and Travel Plan guidance, it is recommended that the following initial target is progressed over the first two years of site occupations:

"after 24 months of site occupations the development will look to reduce single occupancy car trips by 10% over a 12 hour period (0700 to 1900 hours)"

- 3.14 It is recommended that this initial Travel Plan target is monitored and reviewed across the first 24 months of the site occupancy. If the target is considered to be being easily met or too challenging then consideration to altering the reduction will be discussed with WSCC, and a revised target agreed.

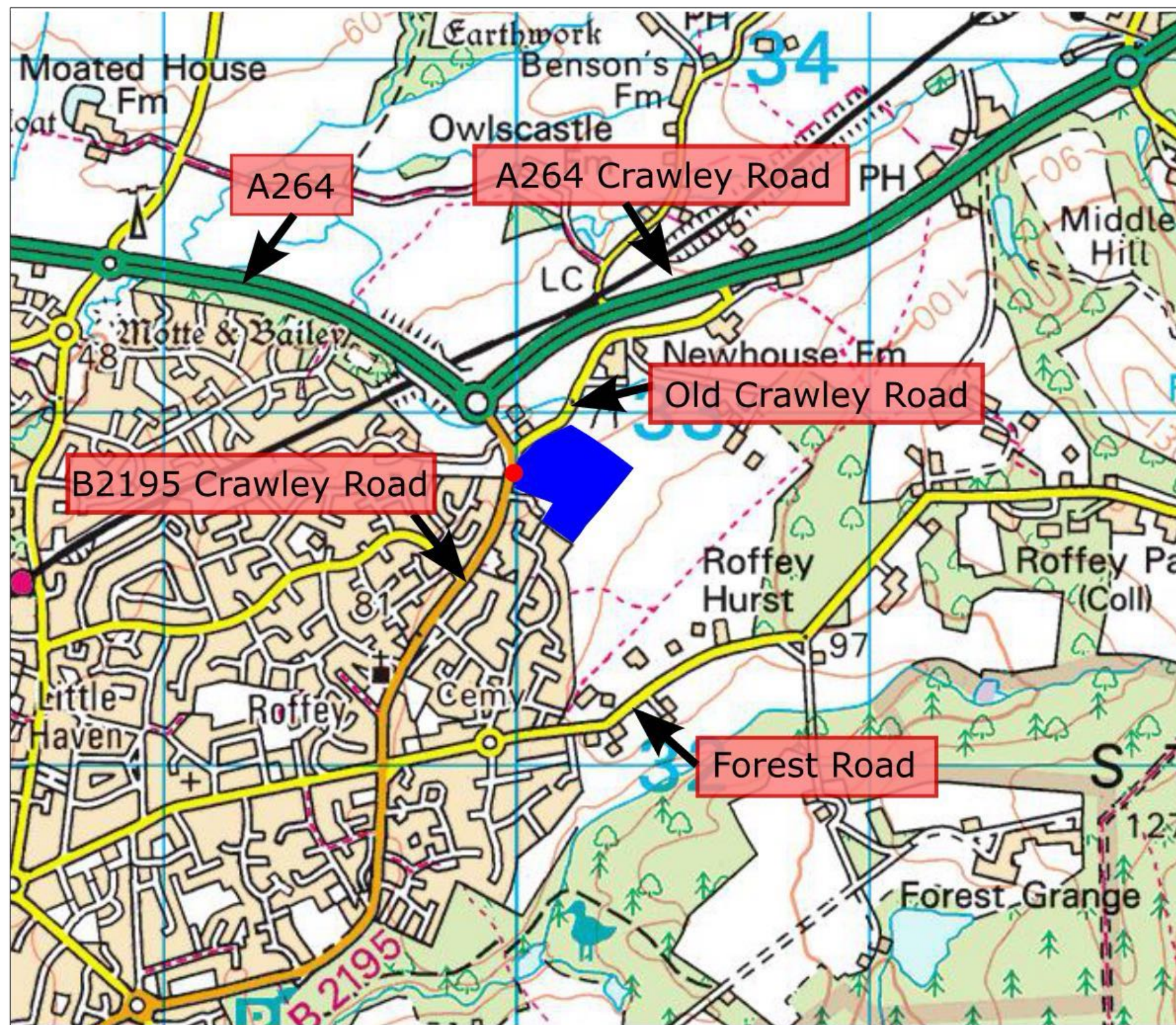
4.0 CONCLUSIONS

- 4.1 This FTP has been commissioned by FCP Land 4 Limited to support sustainable travel to and from their proposed 120 residential unit scheme on land to the south of New House Farm, Old Crawley Road, Faygate.

- 4.2 This document has been prepared as supporting information for a planning application for the residential development and looks to encourage end occupiers of the development to travel as sustainably as possible. This document looks to deliver the requirements of the National Planning Policy Framework (NPPF), as well as the appropriate Horsham District Council and West Sussex County Council local highway and planning policies.
- 4.3 This document confirms the sustainable credentials of the site. It is considered that the location of the site, coupled with the recommended policy initiatives, will contribute towards reducing the reliance on the private car and meeting local transport policy guidelines.
- 4.4 In addition, the commitment to ensuring the nominated Travel Plan Co-ordinator is in post through the build out of the scheme will ensure the Travel Plan has the maximum level of support and delivers the suggested 10% reduction in single occupancy car trips from the site between 0700 and 1900 hours over the first 24 months of the Travel Plan being implemented and operational.
- 4.5 This document is seen as the first iteration of the Travel Plan for the site, and it will be regularly updated and refined as measures are implemented, surveys undertaken and the effectiveness of the *hard* and *soft* Travel Plan measures evaluated.
- 4.6 This approach will ensure that all end-occupiers of the development are encouraged to travel as sustainably as possible from the site from first occupation.

Key

- Development Site
- Proposed Access



**SK21905 OLD CRAWLEY ROAD
FAYGATE**

Plan 1: Site Location

Location Plan & Local Highway
Network

Drawn by: KAT
Revision: -

Checked by: MAK
Date: 04/12/2025

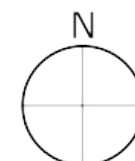
Key



Site Location

2km walking catchment

meters



**SK21905 OLD CRAWLEY ROAD,
FAYGATE**

Plan 2: Accessibility

2km Walking Catchment

Drawn by: KAT

Revision: -

Checked by: MAK

Date: 04/12/25

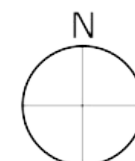
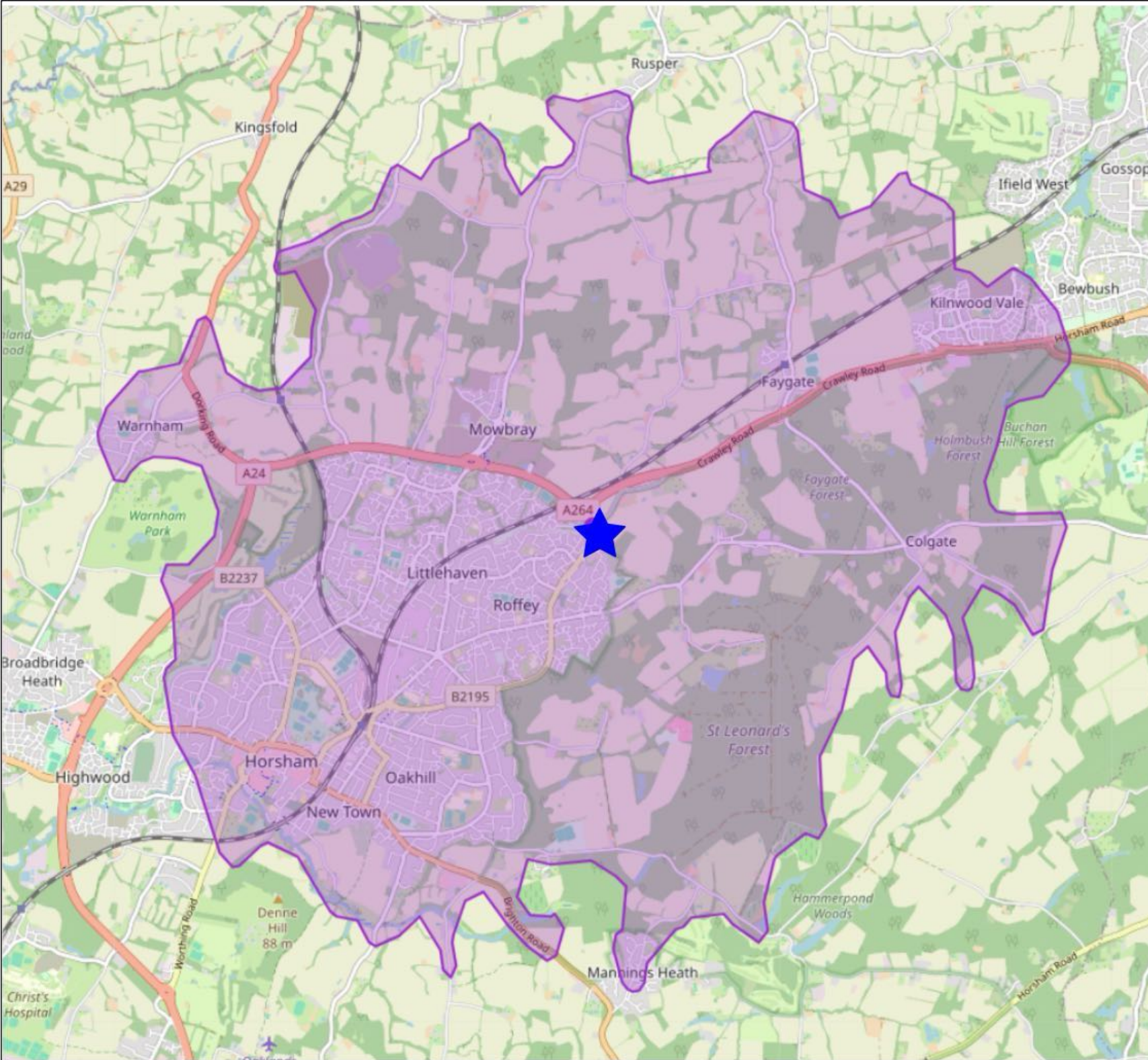
Key



Site Location



5km cycling catchment



**SK21905 OLD CRAWLEY ROAD,
FAYGATE**

Plan 3: Accessibility

5km Cycling Catchment

Drawn by: KAT

Revision: -

Checked by: MAK

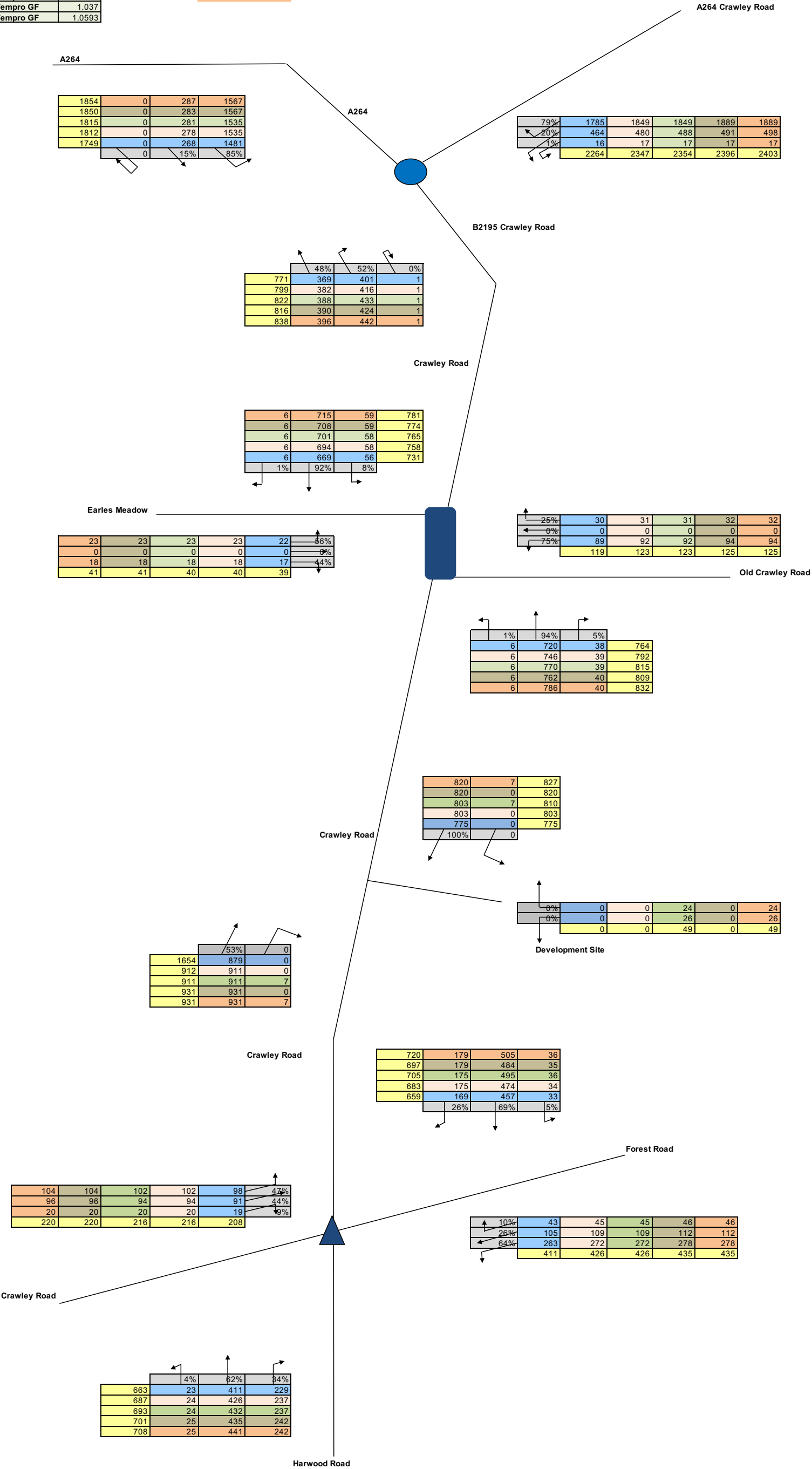
Date: 04/12/25

APPENDIX J

Faygate, Horsham - Fairfax Acquisitions Limited
AM Peak Flows - March 2026 Modelling
AM Peak Hour: MCTC 0745-0845
AM Peak Hour: ATC 0800-0900

2026 Surveyed
2029 Opening Year
2029 OY + Dev
2031 Future Year
2031 FY + DEV

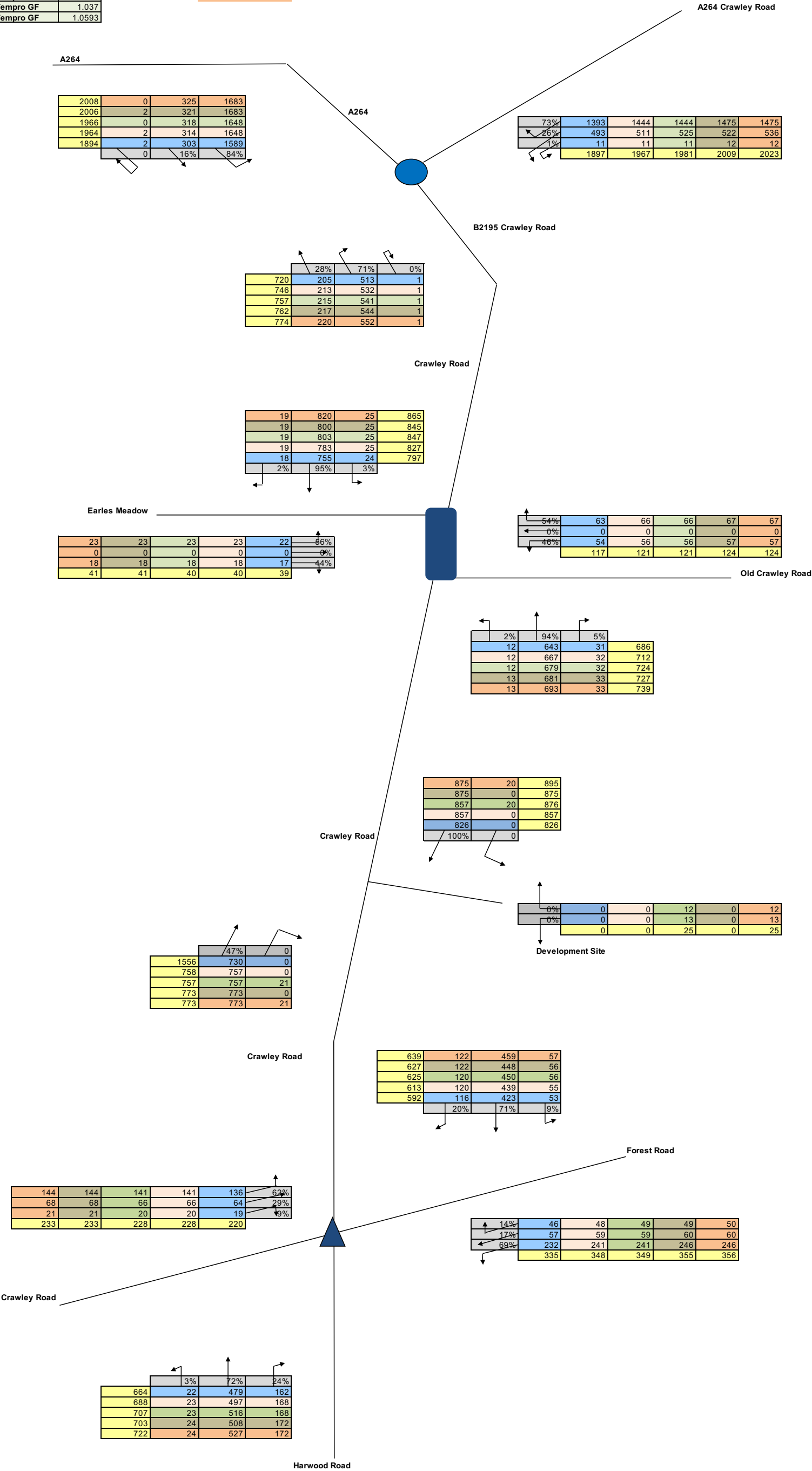
Horsham 001 MSOA	
AM 2026 to 2029 Tempro GF	1.0364
AM 2026 to 2031 Tempro GF	1.0583
PM 2026 to 2029 Tempro GF	1.037
PM 2026 to 2031 Tempro GF	1.0593



Faygate, Horsham - Fairfax Acquisitions Limited
PM Peak Flows - March 2026 Modelling
PM Peak Hour: MCTC 1700-1800
PM Peak Hour: ATC 1700-1800

2026 Surveyed
2029 Opening Year
2029 OY + Dev
2031 Future Year
2031 FY + DEV

Horsham 001 MSOA	
AM 2026 to 2029 Tempro GF	1.0364
AM 2026 to 2031 Tempro GF	1.0583
PM 2026 to 2029 Tempro GF	1.037
PM 2026 to 2031 Tempro GF	1.0593



APPENDIX K

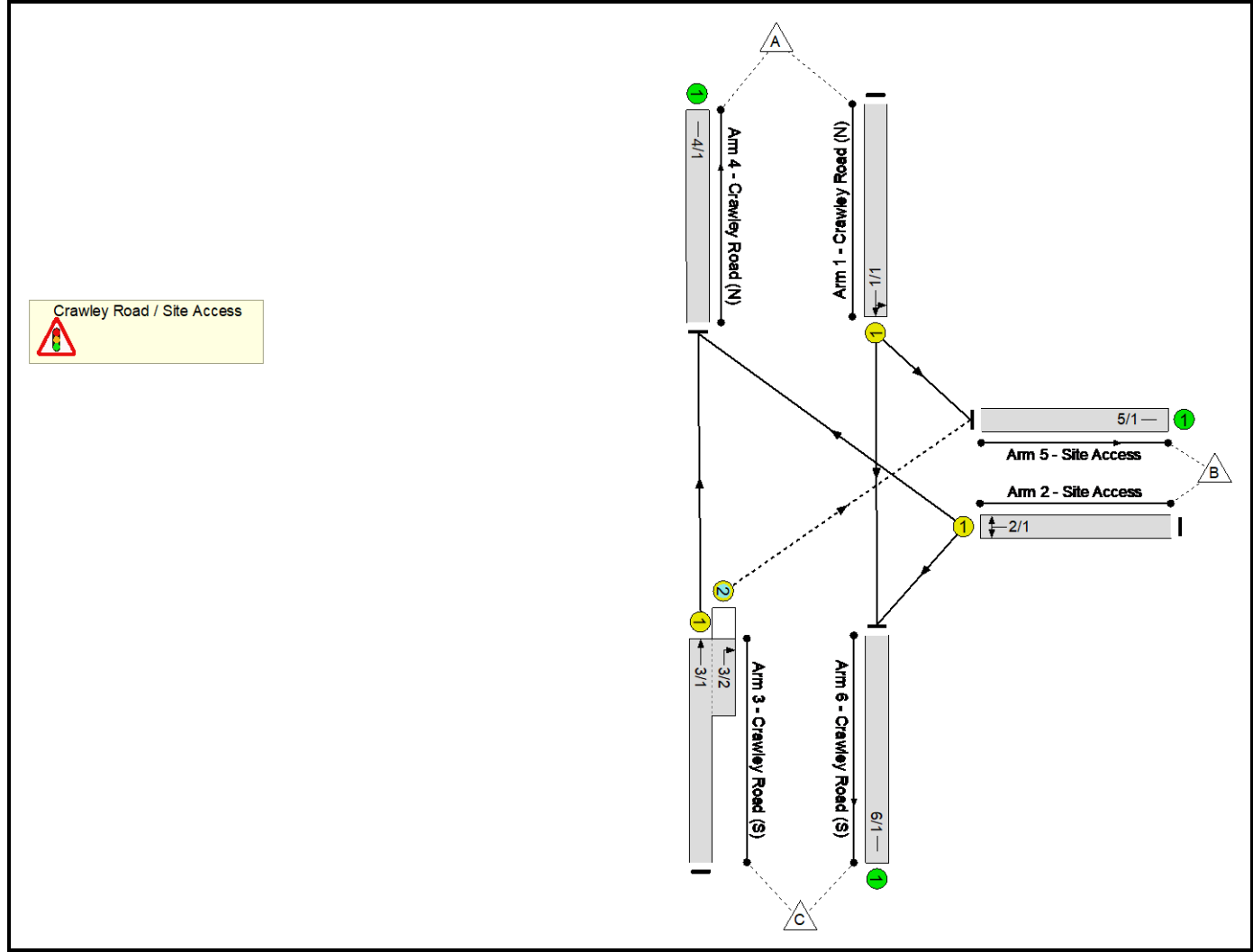
Full Input Data And Results

Full Input Data And Results

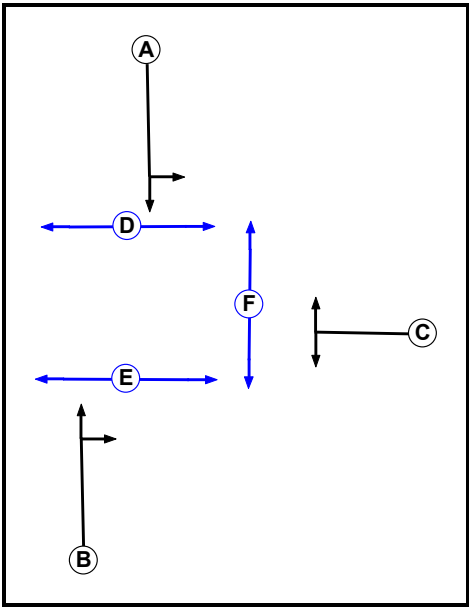
User and Project Details

Project:	Land at Crawley Road, Faygate
Title:	Proposed Site Access
Location:	Faygate
Client:	SDP
Additional detail:	
File name:	Crawley Road - Site Access 260311.lsg3x
Author:	JAT
Company:	SK
Address:	Albion Wharf, Manchester

Network Layout Diagram



Phase Diagram



Phase Input Data

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

Phase Intergreens Matrix

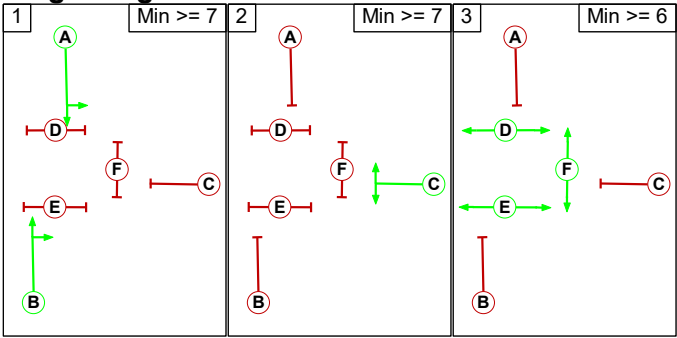
Terminating Phase	Starting Phase						
		A	B	C	D	E	F
	A		-	7	5	7	7
	B	-		7	7	5	7
	C	7	7		7	7	5
	D	12	12	12		-	-
	E	12	12	12	-		-
	F	12	12	12	-	-	

Phases in Stage

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

Full Input Data And Results

Stage Diagram



Phase Delays

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

Prohibited Stage Change

From Stage	To Stage			
		1	2	3
	1		7	7
	2	7		7
	3	12	12	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Crawley Road / Site Access											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
3/2 (Crawley Road (S))	5/1 (Right)	1439	0	1/1	1.09	All	2.00	-	0.50	2	2.00

Full Input Data And Results

Lane Input Data

Junction: Crawley Road / Site Access												
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 (Crawley Road (N))	U	A	2	3	60.0	Geom	-	4.10	0.00	Y	Arm 5 Left	12.00
											Arm 6 Ahead	Inf
2/1 (Site Access)	U	C	2	3	60.0	Geom	-	4.00	0.00	Y	Arm 4 Right Arm 6 Left	Inf 12.00
3/1 (Crawley Road (S))	U	B	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 4 Ahead	Inf
3/2 (Crawley Road (S))	O	B	2	3	5.0	Geom	-	3.50	0.00	Y	Arm 5 Right	15.00
4/1 (Crawley Road (N))	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Site Access)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Crawley Road (S))	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2029 AM Opening Year with Development'	07:45	08:45	01:00	
2: '2029 PM Opening Year with Development'	17:00	18:00	01:00	
3: '2031 AM Future Year with Development'	07:45	08:45	01:00	
4: '2031 PM Future Year with Development'	17:00	18:00	01:00	

Scenario 1: '2024 AM Peak with Development' (FG1: '2029 AM Opening Year with Development', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin	A	B	C	Tot.	
	A	0	7	803	810
	B	24	0	26	50
	C	911	7	0	918
	Tot.	935	14	829	1778

Traffic Lane Flows

Lane	Scenario 1: 2024 AM Peak with Development
Junction: Crawley Road / Site Access	
1/1	810
2/1	50
3/1 (with short)	918(In) 911(Out)
3/2 (short)	7
4/1	935
5/1	14
6/1	829

Lane Saturation Flows

Junction: Crawley Road / Site Access								
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 (Crawley Road (N))	4.10	0.00	Y	Arm 5 Left	12.00	0.9 %	2023	2023
				Arm 6 Ahead	Inf	99.1 %		
2/1 (Site Access)	4.00	0.00	Y	Arm 4 Right	Inf	48.0 %	1892	1892
				Arm 6 Left	12.00	52.0 %		
3/1 (Crawley Road (S))	3.50	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1965	1965
3/2 (Crawley Road (S))	3.50	0.00	Y	Arm 5 Right	15.00	100.0 %	1786	1786
4/1 (Crawley Road (N) Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Site Access Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Crawley Road (S) Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2024 PM Peak with Development' (FG2: '2029 PM Opening Year with Development', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	20	857	877
	B	12	0	13	25
	C	757	21	0	778
	Tot.	769	41	870	1680

Traffic Lane Flows

Lane	Scenario 2: 2024 PM Peak with Development
Junction: Crawley Road / Site Access	
1/1	877
2/1	25
3/1 (with short)	778(In) 757(Out)
3/2 (short)	21
4/1	769
5/1	41
6/1	870

Lane Saturation Flows

Junction: Crawley Road / Site Access								
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 (Crawley Road (N))	4.10	0.00	Y	Arm 5 Left	12.00	2.3 %	2019	2019
				Arm 6 Ahead	Inf	97.7 %		
2/1 (Site Access)	4.00	0.00	Y	Arm 4 Right	Inf	48.0 %	1892	1892
				Arm 6 Left	12.00	52.0 %		
3/1 (Crawley Road (S))	3.50	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1965	1965
3/2 (Crawley Road (S))	3.50	0.00	Y	Arm 5 Right	15.00	100.0 %	1786	1786
4/1 (Crawley Road (N) Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Site Access Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Crawley Road (S) Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 3: '2031 AM peak with Development' (FG3: '2031 AM Future Year with Development', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	7	820	827
	B	24	0	26	50
	C	931	7	0	938
	Tot.	955	14	846	1815

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: 2031 AM peak with Development
Junction: Crawley Road / Site Access	
1/1	827
2/1	50
3/1 (with short)	938(In) 931(Out)
3/2 (short)	7
4/1	955
5/1	14
6/1	846

Lane Saturation Flows

Junction: Crawley Road / Site Access								
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 (Crawley Road (N))	4.10	0.00	Y	Arm 5 Left	12.00	0.8 %	2023	2023
				Arm 6 Ahead	Inf	99.2 %		
2/1 (Site Access)	4.00	0.00	Y	Arm 4 Right	Inf	48.0 %	1892	1892
				Arm 6 Left	12.00	52.0 %		
3/1 (Crawley Road (S))	3.50	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1965	1965
3/2 (Crawley Road (S))	3.50	0.00	Y	Arm 5 Right	15.00	100.0 %	1786	1786
4/1 (Crawley Road (N) Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Site Access Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Crawley Road (S) Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 4: '2031 PM Peak with Development' (FG4: '2031 PM Future Year with Development', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	20	875	895
	B	12	0	13	25
	C	773	21	0	794
	Tot.	785	41	888	1714

Traffic Lane Flows

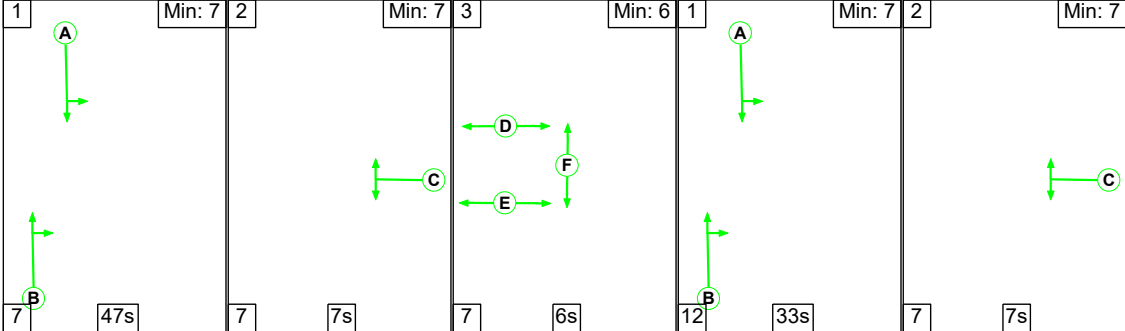
Lane	Scenario 4: 2031 PM Peak with Development
Junction: Crawley Road / Site Access	
1/1	895
2/1	25
3/1 (with short)	794(In) 773(Out)
3/2 (short)	21
4/1	785
5/1	41
6/1	888

Lane Saturation Flows

Junction: Crawley Road / Site Access								
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 (Crawley Road (N))	4.10	0.00	Y	Arm 5 Left	12.00	2.2 %	2019	2019
				Arm 6 Ahead	Inf	97.8 %		
2/1 (Site Access)	4.00	0.00	Y	Arm 4 Right	Inf	48.0 %	1892	1892
				Arm 6 Left	12.00	52.0 %		
3/1 (Crawley Road (S))	3.50	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1965	1965
3/2 (Crawley Road (S))	3.50	0.00	Y	Arm 5 Right	15.00	100.0 %	1786	1786
4/1 (Crawley Road (N) Lane 1)	Infinite Saturation Flow						Inf	Inf
5/1 (Site Access Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Crawley Road (S) Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 1: '2024 AM Peak with Development' (FG1: '2029 AM Opening Year with Development', Plan 1: 'Network Control Plan 1')

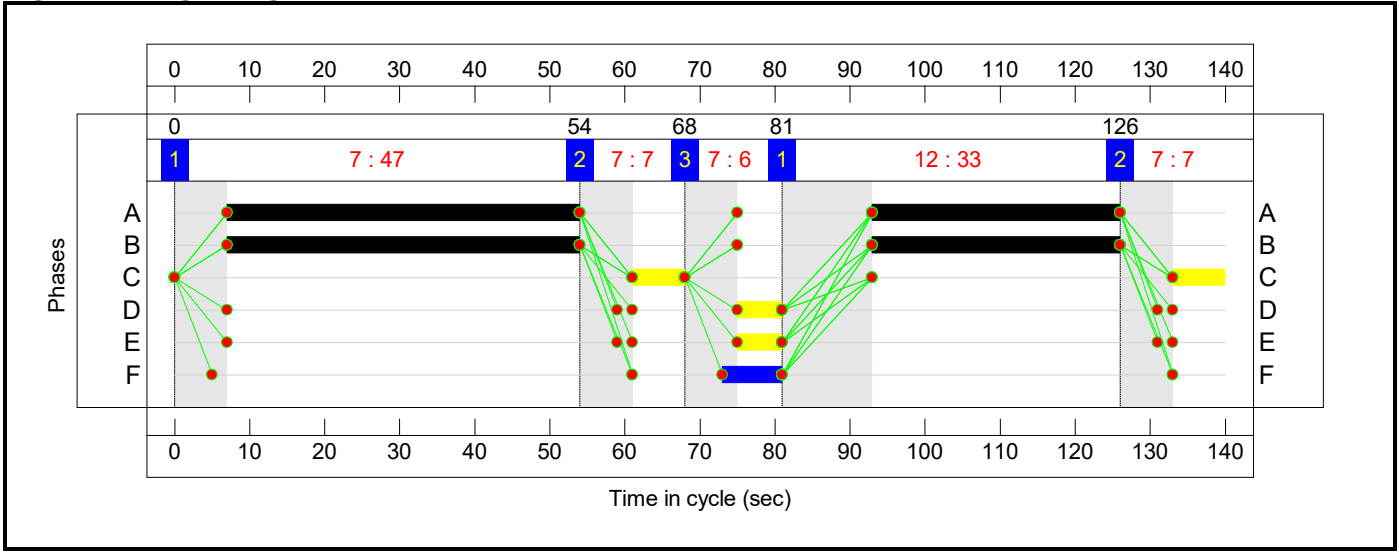
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	1	2
Duration	47	7	6	33	7
Change Point	0	54	68	81	126

Signal Timings Diagram



Full Input Data And Results

Network Results

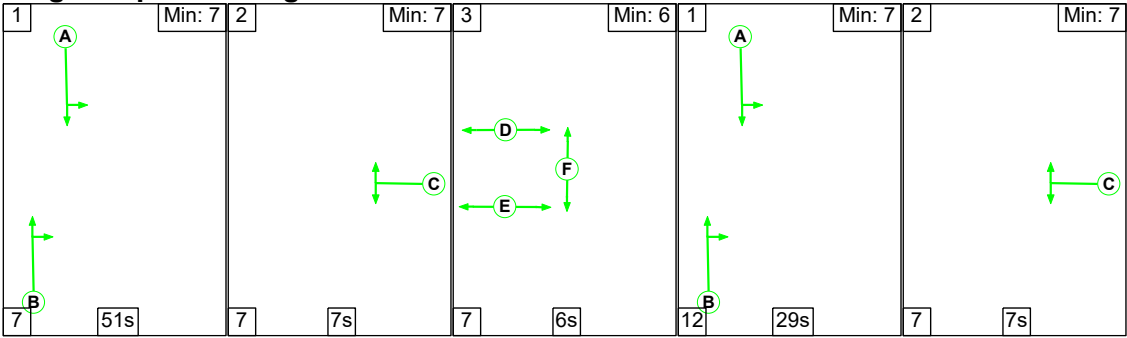
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)
Network: Proposed Site Access	-	-	N/A	-	-		-	-	-	-	-	-	79.4%	-
Crawley Road / Site Access	-	-	N/A	-	-		-	-	-	-	-	-	79.4%	-
1/1	Crawley Road (N) Left Ahead	U	N/A	N/A	A		2	80	-	810	2023	1185	68.4%	810
2/1	Site Access Right Left	U	N/A	N/A	C		2	14	-	50	1892	216	23.1%	50
3/1+3/2	Crawley Road (S) Ahead Right	U+O	N/A	N/A	B		2	80	-	918	1965:1786	1148+9	79.4 : 79.4%	918
4/1	Crawley Road (N)	U	N/A	N/A	-		-	-	-	935	Inf	Inf	0.0%	935
5/1	Site Access	U	N/A	N/A	-		-	-	-	14	Inf	Inf	0.0%	14
6/1	Crawley Road (S)	U	N/A	N/A	-		-	-	-	829	Inf	Inf	0.0%	829
Item	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)	Back of Uniform Q At End of Red(pcu)	
Network: Proposed Site Access	-	7	0	0	6.0	3.1	0.0	9.1	-	-	-	-	-	
Crawley Road / Site Access	-	7	0	0	6.0	3.1	0.0	9.1	-	-	-	-	-	
1/1	810	-	-	-	2.5	1.1	-	3.5	15.8	14.2	1.1	15.2	8.1	
2/1	50	-	-	-	0.4	0.2	-	0.5	39.1	0.9	0.2	1.1	0.9	
3/1+3/2	918	7	0	0	3.1	1.9	0.0	5.0	19.8	17.8	1.9	19.7	9.1	
4/1	935	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
5/1	14	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
6/1	829	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	

Full Input Data And Results

C1	PRC for Signalled Lanes (%):	13.4	Total Delay for Signalled Lanes (pcuHr):	9.13	Cycle Time (s):	140
	PRC Over All Lanes (%):	13.4	Total Delay Over All Lanes(pcuHr):	9.13		

Full Input Data And Results
Scenario 2: '2024 PM Peak with Development' (FG2: '2029 PM Opening Year with Development', Plan 1: 'Network Control Plan 1')

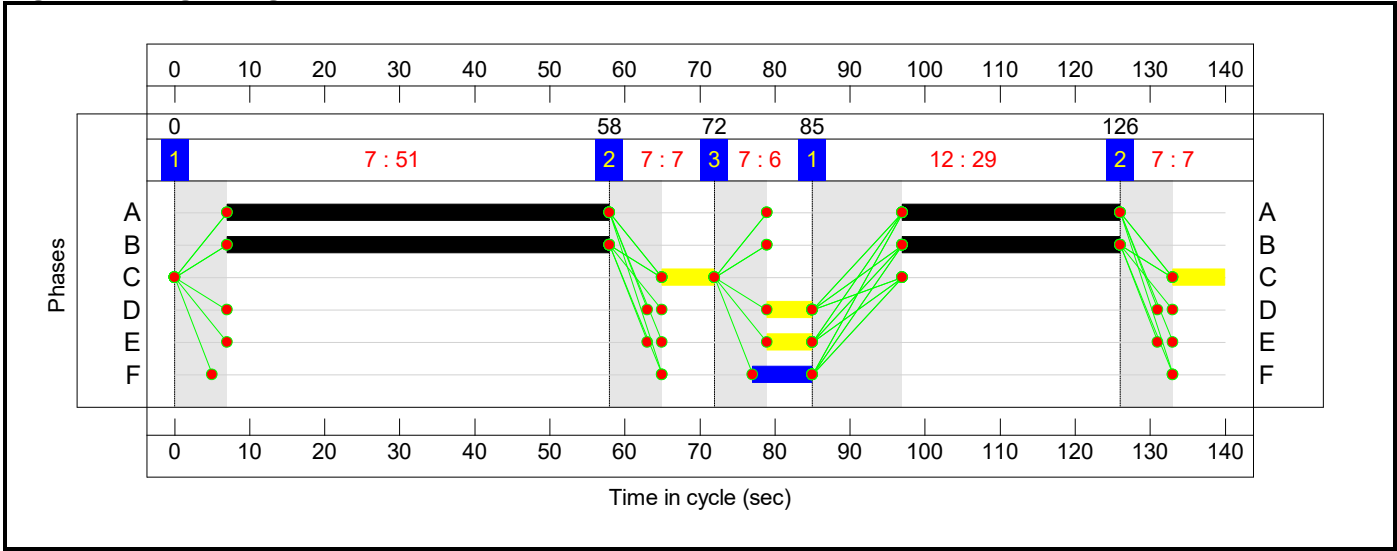
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	1	2
Duration	51	7	6	29	7
Change Point	0	58	72	85	126

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)
Network: Proposed Site Access	-	-	N/A	-	-		-	-	-	-	-	-	74.2%	-
Crawley Road / Site Access	-	-	N/A	-	-		-	-	-	-	-	-	74.2%	-
1/1	Crawley Road (N) Left Ahead	U	N/A	N/A	A		2	80	-	877	2019	1183	74.2%	877
2/1	Site Access Right Left	U	N/A	N/A	C		2	14	-	25	1892	216	11.6%	25
3/1+3/2	Crawley Road (S) Ahead Right	U+O	N/A	N/A	B		2	80	-	778	1965:1786	1129+31	67.1 : 67.1%	778
4/1	Crawley Road (N)	U	N/A	N/A	-		-	-	-	769	Inf	Inf	0.0%	769
5/1	Site Access	U	N/A	N/A	-		-	-	-	41	Inf	Inf	0.0%	41
6/1	Crawley Road (S)	U	N/A	N/A	-		-	-	-	870	Inf	Inf	0.0%	870
Item	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)	Back of Uniform Q At End of Red(pcu)	
Network: Proposed Site Access	-	13	0	8	5.3	2.5	0.1	7.9	-	-	-	-	-	
Crawley Road / Site Access	-	13	0	8	5.3	2.5	0.1	7.9	-	-	-	-	-	
1/1	877	-	-	-	2.8	1.4	-	4.3	17.5	16.3	1.4	17.7	8.8	
2/1	25	-	-	-	0.2	0.1	-	0.3	37.3	0.4	0.1	0.5	0.4	
3/1+3/2	778	13	0	8	2.3	1.0	0.1	3.4	15.7	13.3	1.0	14.3	7.6	
4/1	769	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
5/1	41	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
6/1	870	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	

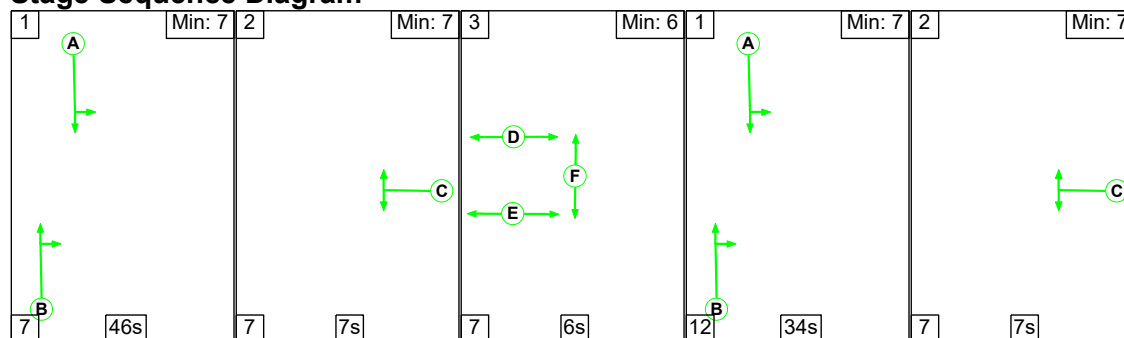
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	21.4	Total Delay for Signalled Lanes (pcuHr):	7.91	Cycle Time (s):	140
	PRC Over All Lanes (%):	21.4	Total Delay Over All Lanes(pcuHr):	7.91		

Full Input Data And Results

Scenario 3: '2031 AM peak with Development' (FG3: '2031 AM Future Year with Development', Plan 1: 'Network Control Plan 1')

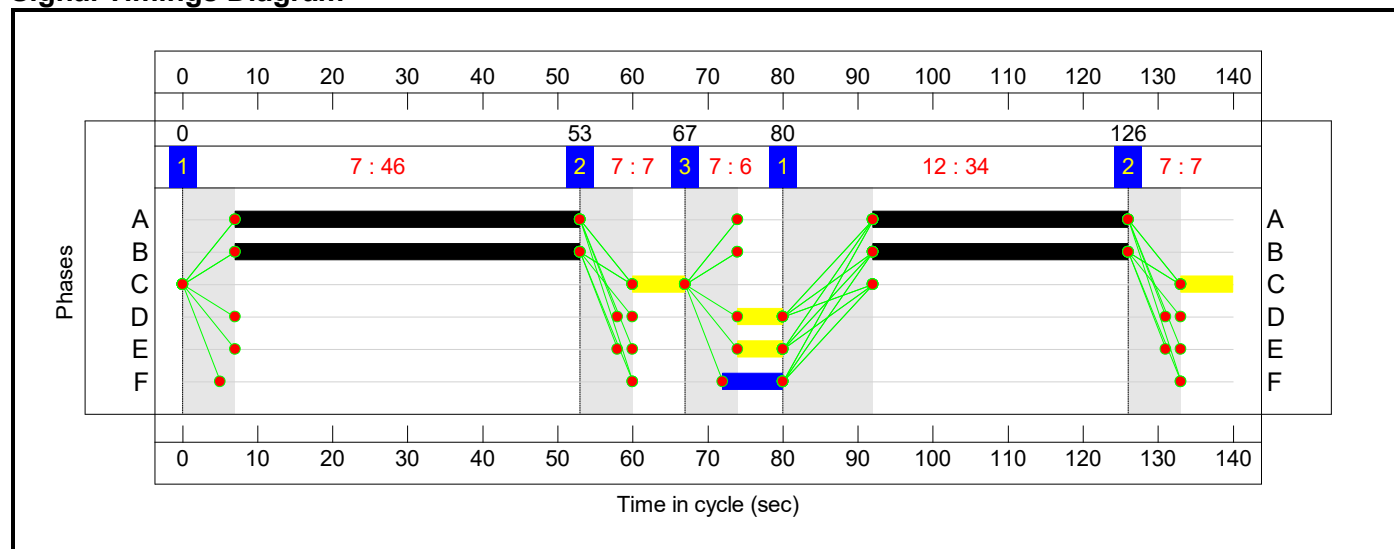
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	1	2
Duration	46	7	6	34	7
Change Point	0	53	67	80	126

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)
Network: Proposed Site Access	-	-	N/A	-	-		-	-	-	-	-	-	81.1%	-
Crawley Road / Site Access	-	-	N/A	-	-		-	-	-	-	-	-	81.1%	-
1/1	Crawley Road (N) Left Ahead	U	N/A	N/A	A		2	80	-	827	2023	1185	69.8%	827
2/1	Site Access Right Left	U	N/A	N/A	C		2	14	-	50	1892	216	23.1%	50
3/1+3/2	Crawley Road (S) Ahead Right	U+O	N/A	N/A	B		2	80	-	938	1965:1786	1148+9	81.1 : 81.1%	938
4/1	Crawley Road (N)	U	N/A	N/A	-		-	-	-	955	Inf	Inf	0.0%	955
5/1	Site Access	U	N/A	N/A	-		-	-	-	14	Inf	Inf	0.0%	14
6/1	Crawley Road (S)	U	N/A	N/A	-		-	-	-	846	Inf	Inf	0.0%	846
Item	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)	Back of Uniform Q At End of Red(pcu)	
Network: Proposed Site Access	-	7	0	0	6.2	3.4	0.0	9.6	-	-	-	-	-	
Crawley Road / Site Access	-	7	0	0	6.2	3.4	0.0	9.6	-	-	-	-	-	
1/1	827	-	-	-	2.6	1.1	-	3.7	16.1	14.7	1.1	15.9	8.3	
2/1	50	-	-	-	0.4	0.2	-	0.5	39.1	0.9	0.2	1.1	0.9	
3/1+3/2	938	7	0	0	3.3	2.1	0.0	5.4	20.6	18.7	2.1	20.8	9.3	
4/1	955	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
5/1	14	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
6/1	846	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	

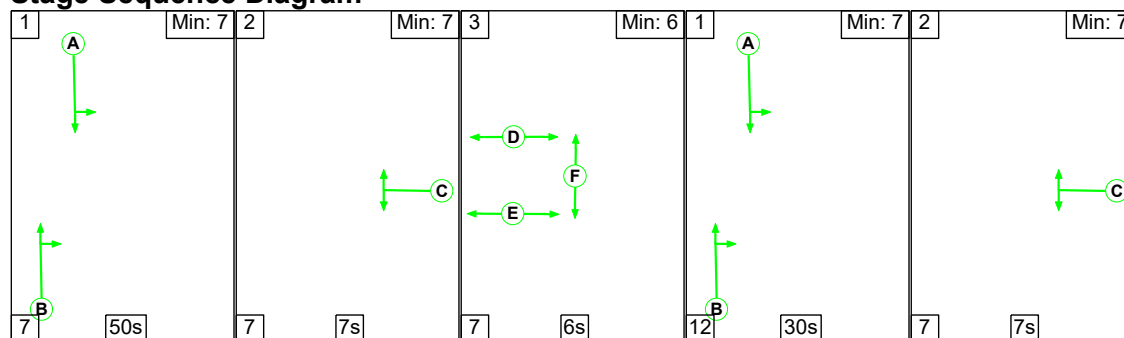
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	11.0	Total Delay for Signalled Lanes (pcuHr):	9.63	Cycle Time (s):	140
	PRC Over All Lanes (%):	11.0	Total Delay Over All Lanes(pcuHr):	9.63		

Full Input Data And Results

Scenario 4: '2031 PM Peak with Development' (FG4: '2031 PM Future Year with Development', Plan 1: 'Network Control Plan 1')

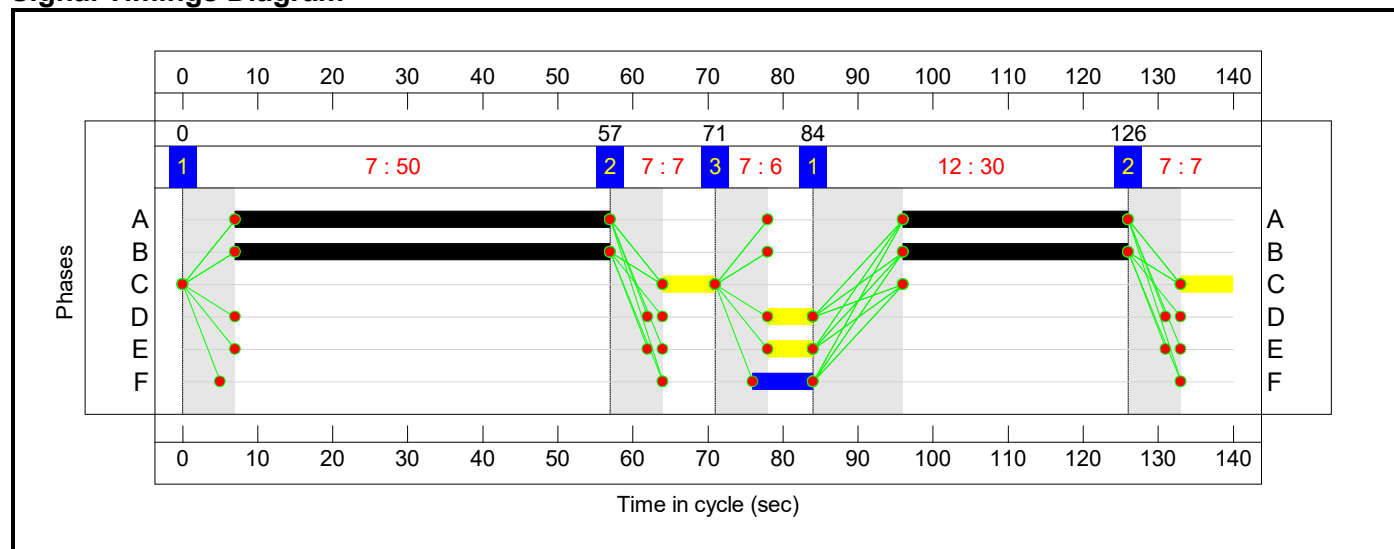
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	1	2
Duration	50	7	6	30	7
Change Point	0	57	71	84	126

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)
Network: Proposed Site Access	-	-	N/A	-	-		-	-	-	-	-	-	75.7%	-
Crawley Road / Site Access	-	-	N/A	-	-		-	-	-	-	-	-	75.7%	-
1/1	Crawley Road (N) Left Ahead	U	N/A	N/A	A		2	80	-	895	2019	1183	75.7%	895
2/1	Site Access Right Left	U	N/A	N/A	C		2	14	-	25	1892	216	11.6%	25
3/1+3/2	Crawley Road (S) Ahead Right	U+O	N/A	N/A	B		2	80	-	794	1965:1786	1129+31	68.4 : 68.4%	794
4/1	Crawley Road (N)	U	N/A	N/A	-		-	-	-	785	Inf	Inf	0.0%	785
5/1	Site Access	U	N/A	N/A	-		-	-	-	41	Inf	Inf	0.0%	41
6/1	Crawley Road (S)	U	N/A	N/A	-		-	-	-	888	Inf	Inf	0.0%	888
Item	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)	Back of Uniform Q At End of Red(pcu)	
Network: Proposed Site Access	-	12	0	9	5.5	2.7	0.1	8.3	-	-	-	-	-	
Crawley Road / Site Access	-	12	0	9	5.5	2.7	0.1	8.3	-	-	-	-	-	
1/1	895	-	-	-	2.9	1.5	-	4.5	18.0	16.9	1.5	18.4	8.9	
2/1	25	-	-	-	0.2	0.1	-	0.3	37.3	0.4	0.1	0.5	0.4	
3/1+3/2	794	12	0	9	2.4	1.1	0.1	3.5	16.1	13.8	1.1	14.8	7.8	
4/1	785	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
5/1	41	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
6/1	888	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	

Full Input Data And Results

C1	PRC for Signalled Lanes (%):	18.9	Total Delay for Signalled Lanes (pcuHr):	8.28	Cycle Time (s):	140
	PRC Over All Lanes (%):	18.9	Total Delay Over All Lanes(pcuHr):	8.28		

APPENDIX L

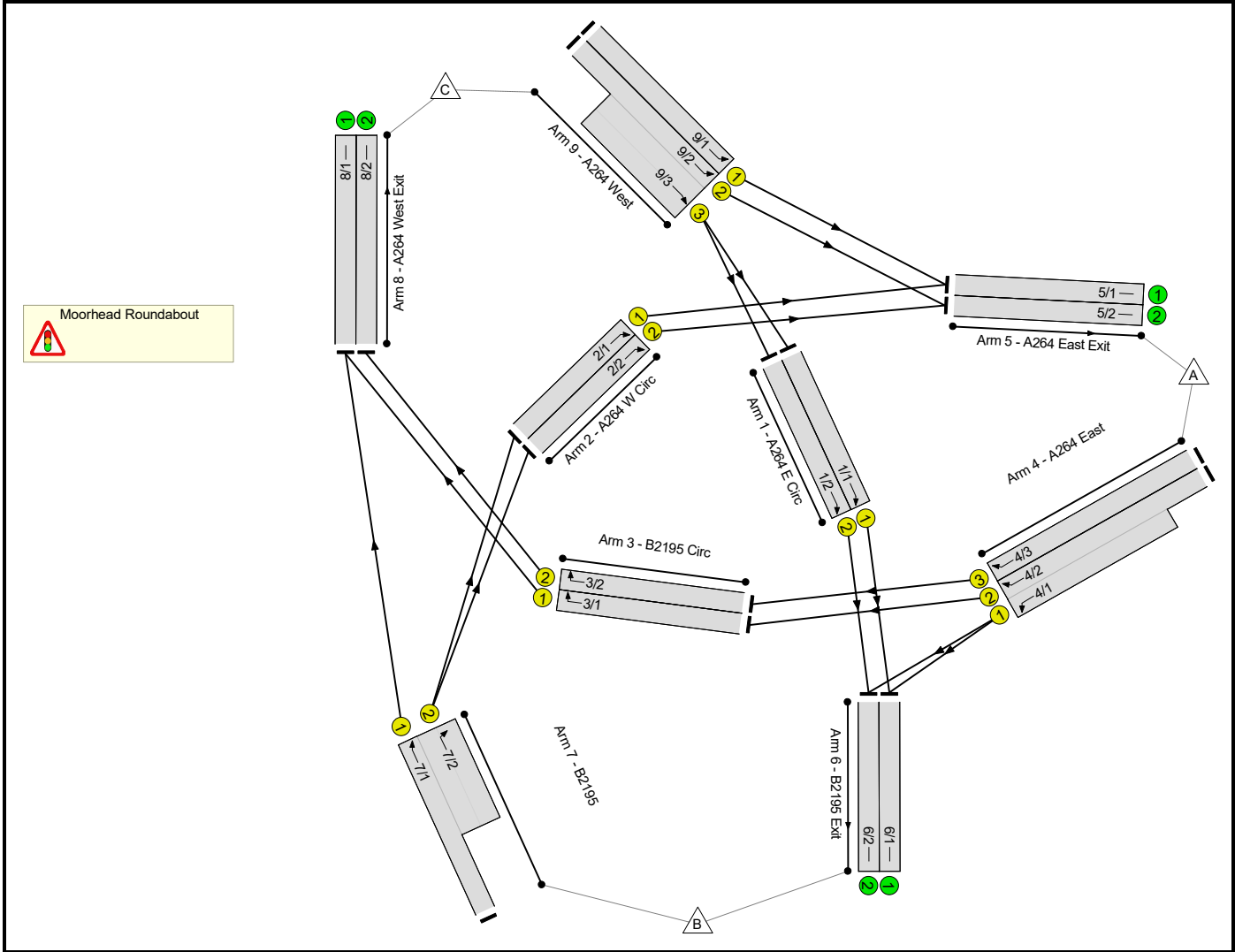
Full Input Data And Results

Full Input Data And Results

User and Project Details

Project:	Land at Crawley Road, Faygate
Title:	Moorhead Roundabout
Location:	Faygate
Client:	SDP
Design Layout Ref:	Committed Improvement Scheme
Additional detail:	
File name:	Moorhead Roundabout v4a.lsg3x
Author:	JAT
Company:	SK
Address:	Albion Wharf, Manchester

Network Layout Diagram





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	Traffic		7	7
F	Traffic		7	7
G	Traffic		7	7
H	Traffic		7	7
I	Traffic		7	7

Full Input Data And Results

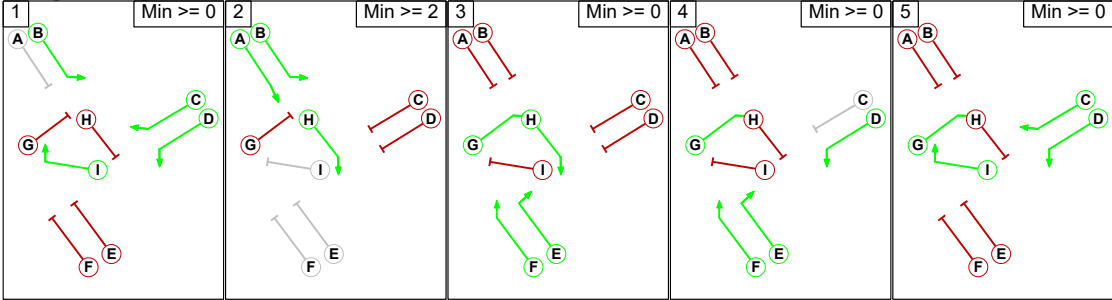
Phase Intergreens Matrix

Terminating Phase	Starting Phase									
		A	B	C	D	E	F	G	H	I
	A		-	-	-	-	-	7	-	-
	B	-		-	-	-	-	7	-	-
	C	-	-		-	-	-	-	7	-
	D	-	-	-		-	-	-	7	-
	E	-	-	-	-		-	-	-	7
	F	-	-	-	-	-		-	-	7
	G	7	7	-	-	-	-		-	-
	H	-	-	7	7	-	-	-		-
	I	-	-	-	-	7	7	-	-	

Phases in Stage

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

Stage Diagram



Phase Delays

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

Prohibited Stage Change

From Stage	To Stage					
		1	2	3	4	5
	1		7	7	7	7
	2	7		7	7	7
	3	7	7		7	7
	4	7	7	7		7
	5	7	7	7	7	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Moorhead Roundabout
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: Moorhead Roundabout												
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 (A264 E Circ)	U	H	2	3	7.3	Geom	-	4.70	0.00	Y	Arm 6 Ahead	50.00
1/2 (A264 E Circ)	U	H	2	3	7.3	Geom	-	4.00	0.00	N	Arm 6 Ahead	50.00
2/1 (A264 W Circ)	U	G	2	3	10.4	Geom	-	4.70	0.00	N	Arm 5 Right	Inf
2/2 (A264 W Circ)	U	G	2	3	10.4	Geom	-	4.00	0.00	N	Arm 5 Right	Inf
3/1 (B2195 Circ)	U	I	2	3	7.0	Geom	-	4.40	0.00	N	Arm 8 Right	30.00
3/2 (B2195 Circ)	U	I	2	3	7.0	Geom	-	4.40	0.00	Y	Arm 8 Right	30.00
4/1 (A264 East)	U	D	2	3	33.0	Geom	-	3.80	0.00	Y	Arm 6 Left	50.00
4/2 (A264 East)	U	C	2	3	60.0	Geom	-	3.80	0.00	Y	Arm 3 Ahead	100.00
4/3 (A264 East)	U	C	2	3	60.0	Geom	-	3.80	0.00	N	Arm 3 Ahead	100.00
5/1 (A264 East Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/2 (A264 East Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (B2195 Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/2 (B2195 Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (B2195)	U	F	2	3	60.0	Geom	-	3.60	0.00	Y	Arm 8 Ahead	55.00
7/2 (B2195)	U	E	2	3	7.8	User	3600	-	-	-	-	-
8/1 (A264 West Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/2 (A264 West Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
9/1 (A264 West)	U	B	2	3	60.0	Geom	-	3.70	0.00	Y	Arm 5 Ahead	55.00

Full Input Data And Results

9/2 (A264 West)	U	B	2	3	60.0	Geom	-	3.70	0.00	Y	Arm 5 Ahead	55.00
9/3 (A264 West)	U	A	2	3	9.6	User	3600	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2026 AM Peak Observed'	07:45	08:45	01:00	
2: '2026 PM Peak Observed'	17:00	18:00	01:00	
3: '2029 AM Peak Base'	07:45	08:45	01:00	
4: '2029 PM Peak Base'	17:00	18:00	01:00	
5: '2029 AM Peak with Development'	07:45	08:45	01:00	
6: '2029 PM Peak with Development'	17:00	18:00	01:00	
7: '2031 AM Peak Base'	07:45	08:45	01:00	
8: '2031 PM Peak Base'	17:00	18:00	01:00	
9: '2031 AM Peak with Development'	07:45	08:45	01:00	
10: '2031 PM Peak with Development'	17:00	18:00	01:00	

Scenario 1: '2026 AM Peak Observed' (FG1: '2026 AM Peak Observed', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	464	1785	2249
	B	401	0	369	770
	C	1481	268	0	1749
	Tot.	1882	732	2154	4768

Traffic Lane Flows

Lane	Scenario 1: 2026 AM Peak Observed
Junction: Moorhead Roundabout	
1/1	129
1/2	139
2/1	209
2/2	192
3/1	929
3/2	856
4/1 (short)	464
4/2 (with short)	1393(In) 929(Out)
4/3	856
5/1	968
5/2	914
6/1	361
6/2	371
7/1 (with short)	770(In) 369(Out)
7/2 (short)	401
8/1	1298
8/2	856
9/1	759
9/2 (with short)	990(In) 722(Out)
9/3 (short)	268

Full Input Data And Results

Lane Saturation Flows

Junction: Moorhead Roundabout								
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 (A264 E Circ)	4.70	0.00	Y	Arm 6 Ahead	50.00	100.0 %	2024	2024
1/2 (A264 E Circ)	4.00	0.00	N	Arm 6 Ahead	50.00	100.0 %	2092	2092
2/1 (A264 W Circ)	4.70	0.00	N	Arm 5 Right	Inf	100.0 %	2225	2225
2/2 (A264 W Circ)	4.00	0.00	N	Arm 5 Right	Inf	100.0 %	2155	2155
3/1 (B2195 Circ)	4.40	0.00	N	Arm 8 Right	30.00	100.0 %	2090	2090
3/2 (B2195 Circ)	4.40	0.00	Y	Arm 8 Right	30.00	100.0 %	1957	1957
4/1 (A264 East)	3.80	0.00	Y	Arm 6 Left	50.00	100.0 %	1937	1937
4/2 (A264 East)	3.80	0.00	Y	Arm 3 Ahead	100.00	100.0 %	1966	1966
4/3 (A264 East)	3.80	0.00	N	Arm 3 Ahead	100.00	100.0 %	2103	2103
5/1 (A264 East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A264 East Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (B2195 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (B2195 Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (B2195)	3.60	0.00	Y	Arm 8 Ahead	55.00	100.0 %	1923	1923
7/2 (B2195 Lane 2)	This lane uses a directly entered Saturation Flow						3600	3600
8/1 (A264 West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (A264 West Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (A264 West)	3.70	0.00	Y	Arm 5 Ahead	55.00	100.0 %	1932	1932
9/2 (A264 West)	3.70	0.00	Y	Arm 5 Ahead	55.00	100.0 %	1932	1932
9/3 (A264 West Lane 3)	This lane uses a directly entered Saturation Flow						3600	3600

Full Input Data And Results

Scenario 2: '2026 PM Peak Observed' (FG2: '2026 PM Peak Observed', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	493	1393	1886
	B	513	0	205	718
	C	1589	303	0	1892
	Tot.	2102	796	1598	4496

Traffic Lane Flows

Lane	Scenario 2: 2026 PM Peak Observed
Junction: Moorhead Roundabout	
1/1	146
1/2	157
2/1	265
2/2	248
3/1	737
3/2	656
4/1 (short)	493
4/2 (with short)	1230(In) 737(Out)
4/3	656
5/1	1088
5/2	1014
6/1	393
6/2	403
7/1 (with short)	718(In) 205(Out)
7/2 (short)	513
8/1	942
8/2	656
9/1	823
9/2 (with short)	1069(In) 766(Out)
9/3 (short)	303

Full Input Data And Results

Lane Saturation Flows

Junction: Moorhead Roundabout								
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 (A264 E Circ)	4.70	0.00	Y	Arm 6 Ahead	50.00	100.0 %	2024	2024
1/2 (A264 E Circ)	4.00	0.00	N	Arm 6 Ahead	50.00	100.0 %	2092	2092
2/1 (A264 W Circ)	4.70	0.00	N	Arm 5 Right	Inf	100.0 %	2225	2225
2/2 (A264 W Circ)	4.00	0.00	N	Arm 5 Right	Inf	100.0 %	2155	2155
3/1 (B2195 Circ)	4.40	0.00	N	Arm 8 Right	30.00	100.0 %	2090	2090
3/2 (B2195 Circ)	4.40	0.00	Y	Arm 8 Right	30.00	100.0 %	1957	1957
4/1 (A264 East)	3.80	0.00	Y	Arm 6 Left	50.00	100.0 %	1937	1937
4/2 (A264 East)	3.80	0.00	Y	Arm 3 Ahead	100.00	100.0 %	1966	1966
4/3 (A264 East)	3.80	0.00	N	Arm 3 Ahead	100.00	100.0 %	2103	2103
5/1 (A264 East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A264 East Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (B2195 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (B2195 Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (B2195)	3.60	0.00	Y	Arm 8 Ahead	55.00	100.0 %	1923	1923
7/2 (B2195 Lane 2)	This lane uses a directly entered Saturation Flow						3600	3600
8/1 (A264 West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (A264 West Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (A264 West)	3.70	0.00	Y	Arm 5 Ahead	55.00	100.0 %	1932	1932
9/2 (A264 West)	3.70	0.00	Y	Arm 5 Ahead	55.00	100.0 %	1932	1932
9/3 (A264 West Lane 3)	This lane uses a directly entered Saturation Flow						3600	3600

Full Input Data And Results

Scenario 3: '2029 AM Peak Base' (FG3: '2029 AM Peak Base', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	480	1849	2329
	B	416	0	382	798
	C	1535	278	0	1813
	Tot.	1951	758	2231	4940

Traffic Lane Flows

Lane	Scenario 3: 2029 AM Peak Base
Junction: Moorhead Roundabout	
1/1	134
1/2	144
2/1	217
2/2	199
3/1	959
3/2	890
4/1 (short)	480
4/2 (with short)	1439(In) 959(Out)
4/3	890
5/1	1007
5/2	944
6/1	374
6/2	384
7/1 (with short)	798(In) 382(Out)
7/2 (short)	416
8/1	1341
8/2	890
9/1	790
9/2 (with short)	1023(In) 745(Out)
9/3 (short)	278

Full Input Data And Results

Lane Saturation Flows

Junction: Moorhead Roundabout								
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 (A264 E Circ)	4.70	0.00	Y	Arm 6 Ahead	50.00	100.0 %	2024	2024
1/2 (A264 E Circ)	4.00	0.00	N	Arm 6 Ahead	50.00	100.0 %	2092	2092
2/1 (A264 W Circ)	4.70	0.00	N	Arm 5 Right	Inf	100.0 %	2225	2225
2/2 (A264 W Circ)	4.00	0.00	N	Arm 5 Right	Inf	100.0 %	2155	2155
3/1 (B2195 Circ)	4.40	0.00	N	Arm 8 Right	30.00	100.0 %	2090	2090
3/2 (B2195 Circ)	4.40	0.00	Y	Arm 8 Right	30.00	100.0 %	1957	1957
4/1 (A264 East)	3.80	0.00	Y	Arm 6 Left	50.00	100.0 %	1937	1937
4/2 (A264 East)	3.80	0.00	Y	Arm 3 Ahead	100.00	100.0 %	1966	1966
4/3 (A264 East)	3.80	0.00	N	Arm 3 Ahead	100.00	100.0 %	2103	2103
5/1 (A264 East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A264 East Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (B2195 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (B2195 Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (B2195)	3.60	0.00	Y	Arm 8 Ahead	55.00	100.0 %	1923	1923
7/2 (B2195 Lane 2)	This lane uses a directly entered Saturation Flow						3600	3600
8/1 (A264 West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (A264 West Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (A264 West)	3.70	0.00	Y	Arm 5 Ahead	55.00	100.0 %	1932	1932
9/2 (A264 West)	3.70	0.00	Y	Arm 5 Ahead	55.00	100.0 %	1932	1932
9/3 (A264 West Lane 3)	This lane uses a directly entered Saturation Flow						3600	3600

Full Input Data And Results

Scenario 4: '2029 PM Peak Base' (FG4: '2029 PM Peak Base', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	511	1444	1955
	B	532	0	213	745
	C	1648	314	0	1962
	Tot.	2180	825	1657	4662

Traffic Lane Flows

Lane	Scenario 4: 2029 PM Peak Base
Junction: Moorhead Roundabout	
1/1	152
1/2	162
2/1	275
2/2	257
3/1	762
3/2	682
4/1 (short)	511
4/2 (with short)	1273(In) 762(Out)
4/3	682
5/1	1133
5/2	1047
6/1	408
6/2	417
7/1 (with short)	745(In) 213(Out)
7/2 (short)	532
8/1	975
8/2	682
9/1	858
9/2 (with short)	1104(In) 790(Out)
9/3 (short)	314

Junction: Moorhead Roundabout								
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 (A264 E Circ)	4.70	0.00	Y	Arm 6 Ahead	50.00	100.0 %	2024	2024
1/2 (A264 E Circ)	4.00	0.00	N	Arm 6 Ahead	50.00	100.0 %	2092	2092
2/1 (A264 W Circ)	4.70	0.00	N	Arm 5 Right	Inf	100.0 %	2225	2225
2/2 (A264 W Circ)	4.00	0.00	N	Arm 5 Right	Inf	100.0 %	2155	2155
3/1 (B2195 Circ)	4.40	0.00	N	Arm 8 Right	30.00	100.0 %	2090	2090
3/2 (B2195 Circ)	4.40	0.00	Y	Arm 8 Right	30.00	100.0 %	1957	1957
4/1 (A264 East)	3.80	0.00	Y	Arm 6 Left	50.00	100.0 %	1937	1937
4/2 (A264 East)	3.80	0.00	Y	Arm 3 Ahead	100.00	100.0 %	1966	1966
4/3 (A264 East)	3.80	0.00	N	Arm 3 Ahead	100.00	100.0 %	2103	2103
5/1 (A264 East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A264 East Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (B2195 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (B2195 Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (B2195)	3.60	0.00	Y	Arm 8 Ahead	55.00	100.0 %	1923	1923
7/2 (B2195 Lane 2)	This lane uses a directly entered Saturation Flow						3600	3600
8/1 (A264 West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (A264 West Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (A264 West)	3.70	0.00	Y	Arm 5 Ahead	55.00	100.0 %	1932	1932
9/2 (A264 West)	3.70	0.00	Y	Arm 5 Ahead	55.00	100.0 %	1932	1932
9/3 (A264 West Lane 3)	This lane uses a directly entered Saturation Flow						3600	3600

Full Input Data And Results

Scenario 5: '2029 AM Peak with Development' (FG5: '2029 AM Peak with Development', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination				
		A	B	C	Tot.
	A	0	488	1849	2337
	B	433	0	388	821
	C	1535	281	0	1816
	Tot.	1968	769	2237	4974

Traffic Lane Flows

Lane	Scenario 5: 2029 AM Peak with Development
Junction: Moorhead Roundabout	
1/1	135
1/2	146
2/1	226
2/2	207
3/1	959
3/2	890
4/1 (short)	488
4/2 (with short)	1447(In) 959(Out)
4/3	890
5/1	1017
5/2	951
6/1	379
6/2	390
7/1 (with short)	821(In) 388(Out)
7/2 (short)	433
8/1	1347
8/2	890
9/1	791
9/2 (with short)	1025(In) 744(Out)
9/3 (short)	281

Junction: Moorhead Roundabout								
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 (A264 E Circ)	4.70	0.00	Y	Arm 6 Ahead	50.00	100.0 %	2024	2024
1/2 (A264 E Circ)	4.00	0.00	N	Arm 6 Ahead	50.00	100.0 %	2092	2092
2/1 (A264 W Circ)	4.70	0.00	N	Arm 5 Right	Inf	100.0 %	2225	2225
2/2 (A264 W Circ)	4.00	0.00	N	Arm 5 Right	Inf	100.0 %	2155	2155
3/1 (B2195 Circ)	4.40	0.00	N	Arm 8 Right	30.00	100.0 %	2090	2090
3/2 (B2195 Circ)	4.40	0.00	Y	Arm 8 Right	30.00	100.0 %	1957	1957
4/1 (A264 East)	3.80	0.00	Y	Arm 6 Left	50.00	100.0 %	1937	1937
4/2 (A264 East)	3.80	0.00	Y	Arm 3 Ahead	100.00	100.0 %	1966	1966
4/3 (A264 East)	3.80	0.00	N	Arm 3 Ahead	100.00	100.0 %	2103	2103
5/1 (A264 East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A264 East Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (B2195 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (B2195 Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (B2195)	3.60	0.00	Y	Arm 8 Ahead	55.00	100.0 %	1923	1923
7/2 (B2195 Lane 2)	This lane uses a directly entered Saturation Flow						3600	3600
8/1 (A264 West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (A264 West Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (A264 West)	3.70	0.00	Y	Arm 5 Ahead	55.00	100.0 %	1932	1932
9/2 (A264 West)	3.70	0.00	Y	Arm 5 Ahead	55.00	100.0 %	1932	1932
9/3 (A264 West Lane 3)	This lane uses a directly entered Saturation Flow						3600	3600

Full Input Data And Results

Scenario 6: '2029 PM Peak with Development' (FG6: '2029 PM Peak with Development', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination				
		A	B	C	Tot.
	A	0	525	1444	1969
	B	541	0	215	756
	C	1648	318	0	1966
	Tot.	2189	843	1659	4691

Traffic Lane Flows

Lane	Scenario 6: 2029 PM Peak with Development
Junction: Moorhead Roundabout	
1/1	154
1/2	164
2/1	279
2/2	262
3/1	761
3/2	683
4/1 (short)	525
4/2 (with short)	1286(In) 761(Out)
4/3	683
5/1	1137
5/2	1052
6/1	417
6/2	426
7/1 (with short)	756(In) 215(Out)
7/2 (short)	541
8/1	976
8/2	683
9/1	858
9/2 (with short)	1108(In) 790(Out)
9/3 (short)	318

Full Input Data And Results

Lane Saturation Flows

Junction: Moorhead Roundabout								
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 (A264 E Circ)	4.70	0.00	Y	Arm 6 Ahead	50.00	100.0 %	2024	2024
1/2 (A264 E Circ)	4.00	0.00	N	Arm 6 Ahead	50.00	100.0 %	2092	2092
2/1 (A264 W Circ)	4.70	0.00	N	Arm 5 Right	Inf	100.0 %	2225	2225
2/2 (A264 W Circ)	4.00	0.00	N	Arm 5 Right	Inf	100.0 %	2155	2155
3/1 (B2195 Circ)	4.40	0.00	N	Arm 8 Right	30.00	100.0 %	2090	2090
3/2 (B2195 Circ)	4.40	0.00	Y	Arm 8 Right	30.00	100.0 %	1957	1957
4/1 (A264 East)	3.80	0.00	Y	Arm 6 Left	50.00	100.0 %	1937	1937
4/2 (A264 East)	3.80	0.00	Y	Arm 3 Ahead	100.00	100.0 %	1966	1966
4/3 (A264 East)	3.80	0.00	N	Arm 3 Ahead	100.00	100.0 %	2103	2103
5/1 (A264 East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A264 East Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (B2195 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (B2195 Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (B2195)	3.60	0.00	Y	Arm 8 Ahead	55.00	100.0 %	1923	1923
7/2 (B2195 Lane 2)	This lane uses a directly entered Saturation Flow						3600	3600
8/1 (A264 West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (A264 West Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (A264 West)	3.70	0.00	Y	Arm 5 Ahead	55.00	100.0 %	1932	1932
9/2 (A264 West)	3.70	0.00	Y	Arm 5 Ahead	55.00	100.0 %	1932	1932
9/3 (A264 West Lane 3)	This lane uses a directly entered Saturation Flow						3600	3600

Full Input Data And Results

Scenario 7: '2031 AM Peak Base' (FG7: '2031 AM Peak Base', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	491	1889	2380
	B	424	0	390	814
	C	1567	283	0	1850
	Tot.	1991	774	2279	5044

Traffic Lane Flows

Lane	Scenario 7: 2031 AM Peak Base
Junction: Moorhead Roundabout	
1/1	136
1/2	147
2/1	222
2/2	202
3/1	978
3/2	911
4/1 (short)	491
4/2 (with short)	1469(In) 978(Out)
4/3	911
5/1	1032
5/2	959
6/1	382
6/2	392
7/1 (with short)	814(In) 390(Out)
7/2 (short)	424
8/1	1368
8/2	911
9/1	810
9/2 (with short)	1040(In) 757(Out)
9/3 (short)	283

Full Input Data And Results

Lane Saturation Flows

Junction: Moorhead Roundabout								
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 (A264 E Circ)	4.70	0.00	Y	Arm 6 Ahead	50.00	100.0 %	2024	2024
1/2 (A264 E Circ)	4.00	0.00	N	Arm 6 Ahead	50.00	100.0 %	2092	2092
2/1 (A264 W Circ)	4.70	0.00	N	Arm 5 Right	Inf	100.0 %	2225	2225
2/2 (A264 W Circ)	4.00	0.00	N	Arm 5 Right	Inf	100.0 %	2155	2155
3/1 (B2195 Circ)	4.40	0.00	N	Arm 8 Right	30.00	100.0 %	2090	2090
3/2 (B2195 Circ)	4.40	0.00	Y	Arm 8 Right	30.00	100.0 %	1957	1957
4/1 (A264 East)	3.80	0.00	Y	Arm 6 Left	50.00	100.0 %	1937	1937
4/2 (A264 East)	3.80	0.00	Y	Arm 3 Ahead	100.00	100.0 %	1966	1966
4/3 (A264 East)	3.80	0.00	N	Arm 3 Ahead	100.00	100.0 %	2103	2103
5/1 (A264 East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A264 East Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (B2195 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (B2195 Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (B2195)	3.60	0.00	Y	Arm 8 Ahead	55.00	100.0 %	1923	1923
7/2 (B2195 Lane 2)	This lane uses a directly entered Saturation Flow						3600	3600
8/1 (A264 West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (A264 West Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (A264 West)	3.70	0.00	Y	Arm 5 Ahead	55.00	100.0 %	1932	1932
9/2 (A264 West)	3.70	0.00	Y	Arm 5 Ahead	55.00	100.0 %	1932	1932
9/3 (A264 West Lane 3)	This lane uses a directly entered Saturation Flow						3600	3600

Full Input Data And Results

Scenario 8: '2031 PM Peak Base' (FG8: '2031 PM Peak Base', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin		A	B	C	Tot.
	A	0	522	1475	1997
	B	544	0	217	761
	C	1683	321	0	2004
	Tot.	2227	843	1692	4762

Traffic Lane Flows

Lane	Scenario 8: 2031 PM Peak Base
Junction: Moorhead Roundabout	
1/1	155
1/2	166
2/1	281
2/2	263
3/1	777
3/2	698
4/1 (short)	522
4/2 (with short)	1299(In) 777(Out)
4/3	698
5/1	1160
5/2	1067
6/1	416
6/2	427
7/1 (with short)	761(In) 217(Out)
7/2 (short)	544
8/1	994
8/2	698
9/1	879
9/2 (with short)	1125(In) 804(Out)
9/3 (short)	321

Full Input Data And Results

Lane Saturation Flows

Junction: Moorhead Roundabout								
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 (A264 E Circ)	4.70	0.00	Y	Arm 6 Ahead	50.00	100.0 %	2024	2024
1/2 (A264 E Circ)	4.00	0.00	N	Arm 6 Ahead	50.00	100.0 %	2092	2092
2/1 (A264 W Circ)	4.70	0.00	N	Arm 5 Right	Inf	100.0 %	2225	2225
2/2 (A264 W Circ)	4.00	0.00	N	Arm 5 Right	Inf	100.0 %	2155	2155
3/1 (B2195 Circ)	4.40	0.00	N	Arm 8 Right	30.00	100.0 %	2090	2090
3/2 (B2195 Circ)	4.40	0.00	Y	Arm 8 Right	30.00	100.0 %	1957	1957
4/1 (A264 East)	3.80	0.00	Y	Arm 6 Left	50.00	100.0 %	1937	1937
4/2 (A264 East)	3.80	0.00	Y	Arm 3 Ahead	100.00	100.0 %	1966	1966
4/3 (A264 East)	3.80	0.00	N	Arm 3 Ahead	100.00	100.0 %	2103	2103
5/1 (A264 East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A264 East Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (B2195 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (B2195 Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (B2195)	3.60	0.00	Y	Arm 8 Ahead	55.00	100.0 %	1923	1923
7/2 (B2195 Lane 2)	This lane uses a directly entered Saturation Flow						3600	3600
8/1 (A264 West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (A264 West Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (A264 West)	3.70	0.00	Y	Arm 5 Ahead	55.00	100.0 %	1932	1932
9/2 (A264 West)	3.70	0.00	Y	Arm 5 Ahead	55.00	100.0 %	1932	1932
9/3 (A264 West Lane 3)	This lane uses a directly entered Saturation Flow						3600	3600

Full Input Data And Results

Scenario 9: '2031 AM Peak with Development' (FG9: '2031 AM Peak with Development', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination				
		A	B	C	Tot.
	A	0	498	1889	2387
	B	442	0	396	838
	C	1567	287	0	1854
	Tot.	2009	785	2285	5079

Traffic Lane Flows

Lane	Scenario 9: 2031 AM Peak with Development
Junction: Moorhead Roundabout	
1/1	138
1/2	149
2/1	232
2/2	210
3/1	976
3/2	913
4/1 (short)	498
4/2 (with short)	1474(In) 976(Out)
4/3	913
5/1	1043
5/2	966
6/1	387
6/2	398
7/1 (with short)	838(In) 396(Out)
7/2 (short)	442
8/1	1372
8/2	913
9/1	811
9/2 (with short)	1043(In) 756(Out)
9/3 (short)	287

Full Input Data And Results

Lane Saturation Flows

Junction: Moorhead Roundabout								
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 (A264 E Circ)	4.70	0.00	Y	Arm 6 Ahead	50.00	100.0 %	2024	2024
1/2 (A264 E Circ)	4.00	0.00	N	Arm 6 Ahead	50.00	100.0 %	2092	2092
2/1 (A264 W Circ)	4.70	0.00	N	Arm 5 Right	Inf	100.0 %	2225	2225
2/2 (A264 W Circ)	4.00	0.00	N	Arm 5 Right	Inf	100.0 %	2155	2155
3/1 (B2195 Circ)	4.40	0.00	N	Arm 8 Right	30.00	100.0 %	2090	2090
3/2 (B2195 Circ)	4.40	0.00	Y	Arm 8 Right	30.00	100.0 %	1957	1957
4/1 (A264 East)	3.80	0.00	Y	Arm 6 Left	50.00	100.0 %	1937	1937
4/2 (A264 East)	3.80	0.00	Y	Arm 3 Ahead	100.00	100.0 %	1966	1966
4/3 (A264 East)	3.80	0.00	N	Arm 3 Ahead	100.00	100.0 %	2103	2103
5/1 (A264 East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A264 East Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (B2195 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (B2195 Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (B2195)	3.60	0.00	Y	Arm 8 Ahead	55.00	100.0 %	1923	1923
7/2 (B2195 Lane 2)	This lane uses a directly entered Saturation Flow						3600	3600
8/1 (A264 West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (A264 West Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (A264 West)	3.70	0.00	Y	Arm 5 Ahead	55.00	100.0 %	1932	1932
9/2 (A264 West)	3.70	0.00	Y	Arm 5 Ahead	55.00	100.0 %	1932	1932
9/3 (A264 West Lane 3)	This lane uses a directly entered Saturation Flow						3600	3600

Full Input Data And Results

Scenario 10: '2031 PM Peak with Development' (FG10: '2031 PM Peak with Development', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination				
		A	B	C	Tot.
	A	0	536	1475	2011
	B	552	0	220	772
	C	1683	325	0	2008
	Tot.	2235	861	1695	4791

Traffic Lane Flows

Lane	Scenario 10: 2031 PM Peak with Development
Junction: Moorhead Roundabout	
1/1	157
1/2	168
2/1	285
2/2	267
3/1	776
3/2	699
4/1 (short)	536
4/2 (with short)	1312(In) 776(Out)
4/3	699
5/1	1164
5/2	1071
6/1	425
6/2	436
7/1 (with short)	772(In) 220(Out)
7/2 (short)	552
8/1	996
8/2	699
9/1	879
9/2 (with short)	1129(In) 804(Out)
9/3 (short)	325

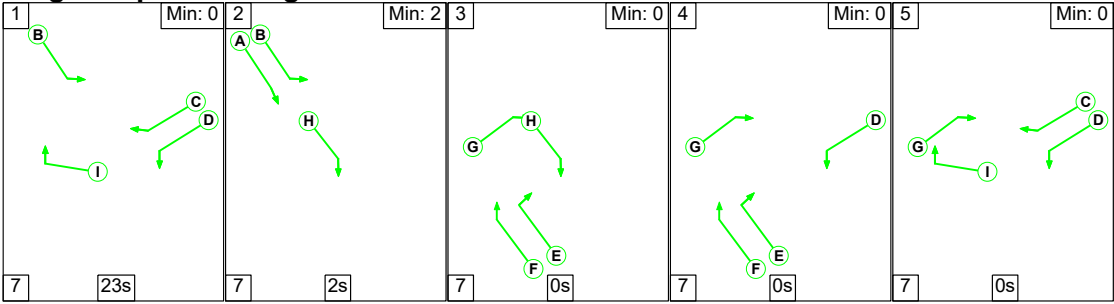
Full Input Data And Results

Lane Saturation Flows

Junction: Moorhead Roundabout								
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 (A264 E Circ)	4.70	0.00	Y	Arm 6 Ahead	50.00	100.0 %	2024	2024
1/2 (A264 E Circ)	4.00	0.00	N	Arm 6 Ahead	50.00	100.0 %	2092	2092
2/1 (A264 W Circ)	4.70	0.00	N	Arm 5 Right	Inf	100.0 %	2225	2225
2/2 (A264 W Circ)	4.00	0.00	N	Arm 5 Right	Inf	100.0 %	2155	2155
3/1 (B2195 Circ)	4.40	0.00	N	Arm 8 Right	30.00	100.0 %	2090	2090
3/2 (B2195 Circ)	4.40	0.00	Y	Arm 8 Right	30.00	100.0 %	1957	1957
4/1 (A264 East)	3.80	0.00	Y	Arm 6 Left	50.00	100.0 %	1937	1937
4/2 (A264 East)	3.80	0.00	Y	Arm 3 Ahead	100.00	100.0 %	1966	1966
4/3 (A264 East)	3.80	0.00	N	Arm 3 Ahead	100.00	100.0 %	2103	2103
5/1 (A264 East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (A264 East Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (B2195 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (B2195 Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (B2195)	3.60	0.00	Y	Arm 8 Ahead	55.00	100.0 %	1923	1923
7/2 (B2195 Lane 2)	This lane uses a directly entered Saturation Flow						3600	3600
8/1 (A264 West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (A264 West Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (A264 West)	3.70	0.00	Y	Arm 5 Ahead	55.00	100.0 %	1932	1932
9/2 (A264 West)	3.70	0.00	Y	Arm 5 Ahead	55.00	100.0 %	1932	1932
9/3 (A264 West Lane 3)	This lane uses a directly entered Saturation Flow						3600	3600

Scenario 1: '2026 AM Peak Observed' (FG1: '2026 AM Peak Observed', Plan 1: 'Network Control Plan 1')

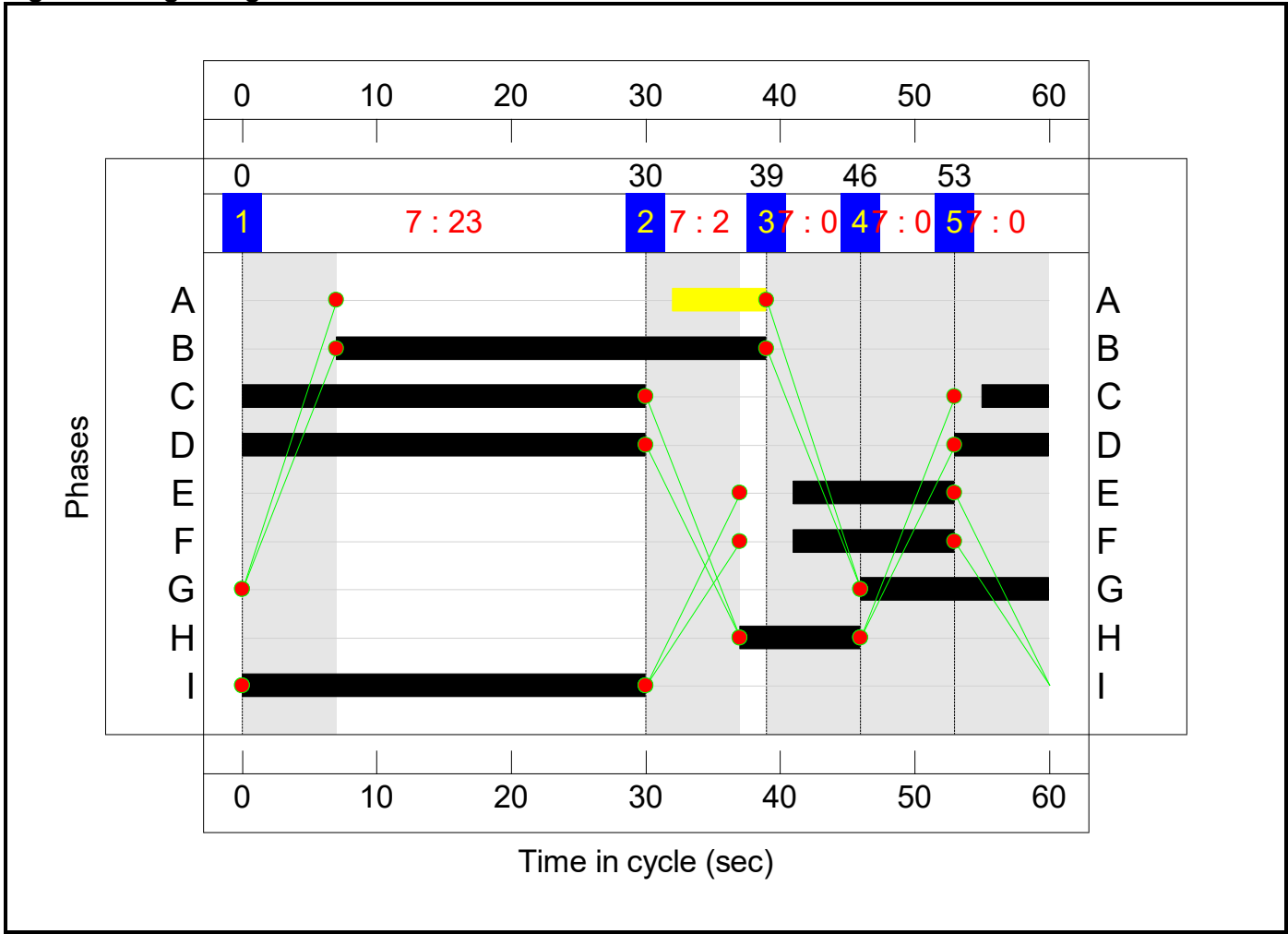
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	23	2	0	0	0
Change Point	0	30	39	46	53

Signal Timings Diagram



Full Input Data And Results

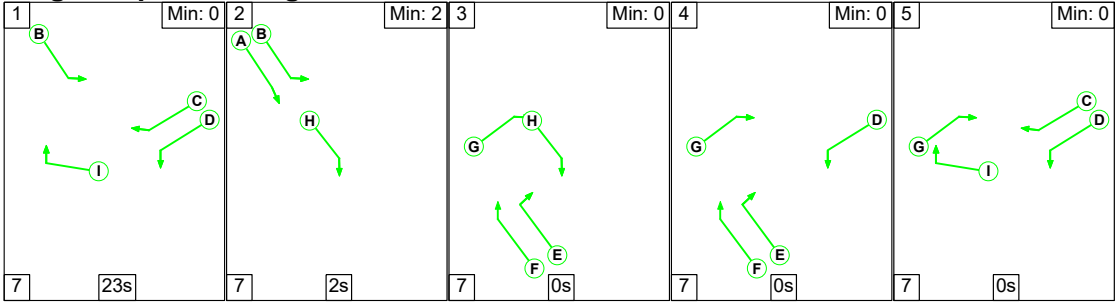
Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)
Network: Moorhead Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	88.6%	-
Moorhead Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	88.6%	-
1/1	A264 E Circ Ahead	U	N/A	N/A	H		1	9	-	129	2024	337	38.2%	129
1/2	A264 E Circ Ahead	U	N/A	N/A	H		1	9	-	139	2092	349	39.9%	139
2/1	A264 W Circ Right	U	N/A	N/A	G		1	14	-	209	2225	556	37.6%	209
2/2	A264 W Circ Right	U	N/A	N/A	G		1	14	-	192	2155	539	35.6%	192
3/1	B2195 Circ Right	U	N/A	N/A	I		1	30	-	929	2090	1080	86.0%	929
3/2	B2195 Circ Right	U	N/A	N/A	I		1	30	-	856	1957	1011	84.7%	856
4/2+4/1	A264 East Ahead Left	U	N/A	N/A	C D		1	35:37	-	1393	1966:1937	1180+652	78.8 : 71.2%	1393
4/3	A264 East Ahead	U	N/A	N/A	C		1	35	-	856	2103	1262	67.8%	856
5/1	A264 East Exit	U	N/A	N/A	-		-	-	-	968	Inf	Inf	0.0%	968
5/2	A264 East Exit	U	N/A	N/A	-		-	-	-	914	Inf	Inf	0.0%	914
6/1	B2195 Exit	U	N/A	N/A	-		-	-	-	361	Inf	Inf	0.0%	361
6/2	B2195 Exit	U	N/A	N/A	-		-	-	-	371	Inf	Inf	0.0%	371
7/1+7/2	B2195 Right Ahead	U	N/A	N/A	F E		1	12	-	770	1923:3600	417+453	88.6 : 88.6%	770
8/1	A264 West Exit	U	N/A	N/A	-		-	-	-	1298	Inf	Inf	0.0%	1298
8/2	A264 West Exit	U	N/A	N/A	-		-	-	-	856	Inf	Inf	0.0%	856
9/1	A264 West Ahead	U	N/A	N/A	B		1	32	-	759	1932	1063	71.4%	759

Full Input Data And Results

9/2+9/3	A264 West Ahead Ahead2	U	N/A	N/A	B A		1	32:7	-	990	1932:3600	933+346	77.4 : 77.4%	990
Item	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)	Back of Uniform Q At End of Red(pcu)	
Network: Moorhead Roundabout	-	0	0	0	17.5	16.0	0.0	33.5	-	-	-	-	-	
Moorhead Roundabout	-	0	0	0	17.5	16.0	0.0	33.5	-	-	-	-	-	
1/1	129	-	-	-	0.0	0.3	-	0.3	9.5	1.7	0.3	2.1	0.0	
1/2	139	-	-	-	0.0	0.3	-	0.4	9.5	1.9	0.3	2.2	0.0	
2/1	209	-	-	-	0.0	0.3	-	0.3	5.5	0.2	0.3	0.5	0.0	
2/2	192	-	-	-	0.0	0.3	-	0.3	5.5	0.2	0.3	0.5	0.0	
3/1	929	-	-	-	0.9	3.0	-	3.9	15.0	13.4	3.0	16.4	1.0	
3/2	856	-	-	-	1.0	2.7	-	3.7	15.6	12.1	2.7	14.8	1.0	
4/2+4/1	1393	-	-	-	3.0	1.6	-	4.6	11.9	11.6	1.6	13.2	5.7	
4/3	856	-	-	-	1.9	1.0	-	3.0	12.5	9.5	1.0	10.6	5.2	
5/1	968	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
5/2	914	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
6/1	361	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
6/2	371	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
7/1+7/2	770	-	-	-	4.6	3.6	-	8.3	38.6	5.9	3.6	9.6	4.6	
8/1	1298	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
8/2	856	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
9/1	759	-	-	-	2.1	1.2	-	3.4	15.9	9.3	1.2	10.5	5.3	
9/2+9/3	990	-	-	-	3.8	1.7	-	5.5	19.8	8.6	1.7	10.3	5.0	
C1 PRC for Signalled Lanes (%): 1.6 Total Delay for Signalled Lanes (pcuHr): 33.54 Cycle Time (s): 60 PRC Over All Lanes (%): 1.6 Total Delay Over All Lanes(pcuHr): 33.54														

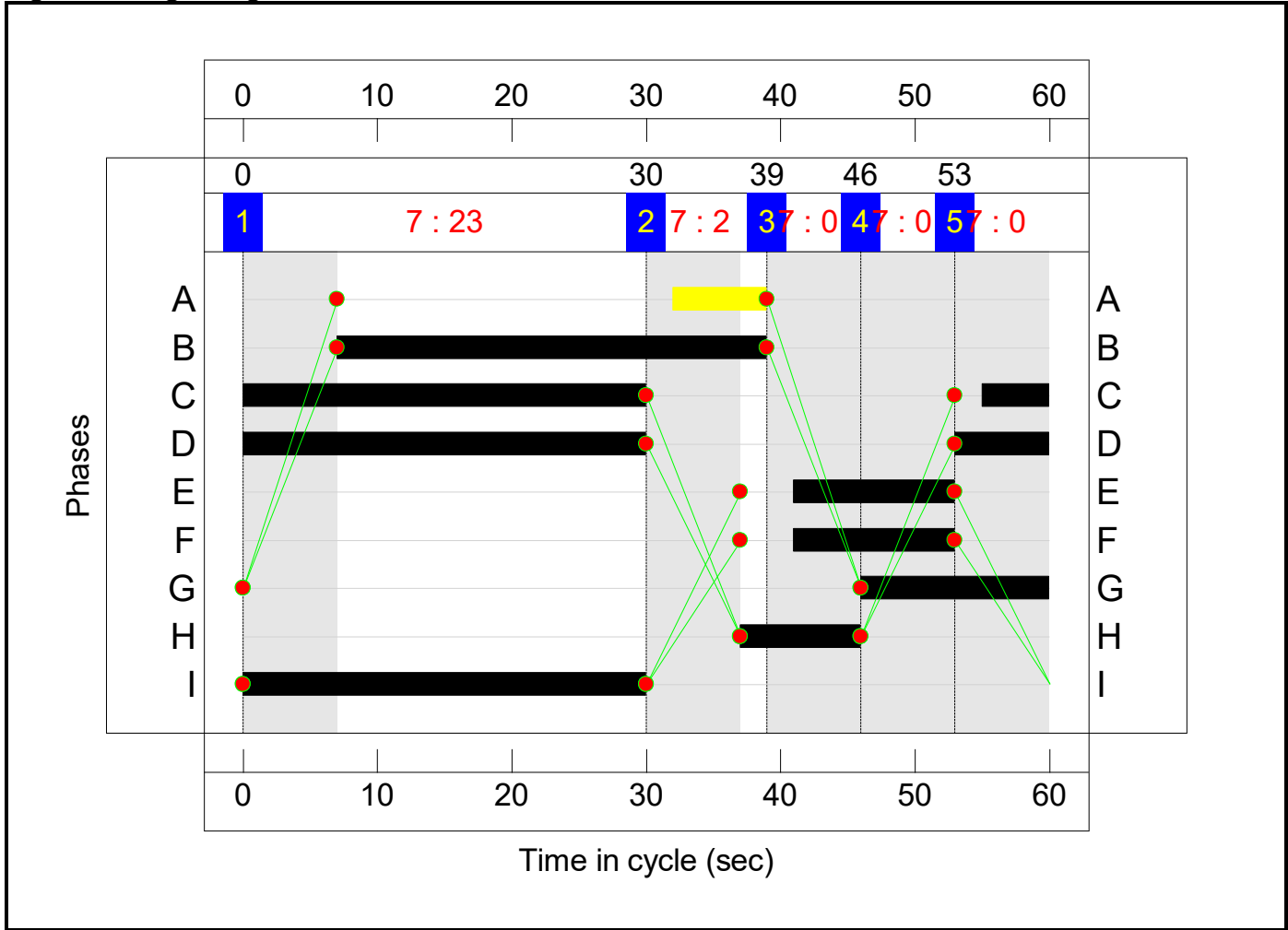
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	23	2	0	0	0
Change Point	0	30	39	46	53

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)
Network: Moorhead Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	82.7%	-
Moorhead Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	82.7%	-
1/1	A264 E Circ Ahead	U	N/A	N/A	H		1	9	-	146	2024	337	43.3%	146
1/2	A264 E Circ Ahead	U	N/A	N/A	H		1	9	-	157	2092	349	45.0%	157
2/1	A264 W Circ Right	U	N/A	N/A	G		1	14	-	265	2225	556	47.6%	265
2/2	A264 W Circ Right	U	N/A	N/A	G		1	14	-	248	2155	539	46.0%	248
3/1	B2195 Circ Right	U	N/A	N/A	I		1	30	-	737	2090	1080	68.3%	737
3/2	B2195 Circ Right	U	N/A	N/A	I		1	30	-	656	1957	1011	64.9%	656
4/2+4/1	A264 East Ahead Left	U	N/A	N/A	C D		1	35:37	-	1230	1966:1937	1171+783	62.9 : 62.9%	1230
4/3	A264 East Ahead	U	N/A	N/A	C		1	35	-	656	2103	1262	52.0%	656
5/1	A264 East Exit	U	N/A	N/A	-		-	-	-	1088	Inf	Inf	0.0%	1088
5/2	A264 East Exit	U	N/A	N/A	-		-	-	-	1014	Inf	Inf	0.0%	1014
6/1	B2195 Exit	U	N/A	N/A	-		-	-	-	393	Inf	Inf	0.0%	393
6/2	B2195 Exit	U	N/A	N/A	-		-	-	-	403	Inf	Inf	0.0%	403
7/1+7/2	B2195 Right Ahead	U	N/A	N/A	F E		1	12	-	718	1923:3600	312+780	65.8 : 65.8%	718
8/1	A264 West Exit	U	N/A	N/A	-		-	-	-	942	Inf	Inf	0.0%	942
8/2	A264 West Exit	U	N/A	N/A	-		-	-	-	656	Inf	Inf	0.0%	656
9/1	A264 West Ahead	U	N/A	N/A	B		1	32	-	823	1932	1063	77.5%	823

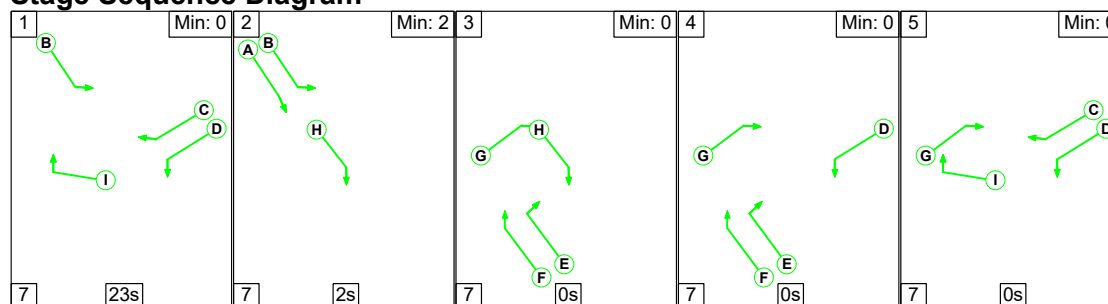
Full Input Data And Results

9/2+9/3	A264 West Ahead Ahead2	U	N/A	N/A	B A		1	32:7	-	1069	1932:3600	926+366	82.7 : 82.7%	1069
Item	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)	Back of Uniform Q At End of Red(pcu)	
Network: Moorhead Roundabout	-	0	0	0	15.9	10.0	0.0	25.9	-	-	-	-	-	
Moorhead Roundabout	-	0	0	0	15.9	10.0	0.0	25.9	-	-	-	-	-	
1/1	146	-	-	-	0.0	0.4	-	0.4	10.2	1.9	0.4	2.3	0.0	
1/2	157	-	-	-	0.0	0.4	-	0.4	10.3	2.0	0.4	2.4	0.0	
2/1	265	-	-	-	0.0	0.5	-	0.5	6.5	0.2	0.5	0.7	0.0	
2/2	248	-	-	-	0.0	0.4	-	0.4	6.5	0.2	0.4	0.7	0.0	
3/1	737	-	-	-	0.6	1.1	-	1.7	8.4	8.9	1.1	10.0	0.8	
3/2	656	-	-	-	0.7	0.9	-	1.6	8.6	7.8	0.9	8.7	0.7	
4/2+4/1	1230	-	-	-	2.3	0.8	-	3.2	9.3	7.8	0.8	8.6	4.5	
4/3	656	-	-	-	1.3	0.5	-	1.8	9.9	6.2	0.5	6.7	4.0	
5/1	1088	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
5/2	1014	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
6/1	393	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
6/2	403	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
7/1+7/2	718	-	-	-	4.2	1.0	-	5.2	26.0	3.8	1.0	4.8	3.2	
8/1	942	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
8/2	656	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
9/1	823	-	-	-	2.4	1.7	-	4.1	18.0	10.7	1.7	12.4	5.7	
9/2+9/3	1069	-	-	-	4.2	2.3	-	6.6	22.1	9.4	2.3	11.7	5.3	
C1 PRC for Signalled Lanes (%): 8.8 Total Delay for Signalled Lanes (pcuHr): 25.91 Cycle Time (s): 60 PRC Over All Lanes (%): 8.8 Total Delay Over All Lanes(pcuHr): 25.91														

Full Input Data And Results

Scenario 3: '2029 AM Peak Base' (FG3: '2029 AM Peak Base', Plan 1: 'Network Control Plan 1')

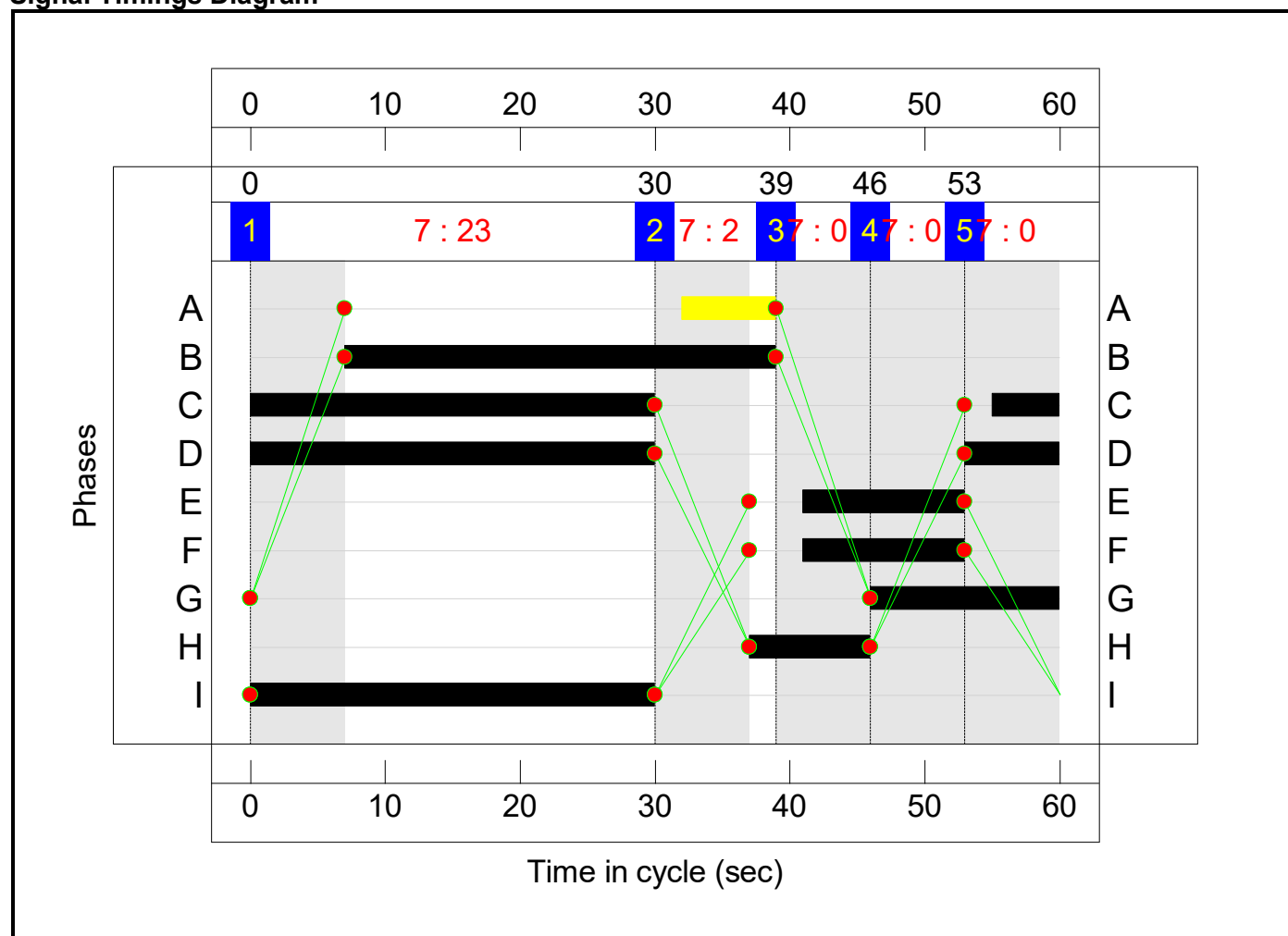
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	23	2	0	0	0
Change Point	0	30	39	46	53

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)
Network: Moorhead Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	91.7%	-
Moorhead Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	91.7%	-
1/1	A264 E Circ Ahead	U	N/A	N/A	H		1	9	-	134	2024	337	39.7%	134
1/2	A264 E Circ Ahead	U	N/A	N/A	H		1	9	-	144	2092	349	41.3%	144
2/1	A264 W Circ Right	U	N/A	N/A	G		1	14	-	217	2225	556	39.0%	217
2/2	A264 W Circ Right	U	N/A	N/A	G		1	14	-	199	2155	539	36.9%	199
3/1	B2195 Circ Right	U	N/A	N/A	I		1	30	-	959	2090	1080	88.8%	959
3/2	B2195 Circ Right	U	N/A	N/A	I		1	30	-	890	1957	1011	88.0%	890
4/2+4/1	A264 East Ahead Left	U	N/A	N/A	C D		1	35:37	-	1439	1966:1937	1180+653	81.3 : 73.6%	1439
4/3	A264 East Ahead	U	N/A	N/A	C		1	35	-	890	2103	1262	70.5%	890
5/1	A264 East Exit	U	N/A	N/A	-		-	-	-	1007	Inf	Inf	0.0%	1007
5/2	A264 East Exit	U	N/A	N/A	-		-	-	-	944	Inf	Inf	0.0%	944
6/1	B2195 Exit	U	N/A	N/A	-		-	-	-	374	Inf	Inf	0.0%	374
6/2	B2195 Exit	U	N/A	N/A	-		-	-	-	384	Inf	Inf	0.0%	384
7/1+7/2	B2195 Right Ahead	U	N/A	N/A	F E		1	12	-	798	1923:3600	417+454	91.7 : 91.7%	798
8/1	A264 West Exit	U	N/A	N/A	-		-	-	-	1341	Inf	Inf	0.0%	1341
8/2	A264 West Exit	U	N/A	N/A	-		-	-	-	890	Inf	Inf	0.0%	890
9/1	A264 West Ahead	U	N/A	N/A	B		1	32	-	790	1932	1063	74.3%	790

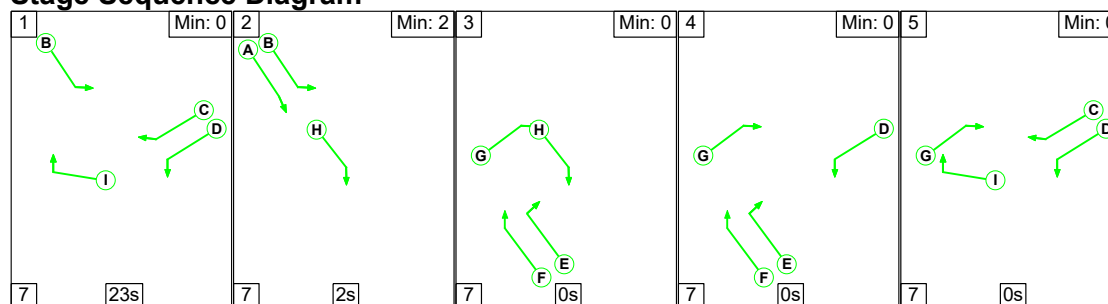
Full Input Data And Results

9/2+9/3	A264 West Ahead Ahead2	U	N/A	N/A	B A		1	32:7	-	1023	1932:3600	932+348	79.9 : 79.9%	1023
Item	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)	Back of Uniform Q At End of Red(pcu)	
Network: Moorhead Roundabout	-	0	0	0	18.5	19.8	0.0	38.2	-	-	-	-	-	
Moorhead Roundabout	-	0	0	0	18.5	19.8	0.0	38.2	-	-	-	-	-	
1/1	134	-	-	-	0.0	0.3	-	0.4	9.7	1.8	0.3	2.1	0.0	
1/2	144	-	-	-	0.0	0.4	-	0.4	9.7	1.9	0.4	2.3	0.0	
2/1	217	-	-	-	0.0	0.3	-	0.3	5.6	0.2	0.3	0.6	0.0	
2/2	199	-	-	-	0.0	0.3	-	0.3	5.6	0.2	0.3	0.5	0.0	
3/1	959	-	-	-	1.0	3.7	-	4.7	17.6	14.1	3.7	17.8	1.1	
3/2	890	-	-	-	1.1	3.5	-	4.6	18.6	13.1	3.5	16.6	1.0	
4/2+4/1	1439	-	-	-	3.2	1.8	-	5.0	12.6	12.3	1.8	14.1	5.9	
4/3	890	-	-	-	2.1	1.2	-	3.2	13.1	10.1	1.2	11.3	5.4	
5/1	1007	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
5/2	944	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
6/1	374	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
6/2	384	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
7/1+7/2	798	-	-	-	4.8	4.9	-	9.7	43.8	6.2	4.9	11.0	4.8	
8/1	1341	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
8/2	890	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
9/1	790	-	-	-	2.3	1.4	-	3.7	16.8	9.9	1.4	11.3	5.5	
9/2+9/3	1023	-	-	-	3.9	2.0	-	5.9	20.7	8.9	2.0	10.9	5.2	
C1 PRC for Signalled Lanes (%): -1.9 Total Delay for Signalled Lanes (pcuHr): 38.25 Cycle Time (s): 60 PRC Over All Lanes (%): -1.9 Total Delay Over All Lanes(pcuHr): 38.25														

Full Input Data And Results

Scenario 4: '2029 PM Peak Base' (FG4: '2029 PM Peak Base', Plan 1: 'Network Control Plan 1')

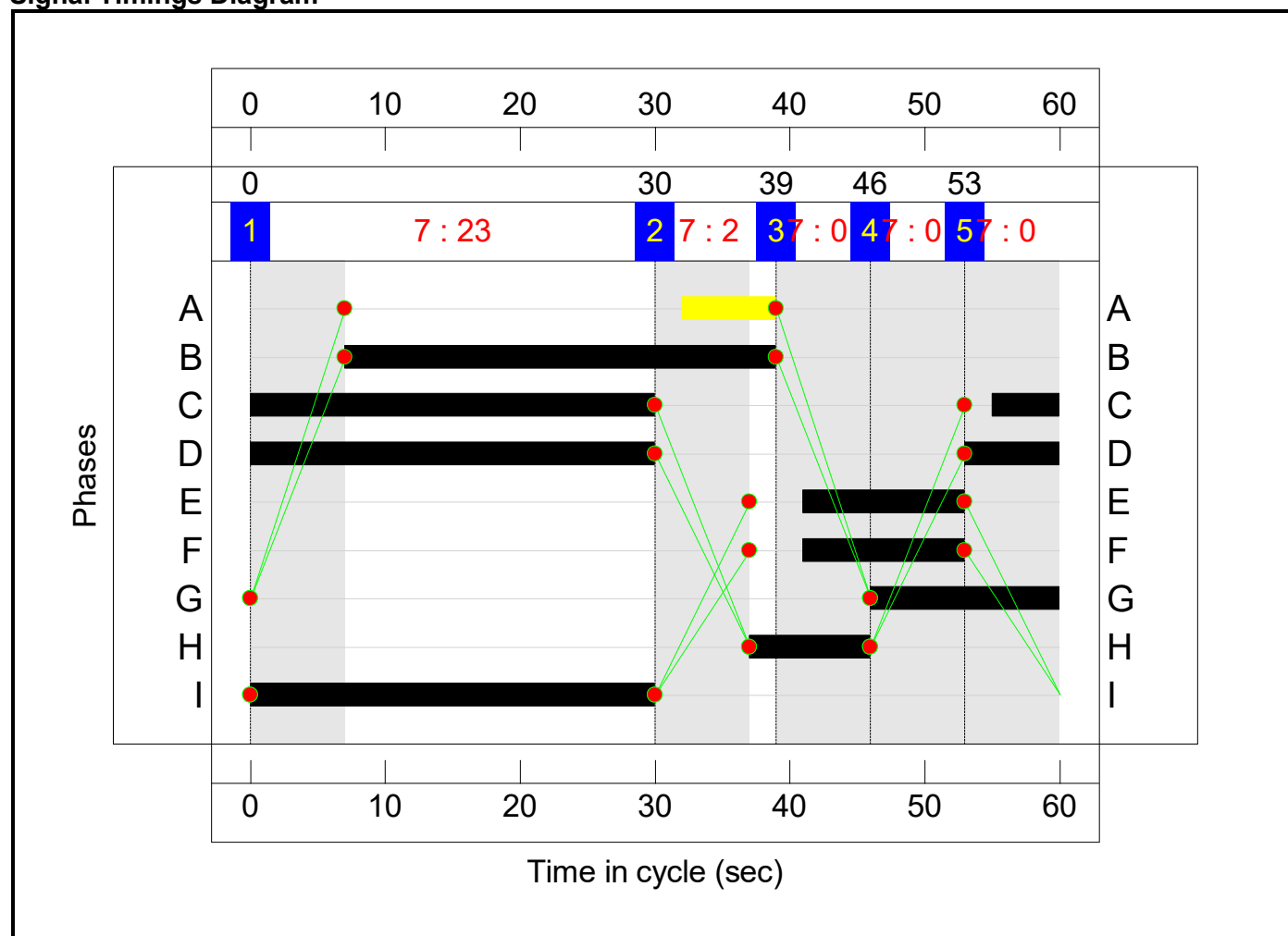
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	23	2	0	0	0
Change Point	0	30	39	46	53

Signal Timings Diagram



Full Input Data And Results

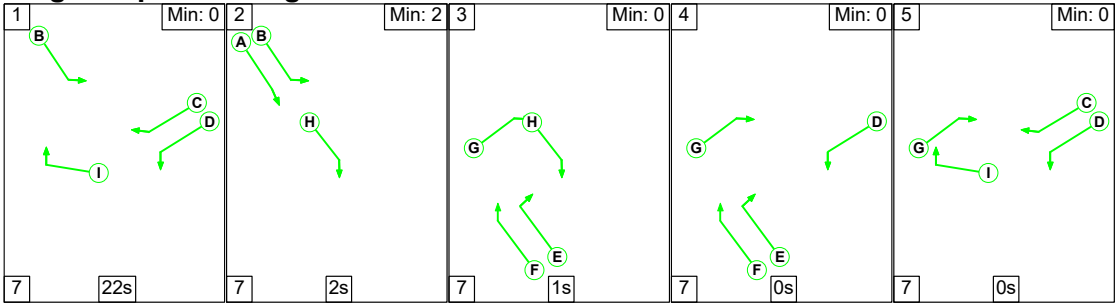
Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)
Network: Moorhead Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	85.4%	-
Moorhead Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	85.4%	-
1/1	A264 E Circ Ahead	U	N/A	N/A	H		1	9	-	152	2024	337	45.1%	152
1/2	A264 E Circ Ahead	U	N/A	N/A	H		1	9	-	162	2092	349	46.5%	162
2/1	A264 W Circ Right	U	N/A	N/A	G		1	14	-	275	2225	556	49.4%	275
2/2	A264 W Circ Right	U	N/A	N/A	G		1	14	-	257	2155	539	47.7%	257
3/1	B2195 Circ Right	U	N/A	N/A	I		1	30	-	762	2090	1080	70.6%	762
3/2	B2195 Circ Right	U	N/A	N/A	I		1	30	-	682	1957	1011	67.5%	682
4/2+4/1	A264 East Ahead Left	U	N/A	N/A	C D		1	35:37	-	1273	1966:1937	1170+784	65.1 : 65.1%	1273
4/3	A264 East Ahead	U	N/A	N/A	C		1	35	-	682	2103	1262	54.0%	682
5/1	A264 East Exit	U	N/A	N/A	-		-	-	-	1133	Inf	Inf	0.0%	1133
5/2	A264 East Exit	U	N/A	N/A	-		-	-	-	1047	Inf	Inf	0.0%	1047
6/1	B2195 Exit	U	N/A	N/A	-		-	-	-	408	Inf	Inf	0.0%	408
6/2	B2195 Exit	U	N/A	N/A	-		-	-	-	417	Inf	Inf	0.0%	417
7/1+7/2	B2195 Right Ahead	U	N/A	N/A	F E		1	12	-	745	1923:3600	312+780	68.2 : 68.2%	745
8/1	A264 West Exit	U	N/A	N/A	-		-	-	-	975	Inf	Inf	0.0%	975
8/2	A264 West Exit	U	N/A	N/A	-		-	-	-	682	Inf	Inf	0.0%	682
9/1	A264 West Ahead	U	N/A	N/A	B		1	32	-	858	1932	1063	80.7%	858

Full Input Data And Results

9/2+9/3	A264 West Ahead Ahead2	U	N/A	N/A	B A		1	32:7	-	1104	1932:3600	926+368	85.4 : 85.4%	1104
Item	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)	Back of Uniform Q At End of Red(pcu)	
Network: Moorhead Roundabout	-	0	0	0	16.7	11.5	0.0	28.2	-	-	-	-	-	
Moorhead Roundabout	-	0	0	0	16.7	11.5	0.0	28.2	-	-	-	-	-	
1/1	152	-	-	-	0.0	0.4	-	0.4	10.5	1.9	0.4	2.3	0.0	
1/2	162	-	-	-	0.0	0.4	-	0.5	10.5	2.3	0.4	2.8	0.0	
2/1	275	-	-	-	0.0	0.5	-	0.5	6.7	0.2	0.5	0.7	0.0	
2/2	257	-	-	-	0.0	0.5	-	0.5	6.7	0.2	0.5	0.7	0.0	
3/1	762	-	-	-	0.7	1.2	-	1.9	8.8	9.5	1.2	10.7	0.9	
3/2	682	-	-	-	0.7	1.0	-	1.7	9.1	8.3	1.0	9.4	0.8	
4/2+4/1	1273	-	-	-	2.4	0.9	-	3.4	9.5	8.3	0.9	9.2	4.7	
4/3	682	-	-	-	1.3	0.6	-	1.9	10.2	6.6	0.6	7.2	4.2	
5/1	1133	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
5/2	1047	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
6/1	408	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
6/2	417	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
7/1+7/2	745	-	-	-	4.4	1.1	-	5.5	26.5	4.1	1.1	5.1	3.3	
8/1	975	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
8/2	682	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
9/1	858	-	-	-	2.6	2.1	-	4.7	19.6	11.4	2.1	13.5	6.0	
9/2+9/3	1104	-	-	-	4.4	2.8	-	7.2	23.6	10.2	2.8	13.0	5.5	
C1 PRC for Signalled Lanes (%): 5.4 Total Delay for Signalled Lanes (pcuHr): 28.18 Cycle Time (s): 60 PRC Over All Lanes (%): 5.4 Total Delay Over All Lanes(pcuHr): 28.18														

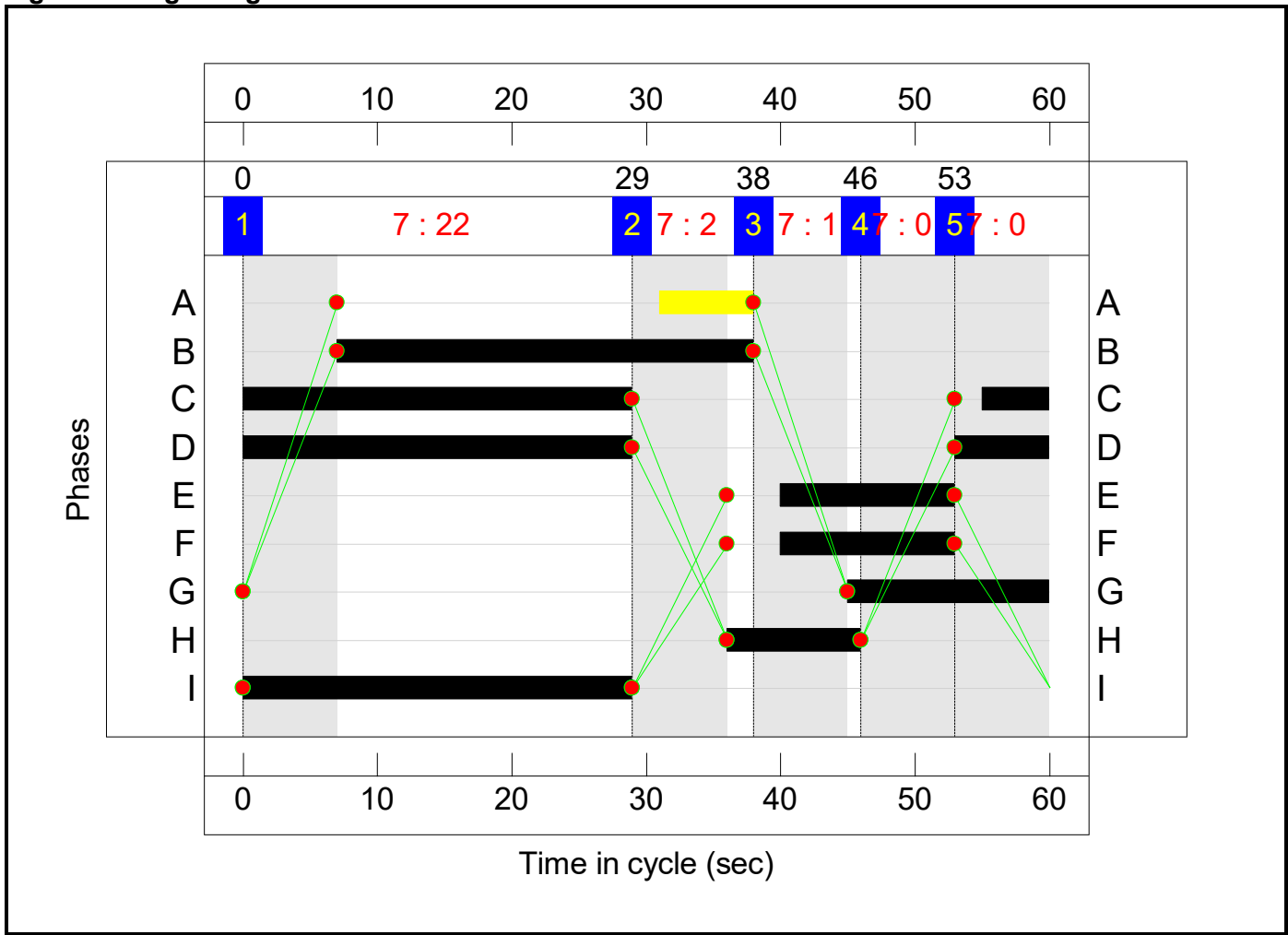
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	22	2	1	0	0
Change Point	0	29	38	46	53

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)
Network: Moorhead Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	91.8%	-
Moorhead Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	91.8%	-
1/1	A264 E Circ Ahead	U	N/A	N/A	H		1	10	-	135	2024	371	36.4%	135
1/2	A264 E Circ Ahead	U	N/A	N/A	H		1	10	-	146	2092	384	38.1%	146
2/1	A264 W Circ Right	U	N/A	N/A	G		1	15	-	226	2225	593	38.1%	226
2/2	A264 W Circ Right	U	N/A	N/A	G		1	15	-	207	2155	575	36.0%	207
3/1	B2195 Circ Right	U	N/A	N/A	I		1	29	-	959	2090	1045	91.8%	959
3/2	B2195 Circ Right	U	N/A	N/A	I		1	29	-	890	1957	978	91.0%	890
4/2+4/1	A264 East Ahead Left	U	N/A	N/A	C D		1	34:36	-	1447	1966:1937	1147+660	83.6 : 74.0%	1447
4/3	A264 East Ahead	U	N/A	N/A	C		1	34	-	890	2103	1227	72.5%	890
5/1	A264 East Exit	U	N/A	N/A	-		-	-	-	1017	Inf	Inf	0.0%	1017
5/2	A264 East Exit	U	N/A	N/A	-		-	-	-	951	Inf	Inf	0.0%	951
6/1	B2195 Exit	U	N/A	N/A	-		-	-	-	379	Inf	Inf	0.0%	379
6/2	B2195 Exit	U	N/A	N/A	-		-	-	-	390	Inf	Inf	0.0%	390
7/1+7/2	B2195 Right Ahead	U	N/A	N/A	F E		1	13	-	821	1923:3600	449+501	86.5 : 86.5%	821
8/1	A264 West Exit	U	N/A	N/A	-		-	-	-	1347	Inf	Inf	0.0%	1347
8/2	A264 West Exit	U	N/A	N/A	-		-	-	-	890	Inf	Inf	0.0%	890
9/1	A264 West Ahead	U	N/A	N/A	B		1	31	-	791	1932	1030	76.8%	791

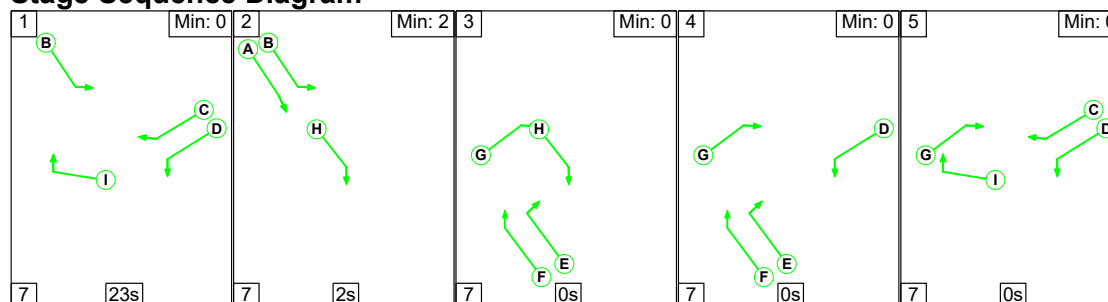
Full Input Data And Results

9/2+9/3	A264 West Ahead Ahead2	U	N/A	N/A	B A		1	31:7	-	1025	1932:3600	908+343	82.0 : 82.0%	1025
Item	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)	Back of Uniform Q At End of Red(pcu)	
Network: Moorhead Roundabout	-	0	0	0	19.3	20.9	0.0	40.3	-	-	-	-	-	
Moorhead Roundabout	-	0	0	0	19.3	20.9	0.0	40.3	-	-	-	-	-	
1/1	135	-	-	-	0.0	0.3	-	0.3	8.4	1.8	0.3	2.1	0.0	
1/2	146	-	-	-	0.0	0.3	-	0.3	8.4	1.9	0.3	2.2	0.0	
2/1	226	-	-	-	0.0	0.3	-	0.3	5.2	0.2	0.3	0.5	0.0	
2/2	207	-	-	-	0.0	0.3	-	0.3	5.2	0.2	0.3	0.5	0.0	
3/1	959	-	-	-	1.0	5.0	-	6.0	22.5	14.6	5.0	19.6	1.1	
3/2	890	-	-	-	1.2	4.6	-	5.7	23.2	13.6	4.6	18.2	1.0	
4/2+4/1	1447	-	-	-	3.5	2.0	-	5.5	13.7	12.8	2.0	14.8	6.1	
4/3	890	-	-	-	2.2	1.3	-	3.5	14.3	10.6	1.3	11.9	5.7	
5/1	1017	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
5/2	951	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
6/1	379	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
6/2	390	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
7/1+7/2	821	-	-	-	4.8	3.1	-	7.8	34.4	6.1	3.1	9.2	4.7	
8/1	1347	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
8/2	890	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
9/1	791	-	-	-	2.4	1.6	-	4.1	18.5	10.3	1.6	12.0	5.7	
9/2+9/3	1025	-	-	-	4.1	2.2	-	6.3	22.2	9.3	2.2	11.5	5.4	
C1 PRC for Signalled Lanes (%): -2.0 Total Delay for Signalled Lanes (pcuHr): 40.27 Cycle Time (s): 60 PRC Over All Lanes (%): -2.0 Total Delay Over All Lanes(pcuHr): 40.27														

Full Input Data And Results

Scenario 6: '2029 PM Peak with Development' (FG6: '2029 PM Peak with Development', Plan 1: 'Network Control Plan 1')

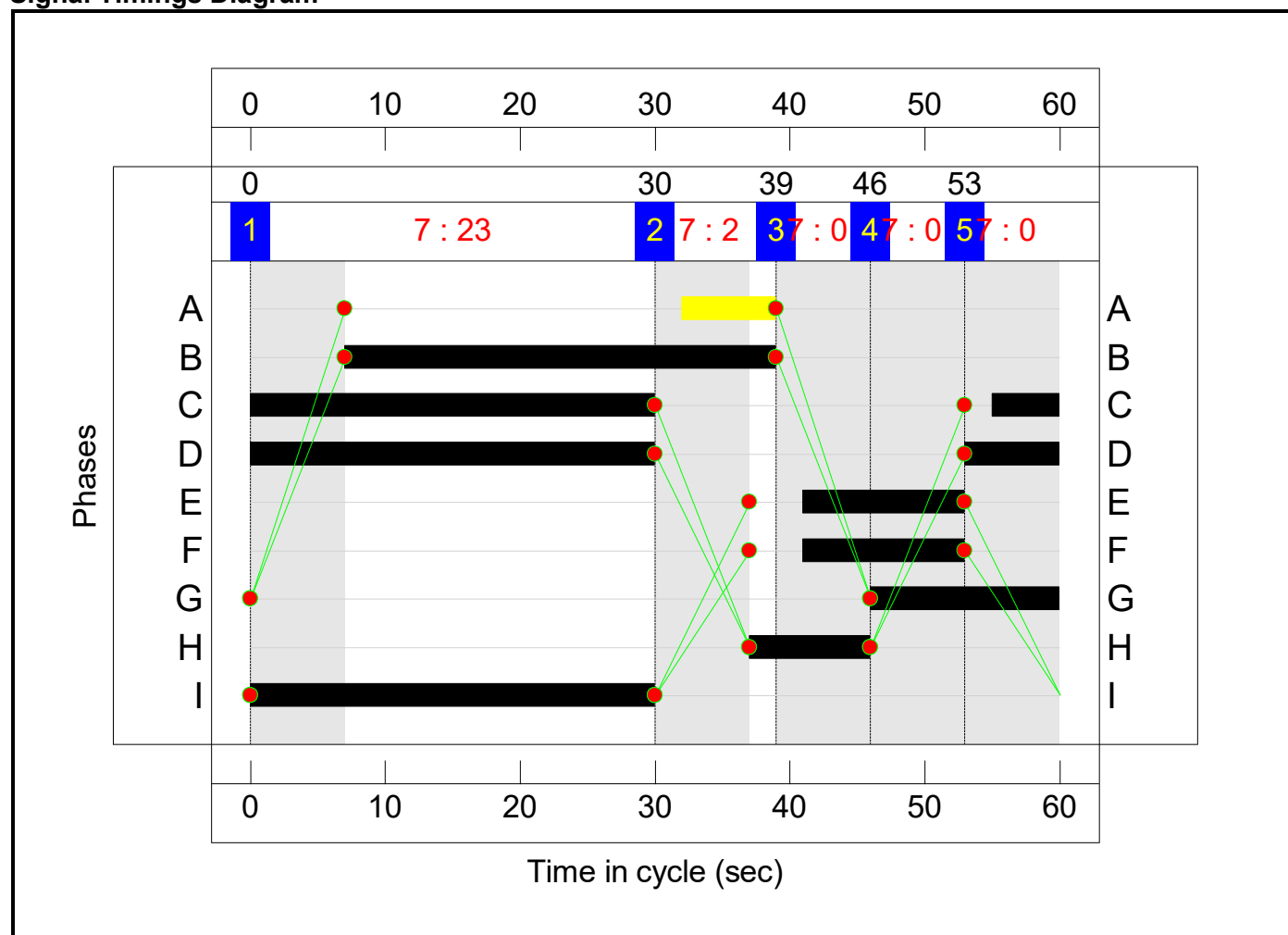
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	23	2	0	0	0
Change Point	0	30	39	46	53

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)
Network: Moorhead Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	85.5%	-
Moorhead Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	85.5%	-
1/1	A264 E Circ Ahead	U	N/A	N/A	H		1	9	-	154	2024	337	45.7%	154
1/2	A264 E Circ Ahead	U	N/A	N/A	H		1	9	-	164	2092	349	47.0%	164
2/1	A264 W Circ Right	U	N/A	N/A	G		1	14	-	279	2225	556	50.2%	279
2/2	A264 W Circ Right	U	N/A	N/A	G		1	14	-	262	2155	539	48.6%	262
3/1	B2195 Circ Right	U	N/A	N/A	I		1	30	-	761	2090	1080	70.5%	761
3/2	B2195 Circ Right	U	N/A	N/A	I		1	30	-	683	1957	1011	67.5%	683
4/2+4/1	A264 East Ahead Left	U	N/A	N/A	C D		1	35:37	-	1286	1966:1937	1156+798	65.8 : 65.8%	1286
4/3	A264 East Ahead	U	N/A	N/A	C		1	35	-	683	2103	1262	54.1%	683
5/1	A264 East Exit	U	N/A	N/A	-		-	-	-	1137	Inf	Inf	0.0%	1137
5/2	A264 East Exit	U	N/A	N/A	-		-	-	-	1052	Inf	Inf	0.0%	1052
6/1	B2195 Exit	U	N/A	N/A	-		-	-	-	417	Inf	Inf	0.0%	417
6/2	B2195 Exit	U	N/A	N/A	-		-	-	-	426	Inf	Inf	0.0%	426
7/1+7/2	B2195 Right Ahead	U	N/A	N/A	F E		1	12	-	756	1923:3600	310+780	69.4 : 69.4%	756
8/1	A264 West Exit	U	N/A	N/A	-		-	-	-	976	Inf	Inf	0.0%	976
8/2	A264 West Exit	U	N/A	N/A	-		-	-	-	683	Inf	Inf	0.0%	683
9/1	A264 West Ahead	U	N/A	N/A	B		1	32	-	858	1932	1063	80.7%	858

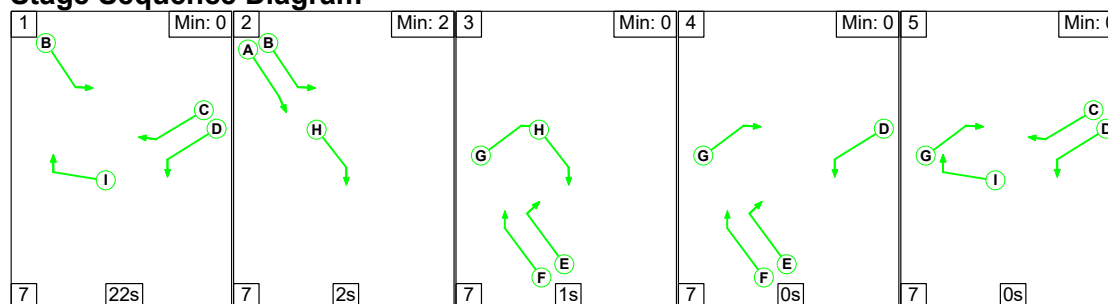
Full Input Data And Results

9/2+9/3	A264 West Ahead Ahead2	U	N/A	N/A	B A		1	32:7	-	1108	1932:3600	924+372	85.5 : 85.5%	1108
Item	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)	Back of Uniform Q At End of Red(pcu)	
Network: Moorhead Roundabout	-	0	0	0	16.9	11.6	0.0	28.5	-	-	-	-	-	
Moorhead Roundabout	-	0	0	0	16.9	11.6	0.0	28.5	-	-	-	-	-	
1/1	154	-	-	-	0.0	0.4	-	0.5	10.6	1.9	0.4	2.4	0.0	
1/2	164	-	-	-	0.0	0.4	-	0.5	10.6	2.3	0.4	2.8	0.0	
2/1	279	-	-	-	0.0	0.5	-	0.5	6.8	0.2	0.5	0.7	0.0	
2/2	262	-	-	-	0.0	0.5	-	0.5	6.8	0.2	0.5	0.7	0.0	
3/1	761	-	-	-	0.7	1.2	-	1.9	8.8	9.5	1.2	10.6	0.9	
3/2	683	-	-	-	0.7	1.0	-	1.7	9.1	8.3	1.0	9.4	0.8	
4/2+4/1	1286	-	-	-	2.5	1.0	-	3.4	9.6	8.2	1.0	9.2	4.7	
4/3	683	-	-	-	1.3	0.6	-	1.9	10.2	6.6	0.6	7.2	4.2	
5/1	1137	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
5/2	1052	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
6/1	417	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
6/2	426	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
7/1+7/2	756	-	-	-	4.5	1.1	-	5.6	26.8	4.1	1.1	5.3	3.4	
8/1	976	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
8/2	683	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
9/1	858	-	-	-	2.6	2.1	-	4.7	19.6	11.4	2.1	13.5	6.0	
9/2+9/3	1108	-	-	-	4.4	2.9	-	7.3	23.7	10.2	2.9	13.1	5.5	
C1 PRC for Signalled Lanes (%): 5.3 Total Delay for Signalled Lanes (pcuHr): 28.49 Cycle Time (s): 60 PRC Over All Lanes (%): 5.3 Total Delay Over All Lanes(pcuHr): 28.49														

Full Input Data And Results

Scenario 7: '2031 AM Peak Base' (FG7: '2031 AM Peak Base', Plan 1: 'Network Control Plan 1')

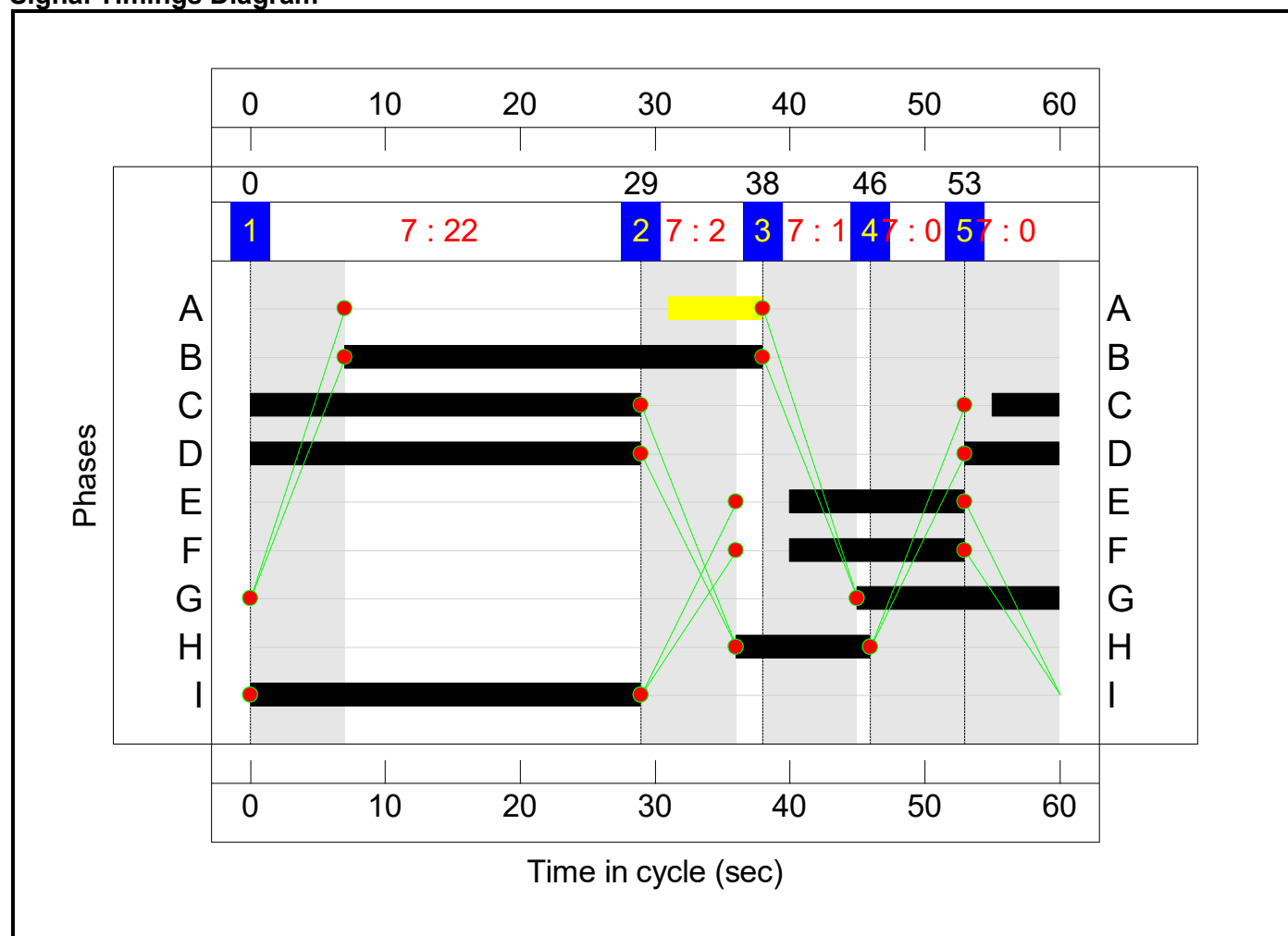
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	22	2	1	0	0
Change Point	0	29	38	46	53

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)
Network: Moorhead Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	93.6%	-
Moorhead Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	93.6%	-
1/1	A264 E Circ Ahead	U	N/A	N/A	H		1	10	-	136	2024	371	36.7%	136
1/2	A264 E Circ Ahead	U	N/A	N/A	H		1	10	-	147	2092	384	38.3%	147
2/1	A264 W Circ Right	U	N/A	N/A	G		1	15	-	222	2225	593	37.4%	222
2/2	A264 W Circ Right	U	N/A	N/A	G		1	15	-	202	2155	575	35.2%	202
3/1	B2195 Circ Right	U	N/A	N/A	I		1	29	-	978	2090	1045	93.6%	978
3/2	B2195 Circ Right	U	N/A	N/A	I		1	29	-	911	1957	978	93.1%	911
4/2+4/1	A264 East Ahead Left	U	N/A	N/A	C D		1	34:36	-	1469	1966:1937	1147+654	85.3 : 75.1%	1469
4/3	A264 East Ahead	U	N/A	N/A	C		1	34	-	911	2103	1227	74.3%	911
5/1	A264 East Exit	U	N/A	N/A	-		-	-	-	1032	Inf	Inf	0.0%	1032
5/2	A264 East Exit	U	N/A	N/A	-		-	-	-	959	Inf	Inf	0.0%	959
6/1	B2195 Exit	U	N/A	N/A	-		-	-	-	382	Inf	Inf	0.0%	382
6/2	B2195 Exit	U	N/A	N/A	-		-	-	-	392	Inf	Inf	0.0%	392
7/1+7/2	B2195 Right Ahead	U	N/A	N/A	F E		1	13	-	814	1923:3600	449+488	86.9 : 86.9%	814
8/1	A264 West Exit	U	N/A	N/A	-		-	-	-	1368	Inf	Inf	0.0%	1368
8/2	A264 West Exit	U	N/A	N/A	-		-	-	-	911	Inf	Inf	0.0%	911
9/1	A264 West Ahead	U	N/A	N/A	B		1	31	-	810	1932	1030	78.6%	810

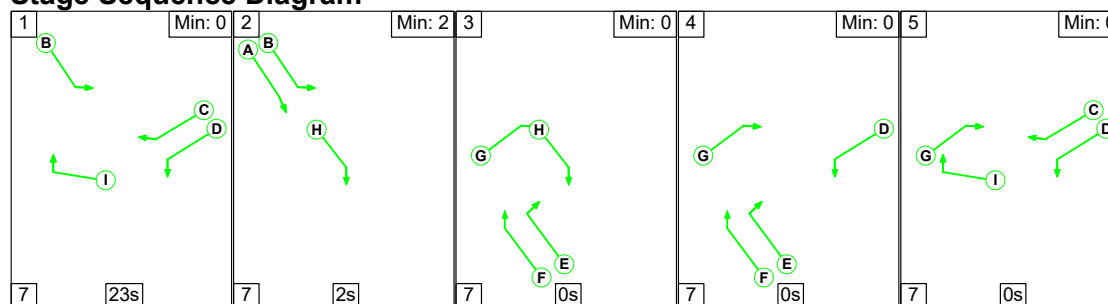
Full Input Data And Results

9/2+9/3	A264 West Ahead Ahead2	U	N/A	N/A	B A		1	31:7	-	1040	1932:3600	909+340	83.3 : 83.3%	1040
Item	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)	Back of Uniform Q At End of Red(pcu)	
Network: Moorhead Roundabout	-	0	0	0	19.8	24.1	0.0	43.9	-	-	-	-	-	
Moorhead Roundabout	-	0	0	0	19.8	24.1	0.0	43.9	-	-	-	-	-	
1/1	136	-	-	-	0.0	0.3	-	0.3	8.5	1.8	0.3	2.1	0.0	
1/2	147	-	-	-	0.0	0.3	-	0.3	8.5	1.9	0.3	2.3	0.0	
2/1	222	-	-	-	0.0	0.3	-	0.3	5.1	0.2	0.3	0.5	0.0	
2/2	202	-	-	-	0.0	0.3	-	0.3	5.1	0.2	0.3	0.5	0.0	
3/1	978	-	-	-	1.0	6.2	-	7.2	26.4	15.2	6.2	21.3	1.1	
3/2	911	-	-	-	1.2	5.8	-	7.0	27.6	14.2	5.8	19.9	1.0	
4/2+4/1	1469	-	-	-	3.6	2.2	-	5.8	14.2	13.3	2.2	15.5	6.2	
4/3	911	-	-	-	2.3	1.4	-	3.8	14.8	11.1	1.4	12.6	5.8	
5/1	1032	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
5/2	959	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
6/1	382	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
6/2	392	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
7/1+7/2	814	-	-	-	4.8	3.2	-	7.9	35.0	6.2	3.2	9.3	4.8	
8/1	1368	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
8/2	911	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
9/1	810	-	-	-	2.5	1.8	-	4.3	19.3	10.8	1.8	12.6	5.9	
9/2+9/3	1040	-	-	-	4.2	2.4	-	6.6	22.9	9.7	2.4	12.1	5.5	
C1 PRC for Signalled Lanes (%): -4.0 Total Delay for Signalled Lanes (pcuHr): 43.87 Cycle Time (s): 60 PRC Over All Lanes (%): -4.0 Total Delay Over All Lanes(pcuHr): 43.87														

Full Input Data And Results

Scenario 8: '2031 PM Peak Base' (FG8: '2031 PM Peak Base', Plan 1: 'Network Control Plan 1')

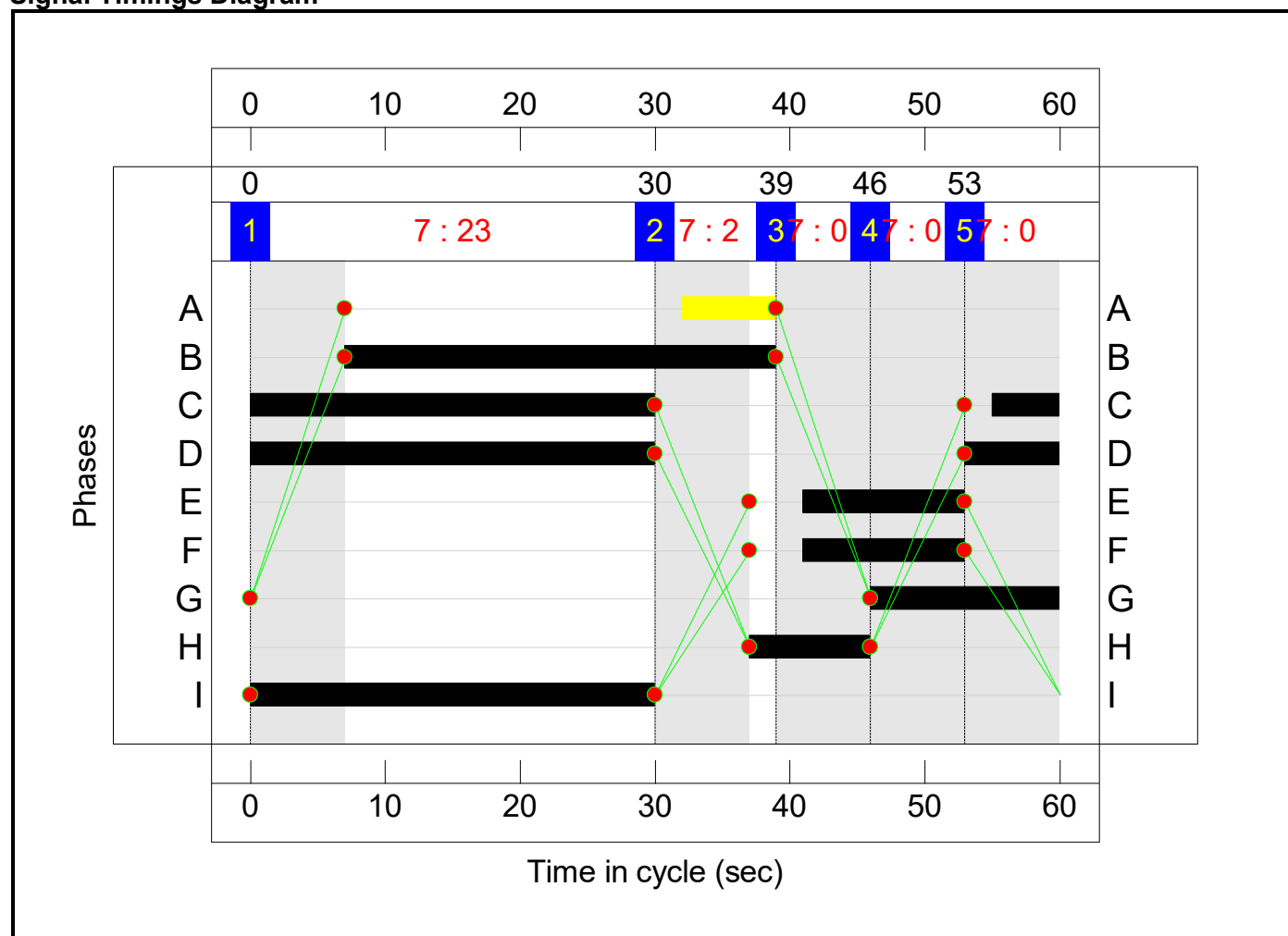
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	23	2	0	0	0
Change Point	0	30	39	46	53

Signal Timings Diagram



Full Input Data And Results

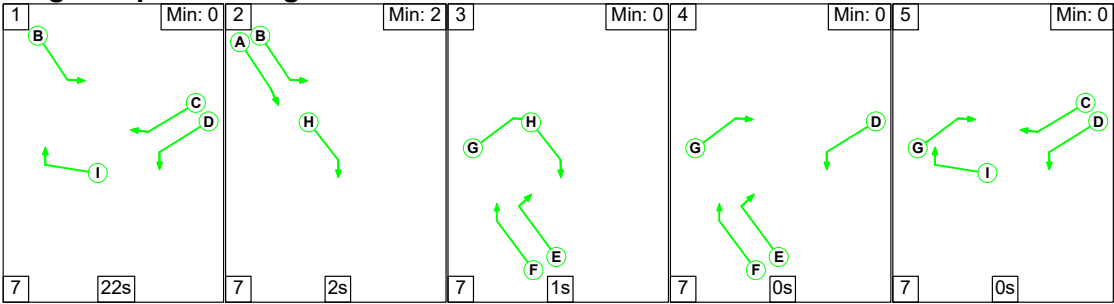
Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)
Network: Moorhead Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	86.9%	-
Moorhead Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	86.9%	-
1/1	A264 E Circ Ahead	U	N/A	N/A	H		1	9	-	155	2024	337	45.9%	155
1/2	A264 E Circ Ahead	U	N/A	N/A	H		1	9	-	166	2092	349	47.6%	166
2/1	A264 W Circ Right	U	N/A	N/A	G		1	14	-	281	2225	556	50.5%	281
2/2	A264 W Circ Right	U	N/A	N/A	G		1	14	-	263	2155	539	48.8%	263
3/1	B2195 Circ Right	U	N/A	N/A	I		1	30	-	777	2090	1080	72.0%	777
3/2	B2195 Circ Right	U	N/A	N/A	I		1	30	-	698	1957	1011	69.0%	698
4/2+4/1	A264 East Ahead Left	U	N/A	N/A	C D		1	35:37	-	1299	1966:1937	1169+785	66.5 : 66.5%	1299
4/3	A264 East Ahead	U	N/A	N/A	C		1	35	-	698	2103	1262	55.3%	698
5/1	A264 East Exit	U	N/A	N/A	-		-	-	-	1160	Inf	Inf	0.0%	1160
5/2	A264 East Exit	U	N/A	N/A	-		-	-	-	1067	Inf	Inf	0.0%	1067
6/1	B2195 Exit	U	N/A	N/A	-		-	-	-	416	Inf	Inf	0.0%	416
6/2	B2195 Exit	U	N/A	N/A	-		-	-	-	427	Inf	Inf	0.0%	427
7/1+7/2	B2195 Right Ahead	U	N/A	N/A	F E		1	12	-	761	1923:3600	311+780	69.7 : 69.7%	761
8/1	A264 West Exit	U	N/A	N/A	-		-	-	-	994	Inf	Inf	0.0%	994
8/2	A264 West Exit	U	N/A	N/A	-		-	-	-	698	Inf	Inf	0.0%	698
9/1	A264 West Ahead	U	N/A	N/A	B		1	32	-	879	1932	1063	82.7%	879

Full Input Data And Results

9/2+9/3	A264 West Ahead Ahead2	U	N/A	N/A	B A		1	32:7	-	1125	1932:3600	925+369	86.9 : 86.9%	1125
Item	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)	Back of Uniform Q At End of Red(pcu)	
Network: Moorhead Roundabout	-	0	0	0	17.2	12.5	0.0	29.8	-	-	-	-	-	
Moorhead Roundabout	-	0	0	0	17.2	12.5	0.0	29.8	-	-	-	-	-	
1/1	155	-	-	-	0.0	0.4	-	0.5	10.7	1.9	0.4	2.4	0.0	
1/2	166	-	-	-	0.0	0.5	-	0.5	10.7	2.4	0.5	2.8	0.0	
2/1	281	-	-	-	0.0	0.5	-	0.5	6.9	0.2	0.5	0.8	0.0	
2/2	263	-	-	-	0.0	0.5	-	0.5	6.8	0.2	0.5	0.7	0.0	
3/1	777	-	-	-	0.7	1.3	-	2.0	9.1	9.9	1.3	11.2	0.9	
3/2	698	-	-	-	0.7	1.1	-	1.8	9.4	8.7	1.1	9.8	0.8	
4/2+4/1	1299	-	-	-	2.5	1.0	-	3.5	9.7	8.4	1.0	9.4	4.7	
4/3	698	-	-	-	1.4	0.6	-	2.0	10.4	6.8	0.6	7.4	4.3	
5/1	1160	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
5/2	1067	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
6/1	416	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
6/2	427	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
7/1+7/2	761	-	-	-	4.5	1.1	-	5.7	26.8	4.2	1.1	5.3	3.4	
8/1	994	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
8/2	698	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
9/1	879	-	-	-	2.7	2.3	-	5.1	20.7	12.0	2.3	14.3	6.1	
9/2+9/3	1125	-	-	-	4.5	3.2	-	7.7	24.7	10.9	3.2	14.0	5.6	
C1 PRC for Signalled Lanes (%): 3.6 Total Delay for Signalled Lanes (pcuHr): 29.76 Cycle Time (s): 60 PRC Over All Lanes (%): 3.6 Total Delay Over All Lanes(pcuHr): 29.76														

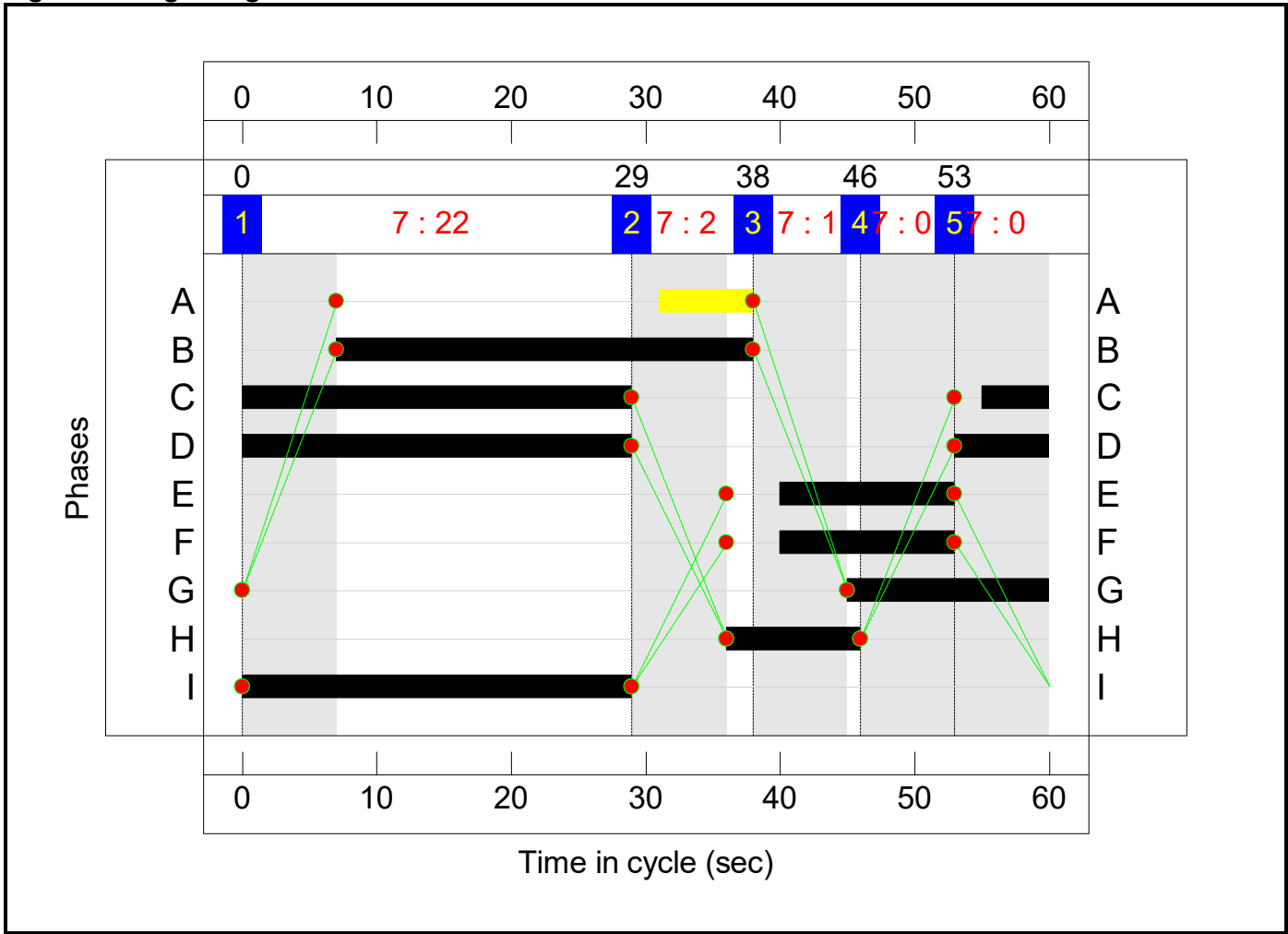
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	22	2	1	0	0
Change Point	0	29	38	46	53

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)
Network: Moorhead Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	93.4%	-
Moorhead Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	93.4%	-
1/1	A264 E Circ Ahead	U	N/A	N/A	H		1	10	-	138	2024	371	37.2%	138
1/2	A264 E Circ Ahead	U	N/A	N/A	H		1	10	-	149	2092	384	38.8%	149
2/1	A264 W Circ Right	U	N/A	N/A	G		1	15	-	232	2225	593	39.1%	232
2/2	A264 W Circ Right	U	N/A	N/A	G		1	15	-	210	2155	575	36.5%	210
3/1	B2195 Circ Right	U	N/A	N/A	I		1	29	-	976	2090	1045	93.4%	976
3/2	B2195 Circ Right	U	N/A	N/A	I		1	29	-	913	1957	978	93.3%	913
4/2+4/1	A264 East Ahead Left	U	N/A	N/A	C D		1	34:36	-	1474	1966:1937	1147+661	85.1 : 75.4%	1474
4/3	A264 East Ahead	U	N/A	N/A	C		1	34	-	913	2103	1227	74.4%	913
5/1	A264 East Exit	U	N/A	N/A	-		-	-	-	1043	Inf	Inf	0.0%	1043
5/2	A264 East Exit	U	N/A	N/A	-		-	-	-	966	Inf	Inf	0.0%	966
6/1	B2195 Exit	U	N/A	N/A	-		-	-	-	387	Inf	Inf	0.0%	387
6/2	B2195 Exit	U	N/A	N/A	-		-	-	-	398	Inf	Inf	0.0%	398
7/1+7/2	B2195 Right Ahead	U	N/A	N/A	F E		1	13	-	838	1923:3600	449+501	88.3 : 88.3%	838
8/1	A264 West Exit	U	N/A	N/A	-		-	-	-	1372	Inf	Inf	0.0%	1372
8/2	A264 West Exit	U	N/A	N/A	-		-	-	-	913	Inf	Inf	0.0%	913
9/1	A264 West Ahead	U	N/A	N/A	B		1	31	-	811	1932	1030	78.7%	811

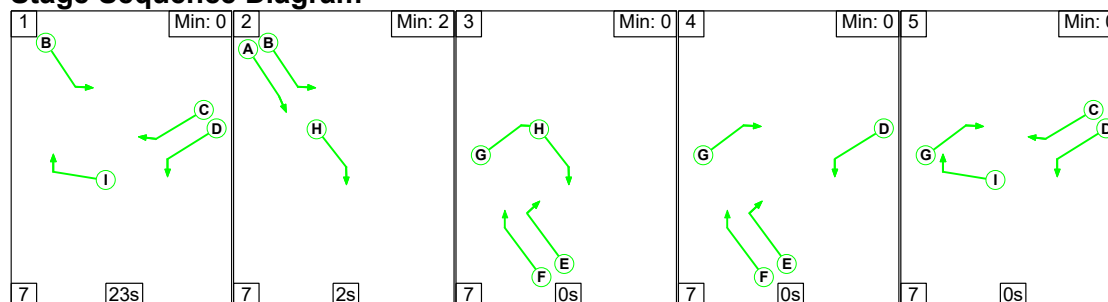
Full Input Data And Results

9/2+9/3	A264 West Ahead Ahead2	U	N/A	N/A	B A		1	31:7	-	1043	1932:3600	907+344	83.3 : 83.3%	1043
Item	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)	Back of Uniform Q At End of Red(pcu)	
Network: Moorhead Roundabout	-	0	0	0	20.0	24.6	0.0	44.5	-	-	-	-	-	
Moorhead Roundabout	-	0	0	0	20.0	24.6	0.0	44.5	-	-	-	-	-	
1/1	138	-	-	-	0.0	0.3	-	0.3	8.5	1.8	0.3	2.1	0.0	
1/2	149	-	-	-	0.0	0.3	-	0.4	8.5	2.0	0.3	2.3	0.0	
2/1	232	-	-	-	0.0	0.3	-	0.3	5.3	0.2	0.3	0.6	0.0	
2/2	210	-	-	-	0.0	0.3	-	0.3	5.2	0.2	0.3	0.5	0.0	
3/1	976	-	-	-	1.0	6.0	-	7.0	25.9	15.2	6.0	21.2	1.1	
3/2	913	-	-	-	1.2	5.9	-	7.1	28.1	14.2	5.9	20.1	1.0	
4/2+4/1	1474	-	-	-	3.6	2.2	-	5.8	14.2	13.3	2.2	15.5	6.2	
4/3	913	-	-	-	2.3	1.4	-	3.8	14.9	11.2	1.4	12.6	5.8	
5/1	1043	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
5/2	966	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
6/1	387	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
6/2	398	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
7/1+7/2	838	-	-	-	4.9	3.5	-	8.4	36.3	6.3	3.5	9.8	4.8	
8/1	1372	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
8/2	913	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
9/1	811	-	-	-	2.5	1.8	-	4.4	19.3	10.8	1.8	12.6	5.9	
9/2+9/3	1043	-	-	-	4.2	2.4	-	6.6	22.9	9.5	2.4	11.9	5.5	
C1 PRC for Signalled Lanes (%): -3.8 Total Delay for Signalled Lanes (pcuHr): 44.52 Cycle Time (s): 60 PRC Over All Lanes (%): -3.8 Total Delay Over All Lanes(pcuHr): 44.52														

Full Input Data And Results

Scenario 10: '2031 PM Peak with Development' (FG10: '2031 PM Peak with Development', Plan 1: 'Network Control Plan 1')

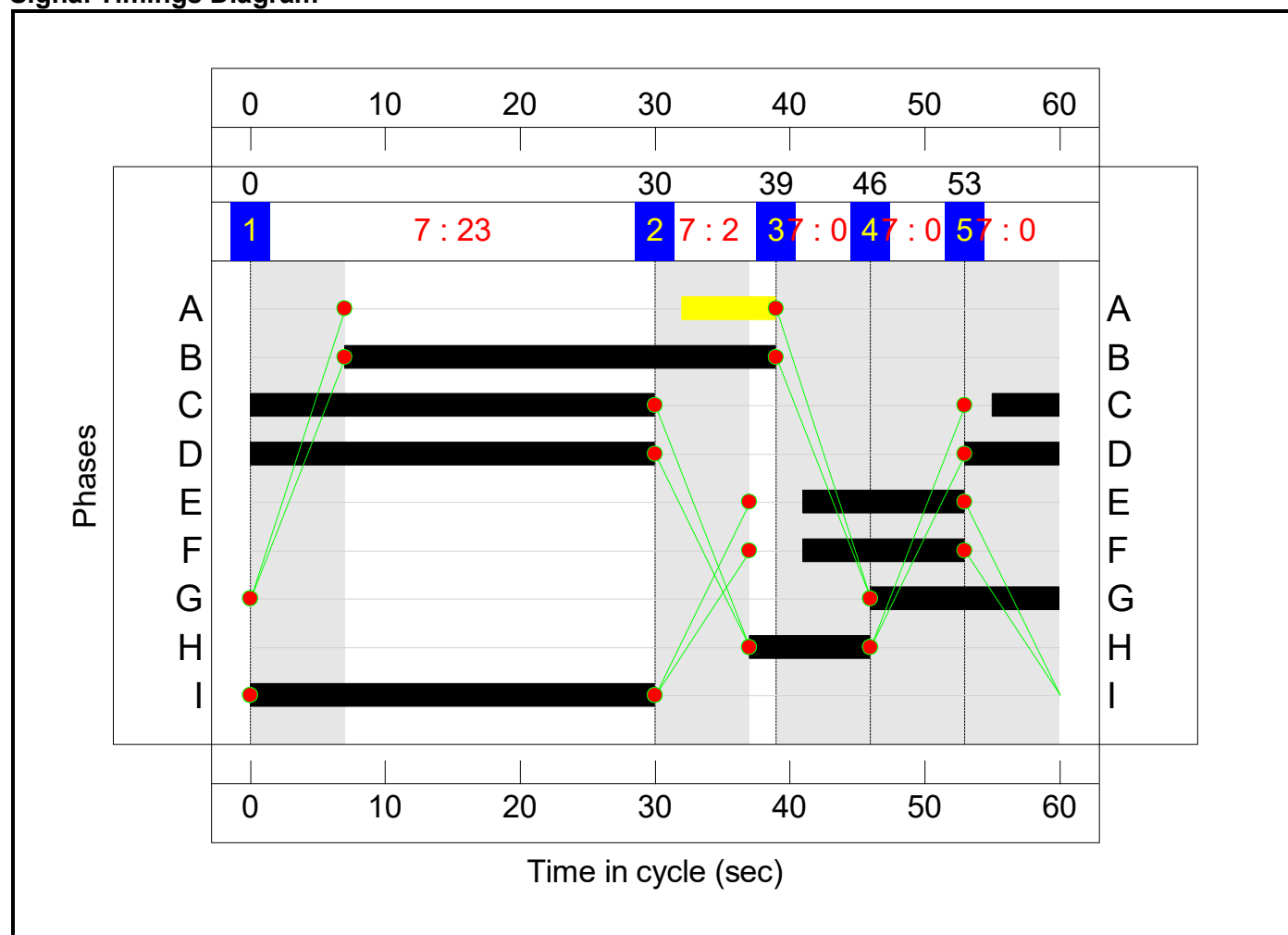
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5
Duration	23	2	0	0	0
Change Point	0	30	39	46	53

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)
Network: Moorhead Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	87.0%	-
Moorhead Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	87.0%	-
1/1	A264 E Circ Ahead	U	N/A	N/A	H		1	9	-	157	2024	337	46.5%	157
1/2	A264 E Circ Ahead	U	N/A	N/A	H		1	9	-	168	2092	349	48.2%	168
2/1	A264 W Circ Right	U	N/A	N/A	G		1	14	-	285	2225	556	51.2%	285
2/2	A264 W Circ Right	U	N/A	N/A	G		1	14	-	267	2155	539	49.6%	267
3/1	B2195 Circ Right	U	N/A	N/A	I		1	30	-	776	2090	1080	71.9%	776
3/2	B2195 Circ Right	U	N/A	N/A	I		1	30	-	699	1957	1011	69.1%	699
4/2+4/1	A264 East Ahead Left	U	N/A	N/A	C D		1	35:37	-	1312	1966:1937	1156+798	67.1 : 67.1%	1312
4/3	A264 East Ahead	U	N/A	N/A	C		1	35	-	699	2103	1262	55.4%	699
5/1	A264 East Exit	U	N/A	N/A	-		-	-	-	1164	Inf	Inf	0.0%	1164
5/2	A264 East Exit	U	N/A	N/A	-		-	-	-	1071	Inf	Inf	0.0%	1071
6/1	B2195 Exit	U	N/A	N/A	-		-	-	-	425	Inf	Inf	0.0%	425
6/2	B2195 Exit	U	N/A	N/A	-		-	-	-	436	Inf	Inf	0.0%	436
7/1+7/2	B2195 Right Ahead	U	N/A	N/A	F E		1	12	-	772	1923:3600	311+780	70.8 : 70.8%	772
8/1	A264 West Exit	U	N/A	N/A	-		-	-	-	996	Inf	Inf	0.0%	996
8/2	A264 West Exit	U	N/A	N/A	-		-	-	-	699	Inf	Inf	0.0%	699
9/1	A264 West Ahead	U	N/A	N/A	B		1	32	-	879	1932	1063	82.7%	879

Full Input Data And Results

9/2+9/3	A264 West Ahead Ahead2	U	N/A	N/A	B A		1	32:7	-	1129	1932:3600	924+373	87.0 : 87.0%	1129
Item	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)	Back of Uniform Q At End of Red(pcu)	
Network: Moorhead Roundabout	-	0	0	0	17.4	12.7	0.0	30.1	-	-	-	-	-	
Moorhead Roundabout	-	0	0	0	17.4	12.7	0.0	30.1	-	-	-	-	-	
1/1	157	-	-	-	0.0	0.4	-	0.5	10.8	1.9	0.4	2.4	0.0	
1/2	168	-	-	-	0.0	0.5	-	0.5	10.8	2.4	0.5	2.8	0.0	
2/1	285	-	-	-	0.0	0.5	-	0.6	7.0	0.2	0.5	0.8	0.0	
2/2	267	-	-	-	0.0	0.5	-	0.5	6.9	0.2	0.5	0.7	0.0	
3/1	776	-	-	-	0.7	1.3	-	2.0	9.1	9.9	1.3	11.1	0.9	
3/2	699	-	-	-	0.7	1.1	-	1.8	9.4	8.7	1.1	9.8	0.8	
4/2+4/1	1312	-	-	-	2.5	1.0	-	3.6	9.8	8.4	1.0	9.4	4.7	
4/3	699	-	-	-	1.4	0.6	-	2.0	10.4	6.8	0.6	7.4	4.3	
5/1	1164	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
5/2	1071	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
6/1	425	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
6/2	436	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
7/1+7/2	772	-	-	-	4.6	1.2	-	5.8	27.1	4.2	1.2	5.4	3.4	
8/1	996	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
8/2	699	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
9/1	879	-	-	-	2.7	2.3	-	5.1	20.7	12.0	2.3	14.3	6.1	
9/2+9/3	1129	-	-	-	4.6	3.2	-	7.8	24.8	10.9	3.2	14.1	5.6	
C1 PRC for Signalled Lanes (%): 3.4 Total Delay for Signalled Lanes (pcuHr): 30.07 Cycle Time (s): 60 PRC Over All Lanes (%): 3.4 Total Delay Over All Lanes(pcuHr): 30.07														

APPENDIX M

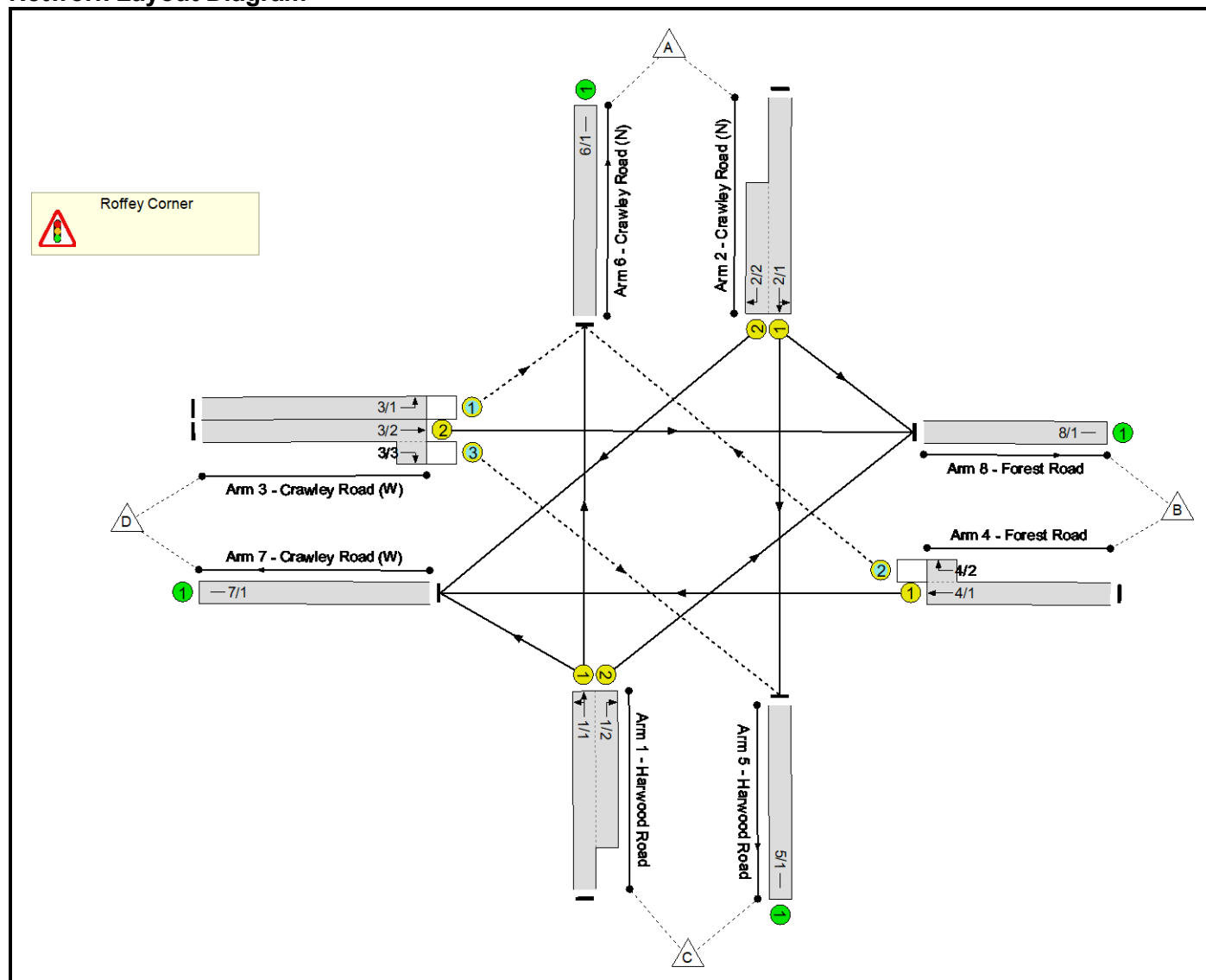
Full Input Data And Results

Full Input Data And Results

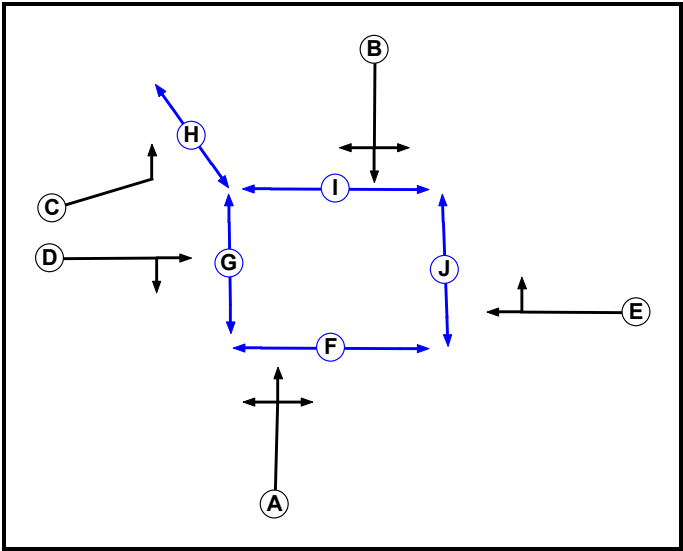
User and Project Details

Project:	Land at Crawley Road, Faygate
Title:	Roffey Corner
Location:	
Client:	SDP
Additional detail:	
File name:	Roffey Corner.lsg3x
Author:	JAT
Company:	SK
Address:	Albion Wharf, Manchester

Network Layout Diagram



Phase Diagram



Phase Input Data

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

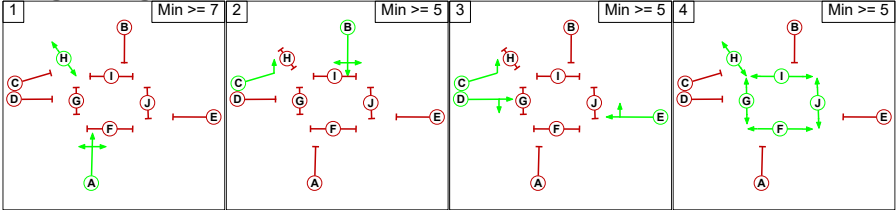
Phase Intergreens Matrix

Terminating Phase	Starting Phase										
		A	B	C	D	E	F	G	H	I	J
	A		6	8	6	5	5	7	-	8	8
	B	5		-	5	6	8	7	-	5	7
	C	5	-		-	-	-	-	5	-	-
	D	5	6	-		-	8	5	-	8	8
	E	6	5	-	-		7	8	-	7	5
	F	11	11	-	11	11		-	-	-	-
	G	11	11	-	11	11	-		-	-	-
	H	-	-	3	-	-	-	-		-	-
	I	11	11	-	11	11	-	-	-		-
	J	11	11	-	11	11	-	-	-	-	

Phases in Stage

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

Stage Diagram



Phase Delays

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

Prohibited Stage Change

From Stage	To Stage				
		1	2	3	4
	1		8	8	8
	2	5		6	8
	3	6	6		8
	4	11	11	11	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Roffey Corner											
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 (Crawley Road (W))	6/1 (Left)	715	0	1/1	0.22	To 6/1 (Ahead)	2.00	-	0.50	2	2.00
				4/2	0.22	All					
3/3 (Crawley Road (W))	5/1 (Right)	1439	0	4/1	1.09	All	2.00	-	0.50	2	2.00
4/2 (Forest Road)	6/1 (Right)	1439	0	3/2	1.09	All	2.00	-	0.50	2	2.00

Full Input Data And Results

Lane Input Data

Junction: Roffey Corner												
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 (Harwood Road)	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 6 Ahead	Inf
1/2 (Harwood Road)	U	A	2	3	10.4	Geom	-	3.00	0.00	N	Arm 7 Left	10.00
											Arm 8 Right	20.00
2/1 (Crawley Road (N))	U	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Ahead	Inf
											Arm 8 Left	10.00
2/2 (Crawley Road (N))	U	B	2	3	8.7	Geom	-	3.00	0.00	N	Arm 7 Right	20.00
3/1 (Crawley Road (W))	O	C	2	3	9.6	Geom	-	3.60	0.00	Y	Arm 6 Left	40.00
3/2 (Crawley Road (W))	U	D	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 8 Ahead	Inf
3/3 (Crawley Road (W))	O	D	2	3	2.0	Geom	-	3.00	0.00	N	Arm 5 Right	10.00
4/1 (Forest Road)	U	E	2	3	60.0	Geom	-	2.80	0.00	Y	Arm 7 Ahead	Inf
4/2 (Forest Road)	O	E	2	3	2.0	Geom	-	2.80	0.00	N	Arm 6 Right	10.00
5/1 (Harwood Road)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Crawley Road (N))	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (Crawley Road (W))	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (Forest Road)	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2026 AM Peak Observed'	07:45	08:45	01:00	
2: '2026 PM Peak Observed'	17:00	18:00	01:00	
3: '2029 AM Peak Base'	07:45	08:45	01:00	
4: '2029 PM Peak Base'	17:00	18:00	01:00	
5: '2029 AM Peak with Development'	07:45	08:45	01:00	
6: '2029 PM Peak with Development'	17:00	18:00	01:00	
7: '2031 AM Peak Base'	07:45	08:45	01:00	
8: '2031 PM Peak Base'	17:00	18:00	01:00	
9: '2031 AM Peak with Development'	07:45	08:45	01:00	
10: '2031 PM Peak with Development'	17:00	18:00	01:00	

Scenario 1: '2026 AM Peak Observed' (FG1: '2026 AM Peak Observed', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
Origin		A	B	C	D	Tot.
	A	0	33	457	169	659
	B	43	0	0	105	148
	C	411	229	0	23	663
	D	98	91	19	0	208
	Tot.	552	353	476	297	1678

Traffic Lane Flows

Lane	Scenario 1: 2026 AM Peak Observed
Junction: Roffey Corner	
1/1 (with short)	663(In) 434(Out)
1/2 (short)	229
2/1 (with short)	659(In) 490(Out)
2/2 (short)	169
3/1	98
3/2 (with short)	110(In) 91(Out)
3/3 (short)	19
4/1 (with short)	148(In) 105(Out)
4/2 (short)	43
5/1	476
6/1	552
7/1	297
8/1	353

Lane Saturation Flows

Junction: Roffey Corner								
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 (Harwood Road)	3.00	0.00	Y	Arm 6 Ahead	Inf	94.7 %	1900	1900
				Arm 7 Left	10.00	5.3 %		
1/2 (Harwood Road)	3.00	0.00	N	Arm 8 Right	20.00	100.0 %	1912	1912
2/1 (Crawley Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	93.3 %	1896	1896
				Arm 8 Left	10.00	6.7 %		
2/2 (Crawley Road (N))	3.00	0.00	N	Arm 7 Right	20.00	100.0 %	1912	1912
3/1 (Crawley Road (W))	3.60	0.00	Y	Arm 6 Left	40.00	100.0 %	1904	1904
3/2 (Crawley Road (W))	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
3/3 (Crawley Road (W))	3.00	0.00	N	Arm 5 Right	10.00	100.0 %	1787	1787
4/1 (Forest Road)	2.80	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1895	1895
4/2 (Forest Road)	2.80	0.00	N	Arm 6 Right	10.00	100.0 %	1770	1770
5/1 (Harwood Road Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Crawley Road (N) Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Crawley Road (W) Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Forest Road Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2026 PM Peak Observed' (FG2: '2026 PM Peak Observed', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	53	423	116	592
	B	46	0	0	57	103
	C	479	162	0	22	663
	D	136	64	19	0	219
	Tot.	661	279	442	195	1577

Traffic Lane Flows

Lane	Scenario 2: 2026 PM Peak Observed
Junction: Roffey Corner	
1/1 (with short)	663(In) 501(Out)
1/2 (short)	162
2/1 (with short)	592(In) 476(Out)
2/2 (short)	116
3/1	136
3/2 (with short)	83(In) 64(Out)
3/3 (short)	19
4/1 (with short)	103(In) 57(Out)
4/2 (short)	46
5/1	442
6/1	661
7/1	195
8/1	279

Lane Saturation Flows

Junction: Roffey Corner								
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 (Harwood Road)	3.00	0.00	Y	Arm 6 Ahead	Inf	95.6 %	1902	1902
				Arm 7 Left	10.00	4.4 %		
1/2 (Harwood Road)	3.00	0.00	N	Arm 8 Right	20.00	100.0 %	1912	1912
2/1 (Crawley Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	88.9 %	1884	1884
				Arm 8 Left	10.00	11.1 %		
2/2 (Crawley Road (N))	3.00	0.00	N	Arm 7 Right	20.00	100.0 %	1912	1912
3/1 (Crawley Road (W))	3.60	0.00	Y	Arm 6 Left	40.00	100.0 %	1904	1904
3/2 (Crawley Road (W))	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
3/3 (Crawley Road (W))	3.00	0.00	N	Arm 5 Right	10.00	100.0 %	1787	1787
4/1 (Forest Road)	2.80	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1895	1895
4/2 (Forest Road)	2.80	0.00	N	Arm 6 Right	10.00	100.0 %	1770	1770
5/1 (Harwood Road Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Crawley Road (N) Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Crawley Road (W) Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Forest Road Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 3: '2029 AM Peak Base' (FG3: '2029 AM Peak Base', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	34	474	175	683
	B	45	0	0	109	154
	C	426	237	0	24	687
	D	102	94	20	0	216
	Tot.	573	365	494	308	1740

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: 2029 AM Peak Base
Junction: Roffey Corner	
1/1 (with short)	687(In) 450(Out)
1/2 (short)	237
2/1 (with short)	683(In) 508(Out)
2/2 (short)	175
3/1	102
3/2 (with short)	114(In) 94(Out)
3/3 (short)	20
4/1 (with short)	154(In) 109(Out)
4/2 (short)	45
5/1	494
6/1	573
7/1	308
8/1	365

Lane Saturation Flows

Junction: Roffey Corner								
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 (Harwood Road)	3.00	0.00	Y	Arm 6 Ahead	Inf	94.7 %	1900	1900
				Arm 7 Left	10.00	5.3 %		
1/2 (Harwood Road)	3.00	0.00	N	Arm 8 Right	20.00	100.0 %	1912	1912
2/1 (Crawley Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	93.3 %	1896	1896
				Arm 8 Left	10.00	6.7 %		
2/2 (Crawley Road (N))	3.00	0.00	N	Arm 7 Right	20.00	100.0 %	1912	1912
3/1 (Crawley Road (W))	3.60	0.00	Y	Arm 6 Left	40.00	100.0 %	1904	1904
3/2 (Crawley Road (W))	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
3/3 (Crawley Road (W))	3.00	0.00	N	Arm 5 Right	10.00	100.0 %	1787	1787
4/1 (Forest Road)	2.80	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1895	1895
4/2 (Forest Road)	2.80	0.00	N	Arm 6 Right	10.00	100.0 %	1770	1770
5/1 (Harwood Road Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Crawley Road (N) Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Crawley Road (W) Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Forest Road Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 4: '2029 PM Peak Base' (FG4: '2029 PM Peak Base', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	55	439	120	614
	B	48	0	0	59	107
	C	497	168	0	23	688
	D	141	66	20	0	227
	Tot.	686	289	459	202	1636

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: 2029 PM Peak Base
Junction: Roffey Corner	
1/1 (with short)	688(In) 520(Out)
1/2 (short)	168
2/1 (with short)	614(In) 494(Out)
2/2 (short)	120
3/1	141
3/2 (with short)	86(In) 66(Out)
3/3 (short)	20
4/1 (with short)	107(In) 59(Out)
4/2 (short)	48
5/1	459
6/1	686
7/1	202
8/1	289

Lane Saturation Flows

Junction: Roffey Corner								
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 (Harwood Road)	3.00	0.00	Y	Arm 6 Ahead	Inf	95.6 %	1902	1902
				Arm 7 Left	10.00	4.4 %		
1/2 (Harwood Road)	3.00	0.00	N	Arm 8 Right	20.00	100.0 %	1912	1912
2/1 (Crawley Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	88.9 %	1884	1884
				Arm 8 Left	10.00	11.1 %		
2/2 (Crawley Road (N))	3.00	0.00	N	Arm 7 Right	20.00	100.0 %	1912	1912
3/1 (Crawley Road (W))	3.60	0.00	Y	Arm 6 Left	40.00	100.0 %	1904	1904
3/2 (Crawley Road (W))	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
3/3 (Crawley Road (W))	3.00	0.00	N	Arm 5 Right	10.00	100.0 %	1787	1787
4/1 (Forest Road)	2.80	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1895	1895
4/2 (Forest Road)	2.80	0.00	N	Arm 6 Right	10.00	100.0 %	1770	1770
5/1 (Harwood Road Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Crawley Road (N) Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Crawley Road (W) Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Forest Road Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 5: '2029 AM Peak with Development' (FG5: '2029 AM Peak with Development', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
Origin		A	B	C	D	Tot.
	A	0	36	495	175	706
	B	45	0	0	109	154
	C	432	237	0	24	693
	D	102	94	20	0	216
	Tot.	579	367	515	308	1769

Traffic Lane Flows

Lane	Scenario 5: 2029 AM Peak with Development
Junction: Roffey Corner	
1/1 (with short)	693(In) 456(Out)
1/2 (short)	237
2/1 (with short)	706(In) 531(Out)
2/2 (short)	175
3/1	102
3/2 (with short)	114(In) 94(Out)
3/3 (short)	20
4/1 (with short)	154(In) 109(Out)
4/2 (short)	45
5/1	515
6/1	579
7/1	308
8/1	367

Lane Saturation Flows

Junction: Roffey Corner								
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 (Harwood Road)	3.00	0.00	Y	Arm 6 Ahead	Inf	94.7 %	1900	1900
				Arm 7 Left	10.00	5.3 %		
1/2 (Harwood Road)	3.00	0.00	N	Arm 8 Right	20.00	100.0 %	1912	1912
2/1 (Crawley Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	93.2 %	1896	1896
				Arm 8 Left	10.00	6.8 %		
2/2 (Crawley Road (N))	3.00	0.00	N	Arm 7 Right	20.00	100.0 %	1912	1912
3/1 (Crawley Road (W))	3.60	0.00	Y	Arm 6 Left	40.00	100.0 %	1904	1904
3/2 (Crawley Road (W))	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
3/3 (Crawley Road (W))	3.00	0.00	N	Arm 5 Right	10.00	100.0 %	1787	1787
4/1 (Forest Road)	2.80	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1895	1895
4/2 (Forest Road)	2.80	0.00	N	Arm 6 Right	10.00	100.0 %	1770	1770
5/1 (Harwood Road Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Crawley Road (N) Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Crawley Road (W) Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Forest Road Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 6: '2029 PM Peak with Development' (FG6: '2029 PM Peak with Development', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
	A	B	C	D	Tot.	
Origin	A	0	56	450	120	626
	B	49	0	0	59	108
	C	516	168	0	23	707
	D	141	66	20	0	227
	Tot.	706	290	470	202	1668

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 6: 2029 PM Peak with Development
Junction: Roffey Corner	
1/1 (with short)	707(In) 539(Out)
1/2 (short)	168
2/1 (with short)	626(In) 506(Out)
2/2 (short)	120
3/1	141
3/2 (with short)	86(In) 66(Out)
3/3 (short)	20
4/1 (with short)	108(In) 59(Out)
4/2 (short)	49
5/1	470
6/1	706
7/1	202
8/1	290

Lane Saturation Flows

Junction: Roffey Corner								
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 (Harwood Road)	3.00	0.00	Y	Arm 6 Ahead	Inf	95.7 %	1903	1903
				Arm 7 Left	10.00	4.3 %		
1/2 (Harwood Road)	3.00	0.00	N	Arm 8 Right	20.00	100.0 %	1912	1912
2/1 (Crawley Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	88.9 %	1884	1884
				Arm 8 Left	10.00	11.1 %		
2/2 (Crawley Road (N))	3.00	0.00	N	Arm 7 Right	20.00	100.0 %	1912	1912
3/1 (Crawley Road (W))	3.60	0.00	Y	Arm 6 Left	40.00	100.0 %	1904	1904
3/2 (Crawley Road (W))	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
3/3 (Crawley Road (W))	3.00	0.00	N	Arm 5 Right	10.00	100.0 %	1787	1787
4/1 (Forest Road)	2.80	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1895	1895
4/2 (Forest Road)	2.80	0.00	N	Arm 6 Right	10.00	100.0 %	1770	1770
5/1 (Harwood Road Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Crawley Road (N) Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Crawley Road (W) Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Forest Road Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 7: '2031 AM Peak Base' (FG7: '2031 AM Peak Base', Plan 2: 'Network Control Plan 2')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	35	484	179	698
	B	46	0	0	112	158
	C	435	242	0	25	702
	D	104	96	20	0	220
	Tot.	585	373	504	316	1778

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 7: 2031 AM Peak Base
Junction: Roffey Corner	
1/1 (with short)	702(In) 460(Out)
1/2 (short)	242
2/1 (with short)	698(In) 519(Out)
2/2 (short)	179
3/1	104
3/2 (with short)	116(In) 96(Out)
3/3 (short)	20
4/1 (with short)	158(In) 112(Out)
4/2 (short)	46
5/1	504
6/1	585
7/1	316
8/1	373

Lane Saturation Flows

Junction: Roffey Corner								
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 (Harwood Road)	3.00	0.00	Y	Arm 6 Ahead	Inf	94.6 %	1900	1900
				Arm 7 Left	10.00	5.4 %		
1/2 (Harwood Road)	3.00	0.00	N	Arm 8 Right	20.00	100.0 %	1912	1912
2/1 (Crawley Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	93.3 %	1896	1896
				Arm 8 Left	10.00	6.7 %		
2/2 (Crawley Road (N))	3.00	0.00	N	Arm 7 Right	20.00	100.0 %	1912	1912
3/1 (Crawley Road (W))	3.60	0.00	Y	Arm 6 Left	40.00	100.0 %	1904	1904
3/2 (Crawley Road (W))	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
3/3 (Crawley Road (W))	3.00	0.00	N	Arm 5 Right	10.00	100.0 %	1787	1787
4/1 (Forest Road)	2.80	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1895	1895
4/2 (Forest Road)	2.80	0.00	N	Arm 6 Right	10.00	100.0 %	1770	1770
5/1 (Harwood Road Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Crawley Road (N) Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Crawley Road (W) Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Forest Road Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 8: '2031 PM Peak Base' (FG8: '2031 PM Peak Base', Plan 2: 'Network Control Plan 2')**Traffic Flows, Desired****Desired Flow :**

	Destination					
		A	B	C	D	Tot.
Origin	A	0	56	448	122	626
	B	49	0	0	60	109
	C	508	172	0	24	704
	D	144	68	21	0	233
	Tot.	701	296	469	206	1672

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 8: 2031 PM Peak Base
Junction: Roffey Corner	
1/1 (with short)	704(In) 532(Out)
1/2 (short)	172
2/1 (with short)	626(In) 504(Out)
2/2 (short)	122
3/1	144
3/2 (with short)	89(In) 68(Out)
3/3 (short)	21
4/1 (with short)	109(In) 60(Out)
4/2 (short)	49
5/1	469
6/1	701
7/1	206
8/1	296

Lane Saturation Flows

Junction: Roffey Corner								
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 (Harwood Road)	3.00	0.00	Y	Arm 6 Ahead	Inf	95.5 %	1902	1902
				Arm 7 Left	10.00	4.5 %		
1/2 (Harwood Road)	3.00	0.00	N	Arm 8 Right	20.00	100.0 %	1912	1912
2/1 (Crawley Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	88.9 %	1884	1884
				Arm 8 Left	10.00	11.1 %		
2/2 (Crawley Road (N))	3.00	0.00	N	Arm 7 Right	20.00	100.0 %	1912	1912
3/1 (Crawley Road (W))	3.60	0.00	Y	Arm 6 Left	40.00	100.0 %	1904	1904
3/2 (Crawley Road (W))	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
3/3 (Crawley Road (W))	3.00	0.00	N	Arm 5 Right	10.00	100.0 %	1787	1787
4/1 (Forest Road)	2.80	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1895	1895
4/2 (Forest Road)	2.80	0.00	N	Arm 6 Right	10.00	100.0 %	1770	1770
5/1 (Harwood Road Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Crawley Road (N) Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Crawley Road (W) Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Forest Road Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 9: '2031 AM Peak with Development' (FG9: '2031 AM Peak with Development', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
	A	B	C	D	Tot.	
Origin	A	0	36	505	179	720
	B	46	0	0	112	158
	C	441	242	0	25	708
	D	104	96	20	0	220
	Tot.	591	374	525	316	1806

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 9: 2031 AM Peak with Development
Junction: Roffey Corner	
1/1 (with short)	708(In) 466(Out)
1/2 (short)	242
2/1 (with short)	720(In) 541(Out)
2/2 (short)	179
3/1	104
3/2 (with short)	116(In) 96(Out)
3/3 (short)	20
4/1 (with short)	158(In) 112(Out)
4/2 (short)	46
5/1	525
6/1	591
7/1	316
8/1	374

Lane Saturation Flows

Junction: Roffey Corner								
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 (Harwood Road)	3.00	0.00	Y	Arm 6 Ahead	Inf	94.6 %	1900	1900
				Arm 7 Left	10.00	5.4 %		
1/2 (Harwood Road)	3.00	0.00	N	Arm 8 Right	20.00	100.0 %	1912	1912
2/1 (Crawley Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	93.3 %	1896	1896
				Arm 8 Left	10.00	6.7 %		
2/2 (Crawley Road (N))	3.00	0.00	N	Arm 7 Right	20.00	100.0 %	1912	1912
3/1 (Crawley Road (W))	3.60	0.00	Y	Arm 6 Left	40.00	100.0 %	1904	1904
3/2 (Crawley Road (W))	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
3/3 (Crawley Road (W))	3.00	0.00	N	Arm 5 Right	10.00	100.0 %	1787	1787
4/1 (Forest Road)	2.80	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1895	1895
4/2 (Forest Road)	2.80	0.00	N	Arm 6 Right	10.00	100.0 %	1770	1770
5/1 (Harwood Road Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Crawley Road (N) Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Crawley Road (W) Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Forest Road Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 10: '2031 PM Peak with Development' (FG10: '2031 PM Peak with Development', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
	A	B	C	D	Tot.	
Origin	A	0	57	459	122	638
	B	50	0	0	60	110
	C	527	172	0	24	723
	D	144	68	21	0	233
	Tot.	721	297	480	206	1704

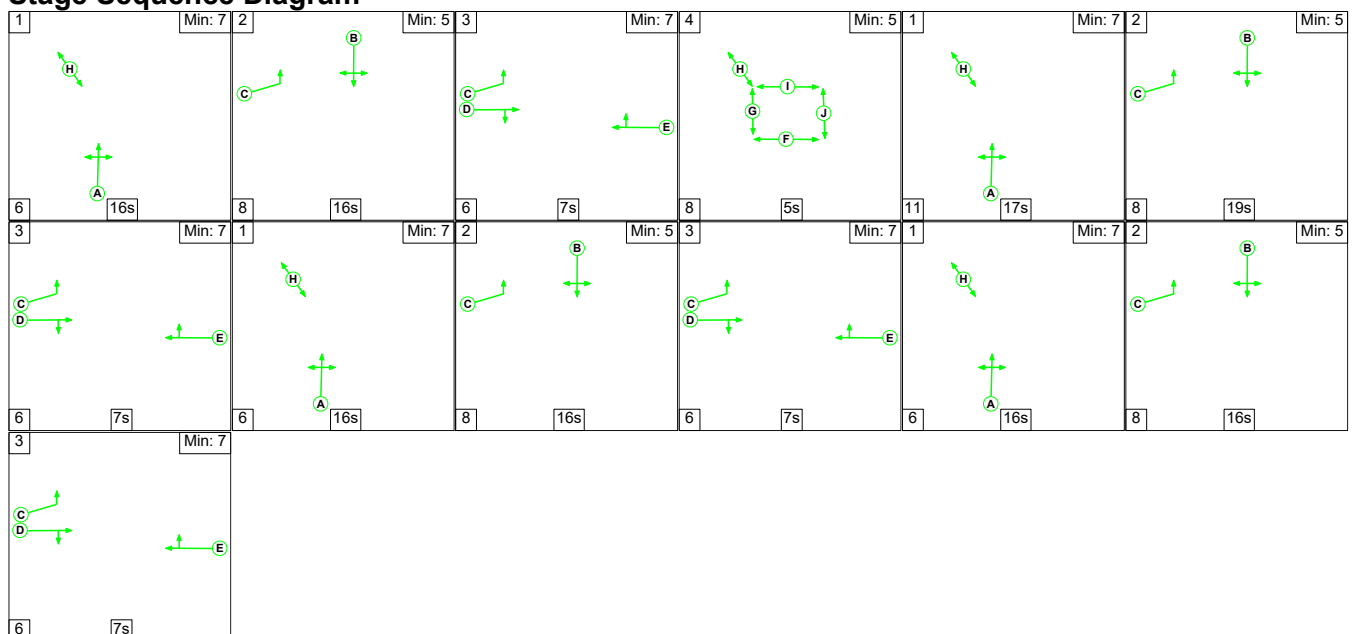
Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 10: 2031 PM Peak with Development
Junction: Roffey Corner	
1/1 (with short)	723(In) 551(Out)
1/2 (short)	172
2/1 (with short)	638(In) 516(Out)
2/2 (short)	122
3/1	144
3/2 (with short)	89(In) 68(Out)
3/3 (short)	21
4/1 (with short)	110(In) 60(Out)
4/2 (short)	50
5/1	480
6/1	721
7/1	206
8/1	297

Lane Saturation Flows

Junction: Roffey Corner								
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 (Harwood Road)	3.00	0.00	Y	Arm 6 Ahead	Inf	95.6 %	1903	1903
				Arm 7 Left	10.00	4.4 %		
1/2 (Harwood Road)	3.00	0.00	N	Arm 8 Right	20.00	100.0 %	1912	1912
2/1 (Crawley Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	89.0 %	1884	1884
				Arm 8 Left	10.00	11.0 %		
2/2 (Crawley Road (N))	3.00	0.00	N	Arm 7 Right	20.00	100.0 %	1912	1912
3/1 (Crawley Road (W))	3.60	0.00	Y	Arm 6 Left	40.00	100.0 %	1904	1904
3/2 (Crawley Road (W))	3.00	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1915	1915
3/3 (Crawley Road (W))	3.00	0.00	N	Arm 5 Right	10.00	100.0 %	1787	1787
4/1 (Forest Road)	2.80	0.00	Y	Arm 7 Ahead	Inf	100.0 %	1895	1895
4/2 (Forest Road)	2.80	0.00	N	Arm 6 Right	10.00	100.0 %	1770	1770
5/1 (Harwood Road Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Crawley Road (N) Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Crawley Road (W) Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Forest Road Lane 1)	Infinite Saturation Flow						Inf	Inf

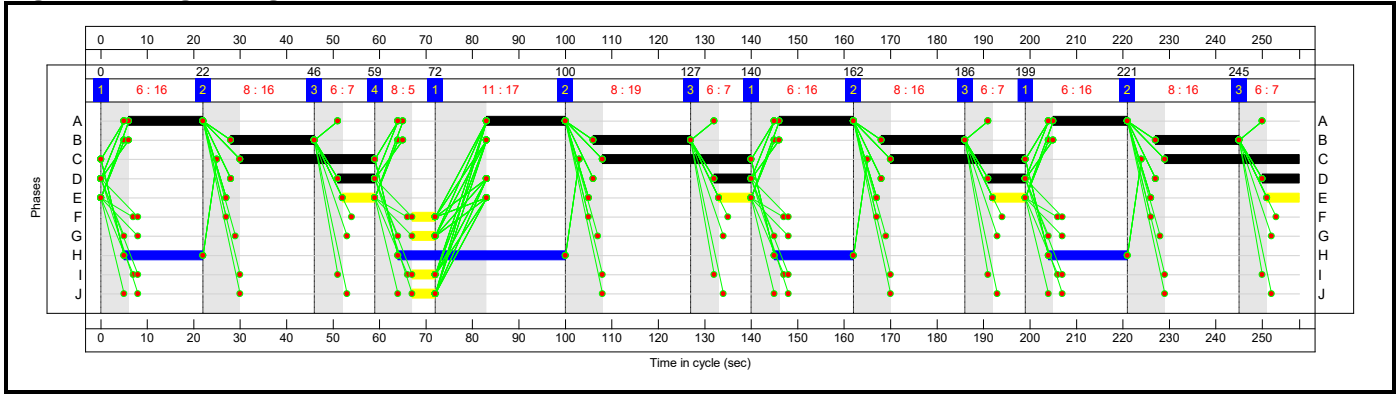
Scenario 1: '2026 AM Peak Observed' (FG1: '2026 AM Peak Observed', Plan 1: 'Network Control Plan 1')
Stage Sequence Diagram


Stage Timings

Stage	1	2	3	4	1	2	3	1	2	3
Duration	16	16	7	5	17	19	7	16	16	7
Change Point	0	22	46	59	72	100	127	140	162	186

Stage	1	2	3							
Duration	16	16	7							
Change Point	199	221	245							

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)
Network: Roffey Corner	-	-	N/A	-	-		-	-	-	-	-	-	85.4%	-
Roffey Corner	-	-	N/A	-	-		-	-	-	-	-	-	85.4%	-
1/1+1/2	Harwood Road Ahead Left Right	U	N/A	N/A	A		4	65	-	663	1900:1912	508+268	85.4 : 85.4%	663
2/1+2/2	Crawley Road (N) Ahead Right Left	U	N/A	N/A	B		4	75	-	659	1896:1912	575+198	85.2 : 85.2%	659
3/1	Crawley Road (W) Left	O	N/A	N/A	C		4	119	-	98	1904	783	12.5%	98
3/2+3/3	Crawley Road (W) Right Ahead	U+O	N/A	N/A	D		4	32	-	110	1915:1787	233+49	39.1 : 39.1%	110
4/1+4/2	Forest Road Right Ahead	U+O	N/A	N/A	E		4	28	-	148	1895:1770	193+79	54.3 : 54.3%	148
5/1	Harwood Road	U	N/A	N/A	-		-	-	-	476	Inf	Inf	0.0%	476
6/1	Crawley Road (N)	U	N/A	N/A	-		-	-	-	552	Inf	Inf	0.0%	552
7/1	Crawley Road (W)	U	N/A	N/A	-		-	-	-	297	Inf	Inf	0.0%	297
8/1	Forest Road	U	N/A	N/A	-		-	-	-	353	Inf	Inf	0.0%	353

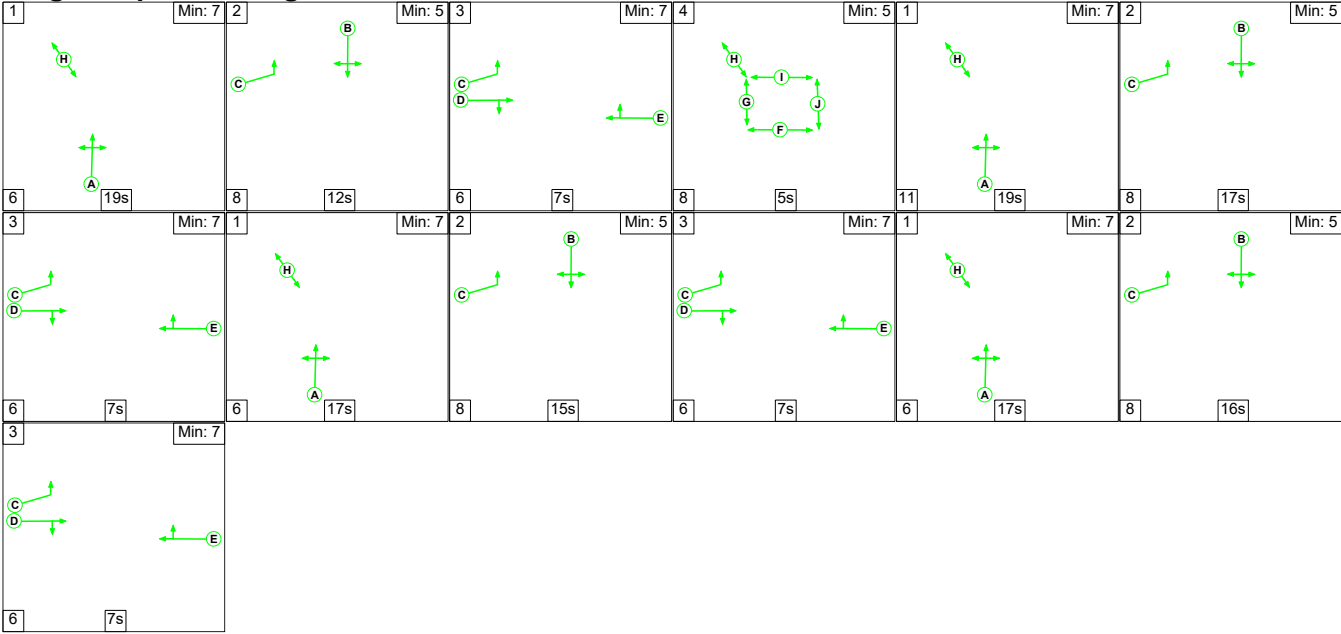
Full Input Data And Results

Item	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)	Back of Uniform Q At End of Red(pcu)	
Network: Roffey Corner	-	77	83	0	10.0	6.5	0.0	16.6	-	-	-	-	-	
Roffey Corner	-	77	83	0	10.0	6.5	0.0	16.6	-	-	-	-	-	
1/1+1/2	663	-	-	-	4.1	2.8	-	6.8	37.2	9.3	2.8	12.1	7.0	
2/1+2/2	659	-	-	-	3.8	2.7	-	6.5	35.7	11.6	2.7	14.4	7.8	
3/1	98	15	83	0	0.3	0.1	0.0	0.3	12.6	1.4	0.1	1.4	1.3	
3/2+3/3	110	19	0	0	0.8	0.3	0.0	1.1	36.9	1.9	0.3	2.2	1.8	
4/1+4/2	148	43	0	0	1.1	0.6	0.0	1.7	41.7	2.3	0.6	2.9	2.1	
5/1	476	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
6/1	552	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
7/1	297	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
8/1	353	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
C1 PRC for Signalled Lanes (%): 5.4 Total Delay for Signalled Lanes (pcuHr): 16.56 Cycle Time (s): 258 PRC Over All Lanes (%): 5.4 Total Delay Over All Lanes(pcuHr): 16.56														

Full Input Data And Results

Scenario 2: '2026 PM Peak Observed' (FG2: '2026 PM Peak Observed', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

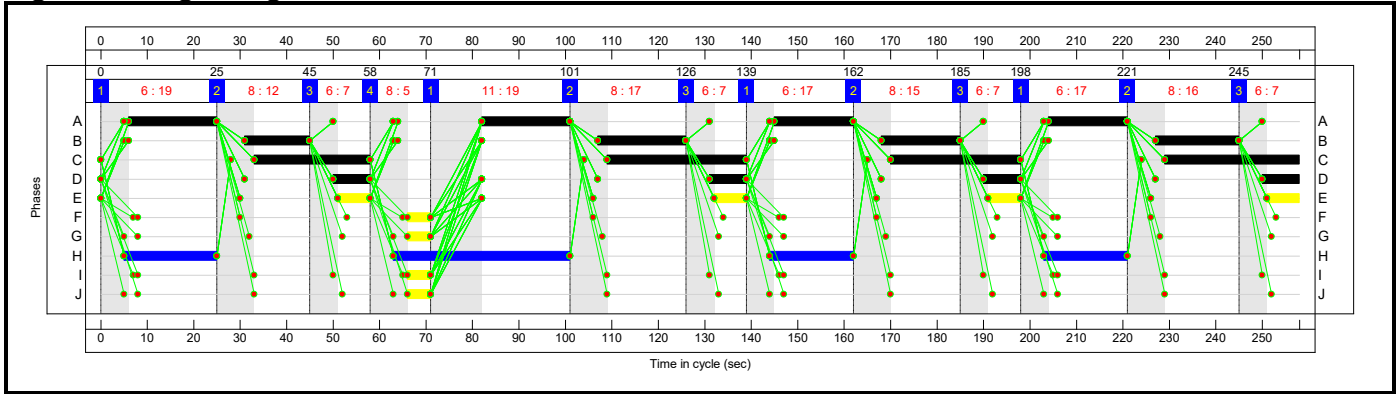


Stage Timings

Stage	1	2	3	4	1	2	3	1	2	3
Duration	19	12	7	5	19	17	7	17	15	7
Change Point	0	25	45	58	71	101	126	139	162	185

Stage	1	2	3							
Duration	17	16	7							
Change Point	198	221	245							

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)
Network: Roffey Corner	-	-	N/A	-	-		-	-	-	-	-	-	90.5%	-
Roffey Corner	-	-	N/A	-	-		-	-	-	-	-	-	90.5%	-
1/1+1/2	Harwood Road Ahead Left Right	U	N/A	N/A	A		4	72	-	663	1902:1912	560+181	89.4 : 89.4%	663
2/1+2/2	Crawley Road (N) Ahead Right Left	U	N/A	N/A	B		4	68	-	592	1884:1912	526+128	90.5 : 90.5%	592
3/1	Crawley Road (W) Left	O	N/A	N/A	C		4	112	-	136	1904	730	18.6%	136
3/2+3/3	Crawley Road (W) Right Ahead	U+O	N/A	N/A	D		4	32	-	83	1915:1787	224+67	28.5 : 28.5%	83
4/1+4/2	Forest Road Right Ahead	U+O	N/A	N/A	E		4	28	-	103	1895:1770	175+141	32.6 : 32.6%	103
5/1	Harwood Road	U	N/A	N/A	-		-	-	-	442	Inf	Inf	0.0%	442
6/1	Crawley Road (N)	U	N/A	N/A	-		-	-	-	661	Inf	Inf	0.0%	661
7/1	Crawley Road (W)	U	N/A	N/A	-		-	-	-	195	Inf	Inf	0.0%	195
8/1	Forest Road	U	N/A	N/A	-		-	-	-	279	Inf	Inf	0.0%	279

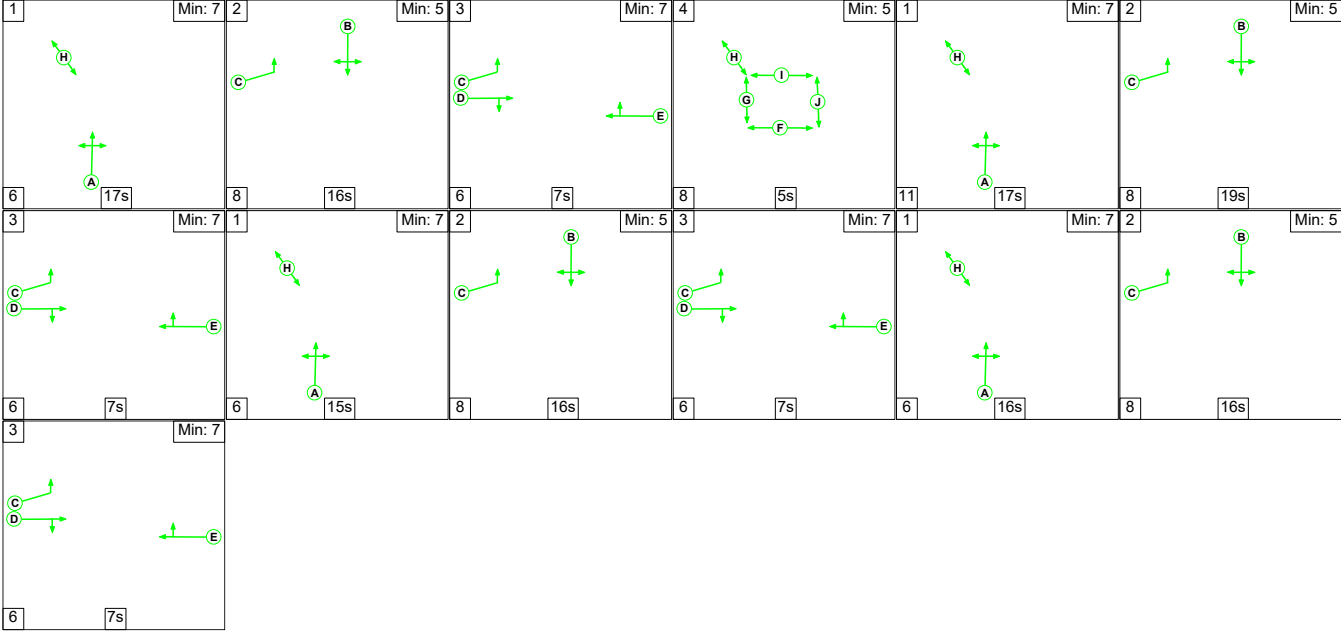
Full Input Data And Results

Item	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)	Back of Uniform Q At End of Red(pcu)	
Network: Roffey Corner	-	86	115	0	9.4	8.6	0.0	18.0	-	-	-	-	-	
Roffey Corner	-	86	115	0	9.4	8.6	0.0	18.0	-	-	-	-	-	
1/1+1/2	663	-	-	-	3.9	3.8	-	7.7	42.0	10.6	3.8	14.4	7.5	
2/1+2/2	592	-	-	-	3.7	4.2	-	7.9	48.3	11.2	4.2	15.4	7.8	
3/1	136	21	115	0	0.4	0.1	0.0	0.5	14.2	2.0	0.1	2.1	1.8	
3/2+3/3	83	19	0	0	0.6	0.2	0.0	0.8	34.6	1.3	0.2	1.5	1.2	
4/1+4/2	103	46	0	0	0.8	0.2	0.0	1.0	35.3	1.2	0.2	1.4	1.1	
5/1	442	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
6/1	661	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
7/1	195	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
8/1	279	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
C1 PRC for Signalled Lanes (%): -0.6 Total Delay for Signalled Lanes (pcuHr): 18.02 Cycle Time (s): 258 PRC Over All Lanes (%): -0.6 Total Delay Over All Lanes(pcuHr): 18.02														

Full Input Data And Results

Scenario 3: '2029 AM Peak Base' (FG3: '2029 AM Peak Base', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

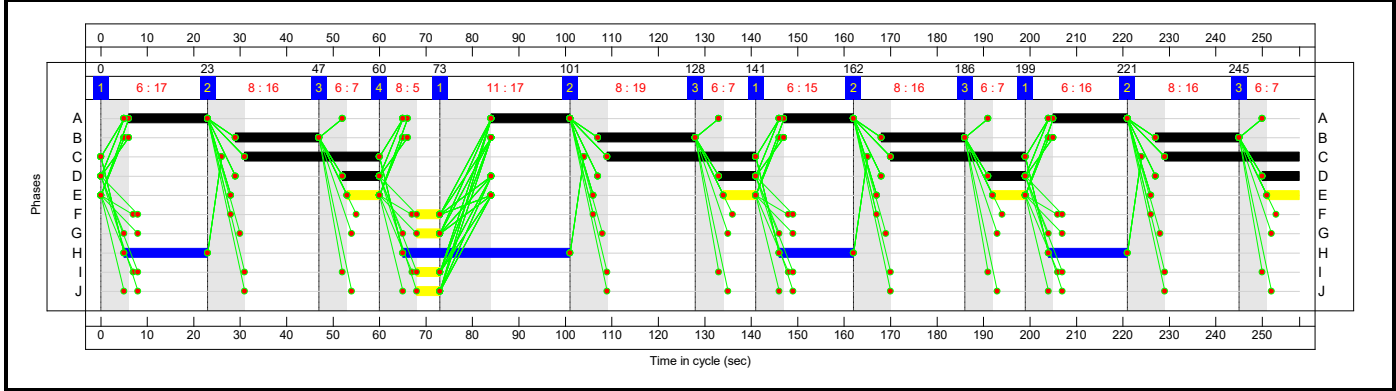


Stage Timings

Stage	1	2	3	4	1	2	3	1	2	3
Duration	17	16	7	5	17	19	7	15	16	7
Change Point	0	23	47	60	73	101	128	141	162	186

Stage	1	2	3							
Duration	16	16	7							
Change Point	199	221	245							

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)
Network: Roffey Corner	-	-	N/A	-	-		-	-	-	-	-	-	88.6%	-
Roffey Corner	-	-	N/A	-	-		-	-	-	-	-	-	88.6%	-
1/1+1/2	Harwood Road Ahead Left Right	U	N/A	N/A	A		4	65	-	687	1900:1912	508+268	88.6 : 88.6%	687
2/1+2/2	Crawley Road (N) Ahead Right Left	U	N/A	N/A	B		4	75	-	683	1896:1912	575+198	88.3 : 88.3%	683
3/1	Crawley Road (W) Left	O	N/A	N/A	C		4	119	-	102	1904	783	13.0%	102
3/2+3/3	Crawley Road (W) Right Ahead	U+O	N/A	N/A	D		4	32	-	114	1915:1787	233+49	40.4 : 40.4%	114
4/1+4/2	Forest Road Right Ahead	U+O	N/A	N/A	E		4	28	-	154	1895:1770	193+80	56.4 : 56.4%	154
5/1	Harwood Road	U	N/A	N/A	-		-	-	-	494	Inf	Inf	0.0%	494
6/1	Crawley Road (N)	U	N/A	N/A	-		-	-	-	573	Inf	Inf	0.0%	573
7/1	Crawley Road (W)	U	N/A	N/A	-		-	-	-	308	Inf	Inf	0.0%	308
8/1	Forest Road	U	N/A	N/A	-		-	-	-	365	Inf	Inf	0.0%	365

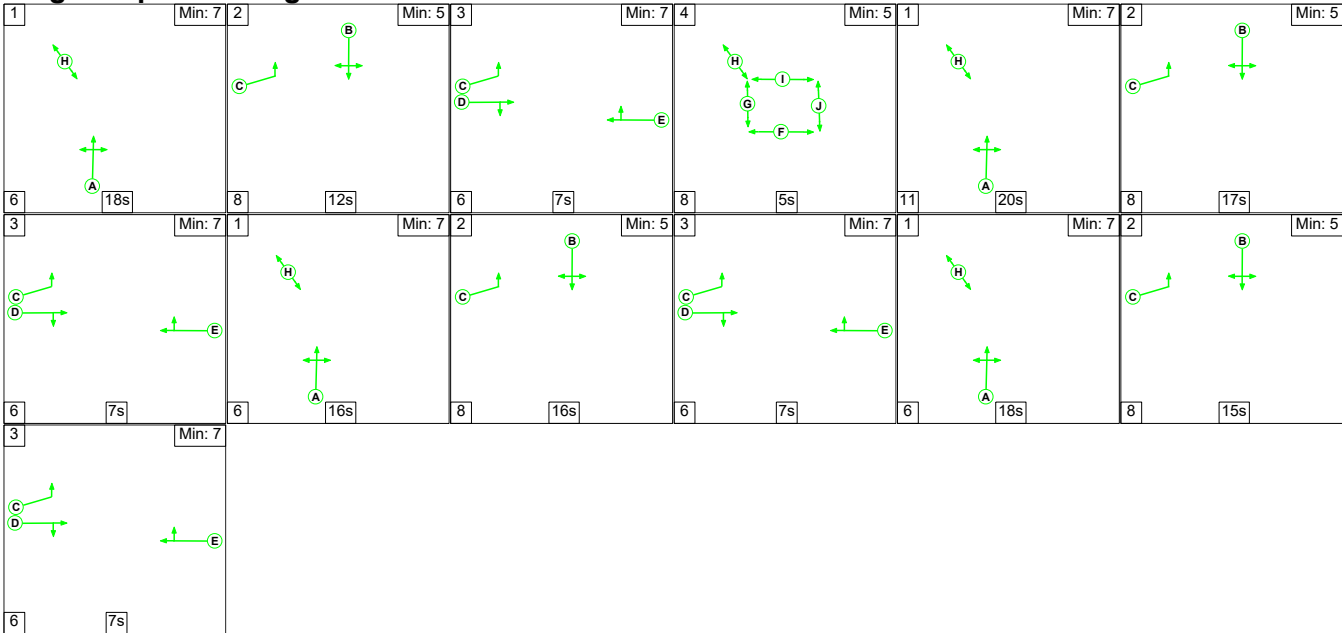
Full Input Data And Results

Item	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)	Back of Uniform Q At End of Red(pcu)	
Network: Roffey Corner	-	81	86	0	10.6	8.1	0.1	18.8	-	-	-	-	-	
Roffey Corner	-	81	86	0	10.6	8.1	0.1	18.8	-	-	-	-	-	
1/1+1/2	687	-	-	-	4.3	3.6	-	7.9	41.3	9.8	3.6	13.3	7.3	
2/1+2/2	683	-	-	-	4.0	3.5	-	7.6	39.8	12.4	3.5	15.9	8.0	
3/1	102	16	86	0	0.3	0.1	0.0	0.4	12.6	1.4	0.1	1.5	1.3	
3/2+3/3	114	20	0	0	0.8	0.3	0.0	1.2	37.2	2.0	0.3	2.3	1.8	
4/1+4/2	154	45	0	0	1.1	0.6	0.0	1.8	42.4	2.5	0.6	3.1	2.2	
5/1	494	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
6/1	573	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
7/1	308	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
8/1	365	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
C1 PRC for Signalled Lanes (%): 1.6 Total Delay for Signalled Lanes (pcuHr): 18.78 Cycle Time (s): 258 PRC Over All Lanes (%): 1.6 Total Delay Over All Lanes(pcuHr): 18.78														

Full Input Data And Results

Scenario 4: '2029 PM Peak Base' (FG4: '2029 PM Peak Base', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

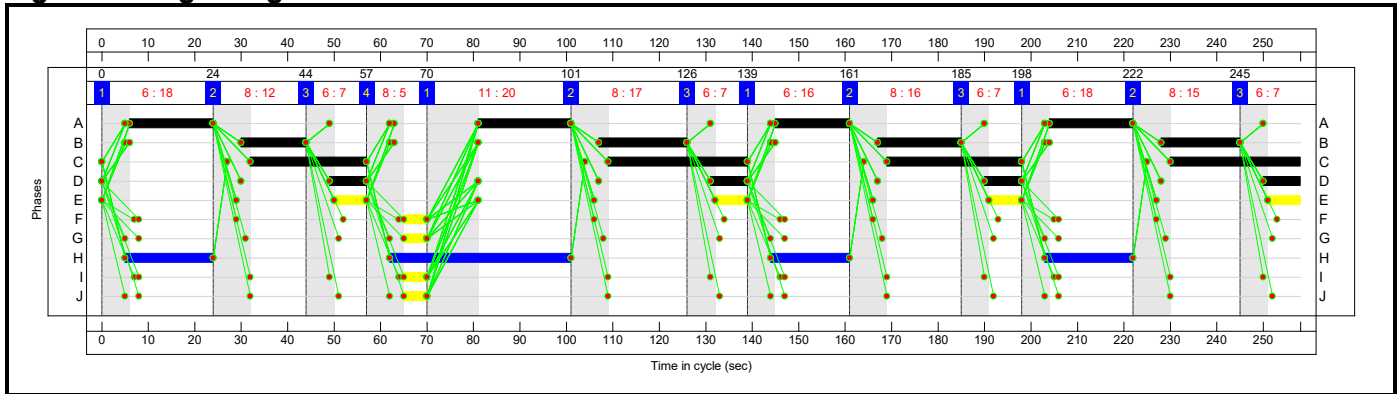


Stage Timings

Stage	1	2	3	4	1	2	3	1	2	3
Duration	18	12	7	5	20	17	7	16	16	7
Change Point	0	24	44	57	70	101	126	139	161	185

Stage	1	2	3							
Duration	18	15	7							
Change Point	198	222	245							

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)
Network: Roffey Corner	-	-	N/A	-	-		-	-	-	-	-	-	94.0%	-
Roffey Corner	-	-	N/A	-	-		-	-	-	-	-	-	94.0%	-
1/1+1/2	Harwood Road Ahead Left Right	U	N/A	N/A	A		4	72	-	688	1902:1912	560+181	92.9 : 92.9%	688
2/1+2/2	Crawley Road (N) Ahead Right Left	U	N/A	N/A	B		4	68	-	614	1884:1912	526+128	94.0 : 94.0%	614
3/1	Crawley Road (W) Left	O	N/A	N/A	C		4	112	-	141	1904	730	19.3%	141
3/2+3/3	Crawley Road (W) Right Ahead	U+O	N/A	N/A	D		4	32	-	86	1915:1787	224+68	29.5 : 29.5%	86
4/1+4/2	Forest Road Right Ahead	U+O	N/A	N/A	E		4	28	-	107	1895:1770	174+142	33.8 : 33.8%	107
5/1	Harwood Road	U	N/A	N/A	-		-	-	-	459	Inf	Inf	0.0%	459
6/1	Crawley Road (N)	U	N/A	N/A	-		-	-	-	686	Inf	Inf	0.0%	686
7/1	Crawley Road (W)	U	N/A	N/A	-		-	-	-	202	Inf	Inf	0.0%	202
8/1	Forest Road	U	N/A	N/A	-		-	-	-	289	Inf	Inf	0.0%	289

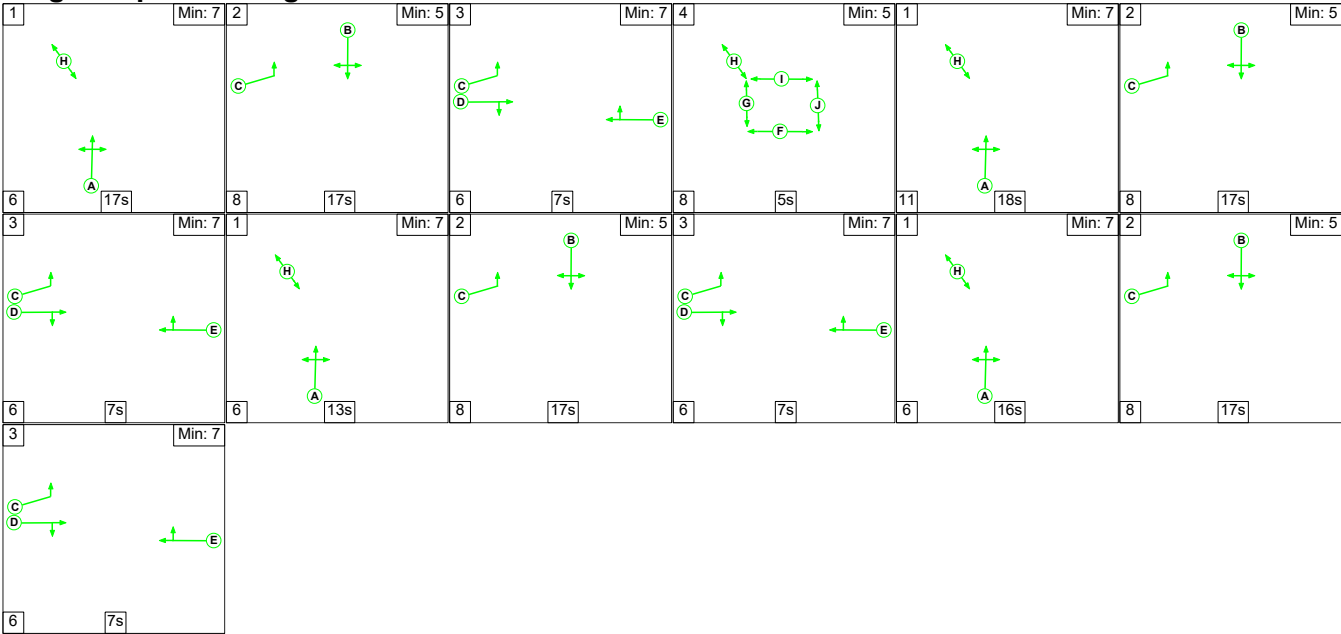
Full Input Data And Results

Item	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)	Back of Uniform Q At End of Red(pcu)	
Network: Roffey Corner	-	90	119	0	10.0	12.0	0.0	22.0	-	-	-	-	-	
Roffey Corner	-	90	119	0	10.0	12.0	0.0	22.0	-	-	-	-	-	
1/1+1/2	688	-	-	-	4.1	5.4	-	9.5	49.8	11.5	5.4	17.0	7.8	
2/1+2/2	614	-	-	-	4.1	6.0	-	10.0	58.8	12.2	6.0	18.2	8.2	
3/1	141	22	119	0	0.4	0.1	0.0	0.6	14.3	2.2	0.1	2.3	1.9	
3/2+3/3	86	20	0	0	0.6	0.2	0.0	0.8	34.9	1.4	0.2	1.6	1.3	
4/1+4/2	107	48	0	0	0.8	0.3	0.0	1.1	35.6	1.2	0.3	1.5	1.2	
5/1	459	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
6/1	686	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
7/1	202	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
8/1	289	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
C1 PRC for Signalled Lanes (%): -4.4 Total Delay for Signalled Lanes (pcuHr): 22.00 Cycle Time (s): 258 PRC Over All Lanes (%): -4.4 Total Delay Over All Lanes(pcuHr): 22.00														

Full Input Data And Results

Scenario 5: '2029 AM Peak with Development' (FG5: '2029 AM Peak with Development', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

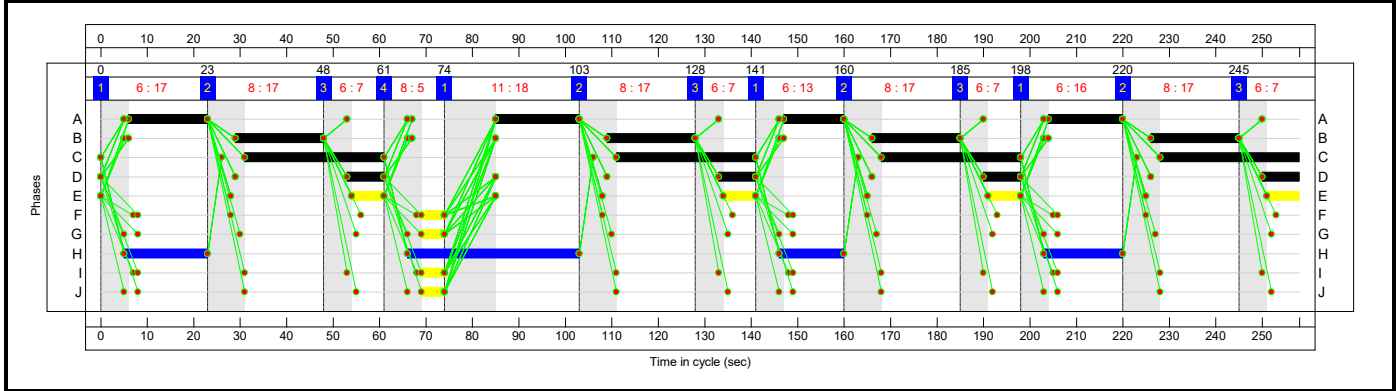


Stage Timings

Stage	1	2	3	4	1	2	3	1	2	3
Duration	17	17	7	5	18	17	7	13	17	7
Change Point	0	23	48	61	74	103	128	141	160	185

Stage	1	2	3							
Duration	16	17	7							
Change Point	198	220	245							

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)
Network: Roffey Corner	-	-	N/A	-	-		-	-	-	-	-	-	91.2%	-
Roffey Corner	-	-	N/A	-	-		-	-	-	-	-	-	91.2%	-
1/1+1/2	Harwood Road Ahead Left Right	U	N/A	N/A	A		4	64	-	693	1900:1912	501+260	91.1 : 91.1%	693
2/1+2/2	Crawley Road (N) Ahead Right Left	U	N/A	N/A	B		4	76	-	706	1896:1912	582+192	91.2 : 91.2%	706
3/1	Crawley Road (W) Left	O	N/A	N/A	C		4	120	-	102	1904	791	12.9%	102
3/2+3/3	Crawley Road (W) Right Ahead	U+O	N/A	N/A	D		4	32	-	114	1915:1787	233+49	40.4 : 40.4%	114
4/1+4/2	Forest Road Right Ahead	U+O	N/A	N/A	E		4	28	-	154	1895:1770	193+80	56.4 : 56.4%	154
5/1	Harwood Road	U	N/A	N/A	-		-	-	-	515	Inf	Inf	0.0%	515
6/1	Crawley Road (N)	U	N/A	N/A	-		-	-	-	579	Inf	Inf	0.0%	579
7/1	Crawley Road (W)	U	N/A	N/A	-		-	-	-	308	Inf	Inf	0.0%	308
8/1	Forest Road	U	N/A	N/A	-		-	-	-	367	Inf	Inf	0.0%	367

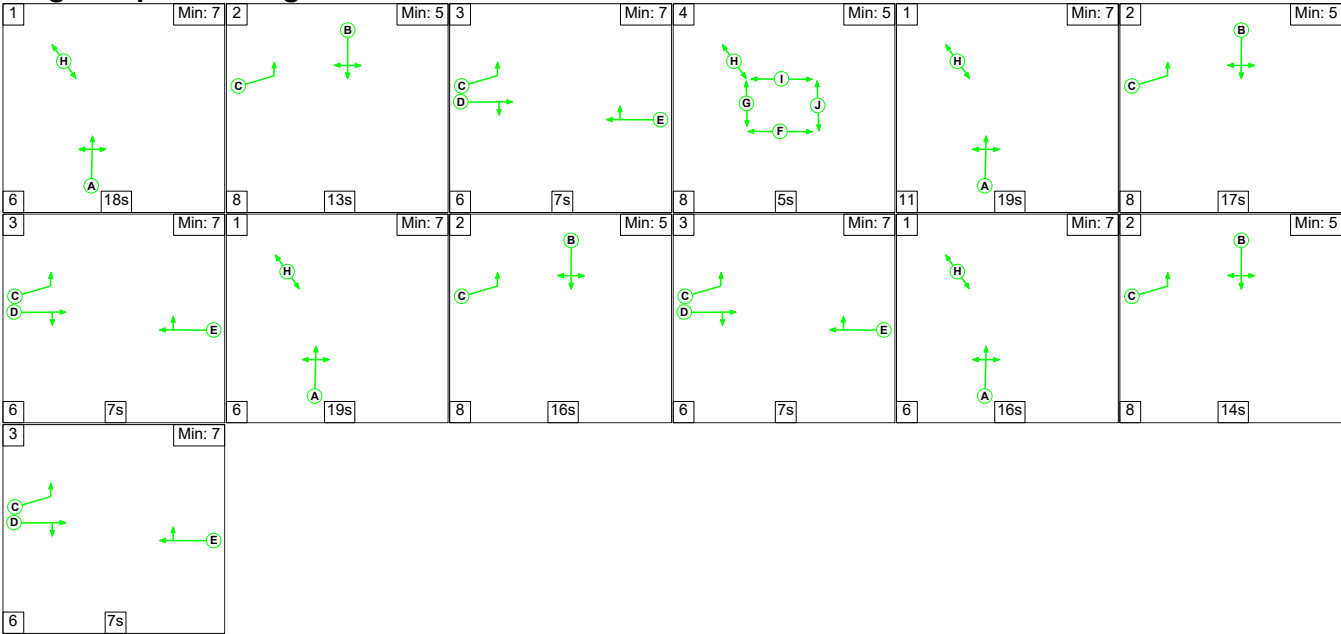
Full Input Data And Results

[illegible]

Full Input Data And Results

Scenario 6: '2029 PM Peak with Development' (FG6: '2029 PM Peak with Development', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

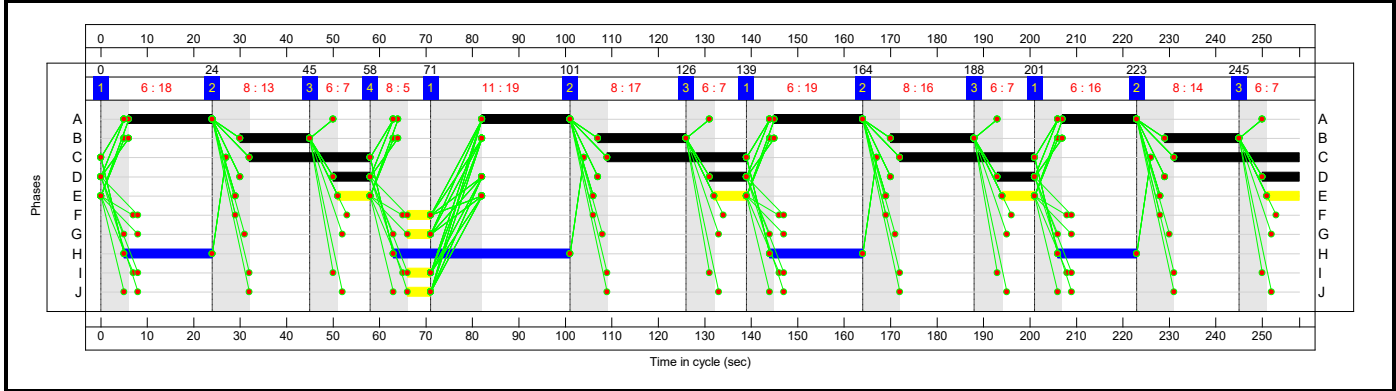


Stage Timings

Stage	1	2	3	4	1	2	3	1	2	3
Duration	18	13	7	5	19	17	7	19	16	7
Change Point	0	24	45	58	71	101	126	139	164	188

Stage	1	2	3							
Duration	16	14	7							
Change Point	201	223	245							

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)
Network: Roffey Corner	-	-	N/A	-	-		-	-	-	-	-	-	96.2%	-
Roffey Corner	-	-	N/A	-	-		-	-	-	-	-	-	96.2%	-
1/1+1/2	Harwood Road Ahead Left Right	U	N/A	N/A	A		4	72	-	707	1903:1912	561+175	96.2 : 96.2%	707
2/1+2/2	Crawley Road (N) Ahead Right Left	U	N/A	N/A	B		4	68	-	626	1884:1912	526+125	96.2 : 96.2%	626
3/1	Crawley Road (W) Left	O	N/A	N/A	C		4	112	-	141	1904	730	19.3%	141
3/2+3/3	Crawley Road (W) Right Ahead	U+O	N/A	N/A	D		4	32	-	86	1915:1787	224+68	29.5 : 29.5%	86
4/1+4/2	Forest Road Right Ahead	U+O	N/A	N/A	E		4	28	-	108	1895:1770	174+144	33.9 : 33.9%	108
5/1	Harwood Road	U	N/A	N/A	-		-	-	-	470	Inf	Inf	0.0%	470
6/1	Crawley Road (N)	U	N/A	N/A	-		-	-	-	706	Inf	Inf	0.0%	706
7/1	Crawley Road (W)	U	N/A	N/A	-		-	-	-	202	Inf	Inf	0.0%	202
8/1	Forest Road	U	N/A	N/A	-		-	-	-	290	Inf	Inf	0.0%	290

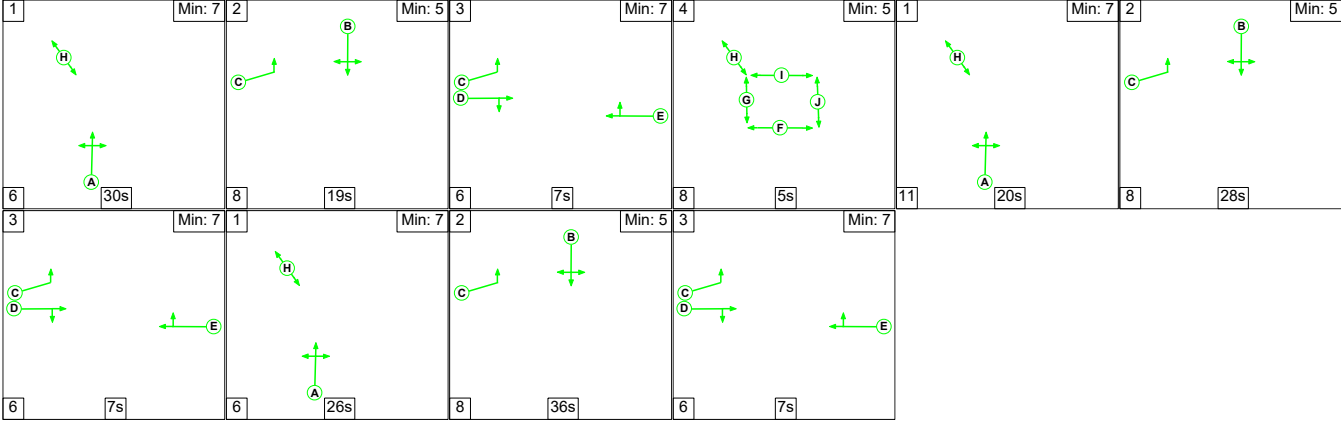
Full Input Data And Results

[illegible]

Full Input Data And Results

Scenario 7: '2031 AM Peak Base' (FG7: '2031 AM Peak Base', Plan 2: 'Network Control Plan 2')

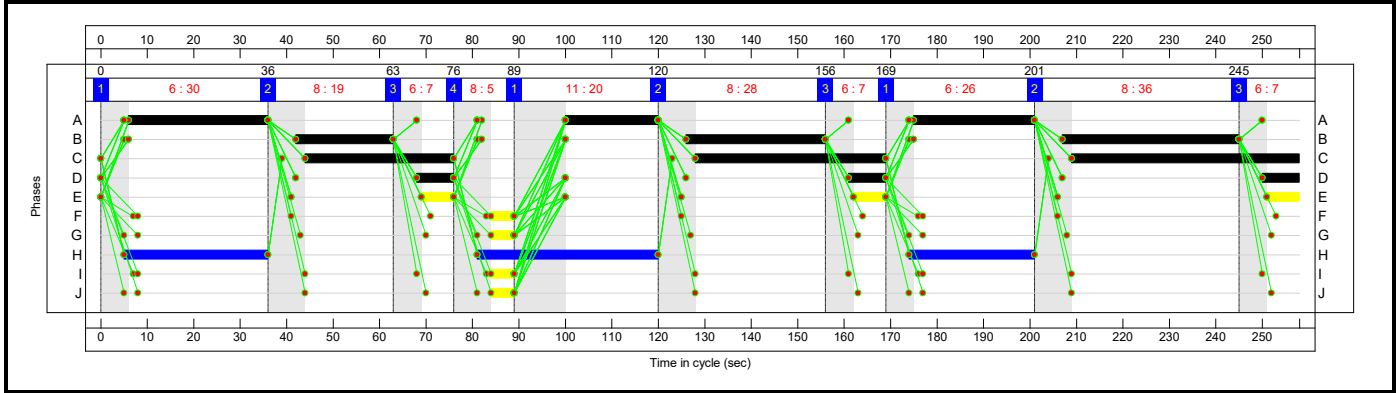
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	1	2	3	1	2	3
Duration	30	19	7	5	20	28	7	26	36	7
Change Point	0	36	63	76	89	120	156	169	201	245

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)
Network: Roffey Corner	-	-	N/A	-	-		-	-	-	-	-	-	85.6%	-
Roffey Corner	-	-	N/A	-	-		-	-	-	-	-	-	85.6%	-
1/1+1/2	Harwood Road Ahead Left Right	U	N/A	N/A	A		3	76	-	702	1900:1912	537+283	85.6 : 85.6%	702
2/1+2/2	Crawley Road (N) Ahead Right Left	U	N/A	N/A	B		3	89	-	698	1896:1912	611+211	84.9 : 84.9%	698
3/1	Crawley Road (W) Left	O	N/A	N/A	C		3	122	-	104	1904	833	12.5%	104
3/2+3/3	Crawley Road (W) Right Ahead	U+O	N/A	N/A	D		3	24	-	116	1915:1787	175+36	54.9 : 54.9%	116
4/1+4/2	Forest Road Right Ahead	U+O	N/A	N/A	E		3	21	-	158	1895:1770	145+60	77.3 : 77.3%	158
5/1	Harwood Road	U	N/A	N/A	-		-	-	-	504	Inf	Inf	0.0%	504
6/1	Crawley Road (N)	U	N/A	N/A	-		-	-	-	585	Inf	Inf	0.0%	585
7/1	Crawley Road (W)	U	N/A	N/A	-		-	-	-	316	Inf	Inf	0.0%	316
8/1	Forest Road	U	N/A	N/A	-		-	-	-	373	Inf	Inf	0.0%	373

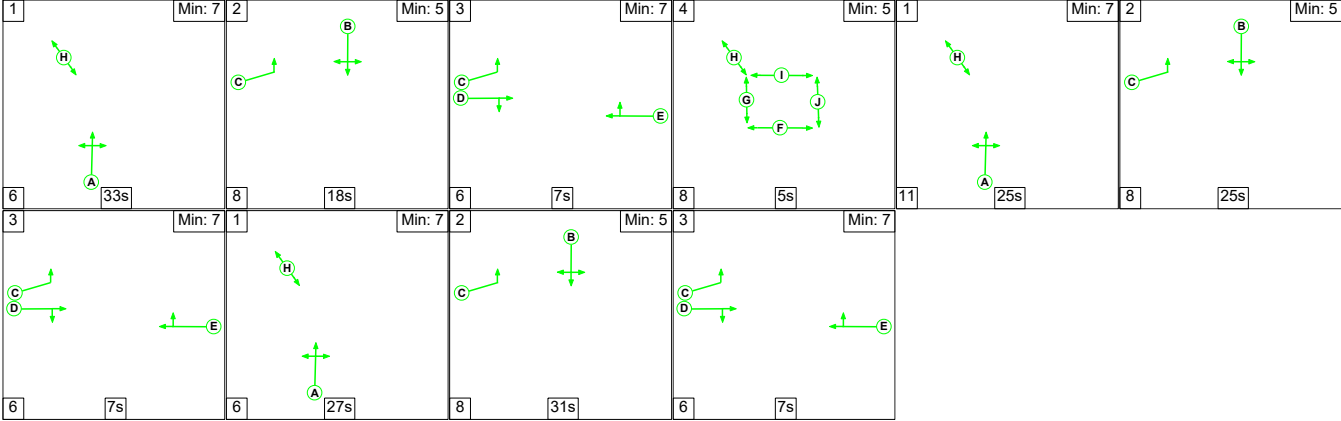
Full Input Data And Results

[illegible]

Full Input Data And Results

Scenario 8: '2031 PM Peak Base' (FG8: '2031 PM Peak Base', Plan 2: 'Network Control Plan 2')

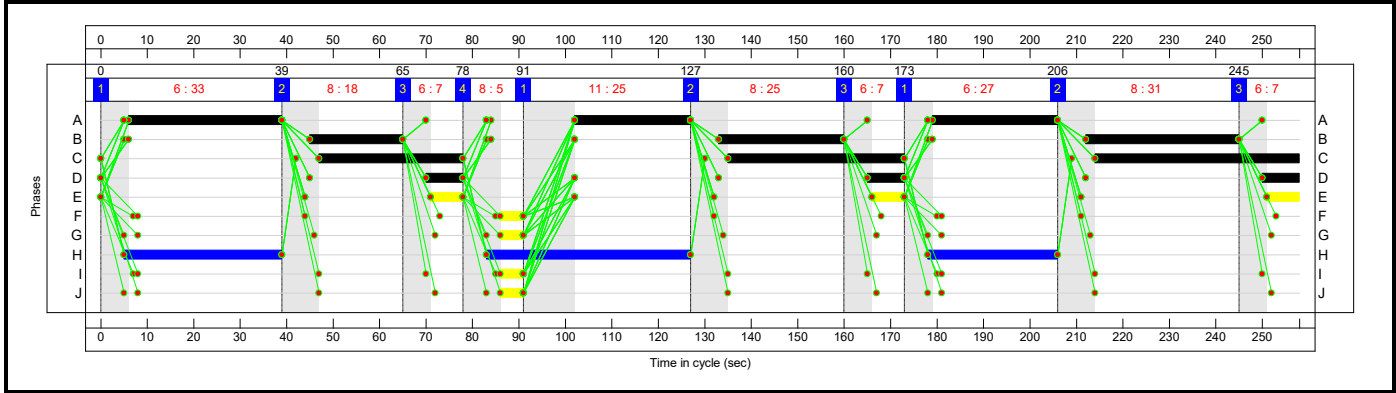
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	1	2	3	1	2	3
Duration	33	18	7	5	25	25	7	27	31	7
Change Point	0	39	65	78	91	127	160	173	206	245

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)
Network: Roffey Corner	-	-	N/A	-	-		-	-	-	-	-	-	88.3%	-
Roffey Corner	-	-	N/A	-	-		-	-	-	-	-	-	88.3%	-
1/1+1/2	Harwood Road Ahead Left Right	U	N/A	N/A	A		3	85	-	704	1902:1912	603+195	88.3 : 88.3%	704
2/1+2/2	Crawley Road (N) Ahead Right Left	U	N/A	N/A	B		3	80	-	626	1884:1912	577+140	87.4 : 87.4%	626
3/1	Crawley Road (W) Left	O	N/A	N/A	C		3	113	-	144	1904	761	18.9%	144
3/2+3/3	Crawley Road (W) Right Ahead	U+O	N/A	N/A	D		3	24	-	89	1915:1787	167+52	40.6 : 40.6%	89
4/1+4/2	Forest Road Right Ahead	U+O	N/A	N/A	E		3	21	-	109	1895:1770	131+107	45.9 : 45.9%	109
5/1	Harwood Road	U	N/A	N/A	-		-	-	-	469	Inf	Inf	0.0%	469
6/1	Crawley Road (N)	U	N/A	N/A	-		-	-	-	701	Inf	Inf	0.0%	701
7/1	Crawley Road (W)	U	N/A	N/A	-		-	-	-	206	Inf	Inf	0.0%	206
8/1	Forest Road	U	N/A	N/A	-		-	-	-	296	Inf	Inf	0.0%	296

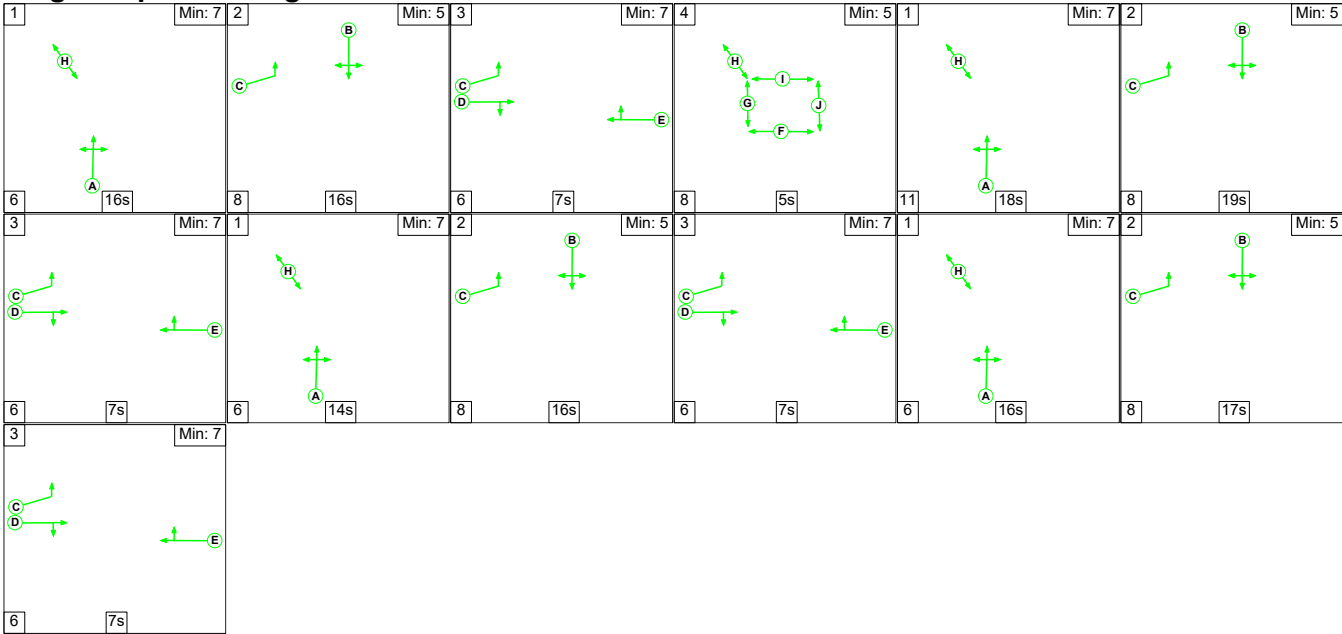
Full Input Data And Results

Item	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)	Back of Uniform Q At End of Red(pcu)	
Network: Roffey Corner	-	87	127	0	12.1	7.6	0.1	19.7	-	-	-	-	-	
Roffey Corner	-	87	127	0	12.1	7.6	0.1	19.7	-	-	-	-	-	
1/1+1/2	704	-	-	-	4.9	3.5	-	8.4	42.8	13.7	3.5	17.2	8.9	
2/1+2/2	626	-	-	-	4.6	3.2	-	7.8	45.1	13.9	3.2	17.1	9.2	
3/1	144	17	127	0	0.6	0.1	0.0	0.7	17.3	2.4	0.1	2.5	2.2	
3/2+3/3	89	21	0	0	0.9	0.3	0.0	1.2	50.5	1.7	0.3	2.0	1.6	
4/1+4/2	109	49	0	0	1.1	0.4	0.0	1.6	51.7	1.5	0.4	1.9	1.4	
5/1	469	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
6/1	701	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
7/1	206	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
8/1	296	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
C1 PRC for Signalled Lanes (%): 2.0 Total Delay for Signalled Lanes (pcuHr): 19.72 Cycle Time (s): 258 PRC Over All Lanes (%): 2.0 Total Delay Over All Lanes(pcuHr): 19.72														

Full Input Data And Results

Scenario 9: '2031 AM Peak with Development' (FG9: '2031 AM Peak with Development', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

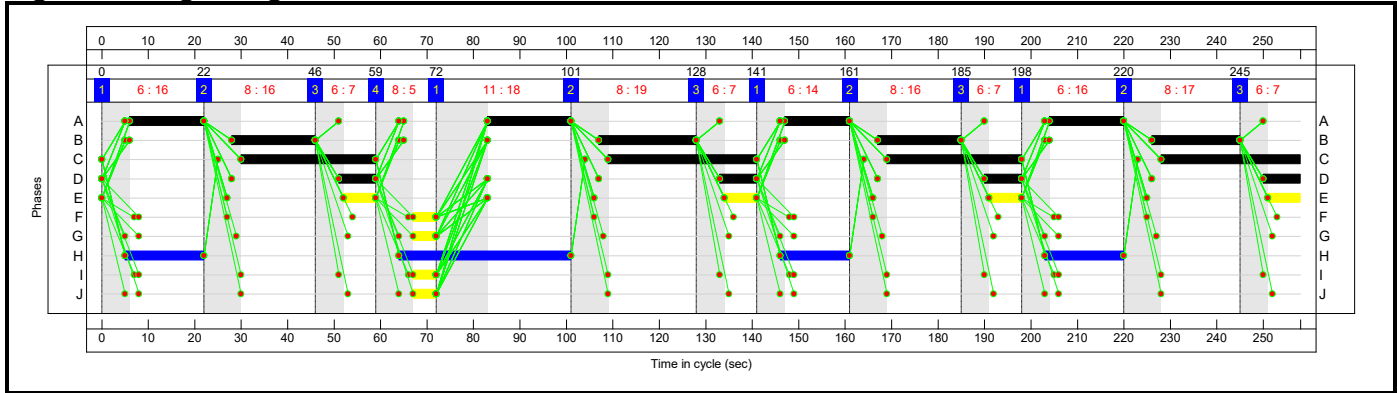


Stage Timings

Stage	1	2	3	4	1	2	3	1	2	3
Duration	16	16	7	5	18	19	7	14	16	7
Change Point	0	22	46	59	72	101	128	141	161	185

Stage	1	2	3							
Duration	16	17	7							
Change Point	198	220	245							

Signal Timings Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)
Network: Roffey Corner	-	-	N/A	-	-		-	-	-	-	-	-	93.1%	-
Roffey Corner	-	-	N/A	-	-		-	-	-	-	-	-	93.1%	-
1/1+1/2	Harwood Road Ahead Left Right	U	N/A	N/A	A		4	64	-	708	1900:1912	501+260	93.1 : 93.1%	708
2/1+2/2	Crawley Road (N) Ahead Right Left	U	N/A	N/A	B		4	76	-	720	1896:1912	581+192	93.1 : 93.1%	720
3/1	Crawley Road (W) Left	O	N/A	N/A	C		4	120	-	104	1904	791	13.2%	104
3/2+3/3	Crawley Road (W) Right Ahead	U+O	N/A	N/A	D		4	32	-	116	1915:1787	233+49	41.2 : 41.2%	116
4/1+4/2	Forest Road Right Ahead	U+O	N/A	N/A	E		4	28	-	158	1895:1770	193+79	58.0 : 58.0%	158
5/1	Harwood Road	U	N/A	N/A	-		-	-	-	525	Inf	Inf	0.0%	525
6/1	Crawley Road (N)	U	N/A	N/A	-		-	-	-	591	Inf	Inf	0.0%	591
7/1	Crawley Road (W)	U	N/A	N/A	-		-	-	-	316	Inf	Inf	0.0%	316
8/1	Forest Road	U	N/A	N/A	-		-	-	-	374	Inf	Inf	0.0%	374

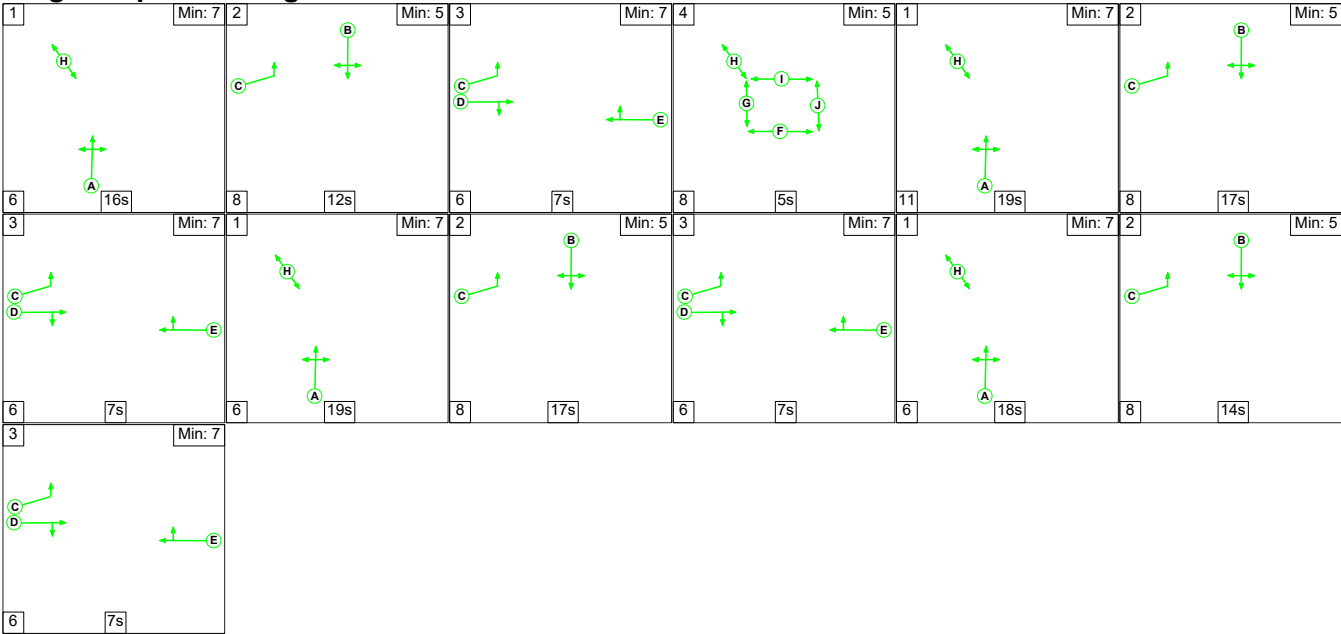
Full Input Data And Results

Item	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)	Back of Uniform Q At End of Red(pcu)	
Network: Roffey Corner	-	82	88	0	11.4	12.2	0.1	23.6	-	-	-	-	-	
Roffey Corner	-	82	88	0	11.4	12.2	0.1	23.6	-	-	-	-	-	
1/1+1/2	708	-	-	-	4.5	5.5	-	10.0	51.1	10.2	5.5	15.8	7.5	
2/1+2/2	720	-	-	-	4.6	5.6	-	10.1	50.6	14.3	5.6	19.9	8.7	
3/1	104	16	88	0	0.3	0.1	0.0	0.4	12.6	1.5	0.1	1.5	1.4	
3/2+3/3	116	20	0	0	0.8	0.3	0.0	1.2	37.5	2.1	0.3	2.4	1.9	
4/1+4/2	158	46	0	0	1.2	0.7	0.0	1.9	43.1	2.6	0.7	3.3	2.3	
5/1	525	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
6/1	591	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
7/1	316	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
8/1	374	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	
C1 PRC for Signalled Lanes (%): -3.4 Total Delay for Signalled Lanes (pcuHr): 23.63 Cycle Time (s): 258 PRC Over All Lanes (%): -3.4 Total Delay Over All Lanes(pcuHr): 23.63														

Full Input Data And Results

Scenario 10: '2031 PM Peak with Development' (FG10: '2031 PM Peak with Development', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

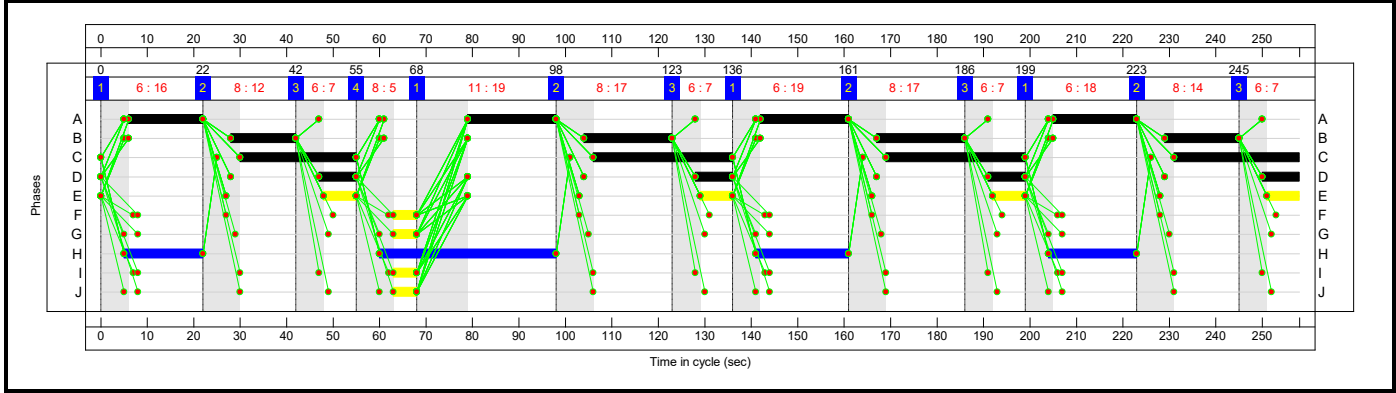


Stage Timings

Stage	1	2	3	4	1	2	3	1	2	3
Duration	16	12	7	5	19	17	7	19	17	7
Change Point	0	22	42	55	68	98	123	136	161	186

Stage	1	2	3							
Duration	18	14	7							
Change Point	199	223	245							

Signal Timings Diagram



Full Input Data And Results

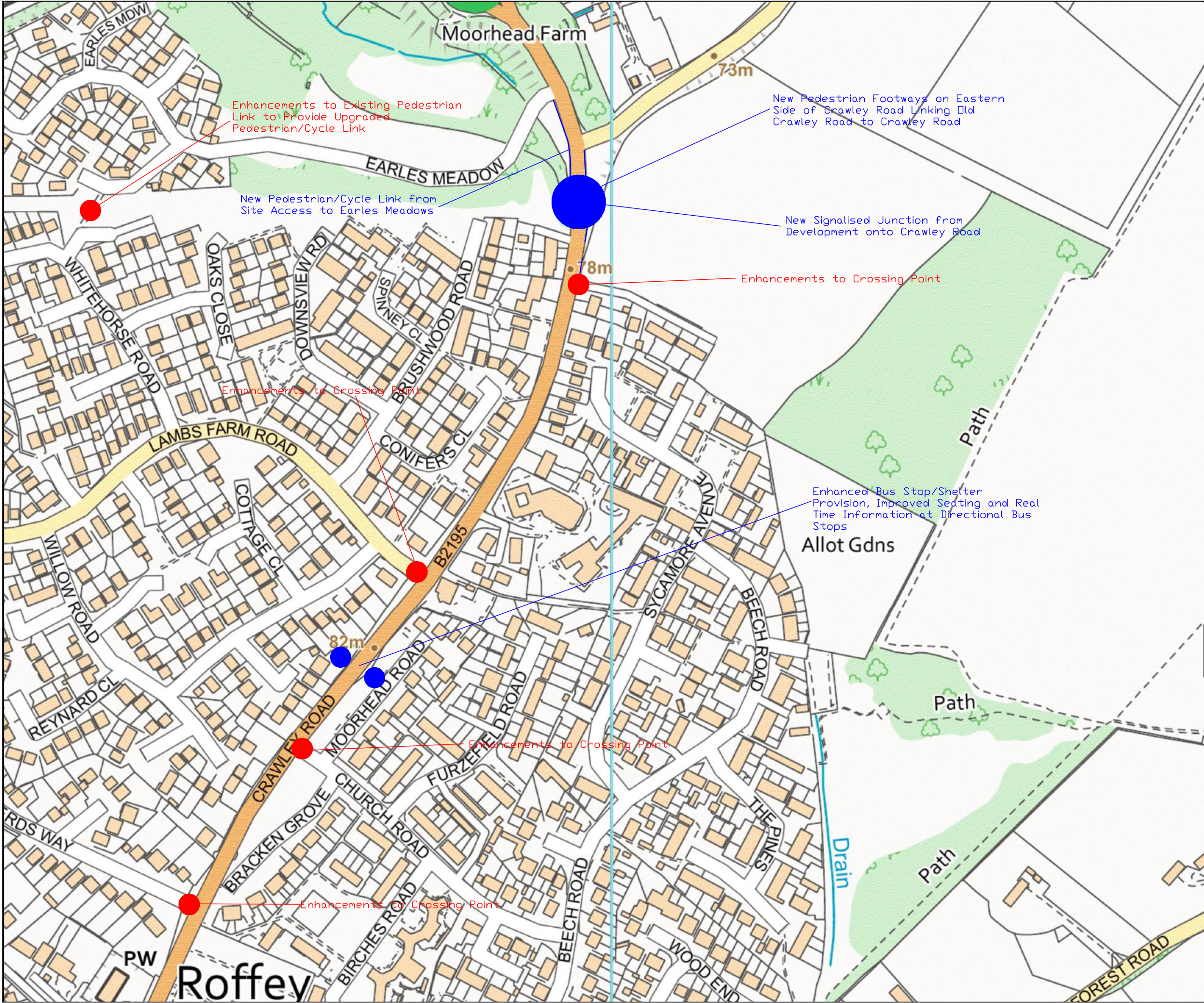
Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Arriving (pcu)
Network: Roffey Corner	-	-	N/A	-	-		-	-	-	-	-	-	98.3%	-
Roffey Corner	-	-	N/A	-	-		-	-	-	-	-	-	98.3%	-
1/1+1/2	Harwood Road Ahead Left Right	U	N/A	N/A	A		4	72	-	723	1903:1912	561+175	98.3 : 98.3%	723
2/1+2/2	Crawley Road (N) Ahead Right Left	U	N/A	N/A	B		4	68	-	638	1884:1912	526+124	98.1 : 98.1%	638
3/1	Crawley Road (W) Left	O	N/A	N/A	C		4	112	-	144	1904	730	19.7%	144
3/2+3/3	Crawley Road (W) Right Ahead	U+O	N/A	N/A	D		4	32	-	89	1915:1787	223+69	30.5 : 30.5%	89
4/1+4/2	Forest Road Right Ahead	U+O	N/A	N/A	E		4	28	-	110	1895:1770	174+145	34.5 : 34.5%	110
5/1	Harwood Road	U	N/A	N/A	-		-	-	-	480	Inf	Inf	0.0%	480
6/1	Crawley Road (N)	U	N/A	N/A	-		-	-	-	721	Inf	Inf	0.0%	721
7/1	Crawley Road (W)	U	N/A	N/A	-		-	-	-	206	Inf	Inf	0.0%	206
8/1	Forest Road	U	N/A	N/A	-		-	-	-	297	Inf	Inf	0.0%	297

Full Input Data And Results

[illegible]

APPENDIX N



THIS DRAWING MAY BE USED ONLY FOR THE PURPOSE INTENDED AND ONLY WRITTEN DIMENSIONS SHALL BE USED

NOTES

Revision Details	By	Date	Suffix
	Check		

Drawing Number
SK21905-05 REV A

Faygate, Sussex

Drawing Title
Non-Motorised User Audit Mitigation Plan

Scale at A3
NTS

Drawn	Approved
KAT	MAK

Check	Date
KAT	18/03/26

SK Transport Planning Ltd
Albion Wharf, 19 Albion Street
Manchester M1 5LN
Telephone (0161) 234 6509
Fax (0161) 236 7959



APPENDIX O

LAND AT CRAWLEY ROAD, FAYGATE
RESIDENTIAL DEVELOPMENT

STAGE 1 ROAD SAFETY AUDIT
RESPONSE REPORT

DOCUMENT CONTROL

Project Title:		Land at Crawley Road, Faygate	
Client:		FCP Land 4	
Project Manager:		Michael Kitching	
Project Number:		SK21905	
Document Reference:		SK2190_RSARR01	
Document Type:		Road Safety Audit Response Report	
Primary Author:		Michael Kitching	
Approval Signature: Michael Kitching			
Directory & File Name:		P:\2019\PROJECT FOLDERS\SK21905\Technical\Reports\SK21905_RSARR01	
Issue	Date	Distribution	Comments
01	05/11/20	Project Team	Final Report

CONTENTS

	Page
1.0	INTRODUCTION
2.0	STAGE 1 ROAD SAFETY AUDIT REVIEW
3.0	CONCLUSIONS

APPENDICES

Appendix A:	Road Safety Audit (October 2020)
Appendix B:	Vehicle Swept Path Analysis
Appendix C:	Sustainable Access Strategy Plans
Appendix D:	Revised GA Signalised Junction Layout
Appendix E:	Road Safety Audit Decision Log (including GG119 Tables F4, F5 and F6)

1.0 INTRODUCTION

- 1.1 This Road Safety Audit Response Report (RSARR) has been prepared in response to the Stage 1 Road Safety Audit (RSA) Revision Document prepared by Waterman Aspen on the 26th October 2020. This document supersedes the Stage 1 RSA prepared on the 30th January 2020. A copy of the final RSA is provided in **appendix a**. As stated in the document this Stage 1 RSA was undertaken in line with the requirements of Design Manual for Roads and Bridges GG119 Road Safety Audit (formerly HD 19/15).
- 1.2 The weather during the RSA site visit was fine and the carriageway surface was dry. In line with standard audit parameters the RSA team examined and reported only the road safety issues of the scheme as presented and did not examine or verified the compliance of the design to any other criteria.
- 1.3 This RSARR confirms that a previous Stage 1 RSA was undertaken in 2020, with all the Audit Team confirming that all the concerns raised in that report were considered to have been addressed satisfactorily.
- 1.4 This RSARR confirms that the RSA has been undertaken on a proposed signalised junction on the B2195 Crawley Road to serve a residential development to the east of this section of adopted highway. The RSA confirms that during the life of the planning application the access arrangements have been amended to accommodate some pedestrian and cycle enhancements that have been discussed and agreed in principle between the applicant and West Sussex County Council (WSCC), as Highway Authority. These measures include the provision of:
- pedestrian crossing facilities on all junction arms, including a shared pedestrian/cycle crossing on the northern junction arm
 - new 3m wide pedestrian/cycle link from the western side of the junction which then routes northwards across adopted highway to link with Earles Meadows
 - a new 3m wide pedestrian/cycle link on the eastern side of the junction, to link the development with Old Crawley Road
- 1.5 This RSARR considers the four identified technical problems in the RSA and provides a response as to how these identified matters will be addressed. The review can be found in **section 2** of this report.

2.0 STAGE 1 ROAD SAFETY AUDIT REVIEW

- 2.1 This section of the report reviews the four problems that have been identified and provides commentary on how each of the identified matters will be addressed.

Matters Arising from the Stage 1 Road Safety Audit

- 2.2 The audit for the site access onto the B2195 Crawley Road has considered the provision of a new signalised junction, complete with pedestrian crossing facilities on the eastern and southern arms, along with a 'Toucan' crossing facility on the northern junction arm. The eastern (development) arm provides an appropriate vehicular access into the development site that accommodates all private car and HGV traffic movements, alongside a 2m pedestrian footway on the southern side of the carriageway and a combined 3m wide pedestrian/cycle route on the northern side of this route.
- 2.3 Through discussions with WSCC it has been agreed that additional enhancements to pedestrian and cycle access through this junction should also be provided. This has resulted in the revised scheme incorporating new controlled crossing facilities and new pedestrian and pedestrian/cycle links to connect the development into existing highway infrastructure on the northern and western sides of the junction. These enhanced pedestrian and cycle measures have been prepared collaboratively with WSCC, and it has been agreed that they will deliver material enhancements to sustainable access to and from the site.
- 2.4 Four technical matters have been raised in the RSA. Commentary on these matters are provided below.

Matter 1: Risk of Conflict Between Heavy Goods Vehicles and Pedestrians

- 2.5 The RSA team have commented that the access proposals comprise of a new signalised junction for the development, which includes a new entrance into the housing development. The RSA team has confirmed that they were provided with vehicle tracking for a refuse vehicle for all turning movements within the signalised junction.
- 2.6 However, the RSA team has also stated that an HGV will be unable to make the movements at the junction without mounting the footway and coming into conflict with pedestrians waiting to cross at the junction.

- 2.7 The RSA team's recommendation is that vehicle tracking for an HGV is carried out for all movements at the junction to ensure that there are no conflict points with waiting pedestrians.
- 2.8 In response to the RSA team's comments a full dataset of HGV vehicle tracking movements have been prepared for the following vehicles:
- large 3 axle refuse vehicle
 - 16.5m articulated vehicle
 - 10m rigid vehicle
 - 12m rigid vehicle
- 2.9 The full tracking plans are presented in **appendix b**, which confirm that all these HGV's can undertake all turning movements through the junction without conflicting with footways or crossing points. As confirmed on the tracking plans some very minor adjustments have been made to the south-eastern kerb alignment within the junction, as well as the position of the splitter island on the eastern (development) junction arm.
- 2.10 Based on this review it is confirmed that a range of HGVs can be accommodated undertaking all turning movements through the junction, as shown on the attached tracking drawings.

Matter 2: Risk of Vehicle Collisions with Cyclists

- 2.11 The RSA team have commented that they note the scheme proposes to introduce a shared pedestrian and cyclist crossing facility, and shared footways. The cycle route is not detailed to show the start and end sections of the shared footways and the Audit Team is concerned that cyclists may be introduced back into the carriageway without any warning to the approaching motorists.
- 2.12 The RSA team's recommendation is that the cycle route and shared space is clearly defined with a design for the entry/exit points for cyclists, with the width of the running lanes increased to a suitable size for locations where cyclists are re-joining the carriageway.
- 2.13 In response to the RSA team's comments it is important to understand the principles of pedestrian and cycle access at this location, and how the wider pedestrian and cycle infrastructure has been designed. To assist this discussion pedestrian and cycle enhancement route schemes have previously been submitted to the Council, which show the desire lines from the site for walking and cycling via the existing Public Right

of Way (PROW) network running from the south-western corner of the site towards Crawley Road. These routes, which are shown on plan in **appendix c** confirm that these routes travel from the site, through the adjacent residential areas and then cross or join Crawley Road to continue towards the town centre. They will provide the most direct route from the development to the town centre and its rail station.

- 2.14 To complement the above-mentioned routes it has been agreed with WSCC that the opportunity to allow pedestrians and cyclists to enter and exit the site at the signalised junction access should be provided. These cycle connections are not proposed to link with the carriageway on the B2195 Crawley Road, but a scheme to cross this section of adopted highway, to allow pedestrians to join the footway on the western side of Crawley Road, and for cyclists to be able to connect safely to Old Crawley Road and Earles Meadow.
- 2.15 With regard to the pedestrian and cycle proposals, the proposals at the signalised junction will deliver a continuous link from the eastern (development) arm providing:
- a 3m wide pedestrian and cycle link to Old Crawley Road
 - a 2m wide pedestrian link on the southern side of the eastern (development) arm to link with the eastern footway on Crawley Road, the proposed controlled crossing on the southern junction arm, to connect into the footway on the western side of the junction
 - a 4m wide "Toucan" crossing on the northern junction arm, to provide pedestrian and cycle access across Crawley Road, to then connect into a 3m wide shared pedestrian/cycle link which routes northwards to link with Earles Meadows
- 2.16 What these measures deliver is infrastructure that cross the B2195 Crawley Road and remove the need to merge and diverge from this route to use the proposed cycle routes. As an example a cyclist leaving the site will have a segregated route on the northern side of the eastern junction arm, and will not need to route onto the carriageway of the B2195 Crawley Road to access Earles Meadows or Old Crawley Road, as they can do so via the proposed "Toucan" crossing.
- 2.17 With this infrastructure there is no need to ride northwards onto the carriageway of the B2195 Crawley Road to access Earles Meadows or Old Crawley Road, and continuing north from the site on Crawley Road simply routes onto the A264, a route not suited for cycling. A resident leaving the site to head south would do so from the upgraded PROW network, as reviewed earlier in this document.

- 2.18 Based on this review it is confirmed that the package of pedestrian and cycle measures at the proposed signalised junction will provide safe, segregated access to nearby links to onward destinations.

Matter 3: Risk of Vehicle Collisions with Pedestrians

- 2.19 The RSA team have noted that the amended scheme design looks to introduce a new "Toucan" crossing facility across Crawley Road, with the crossing over the new site entrance road showing just for pedestrians. The Audit Team are concerned that cyclists using the Toucan crossing facility will head into the new housing development, which appears not to be a shared use footway which could lead to conflict with pedestrians at this location.
- 2.20 The RSA team's recommendation is that the extent of the shared use footway is clearly defined and the crossing facility over the new access road is to be a "Toucan" crossing.
- 2.21 In response to the RSA team's comments the shared footway/cycleway has always been shown as being 3m wide, but for clarity this has been labelled as such on the revised layout drawings presented in **appendices b and d**. From the "Toucan" crossing the 3m wide shared footway/cycleway will continue into the site, to allow safe, segregated access for these modes of travel to and from Crawley Road. Labelling these routes as 3m wide will ensure these drawings can be the subject of a Planning Condition to ensure this infrastructure in perpetuity.

Matter 4: Risk of Cyclist Collisions with Pedestrians or Vehicles

The RSA team have noted that the footways from the signalised junction into the scheme are proposed to be a shared facility for pedestrians and cyclists, with the footways wider at these locations. The RSA team are concerned that there is no link for cyclists into the town centre, or clear direction for cyclists which could lead to confusion and to cyclists using the non-shared footway and coming into conflict with pedestrians or entering the carriageway unexpectedly.

- 2.22 The RSA team's recommendation is that there is clear detail and signage available to the cyclists for the direction of the cycle route/shared spaces in this location.
- 2.23 In response to the RSA team's comments the technical points raised in response to Matter 2 are relevant to this response, as they show the previously presented

enhancements to the PROW network for pedestrian and cycle access on desire lines between the proposed development and the town centre. These are shown on plan in **appendix c**. These routes provide a direct and attractive link to the town centre, in addition to that proposed through the signalised junction.

- 2.24 In addition to the above the 3m wide shared pedestrian/cycle route from the development to the signalised junction, through the "Toucan" crossing and then onwards towards the town centre via Earles Meadows is an additional route that complements the PROW enhancements shown in **appendix c**.
- 2.25 In line with the proposals in the previously submitted and agreed Sustainable Access Audit (prepared in July 2020) the development will contribute towards a wayfinding strategy from the site along the identified sustainable corridors towards the town centre. The routes through the proposed signalised junction can be incorporated into this wayfinding strategy.

3.0 CONCLUSIONS

- 3.1 The technical matters raised by the RSA team have been considered in this Response Report. The matters have been responded to in a positive manner by the scheme designers, to ensure the development access and pedestrian and cycle infrastructure will be delivered in perpetuity. It is noted that the RSA has not identified any fundamental design issues with the access proposals.
- 3.2 The technical matters have been noted and agreed by the scheme designer. The Designer's Response confirms how the technical matters will be addressed. There are no further outstanding matters from the RSA that have either not been commented on or will need to be addressed at detailed design stage.
- 3.3 The design team look forward to discussing the Stage 1 Road Safety Audit and the Designers Response with the highway authority at the appropriate time.

APPENDIX A

**FAIRFAX
OLD CRAWLEY ROAD,
FAYGATE, SUSSEX
SECTION 278 WORKS**

SA 3005

**STAGE 1 ROAD SAFETY AUDIT
REVISION**

October 2020

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REV	ISSUE STATUS	PREPARED BY/DATE	CHECKED BY/DATE	APPROVED BY/DATE
1	DRAFT	DG 27 January 2020	SR 27 January 2020	
2	FINAL	DG 30 January 2020	SR 30 January 2020	AC 31 January 2020
3	REVISION 01	DG 26 October 2020	LB 27 October 2020	AD 29 October 2020

Our Markets



Property & Buildings



Transport & Infrastructure



Energy & Utilities



Environment

Disclaimer note

The client has confirmed that it is entering into the agreement under which this report is being prepared on its own behalf and not on behalf of, or for the benefit of any other party and has agreed that in any event of any claim arising out of or in connection with that agreement and/or the report itself it shall be entitled to recover from Waterman Aspen Limited only the losses, if any, it has itself suffered.

This report therefore is for the private and confidential use of the client for whom it was prepared solely for the purposes requested by the client. It should not be reproduced in whole or in part or relied upon by any third party for any use whatsoever without the express written authority of Waterman Aspen Limited.

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1.0 INTRODUCTION

1.1 This report is a revised Stage 1 Road Safety Audit (RSA) carried out on the feasibility design of the proposed access arrangements for a new housing development with a new signalised junction being introduced at the junction of Old Crawley Road and Crawley Road (B2195) at the request of SK Transport Planning on behalf of West Sussex County Council.

1.2 The RSA team, staff members from Waterman Aspen, present at the RSA were:

Darren Gotch MCIHT
Audit Team Leader

Liam Bourne
Audit Team Member

We confirm that no member of the Audit Team has been involved with the design process and that at least one member of the Audit Team holds the Highways England Certificate of Competency.

1.3 The site visit was carried out on the afternoon of Wednesday 21st October 2020. The weather during the site visit was fine and the carriageway surface was dry.

1.4 The RSA brief issued to the team comprised of various elements listed at Appendix Two.

1.5 The scheme has been examined and this report compiled only with regard to the safety implications for road users of the scheme as presented. It has not been examined or verified for compliance with any other Standards or criteria. However, in order to clearly explain a safety problem or the recommendation to resolve a problem, the Audit Team may on occasion have referred to a design standard for information only. Any audit comments should not be construed as implying that a technical audit has been undertaken in any respect.

1.6 All of the problems described in this report are considered by the RSA team to require action in order to improve the safety of the scheme and minimise collision occurrence. However, if any of the problems or recommendations within this Road Safety Audit report are not accepted, a copy of the signed exception report from the Overseeing Organisation should be sent to the Road Safety Audit Team Leader.

1.7 Any recommendations included within this report should not be regarded as being prescriptive design solutions to the problems raised. They are intended only to indicate a proportionate and viable means of eliminating or mitigating the identified problem, in accordance with GG119, and in no way imply that a formal design process has been undertaken. There may be alternative methods of addressing a problem which would be equally acceptable in achieving the desired elimination or mitigation and these should be considered when responding to this report.

2.0 PROPOSALS

2.1 The scheme proposes to construct Section 278 adoptable Highway works in the form of revised access arrangements proposed to serve the residential development at land at Crawley Road. During the life of the planning application the access arrangements have been amended to accommodate:

- Pedestrian crossing facilities on all junction arms, including a shared pedestrian/cycle crossing on the northern junction arm
- New 3m wide pedestrian/cycle link from the western side of the junction which then routes northwards across adopted highway to link with Earles Meadows
- A new 3m wide pedestrian/cycle link on the eastern side of the junction, to link the development with Old Crawley Road

3.0 RECORDED INJURY ACCIDENT HISTORY

3.1 No recorded injury accident data has been submitted to the Audit Team.

4.0 DEPARTURES FROM STANDARD

4.1 No Departures from Standards were highlighted to the Audit Team.

5.0 DOCUMENTS AND INFORMATION NOT PROVIDED

- Drainage
- Signs and Lines

6.0 MATTERS ARISING FROM PREVIOUS ROAD SAFETY AUDITS

- 6.1 A previous Road Safety Audit was undertaken in 2020. All the concerns raised in that report are considered to have been addressed satisfactorily.
- 6.2 A revision to the previous Road Safety Audit was undertaken in 2020. All the concerns raised in that report are no longer considered to be relevant as the location and design of the junctions have changed. Any new problems are raised in Section 7.0 below.

7.0 MATTERS ARISING FROM THIS STAGE 1 ROAD SAFETY AUDIT**7.1 Problem:****Location: Entire Scheme****Summary: Risk of conflict between Heavy Goods Vehicles and pedestrians**

A signalised junction is proposed for the location, which includes a new entrance into the housing development.

The Audit Team were provided with vehicle tracking for a refuse vehicle only for the proposed layout of the junction. However, the Audit Team are concerned that a Heavy Goods Vehicle will be unable to make the movements at the junction without mounting the footway and coming into conflict with pedestrians waiting to cross at the location.

Recommendation

It is recommended that vehicle tracking for a Heavy Goods Vehicle is carried out for all movements at the junction to ensure that there are no conflict points with waiting pedestrians.

7.2 Problem:**Location: Entire Scheme****Summary: Risk of vehicle collisions with cyclists.**

It is proposed to introduce a shared pedestrian and cyclist crossing facility and shared footways. The cycle route is not detailed to show the start and end sections of the shared use footways and the Audit Team are concerned that cyclists may be introduced back to the carriageway without any warning to the approaching motorists. This is an added concern with the vehicle lanes being designed to 3.65m which is recognised in current guidance to be dangerous for cyclists.

Recommendation:

It is recommended that the cycle route and shared space is clearly defined with a design for the entry/exit points for cyclists, with the width of the running lanes increased to a suitable size for locations where cyclists are re-joining the carriageway.

7.3 Problem:**Location:** Entire Scheme**Summary:** Risk of cyclist collisions with pedestrians.

It is proposed to introduce a toucan crossing facility across Crawley Road, with the crossing over the new site entrance road showing just for pedestrians. The Audit Team are concerned that cyclists using the toucan crossing facility will head into the new housing development, which appears not to be a shared use footway which could lead to conflict with pedestrians at the location.

Recommendation:

It is recommended that the extent of the shared use footway is clearly defined and the crossing facility over the new access road to be a toucan crossing.

7.4 Problem:**Location:** Entire Scheme**Summary:** Risk of cyclist collisions with pedestrians or vehicles.

It is proposed for the footways within the scheme to be a shared facility for pedestrians and cyclists, with the footways wider at these locations.

The Audit Team are concerned that there is no link for cyclists into the town centre, or clear direction for cyclists which could lead to confusion and to cyclists using the non-shared footway and coming into conflict with pedestrians or entering the carriageway unexpectedly.

Recommendation:

It is recommended that there is clear detail and signage available to the cyclists for the direction of the cycle route/shared spaces at the location.

8.0 GENERAL COMMENTS

8.1 No general comments are raised by the Audit Team.

APPENDIX ONE

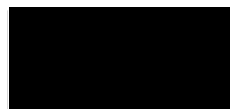
9.0 AUDIT TEAM STATEMENT

AUDIT TEAM STATEMENT

We certify that the audit has been carried out in accordance with the requirements set out in GG119. The problems identified have been noted in this report together with associated safety improvement suggestions which we recommend should be studied for implementation.

AUDIT TEAM LEADER

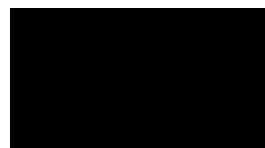
Darren Gotch MCHIT
Principal Traffic Engineer
Waterman Aspen
5th Floor
1 Cornwall Street
Birmingham
B3 2DX



Signed:

Date: 27th October 2020**AUDIT TEAM MEMBER**

Liam Bourne MCIHT
Senior Traffic Engineer
Waterman Aspen
5th Floor
1 Cornwall Street
Birmingham
B3 2DX



Signed:

Date: 27th October 2020

APPENDIX TWO

10.0 LIST OF DRAWINGS AND DOCUMENTS PROVIDED TO THE AUDIT TEAM

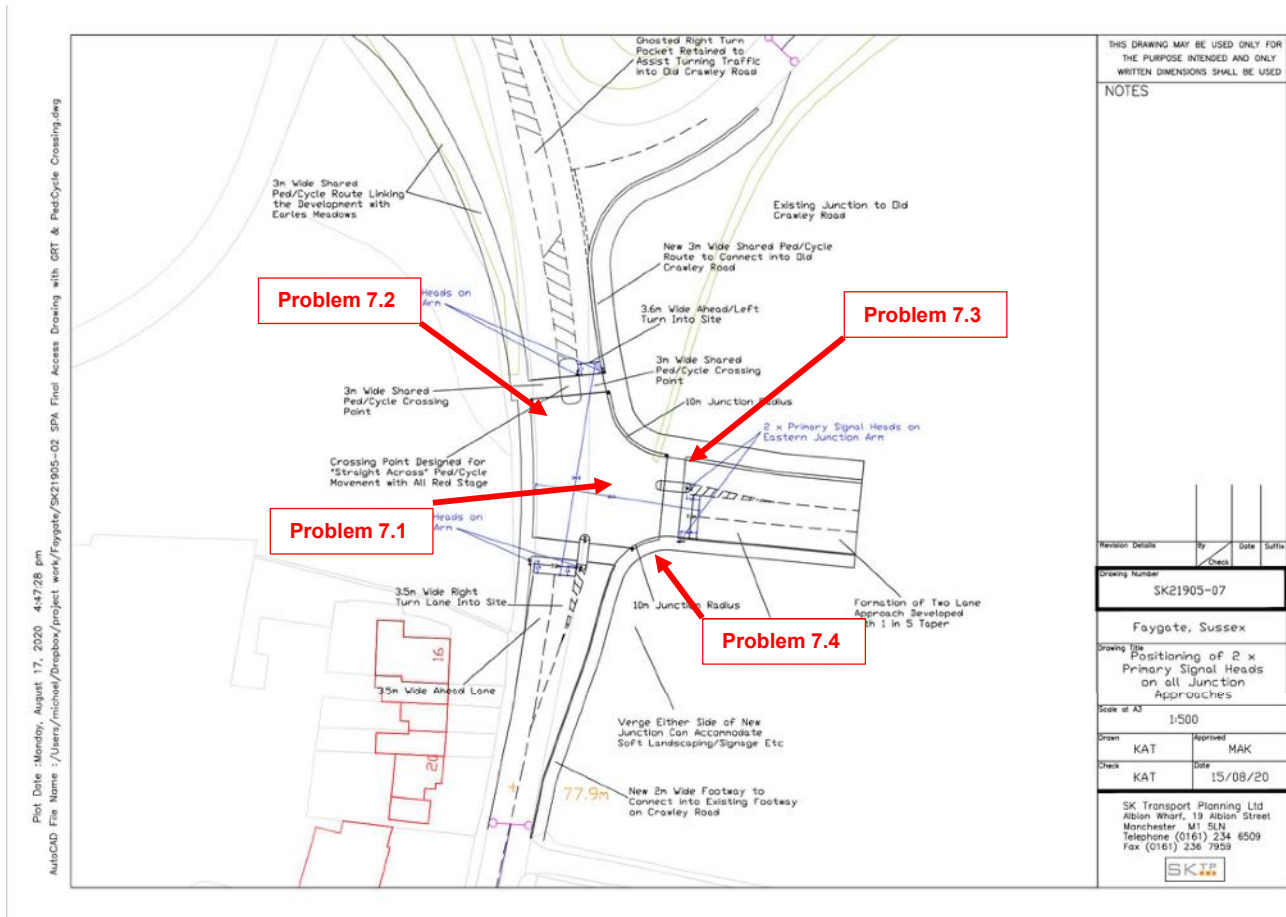
LIST OF DRAWINGS AND DOCUMENTS PROVIDED TO THE AUDIT TEAMDrawings

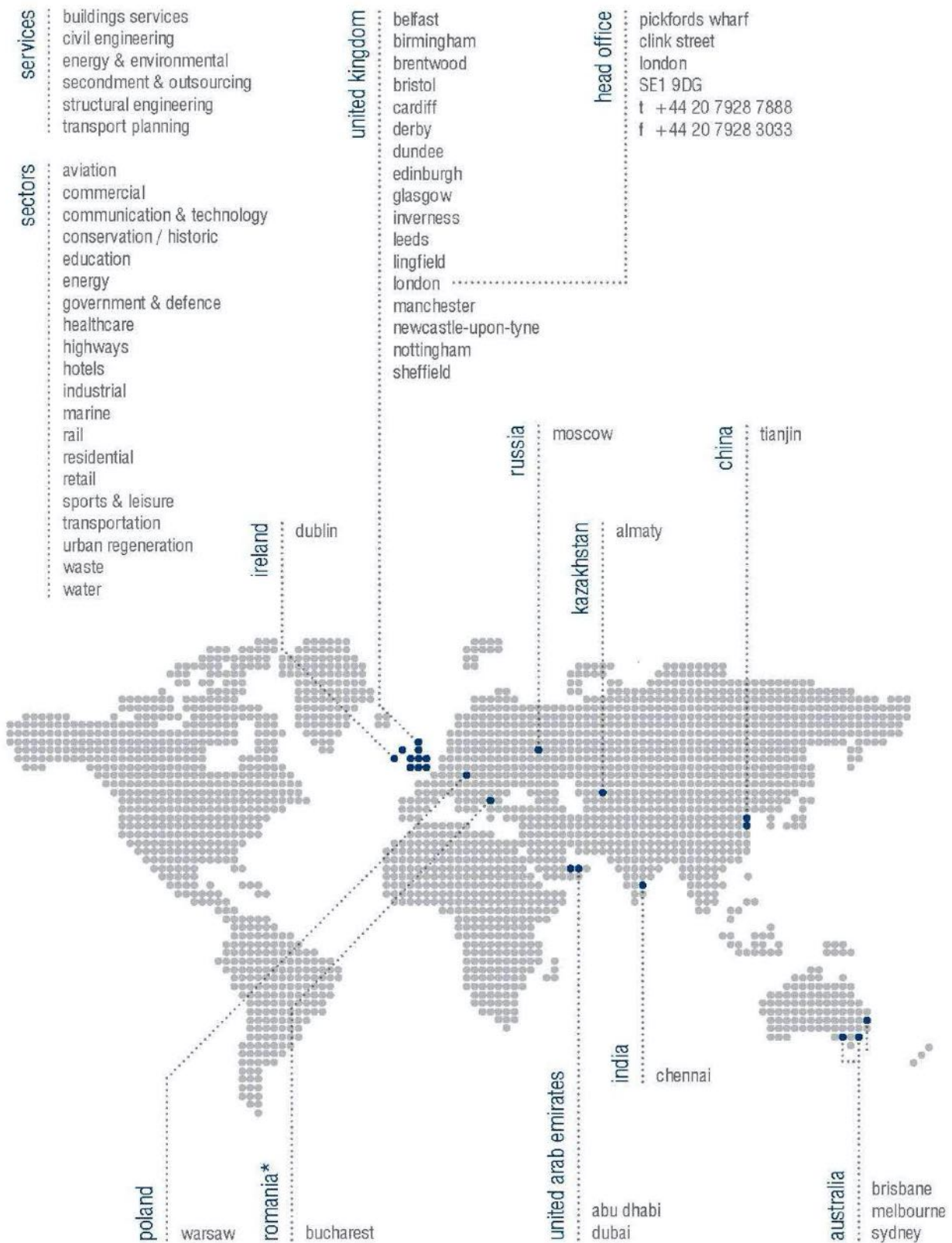
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APPENDIX THREE

11.0 PROBLEM LOCATION PLAN

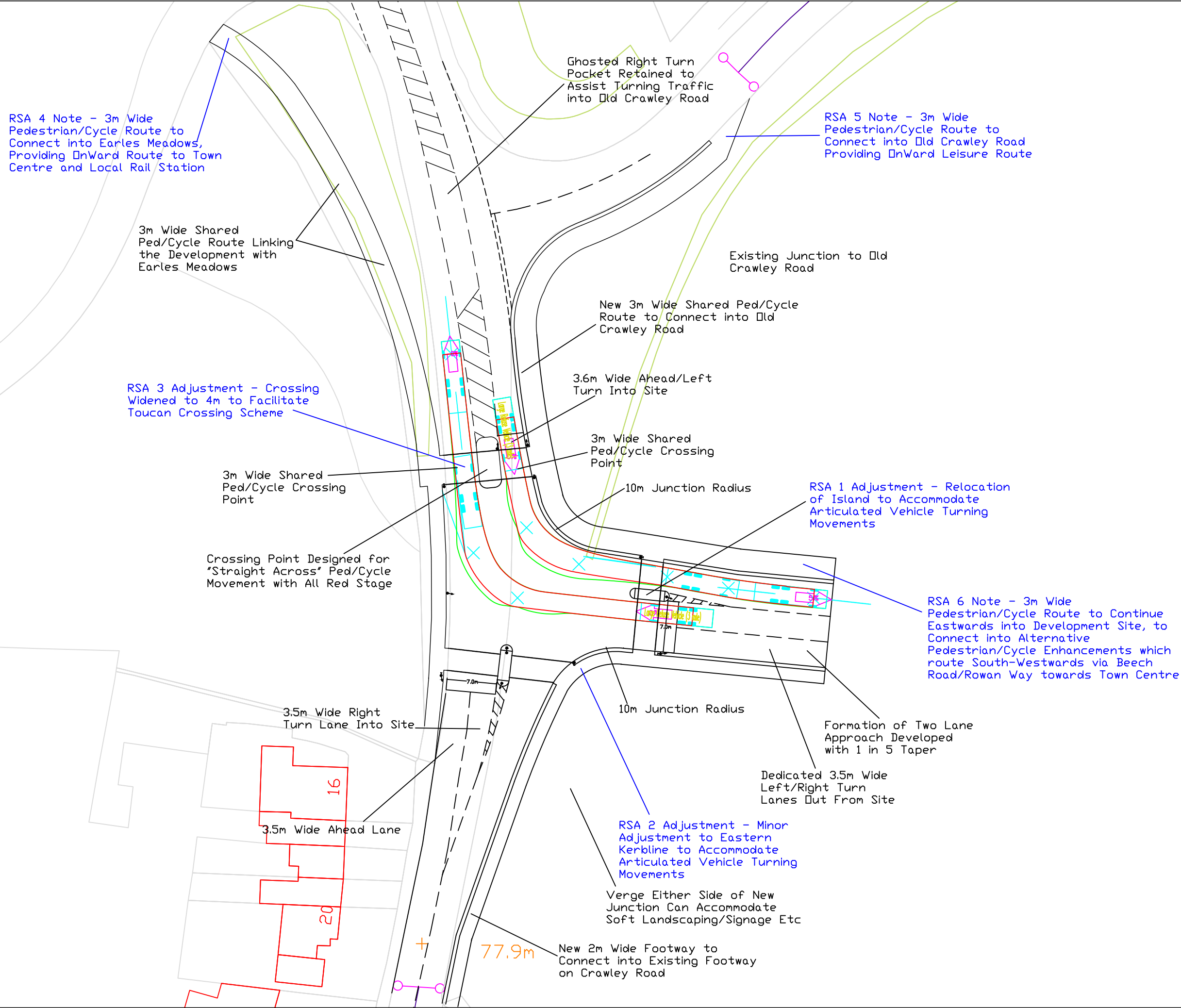
APPENDIX THREE - LOCATION PLAN





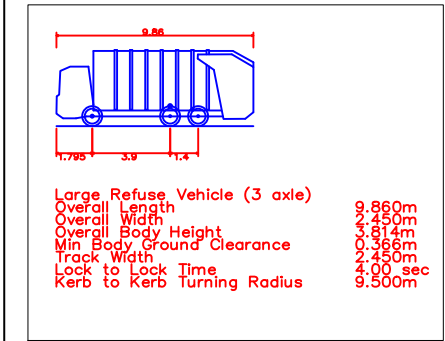
* Project Office

APPENDIX B



THIS DRAWING MAY BE USED ONLY FOR
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WRITTEN DIMENSIONS SHALL BE USED

NOTES



Revision Details	By	Date	Suffix
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SK21905-10

Faygate, Sussex

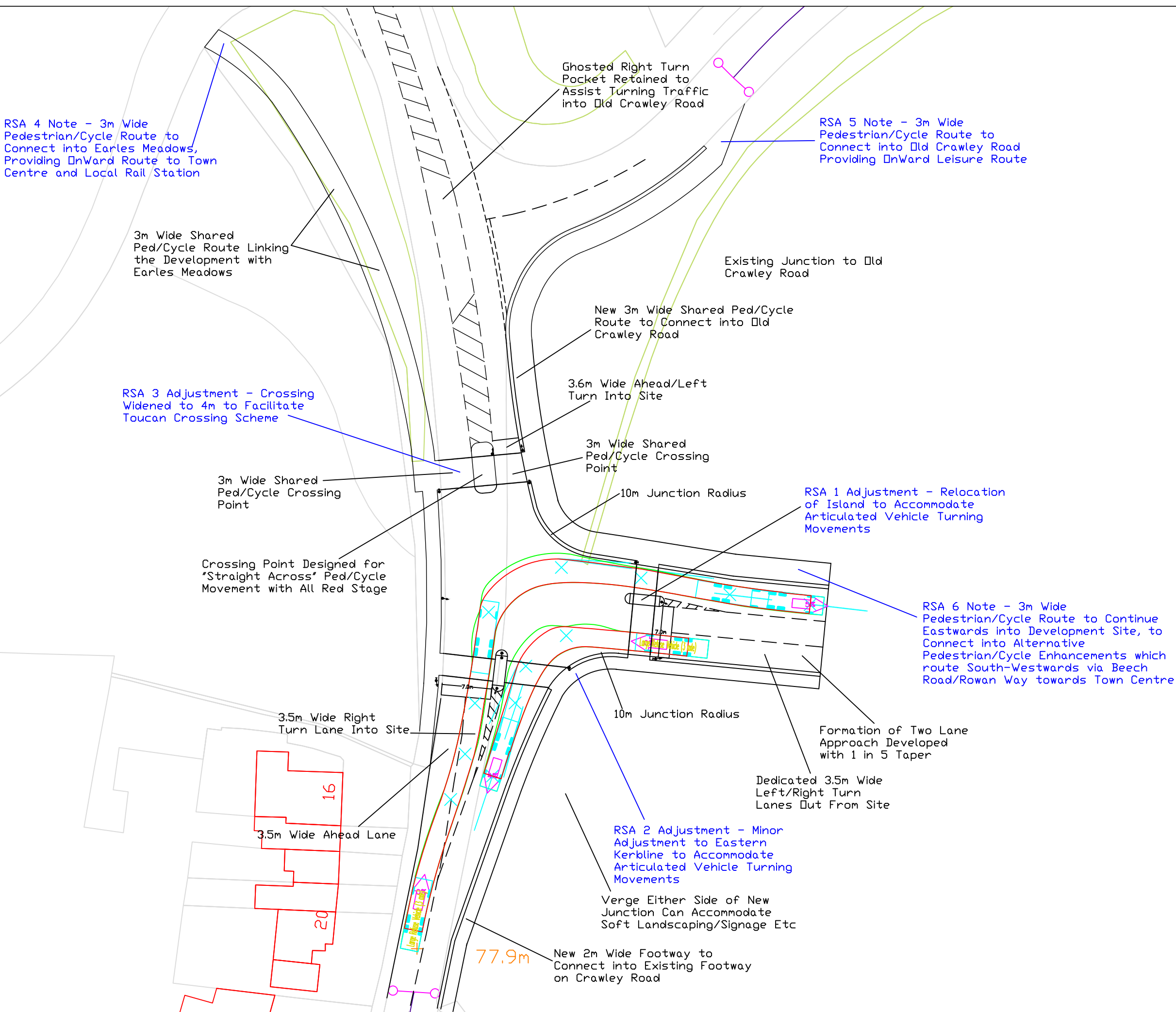
Drawing Title
Swept Path Analysis Refuse Vehicle R/T Out and L/T In

Scale at A3
1:500

Drawn	Approved
KAT	MAK

Check	Date
KAT	05/11/20

SK Transport Planning Ltd Albion Wharf, 19 Albion Street Manchester M1 5LN Telephone (0161) 234 6509 Fax (0161) 236 7959
SK TP



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NOTES

Revision Details	By	Date	Suffix
Check			

Drawing Number

SK21905-11

Faygate, Sussex

Drawing Title

Swept Path Analysis
Refuse Vehicle L/T
Out and R/T In

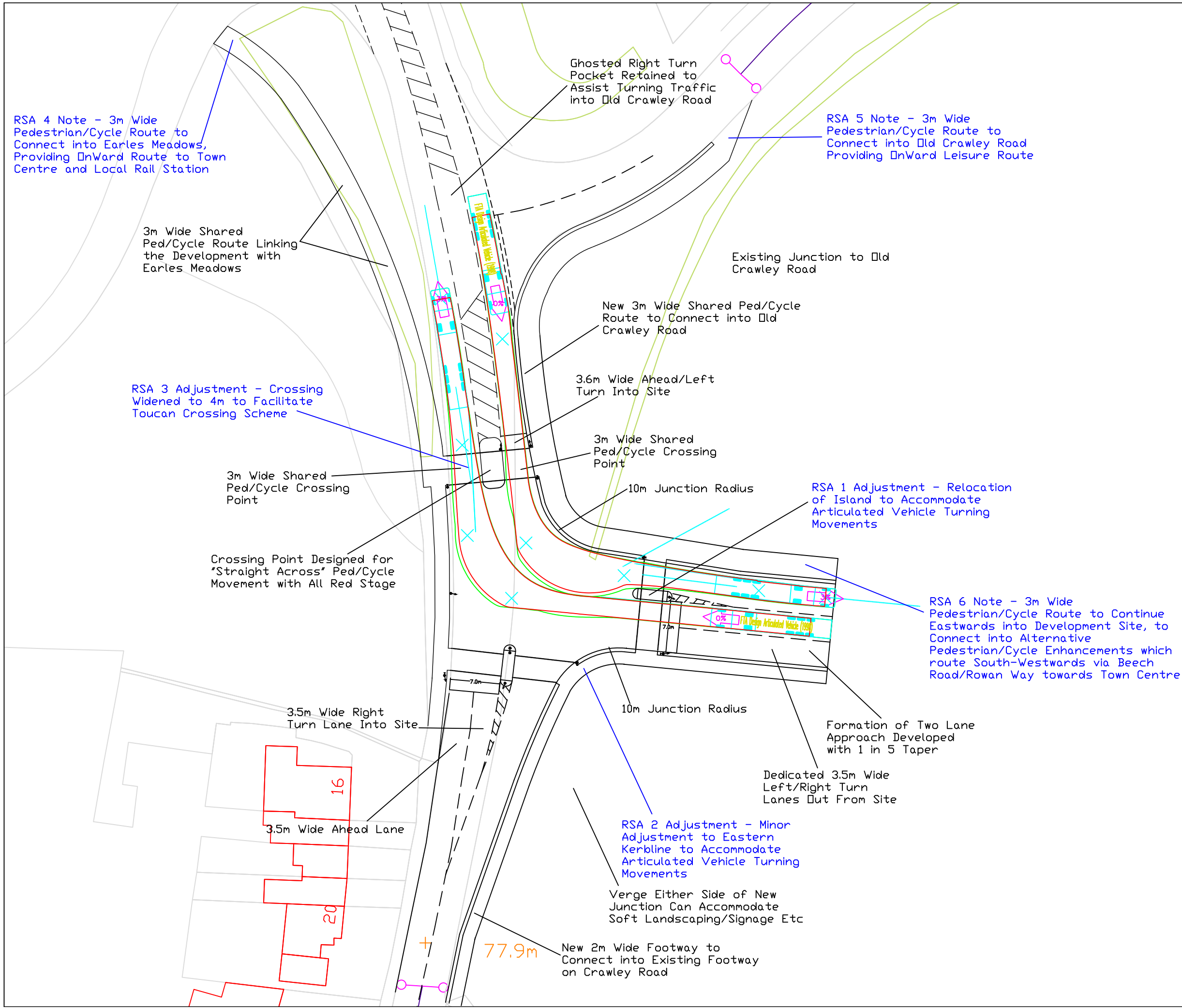
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Check	KAT	Date	05/11/20

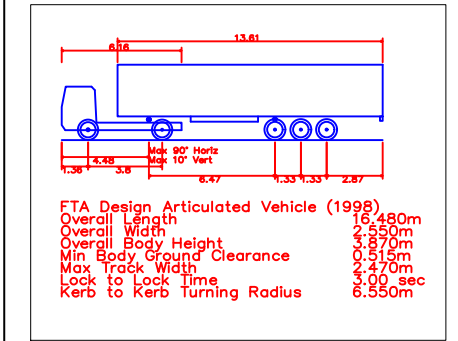
SK Transport Planning Ltd
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Telephone (0161) 234 6509
Fax (0161) 236 7959

SK TP



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NOTES



FTA Design Articulated Vehicle (1998)
Overall Length 16.480m
Overall Width 2.550m
Overall Body Height 4.370m
Min Body Ground Clearance 0.515m
Max Track Width 4.470m
Lock to Lock Time 3.00 sec
Kerb to Kerb Turning Radius 6.550m

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	Check		

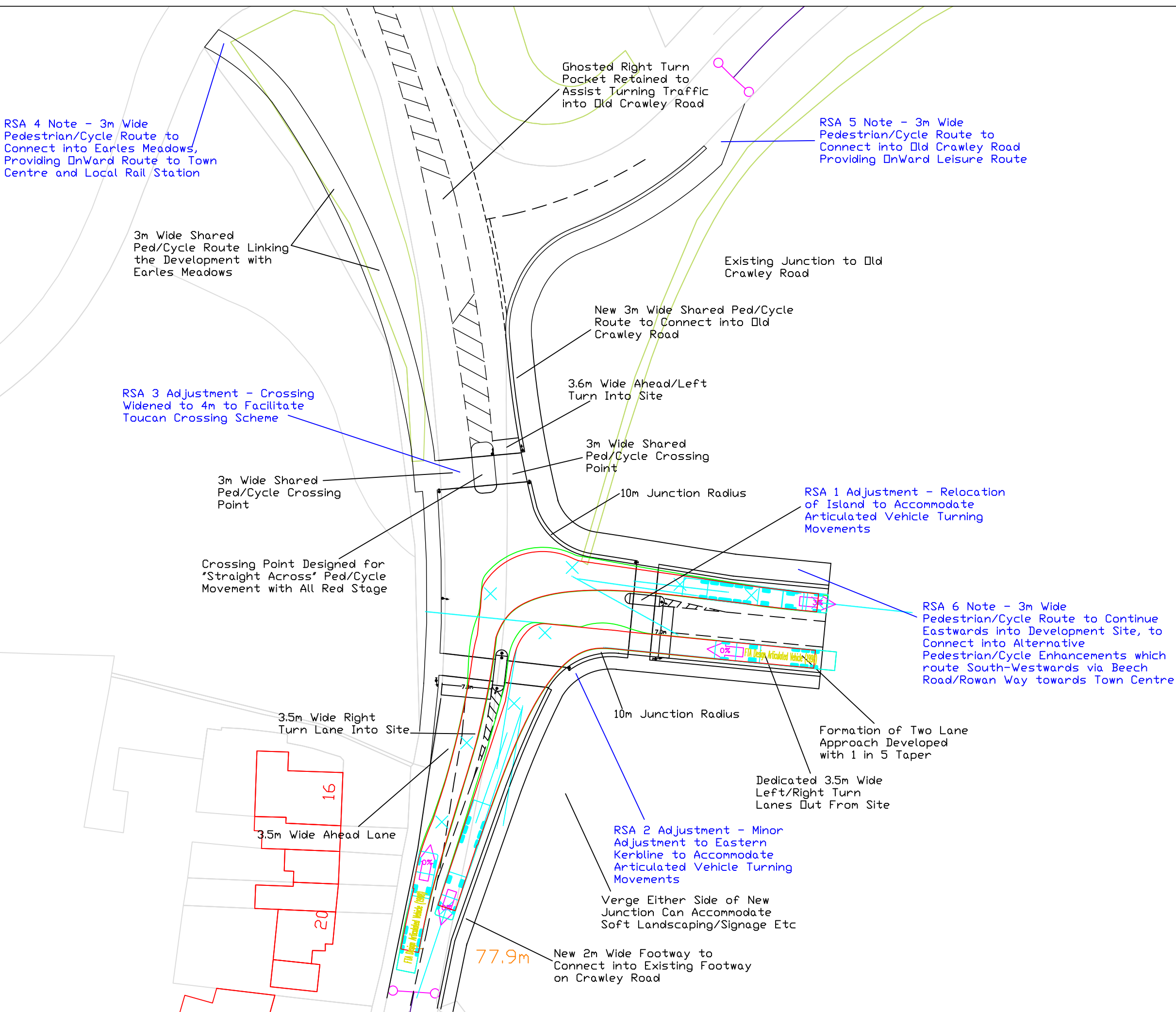
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Faygate, Sussex
Drawing Title
Swept Path Analysis Artic HGV R/T Out and L/T In

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1:500

Drawn	Approved
KAT	MAK
Check	Date
KAT	05/11/20

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NOTES

Revision Details	By	Date	Suffix
	Check		

Drawing Number

SK21905-15

Faygate, Sussex

Drawing Title

Swept Path Analysis
Artic HGV L/T Out and R/T In

Scale at A3

1:500

Drawn	KAT	Approved	MAK
Check	KAT	Date	05/11/20

SK Transport Planning Ltd
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Fax (0161) 236 7959

SK TP



3m Wide Shared Ped/Cycle Route Linking the Development with Earles Meadows

RSA 3 Adjustment - Crossing
Widened to 4m to Facilitate
Toucan Crossing Scheme

3m Wide Shared —
Ped/Cycle Crossing
Point

Crossing Point Designed for
"Straight Across" Ped/Cycle
Movement with All Red Stage

3.5m Wide Right
Turn Lane Into Site.

3.5m Wide Ahead Lane

Ghosted Right Turn
Pocket Retained to
Assist Turning Traffic
into Old Crawley Road

RSA 5 Note - 3m Wide
Pedestrian/Cycle Route to
Connect into Old Crawley Road
Providing OnWard Leisure Route

Existing Junction to Old
Crawley Road

New 3m Wide Shared Ped/Cycle
Route to Connect into Old
Crawley Road

3.6m Wide Ahead/Left
Turn Into Site

3m Wide Shared
- Ped/Cycle Crossing
Point

10m Junction Radius

RSA 1 Adjustment - Relocation of Island to Accommodate Articulated Vehicle Turning Movements

- RSA 6 Note - 3m Wide Pedestrian/Cycle Route to Continue Eastwards into Development Site, to Connect into Alternative Pedestrian/Cycle Enhancements which route South-Westwards via Beech Road/Rowan Way towards Town Centre

10m Junction Radius

Formation of Two Lane
Approach Developed
with 1 in 5 Taper

Dedicated 3.5m Wide
Left/Right Turn
Lanes Out From Site

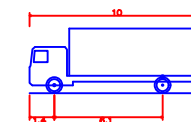
RSA 2 Adjustment - Minor
Adjustment to Eastern
Kerklene to Accommodate
Articulated Vehicle Turning
Movements

Verge Either Side of New
Junction Can Accommodate
Soft Landscaping/Signage Etc

New 2m Wide Footway to
Connect into Existing Footway
on Crawley Road

77.9m

NOTES



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	3.00 sec
Kerb to Kerb Turning Radius	11.000m

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Drawing Number
SK21905-16

Faygate, Sussex

Drawing Title

Swept Path Analysis
Rigid HGV R/T Out and
L/T In

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Drawn KAT	Approved MAK
--------------	-----------------

Check	Date
KAT	05/11/20

SK Transport Planning Ltd
Albion Wharf, 19 Albion Street
Manchester M1 5LN
Telephone (0161) 234 6509
Fax (0161) 236 7959





3m Wide Shared Ped/Cycle Route Linking the Development with Earles Meadows

RSA 3 Adjustment - Crossing
Widened to 4m to Facilitate
Toucan Crossing Scheme

3m Wide Shared —
Ped/Cycle Crossing
Point

Crossing Point Designed for
"Straight Across" Ped/Cycle
Movement with All Red Stage

3.5m Wide Right
Turn Lane Into Site

3.5m Wide Ahead Lane

Ghosted Right Turn
Pocket Retained to
Assist Turning Traffic
into Old Crawley Road

RSA 5 Note - 3m Wide
Pedestrian/Cycle Route to
Connect into Old Crawley Road
Providing OnWard Leisure Route

Existing Junction to Old
Crawley Road

New 3m Wide Shared Ped/Cycle
Route to Connect into Old
Crawley Road

3.6m Wide Ahead/Left
Turn Into Site

3m Wide Shared
- Ped/Cycle Crossing
Point

10m Junction Radius

RSA 1 Adjustment - Relocation
of Island to Accommodate
Articulated Vehicle Turning
Movements

RSA 6 Note - 3m Wide
~ Pedestrian/Cycle Route to Continue Eastwards into Development Site, to Connect into Alternative Pedestrian/Cycle Enhancements which route South-Westwards via Beech Road/Rowan Way towards Town Centre

10m Junction Radius

Formation of Two Lane
Approach Developed
with 1 in 5 Taper

Dedicated 3.5m Wide
Left/Right Turn
Lanes Out From Site

RSA 2 Adjustment - Minor
Adjustment to Eastern
Kerbline to Accommodate
Articulated Vehicle Turning
Movements

Verge Either Side of New
Junction Can Accommodate
Soft Landscaping/Signage Etc

New 2m Wide Footway to
Connect into Existing Footway
on Crawley Road

77.9m

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WRITTEN DIMENSIONS SHALL BE USED

NOTES

Revision Details	By Check	Date	Suffix
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Drawing Number

SK21905-17

Faygate, Sussex

Drawing Title

Swept Path Analysis
Rigid HGV L/T Out and
R/T In

Scale at A3

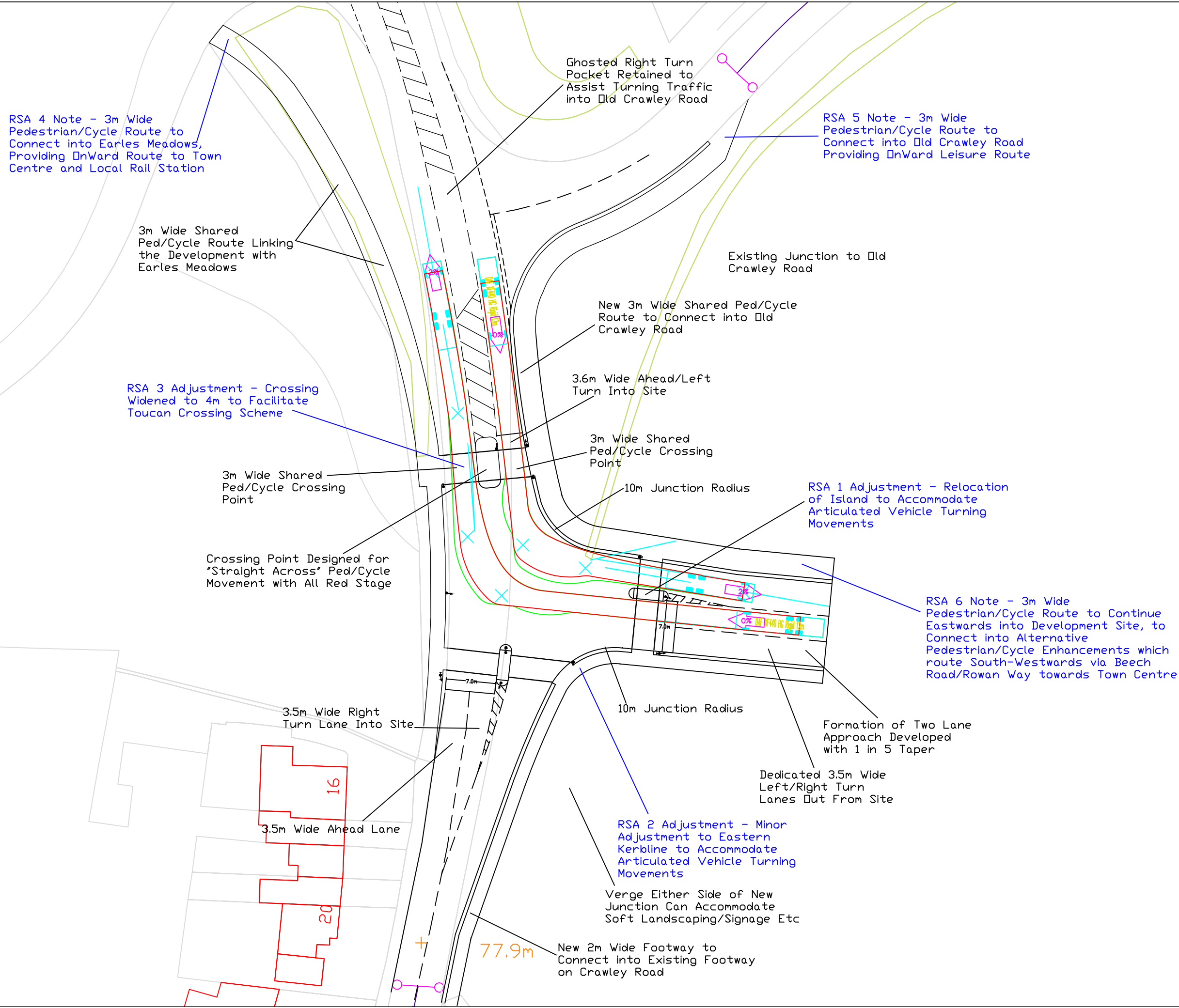
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Drawn KAT	Approved MAK
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Check	Date
KAT	05/11/20

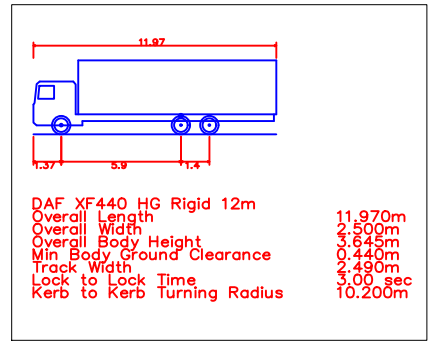
SK Transport Planning Ltd
Albion Wharf, 19 Albion Street
Manchester M1 5LN
Telephone (0161) 234 6509
Fax (0161) 236 7959





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Revision Details	By	Date	Suffix
	Check		

Drawing Number
SK21905-18

Faygate, Sussex

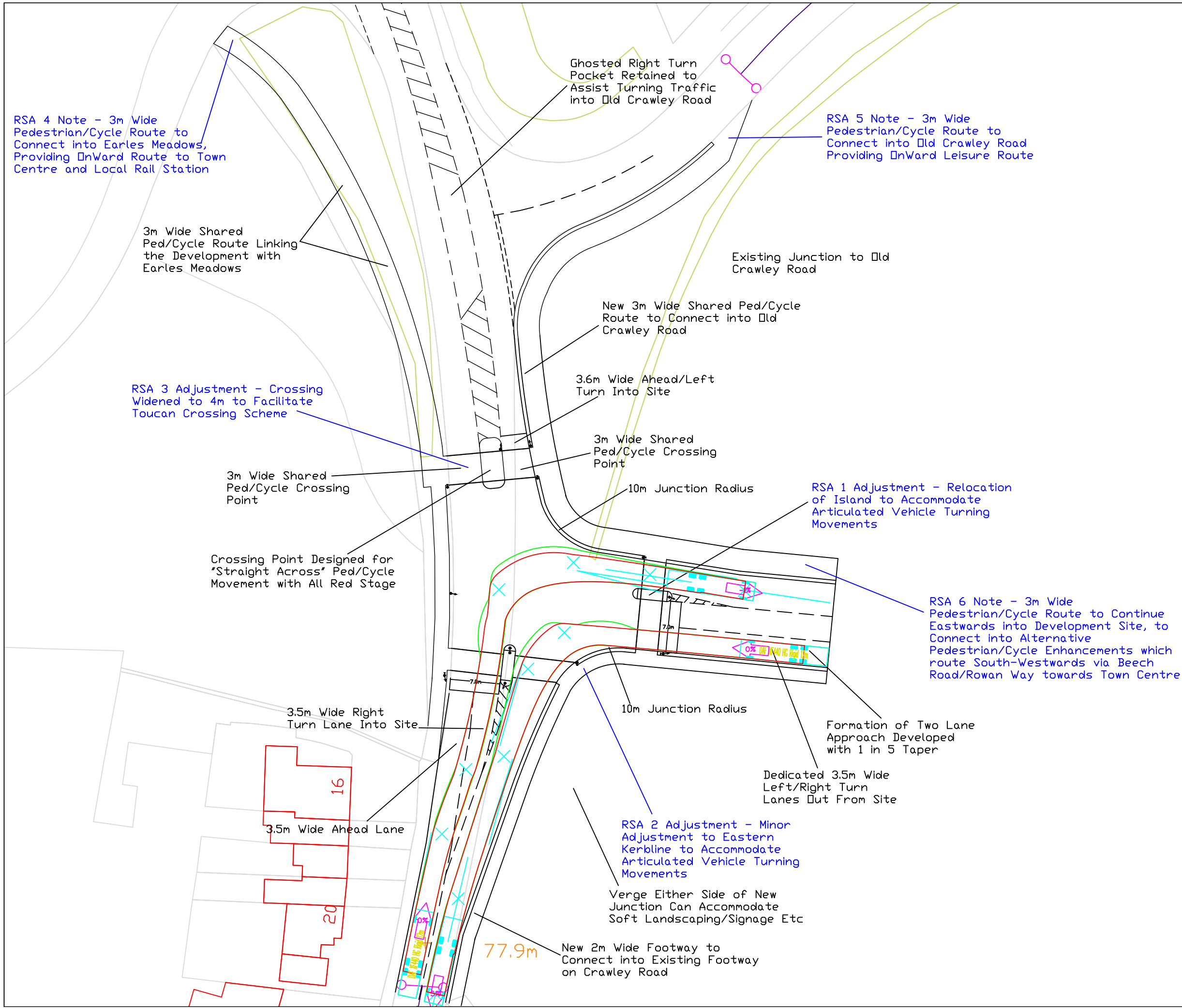
Drawing Title
Swept Path Analysis 12m Rigid HGV R/T Out and L/T In

Scale at A3
1:500

Drawn	Approved
KAT	MAK

Check	Date
KAT	05/11/20

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NOTES

Revision Details	By	Date	Suffix
	Check		

Drawing Number
SK21905-19

Faygate, Sussex
Drawing Title
Swept Path Analysis 12m Rigid HGV L/T Out and R/T In

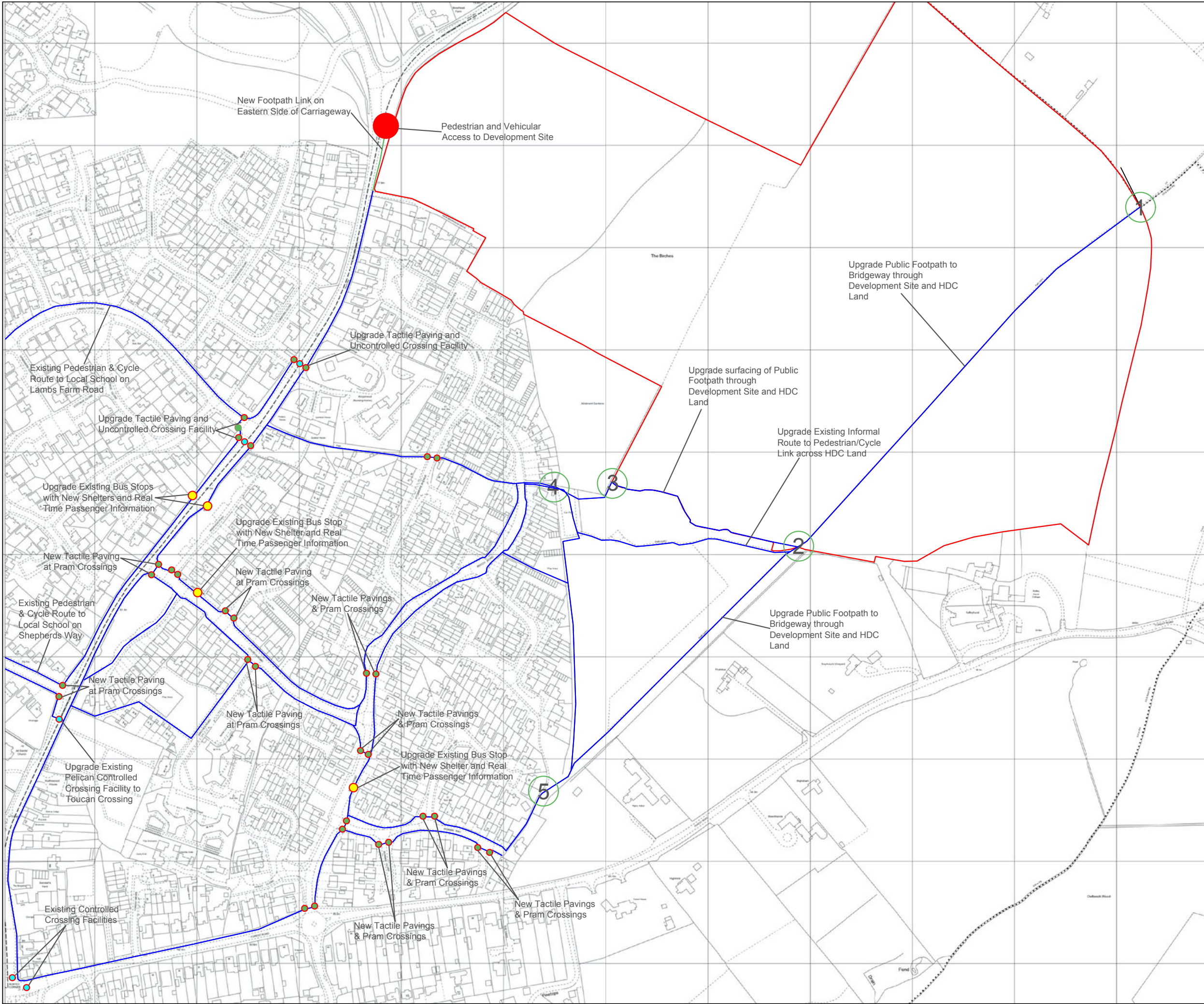
Scale at A3
1:500

Drawn	Approved
KAT	MAK
Check	Date
KAT	05/11/20

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APPENDIX C



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NOTES

Development Site
Boundary

- 1 Eastern Point of Existing Public Footpath within Development Site
- 2 South-Western Point of Existing Public Footpath within Development Site
- 3 Western Point of Existing Public Footpath within Development Site
- 4 Western Point of Existing Public Footpath within HDC Land
- 5 South-Western Point of Existing Public Footpath within HDC Land

Revision Details	By Check	Date	Suffix

Drawing Number
SK21906-50 REV A

Crawley Road, Faygate

Drawing Title

Pedestrian Route Enhancement
Scheme

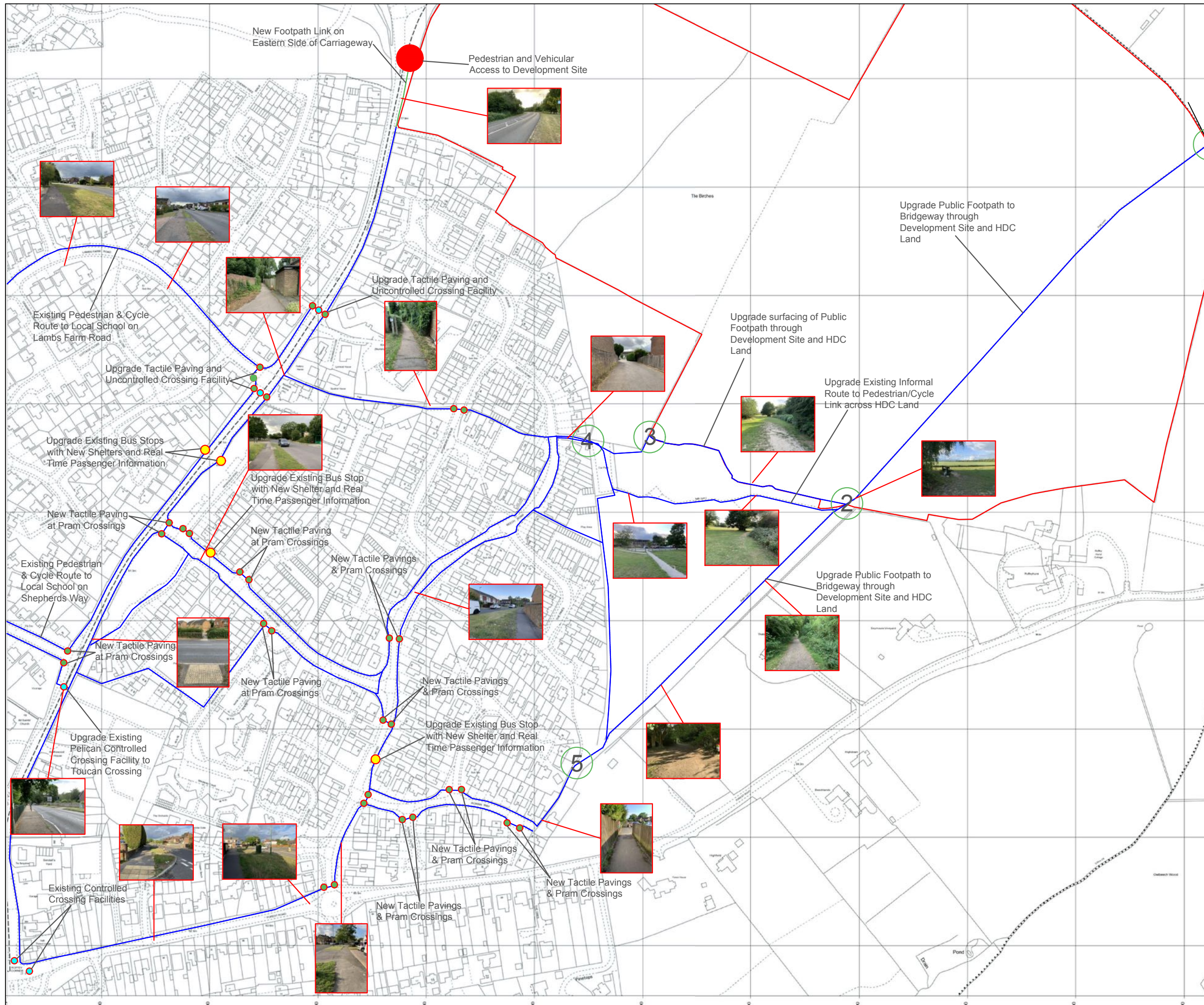
Scale at A3	NTS
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Drawn KAT	Approved MAK
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Check	Date
KAT	16/07/20

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NOTES

- Development Site Boundary
- ① Eastern Point of Existing Public Footpath within Development Site
- ② South-Western Point of Existing Public Footpath within Development Site
- ③ Western Point of Existing Public Footpath within Development Site
- ④ Western Point of Existing Public Footpath within HDC Land
- ⑤ South-Western Point of Existing Public Footpath within HDC Land

Revision	Details	By	Date	Suffix
		Check		

Drawing Number

SK21906-51

Crawley Road, Faygate

Drawing Title

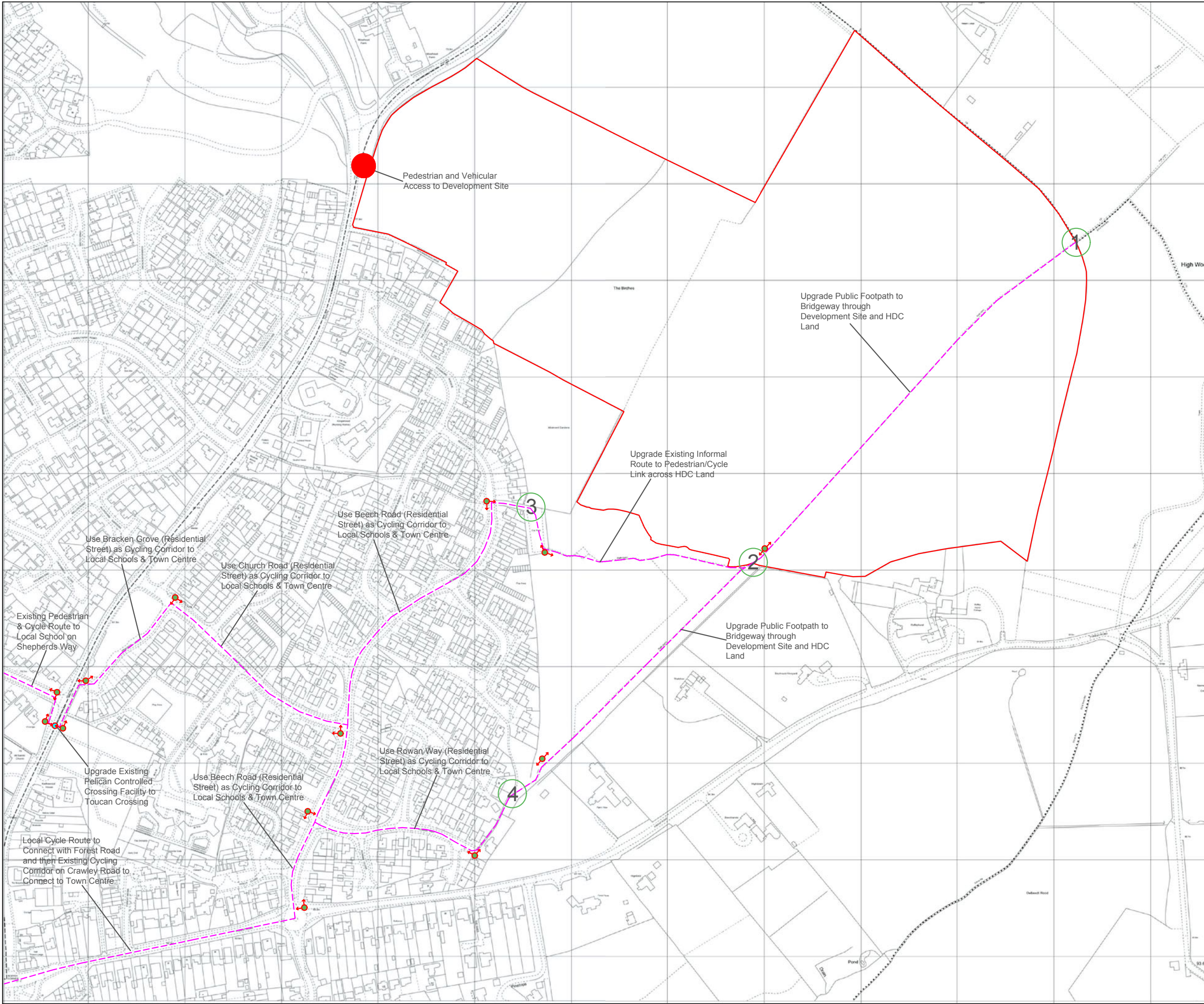
Pedestrian Route Enhancement Scheme - Site Audit

Scale at A3

NTS

Drawn	KAT	Approved	MAK
Check	KAT	Date	16/07/20

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NOTES

- | | |
|---|---|
|  | Development Site Boundary |
|  | Eastern Point of Existing Public Footpath within Development Site |
|  | South-Western Point of Existing Public Footpath within Development Site |
|  | Existing Link across HBC Land to Local Highway Network |
|  | South-Western Point of Existing Public Footpath within HDC Land |
|  | New Pedestrian/Cycle Signage Scheme to Direct Residents on Identified Corridors |

Revision Details	By Check	Date	Suffix

Drawing Number

SK21906-52

Crawley Road, Faygate

Drawing Title

Cycle Route Enhancement
Scheme & Signage Strategy

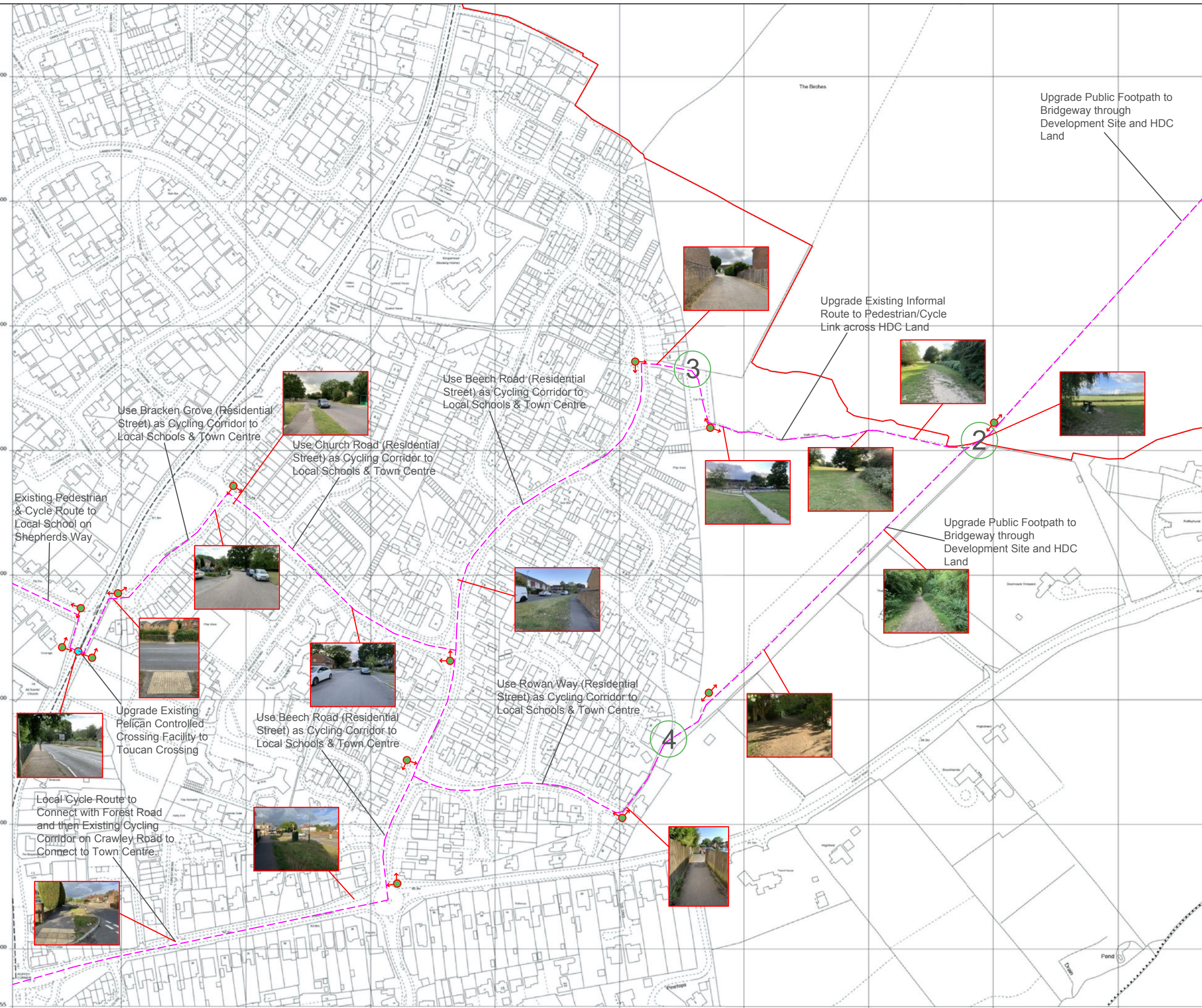
Scale at A3	NTS
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Drawn	Approved
KAT	MAK

Check	Date
KAT	16/07/20

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NOTES

- | | |
|---|---|
|  | Development Site Boundary |
|  | South-Western Point of Existing Public Footpath within Development Site |
|  | Existing Link across HBC Land to Local Highway Network |
|  | South-Western Point of Existing Public Footpath within HDC Land |
|  | New Pedestrian/Cycle Signage Scheme to Direct Residents on Identified Corridors |

Revision	Details	By	Date
		Check	

Drawing Number

SK21906-53

Crawley Road, Faygate

Drawing Title

Cycle Route Enhancement
Scheme - Site Audit & Signage
Strategy

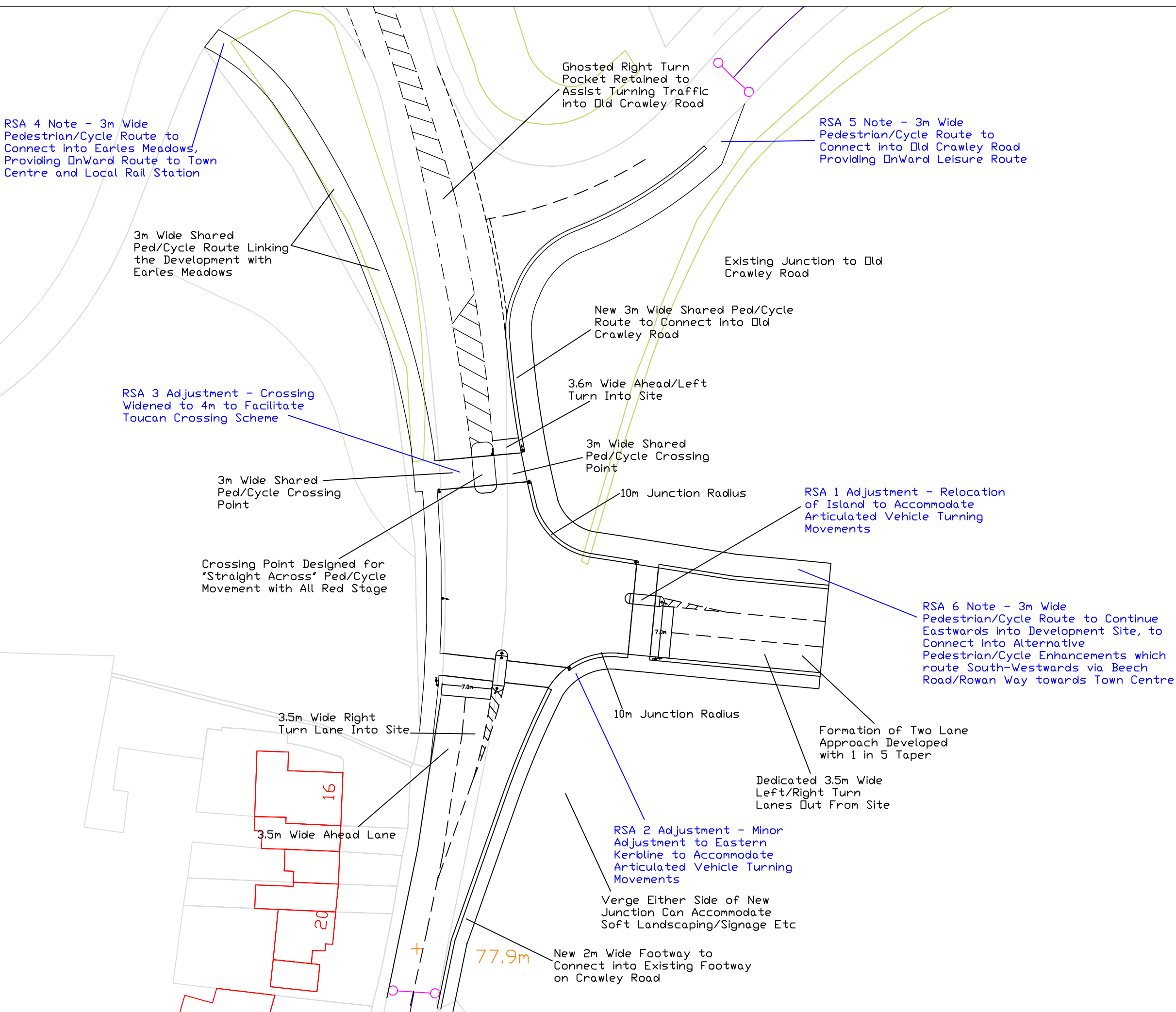
Scale at A3	NTS
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Drawn KAT	Approved MAK
Check KAT	Date 16/07/20

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APPENDIX D



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NOTES

Revision Details	By	Date	Suffix
Check			

Drawing Number

SK21905-07 REV A

Faygate, Sussex

Drawing Title

Minor Adjustments to GA Layout following Stage 1 RSA Comments

Scale at A3

1:500

Drawn	KAT	Approved	MAK
Check	KAT	Date	05/11/20

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APPENDIX E

Land at Crawley Road, Faygate

GG119 Table F4– RSA Decision Log (5th November 2020)

RSA Problem	RSA Recommendation	Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
The RSA team have commented that the access proposals comprise of a new signalised junction for the development, which includes a new entrance into the housing development. The RSA team has confirmed that they were provided with vehicle tracking for a refuse vehicle for all turning movements within the signalised junction. However, the RSA team has also stated that an HGV will be unable to make the movements at the junction without mounting the footway and coming into conflict with pedestrians waiting to cross at the junction.	The RSA team's recommendation is that vehicle tracking for an HGV is carried out for all movements at the junction to ensure that there are no conflict points with waiting pedestrians.	In response to the RSA team's comments a full dataset of HGV vehicle tracking movements have been prepared for the following vehicles: • large 3 axle refuse vehicle • 16.5m articulated vehicle • 10m rigid vehicle • 12m rigid vehicle The full tracking plans are presented in appendix b, which confirm that all these HGV's can undertake all turning movements through the junction without conflicting with footways or crossing points. As confirmed on the tracking plans some very minor adjustments have been made to the south-eastern kerb alignment within the junction, as well as the position of the splitter island on the eastern (development) junction arm. Based on this review it is confirmed that a range of HGVs can be accommodated undertaking all turning movements through the junction, as shown on the attached tracking drawings.		To apply the design parameters as set out in the GA drawing that is the subject of the RSA, to deliver the final scheme presented in appendix d.
The RSA team have commented that they note	The RSA team's recommendation is that	In response to the RSA team's comments it is important to understand the principles of pedestrian and cycle access at this location, and how		To provide all pedestrian and

the scheme proposes to introduce a shared pedestrian and cyclist crossing facility, and shared footways. The cycle route is not detailed to show the start and end sections of the shared footways and the Audit Team is concerned that cyclists may be introduced back into the carriageway without any warning to the approaching motorists.	the cycle route and shared space is clearly defined with a design for the entry/exit points for cyclists, with the width of the running lanes increased to a suitable size for locations where cyclists are re-joining the carriageway.	the wider pedestrian and cycle infrastructure has been designed. To assist this discussion pedestrian and cycle enhancement route schemes have previously been submitted to the Council, which show the desire lines from the site for walking and cycling via the existing Public Right of Way (PROW) network running from the south-western corner of the site towards Crawley Road. These routes, which are shown on plan in appendix c confirm that these routes travel from the site, through the adjacent residential areas and then cross or join Crawley Road to continue towards the town centre. They will provide the most direct route from the development to the town centre and its rail station. To complement the above-mentioned routes it has been agreed with WSCC that the opportunity to allow pedestrians and cyclists to enter and exit the site at the signalised junction access should be provided. These cycle connections are not proposed to link with the carriageway on the B2195 Crawley Road, but a scheme to cross this section of adopted highway, to allow pedestrians to join the footway on the western side of Crawley Road, and for cyclists to be able to connect safely to Old Crawley Road and Earles Meadow. With regard to the pedestrian and cycle proposals, the proposals at the signalised junction will deliver a continuous link from the eastern (development) arm providing: • a 3m wide pedestrian and cycle link to Old Crawley Road • a 2m wide pedestrian link on the southern side of the eastern (development) arm to link with the eastern footway on Crawley Road, the proposed controlled crossing on the southern junction arm, to connect into the footway on the western side of the junction • a 4m wide “Toucan” crossing on the northern junction arm, to provide pedestrian and cycle access across Crawley Road, to then connect into a 3m wide shared pedestrian/cycle link which routes northwards to link with Earles Meadows		cycle infrastructure as laid out in the GA drawing presented in appendix d, in conjunction with the sustainable access strategy works presented in appendix c.
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		What these measures deliver is infrastructure that <u>cross</u> the B2195 Crawley Road and remove the need to merge and diverge from this route to use the proposed cycle routes. As an example a cyclist leaving the site will have a segregated route on the northern side of the eastern junction arm, and will not need to route onto the carriageway of the B2195 Crawley Road to access Earles Meadows or Old Crawley Road, as they can do so via the proposed “Toucan” crossing. With this infrastructure there is no need to ride northwards onto the carriageway of the B2195 Crawley Road to access Earles Meadows or Old Crawley Road, and continuing north from the site on Crawley Road simply routes onto the A264, a route not suited for cycling. A resident leaving the site to head south would do so from the upgraded PROW network, as reviewed earlier in this document. Based on this review it is confirmed that the package of pedestrian and cycle measures at the proposed signalised junction will provide safe, segregated access to nearby links to onward destinations.		
The RSA team have noted that the amended scheme design looks to introduce a new “Toucan” crossing facility across Crawley Road, with the crossing over the new site entrance road showing just for pedestrians. The Audit Team are concerned that cyclists using the Toucan crossing facility will head into the new housing development, which appears not to be a shared use footway which could lead to	The RSA team’s recommendation is that the extent of the shared use footway is clearly defined and the crossing facility over the new access road is to be a “Toucan” crossing.	In response to the RSA team’s comments the shared footway/cycleway has always been shown as being 3m wide, but for clarity this has been labelled as such on the revised layout drawings presented in appendices b and d. From the “Toucan” crossing the 3m wide shared footway/cycleway will continue into the site, to allow safe, segregated access for these modes of travel to and from Crawley Road. Labelling these routes as 3m wide will ensure these drawings can be the subject of a Planning Condition to ensure this infrastructure in perpetuity.		Deliver the shared pedestrian/cycle routes at 3m in width, and ensure these are delivered from the centre of the residential development to off-site locations.

conflict with pedestrians at this location.				
The RSA team have noted that the footways from the signalised junction into the scheme are proposed to be a shared facility for pedestrians and cyclists, with the footways wider at these locations. The RSA team are concerned that there is no link for cyclists into the town centre, or clear direction for cyclists which could lead to confusion and to cyclists using the non-shared footway and coming into conflict with pedestrians or entering the carriageway unexpectedly.	The RSA team's recommendation is that there is clear detail and signage available to the cyclists for the direction of the cycle route/shared spaces in this location.	In response to the RSA team's comments the technical points raised in response to Matter 2 are relevant to this response, as they show the previously presented enhancements to the PROW network for pedestrian and cycle access on desire lines between the proposed development and the town centre. These are shown on plan in appendix c. These routes provide a direct and attractive link to the town centre, in addition to that proposed through the signalised junction. In addition to the above the 3m wide shared pedestrian/cycle route from the development to the signalised junction, through the "Toucan" crossing and then onwards towards the town centre via Earles Meadows is an additional route that complements the PROW enhancements shown in appendix c. In line with the proposals in the previously submitted and agreed Sustainable Access Audit (prepared in July 2020) the development will contribute towards a wayfinding strategy from the site along the identified sustainable corridors towards the town centre. The routes through the proposed signalised junction can be incorporated into this wayfinding strategy.		Deliver the sustainable access routes as laid out in the Transport Assessment, Sustainable Access Audit and RSA, along with a wayfinding strategy to encourage the use of these corridors from the development to the town centre and rail stations.

GG119 Table F5– Design Organisation Statement (5th November 2020)

On behalf of the Design Organisation I certify that:	
1) the RSA actions identified in response to the road safety audit problem in this road safety audit have been discussed and agreed with the Overseeing Organisation.	
Name	Michael Kitching
Signed	
Position	
Organisation	SK Transport Planning Limited
Date	5 th November 2020

GG119 Table F6– Overseeing Organisation Statement (5th November 2020)

On behalf of the Overseeing Organisation I certify that:	
1) the RSA actions identified in response to the road safety audit problem in this road safety audit have been discussed and agreed with the Design Organisation, and	
2) the agreed RSA actions will be progressed.	
Name	
Signed	
Position	
Organisation	
Date	