

Appendix A

APPRAISAL SUMMARY TABLE

Appraisal Summary Table		Updated for Revised Submission		Date produced:		2 11 2015		Contact:		
Name of scheme:		Bracknell Town Centre Redevelopment Works						Name		Stuart Jefferies
Description of scheme:		Highway / pedestrian / cycle infrastructure improvements and public realm improvements as part of the wider Bracknell town centre redevelopment with delivery of VMS, RTPI and UTM						Organisation		Bracknell Forest Council
								Role		Promoter/Official
Impacts	Summary of key impacts	Assessment				Monetary £(NPV)	Distributional 7-pt scale/ vulnerable grp			
		Quantitative		Qualitative						
Economy	Business users & transport providers	Value of journey time changes(£)				£22,418,000				
		Net journey time changes (£)								
		0 to 2min	2 to 5min	> 5min						
	Reliability impact on Business users	Included within the Business users & transport providers section								
	Regeneration	The area concerned is not designated a regeneration area as defined by the UK or European Regeneration Programmes								
	Wider Impacts	Wider Impacts (Agglomeration, Output Changes and Tax Revenues) do not apply to this project								
Environmental	Noise	The Approved 2007 Planning Application Environmental Statement, section 8 Table 8.22 Summary of Impacts recorded negligible changes in noise impact for traffic					negligible			
	Air Quality	The BFC Approved 2007 Planning Application Environmental Statement, section 7 Table 7.15 Summary of Impacts recorded minor adverse for long term local effects in the Town Centre, which would be mitigated through improved public transport and wide transport strategy					minor adverse			
	Greenhouse gases	Not assessed as TUBA was not used				Not assessed				
	Landscape	The landscape of the area is urban and the site has a gently sloping topography. The redevelopment of Bracknell town centre will result in an increase in the height and footprint of some buildings, however the proposed scheme will have a slightly beneficial impact on the landscape as the public realm improvements and landscaping will soften and complement the buildings. Furthermore the tranquility of the site will benefit due to the proposed realignment of The Ring to provide access into the northern sector and increased accessibility by pedestrians and cyclists removing vehicle trips from the town centre's road network. The BFC Approved 2007 Planning Application Environmental Statement section 5 Table 5.12 generally sets out negligible to minor beneficial of impacts on town centre and outer areas of Town		See additional landscape plans and information within the main MSBC document			negligible to minor beneficial			
	Townscape	Bracknell town centre currently has a dense, mid to high-rise townscape that is outdated and relatively unattractive. The highway infrastructure is prominent and results in visual and physical severance. While the redevelopment of the area may increase the density and scale of the townscape, the modern building design and organisation of space will increase the attractiveness of the area. The highway and walking/cycling improvements will contribute to increased accessibility by all modes to the town centre and the realignment of The Ring will reduce the severance experienced, resulting in improved human interaction. The public realm improvements will soften the increase in scale and density through improved public spaces and attractively designed and landscaped areas.					Moderate Beneficial			
	Historic Environment	The Grade II listed buildings in the development area are located along the old alignment of the High Street and were retained during the 1960s/70s redevelopment of Bracknell Town Centre. The Red Lion public house is located on a currently busy road which experiences low pedestrian usage. The breaking of The Ring and formation of the area into a square will enhance the public realm and the buildings setting as a result of lower traffic flows and higher pedestrian usage. The Bull Inn and Boots Opticians are located on the High Street and are currently surrounded by unattractive buildings from the 1960s/70s which are due to be replaced as part of the modern redevelopment works. This will enhance the public realm and restrictions have been put in place to limit the size of new buildings that surround the listed buildings. Both Whynscar House and the Old Manor will have their visual setting preserved and the redevelopment works will have a negligible impact on their setting.					Slight / Moderate Beneficial			
	Biodiversity	The proposed Bracknell town centre redevelopment, including the highway and public realm improvements, lies in relatively close proximity to areas designated for their European, and national conservation value. Any potential effects upon the areas resulting from the scheme will be mitigated to ensure that the effects are neutralised. The scheme also has the potential to affect Wildlife Heritage Sites (WHS) within 1km, and habitats of a range of protected species and species of conservation concern. With the implementation of suitable mitigation measures, it is considered that the scheme will have a slight adverse effect on biodiversity at a local scale.					Slight Adverse			
	Water Environment	There are a number of key environmental water resources in the vicinity of the Bracknell town centre improvements which could be impacted by its construction and operation. These include the Cut, the Bull Brook, the River Thames and the area's groundwater. For each of these a range of factors were assessed, including the quality of the water supply, conveyance of flow and materials, biodiversity, the transport and dilution of waste products, and the value to the economy. Potential impacts that were identified include an increase in the amount of surface run-off and potential restrictions in the flow of groundwater due to an increased footprint of the development; and an increase in the amount of foul drainage and increased rate of abstraction from the Thames. However, mitigation measures have been proposed to limit the significance of these impacts, including measures to filter surface run-off during the construction phase to remove suspended solids before it is discharged into the sewers, and the provision of storm water retention capacity and other sustainable urban drainage systems (SUDS) to attenuate the flow and reduce the increase in total peak storm water discharge from the redeveloped area. With regards to groundwater, it is anticipated that the loss of infiltration of rainfall would be balanced by the application of SUDS. Measures to constrain demand for abstraction and improve the water efficiency and sustainability of the development would be put in place, and to accommodate the increase in foul drainage, the development would require some renewal, replacement and augmentation of sewers in the town centre.					Negligible			
Social	Commuting and Other users	Not assessed as TUBA was not used		Value of journey time changes(£)						
				Net journey time changes (£)						
	Reliability impact on Commuting and Other users	Not assessed as TUBA was not used								
	Physical activity	The improvements in connectivity through improved crossing facilities, walk ways and quality improvements in public realm will generate additional walking and cycling trips through improved accessibility. These will assist in improving physical activity, reducing mortality and absenteeism		Reduced Mortality approx £62k to £103K per year HEAT Walk Economic Benefits Approx £646k per year Reduced Absenteeism approx £58.8k per year			Slight Beneficial	£766,800-£807,800		
	Journey quality	The proposed improvements at these junctions will help to reduce the delays by providing additional capacity, allowing more vehicles through the junction per hour, as shown in the tables above. The reduction in delay and congestion will therefore reduce traveller stress and frustration, and will provide an improved view. In addition to a reduction in delay, the improvements will provide new signage for town centre destinations and the altered highway network, to advise travellers how to get to their destination. This will help to reduce driver frustration.					Moderate Beneficial			
	Accidents	The highway and walking / cycling improvements will reduce the amount of congestion on the road and create safer infrastructure for pedestrians and cyclists. This is likely to reduce the number of road traffic accidents involving vehicle users and vulnerable road users. It is noted that the introduction of a new junction on Millenium Way might create more vehicle accidents but would expect to be "balanced out" by the improved pedestrian and cycle facilities reducing vulnerable user accidents.		No cost benefit analysis completed			Slight Beneficial			
	Security	The improvements to the highway network, the pedestrian / cycle facilities and the public realm in the town centre will help to make it a more secure environment for all users, particularly vulnerable users such as pedestrians, cyclists, women and older people. Users will benefit from changes to landscaping through the public realm improvements, improved lighting and visibility due to the realignment of parts of the town centre's existing internal road network, and improved access on foot to destinations from public transport stops due as a result of the improved pedestrian infrastructure. The realignment of the internal road network, and the 'breaking' of the ring to create more open public space will allow for greater informal surveillance.					Moderate Beneficial			
	Access to services	Strategic accessibility was not considered relevant for further analysis due to the scheme's focus on highway and pedestrian / cycle infrastructure, rather than public transport.								
	Affordability	Affordability was not considered relevant for further analysis due to the scheme's focus on highway and pedestrian / cycle based schemes, rather than specifically looking at public transport affordability.								
	Severance	The provision of improved crossing points on the outskirts of Bracknell town centre will improve the accessibility of the redeveloped centre for pedestrians and cyclists. The provision of an additional pedestrian crossing on the High Street close to its junction with Market Street will have a negligible impact on severance as there is already a pedestrian crossing nearby. The new pedestrian crossing on The Ring, close to its junction with Station Road, will have a slight positive benefit, as there is currently not a road level pedestrian crossing nearby. However, the road does not currently experience a high level of severance. The provision of an additional crossing on the A329 Millenium Way will have a moderate positive benefit. This link experiences high vehicle flows, especially in the peak periods, and therefore is a significant barrier to pedestrian and cyclist movement.					Slight Beneficial			
	Option and non-use values	This is not applicable to this Business Case. "Option and non-use values" analyses the value of preserving transport options for their potential use or the value of the existence of services to individuals when they are not used. This is particularly relevant to service closures, i.e. the closure of rail stations.		Transport Analysis Guidance - Guidance for Senior Responsible Officer - January 2014						
Public Account	Cost to Broad Transport Budget	The total scheme cost, on which this Business Case is based, is £6,382,000 (2015 prices) which gives a present value discounted to 2010, in 2010 prices of £6,140,000						£6,140,000		
	Indirect Tax Revenues	Not assessed as TUBA was not used								

Appendix B

AST WEBTAG WORKSHEETS

HEAT estimate

27 July 2015 - 12:04 (v2.3)

Reduced mortality as a result of changes in walking behaviour

The number of individuals walking has **increased** between your pre and post data.
There are now **317 additional** individuals regularly walking, compared to the baseline.

However, the average amount of walking per person per day has not changed.

The reported level of walking in both your pre and post data gives a reduced risk of mortality of: **27 %**, compared to individuals who do not regularly walk.

Taking this into account, the number of deaths per year that are prevented by this change in walking is: **0.37**

Economic value of walking

Currency: GBP, rounded to 1000

The value of statistical life in your population is:	3,229,000 GBP
<i>Based on a 5 year build up for benefits, a 0 year build up for uptake of walking, and an assessment period of 10 years</i>	
the average annual benefit, averaged over 10 years is:	886,000 GBP
the total benefits accumulated over 10 years are:	8,859,000 GBP
the maximum annual benefit reached by this level of walking, per year, is:	1,181,000 GBP
This level of benefit is realised in year 6 when both health benefits and uptake of walking have reached the maximum levels.	
When future benefits are discounted by 5 % per year:	
the current value of the average annual benefit, averaged across 10 years is:	646,000 GBP
the current value of the total benefits accumulated over 10 years is:	6,464,000 GBP

:

Please bear in mind that HEAT does not calculate risk reductions for individual persons but an average across the population under study. The results should not be misunderstood to represent individual risk reductions. Also note that the VSL not assign a value to the life of one particular person but refers to an average value of a “statistical life”.

It is important to remember that many of the variables used within this HEAT calculation are estimates and therefore liable to some degree of error.

You are reminded that the HEAT tools provide you with an approximation of the level of health benefits. **To get a better sense for the possible range of the results, you are strongly advised to rerun the model, entering slightly different values for variables where you have provided a “best guess”, such as entering high and low estimates for such variables.**

WHO HEAT WALK ASSESSMENT – INPUT DATA PARAMETERS

Based on Input to the WHO Online Spreadsheet

Q1	Before and After data Test		
Q2a	Pre-intervention walking data – Duration		
Q3	Average time spent walking	58 mins	Established from BFC NTS dataset
Q7	How Many People Benefit accessing town centre from wider BFC Wards	14433	Established from Census and NTS trips
Q2b	Post-intervention walking data – Duration		
Q3	Average time spent walking	58 mins	Established from BFC NTS dataset
Q7	How Many People Benefit other LA walk intervention schemes	14750	Increase based on 2.2% forecast from
Q9	Proportion due to Scheme	100%	
Q10	Walking Uptake	0 years (new infrastructure available as soon as scheme completed – steady state assumed)	
Q11	Mortality Rate	UK 2010	
Q12	Value of Statistical Life	£3,229,114 GBP	
Q13	Time period over which benefits calculated	10 years	
Q14	BCR	No	
Q15	Discount Rate	5%	

Distributional Impacts: Noise

	IoD Income Domain					Total
	Most deprived ←————→ Least deprived					
	0-20%	20-40%	40-60%	60-80%	80-100%	
Population in each group with increased noise [A]	0	0	0	0	0	0
Population in each group with decreased noise [B]	0	1,878	2,825	0	0	4,703
Population in each group with no change in noise [C]	0	0	0	0	0	0
Net no of Winners / Losers in each group [D] = [B] – [A]	0	1,878	2,825	0	0	4,703
Total number of Winners / Losers across all groups [E] = $\Sigma[D]$						4,703
Net winners/losers in each area as percentage of total [F] = $[D] / [E]$	0%	40%	60%	0%	0%	100%
Share of total population in the impact area	0%	52%	48%	0%	0%	100%
Assessment	-	✓	✓	-	-	Slightly Beneficial

Although the above analysis shows that there could be a slight benefit in Noise the Environmental Assessment for the Town Centre Redevelopment noted NEGLIGABLE which has been reported in the AST and MSBC Document - SDR WSP|PB 02/11/2015

Distributional Impacts: Air Quality

	IoD Income Domain					Total
	Most deprived ←————→ Least deprived					
	0-20%	20-40%	40-60%	60-80%	80-100%	
Number of properties with improved air quality [A]	0	784	1,159	0	0	1,943
Number of properties with no change in air quality [B]	0	0	0	0	0	0
Number of properties with worse air quality [C]	0	0	0	0	0	0
Number of net winners / losers [D] = [A] – [C]	0	784	1,159	0	0	1,943
Total number of winners / losers across all groups [E] = $\sum[D]$						1,943
Net winners/losers in each area as percentage of total [F] = $[D] / [E]$	0%	40%	60%	0%	0%	100%
Share of total population of study area	0%	52%	48%	0%	0%	100%
Assessment	-	✓	✓	-	-	Slightly Beneficial

Although the above analysis shows that there could be a slight benefit in AQ the Environmental Assessment for the Town Centre Redevelopment noted a MINOR ADVERSE which has been reported in the AST and MSBC Document - SDR WSP|PB 02/11/2015

TAG Landscape Impacts Worksheet

Features	Step 2 Description	Step 3			Step 4 Impact	
		Scale it matters	Rarity	Importance		
Pattern	<p>This landscape is an urban in form and its commercial core, within The Ring, is characterised by a dense collection of mid-rise and high-rise buildings. There is a narrow area of greenery at the south of this area.</p> <p>The western section of peripheral zone, the area within the 'outer ring' of roads, is also characterised by mid-rise buildings, while the eastern area is predominantly greenspace with a collection of small buildings to the south of the Met Office roundabout. The site has a number of pedestrian routes through the centre and subway access under the key roundabouts in the centre.</p> <p>The relatively high-rise nature of the town centre area contrasts with the low-rise nature of the surrounding areas.</p> <p>In general, the urban pattern is relatively incoherent and unstructured.</p> <p>The town centre occupies a gently sloping site that varies in elevation from about 60m AOD along its eastern edge to about 65m AOD at the 3M Roundabout.</p>	Regional	Low	Low at a regional scale	High	<p>The public realm and highway improvements will provide open and landscaped areas which will soften the mid and high-rise buildings replacing the existing layout of the town centre.</p> <p>The improvements will improve the coherence of the urban pattern and provide improved access for pedestrians, cyclists and road users to the redeveloped areas.</p> <p>Slight Beneficial</p>
Tranquility	<p>The site is located within central Bracknell and is surrounded by a network of local and strategic roads, including the A329 and A3095.</p> <p>Bracknell train station is located the southern extent of the town centre and is served by the Reading to Waterloo line, which has approximately four trains an hour in each direction.</p> <p>The area also experiences a high level of pedestrian activity due to its retail and leisure facilities, and the surrounding employment and educational sites.</p> <p>Taking into consideration these factors, the site has a low level of tranquility.</p>	Regional	Low	Low at a regional scale	High	<p>The highway improvements at junctions will improve the flow of traffic, reducing congestion on the network around the town centre, improving the tranquility and air quality.</p> <p>Furthermore, the realignment of The Ring will reduce the number of vehicles travelling through the town centre, further improving tranquility of the area.</p> <p>Slight Beneficial</p>
Cultural	<p>Bracknell town centre was redeveloped in the 1960/70s as a new town, and as such the urban landscape and architecture are very of its time, which has now become outdated.</p> <p>There are five Listed Buildings within the town centre area, which are primarily located on the alignment of the High Street prior to the areas redevelopment in the 1960s/70s.</p>	Regional	Low	Low at a regional scale	High	<p>The town centre redevelopment will update the urban landscape and architecture to provide a more modern centre.</p> <p>The highway and pedestrian/cycle improvements will improve access to the town centre and the redeveloped areas.</p> <p>There will be negligible impact on the area's Listed Buildings as building restrictions have been put in place to limit the impact of the redevelopment on them.</p> <p>Slight Beneficial</p>
Landcover	<p>The scheme is an urban site and is predominantly inhabited by a dense collection low, mid and high rise buildings. The greatest area of high rise buildings is in area to the centre of The Ring.</p> <p>Within the town centre area, there are a number of areas of greenery. There is an area of grass and a number of trees located in the north between the A329 and The Ring. There are also areas of grass on the sections of land between The Ring, Station Way and the A3095, and between Market Street and Station Road.</p>	Regional	Low	Low at a regional scale	High	<p>The site will continue to be urban however elements of the scheme such as the realignment of The Ring and the construction of new buildings will use areas that are currently grassed. However, there will be landscaping of parts of the urban area involved as part of the urban realm improvements.</p> <p>Negligible</p>
Summary of character	<p>The site has a gently sloping topography and is defined by its urban landscape. The relatively high-rise nature of the town centre area contrasts with the lower-rise nature of the surrounding areas. The landcover is mostly buildings and tarmaced areas, however three are areas of grassed greenspace with trees around the edges of the site.</p> <p>The site has a low level of tranquility due to its proximity to major roads, railway lines and its high usage by pedestrians.</p>	Regional	Low	Low at a regional scale	High	<p>The topography of the site is not planned to change, however there will be changes to the urban landscape. There will be a slight increase in the height and footprint of buildings in the town centre, however this will be complemented by the improvements in public realm and the improved accessibility by foot and cycle.</p> <p>The tranquility of the site will improve due to the realignment of The Ring removing vehicle trips from the town centre due to increased access into the northern development zone. Furthermore, the town centre will have improved accessibility for pedestrians and cyclists, reducing the potential number of car trips.</p> <p>Slight Beneficial</p>
<p>Reference Sources</p> <p>Environmental Statement from the 2007 Consented Planning Application</p>						
<p>Step 5 - Summary Assessment Score</p> <p>Slight Beneficial</p>						
<p>Qualitative Comments</p> <p>The landscape of the area is urban and the site has a gently sloping topography. The redevelopment of Bracknell town centre will result in an increase in the height and footprint of some buildings, however the proposed scheme will have a slightly beneficial impact on the landscape as the public realm improvements and landscaping will soften and complement the buildings. Furthermore the tranquility of the site will benefit due to the proposed realignment of The Ring to provide access into the northern sector and increased accessibility by pedestrians and cyclists removing vehicle trips from the town centre's road network.</p>						

Although the above analysis shows that there could be a slight benefit in Landscape the Environmental Assessment for the Town Centre Redevelopment noted NEGLIGABLE TO MINOR BENEFICIAL which has been reported in the AST and MSBC Document - SDR WSP|PB 02/11/2015

TAG Biodiversity Impacts Worksheet

Step 2		Step 3					Step 4	Step 5
Area	Description of feature/ attribute	Scale (at which attribute matters)	Importance (of attribute)	Trend (in relation to target)	Substitution Possibilities	Biodiversity and earth heritage value	Magnitude of impact	Assessment Score
Whole Scheme	Potential indirect effects upon European designated sites; redevelopment area lies within approximately 3km south of the Thames Basin Heaths SPA. The site provides breeding and wintering habitats for an important assemblage of heathland bird species including nightjar, woodlark and Dartford warbler.	International	High	Strict protection afforded under The Conservation of Habitats and Species Regulations 2010 (as amended). Designation reflects conservation value at the international scale.	None	Very High	Factoring in mitigation, if necessary, effects will be neutral	Neutral
Whole Scheme	Potential indirect effects upon UK Statutory designated sites <2km from the site; Wykery Copse is an ancient semi-natural woodland lying approximately 2km to the southwest of the town centre.	National	Medium	Strict protected afforded under the Wildlife and Countryside Act 1981 (as amended). Designation reflects conservation value at the national scale.	Minimal	High	Factoring in mitigation, if necessary, effects will be neutral	Neutral
Whole Scheme	Potential indirect effects upon areas designated as Wildlife Heritage Sites (WHS) <1km from the site; Green Acres (WHS 203) located 1.0km to the north, Whitegrove Copse (WHS 206) located 0.75km to the northeast, Northerams Wood Reserve (WHS 405) located 1.0km to the southwest, Wildridings Copse Reserve (WHS 406) located 0.5km to the southwest, and Bill Hill (WHS 407) located 0.5km to the south.	Local	Medium	Designated as a Wildlife Heritage Site, a local, non-statutory designation for sites of local nature conservation value.	Minimal	Medium	Factoring in mitigation, if necessary, effects will be neutral	Neutral
East Development Zone / Southern Area of Town Centre	Potential indirect effects on flowering spikes of pyramidal orchid within a grass bank near Easthampstead House, and flowering spikes of common spottend orchid in a bank close to the bus station.	Local	Medium	Uncommon species locally.	Minimal	Low	Minor Negative	Slight Adverse
Whole Scheme	Potentially indirect effects on mature / large trees in the town centre, and their potential to support associated wildlife.	Local	Medium	These are mature trees which have some nature conservation value within the context of the town centre because of their maturity/size/potential to support associated wildlife.	Minimal	Low	Minor Negative	Slight Adverse
Whole Scheme	Potential direct and indirect effects upon nesting birds; to include house sparrow and starling which are both on the Royal Society for the Protection of Birds Red Alert list.	Local	Medium	Protection afforded by the Wildlife and Countryside Act 1981 (as amended) and NERC Act 2006.	Habitat loss may be compensated by replacement in most cases; and harm to individual animals avoided by mitigation.	Low	Minor Negative	Slight Adverse
Whole Scheme	Potential direct and indirect effects upon the invertebrate community present which may be of elevated conservation value. Stag beetle <i>Lucanus cervus</i> , which is a listed as a Species of Principal Importance (SPI) under Section 41 of the NERC Act 2006, has been recorded at multiple locations in the town centre.	Local	Low	Protection afforded under the NERC Act 2006; and dependent on species present possible protection under the Wildlife and Countryside Act 1981 (as amended).	Habitat loss may be compensated by replacement in most cases; and harm to population avoided by mitigation (for example lighting design).	Low	Minor Negative	Slight Adverse

Reference Sources

Environmental Statement from the 2007 Consented Planning Application

Summary Assessment Score

Slight Adverse

Qualitative Comments

The proposed Bracknell town centre redevelopment, including the highway and public realm improvements, lies in relatively close proximity to areas designated for their European, and national conservation value. Any potential effects upon the areas resulting from the scheme will be mitigated to ensure that the effects are neutralised. The scheme also has the potential to affect Wildlife Heritage Sites (WHS) within 1km, and habitats of a range of protected species and species of conservation concern. With the implementation of suitable mitigation measures, it is considered that the scheme will have a slight adverse effect on biodiversity at a local scale.

Distributional Impacts: Accidents

	Existing Casualty Rate for Vulnerable Users		
	Defined Vulnerable Casualty Group:		Motorcyclists, cyclists and pedestrians
	Low (more than 30% of average rate for class of road)	Medium (<30% lower to <30% higher than average rate for class of road)	High (more than 30% higher than average rate for class of road)
1. Change in physical layout that could impact on defined vulnerable group			
Significant improvement	Moderate Beneficial	Moderate Beneficial	Large Beneficial
Slight improvement	Slight Beneficial	Slight Beneficial	Moderate Beneficial
Neutral	Neutral	Neutral	Neutral
Slight worsening	Slight Adverse	Slight Adverse	Moderate Adverse
Significant worsening	Moderate Adverse	Moderate Adverse	Large Adverse
2. Change in traffic flow OR speed			
Significant reduction (>15% decrease)	Moderate Beneficial	Moderate Beneficial	Large Beneficial
Slight reduction (>5%, <15% decrease)	Slight Beneficial	Slight Beneficial	Moderate Beneficial
Neutral (<5% increase or decrease)	Neutral	Neutral	Neutral
Slight increase (>5%, <10% increase)	Slight Adverse	Slight Adverse	Moderate Adverse
Significant increase (>10% increase)	Moderate Adverse	Moderate Adverse	Large Adverse

3. Change in numbers of pedestrians, cyclists and motorcyclists

Increase in pedestrians, cyclists and motorcyclists following completion of improvements -
 Pedestrians: 318
 Cyclists: 52
 Motorcyclists: 0

Overall assessment for link, based on criteria 1, 2 and 3 above

Slight Beneficial

Qualitative Commentary

Across the assessed network in Bracknell, the casualty rate is lower than the average rate. The junction improvements and improved access for pedestrians and cyclists will reduce the number of casualties involving these users, providing a slight improvement. It is not anticipated that the highway and access improvements will lead to a reduction in vehicle users therefore the existing casualty rate will not be affected by this factor.

TAG Journey Quality Impacts Worksheet

Overall Journey Quality

Factor	Sub-factor	Better	Neutral	Worse
Traveller Care	Cleanliness			
	Facilities			
	Information			
	Environment			
Travellers' Views	-			
Traveller Stress	Frustration			
	Fear of potential accidents			
	Route uncertainty			

Reference Source

Google Maps

Summary Assessment Score

Moderate Beneficial

Qualitative Comments

The quality of travellers journeys will, overall, improve with the highway and public realm improvements in Bracknell town centre, particularly in terms of the facilities and information available, the environment, driver frustration and fear of potential accidents. The highway improvements will reduce the delay on key links due to capacity improvements at roundabouts. The realignment of roads in central Bracknell will also reduce the number of vehicles using certain links, reducing driver frustration and the fear of potential accidents. The new road signs to inform users of the new road layout and how to get to certain destinations will also benefit their journey quality.

TAG Historic Environment Impacts Worksheet

Feature	Step 2		Step 3			Step 4
	Description	Scale it matters	Significance	Rarity	Impact	
The Red Lion public house and Milestone	<p>Form: Former inn with stables. The building is part timber framed with old tile hipped and gabled roofs. The milestone is painted white with mileages to Reading and London.</p> <p>Survival: Good</p> <p>Condition: Good</p> <p>Complexity: Forms part of a series of listed buildings on the old High Street alignment which were retained during the 1960/70s redevelopment of Bracknell.</p> <p>Context: Located on the north side of the High Street, west of The Ring. The setting of the building encompasses modern office buildings (Winchester House and Eagle House). The setting is therefore robust and modern in character. The milestones setting is defined by the Red Lion Inn and the modern High Street. The building has few historical reference points except for the alignment of the High Street.</p> <p>Period: Building dating from the 16th century, altered in the 17th and 19th centuries. Milestone dating from early 19th century.</p>	Local	Both Grade II Listed Buildings	Low	<p>Currently they front a busy section of road, which has a lower pedestrian usage than other parts of the High Street.</p> <p>On redevelopment, The Ring will be broken and the pedestrian connections improved to the High Street and to the 'Eye'. The Red Lion would stand in a refurbished and reordered Market Square. It's setting will be enhanced by virtue of the removal of immediate traffic and its inclusion within a high quality public realm featuring a seating terrace, landscaping and small scale architecture.</p> <p>Eagle House defines the setting to the east of the Red Lion, which is to be retained. Thus, the visual setting as viewed from the west would be preserved, although the improvements in the foreground due to the elimination of traffic would act to enhance this aspect of the setting.</p> <p>Moderate Beneficial Impact</p>	
The Bull Inn	<p>Form: Former hall house. Part timber frame, with old style hipped roofs.</p> <p>Survival: Good</p> <p>Condition: Good</p> <p>Complexity: Forms part of a series of listed buildings on the old High Street which were retained during the 1960/70s redevelopment of Bracknell.</p> <p>Context: The building is located on the north side of the High Street, adjacent to Ferriby Court. The setting of the building is influenced by the modern building of Eagle House, with glimpses of the mirror glass facades. The intervening development between the historic buildings results in each of them appearing isolated within a modern setting. The building has few historical reference points except for the alignment of the High Street.</p> <p>Period: Dates from c1400, and was extended in the 16th and 19th centuries, and more recently.</p>	Local	Grade II Listed Building	Low	<p>The Bull Inn is currently surrounded by larger scale 1960s retail/office premises at the western end of the existing pedestrianised High Street. Following the redevelopment, the Bull would front onto the newly refurbished High Street facades, although the massing of the buildings around the building would not change. Its setting would be enhanced by its inclusion in the new square comprising residential accommodation over small shops.</p> <p>To provide a satisfactory setting for the listed building, a nearby development block is restricted to a maximum height of 83m AOD within 19m of the rear boundary wall of the building.</p> <p>Moderate Beneficial Impact</p>	
Boots Opticians (former Ginger's Delicatessen)	<p>Form: Former hall house, which is now a shop. The building is timber framed with a tile hipped roof.</p> <p>Survival: Moderate</p> <p>Condition: Good</p> <p>Complexity: Forms part of a series of listed buildings on the old High Street which were retained during the 1960/70s redevelopment of Bracknell.</p> <p>Context: It is located on the north side of the High Street, adjacent to the junction with Crossway. The setting is strongly influenced by the modern buildings of the town centre along the High Street. The building has few historical reference points except for the alignment of the High Street.</p> <p>Period: Dates from the early 15th century, and was re-faced in the 18th century.</p>	Local	Grade II Listed Building	Low	<p>Boots Opticians would become the focal point for the re-formed Charles Square at the intersection of the High Street and the continuation of Stanley Walk northwards into The Eye. Charles Square would provide an active space surrounded by cafes and housing.</p> <p>Building conditions state that the nearby development block shall not exceed 10m in height, with a distance of 24m measured from the rear-most wall and the depth of any building (excluding single storey buildings) shall not exceed 20m within a distance of 38m measured from the rear-most wall. This condition has been specified to provide a satisfactory setting for the listed building.</p> <p>Slight Beneficial Impact</p>	
Whynscar House	<p>Form: Former house now occupied by offices. The construction is part timber frame encased in brick and part brick in Flemish bond with some dark headers. It has an old tile gabled roof.</p> <p>Survival: Moderate</p> <p>Condition: Good</p> <p>Complexity: Unlike the Red Lion, Bull Inn and Boots Opticians, this building and the Old Manor form a grouping where the buildings have a visual relationship, albeit that the buildings are somewhat isolated on an "island" that is separated from the town centre by the Inner Ring and then further surrounded by Church Road on the outer ring.</p> <p>Context: The building is located adjacent to the Old Manor House.</p> <p>Period: Dates from the 17th century, the building was extended and re-faced in the 18th century, and altered and extended in the late 20th century.</p>	Local	Grade II Listed Building	Low	<p>Whynscar House will have its visual setting preserved. The taller elements of the South Development Zone will be glimpsed on the skyline behind the existing development, in views to the south west from the Met Office roundabout to the north east of these listed buildings. However, this would be in the context of the existing buildings and would not affect their settings.</p> <p>Neutral Effect</p>	
The Old Manor	<p>Form: Former hall house, now a restaurant/public house. Its construction is part timber frame, part exposed to rear and much exposed internally. The roof is old tile cross gabled and gabled.</p> <p>Survival: Moderate</p> <p>Condition: Good</p> <p>Complexity: Unlike the Red Lion, Bull Inn and Boots Opticians, this building and Whynscar form a grouping where the buildings have a visual relationship, albeit that the buildings are somewhat isolated on an "island" that is separated from the town centre by the Inner Ring and then further surrounded by Church Road on the outer ring.</p> <p>Context: The building is located north of the High Street at its eastern end, adjacent to The Ring.</p> <p>Period: Dates from the early to mid 15th century, but has been subject to many subsequent alterations.</p>	Local	Grade II Listed Building	Low	<p>The Old Manor will have its visual setting preserved. The taller elements of the South Development Zone will be glimpsed on the skyline behind the existing development, in views to the south west from the Met Office roundabout to the north east of these listed buildings. However, this would be in the context of the existing buildings and would not affect their settings.</p> <p>Neutral Effect</p>	

Reference Sources

Environmental Statement from the 2007 Consented Planning Application

Step 5 - Summary Assessment Score

Slight / Moderate Beneficial

Qualitative Comments

The Grade II listed buildings in the development area are located along the old alignment of the High Street and were retained during the 1960s/70s redevelopment of Bracknell Town Centre. The Red Lion public house is located on a currently busy road which experiences low pedestrian usage. The breaking of The Ring and formation of the area into a square will enhance the public realm and the buildings setting as a result of lower traffic flows and higher pedestrian usage. The Bull Inn and Boots Opticians are located on the High Street and are currently surrounded by unattractive buildings from the 1960s/70s which are due to be replaced as part of the modern redevelopment works. This will enhance the public realm and restrictions have been put in place to limit the size of new buildings that surround the listed buildings. Both Whynscar House and the Old Manor will have their visual setting preserved and the redevelopment works will have a negligible impact on their setting.

Distributional Impacts: Severance

See location plan for more information about assessment locations

400m	All social groups			No-car households			Young people			Older people			People with disabilities		
	Change in severance [A]	No of people affected [B]	Overall effect [A]*[B]	[A]	[B]	[A]*[B]	[A]	[B]	[A]*[B]	[A]	[B]	[A]*[B]	[A]	[B]	[A]*[B]
Location a	Moderate positive (+2)	1167	2334	Moderate positive (+2)	68	136	Moderate positive (+2)	220	439	Moderate positive (+2)	218	435	Moderate positive (+2)	50	100
Location b	Neutral (0)	931	0	Neutral (0)	54	0	Neutral (0)	175	0	Neutral (0)	174	0	Neutral (0)	40	0
Location c	Slight positive (+1)	1350	1350	Slight positive (+1)	79	79	Slight positive (+1)	254	254	Slight positive (+1)	252	252	Slight positive (+1)	58	58

Reference Source(s):

Bracknell Forest Address Point Data, Google Maps, Census 2011 Data on Household Car Ownership, Age, Population Size and Disability Allowance Claimants.

Assessment Score:

All social groups' overall (net) score is +3684 = High Beneficial impact
 No car households is +215 = Slight Beneficial impact
 Young people is +693 = Moderate Beneficial impact
 Older people is +687 = Moderate Beneficial impact
 People with disabilities is +158 = Slight Beneficial impact

Qualitative Comments:

Severance will be improved at both locations a and c due to the provision of new pedestrian crossings where there are currently limited facilities. The greatest impact will be at location a (Millenium Way) which is a busy dual carriageway link which only has one pedestrian crossing (a subway) currently. While a new crossing is being provided at location b (Market Street), it will have a negligible impact on severance due to the presence of a pedestrian crossing approximately 20m away and the minor nature of the road.

TAG Severance Impacts Worksheet

Change in Severance	Population Affected			
	location a	location b	location c	Total Affected
Large negative				
Moderate negative				
Slight negative				
Neutral		931		931
Slight positive			1350	1350
Moderate positive	1167			1167
Large positive				

Reference Source

Census 2011 Data, Bracknell Forest Address Point Data

Summary Assessment Score

Slight Beneficial

Qualitative Comments

The provision of improved crossing points on the outskirts of Bracknell town centre will improve the accessibility of the redeveloped centre for pedestrians and cyclists. The provision of an additional pedestrian crossing on the High Street close to its junction with Market Street will have a negligible impact on severance as there is already a pedestrian crossing nearby. The new pedestrian crossing on The Ring, close to its junction with Station Road, will have a slight positive benefit, as there is currently not a road level pedestrian crossing nearby. However, the road does not currently experience a high level of severance. The provision of an additional crossing on the A329 Millenium Way will have a moderate positive benefit. This link experiences high vehicle flows, especially in the peak periods, and therefore is a significant barrier to pedestrian and cyclist movement.



Distributional Impacts: Personal Security

Security Indicator and element of entire journey	Performance for each security indicator			Relative importance of each indicator [B] (High /Medium /Low) (=3/2/1)				Weighted score for each indicator [C] = [A] * [B]			
	Without scheme	With scheme	Change (0/+1/+2) [A]	All users	Older people	Women	Young People	All users	Older people	Women	Young People
Access on foot from origin to the public transport stop	Moderate	Moderate	0	2	2	2	2	0	0	0	0
Site perimeters, entrances and exits	Moderate	High	1	2	2	2	2	2	2	2	2
Formal surveillance	Moderate	Moderate	0	2	3	3	2	0	0	0	0
Informal surveillance	Moderate	Moderate	0	2	2	2	2	0	0	0	0
Landscaping	Poor	Moderate	1	2	2	2	2	2	2	2	2
Lighting and visibility	Moderate	High	1	2	3	3	2	2	3	3	2
Emergency call	Poor	Poor	0	2	3	3	2	0	0	0	0
Staffing of facility	Moderate	Moderate	0	1	1	1	1	0	0	0	0
Public transport journey between the boarding and alighting stops	Moderate	Moderate	0	2	2	2	2	0	0	0	0
Access on foot from the alighting stop to destination	Moderate	High	1	2	2	2	2	2	2	2	2
Total security improvement score [D] = $\sum[C]_n$								8	9	9	8
No of users affected (<500 users / day is low, >10,000 is high) [E]								17,848 (high)	2,527 (medium)	9,080 (medium)	3,585 (medium)
Overall assessment of security impacts (all users and vulnerable groups)								Slight Ben.	Slight Ben.	Slight Ben.	Slight Ben.

TAG Security Impacts Worksheet

Security Indicator	Relative importance	Without scheme	With scheme
	(High/Medium/Low)	(Poor/Moderate/High)	(Poor/Moderate/High)
Site perimeters,	Medium	Moderate	Moderate
entrances and exits	High	Moderate	High
Formal surveillance	Medium	Moderate	Moderate
Informal surveillance	High	Moderate	High
Landscaping	High	Moderate	High
Lighting and visibility	High	Moderate	High
Emergency call	Medium	Moderate	Moderate

Approximate Number of Users Affected

There are up to 570 AADT by cyclists into Bracknell town centre.

Reference Source

2011 Census Journey to Work data, National Travel Survey data, Google Maps

Summary Assessment Score

Moderately Beneficial

Qualitative Comments

The improvements to the pedestrian/cycle network will have a slightly beneficial impact on security in terms of new, well designed, entrances and exits for pedestrians/cyclists to the redeveloped town centre which will be well defined and marked. Furthermore, the landscaping and improvements to the public realm will improve routes' visibility, allowing greater informal surveillance of pedestrian/cycle routes, increasing users' security. As part of the urban realm improvements, there will be improved landscaping of areas around the pedestrian/cycle network.

TAG Water Environment Impacts Worksheet

Description of study area/ summary of potential impacts	Key environmental resource	Features	Quality	Scale	Rarity	Substitutability	Importance	Magnitude	Significance
Study area: The project site is located in central Bracknell in the vicinity of a range of water-related environmental resources. These are at risk of potential impacts to their water supply, the transport and dilution of waste products, the conveyance of flow and materials, their biodiversity and their economic value.	The Cut (Local River)	Water supply	The watercourse is graded as having a fair/good water quality. Data on the water quality of The Cut downstream of the Bracknell Sewage Treatment Works (STW) is classified as good. There are generally high concentrations of dissolved oxygen (DO) and the concentrations of ammonia are satisfactory. The biochemical oxygen demand data for the watercourse is currently classified as good.	Regional	Low	High	Medium	Negligible	Insignificant
Potential Impacts: <u>During Construction</u> Surface water run-off with high loads of suspended solids from surface earthworks. Changes in the relative area of hardstanding at the site could alter the ratio between rainfall discharged from the site as drainage and that entering the groundwater as recharge. The presence at the construction site of fuels, chemicals and construction materials could create a risk of pollutants being released into the groundwater. However, the thickness of the London Clay will prevent any contamination of the major chalk aquifer.		Transport and dilution of waste products	The watercourse does not receive any direct foul water discharge from the town centre, however biologically treated sewage from STW enters The Cut, following treatment.	Regional	Low	High	Medium	Slight Adverse	Insignificant
	The Bull Brook (a tributary of The Cut)	Conveyance of flow and materials	The watercourse flows in a north-easterly direction away from the site and it is not within its floodplain.	Local	Low	High	Low	Negligible	Insignificant
		Water supply	The watercourse is graded as having a fair/good water quality.	Regional	Low	High	Medium	Negligible	Insignificant
<u>During Operational Phase</u> The area of existing vegetated landscape that would be replaced by hard landscape is approximately 8-10% within the development area. Therefore the rate of run-off of surface water would increase and the infiltration of the ground would be lessened. Creation of basements in the north and south development zones would alter groundwater flow to a degree as they would form partial obstructions to flow. There is expected to be limited impact in the north as the area is London Clay and is an aquiclude. In the south there are no obstructions but there is likely to be a flow of groundwater to the east towards the Bullbrook. Increased abstraction rates from the River Thames could result in a change in the mean flow of between 0.01-0.04%. Increase in foul drainage proportionate to increased floor space.	River Thames	Transport and dilution of waste products	The watercourse does not receive any direct foul water discharge from the town centre.	Regional	Low	High	Medium	Negligible	Insignificant
		Conveyance of flow and materials	The watercourse flows in a north-easterly direction away from the site and it is not within its floodplain.	Local	Low	High	Low	Negligible	Insignificant
	Groundwater	Water supply	It is understood that current abstraction rates from the Thames are insufficient to meet future demand. The abstraction rates from the Thames would need to be increased, following consent from the EA. Data from the EA on the chemical quality of the water shows that the mean concentrations of DO have improved since 1990, leading to a classification of Grade A (excellent). The concentrations of ammoniacal nitrogen have also tended to decrease and have a classification of Grade A. In the vicinity of the closest monitoring site, the watercourse has a biochemical oxygen demand (BOD) classification of Grade B (good). The phosphate and nitrate concentrations in the Thames are high (classified as poor) and indicative of eutrophic conditions.	Regional	Medium	High	High	Slight Adverse	Low Significance
		Biodiversity	The biological quality of the water is classified as excellent (Grade A), an improvement from Grade B in 1995, which suggests that the habitat conditions have been improving.	Regional	Low	High	High	Slight Adverse	Low Significance
		Value to the economy	The main sources of potable water are supplied by the South East Water Company, from abstractions at Bray from the River Thames, and Buckhurst water treatment works.	Regional	Medium	High	High	Negligible	Insignificant
		Water supply	The site is mainly located directly on London Clay and is located in the vicinity of two aquifers - Bagshot Beds (a minor aquifer) and Upper Chalk (a major aquifer). However, the London Clay (20m thick) is a non-aquifer and acts as an aquiclude to isolate the underlying aquifers from surface water recharge. The Bagshot Beds is variably porous/permeable but doesn't have significant fracturing therefore there are only slow groundwater seepages. The Upper Chalk is highly permeable and has the potential for significant fracturing. There are no licensed groundwater abstractions within 1km of the application site boundaries. No part of the site lies within a Source Protection Zone (SPZ) 1 or 2. The site is not located within a sensitive setting with regard to groundwater.	Regional	Low	Medium	High - Upper Chalk has a high productive strata of regional importance.	Slight Adverse	Low Significance

Reference Sources

Environmental Statement from the 2007 Consented Planning Application

Summary Assessment Score

Negligible

Qualitative Comments

The redevelopment of Bracknell town centre has a number of potential impacts to the local resources in the water environment during both the construction and the operational phases, including increases in the amount of surface run-off and potential restrictions in the flow of groundwater. The increased floor area is also proposed to increase the amount of foul drainage and an increased rate of abstraction will be required from the Thames.

However, mitigation measures have been proposed to limit the significance of these impacts. During the construction stage, measures will be put in place to filter the surface run-off before it is discharged into the sewers. The discharge of surface run-off and de-watering effluents would be made to settling tanks or a settling basin to remove suspended solids. Following this, the drainage would be routed to oil interceptors prior to discharge to sewer. Oil and chemicals will be stored in bunded areas to contain any spillages, should they occur. With regards to groundwater protection, with the application of the correct piling methodology, risks to the deep aquifer from piling works penetrating through potentially contaminated land are low.

During the operational stage, to achieve the target of no increase in total peak storm water discharge from the redeveloped area (set by the EA), it would be necessary to provide storm water retention capacity and other sustainable urban drainage systems (SUDS) to attenuate the flow from these areas. The site is on a natural slope and surface flows would tend to run off-site towards the north west and there will be increased flood contributions from existing buildings who would be impacted should the site flood. With regards to the impact on groundwater, it is anticipated that the loss of infiltration of rainfall would be balanced by the application of SUDS. The redevelopment would form part of the increased demand for housing in Berkshire, which would be served by the increased capacity intended for the Bray abstraction and treatment works. To reduce the demand and limit the impact, a variety of measures will be adopted to constrain demand and improve the water efficiency and sustainability of the development. To accommodate the increase in foul drainage, the development would require some renewal, replacement and augmentation of sewers within the town centre.

While there are some potential slightly adverse impacts on the water environment during the construction and operational phases, mitigation measures have been planned which will neutralise these, resulting in a negligible impact.

TAG Townscape Impacts Worksheet

Features	Step 2	Step 3				Changes in Without-scheme case	Step 4 Impact
	Description	Scale it matters	Rarity	Importance	Substitutability		
Layout	<p>The layout and built form of the town centre date principally from its redevelopment as a new town in the 1960s and 70s. It can be divided into two concentric zones - the commercial core and the peripheral zone. The commercial core is defined by The Ring. The peripheral zone is a mix of land uses and is defined to the northwest, north and east by an 'outer ring' of roads and to the south and southwest by the railway station and the Peel Centre.</p> <p>The commercial core is organised around two east/west axes (the High Street and Broadway) and the centrally located Charles Square.</p> <p>Parts of the urban pattern are relatively incoherent and unstructured.</p>	Regional	Low	Low at a regional level	High	<p>Bracknell town centre is currently undergoing a major redevelopment, with many existing buildings being knocked down and new ones being built.</p> <p>The impact on the town centre is between moderate and major, depending on development zone, which reflects the extent of demolition, the displacement of the existing pattern of spaces and the introduction of buildings of substantially greater height and footprint.</p> <p>Without the highway and public realm improvements proposed, the layout of the roads will remain as they currently are. As such, the urban pattern surrounding the redevelopment will remain relatively incoherent, in contrast to the new planned centre.</p>	<p>The public realm improvements will provide open and landscaped areas which will soften the increase in height and density of the new development. This will help to create a balance of spaces in the layout of the town centre.</p> <p>The highway and public realm improvements will improve the coherence of the urban pattern and provide improved access for pedestrians, cyclists and road users to the redeveloped area.</p> <p>Moderate Beneficial</p>
Density and mix	<p>In contrast to the relatively piecemeal transition from a built-up centre of lower density, lower rise suburbs that is typical of unplanned towns, the change in Bracknell is abrupt. The town centre forms a cluster of relatively compact, medium to high-rise buildings that contrast markedly with the surrounding area of mainly low-rise housing, open space and industrial/business/institutional uses.</p> <p>The contrast reflects both the intention to create the town centre as a visible centrepiece and the influences on land use planning during this time.</p>	Regional	Moderate	Moderate at a regional level	High	<p>Following the demolition and redevelopment of buildings in Bracknell town centre, there will be an increase in the perceived scale and density of the built form, particularly when viewed from the north. The northwest development zone will have an increased footprint of development, with buildings extending into areas that are currently open.</p> <p>The western development zone's overall urban pattern will remain the same, although buildings of larger scale and footprint will be introduced. There will also be extension of the higher density development of the commercial core southwards into the peripheral zone.</p>	<p>The public realm improvements will provide open and landscaped areas which will soften the increase in height and density of the new development. This will help to create a balance of spaces in the density and mix of the town centre.</p> <p>Moderate Beneficial</p>
Scale	<p>The commercial core comprises a relatively dense fabric of mainly low to medium rise buildings (3-5 storeys) which are punctuated by several high rise blocks (10-15 storeys).</p> <p>The peripheral zone is primarily occupied by buildings of mainly 2-6 storeys and free-standing office blocks of between 5-8 storeys.</p> <p>The area surrounding the town centre is mainly low-rise housing, open space and industrial/business/institutional uses.</p>	Regional	Moderate	Moderate at a regional level	High	<p>Across the town centre area, there will be an increase in the height of buildings, particularly in the north.</p>	<p>The public realm improvements will provide open and landscaped areas which will soften the increase in height and density of the new development. This will help to create a balance of spaces in the scale of the town centre.</p> <p>Slight Beneficial</p>
Appearance	<p>Most of the architecture and public realm is visibly dated. The appearance of the town centre is distinct due to the contrast of its high-rise buildings from the lower-rise surroundings. The area comprises a mixture of concrete, brick and glass buildings, and tarmac roads and pavements.</p>	Local	Low	High at a local level	Moderate	<p>The redevelopment works in Bracknell will update the visibly dated architecture in the centre. However, without the public realm improvements proposed, the existing public realm will remain outdated.</p>	<p>The highway improvements will fit in with the appearance of the existing buildings and highway links. The public realm improvements in addition to the town centre redevelopment will enhance the appearance of the area.</p> <p>Slight Beneficial</p>
Human interaction	<p>The main pedestrian routes are relatively segregated. These routes often coincide with corridors of open space, linking playing fields and residual areas of woodland and parkland. Highway infrastructure is prominent in many areas, resulting in visual and physical severance.</p>	Local	Low	High at a local level	High	<p>Without the accessibility and public realm improvements proposed, the town centre will continue to have severance from the surrounding areas, limiting the accessibility to the newly redeveloped town centre. Furthermore, a lack of improvements will mean that the centre is not an attractive place for pedestrians and cyclists.</p>	<p>The public realm and pedestrian/cyclist improvements will provide increased accessibility for slow modes, improving the human interaction with the town centre, which is currently very vehicle based. This will reduce the physical and visual severance currently experienced.</p> <p>Moderate Beneficial</p>
Cultural	<p>The layout and built form of the town centre dates principally from its redevelopment as a new town in the 1960s and 70s. However, there are a number of listed buildings in the centre which predate the redevelopment.</p> <p>These include The Red Lion, The Bull Inn, Boots Opticians, The setting of Whynscar House and The Old Manor. There is also a listed milestone located adjacent to the Red Lion in the High Street.</p>	Local	Low	High at a local level	Moderate	<p>There are a number of listed buildings in the town centre, however restrictions have been put in place to limit the impact of redevelopment on them.</p>	<p>The Red Lion and The Bull Inn will benefit from reduced vehicle traffic and increased pedestrian movement due to the breaking of The Ring and the formation of a pedestrianised square, which they will face into.</p> <p>Slight Beneficial</p>
Land use	<p>In the commercial core there are a range of land uses, including retailing and related services (building societies, food and drink outlets etc.) typical of a 'high street' role and multi-storey car parks. There are also offices (low and high rise) and municipal uses including the library, council offices, magistrates and juvenile courts, and the police station. Other land uses include community uses and amenity space.</p> <p>The peripheral zone is of mixed character and use. The land uses include: bus station, residual amenity space, office space (low and high rise), small shops and the telephone exchange.</p> <p>A number of sites and buildings are vacant or under-used.</p>	Regional	Low	Moderate at a regional level	High	<p>With the redevelopment of Bracknell town centre, there will continue to be a mix of land uses. However, the redevelopment will add more retail units and food/drink outlets. There will also be increased development of residential units, many of which will be located above the retail or food/drink units.</p>	<p>The improvements to the highway network and pedestrian/cycle infrastructure will improve accessibility to Bracknell town centre and the new land uses.</p> <p>Slight Beneficial</p>
Summary of character	<p>The layout and design of Bracknell town centre is primarily from its previous redevelopment in the 1960s/70s, and is now visibly dated. The density and scale of the densely packed medium / high rise buildings in the centre contrasts with the more sparsely situated low / medium rise buildings in the outer areas. The land uses in the town centre are primarily commercial and employment, however a number of sites and buildings are vacant and under-used. The main vehicular and pedestrian routes are relatively segregated and the boundaries of the town centre are defined in most directions by transport corridors.</p>	Regional	Low	Moderate at a regional level	High	<p>The redevelopment works in Bracknell (excluding the highway and public realm improvements) will improve the outdated architecture and the choice of retail and leisure facilities.</p> <p>The town centre, which is already densely populated by mid to high rise buildings will increase in scale and density as higher buildings with larger footprints are developed. Without the proposed improvements to the highway network and public realm to landscape these areas and soften them, improving the human interaction, they may feel impersonal and visually unappealing.</p>	<p>The improvements to the highway network and walking/cycling infrastructure will improve accessibility to Bracknell town centre, resulting in increased human interaction with the area. The public realm improvements will also improve the human interaction with the area due to an improvement in the appearance of the centre.</p> <p>While the scale and density of the town centre will increase, the public realm improvements will soften this increase, helping to create a balance of space.</p> <p>Moderate Beneficial</p>

Reference Sources

Environmental Statement from the 2007 Consented Planning Application

Step 5 - Summary Assessment Score

Moderate Beneficial

Qualitative Comments

Bracknell town centre currently has a dense, mid to high-rise townscape that is outdated and relatively unattractive. The highway infrastructure is prominent and results in visual and physical severance. While the redevelopment of the area may increase the density and scale of the townscape, the modern building design and organisation of space will increase the attractiveness of the area. The highway and walking/cycling improvements will contribute to increased accessibility by all modes to the town centre and the realignment of The Ring will reduce the severance experienced, resulting in improved human interaction. The public realm improvements will soften the increase in scale and density through improved public spaces and attractively designed and landscaped areas.

TAG Physical Activity Impacts Worksheet (Basic)

	Pedestrians (i)	Cyclists (ii)	Equestrians and Others (iii)
Numbers affected (a)	7375	285	0
Change in journey time in minutes (b)	0.67	0.01	0
Combined impact (c=a*b)	4914	3	0

Reference Source

Census 2011 data, National Travel Survey data, Google Maps

Summary Assessment Score

Slightly Beneficial

Qualitative Comments

The pedestrian improvements will benefit 7,375 users, of which 159 are new and generated by the scheme. The improvements will provide new links from the north into Bracknell town centre via the signalised crossing on Millennium Way, and will improve the links to the south of Millennium Way in the town centre. These improvements will lead to an average journey time reduction of 40 seconds. The improvements will also generate an increase in the number of cycle users from 259 to 285, and lead to a slight reduction in cycle journey time.

Health Benefits Calculation Using Webtage 3.14.1

Calculate Mean Distance Travelled Per Annum

Mean Distance travelled on route	5.90 km	<i>from calculation on Additional Trips</i>
Mean speed on route	16 km/h	<i>from calculation on Additional Trips</i>
Proportion of users who make a return trip	90%	
Average days travelled on route	124	taken from WHO HEAT assessment
Mean Distance travelled per year per cyclist	1391	

Calculate relative risk for scheme study area

mean distance travelled per year per cyclist calculated from HEAT assessment	600 km
Relative risk (Copenhagen)	0.72
1-relative risk (Copenhagen)	0.28
1 - Relative risk (scheme study area)	0.65

Calculate Reduced Mortality

Mean proportion of England Wales population aged 15-64 who die each year from all causes (Source ONS, 2011)	0.00223
Extra cyclist encouraged by scheme relative to without intervention case	26
Expected deaths in this population	0.0578
Lives saved (in year x) =	0.04
Cost of Life (Source DfT, 2010 cost at 2010 prices)	£ 1.654 million
Reduced Mortality benefits (in year 2010 prices)	£ 62,082

Potential Reduction in Absenteeism from Increased Cycling

Based on Webtage 3.14.1 and also Webtag 3.5.6

Based on the information within the 3.1.4.1 advice

Annual benefit to employers of increased walk and cycle per day through reduced absenteeism is 0.4 days gross salary costs

There are predicted to be 600 new journey to work due to the schemes (based on FTE 3540 in the TC and 17% Census walk and cycle in contributing JTW wards)

Average hourly salary taken from Webtage 3.5.6 £ 28.68 per hour

Average hours worked from ONS for full time employment 42.7 hours per week

Average hours worked from ONS for full time employment 8.54 per day

estimated costs per day based on above figures £ 244.93 per day cost

Therefore 0.4 days gross salary costs as a saving £ 97.97 average saving per annum per person

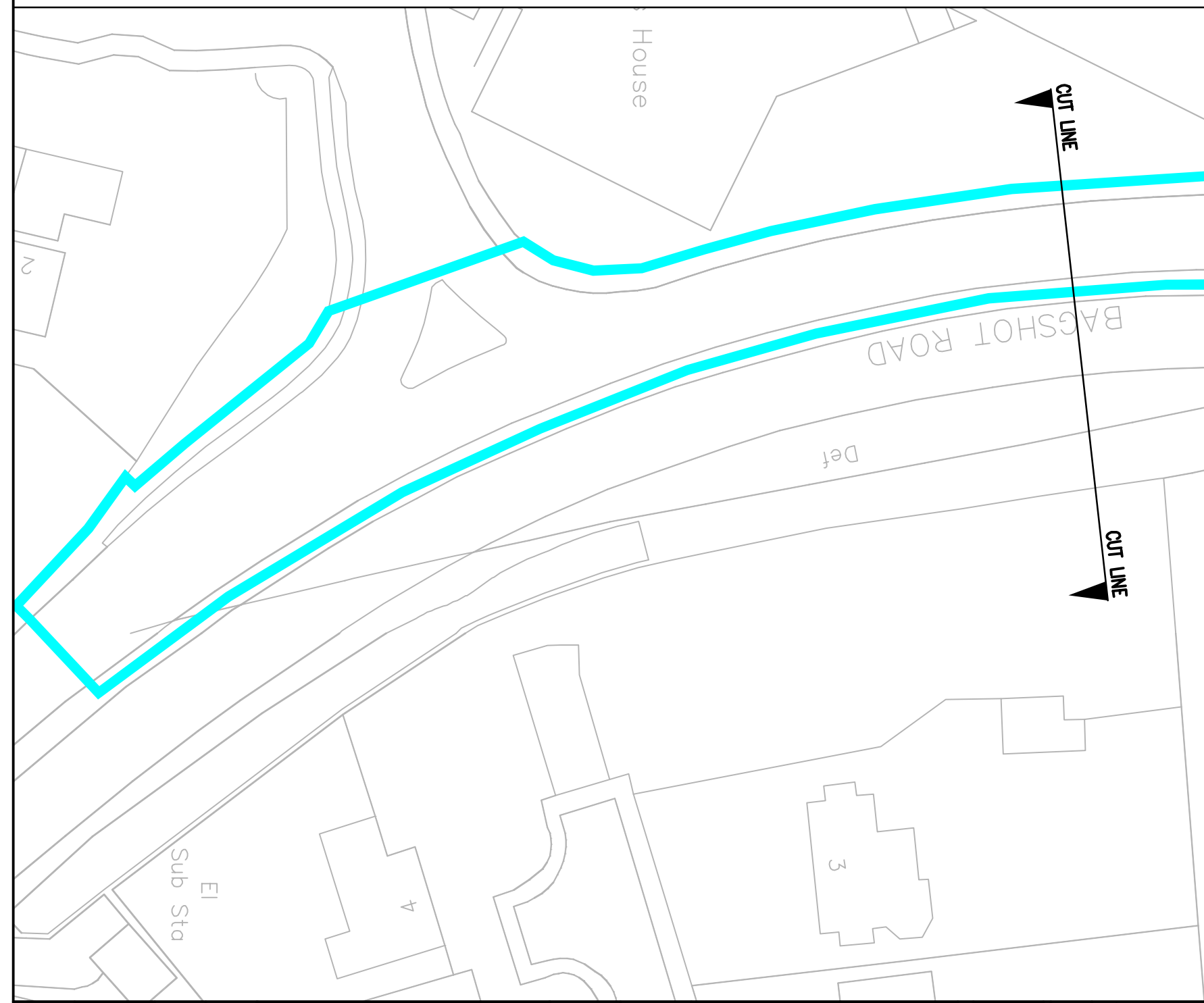
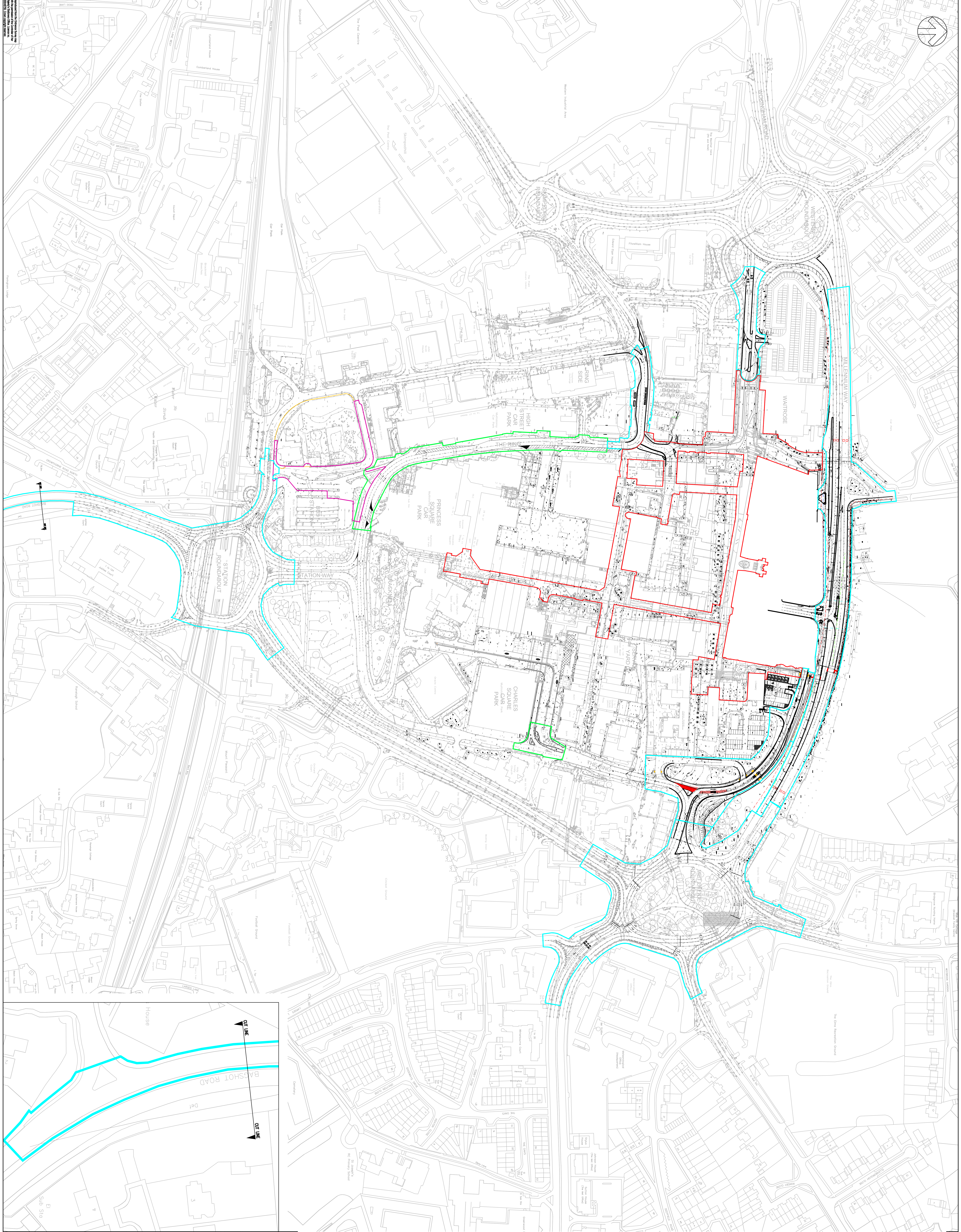
Number of additional work walk and cyclists from scheme interventions

Per annum saving in absenteeism through increase walking & cycling

webtage demand
600
£58,783

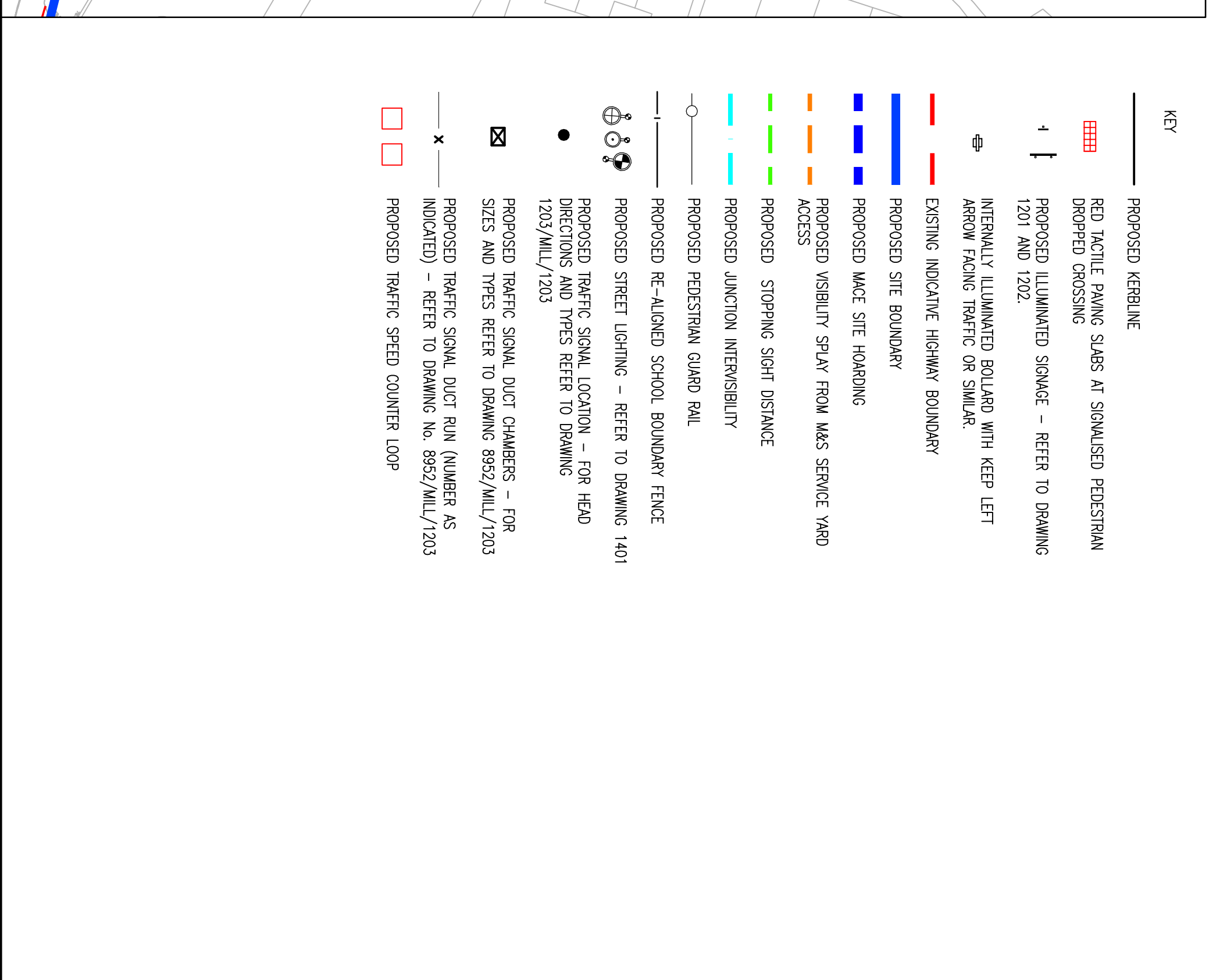
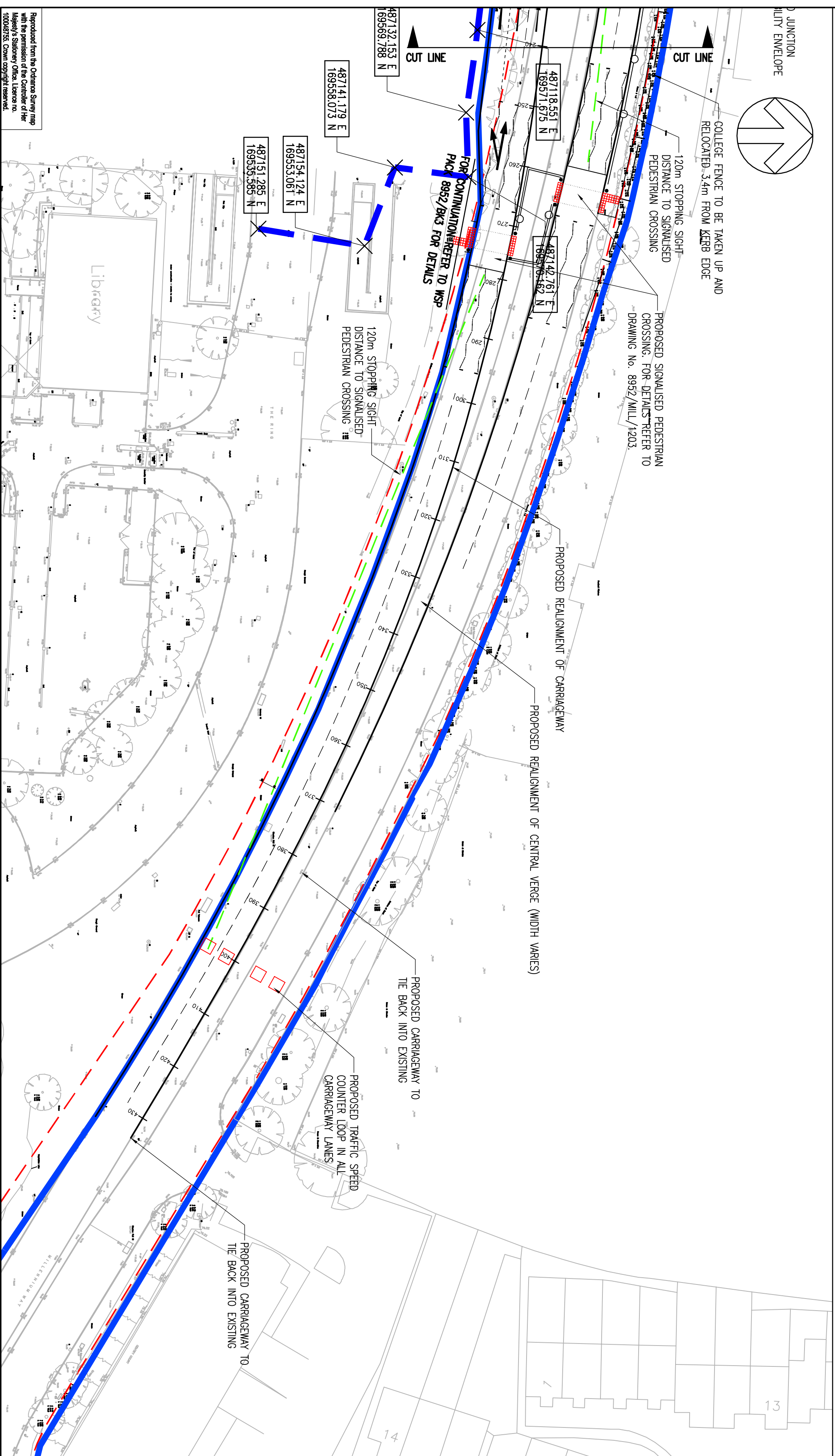
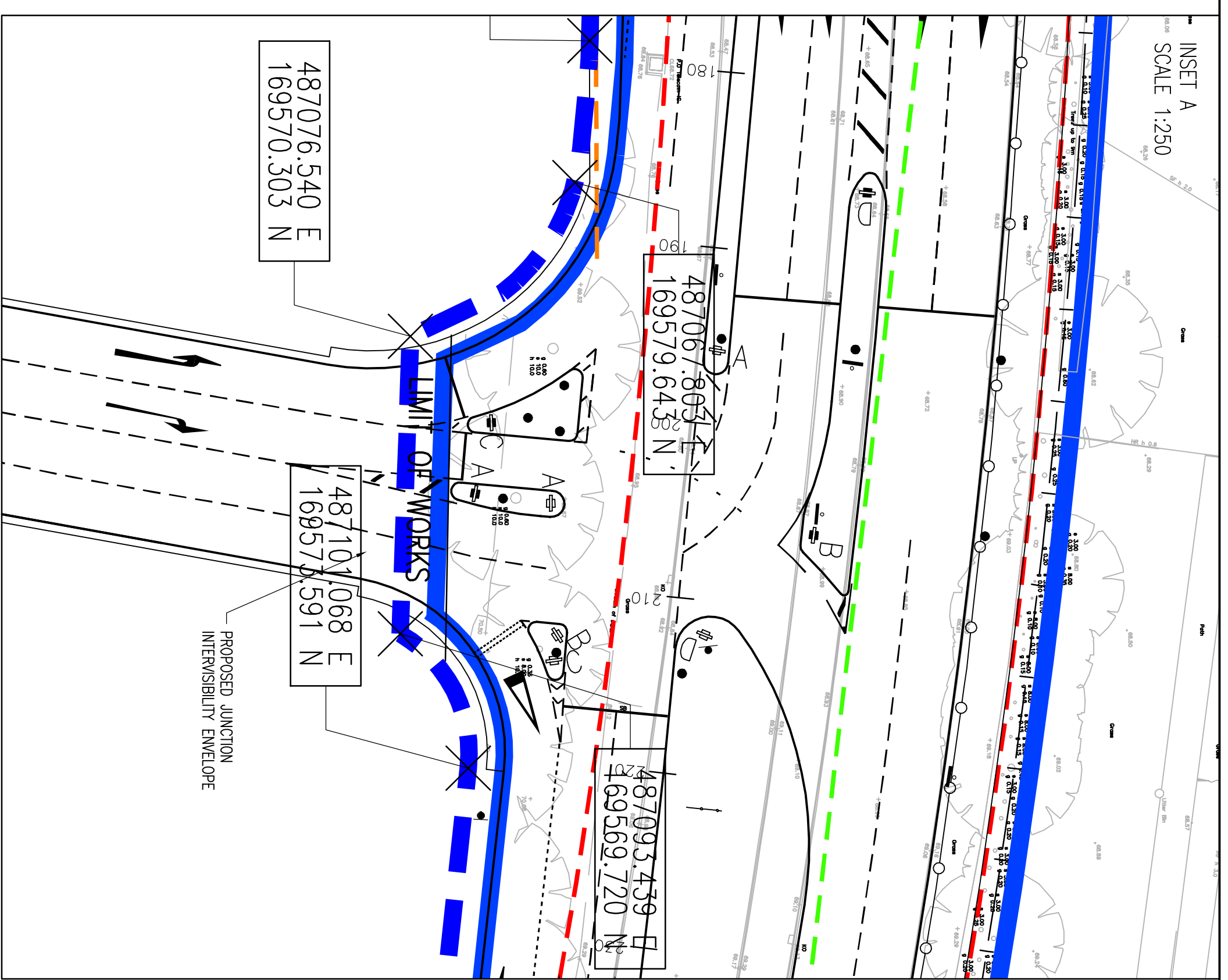
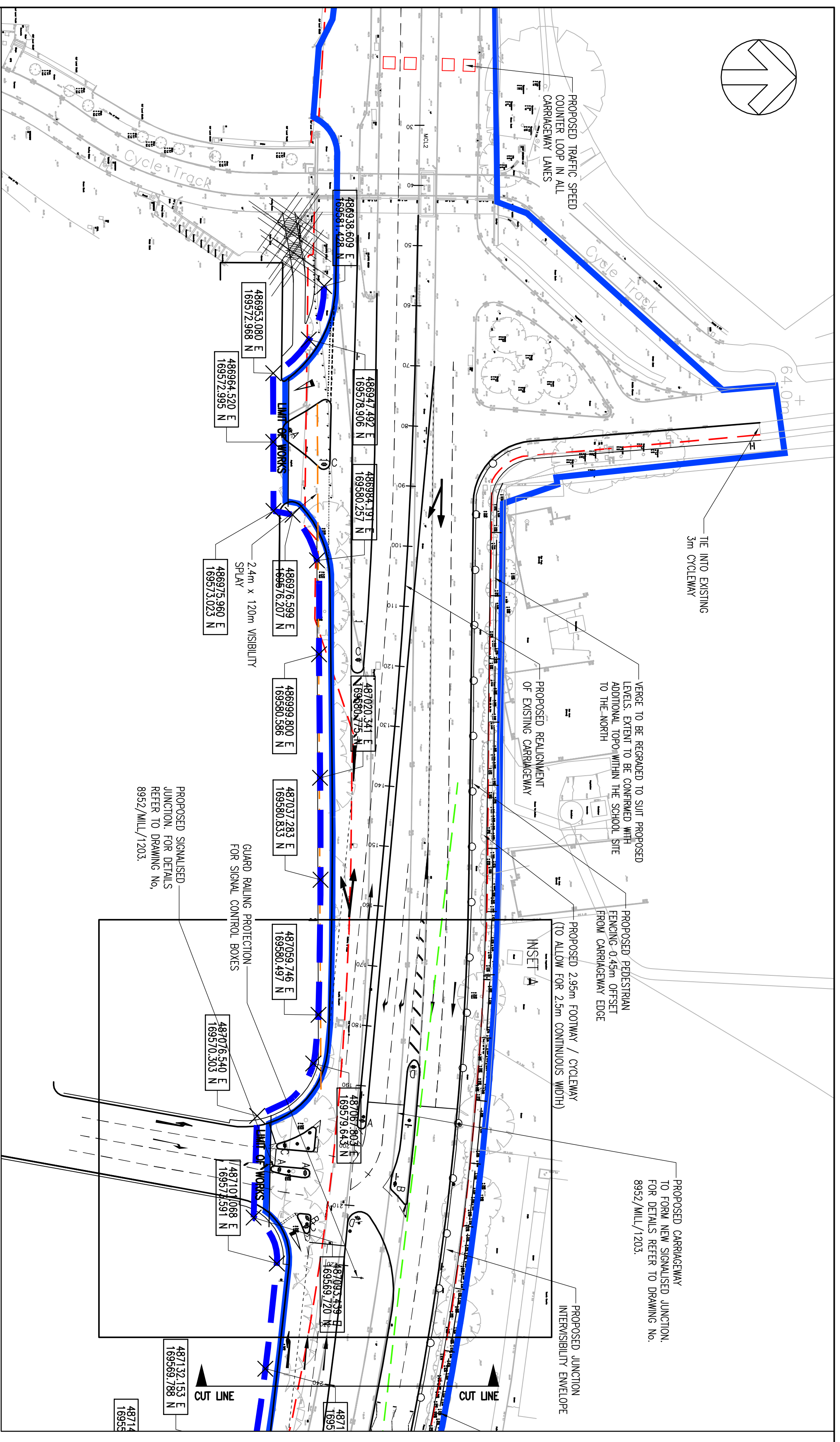
Appendix C

PROJECT DRAWINGS



Headquarters, Bessy, 15th, Boreham, Boreham, RG21 1AU Tel: +44 (0)1295 318800 Fax: +44 (0)1295 318700 www.wspgroup.com www.pbr.com	
BRACKNELL REGENERATION PARTNERSHIP LIMITED	
BRACKNELL TOWN CENTRE HIGHWAYS	
SITE WIDE CONSTRUCTION BOUNDARIES	
SCALE: 1:250 DATE: 08/09/2015 DRAWN BY: PH CHECKED BY: PH	PROJECT NO: 8952-GEN-001 SHEET NO: A
DATE: 16/09/2015 TIME: 11:27:36 USER: PHILIP	PROJECT: 8952-GEN-001 SHEET: A

- DO NOT SCALE**
- KEY:**
- OFF SITE WORKS (BESSHOT)
 - ON SITE WORKS MAZE
 - OPENING WORKS
 - POCKET PARK BOUNDARY
 - BUS STATION WORKINGS BOUNDARY



- KEY**
- PROPOSED KERBLINE
 - ▨ RED TACTILE PAVING SLABS AT SIGNALISED PEDESTRIAN DROPPED CROSSING
 - ⊥ PROPOSED ILLUMINATED SIGNAGE – REFER TO DRAWING 1201 AND 1202.
 - ⊥ INTERMEDIATE ILLUMINATED BOLLARD WITH KEEP LEFT ARROW FACING TRAFFIC OR SIMILAR.
 - EXISTING INDICATIVE HIGHWAY BOUNDARY
 - PROPOSED SITE BOUNDARY
 - PROPOSED MACE SITE HOARDING
 - PROPOSED VISIBILITY SPYLA FROM MACE SERVICE YARD ACCESS
 - PROPOSED STOPPING SIGHT DISTANCE
 - PROPOSED JUNCTION INTERVISIBILITY
 - PROPOSED PEDESTRIAN GUARD RAIL
 - PROPOSED RE-ALIGNED SCHOOL BOUNDARY FENCE
 - ⊙ PROPOSED STREET LIGHTING – REFER TO DRAWING 1401
 - ⊙ PROPOSED TRAFFIC SIGNAL LOCATION – FOR HEAD DIRECTIONS AND TYPES REFER TO DRAWING 1203/MILL/1203
 - ⊙ PROPOSED TRAFFIC SIGNAL DUCT CHAMBERS – FOR SIZES AND TYPES REFER TO DRAWING 8952/MILL/1203
 - ⊙ PROPOSED TRAFFIC SIGNAL DUCT RUN (NUMBERS AS INDICATED) – REFER TO DRAWING NO. 8952/MILL/1203
 - ⊙ PROPOSED TRAFFIC SPEED COUNTER LOOP

DO NOT SCALE

- NOTES**
- ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
 - ALL WORKS SHALL BE COMPLETED TO THE SATISFACTION OF THE BRACKNELL FOREST COUNCIL (BFC) REPRESENTATIVE.
 - THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES AFFECTED BY THE WORKS.
 - TRAFFIC MANAGEMENT AND SAFETY MEASURES SHALL COMPLY IN ALL RESPECTS TO CHAPTER 8 OF THE TRAFFIC SIGNS MANUAL PUBLISHED BY HMSO. THE CONTRACTOR SHALL SUBMIT HIS PROPOSALS FOR THE APPROVAL OF THE ENGINEER AND THE LOCAL HIGHWAY AUTHORITY PRIOR TO COMMENCING ANY WORK.
 - THE CONTRACTOR SHALL CONTACT ALL UTILITIES COMPANIES PRIOR TO COMMENCING ANY EXCAVATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL NECESSARY PERMISSIONS AND APPROVALS FROM THE UTILITIES COMPANIES PRIOR TO THE EXCAVATIONS AND TO TAKE ALL NECESSARY PREVENTIVE MEASURES.
 - THE CONTRACTOR SHALL MAKE GOOD ANY DAMAGE CAUSED TO WALLS, FENCES, KERBING, SURFACING, ROAD SIGNS ETC AT HIS OWN EXPENSE AS INSTRUCTED BY THE ENGINEER AND HIGHWAY AUTHORITY.
 - THE CONTRACTOR SHALL INDEMNIFY THE CLIENT, ENGINEER AND HIGHWAY AUTHORITY AGAINST DAMAGE TO ANY HIGHWAY AUTHORITY PROPERTY OR SITUATION, UNDERMENS PLANT AND ANY COSTS ASSOCIATED WITH THE DISRUPTION OF SERVICES AND THE REPAIR/REPLACEMENT OF THE DAMAGED PLANT. NO WORK ON SITE SHALL COMMENCE UNTIL WRITTEN EVIDENCE OF THE ABOVE INDEMNITY HAS BEEN SUBMITTED TO AND ACCEPTED BY THE ENGINEER.
 - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL DRAWINGS AND NOTER FROM THE BFC DESIGN PACK 8952/MILL/1203. THE CONTRACTOR IS TO SATISFY THEMSELVES THAT THERE ARE NO DISCREPANCIES WITHIN THE DESIGN PACK BEFORE COMMENCING ON SITE. IF IN DOUBT ASK.
 - ALL WORKS TO BE UNDERTAKEN IN COMPLIANCE WITH PROJECT SPECIFICATION & TO BFC APPROVAL.
 - ANY DISCREPANCIES BETWEEN PROJECT SPECIFICATION & BFC REQUIREMENTS TO BE REPORTED IMMEDIATELY TO THE ENGINEER. TOPOGRAPHICAL SURVEY INFORMATION PROVIDED BY CLIENT, WSP CAN NOT ACCEPT RESPONSIBILITY FOR ANY INACCURACIES.
 - VERGE ALONG SCHOOL BOUNDARY TO BE REORGANISED TO SUIT PROPOSED LAYOUT. THIS SHALL BE COMPLETED WITH ADDITIONAL TOPO WITHIN THE SCHOOL SITE TO THE NORTH.

ISSUED FOR CONSTRUCTION

REV	DATE	BY	DESCRIPTION	CHK	APP
A	27/03/15	TKR	FIRST ISSUE	JK	TKR
B	02/04/15	TKR	GENERAL AMENDMENTS	JK	TKR
C	27/04/15	TKR	AMENDED TO SUIT BFC COMMENTS	JK	TKR
D	14/05/15	TKR	ISSUED FOR CONSTRUCTION	JK	TKR
E	19/06/15	PH	MACE SITE HOARDING ADDED	JK	TKR
F	24/06/15	PH	MACE SITE HOARDING ADDED	JK	TKR
G	24/06/15	PH	MACE SITE HOARDING ADDED	JK	TKR
H	17/09/15	JK	MACE SITE HOARDING OR-DRAWINGS ADDED	JK	TKR

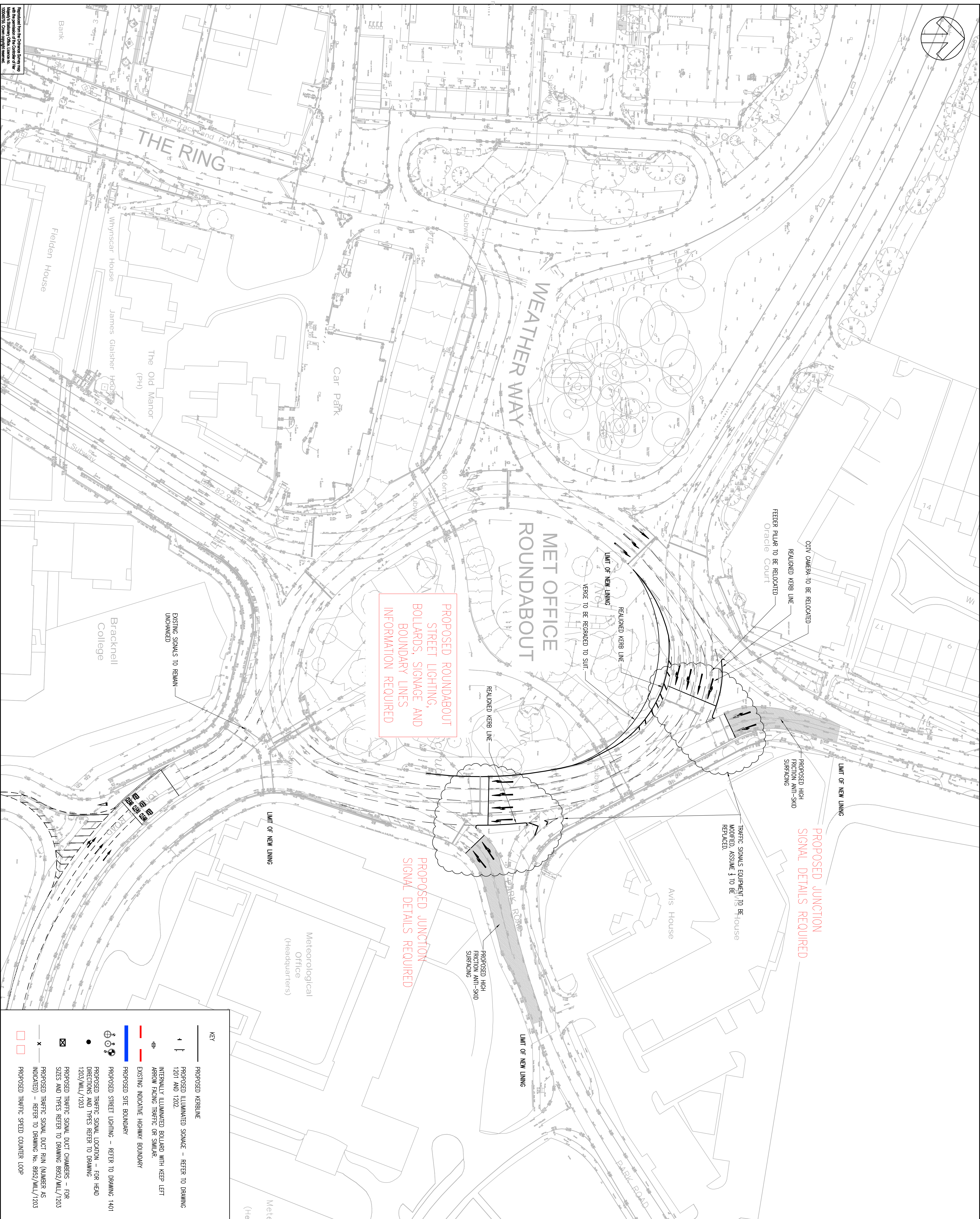
CLIENT:
BRACKNELL REGENERATION LIMITED PARTNERSHIP

PROJECT:
BRACKNELL TOWN CENTRE
REGENERATION WORKS

ARCHITECT:
WSP

Mountbatten House, Basing View, Basingstoke, Hampshire RG21 4HU
Tel: +44 (0)1256 318800 Fax: +44 (0)1256 318700
http://www.wspgroup.com

PROJECT: 70008953	DRAWING NO.: 8952-MILL-101	REV.: H
SCALE @ 1:1500	CHECKED: AD	APPROVED: TG
CAD FILE: 8952-MILL-101	ISSUED DATE: MARCH 2015	
PROJECT NO.: 70008953	DRAWING NO.: 8952-MILL-101	REV.: H



DO NOT SCALE

- NOTES
1. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
 2. ALL WORKS SHALL BE COMPLETED TO THE SATISFACTION OF THE BRACKNELL FOREST COUNCIL (BFC) REPRESENTATIVE.
 3. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES AFFECTED BY THE WORKS.
 4. TRAFFIC MANAGEMENT AND SAFETY MEASURES SHALL COMPLY IN ALL RESPECTS TO CHAPTER 8 OF THE TRAFFIC SIGNS MANUAL PUBLISHED BY HS&O. THE CONTRACTOR SHALL SUBMIT HIS PROPOSALS FOR THE APPROVAL OF THE ENGINEER AND THE LOCAL HIGHWAY AUTHORITY PRIOR TO COMMENCING ANY WORK.
 5. THE CONTRACTOR SHALL CONTACT ALL UTILITIES COMPANIES PRIOR TO COMMENCING ANY EXCAVATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO IDENTIFY AND MARK ALL UTILITIES PRIOR TO EXCAVATION AND TO TAKE ALL NECESSARY PROTECTIVE MEASURES.
 6. THE CONTRACTOR SHALL MAKE GOOD ANY DAMAGE CAUSED TO WALLS, FENCES, KERBING, SURFACING, ROAD SIGNS ETC AT HIS OWN EXPENSE AS INSTRUCTED BY THE ENGINEER AND HIGHWAY AUTHORITY.
 7. THE CONTRACTOR SHALL UNDERTAKE THE CLIENT, ENGINEER AND HIGHWAY AUTHORITY AGAINST DAMAGE TO ANY HIGHWAY AUTHORITY PROPERTY OR STATUTORY UNDERTAKERS PLANT AND ANY COSTS ASSOCIATED WITH THE DISRUPTION OF SERVICES AND THE REPAIR/REPLACEMENT OF THE DAMAGED PLANT. NO WORK ON SITE SHALL COMMENCE UNTIL WRITTEN EVIDENCE OF THE ABOVE INDEMNITY HAS BEEN SUBMITTED TO AND ACCEPTED BY THE ENGINEER.
 8. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL DRAWINGS AND NOTES FROM THE BFC DESIGN PACK 8952/MET. THE CONTRACTOR IS TO SATISFY THEMSELVES THAT THERE ARE NO DISCREPANCIES WITHIN THE DESIGN PACK BEFORE COMMENCING ON SITE. IF IN DOUBT ASK.
 9. ALL WORKS TO BE UNDERTAKEN IN COMPLIANCE WITH PROJECT SPECIFICATION & TO BFC APPROVAL.
 10. ANY DISCREPANCIES BETWEEN PROJECT SPECIFICATION & BFC REQUIREMENTS TO BE REPORTED IMMEDIATELY TO THE ENGINEER.
 11. TOPOGRAPHICAL SURVEY INFORMATION PROVIDED BY CPRTA, WSP CAN NOT ACCEPT RESPONSIBILITY FOR ANY INACCURACIES.
 12. KERB ALONG SCHOOL BOUNDARY TO BE REGRADED TO SUIT PROPOSED LEVELS EXTENT TO BE COMBINED WITH ADDITIONAL TOPO WITHIN THE SCHOOL SITE TO THE NORTH.

DRAFT

REV	DATE	BY	DESCRIPTION	CHK	APP
A			FIRST ISSUE		

FOR INFORMATION ONLY

CLIENT: BRACKNELL REGENERATION LIMITED PARTNERSHIP

ARCHITECT: -

PROJECT: BRACKNELL TOWN CENTRE REGENERATION WORKS

TITLE: MET OFFICE ROUNDABOUT GENERAL ARRANGEMENT

SCALE @ 1:1500

DATE: 8952-MET-101	ISSUED/DATE: PH	APPROVED: TO
PRODUCTIVE: 70008952	DRAWING NO: 8952-MET-101	REV: A

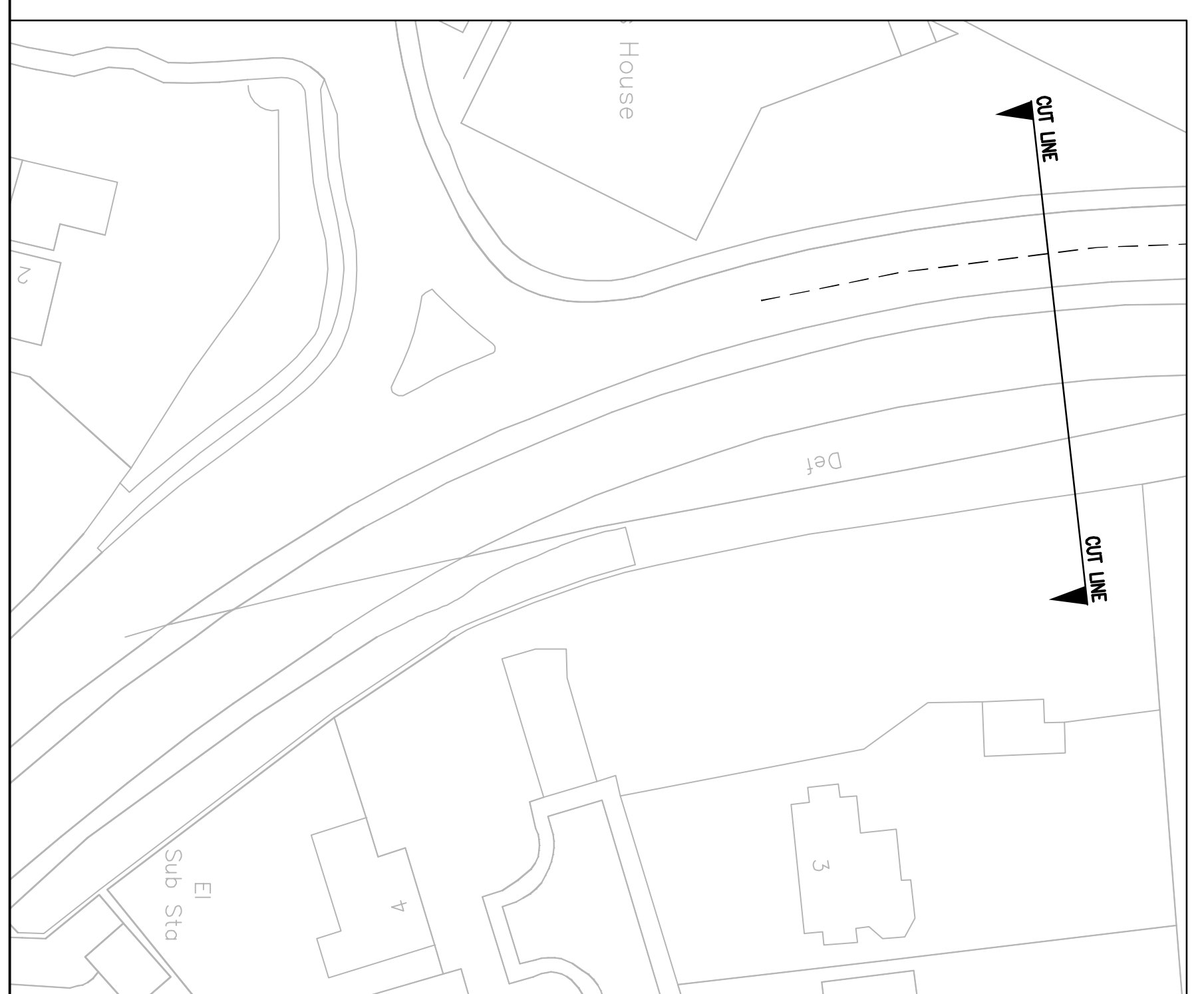
© WSP Group Ltd

WSP

Mountbatten House, Basing View, Basingstoke, Hampshire RG21 4HU
Tel: +44 (0)1256 318800 Fax: +44 (0)1256 318700
http://www.wspgroup.com

KEY

- PROPOSED ILLUMINATED SIGNAGE - REFER TO DRAWING 1201 AND 1202
- INTERNALLY ILLUMINATED BOLLARD WITH KEEP LEFT ARROW FACING TRAFFIC OR SIMILAR.
- EXISTING INDICATIVE HIGHWAY BOUNDARY
- PROPOSED SITE BOUNDARY
- PROPOSED STREET LIGHTING - REFER TO DRAWING 1401
- PROPOSED TRAFFIC SIGNAL LOCATION - FOR HEAD DIRECTIONS AND TYPES REFER TO DRAWING 1203/MIL/1203
- PROPOSED TRAFFIC SIGNAL DUCT CHAMBERS - FOR SIZES AND TYPES REFER TO DRAWING 8952/MIL/1203
- PROPOSED TRAFFIC SIGNAL DUCT RUN (NUMBER AS INDICATED) - REFER TO DRAWING NO. 8952/MIL/1203
- PROPOSED TRAFFIC SPEED COUINER LOOP



DO NOT SCALE

- NOTES**
1. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
 2. ALL WORKS SHALL BE COMPLETED TO THE SATISFACTION OF THE BRACKNELL FOREST COUNCIL (BFC) REPRESENTATIVE.
 3. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES AFFECTED BY THE WORKS.
 4. TRAFFIC MANAGEMENT AND SAFETY MEASURES SHALL COMPLY IN ALL RESPECTS TO CHAPTER 8 OF THE TRAFFIC SIGNS MANUAL PUBLISHED BY HMSO. THE CONTRACTOR SHALL SUBMIT HIS PROPOSALS FOR THE APPROVAL OF THE ENGINEER AND THE LOCAL HIGHWAY AUTHORITY PRIOR TO COMMENCING ANY WORK.
 5. THE CONTRACTOR SHALL CONTACT ALL UTILITIES COMPANIES PRIOR TO COMMENCING ANY EXCAVATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL NECESSARY PERMITS AND TO OBTAIN ALL NECESSARY PROTECTIVE MEASURES.
 6. THE CONTRACTOR SHALL MAKE GOOD ANY DAMAGE CAUSED TO WALLS, FENCES, KERBING, SURFACING, ROAD SIGNS ETC AT HIS OWN EXPENSE AS INSTRUCTED BY THE ENGINEER AND HIGHWAY AUTHORITY.
 7. THE CONTRACTOR SHALL INDemnIFY THE CLIENT, ENGINEER AND HIGHWAY AUTHORITY AGAINST DAMAGE TO ANY HIGHWAY AUTHORITY PROPERTY OR STATUTORY UNDERTAKERS PLANT AND ANY COSTS ASSOCIATED WITH THE DISRUPTION OF SERVICES AND THE REPAIR/REPLACEMENT OF THE DAMAGED PLANT. NO WORK ON SITE SHALL COMMENCE UNTIL WRITTEN EVIDENCE OF THE ABOVE INDEMNITY HAS BEEN SUBMITTED TO AND ACCEPTED BY THE ENGINEER.
 8. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL DRAWINGS AND NOTES ON THE DESIGN PACK 8952/STA/101. THE CONTRACTOR IS TO SATISFY THEMSELVES THAT THERE ARE NO DISCREPANCIES WITHIN THE DESIGN PACK BEFORE COMMENCING ON SITE. 'IF IN DOUBT ASK'.
 9. ALL WORKS TO BE UNDERTAKEN IN COMPLIANCE WITH PROJECT SPECIFICATION & TO BFC APPROVAL.
 10. ANY DISCREPANCIES BETWEEN PROJECT SPECIFICATION & BFC REQUIREMENTS TO BE REPORTED IMMEDIATELY TO THE ENGINEER. TOPOGRAPHICAL SURVEY INFORMATION PROVIDED BY CAPITAL WSP CAN NOT ACCEPT RESPONSIBILITY FOR ANY INACCURACIES.
 - 11.

- KEY**
- PROPOSED KERBELINE
 - PROPOSED PEDESTRIAN FENCING
 - PROPOSED ILLUMINATED SIGNAGE - REFER TO DRAWING 1201 AND 1202.

FOR INFORMATION ONLY

REV	DATE	BY	DESCRIPTION	CHK	APP
C	04/08/2015	TH	AMENDMENTS FOLLOWING BFC COMMENTS	TC	TC
B	14/08/2015	TH	DESIGN UPDATED	TC	TC
A	03/07/15	TK	FIRST ISSUE	TC	TC

WSP

Mountbatten House, Basing View, Basingstoke, Hampshire RG21 4HU
 Tel: +44 (0)1256 318800 Fax: +44 (0)1256 318700
 http://www.wspgroup.com

CLIENT: BRACKNELL REGENERATION LIMITED PARTNERSHIP

PROJECT: BRACKNELL TOWN CENTRE REGENERATION WORKS

TITLE: BRACKNELL STATION ROUNDABOUT GENERAL ARRANGEMENT

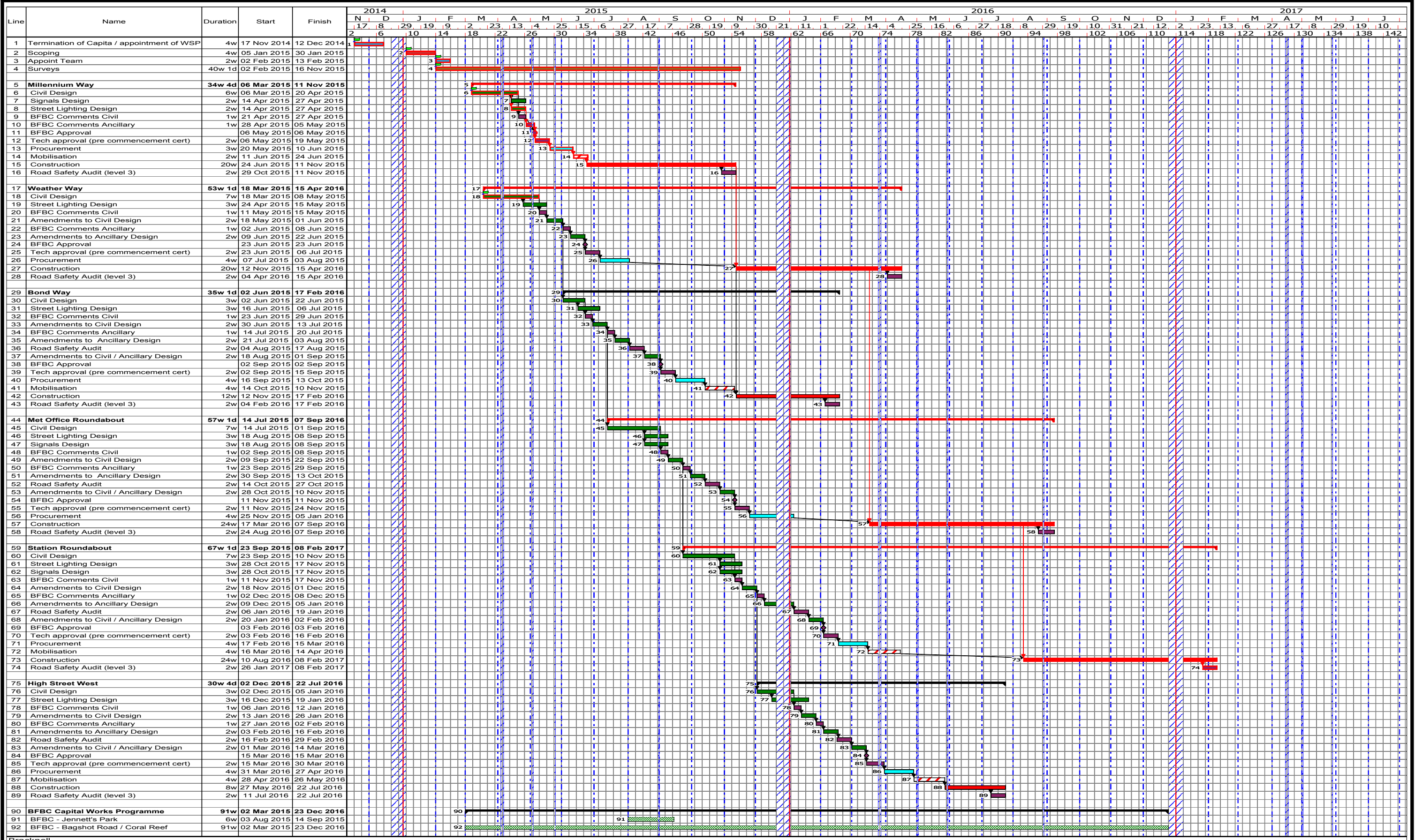
SCALE @ 1:1500	CHECKED: AD	APPROVED: TG
DRAWN BY: 8952-STA-101	ISSUED/DATE: JUNE 2015	REV: C
PROJECT NO: 70008952	DRAWING NO: 8952-STA-101	REV: C

© WSP Group Ltd

Appendix D

PROJECT PROGRAMME (HIGHWAY WORKS)

Bracknell - Off Site Highways High Level Strategic Programme



Bracknell
■ Finalise Appointments / Contracts
 ■ Brief
 ■ Surveys
 ■ Summary
 ■ Design
 ■ Technical Approvals
 ■ Procurement
 ▨ Mobilisation
 ■ Construction

Programme no : BR/OSH/SP
 Prepared by : PS

Rev no : C
 Date: 21/05/2015

Status: Draft

Appendix E

QUANTIFIED RISK ASSESSMENT

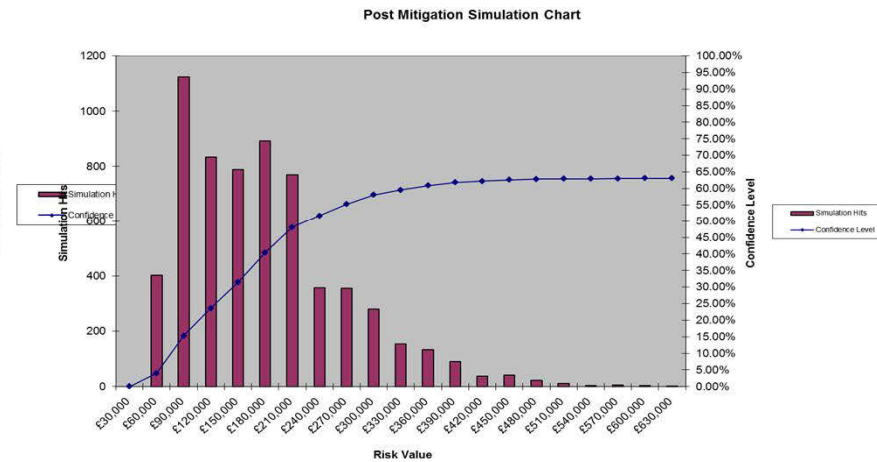
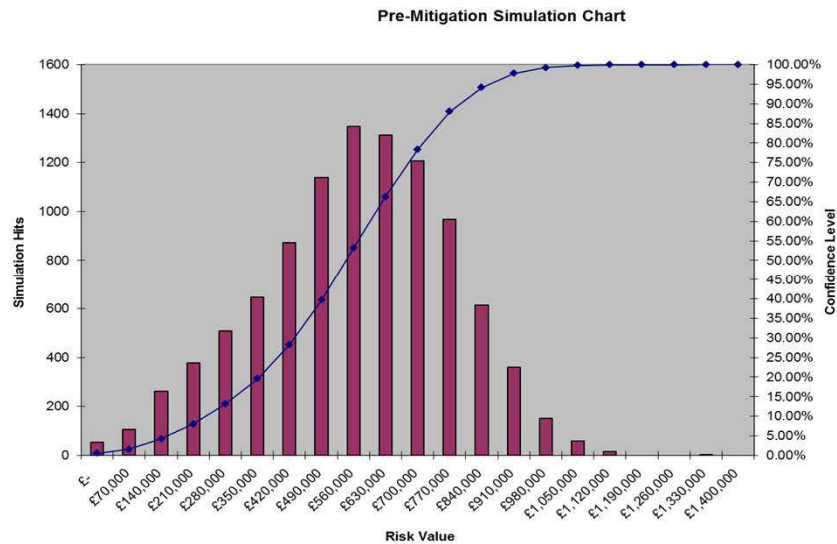
Bracknell Town Centre MSBC		PRE - MITIGATION					RESIDUAL RISK POST MITIGATION							
Risk ID	Risk Description	Threat / Opportunity	Probability of Occurrence	Cost Impact if Occurs	Overall Risk Score	Exp. Risk Impact	Risk Response	Risk Org	Cost of Risk Intervention	Cost Estimate Notes	Probability of Occurrence	Cost Impact if Occurs	Overall Risk Score	Exp. Risk Impact
PROJECT RISKS														
1.1	Securing S278 Agreement	Threat	Unlikely	H	8	£ 11,541	Continued dialogue between Developers and BFC Implementation Team		£5,000	provision for additional consultant fees	Unlikely	H	8	£ 10,864
1.2	Land available for Highway and Urban Realm Improvements	Threat	Unlikely	H	8	£ 11,358	Land searches completed, BFC own highways land and developer has private land		£0	Included within Consultant fee appraisal	Unlikely	M	6	£ 5,617
1.3	Statutory Utilities at Millenium Way and at Junctions	Threat	Very Likely	VH	25	£ 278,635	Design team C2-C4, trial holes and ground radar searches, ongoing dialogue with Utility Companies		£50,000	site investigations, attendance, potential	Fairly Likely	H	12	£ 30,155
1.4	Ground Conditions affecting Highway Works	Threat	Very Likely	M	15	£ 60,261	Geotechnical investigations undertaken, ongoing site review as pavements opened for works, agreed remedial measures, measurement of soft spots		£5,000	Potential redesign for pavement construction details	Fairly Likely	M	9	£ 15,006
1.5	Failure to agree on technical design issues (alignments, cross sections, highways width, cycleways / footway provision etc)	Threat	Likely	H	16	£ 67,883	Close working between design/delivery teams and BFC Implementation team		£10,000	Potential redesign, costs for meeting attendance, PM for co-ordination	Unlikely	M	6	£ 5,309
1.6	Impact of temporary TM restrictions greater than expected leading to extension of time and additional TM costs	Threat	Likely	H	16	£ 68,152	Early involvement with Key Stakeholders, liaison with BFC Implementation team, timey road space booking (BFC Street works permit scheme), use of BFC Term Maintenance Contractor		£5,000	provision for additional consultant fees for co-ordination (contractor fees in project cost)	Unlikely	M	6	£ 5,529
1.7	Abnormal weather conditions	Threat	Likely	M	12	£ 33,168	Programming of earthworks and construction works monitored, potential for additional resources or parallel working if necessary		£0	Delay implications would be managed by Developer team, with necessary acceleration	Fairly Likely	H	12	£ 30,544
									£ 75,000					

The results of the Monte Carlo simulation are recorded below. Please note the following:

1. Risks can be either threats or opportunities. The convention used here is that threats are expected to add cost to the project and therefore they are numerically positive in value and opportunities are expected to remove cost from the project and therefore they are numerically negative.
2. Confidence levels are derived from the simulation. For example the P80 risk value represents the risk value that 80% of the simulation results were equal to or below. Therefore, in theory, if the contingency value were set at the P80 value you could be 80% certain that it would be sufficient.
3. The simulation was run with 10,000 iterations

	Pre-Mitigation	Post-Mitigation
P ₀	£0	£0
P ₅₀	£543,315	£84,565
P ₈₀	£709,841	£188,027
P ₁₀₀	£1,312,485	£614,529

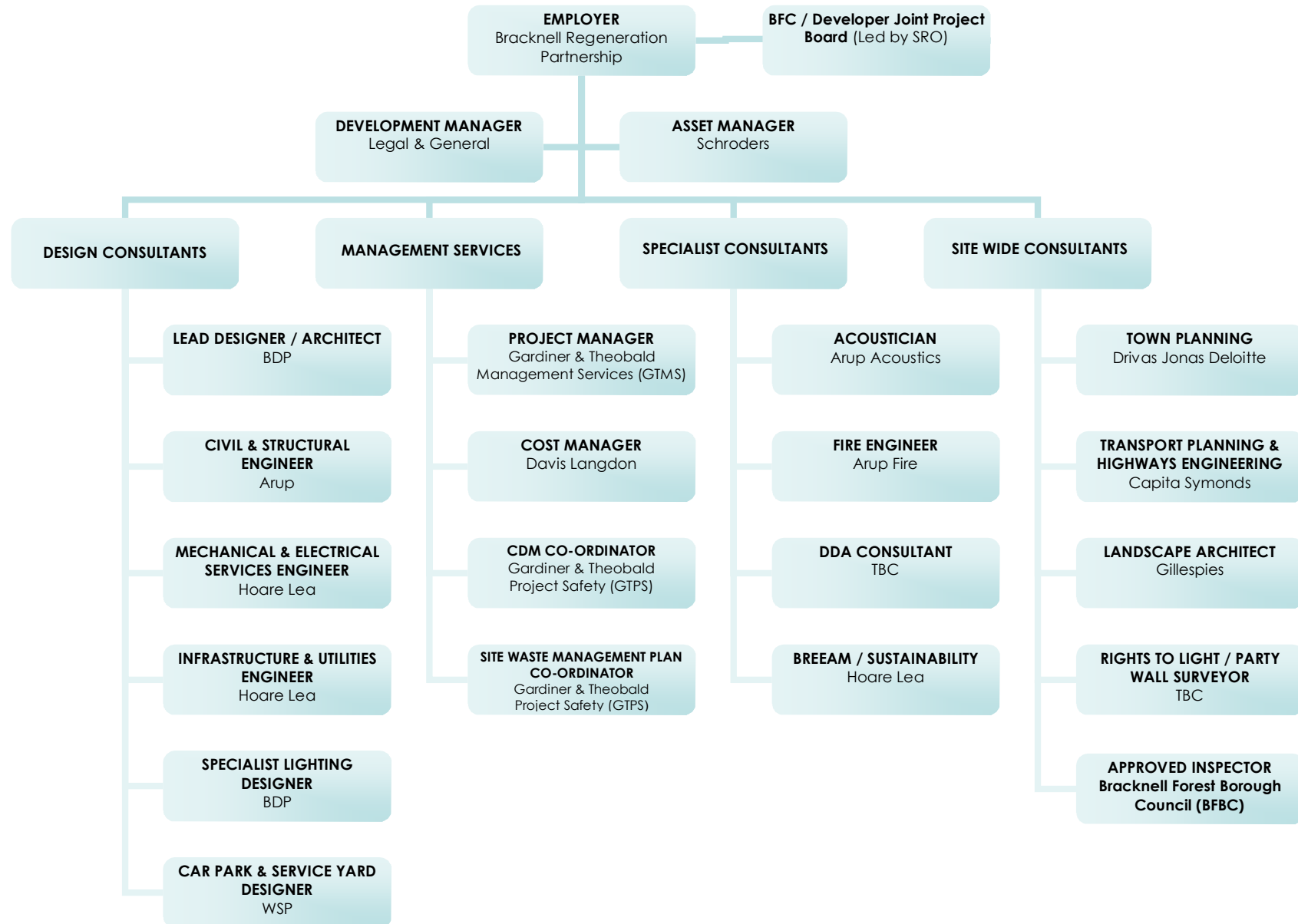
Pre-Mitigation Mean Risk	£	530,998
Post Mitigation Mean Risk	£	103,023
Estimated Cost of Mitigation	£	75,000
	£	178,023



Appendix F

PROJECT ORGANISATIONAL CHART

BRACKNELL REGENERATION PARTNERSHIP NORTHERN RETAIL QUARTER



Appendix G

EXAMPLES OF HIGHWAY GREENING IMPROVEMENTS

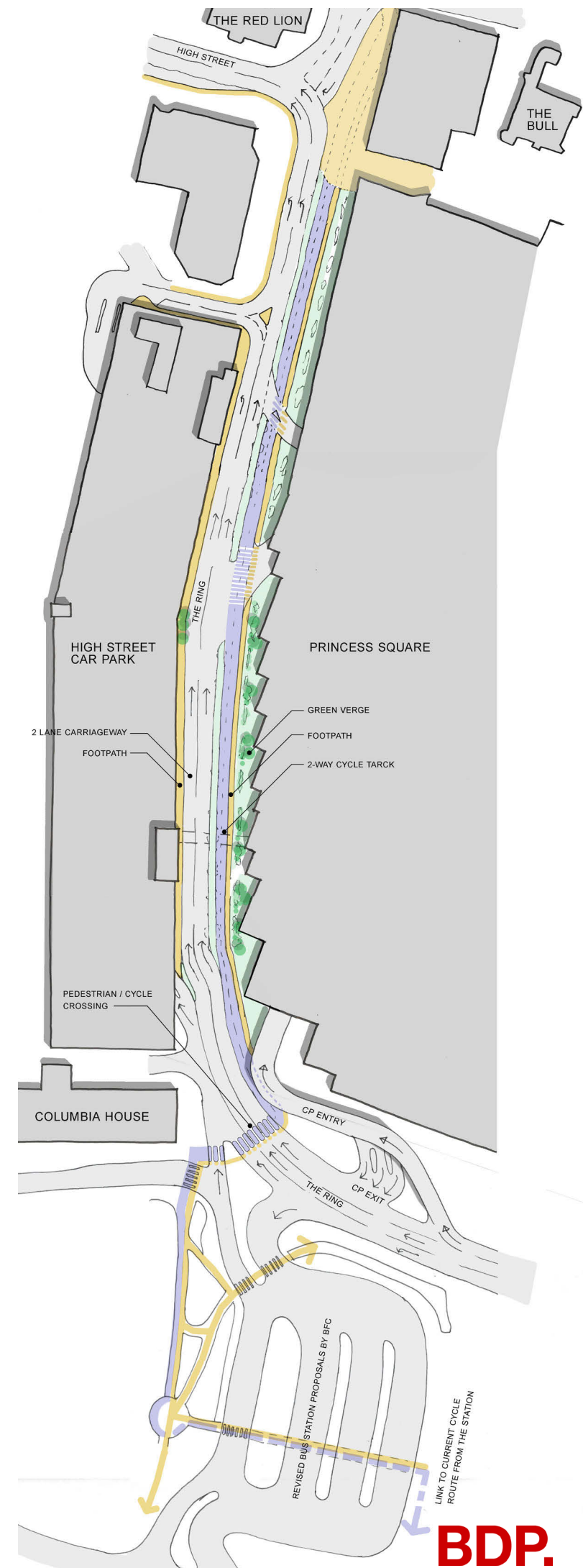
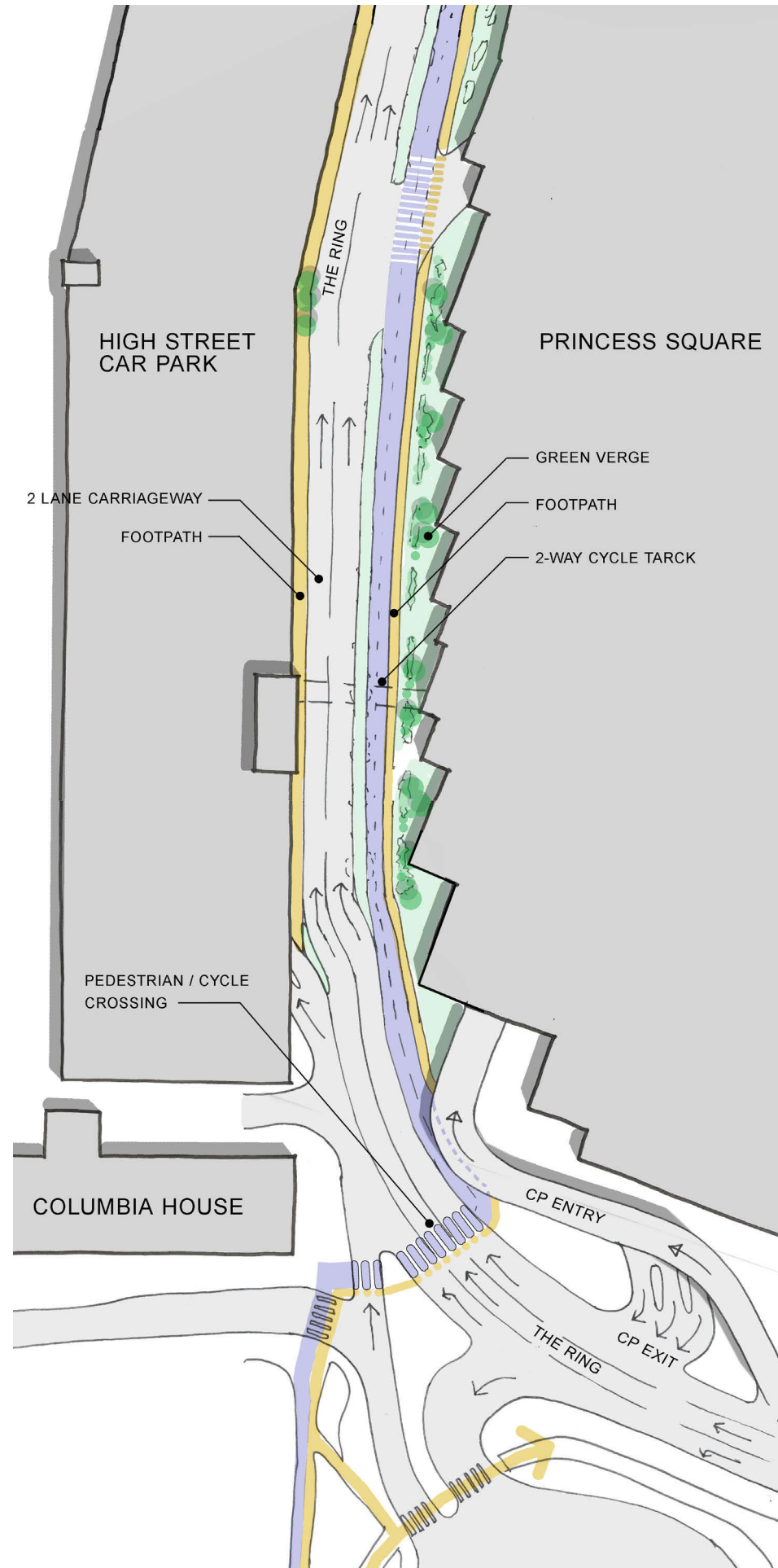
Highway Opportunities to The Ring - Proposed



Existing condition

Objectives:

- Slow down the traffic
- More pedestrian/cycle friendly
- Revitalise built form
- Create a welcoming environment / experience
- Greening where feasible





Summary - Elevation

- Banners panels to MSCP east elevation
- Re-clad cores with render, remove windows (include feature grillage). Incorporate feature 'cap'
- New tree planting
- Re-clad bridge (refer to south ridge options)
- Add feature lighting / Replace Street lighting with Aubrilam columns
- Add signage/animation
- Re-paint concrete frame white

Appendix H

ADDENDUM FOR LINSIG INFORMATION

Bracknell Town Centre, LinSig modelling input

The Millennium Way junction assessment has been run utilising the LinSig V3 computer program used to assess traffic signal junctions; no baseline assessment has been run at this location given that there is no existing junction.

The Station Way Roundabout assessment has been undertaken using the LinSig computer program, although not normally used for priority controlled junctions, LinSig provides a base which is directly comparable to the partial signalisation mitigation proposals.

Met Office Roundabout scenarios have been developed in LinSig, the baseline scenarios mirrors the existing Cableless Link Facility (CLF) timings while the mitigation scenario has been optimised. All of these scenarios have been attached in Appendix H. CLF is a method used to determine the signal timings, although different CLF plans are used through the day it is effectively a fixed time plan which takes no account of the prevailing traffic conditions on site. It is proposed to install Microprocessor Optimised Vehicle Actuation (MOVA) is an adaptive form of signal control which instantaneously optimises traffic signal timings based on the prevailing traffic conditions. Unfortunately it is not possible to model the benefits of MOVA so it does not form part of the scheme benefits calculation directly, albeit the LinSig model timings have been optimised.

The LinSig modelling has been developed using flows approved by the council; these flows are included in the LinSig outputs attached in Appendix H. It should be noted that LinSig is a tool generally appropriate for use with isolated junction or small networks and as such, has not been used to assess the re-routing of traffic around the town centre network.

The LinSig have been run with a 2016 with development AM and PM scenarios. No interpeak scenarios have been developed with discussions with the council and the approved planning application.

RR279 MOVA: the 20 site trial published by TRL considers the benefits of MOVA and concludes that capacity gains of up to 13% can be achieved over fixed time/ CLF / VA although the increase will depend on how appropriate the base plans where to begin with. The Met Office Roundabout will benefit from MOVA control during the peak periods but it is expected that delay will reduce more significantly off-peak as the system optimises the timings.

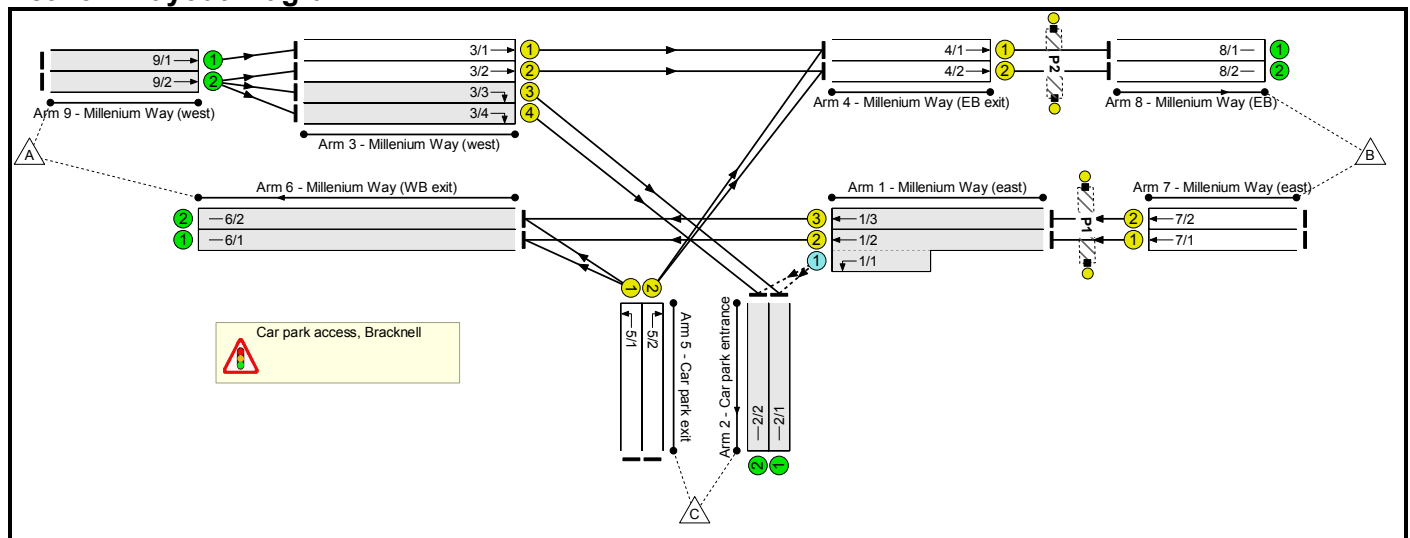
**MILLENNIUM WAY
LINSIG
INFORMATION**

Full Input Data And Results
Full Input Data And Results

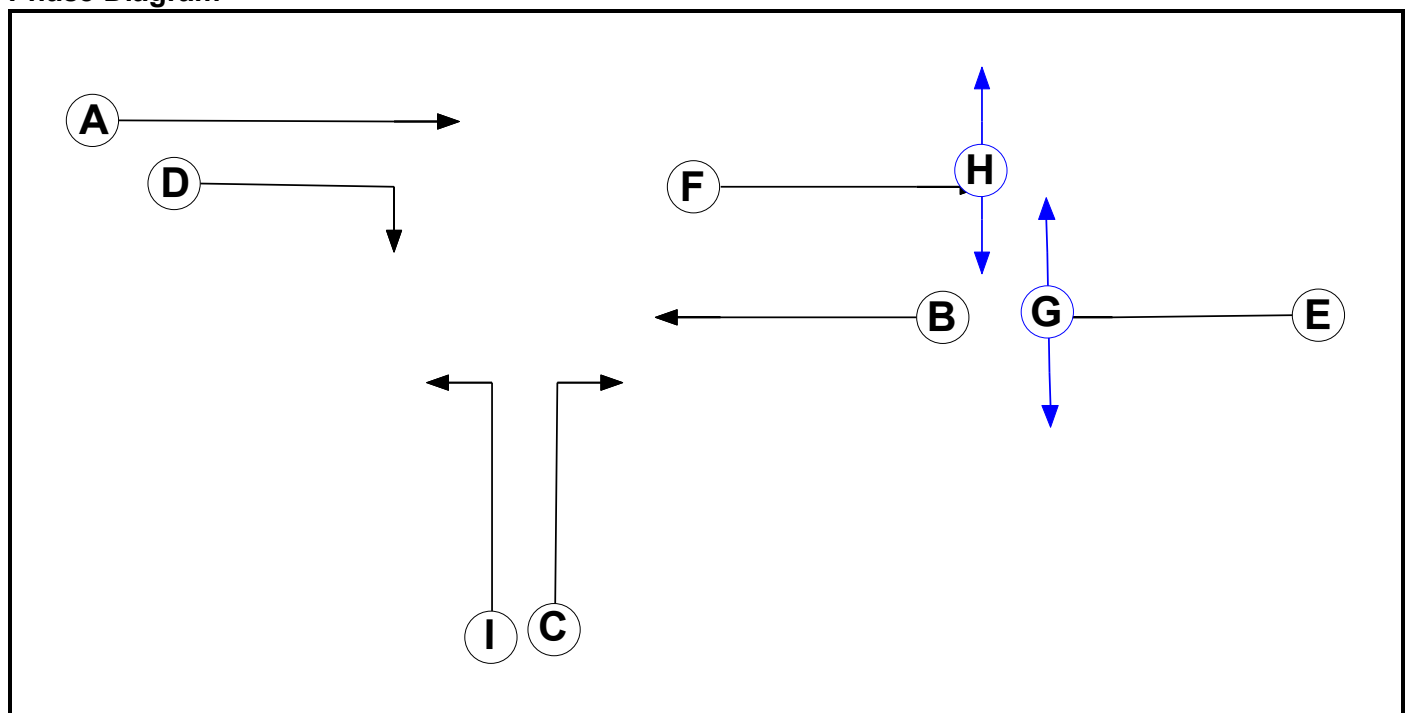
User and Project Details

Project:	CS 52138 - Bracknell
Title:	Proposed car park access (Millenium Way)
Location:	
File name:	Junction 10 (RM TS May13) JP Mar14 - WSP REV B.lsg3x
Author:	JARP
Company:	Capita Symonds
Address:	52, Grosvenor Gardens, Belgravia, London, SW1W 0AU
Notes:	

Network Layout Diagram



Phase Diagram



Full Input Data And Results

Phase Input Data

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

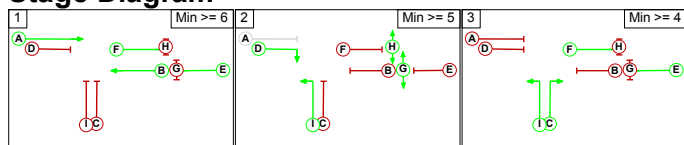
Phase Intergreens Matrix

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

Phases in Stage

1	A B E F
2	D G H I
3	C E F I

Stage Diagram



Phase Delays

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

Full Input Data And Results

Prohibited Stage Change

		To Stage		
		1	2	3
From Stage	1	■	7	7
	2	8	■	8
	3	5	5	■

Full Input Data And Results

Give-Way Lane Input Data

Junction: Car park access, Bracknell											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/1 (Millenium Way (east))	2/1 (Left)	715	0	3/3	0.22	All	-	-	-	-	-
				3/4	0.22	All					
				3/3	0.22	All					
	2/2 (Left)	715	0	3/4	0.22	All					

Full Input Data And Results

Lane Input Data

Junction: Car park access, Bracknell												
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 (Millenium Way (east))	O		2	3	7.0	Geom	-	3.00	0.00	Y	Arm 2 Left	10.00
1/2 (Millenium Way (east))	U	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 6 Ahead	Inf
1/3 (Millenium Way (east))	U	B	2	3	12.0	Geom	-	3.00	0.00	N	Arm 6 Ahead	Inf
2/1 (Car park entrance)	U		2	3	60.0	User	1800	-	-	-	-	-
2/2 (Car park entrance)	U		2	3	60.0	Inf	-	-	-	-	-	-
3/1 (Millenium Way (west))	U	A	2	3	8.0	Geom	-	3.20	0.00	Y	Arm 4 Ahead	Inf
3/2 (Millenium Way (west))	U	A	2	3	8.0	Geom	-	3.30	0.00	N	Arm 4 Ahead	Inf
3/3 (Millenium Way (west))	U	D	2	3	8.0	Geom	-	3.00	0.00	N	Arm 2 Right	10.00
3/4 (Millenium Way (west))	U	D	2	3	8.0	Geom	-	3.00	0.00	N	Arm 2 Right	8.00
4/1 (Millenium Way (EB exit))	U	F	2	3	13.0	Geom	-	3.20	0.00	Y	Arm 8 Ahead	Inf
4/2 (Millenium Way (EB exit))	U	F	2	3	13.0	Geom	-	3.30	0.00	N	Arm 8 Ahead	Inf
5/1 (Car park exit)	U	I	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 6 Left	16.00
5/2 (Car park exit)	U	C	2	3	60.0	Geom	-	3.00	0.00	N	Arm 4 Right	18.00
6/1 (Millenium Way (WB exit))	U		2	3	60.0	Geom	-	3.00	0.00	Y		
6/2 (Millenium Way (WB exit))	U		2	3	60.0	Geom	-	3.00	0.00	N		
7/1 (Millenium Way (east))	U	E	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 1 Ahead	Inf

Full Input Data And Results

7/2 (Millenium Way (east))	U	E	2	3	60.0	Geom	-	3.00	0.00	N	Arm 1 Ahead	Inf
8/1 (Millenium Way (EB))	U		2	3	60.0	Geom	-	3.20	0.00	Y		
8/2 (Millenium Way (EB))	U		2	3	60.0	Geom	-	3.30	0.00	N		
9/1 (Millenium Way (west))	U		2	3	60.0	Geom	-	3.20	0.00	Y	Arm 3 Ahead	Inf
9/2 (Millenium Way (west))	U		2	3	60.0	Geom	-	3.30	0.00	N	Arm 3 Ahead	Inf

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM Peak'	08:00	09:00	01:00	
2: 'PM Peak'	17:00	18:00	01:00	

Scenario 1: 'AM Peak' (FG1: 'AM Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination				Tot.
	A	B	C	Tot.	
A	0	1586	33	1619	
B	1259	0	46	1305	
C	2	3	0	5	
Tot.	1261	1589	79	2929	

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: AM Peak
Junction: Car park access, Bracknell	
1/1 (short)	46
1/2 (with short)	626(In) 580(Out)
1/3	679
2/1	13
2/2	66
3/1	746
3/2	840
3/3	13
3/4	20
4/1	747
4/2	842
5/1	2
5/2	3
6/1	580
6/2	681
7/1	626
7/2	679
8/1	747
8/2	842
9/1	746
9/2	873

Full Input Data And Results

Lane Saturation Flows

Junction: Car park access, Bracknell								
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 (Millenium Way (east))	3.00	0.00	Y	Arm 2 Left	10.00	100.0 %	1665	1665
1/2 (Millenium Way (east))	3.00	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1915	1915
1/3 (Millenium Way (east))	3.00	0.00	N	Arm 6 Ahead	Inf	100.0 %	2055	2055
2/1 (Car park entrance Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (Car park entrance Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (Millenium Way (west))	3.20	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1935	1935
3/2 (Millenium Way (west))	3.30	0.00	N	Arm 4 Ahead	Inf	100.0 %	2085	2085
3/3 (Millenium Way (west))	3.00	0.00	N	Arm 2 Right	10.00	100.0 %	1787	1787
3/4 (Millenium Way (west))	3.00	0.00	N	Arm 2 Right	8.00	100.0 %	1731	1731
4/1 (Millenium Way (EB exit))	3.20	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1935	1935
4/2 (Millenium Way (EB exit))	3.30	0.00	N	Arm 8 Ahead	Inf	100.0 %	2085	2085
5/1 (Car park exit)	3.00	0.00	Y	Arm 6 Left	16.00	100.0 %	1751	1751
5/2 (Car park exit)	3.00	0.00	N	Arm 4 Right	18.00	100.0 %	1897	1897
6/1 (Millenium Way (WB exit))	3.00	0.00	Y				1915	1915
6/2 (Millenium Way (WB exit))	3.00	0.00	N				2055	2055
7/1 (Millenium Way (east))	3.00	0.00	Y	Arm 1 Ahead	Inf	100.0 %	1915	1915
7/2 (Millenium Way (east))	3.00	0.00	N	Arm 1 Ahead	Inf	100.0 %	2055	2055
8/1 (Millenium Way (EB))	3.20	0.00	Y				1935	1935
8/2 (Millenium Way (EB))	3.30	0.00	N				2085	2085
9/1 (Millenium Way (west))	3.20	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1935	1935
9/2 (Millenium Way (west))	3.30	0.00	N	Arm 3 Ahead	Inf	100.0 %	2085	2085

Full Input Data And Results

Scenario 2: 'PM Peak' (FG2: 'PM Peak', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination			
	A	B	C	Tot.
A	0	1674	131	1805
B	1166	0	157	1323
C	147	253	0	400
Tot.	1313	1927	288	3528

Traffic Lane Flows

Lane	Scenario 2: PM Peak
Junction: Car park access, Bracknell	
1/1 (short)	157
1/2 (with short)	677(In) 520(Out)
1/3	646
2/1	66
2/2	222
3/1	800
3/2	874
3/3	66
3/4	65
4/1	900
4/2	1027
5/1	147
5/2	253
6/1	585
6/2	728
7/1	677
7/2	646
8/1	900
8/2	1027
9/1	800
9/2	1005

Full Input Data And Results

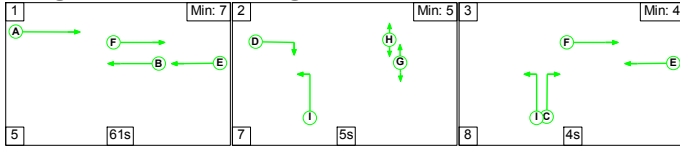
Lane Saturation Flows

Junction: Car park access, Bracknell								
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 (Millenium Way (east))	3.00	0.00	Y	Arm 2 Left	10.00	100.0 %	1665	1665
1/2 (Millenium Way (east))	3.00	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1915	1915
1/3 (Millenium Way (east))	3.00	0.00	N	Arm 6 Ahead	Inf	100.0 %	2055	2055
2/1 (Car park entrance Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (Car park entrance Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (Millenium Way (west))	3.20	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1935	1935
3/2 (Millenium Way (west))	3.30	0.00	N	Arm 4 Ahead	Inf	100.0 %	2085	2085
3/3 (Millenium Way (west))	3.00	0.00	N	Arm 2 Right	10.00	100.0 %	1787	1787
3/4 (Millenium Way (west))	3.00	0.00	N	Arm 2 Right	8.00	100.0 %	1731	1731
4/1 (Millenium Way (EB exit))	3.20	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1935	1935
4/2 (Millenium Way (EB exit))	3.30	0.00	N	Arm 8 Ahead	Inf	100.0 %	2085	2085
5/1 (Car park exit)	3.00	0.00	Y	Arm 6 Left	16.00	100.0 %	1751	1751
5/2 (Car park exit)	3.00	0.00	N	Arm 4 Right	18.00	100.0 %	1897	1897
6/1 (Millenium Way (WB exit))	3.00	0.00	Y				1915	1915
6/2 (Millenium Way (WB exit))	3.00	0.00	N				2055	2055
7/1 (Millenium Way (east))	3.00	0.00	Y	Arm 1 Ahead	Inf	100.0 %	1915	1915
7/2 (Millenium Way (east))	3.00	0.00	N	Arm 1 Ahead	Inf	100.0 %	2055	2055
8/1 (Millenium Way (EB))	3.20	0.00	Y				1935	1935
8/2 (Millenium Way (EB))	3.30	0.00	N				2085	2085
9/1 (Millenium Way (west))	3.20	0.00	Y	Arm 3 Ahead	Inf	100.0 %	1935	1935
9/2 (Millenium Way (west))	3.30	0.00	N	Arm 3 Ahead	Inf	100.0 %	2085	2085

Full Input Data And Results

Scenario 1: 'AM Peak' (FG1: 'AM Peak', Plan 1: 'Staging Plan No. 1')

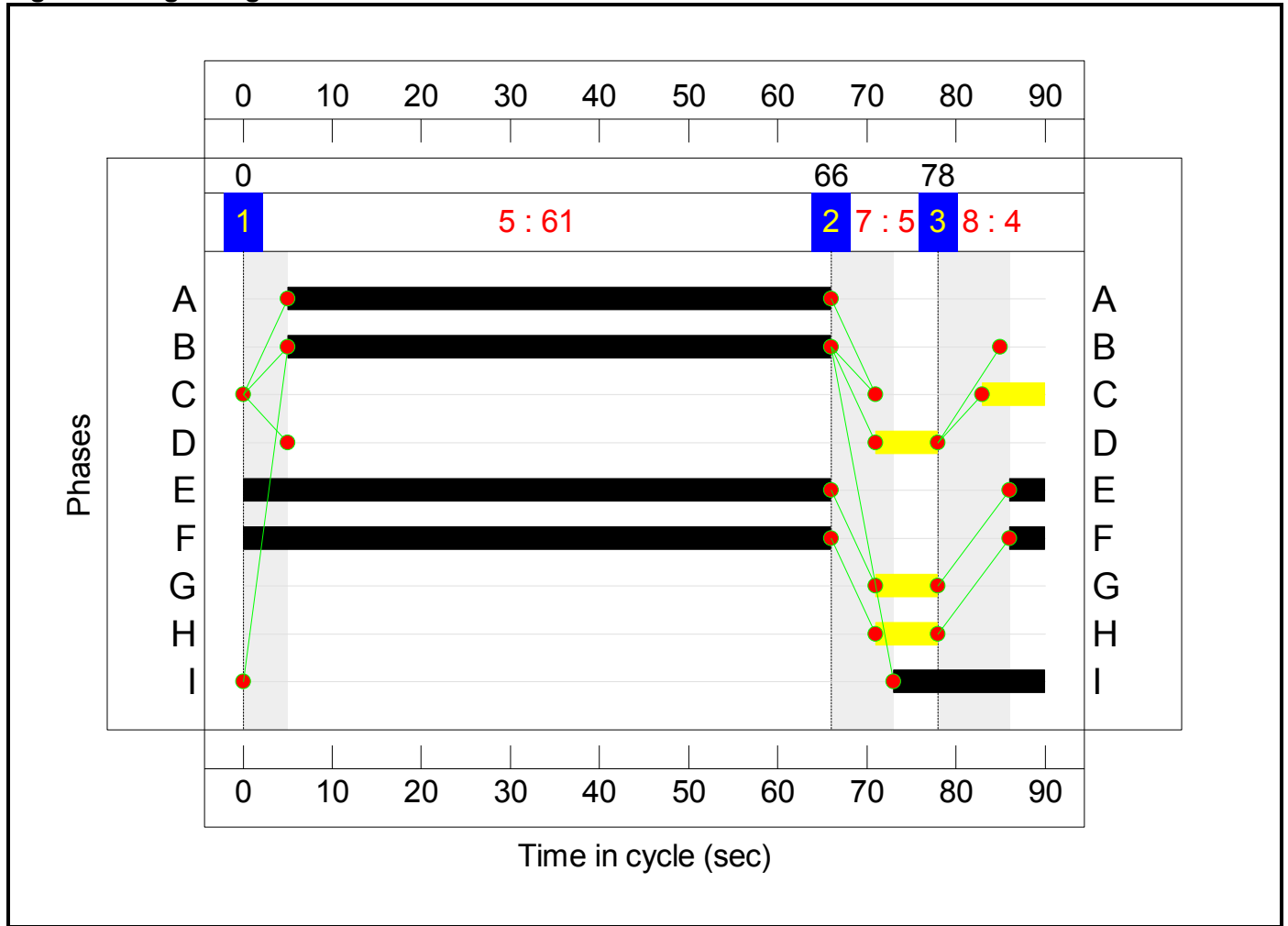
Stage Sequence Diagram



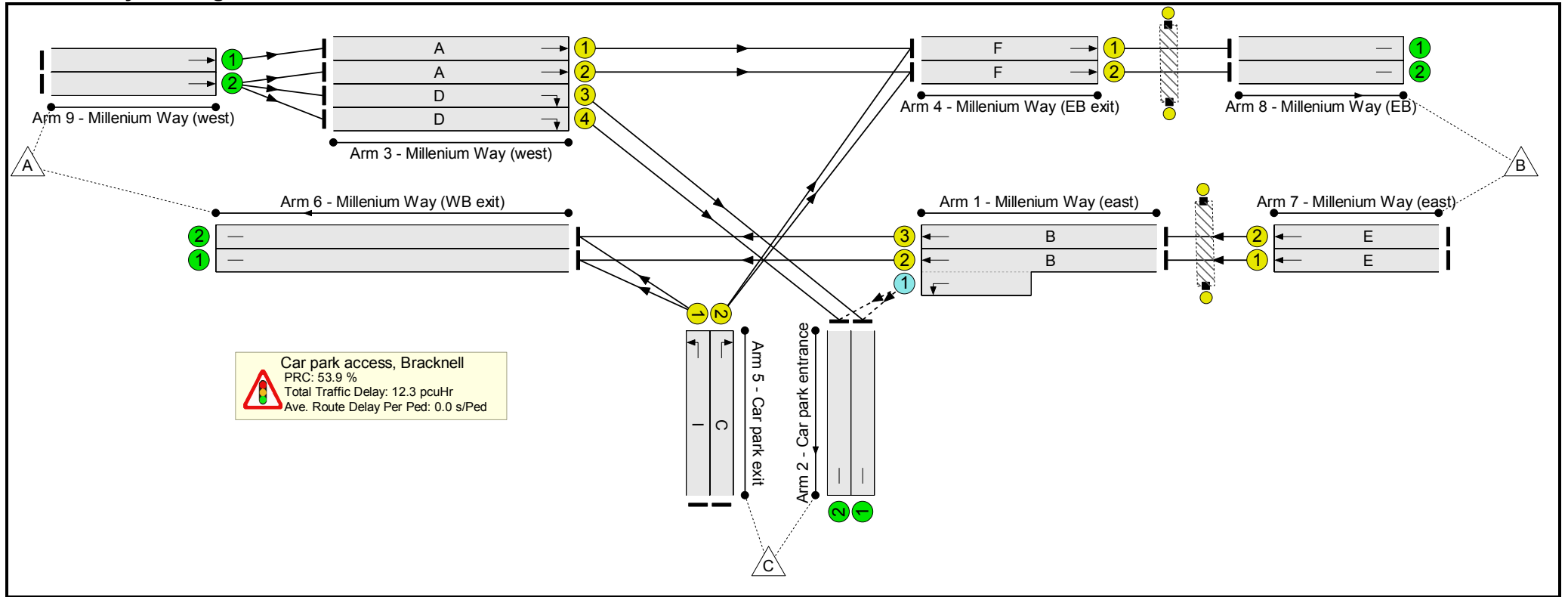
Stage Timings

Stage	1	2	3
Duration	61	5	4
Change Point	0	66	78

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed car park access (Milleneum Way)	-	-	N/A	-	-		-	-	-	-	-	-	58.5%
Car park access, Bracknell	-	-	N/A	-	-		-	-	-	-	-	-	58.5%
1/2+1/1	Millenium Way (east) Left Ahead	U+O	N/A	N/A	B -		1	61	-	626	1915:1665	1333	46.9%
1/3	Millenium Way (east) Ahead	U	N/A	N/A	B		1	61	-	679	2055	1416	48.0%
2/1	Car park entrance	U	N/A	N/A	-		-	-	-	13	1800	1800	0.7%
2/2	Car park entrance	U	N/A	N/A	-		-	-	-	66	Inf	Inf	0.0%
3/1	Millenium Way (west) Ahead	U	N/A	N/A	A		1	61	-	746	1935	1333	56.0%
3/2	Millenium Way (west) Ahead	U	N/A	N/A	A		1	61	-	840	2085	1436	58.5%
3/3	Millenium Way (west) Right	U	N/A	N/A	D		1	7	-	13	1787	159	8.2%
3/4	Millenium Way (west) Right	U	N/A	N/A	D		1	7	-	20	1731	154	13.0%
4/1	Millenium Way (EB exit) Ahead	U	N/A	N/A	F		1	70	-	747	1935	1527	48.9%
4/2	Millenium Way (EB exit) Ahead	U	N/A	N/A	F		1	70	-	842	2085	1645	51.2%
5/1	Car park exit Left	U	N/A	N/A	I		1	17	-	2	1751	350	0.6%
5/2	Car park exit Right	U	N/A	N/A	C		1	7	-	3	1897	169	1.8%
6/1	Millenium Way (WB exit)	U	N/A	N/A	-		-	-	-	580	1915	1915	30.3%
6/2	Millenium Way (WB exit)	U	N/A	N/A	-		-	-	-	681	2055	2055	33.1%

Full Input Data And Results

7/1	Millenium Way (east) Ahead	U	N/A	N/A	E		1	70	-	626	1915	1511	41.4%
7/2	Millenium Way (east) Ahead	U	N/A	N/A	E		1	70	-	679	2055	1621	41.9%
8/1	Millenium Way (EB)	U	N/A	N/A	-		-	-	-	747	1935	1935	38.6%
8/2	Millenium Way (EB)	U	N/A	N/A	-		-	-	-	842	2085	2085	40.4%
9/1	Millenium Way (west) Ahead	U	N/A	N/A	-		-	-	-	746	1935	1935	38.6%
9/2	Millenium Way (west) Ahead	U	N/A	N/A	-		-	-	-	873	2085	2085	41.9%
Ped Link: P1	Unnamed Ped Link	-	-	-			0	0	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	-	-			0	0	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Proposed car park access (Milleneum Way)	-	-	1	45	0	6.4	5.9	0.0	12.3	-	-	-	-
Car park access, Bracknell	-	-	1	45	0	6.4	5.9	0.0	12.3	-	-	-	-
1/2+1/1	626	626	1	45	0	0.5	0.4	-	1.0	5.6	10.2	0.4	10.6
1/3	679	679	-	-	-	0.7	0.5	-	1.1	6.0	7.7	0.5	8.1
2/1	13	13	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
2/2	66	66	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	746	746	-	-	-	1.5	0.6	-	2.1	10.2	9.3	0.6	10.0
3/2	840	840	-	-	-	1.7	0.7	-	2.4	10.3	10.7	0.7	11.4
3/3	13	13	-	-	-	0.1	0.0	-	0.2	50.1	0.3	0.0	0.3
3/4	20	20	-	-	-	0.2	0.1	-	0.3	51.2	0.5	0.1	0.5
4/1	747	747	-	-	-	0.3	0.5	-	0.8	3.6	1.5	0.5	1.9
4/2	842	842	-	-	-	0.3	0.5	-	0.8	3.6	1.6	0.5	2.2
5/1	2	2	-	-	-	0.0	0.0	-	0.0	34.4	0.0	0.0	0.0
5/2	3	3	-	-	-	0.0	0.0	-	0.0	48.7	0.1	0.0	0.1
6/1	580	580	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
6/2	681	681	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
7/1	626	626	-	-	-	0.5	0.4	-	0.9	5.0	4.9	0.4	5.2
7/2	679	679	-	-	-	0.6	0.4	-	0.9	4.9	5.3	0.4	5.6
8/1	747	747	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
8/2	842	842	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
9/1	746	746	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
9/2	873	873	-	-	-	0.0	0.4	-	0.4	1.5	0.0	0.4	0.4
Ped Link: P1	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P2	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf

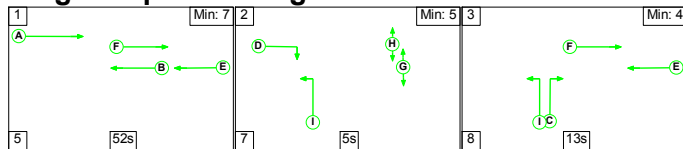
Full Input Data And Results

C1	PRC for Signalled Lanes (%):	53.9	Total Delay for Signalled Lanes (pcuHr):	10.50	Cycle Time (s):	90
	PRC Over All Lanes (%):	53.9	Total Delay Over All Lanes(pcuHr):	12.30		

Full Input Data And Results

Scenario 2: 'PM Peak' (FG2: 'PM Peak', Plan 1: 'Staging Plan No. 1')

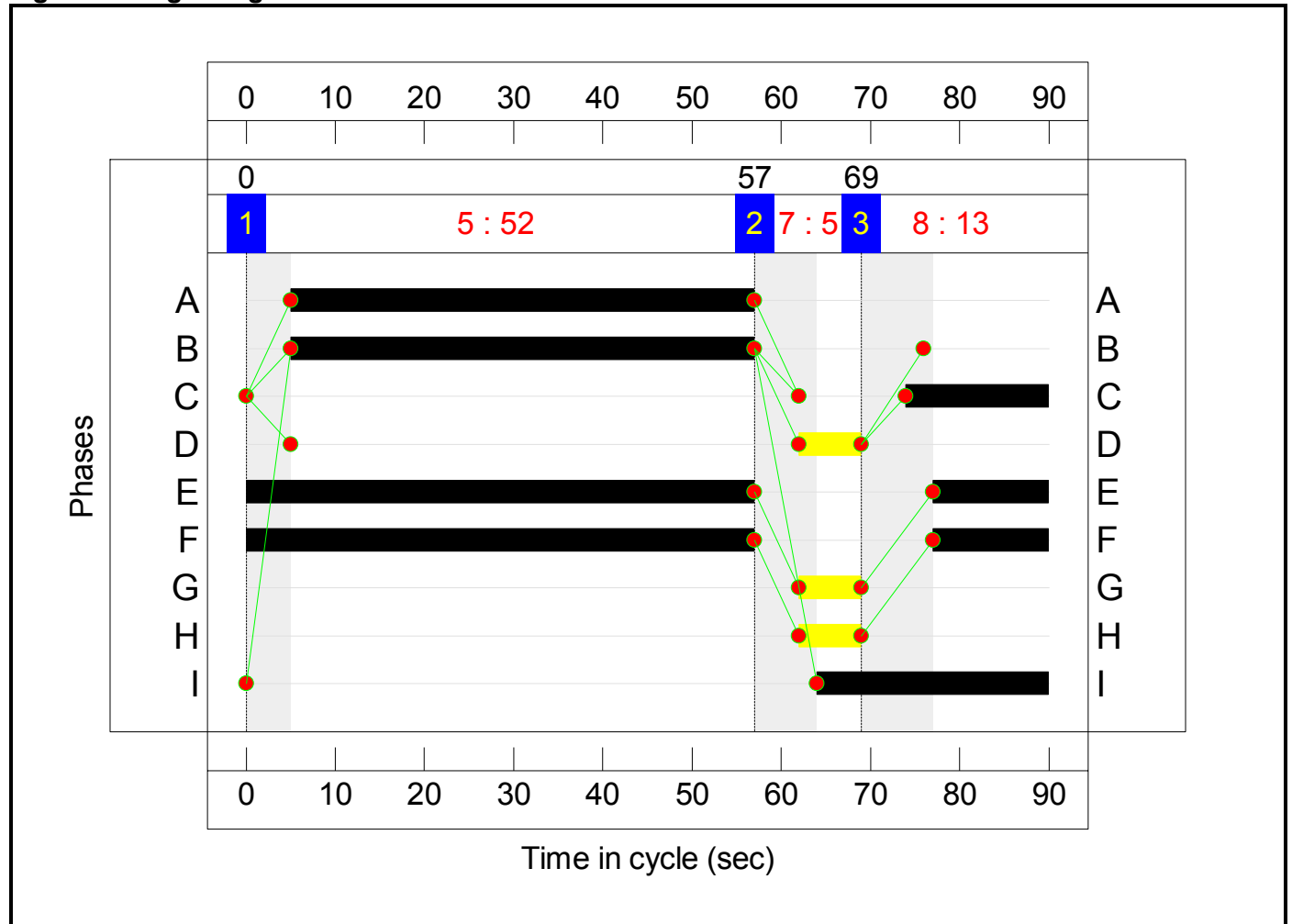
Stage Sequence Diagram



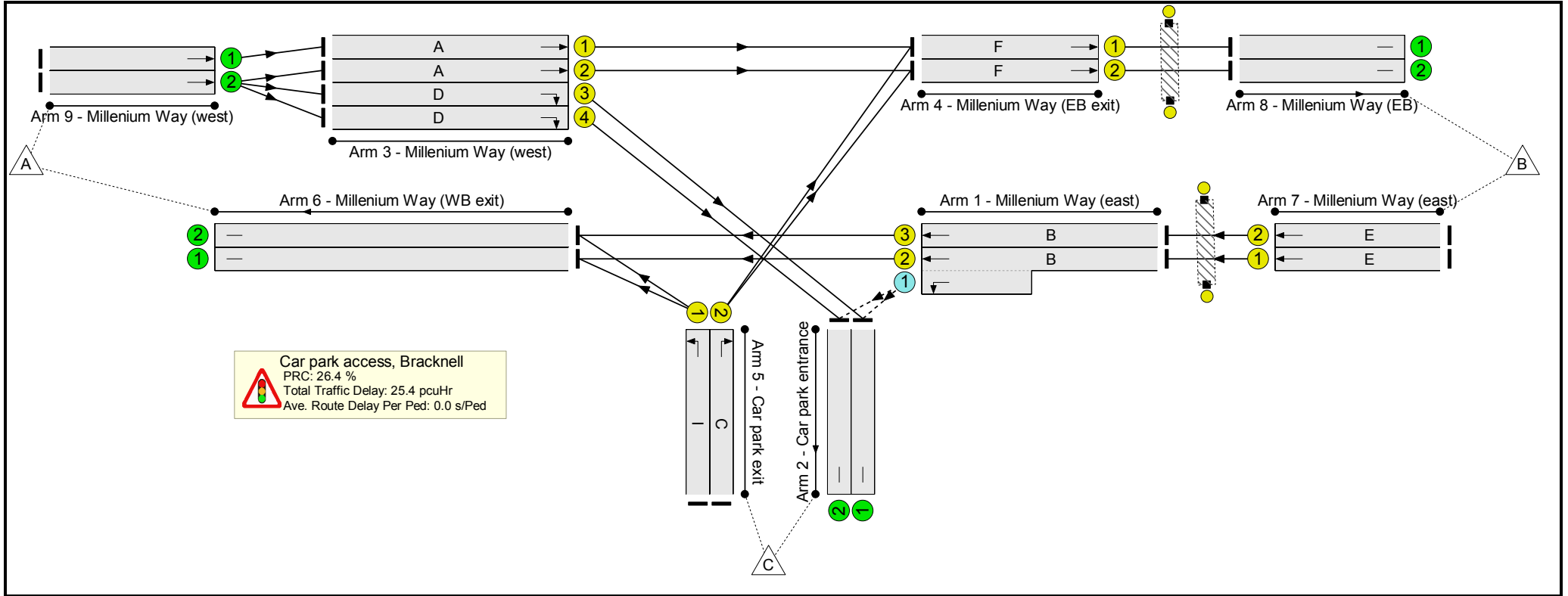
Stage Timings

Stage	1	2	3
Duration	52	5	13
Change Point	0	57	69

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed car park access (Milleneum Way)	-	-	N/A	-	-		-	-	-	-	-	-	71.2%
Car park access, Bracknell	-	-	N/A	-	-		-	-	-	-	-	-	71.2%
1/2+1/1	Millenium Way (east) Left Ahead	U+O	N/A	N/A	B -		1	52	-	677	1915:1665	1187	57.0%
1/3	Millenium Way (east) Ahead	U	N/A	N/A	B		1	52	-	646	2055	1210	53.4%
2/1	Car park entrance	U	N/A	N/A	-		-	-	-	66	1800	1800	3.7%
2/2	Car park entrance	U	N/A	N/A	-		-	-	-	222	Inf	Inf	0.0%
3/1	Millenium Way (west) Ahead	U	N/A	N/A	A		1	52	-	800	1935	1140	70.2%
3/2	Millenium Way (west) Ahead	U	N/A	N/A	A		1	52	-	874	2085	1228	71.2%
3/3	Millenium Way (west) Right	U	N/A	N/A	D		1	7	-	66	1787	159	41.6%
3/4	Millenium Way (west) Right	U	N/A	N/A	D		1	7	-	65	1731	154	42.2%
4/1	Millenium Way (EB exit) Ahead	U	N/A	N/A	F		1	70	-	900	1935	1527	59.0%
4/2	Millenium Way (EB exit) Ahead	U	N/A	N/A	F		1	70	-	1027	2085	1645	62.4%
5/1	Car park exit Left	U	N/A	N/A	I		1	26	-	147	1751	525	28.0%
5/2	Car park exit Right	U	N/A	N/A	C		1	16	-	253	1897	358	70.6%
6/1	Millenium Way (WB exit)	U	N/A	N/A	-		-	-	-	585	1915	1915	30.5%
6/2	Millenium Way (WB exit)	U	N/A	N/A	-		-	-	-	728	2055	2055	35.4%

Full Input Data And Results

7/1	Millenium Way (east) Ahead	U	N/A	N/A	E		1	70	-	677	1915	1511	44.8%
7/2	Millenium Way (east) Ahead	U	N/A	N/A	E		1	70	-	646	2055	1621	39.8%
8/1	Millenium Way (EB)	U	N/A	N/A	-		-	-	-	900	1935	1935	46.5%
8/2	Millenium Way (EB)	U	N/A	N/A	-		-	-	-	1027	2085	2085	49.3%
9/1	Millenium Way (west) Ahead	U	N/A	N/A	-		-	-	-	800	1935	1935	41.3%
9/2	Millenium Way (west) Ahead	U	N/A	N/A	-		-	-	-	1005	2085	2085	48.2%
Ped Link: P1	Unnamed Ped Link	-	-	-			0	0	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	-	-			0	0	-	0	-	0	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Proposed car park access (Milleneum Way)	-	-	2	155	0	15.1	10.2	0.0	25.4	-	-	-	-
Car park access, Bracknell	-	-	2	155	0	15.1	10.2	0.0	25.4	-	-	-	-
1/2+1/1	677	677	2	155	0	1.1	0.7	-	1.7	9.2	11.2	0.7	11.9
1/3	646	646	-	-	-	1.5	0.6	-	2.0	11.3	9.5	0.6	10.1
2/1	66	66	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
2/2	222	222	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	800	800	-	-	-	2.9	1.2	-	4.1	18.2	14.0	1.2	15.2
3/2	874	874	-	-	-	3.2	1.2	-	4.4	18.1	15.3	1.2	16.5
3/3	66	66	-	-	-	0.7	0.4	-	1.1	58.0	1.6	0.4	1.9
3/4	65	65	-	-	-	0.7	0.4	-	1.1	58.9	1.5	0.4	1.9
4/1	900	900	-	-	-	0.3	0.7	-	1.0	4.0	1.6	0.7	2.3
4/2	1027	1027	-	-	-	0.3	0.8	-	1.1	4.0	1.7	0.8	2.5
5/1	147	147	-	-	-	1.0	0.2	-	1.2	28.8	2.8	0.2	3.0
5/2	253	253	-	-	-	2.4	1.2	-	3.6	50.9	5.9	1.2	7.1
6/1	585	585	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2
6/2	728	728	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
7/1	677	677	-	-	-	0.6	0.4	-	1.0	5.3	5.5	0.4	5.9
7/2	646	646	-	-	-	0.5	0.3	-	0.9	4.8	4.8	0.3	5.2
8/1	900	900	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
8/2	1027	1027	-	-	-	0.0	0.5	-	0.5	1.7	0.0	0.5	0.5
9/1	800	800	-	-	-	0.0	0.4	-	0.4	1.6	0.0	0.4	0.4
9/2	1005	1005	-	-	-	0.0	0.5	-	0.5	1.7	0.0	0.5	0.5
Ped Link: P1	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf
Ped Link: P2	0	0	-	-	-	-	-	-	Inf	Inf	-	-	Inf

Full Input Data And Results

C1	PRC for Signalled Lanes (%):	26.4	Total Delay for Signalled Lanes (pcuHr):	23.11	Cycle Time (s):	90
	PRC Over All Lanes (%):	26.4	Total Delay Over All Lanes(pcuHr):	25.36		

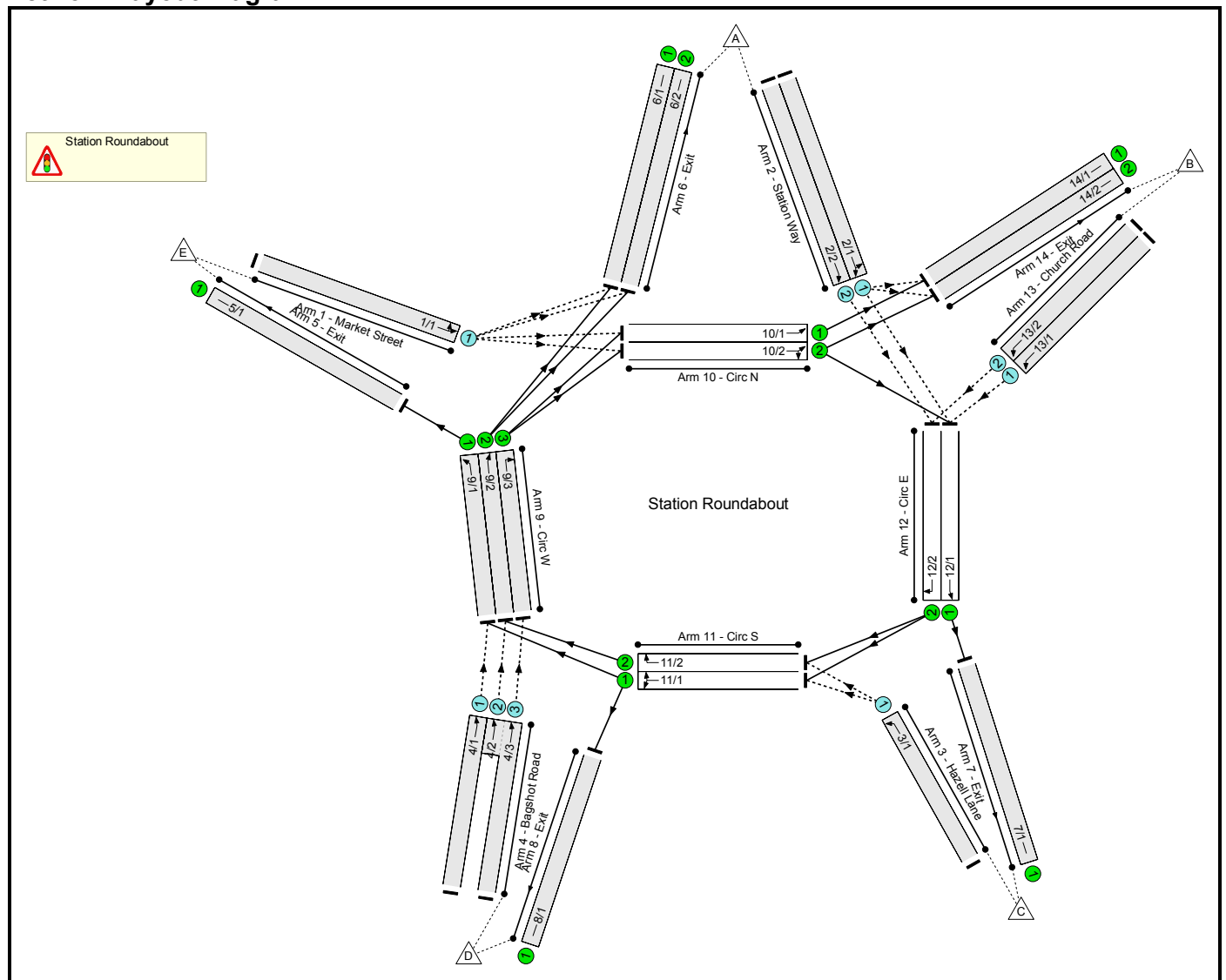
**STATION
ROUNDABOUT
LINSIG
BASE
INFORMATION**

Full Input Data And Results
Full Input Data And Results

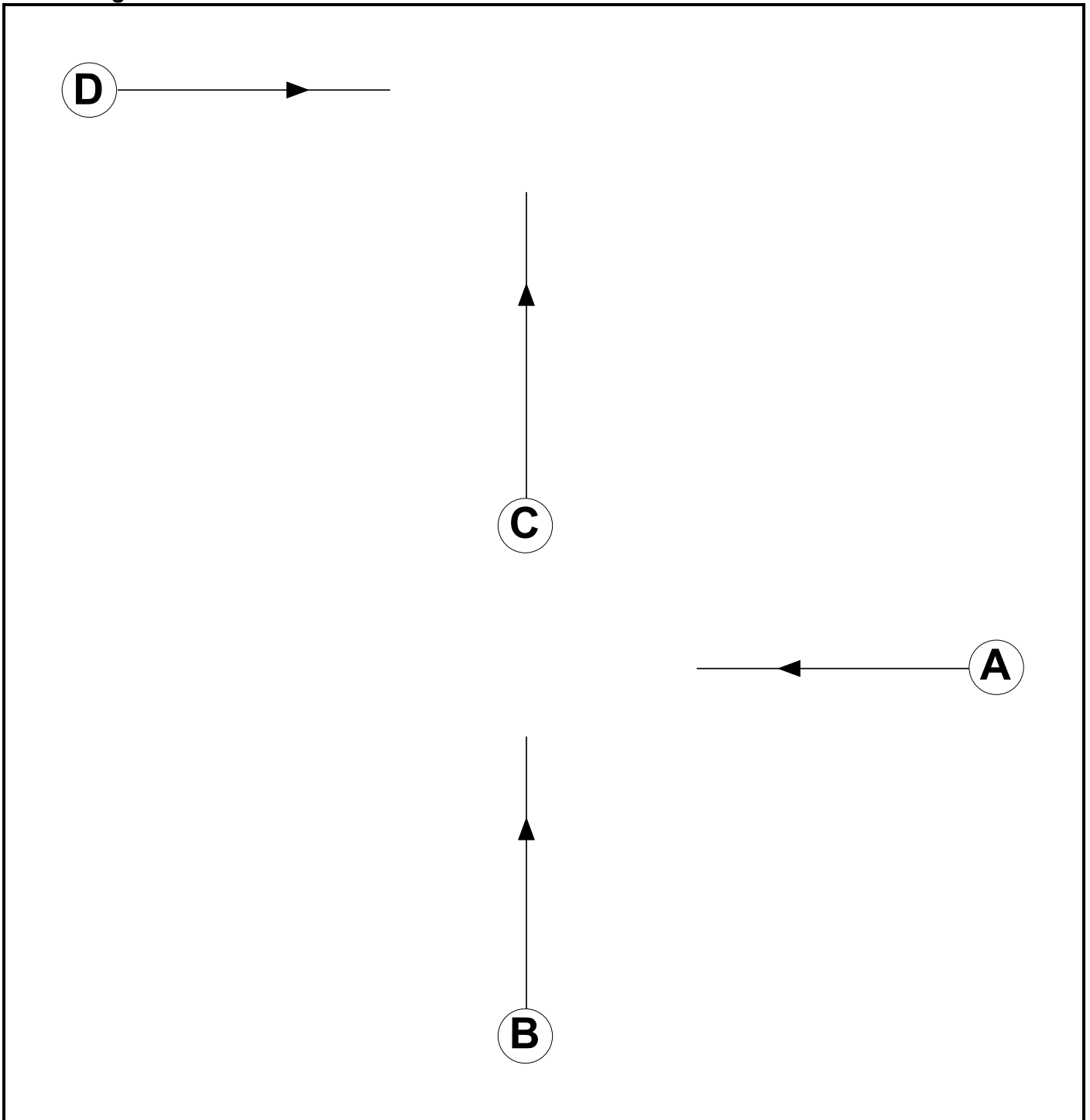
User and Project Details

Project:	
Title:	
Location:	
File name:	20150929 Station Roundabout Bracknell - WSP Base No Signals.lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7
C	Traffic	2		7	7
D	Traffic	2		7	7

Phase Intergrens Matrix

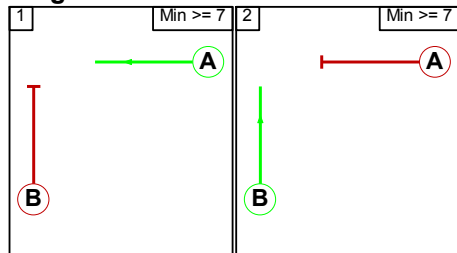
		Starting Phase			
		A	B	C	D
Terminating Phase	A		6	-	-
	B	6		-	-
	C	-	-		6
	D	-	-	6	

Phases in Stage

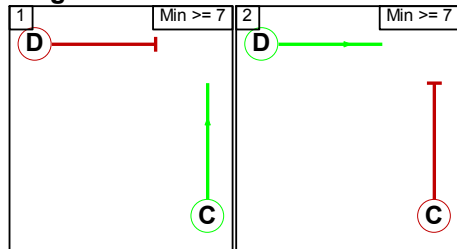
Stream	Stage No.	Phases in Stage
1	1	A
1	2	B
2	1	C
2	2	D

Stage Diagram

Stage Stream: 1



Stage Stream: 2



Phase Delays

Stage Stream: 1

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

Stage Stream: 2

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

Full Input Data And Results

Prohibited Stage Change

Stage Stream: 1

		To Stage	
		1	2
From Stage	1	6	1
	2	1	6

Stage Stream: 2

		To Stage	
		1	2
From Stage	1	6	1
	2	1	6

Full Input Data And Results

Give-Way Lane Input Data

Junction: Station Roundabout											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/1 (Market Street)	6/1 (Left)	715	0	9/2	0.33	All	-	-	-	-	-
				9/3	0.33	All					
	6/2 (Left)	715	0	9/2	0.33	All					
				9/3	0.33	All					
	10/1 (Ahead)	715	0	9/2	0.33	All					
				9/3	0.33	All					
				9/2	0.33	All					
				9/3	0.33	All					
10/2 (Ahead)	715	0	9/2	0.33	All						
			9/3	0.33	All						
2/1 (Station Way)	12/1 (Ahead)	715	0	10/2	0.33	All	-	-	-	-	-
	14/1 (Left)	715	0	10/1	0.33	All					
				10/1	0.33	All					
				10/2	0.33	All					
				10/2	0.33	All					
	14/2 (Left)	715	0	10/2	0.33	All					
10/1				0.33	All						
2/2 (Station Way)	12/2 (Ahead)	715	0	10/2	0.33	All	-	-	-	-	-
				10/1	0.33	All					
3/1 (Hazell Lane)	11/1 (Left)	715	0	12/2	0.33	All	-	-	-	-	-
	11/2 (Left)	715	0	12/2	0.33	All					
4/1 (Bagshot Road)	9/1 (Ahead)	715	0	11/1	0.33	To 9/1 (Right)	-	-	-	-	-
				11/2	0.33	All					
4/2 (Bagshot Road)	9/2 (Ahead)	715	0	11/1	0.33	To 9/1 (Right)	-	-	-	-	-
				11/2	0.33	All					
4/3	9/3 (Ahead)	715	0	11/1	0.33	To 9/1 (Right)	-	-	-	-	-

Full Input Data And Results

(Bagshot Road)				11/2	0.33	All					
				10/2	0.33	To 12/1 (Right)					
13/1 (Church Road)	12/1 (Left)	715	0	2/1	0.33	To 12/1 (Ahead)	-	-	-	-	-
				2/2	0.33	All					
				10/2	0.33	To 12/1 (Right)					
13/2 (Church Road)	12/2 (Left)	715	0	2/1	0.33	To 12/1 (Ahead)	-	-	-	-	-
				2/2	0.33	All					

Full Input Data And Results

Lane Input Data

Junction: Station 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 (Market Street)	O		2	3	60.0	Geom	-	5.00	0.00	Y	Arm 6 Left	30.00
											Arm 10 Ahead	30.00
2/1 (Station Way)	O		2	3	60.0	Geom	-	3.50	0.00	Y	Arm 12 Ahead	25.00
											Arm 14 Left	20.00
2/2 (Station Way)	O		2	3	60.0	Geom	-	3.50	0.00	Y	Arm 12 Ahead	25.00
3/1 (Hazell Lane)	O		2	3	60.0	Geom	-	4.00	0.00	Y	Arm 11 Left	16.00
4/1 (Bagshot Road)	O		2	3	60.0	Geom	-	3.50	0.00	Y	Arm 9 Ahead	40.00
4/2 (Bagshot Road)	O		2	3	3.0	Geom	-	3.50	0.00	Y	Arm 9 Ahead	40.00
4/3 (Bagshot Road)	O		2	3	60.0	Geom	-	3.50	0.00	Y	Arm 9 Ahead	Inf
5/1 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/2 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
9/1 (Circ W)	U		2	3	60.0	Inf	-	-	-	-	-	-
9/2 (Circ W)	U		2	3	16.5	Geom	-	3.20	0.00	Y	Arm 6 Ahead	26.00
9/3 (Circ W)	U		2	3	60.0	Geom	-	3.25	0.00	Y	Arm 10 Right	26.00
10/1 (Circ N)	U		2	3	60.0	Inf	-	-	-	-	-	-
10/2 (Circ N)	U		2	3	60.0	Inf	-	-	-	-	-	-
11/1 (Circ S)	U		2	3	60.0	Inf	-	-	-	-	-	-
11/2 (Circ S)	U		2	3	60.0	Geom	-	3.50	0.00	Y	Arm 9 Right	14.00

Full Input Data And Results

12/1 (Circ E)	U		2	3	60.0	Inf	-	-	-	-	-	-
12/2 (Circ E)	U		2	3	60.0	Inf	-	-	-	-	-	-
13/1 (Church Road)	O		2	3	60.0	Geom	-	3.50	0.00	Y	Arm 12 Left	Inf
13/2 (Church Road)	O		2	3	60.0	Geom	-	3.50	0.00	Y	Arm 12 Left	Inf
14/1 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
14/2 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM 2016'	08:00	09:00	01:00	
2: 'PM 2016'	17:00	18:00	01:00	
3: 'SAT 2016'	15:00	16:00	01:00	

Scenario 1: 'AM 2016' (FG1: 'AM 2016', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination						
	A	B	C	D	E	Tot.	
Origin	A	0	6	0	20	9	35
	B	58	0	9	512	223	802
	C	2	6	0	19	8	35
	D	187	546	29	0	722	1484
	E	54	157	8	475	0	694
	Tot.	301	715	46	1026	962	3050

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: AM 2016
Junction: Station Roundabout	
1/1	219
2/1	6
2/2	29
3/1	29
4/1	722
4/2 (short)	187
4/3 (with short)	762(In) 575(Out)
5/1	962
6/1	150
6/2	151
7/1	46
8/1	551
9/1	962
9/2	247
9/3	575
10/1	352
10/2	388
11/1	791
11/2	60
12/1	46
12/2	822
13/1	9
13/2	793
14/1	355
14/2	354

Full Input Data And Results

Lane Saturation Flows

Junction: Station 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 (Market Street)	5.00	0.00	Y	Arm 6 Left	30.00	24.7 %	2014	2014
				Arm 10 Ahead	30.00	75.3 %		
2/1 (Station Way)	3.50	0.00	Y	Arm 12 Ahead	25.00	0.0 %	1828	1828
				Arm 14 Left	20.00	100.0 %		
2/2 (Station Way)	3.50	0.00	Y	Arm 12 Ahead	25.00	100.0 %	1854	1854
3/1 (Hazell Lane)	4.00	0.00	Y	Arm 11 Left	16.00	100.0 %	1842	1842
4/1 (Bagshot Road)	3.50	0.00	Y	Arm 9 Ahead	40.00	100.0 %	1894	1894
4/2 (Bagshot Road)	3.50	0.00	Y	Arm 9 Ahead	40.00	100.0 %	1894	1894
4/3 (Bagshot Road)	3.50	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1965	1965
5/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (Circ W Lane 1)	Infinite Saturation Flow						Inf	Inf
9/2 (Circ W)	3.20	0.00	Y	Arm 6 Ahead	26.00	100.0 %	1829	1829
9/3 (Circ W)	3.25	0.00	Y	Arm 10 Right	26.00	100.0 %	1834	1834
10/1 (Circ N Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (Circ N Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1 (Circ S Lane 1)	Infinite Saturation Flow						Inf	Inf
11/2 (Circ S)	3.50	0.00	Y	Arm 9 Right	14.00	100.0 %	1775	1775
12/1 (Circ E Lane 1)	Infinite Saturation Flow						Inf	Inf
12/2 (Circ E Lane 2)	Infinite Saturation Flow						Inf	Inf
13/1 (Church Road)	3.50	0.00	Y	Arm 12 Left	Inf	100.0 %	1965	1965
13/2 (Church Road)	3.50	0.00	Y	Arm 12 Left	Inf	100.0 %	1965	1965

Full Input Data And Results

14/1 (Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
14/2 (Exit Lane 2)	Infinite Saturation Flow	Inf	Inf

Scenario 2: 'PM 2016' (FG2: 'PM 2016', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	47	1	149	36	233
	B	25	0	3	495	120	643
	C	1	4	0	11	3	19
	D	102	635	14	0	490	1241
	E	51	318	7	1019	0	1395
	Tot.	179	1004	25	1674	649	3531

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: PM 2016
Junction: Station Roundabout	
1/1	376
2/1	48
2/2	185
3/1	15
4/1	490
4/2 (short)	102
4/3 (with short)	751(In) 649(Out)
5/1	649
6/1	88
6/2	91
7/1	25
8/1	655
9/1	649
9/2	128
9/3	649
10/1	476
10/2	498
11/1	814
11/2	26
12/1	25
12/2	825
13/1	3
13/2	640
14/1	499
14/2	501

Full Input Data And Results

Lane Saturation Flows

Junction: Station 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 (Market Street)	5.00	0.00	Y	Arm 6 Left	30.00	13.6 %	2014	2014
				Arm 10 Ahead	30.00	86.4 %		
2/1 (Station Way)	3.50	0.00	Y	Arm 12 Ahead	25.00	2.1 %	1828	1828
				Arm 14 Left	20.00	97.9 %		
2/2 (Station Way)	3.50	0.00	Y	Arm 12 Ahead	25.00	100.0 %	1854	1854
3/1 (Hazell Lane)	4.00	0.00	Y	Arm 11 Left	16.00	100.0 %	1842	1842
4/1 (Bagshot Road)	3.50	0.00	Y	Arm 9 Ahead	40.00	100.0 %	1894	1894
4/2 (Bagshot Road)	3.50	0.00	Y	Arm 9 Ahead	40.00	100.0 %	1894	1894
4/3 (Bagshot Road)	3.50	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1965	1965
5/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (Circ W Lane 1)	Infinite Saturation Flow						Inf	Inf
9/2 (Circ W)	3.20	0.00	Y	Arm 6 Ahead	26.00	100.0 %	1829	1829
9/3 (Circ W)	3.25	0.00	Y	Arm 10 Right	26.00	100.0 %	1834	1834
10/1 (Circ N Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (Circ N Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1 (Circ S Lane 1)	Infinite Saturation Flow						Inf	Inf
11/2 (Circ S)	3.50	0.00	Y	Arm 9 Right	14.00	100.0 %	1775	1775
12/1 (Circ E Lane 1)	Infinite Saturation Flow						Inf	Inf
12/2 (Circ E Lane 2)	Infinite Saturation Flow						Inf	Inf
13/1 (Church Road)	3.50	0.00	Y	Arm 12 Left	Inf	100.0 %	1965	1965
13/2 (Church Road)	3.50	0.00	Y	Arm 12 Left	Inf	100.0 %	1965	1965

Full Input Data And Results

14/1 (Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
14/2 (Exit Lane 2)	Infinite Saturation Flow	Inf	Inf

Scenario 3: 'SAT 2016' (FG3: 'SAT 2016', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	28	1	125	21	175
	B	43	0	6	570	96	715
	C	2	5	0	25	4	36
	D	242	711	32	0	538	1523
	E	64	187	8	838	0	1097
	Tot.	351	931	47	1558	659	3546

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: SAT 2016
Junction: Station Roundabout	
1/1	259
2/1	29
2/2	146
3/1	31
4/1	538
4/2 (short)	242
4/3 (with short)	985(In) 743(Out)
5/1	659
6/1	175
6/2	176
7/1	47
8/1	720
9/1	659
9/2	287
9/3	743
10/1	449
10/2	489
11/1	841
11/2	45
12/1	47
12/2	855
13/1	6
13/2	709
14/1	463
14/2	463

Full Input Data And Results

Lane Saturation Flows

Junction: Station 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 (Market Street)	5.00	0.00	Y	Arm 6 Left	30.00	24.7 %	2014	2014
				Arm 10 Ahead	30.00	75.3 %		
2/1 (Station Way)	3.50	0.00	Y	Arm 12 Ahead	25.00	3.4 %	1829	1829
				Arm 14 Left	20.00	96.6 %		
2/2 (Station Way)	3.50	0.00	Y	Arm 12 Ahead	25.00	100.0 %	1854	1854
3/1 (Hazell Lane)	4.00	0.00	Y	Arm 11 Left	16.00	100.0 %	1842	1842
4/1 (Bagshot Road)	3.50	0.00	Y	Arm 9 Ahead	40.00	100.0 %	1894	1894
4/2 (Bagshot Road)	3.50	0.00	Y	Arm 9 Ahead	40.00	100.0 %	1894	1894
4/3 (Bagshot Road)	3.50	0.00	Y	Arm 9 Ahead	Inf	100.0 %	1965	1965
5/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (Circ W Lane 1)	Infinite Saturation Flow						Inf	Inf
9/2 (Circ W)	3.20	0.00	Y	Arm 6 Ahead	26.00	100.0 %	1829	1829
9/3 (Circ W)	3.25	0.00	Y	Arm 10 Right	26.00	100.0 %	1834	1834
10/1 (Circ N Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (Circ N Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1 (Circ S Lane 1)	Infinite Saturation Flow						Inf	Inf
11/2 (Circ S)	3.50	0.00	Y	Arm 9 Right	14.00	100.0 %	1775	1775
12/1 (Circ E Lane 1)	Infinite Saturation Flow						Inf	Inf
12/2 (Circ E Lane 2)	Infinite Saturation Flow						Inf	Inf
13/1 (Church Road)	3.50	0.00	Y	Arm 12 Left	Inf	100.0 %	1965	1965
13/2 (Church Road)	3.50	0.00	Y	Arm 12 Left	Inf	100.0 %	1965	1965

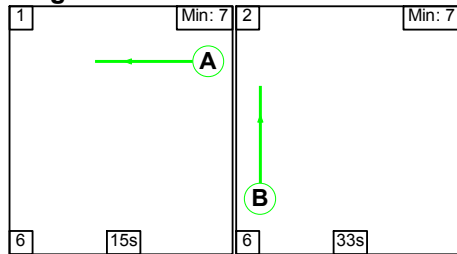
Full Input Data And Results

14/1 (Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
14/2 (Exit Lane 2)	Infinite Saturation Flow	Inf	Inf

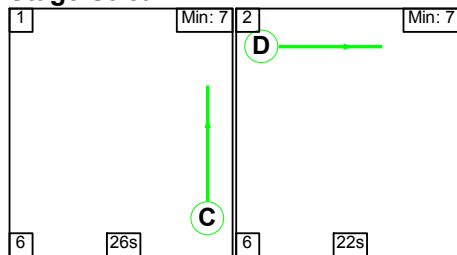
Scenario 1: 'AM 2016' (FG1: 'AM 2016', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

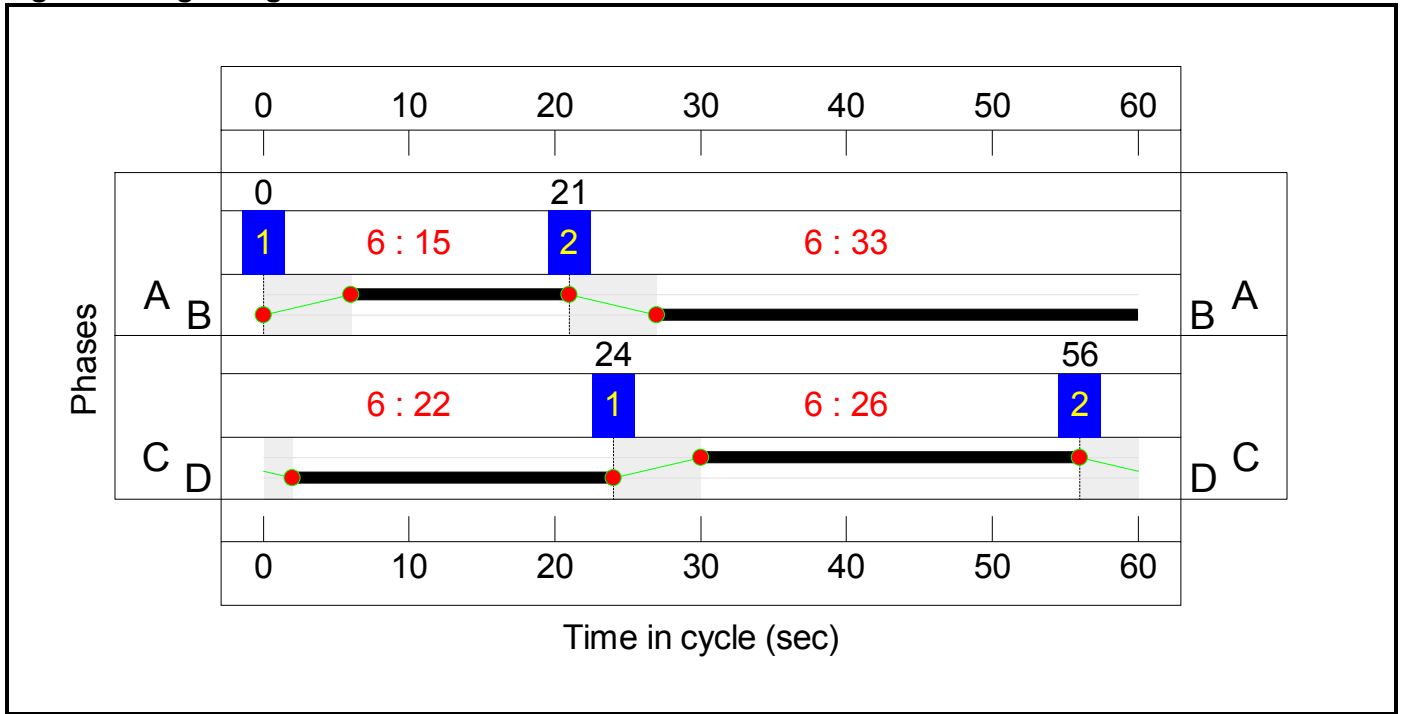
Stage Stream: 1

Stage	1	2
Duration	15	33
Change Point	0	21

Stage Stream: 2


Stage	1	2
Duration	26	22
Change Point	24	56

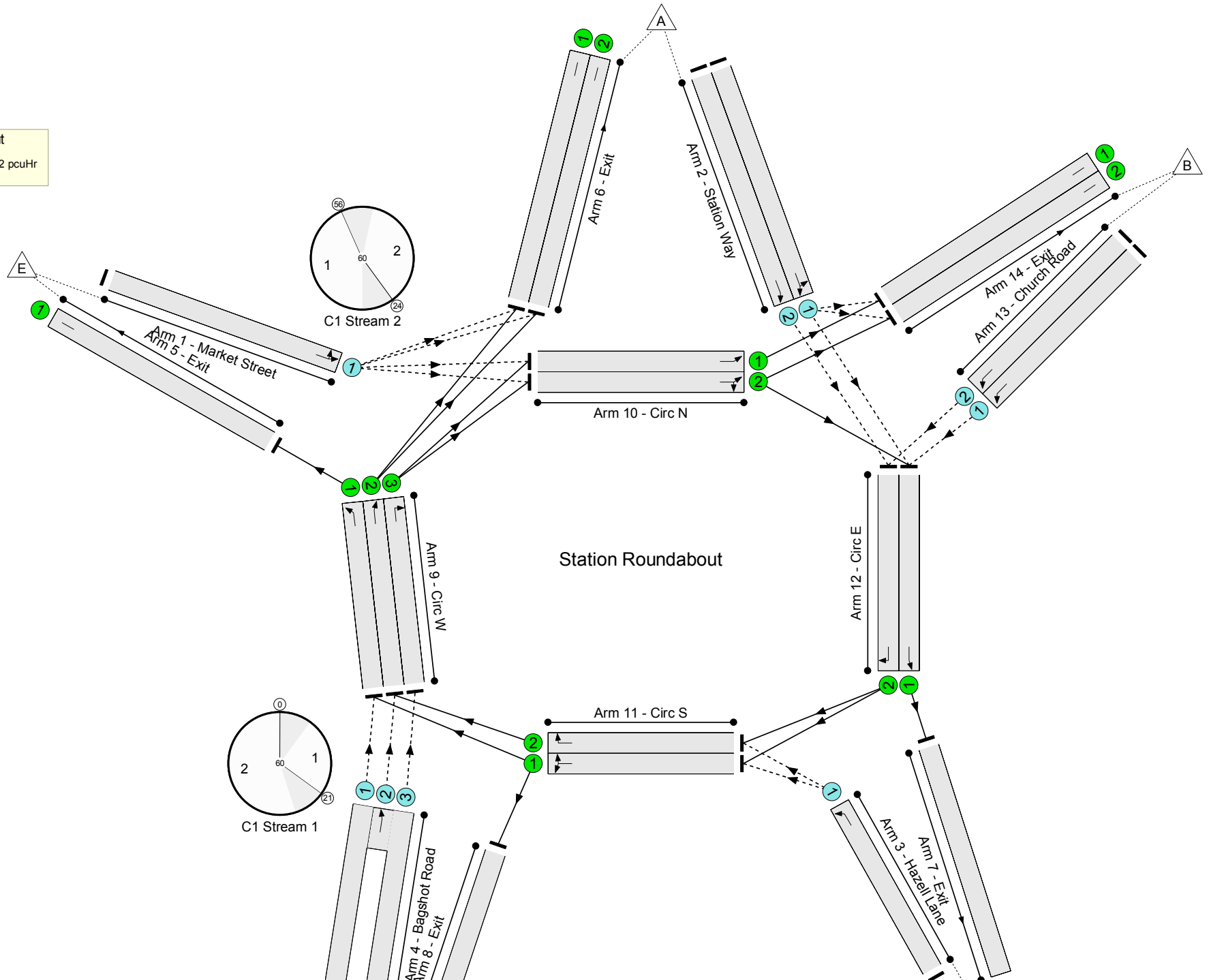
Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results

 **Station Roundabout**
PRC: -27.8 %
Total Traffic Delay: 118.2 pcuHr



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	115.0%
Station Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	115.0%
1/1	Market Street Left Ahead	O	N/A	N/A	-		-	-	-	219	2014	444	49.4%
2/1	Station Way Ahead Left	O	N/A	N/A	-		-	-	-	6	1828	471	1.3%
2/2	Station Way Ahead	O	N/A	N/A	-		-	-	-	29	1854	471	6.2%
3/1	Hazell Lane Left	O	N/A	N/A	-		-	-	-	29	1842	477	6.1%
4/1	Bagshot Road Ahead	O	N/A	N/A	-		-	-	-	722	1894	628	115.0%
4/3+4/2	Bagshot Road Ahead	O	N/A	N/A	-		-	-	-	762	1965:1894	832	91.6%
5/1	Exit	U	N/A	N/A	-		-	-	-	962	Inf	Inf	0.0%
6/1	Exit	U	N/A	N/A	-		-	-	-	150	Inf	Inf	0.0%
6/2	Exit	U	N/A	N/A	-		-	-	-	151	Inf	Inf	0.0%
7/1	Exit	U	N/A	N/A	-		-	-	-	46	Inf	Inf	0.0%
8/1	Exit	U	N/A	N/A	-		-	-	-	551	Inf	Inf	0.0%
9/1	Circ W Left	U	N/A	N/A	-		-	-	-	962	Inf	Inf	0.0%
9/2	Circ W Ahead	U	N/A	N/A	-		-	-	-	247	1829	1829	13.1%
9/3	Circ W Right	U	N/A	N/A	-		-	-	-	575	1834	1834	31.4%
10/1	Circ N Ahead	U	N/A	N/A	-		-	-	-	352	Inf	Inf	0.0%
10/2	Circ N Right Ahead	U	N/A	N/A	-		-	-	-	388	Inf	Inf	0.0%
11/1	Circ S Left Right	U	N/A	N/A	-		-	-	-	791	Inf	Inf	0.0%
11/2	Circ S Right	U	N/A	N/A	-		-	-	-	60	1775	1775	3.0%
12/1	Circ E Ahead	U	N/A	N/A	-		-	-	-	46	Inf	Inf	0.0%
12/2	Circ E Right	U	N/A	N/A	-		-	-	-	822	Inf	Inf	0.0%

Full Input Data And Results

	Church Road Left	O	N/A	N/A	-		-	-	-	9	1965	693	1.3%
13/2	Church Road Left	O	N/A	N/A	-		-	-	-	793	1965	693	114.4%
14/1	Exit	U	N/A	N/A	-		-	-	-	355	Inf	Inf	0.0%
14/2	Exit	U	N/A	N/A	-		-	-	-	354	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	3137	0	0	8.1	110.0	0.0	118.2	-	-	-	-
Station Roundabout	-	-	3137	0	0	8.1	110.0	0.0	118.2	-	-	-	-
1/1	219	219	219	0	0	0.0	0.5	-	0.5	8.0	0.0	0.5	0.5
2/1	6	6	6	0	0	0.0	0.0	-	0.0	3.9	0.0	0.0	0.0
2/2	29	29	29	0	0	0.0	0.0	-	0.0	4.1	0.0	0.0	0.0
3/1	29	29	29	0	0	0.0	0.0	-	0.0	4.0	0.0	0.0	0.0
4/1	722	628	628	0	0	3.9	50.7	-	54.7	272.7	36.1	50.7	86.8
4/3+4/2	762	762	1524	0	0	0.0	4.8	-	4.8	22.7	0.0	4.8	4.8
5/1	840	840	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	146	146	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	147	147	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	46	46	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	487	487	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	840	840	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	240	240	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
9/3	575	575	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2
10/1	352	352	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	388	388	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	698	698	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	53	53	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
12/1	46	46	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	722	722	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/1	9	9	9	0	0	0.0	0.0	-	0.0	2.6	0.0	0.0	0.0
13/2	793	693	693	0	0	4.2	53.6	-	57.8	262.3	39.7	53.6	93.3
14/1	355	355	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/2	354	354	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

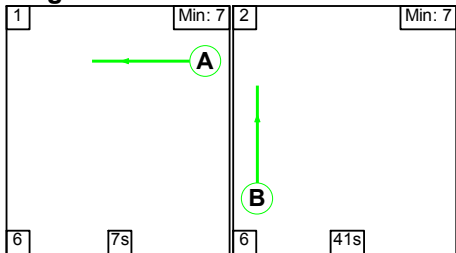
C1	Stream: 1 PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00	Cycle Time (s):	60
C1	Stream: 2 PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00	Cycle Time (s):	60
	PRC Over All Lanes (%):	-27.8	Total Delay Over All Lanes(pcuHr):	118.15		

Full Input Data And Results

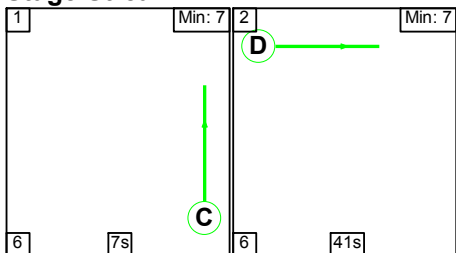
Scenario 2: 'PM 2016' (FG2: 'PM 2016', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

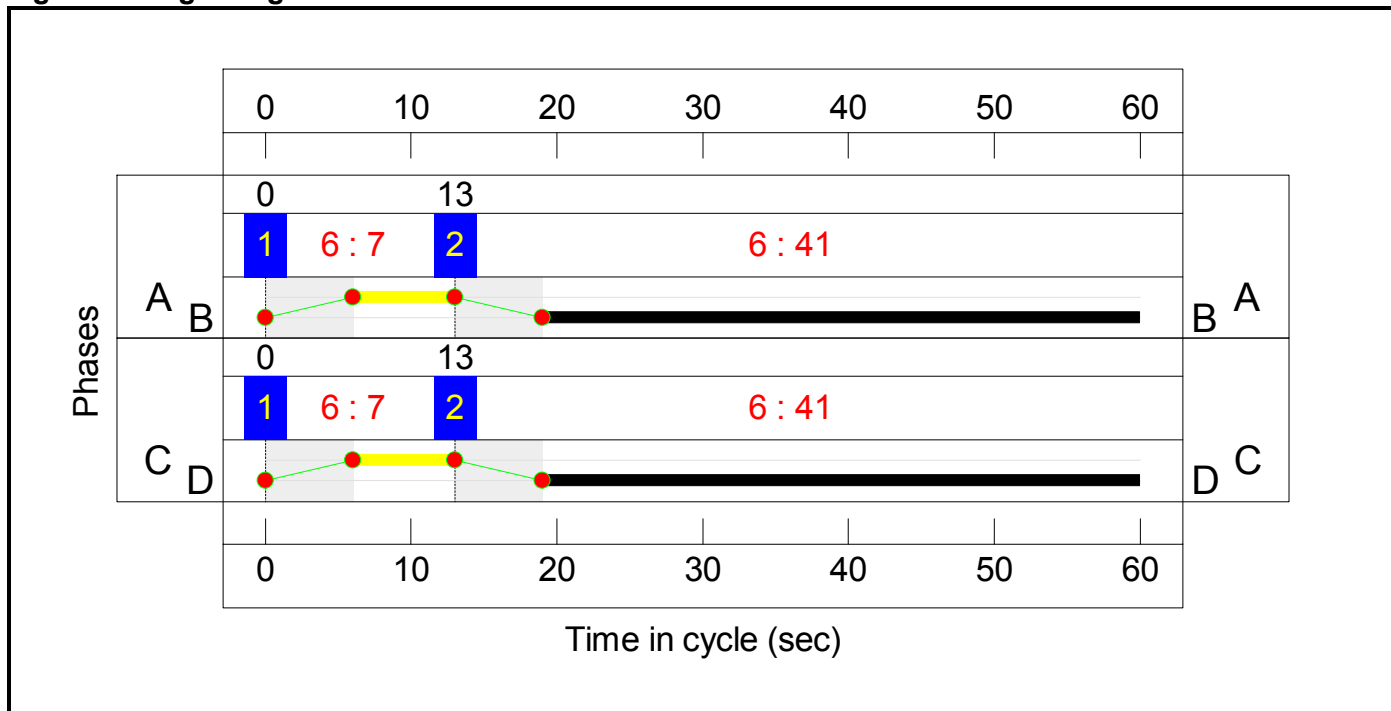
Stage Stream: 1

Stage	1	2
Duration	7	41
Change Point	0	13

Stage Stream: 2

Stage	1	2
Duration	7	41
Change Point	0	13

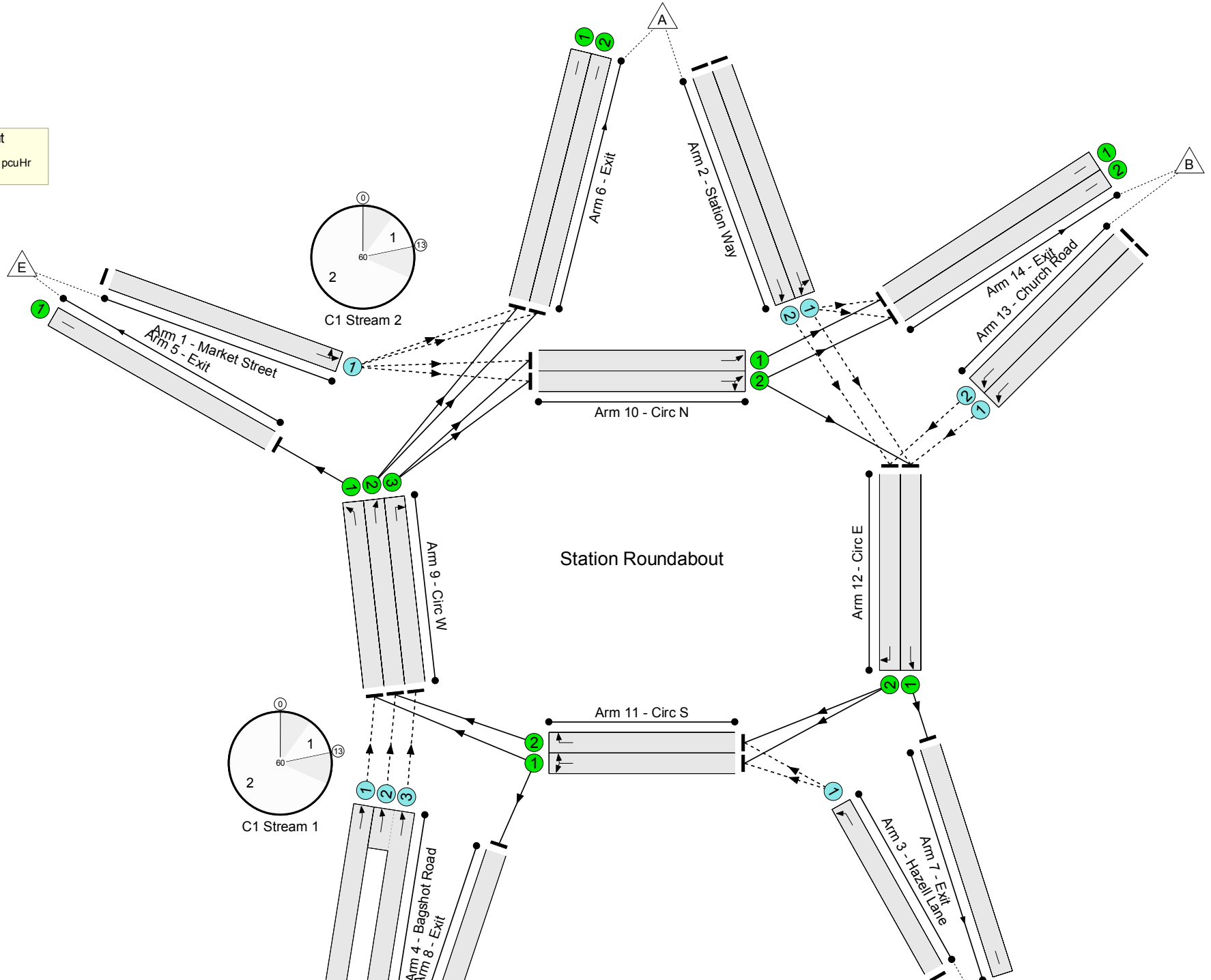
Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results

 **Station Roundabout**
PRC: -10.3 %
Total Traffic Delay: 27.9 pcuHr



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	99.2%
Station Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	99.2%
1/1	Market Street Left Ahead	O	N/A	N/A	-		-	-	-	376	2014	459	82.0%
2/1	Station Way Ahead Left	O	N/A	N/A	-		-	-	-	48	1828	394	12.2%
2/2	Station Way Ahead	O	N/A	N/A	-		-	-	-	185	1854	394	47.0%
3/1	Hazell Lane Left	O	N/A	N/A	-		-	-	-	15	1842	443	3.4%
4/1	Bagshot Road Ahead	O	N/A	N/A	-		-	-	-	490	1894	654	74.9%
4/3+4/2	Bagshot Road Ahead	O	N/A	N/A	-		-	-	-	751	1965:1894	757	99.2%
5/1	Exit	U	N/A	N/A	-		-	-	-	649	Inf	Inf	0.0%
6/1	Exit	U	N/A	N/A	-		-	-	-	88	Inf	Inf	0.0%
6/2	Exit	U	N/A	N/A	-		-	-	-	91	Inf	Inf	0.0%
7/1	Exit	U	N/A	N/A	-		-	-	-	25	Inf	Inf	0.0%
8/1	Exit	U	N/A	N/A	-		-	-	-	655	Inf	Inf	0.0%
9/1	Circ W Left	U	N/A	N/A	-		-	-	-	649	Inf	Inf	0.0%
9/2	Circ W Ahead	U	N/A	N/A	-		-	-	-	128	1829	1829	7.0%
9/3	Circ W Right	U	N/A	N/A	-		-	-	-	649	1834	1834	35.4%
10/1	Circ N Ahead	U	N/A	N/A	-		-	-	-	476	Inf	Inf	0.0%
10/2	Circ N Right Ahead	U	N/A	N/A	-		-	-	-	498	Inf	Inf	0.0%
11/1	Circ S Left Right	U	N/A	N/A	-		-	-	-	814	Inf	Inf	0.0%
11/2	Circ S Right	U	N/A	N/A	-		-	-	-	26	1775	1775	1.5%
12/1	Circ E Ahead	U	N/A	N/A	-		-	-	-	25	Inf	Inf	0.0%
12/2	Circ E Right	U	N/A	N/A	-		-	-	-	825	Inf	Inf	0.0%

Full Input Data And Results

13/1	Church Road Left	O	N/A	N/A	-	-	-	-	3	1965	647	0.5%
13/2	Church Road Left	O	N/A	N/A	-	-	-	-	640	1965	647	99.0%
14/1	Exit	U	N/A	N/A	-	-	-	-	499	Inf	Inf	0.0%
14/2	Exit	U	N/A	N/A	-	-	-	-	501	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	3259	0	0	0.0	27.9	0.0	27.9	-	-	-	-
Station Roundabout	-	-	3259	0	0	0.0	27.9	0.0	27.9	-	-	-	-
1/1	376	376	376	0	0	0.0	2.2	-	2.2	20.7	0.0	2.2	2.2
2/1	48	48	48	0	0	0.0	0.1	-	0.1	5.2	0.0	0.1	0.1
2/2	185	185	185	0	0	0.0	0.4	-	0.4	8.6	0.0	0.4	0.4
3/1	15	15	15	0	0	0.0	0.0	-	0.0	4.2	0.0	0.0	0.0
4/1	490	490	490	0	0	0.0	1.5	-	1.5	10.8	0.0	1.5	1.5
4/3+4/2	751	751	1502	0	0	0.0	12.4	-	12.4	59.2	0.0	12.4	12.4
5/1	649	649	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	88	88	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	91	91	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	25	25	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	655	655	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	649	649	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	128	128	-	-	-	0.0	0.0	-	0.0	1.1	0.0	0.0	0.0
9/3	649	649	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
10/1	476	476	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	498	498	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	814	814	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	26	26	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
12/1	25	25	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	825	825	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/1	3	3	3	0	0	0.0	0.0	-	0.0	2.8	0.0	0.0	0.0
13/2	640	640	640	0	0	0.0	11.1	-	11.1	62.4	0.0	11.1	11.1
14/1	499	499	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/2	501	501	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

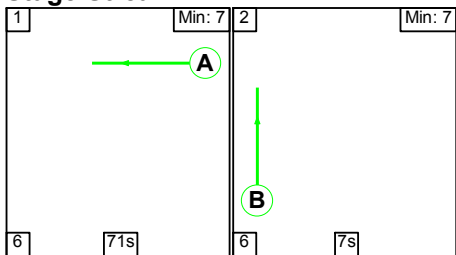
C1	Stream: 1 PRC for Signalled Lanes (%)	0.0	Total Delay for Signalled Lanes (pcuHr)	0.00	Cycle Time (s)	60
C1	Stream: 2 PRC for Signalled Lanes (%)	0.0	Total Delay for Signalled Lanes (pcuHr)	0.00	Cycle Time (s)	60
	PRC Over All Lanes (%)	-10.3	Total Delay Over All Lanes(pcuHr)	27.93		

Full Input Data And Results

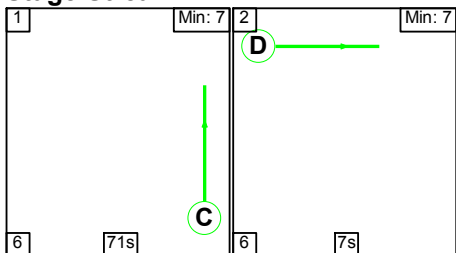
Scenario 3: 'SAT 2016' (FG3: 'SAT 2016', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

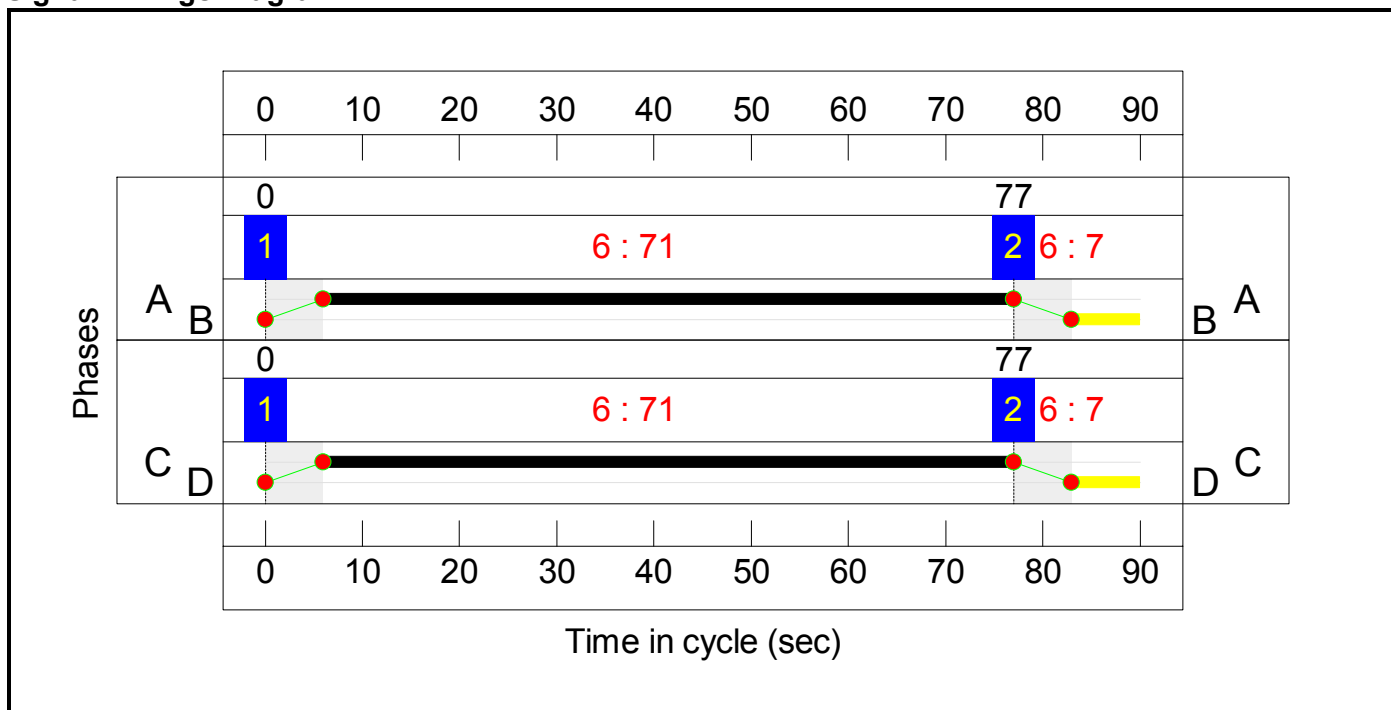
Stage Stream: 1

Stage	1	2
Duration	71	7
Change Point	0	77

Stage Stream: 2

Stage	1	2
Duration	71	7
Change Point	0	77

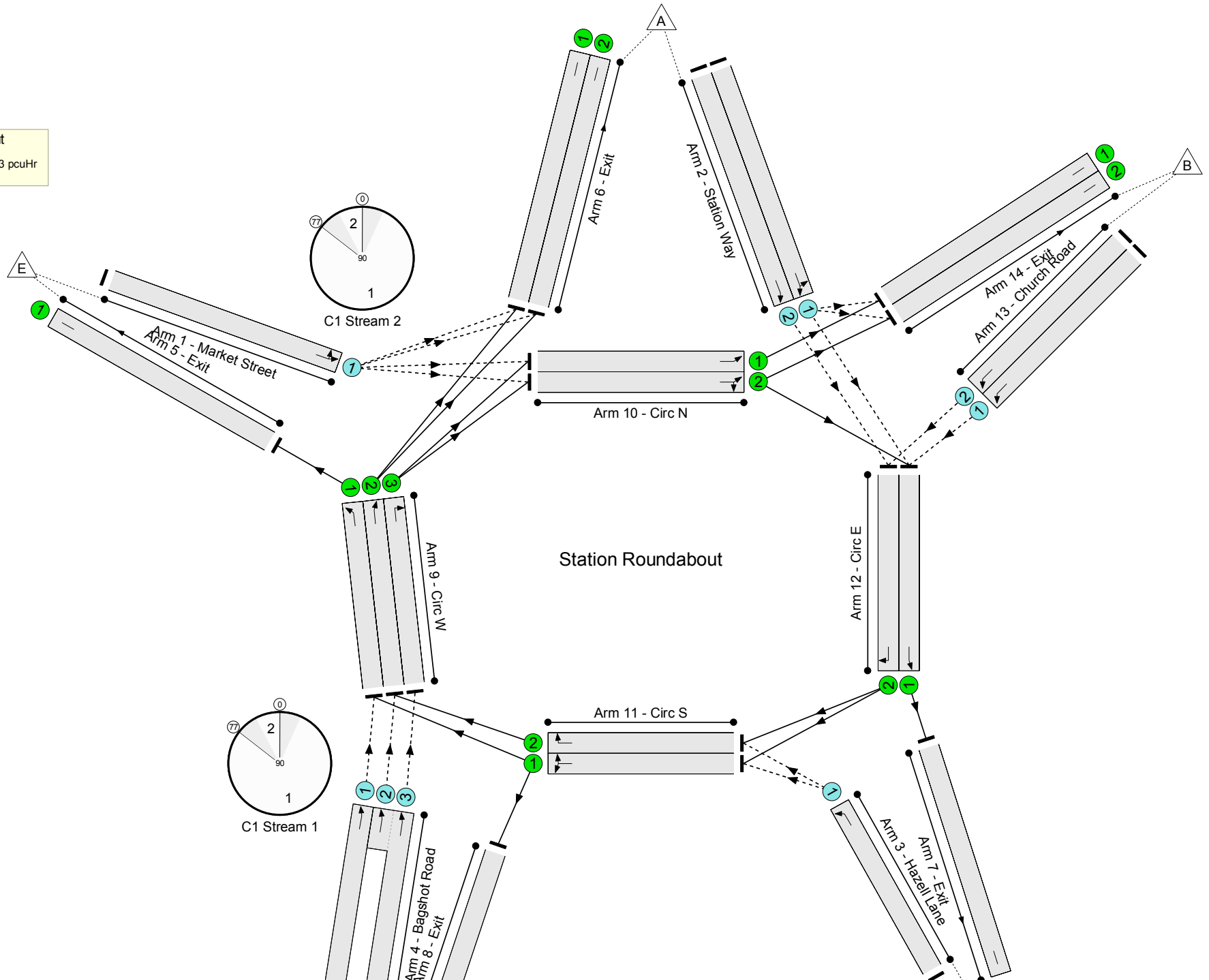
Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results

 **Station Roundabout**
PRC: -24.4 %
Total Traffic Delay: 102.3 pcuHr



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	111.9%
Station Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	111.9%
1/1	Market Street Left Ahead	O	N/A	N/A	-		-	-	-	259	2014	411	63.0%
2/1	Station Way Ahead Left	O	N/A	N/A	-		-	-	-	29	1829	432	6.7%
2/2	Station Way Ahead	O	N/A	N/A	-		-	-	-	146	1854	433	33.7%
3/1	Hazell Lane Left	O	N/A	N/A	-		-	-	-	31	1842	451	6.9%
4/1	Bagshot Road Ahead	O	N/A	N/A	-		-	-	-	538	1894	664	81.1%
4/3+4/2	Bagshot Road Ahead	O	N/A	N/A	-		-	-	-	985	1965:1894	880	111.9%
5/1	Exit	U	N/A	N/A	-		-	-	-	659	Inf	Inf	0.0%
6/1	Exit	U	N/A	N/A	-		-	-	-	175	Inf	Inf	0.0%
6/2	Exit	U	N/A	N/A	-		-	-	-	176	Inf	Inf	0.0%
7/1	Exit	U	N/A	N/A	-		-	-	-	47	Inf	Inf	0.0%
8/1	Exit	U	N/A	N/A	-		-	-	-	720	Inf	Inf	0.0%
9/1	Circ W Left	U	N/A	N/A	-		-	-	-	659	Inf	Inf	0.0%
9/2	Circ W Ahead	U	N/A	N/A	-		-	-	-	287	1829	1829	14.1%
9/3	Circ W Right	U	N/A	N/A	-		-	-	-	743	1834	1834	36.2%
10/1	Circ N Ahead	U	N/A	N/A	-		-	-	-	449	Inf	Inf	0.0%
10/2	Circ N Right Ahead	U	N/A	N/A	-		-	-	-	489	Inf	Inf	0.0%
11/1	Circ S Left Right	U	N/A	N/A	-		-	-	-	841	Inf	Inf	0.0%
11/2	Circ S Right	U	N/A	N/A	-		-	-	-	45	1775	1775	2.3%
12/1	Circ E Ahead	U	N/A	N/A	-		-	-	-	47	Inf	Inf	0.0%
12/2	Circ E Right	U	N/A	N/A	-		-	-	-	855	Inf	Inf	0.0%

Full Input Data And Results

13/1	Church Road Left	O	N/A	N/A	-	-	-	-	6	1965	654	0.9%
13/2	Church Road Left	O	N/A	N/A	-	-	-	-	709	1965	654	108.3%
14/1	Exit	U	N/A	N/A	-	-	-	-	463	Inf	Inf	0.0%
14/2	Exit	U	N/A	N/A	-	-	-	-	463	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	3423	0	0	9.1	93.2	0.0	102.3	-	-	-	-
Station Roundabout	-	-	3423	0	0	9.1	93.2	0.0	102.3	-	-	-	-
1/1	259	259	259	0	0	0.0	0.8	-	0.8	11.7	0.0	0.8	0.8
2/1	29	29	29	0	0	0.0	0.0	-	0.0	4.5	0.0	0.0	0.0
2/2	146	146	146	0	0	0.0	0.3	-	0.3	6.3	0.0	0.3	0.3
3/1	31	31	31	0	0	0.0	0.0	-	0.0	4.3	0.0	0.0	0.0
4/1	538	538	538	0	0	0.0	2.1	-	2.1	13.9	0.0	2.1	2.1
4/3+4/2	985	880	1760	0	0	5.7	56.8	-	62.5	228.5	52.0	56.8	108.9
5/1	651	651	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	160	160	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	161	161	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	43	43	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	675	675	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	651	651	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	258	258	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
9/3	664	664	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
10/1	411	411	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	446	446	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	789	789	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	42	42	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
12/1	43	43	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	799	799	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/1	6	6	6	0	0	0.0	0.0	-	0.0	2.8	0.0	0.0	0.0
13/2	709	654	654	0	0	3.4	32.7	-	36.1	183.4	53.2	32.7	85.9
14/1	425	425	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/2	423	423	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1	Stream: 1 PRC for Signalled Lanes (%)	0.0	Total Delay for Signalled Lanes (pcuHr)	0.00	Cycle Time (s)	90
C1	Stream: 2 PRC for Signalled Lanes (%)	0.0	Total Delay for Signalled Lanes (pcuHr)	0.00	Cycle Time (s)	90
	PRC Over All Lanes (%)	-24.4	Total Delay Over All Lanes(pcuHr)	102.25		

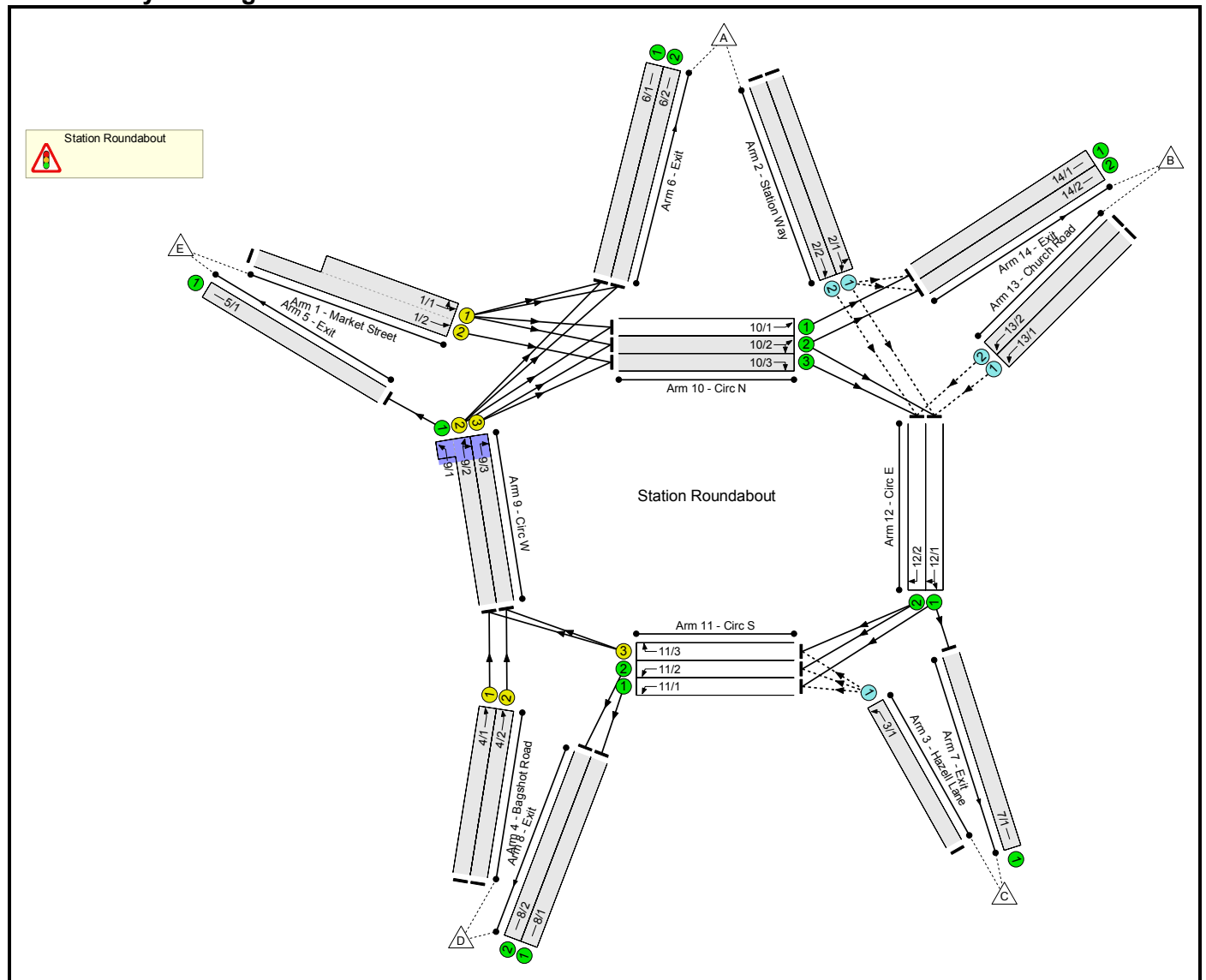
**STATION
ROUNDAABOUT
LINSIG
PROPOSED
INFORMATION**

Full Input Data And Results
Full Input Data And Results

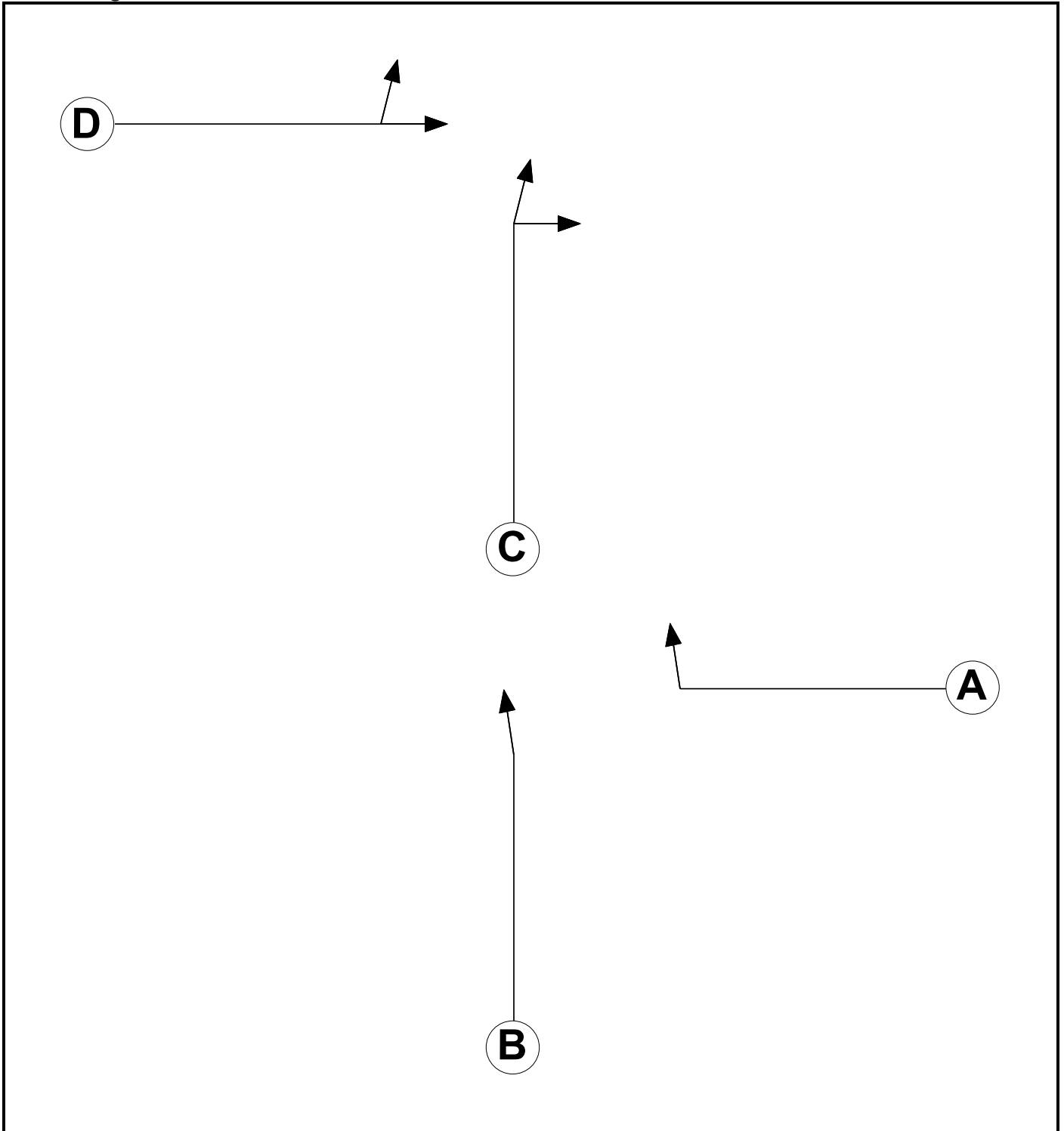
User and Project Details

Project:	Bracknell Town Centre Review
Title:	Station Roundabout - Two Lane Circulatory Sensitivity - Op3 SK002B
Location:	
File name:	Station Roundabout Bracknell - Two Lane Circulatory Sensitivity - Op3 SK002B _ Updated REV B.lsg3x
Author:	
Company:	WSP
Address:	
Notes:	Assuming Bus lane removal / extension to Bagshot Road arm and increased flare on Market Street as per SK002B

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7
C	Traffic	2		7	7
D	Traffic	2		7	7

Full Input Data And Results

Phase Intergrens Matrix

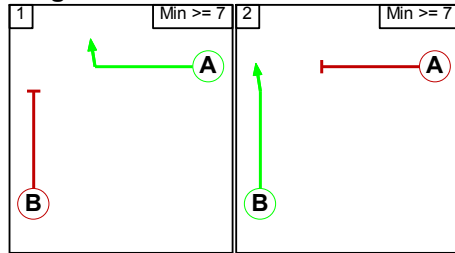
		Starting Phase			
		A	B	C	D
Terminating Phase	A		6	-	-
	B	6		-	-
	C	-	-		6
	D	-	-	6	

Phases in Stage

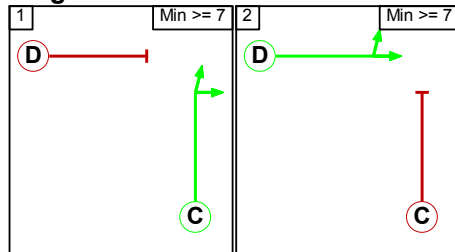
Stream	Stage No.	Phases in Stage
1	1	A
1	2	B
2	1	C
2	2	D

Stage Diagram

Stage Stream: 1



Stage Stream: 2



Phase Delays

Stage Stream: 1

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

Stage Stream: 2

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

Full Input Data And Results

Prohibited Stage Change

Stage Stream: 1

		To Stage	
		1	2
From Stage	1	6	1
	2	1	6

Stage Stream: 2

		To Stage	
		1	2
From Stage	1	6	1
	2	1	6

Full Input Data And Results

Give-Way Lane Input Data

Junction: Station Roundabout											
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)
2/1 (Station Way)	12/1 (Ahead)	715	0	10/3	0.33	All	-	-	-	-	-
				10/2	0.33	All					
				10/1	0.33	All					
	14/1 (Left)	1000	0	10/2	0.33	All					
				10/3	0.33	All					
				10/1	0.33	All					
2/2 (Station Way)	14/2 (Left)	1439	0	10/1	1.09	All					
				10/2	1.09	All					
				10/3	1.09	All					
	12/2 (Ahead)	1000	0	10/2	0.33	All					
				10/3	0.33	All					
				10/1	0.33	All					
11/1 (Left)	1000	0	12/1	0.33	To 11/1 (Right)						
			12/2	0.33	All						
			12/2	0.33	All						
3/1 (Hazell Lane)	11/2 (Left)	715	0	12/1	0.33	To 11/1 (Right)					
				12/2	0.33	All					
	11/3 (Left)	715	0	12/1	0.33	To 11/1 (Right)					
				10/2	0.33	To 12/1 (Right)					
13/1 (Church Road)	12/1 (Left)	1000	0	10/3	0.33	All					
				2/1	0.33	To 12/1 (Ahead)					
				2/2	0.33	All					
13/2	12/2 (Left)	1000	0	10/2	0.33	To 12/1 (Right)	-	-	-	-	-

Full Input Data And Results

(Church Road)			10/3	0.33	All					
			2/1	0.33	To 12/1 (Ahead)					
			2/2	0.33	All					

Full Input Data And Results

Lane Input Data

Junction: Station 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 (Market Street)	U	D	2	3	12.0	Geom	-	3.96	0.00	Y	Arm 6 Left	30.00
											Arm 10 Ahead	30.00
1/2 (Market Street)	U	D	2	3	60.0	Geom	-	3.60	0.00	Y	Arm 10 Ahead	30.00
2/1 (Station Way)	O		2	3	60.0	Geom	-	3.50	0.00	Y	Arm 12 Ahead	25.00
											Arm 14 Left	20.00
2/2 (Station Way)	O		2	3	60.0	Geom	-	3.50	0.00	Y	Arm 12 Ahead	25.00
3/1 (Hazell Lane)	O		2	3	60.0	Geom	-	4.00	0.00	Y	Arm 11 Left	16.00
4/1 (Bagshot Road)	U	B	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 9 Ahead	40.00
4/2 (Bagshot Road)	U	B	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 9 Ahead	40.00
5/1 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/2 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/2 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
9/1 (Circ W)	U		2	3	1.5	User	3600	-	-	-	-	-
9/2 (Circ W)	U	C	2	3	60.0	Geom	-	4.70	0.00	Y	Arm 6 Ahead	22.00
											Arm 10 Right	22.00
9/3 (Circ W)	U	C	2	3	16.5	Geom	-	4.70	0.00	Y	Arm 10 Right	22.00
10/1 (Circ N)	U		2	3	60.0	Inf	-	-	-	-	-	-
10/2 (Circ N)	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

10/3 (Circ N)	U		2	3	60.0	Inf	-	-	-	-	-	-
11/1 (Circ S)	U		2	3	60.0	Inf	-	-	-	-	-	-
11/2 (Circ S)	U		2	3	60.0	Inf	-	-	-	-	-	-
11/3 (Circ S)	U	A	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 9 Right	14.00
12/1 (Circ E)	U		2	3	60.0	Inf	-	-	-	-	-	-
12/2 (Circ E)	U		2	3	60.0	Inf	-	-	-	-	-	-
13/1 (Church Road)	O		2	3	60.0	Geom	-	3.50	0.00	Y	Arm 12 Left	Inf
13/2 (Church Road)	O		2	3	60.0	Geom	-	3.50	0.00	Y	Arm 12 Left	Inf
14/1 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
14/2 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM 2016'	08:00	09:00	01:00	
2: 'PM 2016'	17:00	18:00	01:00	

Scenario 1: 'AM 2016' (FG1: 'AM 2016', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination					Tot.
		A	B	C	D	E	
Origin	A	0	6	0	20	9	35
	B	58	0	9	512	223	802
	C	2	6	0	19	8	35
	D	187	546	29	0	722	1484
	E	54	157	8	475	0	694
	Tot.	301	715	46	1026	962	3050

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: AM 2016
Junction: Station Roundabout	
1/1 (short)	350
1/2 (with short)	694(In) 344(Out)
2/1	6
2/2	29
3/1	35
4/1	909
4/2	575
5/1	962
6/1	151
6/2	150
7/1	46
8/1	532
8/2	494
9/1 (short)	962
9/2 (with short)	1214(In) 252(Out)
9/3	576
10/1	5
10/2	872
10/3	344
11/1	532
11/2	494
11/3	306
12/1	569
12/2	774
13/1	401
13/2	401
14/1	8
14/2	707

Full Input Data And Results

Lane Saturation Flows

Junction: Station 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 (Market Street)	3.96	0.00	Y	Arm 6 Left	30.00	15.4 %	1915	1915
				Arm 10 Ahead	30.00	84.6 %		
1/2 (Market Street)	3.60	0.00	Y	Arm 10 Ahead	30.00	100.0 %	1881	1881
2/1 (Station Way)	3.50	0.00	Y	Arm 12 Ahead	25.00	0.0 %	1828	1828
				Arm 14 Left	20.00	100.0 %		
2/2 (Station Way)	3.50	0.00	Y	Arm 12 Ahead	25.00	100.0 %	1854	1854
3/1 (Hazell Lane)	4.00	0.00	Y	Arm 11 Left	16.00	100.0 %	1842	1842
4/1 (Bagshot Road)	3.50	0.00	Y	Arm 9 Ahead	40.00	100.0 %	1894	1894
4/2 (Bagshot Road)	3.50	0.00	Y	Arm 9 Ahead	40.00	100.0 %	1894	1894
5/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (Circ W Lane 1)	This lane uses a directly entered Saturation Flow						3600	3600
9/2 (Circ W)	4.70	0.00	Y	Arm 6 Ahead	22.00	98.0 %	1952	1952
				Arm 10 Right	22.00	2.0 %		
9/3 (Circ W)	4.70	0.00	Y	Arm 10 Right	22.00	100.0 %	1952	1952
10/1 (Circ N Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (Circ N Lane 2)	Infinite Saturation Flow						Inf	Inf
10/3 (Circ N Lane 3)	Infinite Saturation Flow						Inf	Inf
11/1 (Circ S Lane 1)	Infinite Saturation Flow						Inf	Inf
11/2 (Circ S Lane 2)	Infinite Saturation Flow						Inf	Inf
11/3 (Circ S)	3.50	0.00	Y	Arm 9 Right	14.00	100.0 %	1775	1775
12/1 (Circ E Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

12/2 (Circ E Lane 2)	Infinite Saturation Flow						Inf	Inf
13/1 (Church Road)	3.50	0.00	Y	Arm 12 Left	Inf	100.0 %	1965	1965
13/2 (Church Road)	3.50	0.00	Y	Arm 12 Left	Inf	100.0 %	1965	1965
14/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
14/2 (Exit Lane 2)	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'PM 2016' (FG2: 'PM 2016', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination						
	A	B	C	D	E	Tot.	
A	0	47	1	149	36	233	
B	25	0	3	495	120	643	
C	1	4	0	11	3	19	
D	102	635	14	0	490	1241	
E	51	318	7	1019	0	1395	
Tot.	179	1004	25	1674	649	3531	

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: PM 2016
Junction: Station Roundabout	
1/1 (short)	704
1/2 (with short)	1395(In) 691(Out)
2/1	48
2/2	185
3/1	19
4/1	725
4/2	516
5/1	649
6/1	90
6/2	89
7/1	25
8/1	652
8/2	1022
9/1 (short)	649
9/2 (with short)	914(In) 265(Out)
9/3	516
10/1	137
10/2	1169
10/3	691
11/1	652
11/2	1022
11/3	189
12/1	672
12/2	1197
13/1	322
13/2	321
14/1	160
14/2	844

Full Input Data And Results

Lane Saturation Flows

Junction: Station 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 (Market Street)	3.96	0.00	Y	Arm 6 Left	30.00	7.2 %	1915	1915
				Arm 10 Ahead	30.00	92.8 %		
1/2 (Market Street)	3.60	0.00	Y	Arm 10 Ahead	30.00	100.0 %	1881	1881
2/1 (Station Way)	3.50	0.00	Y	Arm 12 Ahead	25.00	2.1 %	1828	1828
				Arm 14 Left	20.00	97.9 %		
2/2 (Station Way)	3.50	0.00	Y	Arm 12 Ahead	25.00	100.0 %	1854	1854
3/1 (Hazell Lane)	4.00	0.00	Y	Arm 11 Left	16.00	100.0 %	1842	1842
4/1 (Bagshot Road)	3.50	0.00	Y	Arm 9 Ahead	40.00	100.0 %	1894	1894
4/2 (Bagshot Road)	3.50	0.00	Y	Arm 9 Ahead	40.00	100.0 %	1894	1894
5/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
7/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (Circ W Lane 1)	This lane uses a directly entered Saturation Flow						3600	3600
9/2 (Circ W)	4.70	0.00	Y	Arm 6 Ahead	22.00	48.3 %	1952	1952
				Arm 10 Right	22.00	51.7 %		
9/3 (Circ W)	4.70	0.00	Y	Arm 10 Right	22.00	100.0 %	1952	1952
10/1 (Circ N Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (Circ N Lane 2)	Infinite Saturation Flow						Inf	Inf
10/3 (Circ N Lane 3)	Infinite Saturation Flow						Inf	Inf
11/1 (Circ S Lane 1)	Infinite Saturation Flow						Inf	Inf
11/2 (Circ S Lane 2)	Infinite Saturation Flow						Inf	Inf
11/3 (Circ S)	3.50	0.00	Y	Arm 9 Right	14.00	100.0 %	1775	1775
12/1 (Circ E Lane 1)	Infinite Saturation Flow						Inf	Inf

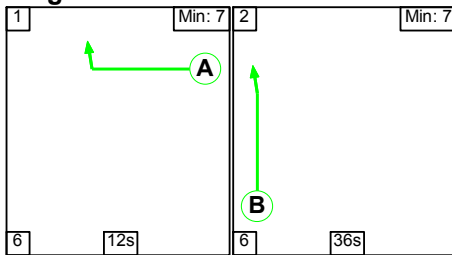
Full Input Data And Results

12/2 (Circ E Lane 2)	Infinite Saturation Flow						Inf	Inf
13/1 (Church Road)	3.50	0.00	Y	Arm 12 Left	Inf	100.0 %	1965	1965
13/2 (Church Road)	3.50	0.00	Y	Arm 12 Left	Inf	100.0 %	1965	1965
14/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
14/2 (Exit Lane 2)	Infinite Saturation Flow						Inf	Inf

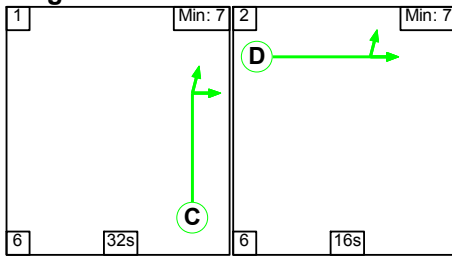
Scenario 1: 'AM 2016' (FG1: 'AM 2016', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

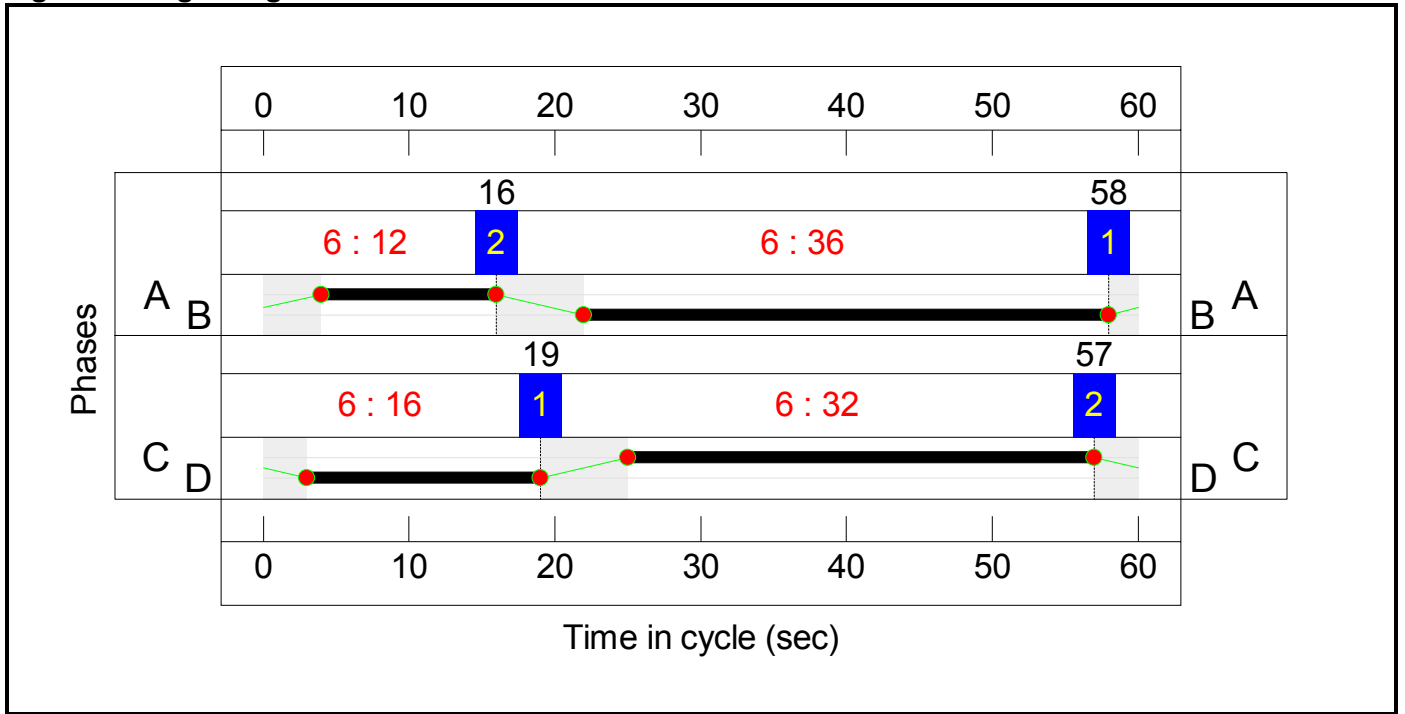
Stage Stream: 1

Stage	1	2
Duration	12	36
Change Point	58	16

Stage Stream: 2

Stage	1	2
Duration	32	16
Change Point	19	57

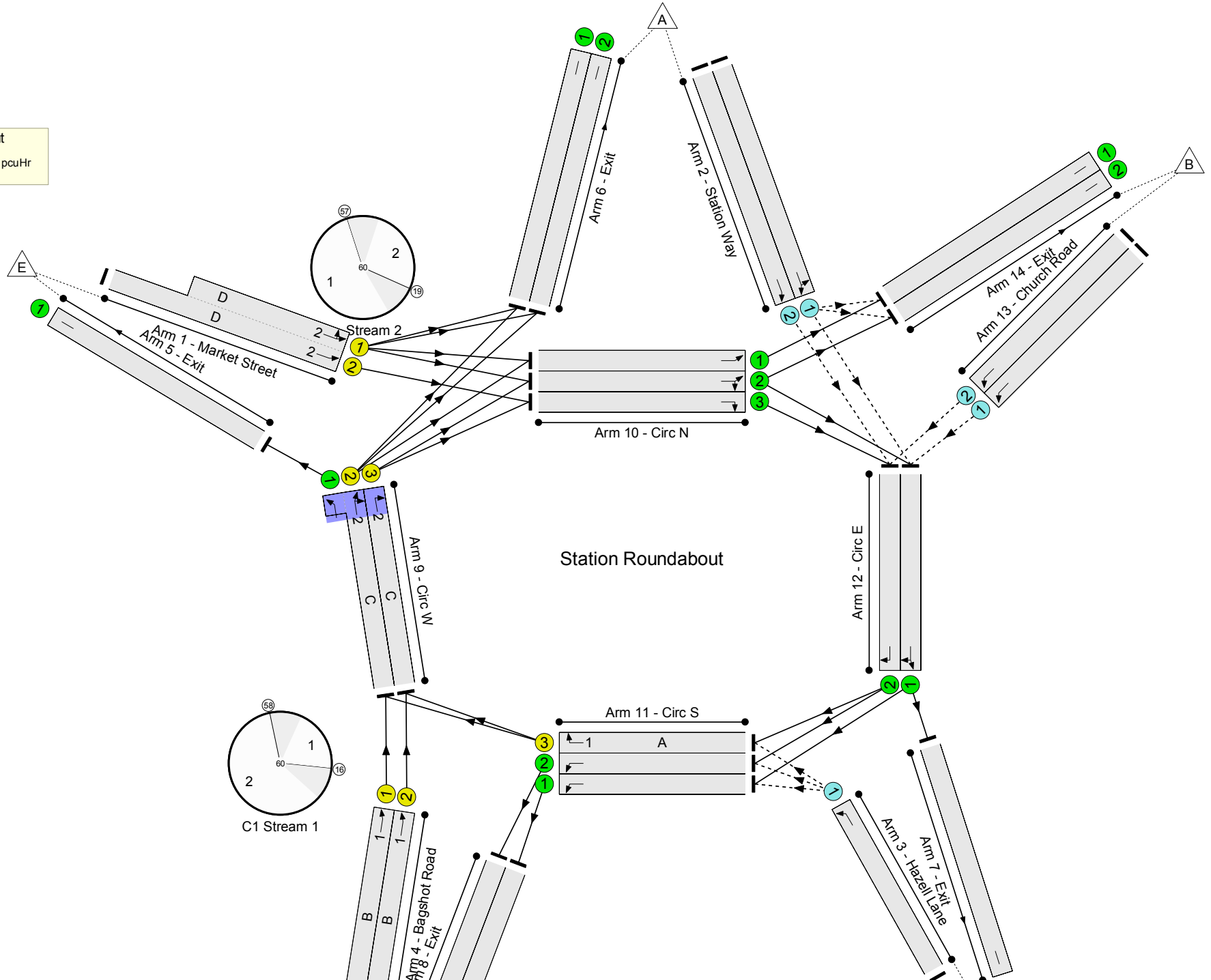
Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results


Station Roundabout
 PRC: 13.1 %
 Total Traffic Delay: 17.0 pcuHr



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Station Roundabout - Two Lane Circulatory Sensitivity - Op3 SK002B	-	-	N/A	-	-		-	-	-	-	-	-	79.6%
Station Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	79.6%
1/2+1/1	Market Street Left Ahead	U	2	N/A	D		1	16	-	694	1881:1915	1076	64.5%
2/1	Station Way Ahead Left	O	N/A	N/A	-		-	-	-	6	1828	572	1.0%
2/2	Station Way Ahead	O	N/A	N/A	-		-	-	-	29	1854	620	4.7%
3/1	Hazell Lane Left	O	N/A	N/A	-		-	-	-	35	1842	369	9.5%
4/1	Bagshot Road Ahead	U	1	N/A	B		1	36	-	909	1894	1168	77.8%
4/2	Bagshot Road Ahead	U	1	N/A	B		1	36	-	575	1894	1168	49.2%
5/1	Exit	U	N/A	N/A	-		-	-	-	962	Inf	Inf	0.0%
6/1	Exit	U	N/A	N/A	-		-	-	-	151	Inf	Inf	0.0%
6/2	Exit	U	N/A	N/A	-		-	-	-	150	Inf	Inf	0.0%
7/1	Exit	U	N/A	N/A	-		-	-	-	46	Inf	Inf	0.0%
8/1	Exit	U	N/A	N/A	-		-	-	-	532	Inf	Inf	0.0%
8/2	Exit	U	N/A	N/A	-		-	-	-	494	Inf	Inf	0.0%
9/2+9/1	Circ W Left Ahead Right	U	2	N/A	C -		1	32	-	1214	1952:3600	2004	60.6%
9/3	Circ W Right	U	2	N/A	C		1	32	-	576	1952	1074	53.7%
10/1	Circ N Ahead	U	N/A	N/A	-		-	-	-	5	Inf	Inf	0.0%
10/2	Circ N Right Ahead	U	N/A	N/A	-		-	-	-	872	Inf	Inf	0.0%
10/3	Circ N Right	U	N/A	N/A	-		-	-	-	344	Inf	Inf	0.0%
11/1	Circ S Left	U	N/A	N/A	-		-	-	-	532	Inf	Inf	0.0%

Full Input Data And Results

11/2	Circ S Left	U	N/A	N/A	-	-	-	-	494	Inf	Inf	0.0%
11/3	Circ S Right	U	1	N/A	A	1	12	-	306	1775	385	79.6%
12/1	Circ E Ahead Right	U	N/A	N/A	-	-	-	-	569	Inf	Inf	0.0%
12/2	Circ E Right	U	N/A	N/A	-	-	-	-	774	Inf	Inf	0.0%
13/1	Church Road Left	O	N/A	N/A	-	-	-	-	401	1965	821	48.8%
13/2	Church Road Left	O	N/A	N/A	-	-	-	-	401	1965	821	48.8%
14/1	Exit	U	N/A	N/A	-	-	-	-	8	Inf	Inf	0.0%
14/2	Exit	U	N/A	N/A	-	-	-	-	707	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Station Roundabout - Two Lane Circulatory Sensitivity - Op3 SK002B	-	-	872	0	0	9.7	7.4	0.0	17.0	-	-	-	-
Station Roundabout	-	-	872	0	0	9.7	7.4	0.0	17.0	-	-	-	-
1/2+1/1	694	694	-	-	-	3.6	0.9	-	4.5	23.6	5.1	0.9	6.0
2/1	6	6	6	0	0	0.0	0.0	-	0.0	5.1	0.0	0.0	0.0
2/2	29	29	29	0	0	0.0	0.0	-	0.0	3.8	0.1	0.0	0.1
3/1	35	35	35	0	0	0.0	0.1	-	0.1	7.2	0.2	0.1	0.2
4/1	909	909	-	-	-	2.1	1.7	-	3.9	15.3	11.1	1.7	12.8
4/2	575	575	-	-	-	1.0	0.5	-	1.5	9.4	5.3	0.5	5.8
5/1	962	962	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	151	151	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	150	150	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	46	46	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	532	532	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	494	494	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2+9/1	1214	1214	-	-	-	0.3	0.8	-	1.1	3.3	1.5	0.8	2.3
9/3	576	576	-	-	-	0.5	0.6	-	1.1	6.9	1.3	0.6	1.9
10/1	5	5	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	872	872	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/3	344	344	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	532	532	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	494	494	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/3	306	306	-	-	-	1.8	1.9	-	3.7	43.1	4.8	1.9	6.6
12/1	569	569	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	774	774	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

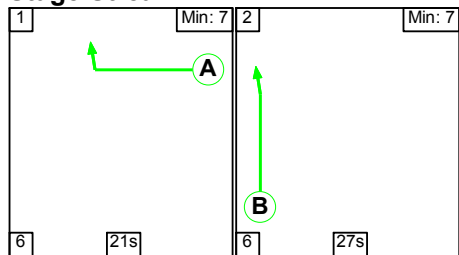
13/1	401	401	401	0	0	0.1	0.5	-	0.6	5.2	1.7	0.5	2.1	
13/2	401	401	401	0	0	0.1	0.5	-	0.6	5.2	1.7	0.5	2.1	
14/1	8	8	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
14/2	707	707	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
C1 Stream: 1 PRC for Signalled Lanes (%)				13.1	Total Delay for Signalled Lanes (pcuHr):				9.04	Cycle Time (s):		60		
C1 Stream: 2 PRC for Signalled Lanes (%)				39.5	Total Delay for Signalled Lanes (pcuHr):				6.74	Cycle Time (s):		60		
PRC Over All Lanes (%)				13.1	Total Delay Over All Lanes(pcuHr):				17.03					

Full Input Data And Results

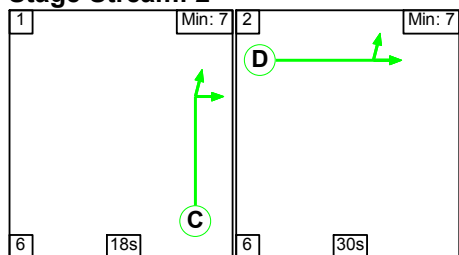
Scenario 2: 'PM 2016' (FG2: 'PM 2016', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

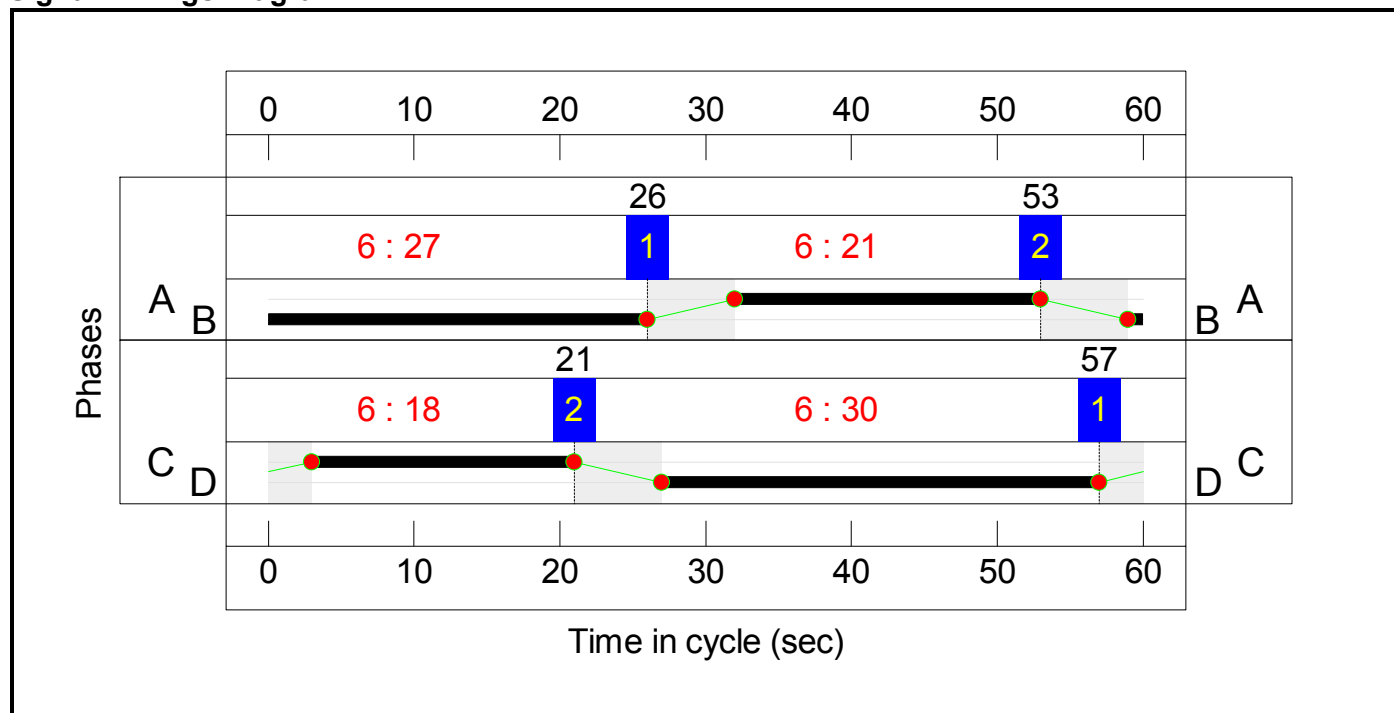
Stage Stream: 1

Stage	1	2
Duration	21	27
Change Point	26	53

Stage Stream: 2

Stage	1	2
Duration	18	30
Change Point	57	21


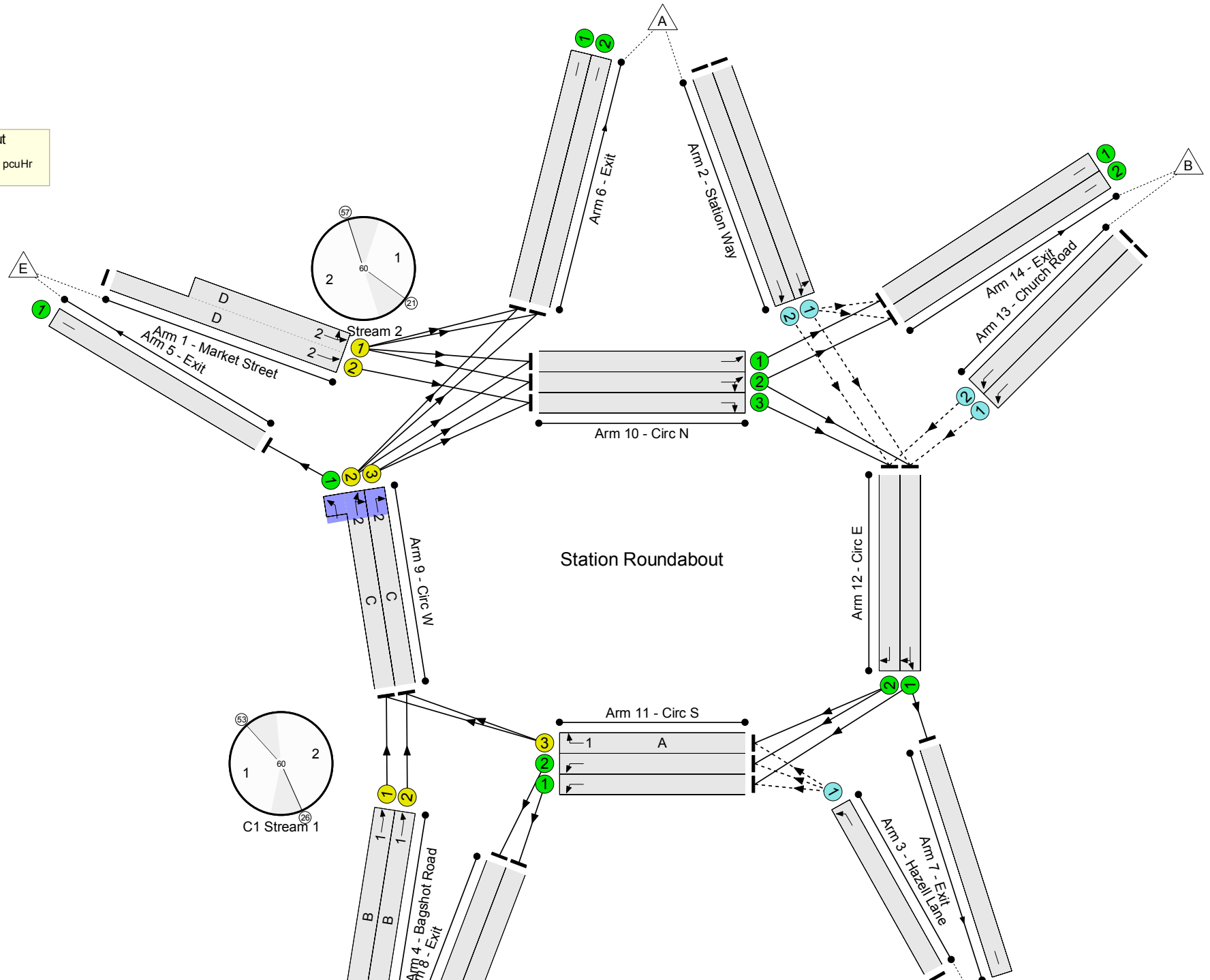
Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results

Station Roundabout
 PRC: 7.8 %
 Total Traffic Delay: 24.6 pcuHr

Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Station Roundabout - Two Lane Circulatory Sensitivity - Op3 SK002B	-	-	N/A	-	-		-	-	-	-	-	-	83.5%
Station Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	83.5%
1/2+1/1	Market Street Left Ahead	U	2	N/A	D		1	30	-	1395	1881:1915	1680	83.0%
2/1	Station Way Ahead Left	O	N/A	N/A	-		-	-	-	48	1828	233	20.6%
2/2	Station Way Ahead	O	N/A	N/A	-		-	-	-	185	1854	398	46.5%
3/1	Hazell Lane Left	O	N/A	N/A	-		-	-	-	19	1842	232	8.2%
4/1	Bagshot Road Ahead	U	1	N/A	B		1	27	-	725	1894	884	82.0%
4/2	Bagshot Road Ahead	U	1	N/A	B		1	27	-	516	1894	884	58.4%
5/1	Exit	U	N/A	N/A	-		-	-	-	649	Inf	Inf	0.0%
6/1	Exit	U	N/A	N/A	-		-	-	-	90	Inf	Inf	0.0%
6/2	Exit	U	N/A	N/A	-		-	-	-	89	Inf	Inf	0.0%
7/1	Exit	U	N/A	N/A	-		-	-	-	25	Inf	Inf	0.0%
8/1	Exit	U	N/A	N/A	-		-	-	-	652	Inf	Inf	0.0%
8/2	Exit	U	N/A	N/A	-		-	-	-	1022	Inf	Inf	0.0%
9/2+9/1	Circ W Left Ahead Right	U	2	N/A	C -		1	18	-	914	1952:3600	1115	81.9%
9/3	Circ W Right	U	2	N/A	C		1	18	-	516	1952	618	83.5%
10/1	Circ N Ahead	U	N/A	N/A	-		-	-	-	137	Inf	Inf	0.0%
10/2	Circ N Right Ahead	U	N/A	N/A	-		-	-	-	1169	Inf	Inf	0.0%
10/3	Circ N Right	U	N/A	N/A	-		-	-	-	691	Inf	Inf	0.0%
11/1	Circ S Left	U	N/A	N/A	-		-	-	-	652	Inf	Inf	0.0%

Full Input Data And Results

11/2	Circ S Left	U	N/A	N/A	-	-	-	-	1022	Inf	Inf	0.0%
11/3	Circ S Right	U	1	N/A	A	1	21	-	189	1775	651	29.0%
12/1	Circ E Ahead Right	U	N/A	N/A	-	-	-	-	672	Inf	Inf	0.0%
12/2	Circ E Right	U	N/A	N/A	-	-	-	-	1197	Inf	Inf	0.0%
13/1	Church Road Left	O	N/A	N/A	-	-	-	-	322	1965	595	54.1%
13/2	Church Road Left	O	N/A	N/A	-	-	-	-	321	1965	595	53.9%
14/1	Exit	U	N/A	N/A	-	-	-	-	160	Inf	Inf	0.0%
14/2	Exit	U	N/A	N/A	-	-	-	-	844	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Station Roundabout - Two Lane Circulatory Sensitivity - Op3 SK002B	-	-	895	0	0	12.7	11.9	0.0	24.6	-	-	-	-
Station Roundabout	-	-	895	0	0	12.7	11.9	0.0	24.6	-	-	-	-
1/2+1/1	1395	1395	-	-	-	4.3	2.4	-	6.7	17.3	8.8	2.4	11.2
2/1	48	48	48	0	0	0.1	0.1	-	0.3	20.2	0.4	0.1	0.6
2/2	185	185	185	0	0	0.2	0.4	-	0.6	12.2	1.3	0.4	1.7
3/1	19	19	19	0	0	0.0	0.0	-	0.1	16.8	0.2	0.0	0.2
4/1	725	725	-	-	-	2.8	2.2	-	5.0	24.8	10.3	2.2	12.5
4/2	516	516	-	-	-	1.7	0.7	-	2.4	16.6	6.2	0.7	6.9
5/1	649	649	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	90	90	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	89	89	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	25	25	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	652	652	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	1022	1022	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2+9/1	914	914	-	-	-	1.3	2.2	-	3.5	13.8	3.4	2.2	5.6
9/3	516	516	-	-	-	1.1	2.4	-	3.5	24.2	2.2	2.4	4.7
10/1	137	137	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	1169	1169	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/3	691	691	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	652	652	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	1022	1022	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/3	189	189	-	-	-	0.5	0.2	-	0.7	13.7	2.2	0.2	2.4
12/1	672	672	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	1197	1197	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

13/1	322	322	322	0	0	0.4	0.6	-	0.9	10.5	2.9	0.6	3.4
13/2	321	321	321	0	0	0.3	0.6	-	0.9	10.5	2.9	0.6	3.4
14/1	160	160	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/2	844	844	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
		C1	Stream: 1 PRC for Signalled Lanes (%)		9.7	Total Delay for Signalled Lanes (pcuHr)		8.10	Cycle Time (s)		60		
		C1	Stream: 2 PRC for Signalled Lanes (%)		7.8	Total Delay for Signalled Lanes (pcuHr)		13.68	Cycle Time (s)		60		
			PRC Over All Lanes (%)		7.8	Total Delay Over All Lanes(pcuHr)		24.64					

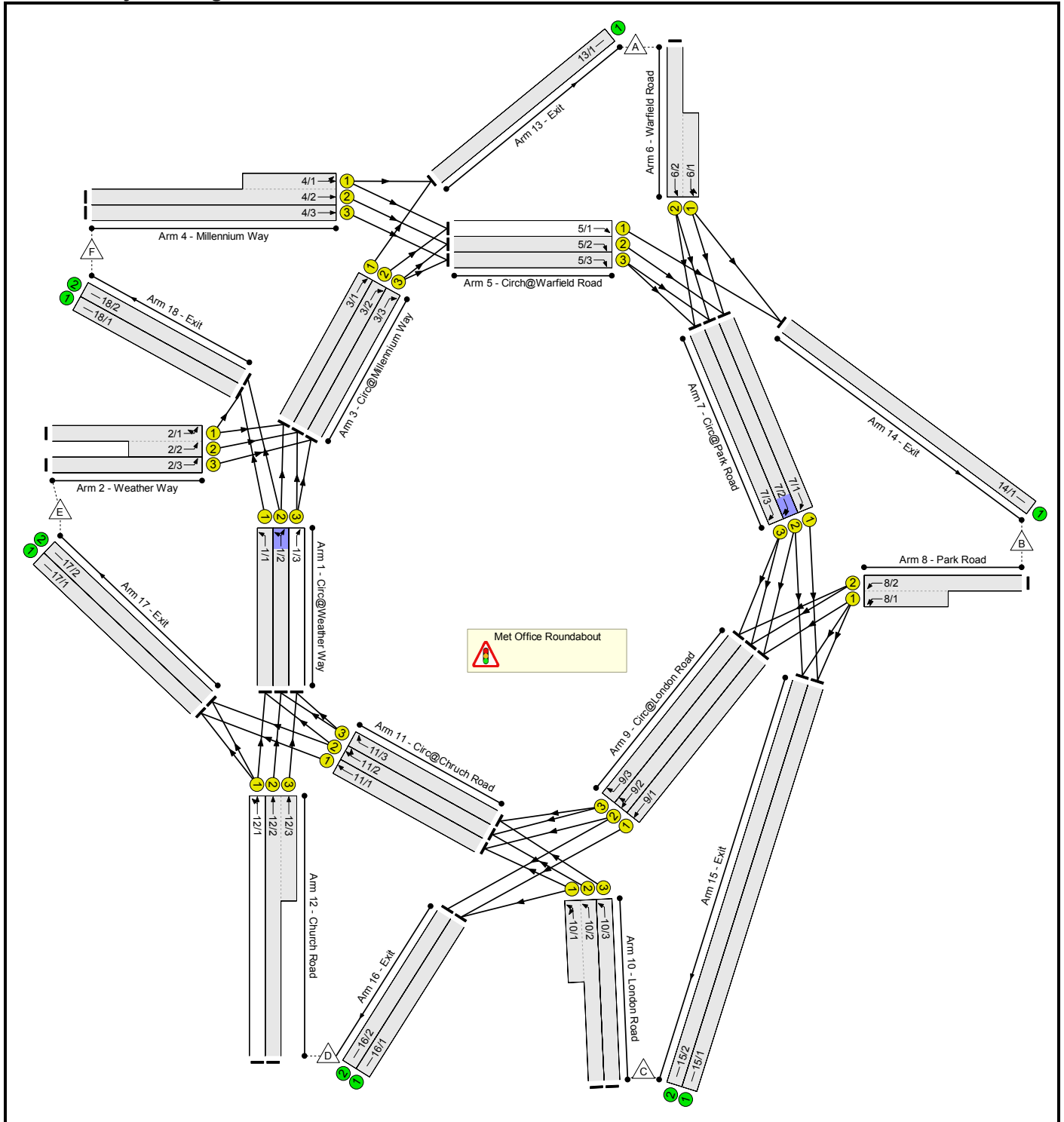
**MET OFFICE
ROUNDAABOUT
LINSIG
BASE
INFORMATION**

Full Input Data And Results
Full Input Data And Results

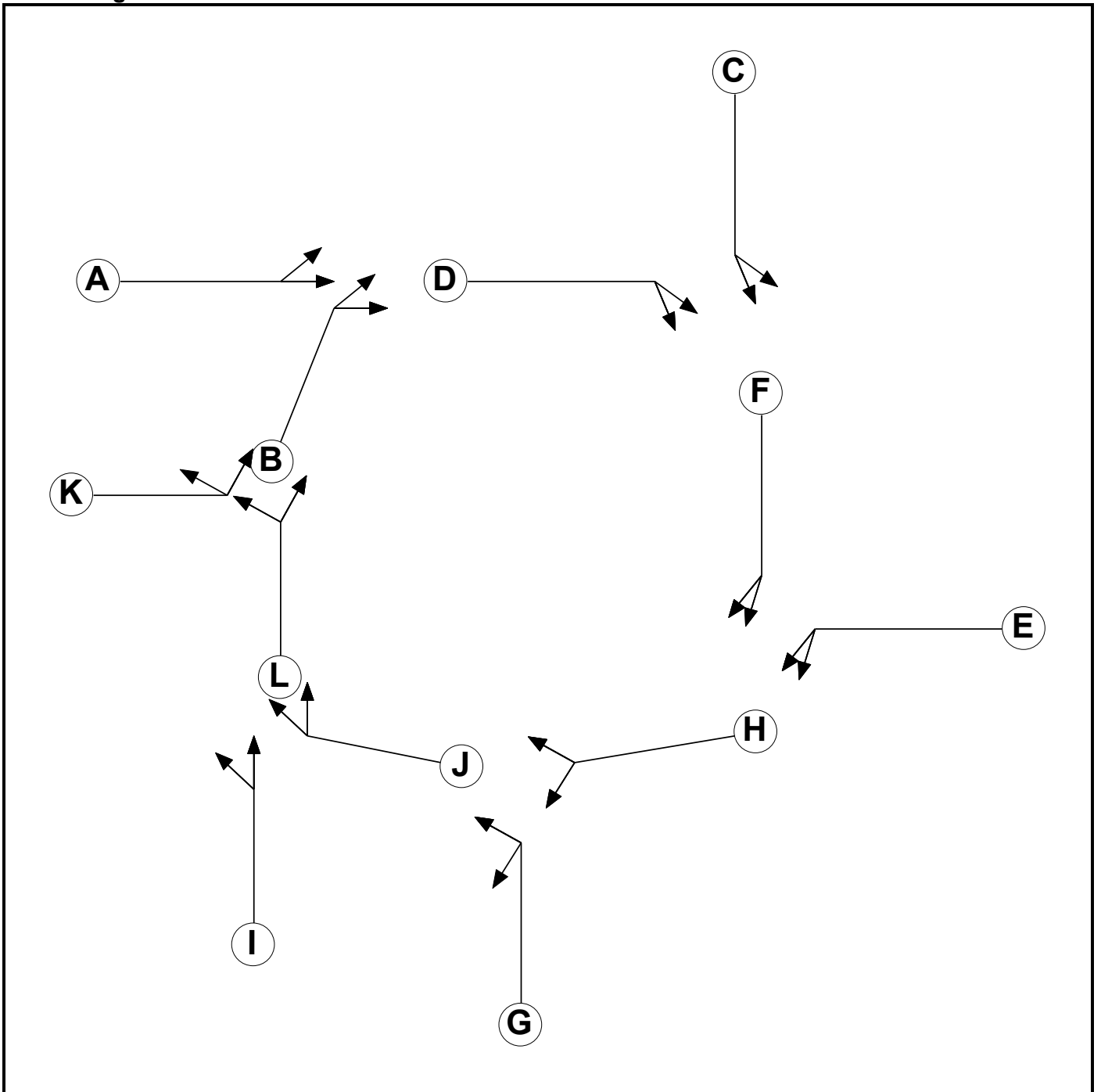
User and Project Details

Project:	
Title:	
Location:	
File name:	Met Office Roundabout Existing 20141017 (developed based on 070714 model).lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	6		7	7
B	Traffic	6		7	7
C	Traffic	1		7	7
D	Traffic	1		7	7
E	Traffic	2		7	7
F	Traffic	2		7	7
G	Traffic	3		7	7
H	Traffic	3		7	7
I	Traffic	4		7	7
J	Traffic	4		7	7
K	Traffic	5		7	7
L	Traffic	5		7	7

Full Input Data And Results

Phase Intergrens Matrix

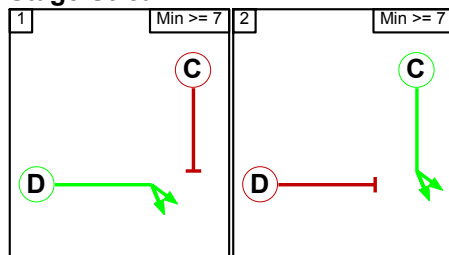
		Starting Phase											
		A	B	C	D	E	F	G	H	I	J	K	L
Terminating Phase	A	5	-	-	-	-	-	-	-	-	-	-	-
	B	-	5	-	-	-	-	-	-	-	-	-	-
	C	-	-	5	-	-	-	-	-	-	-	-	-
	D	-	-	-	5	-	-	-	-	-	-	-	-
	E	-	-	-	-	5	-	-	-	-	-	-	-
	F	-	-	-	-	-	5	-	-	-	-	-	-
	G	-	-	-	-	-	-	5	-	-	-	-	-
	H	-	-	-	-	-	-	-	5	-	-	-	-
	I	-	-	-	-	-	-	-	-	5	-	-	-
	J	-	-	-	-	-	-	-	-	-	5	-	-
	K	-	-	-	-	-	-	-	-	-	-	5	-
	L	-	-	-	-	-	-	-	-	-	-	-	5

Phases in Stage

Stream	Stage No.	Phases in Stage
1	1	D
1	2	C
2	1	F
2	2	E
3	1	H
3	2	G
4	1	J
4	2	I
5	1	L
5	2	K
6	1	B
6	2	A

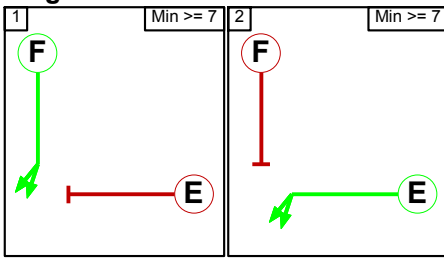
Stage Diagram

Stage Stream: 1

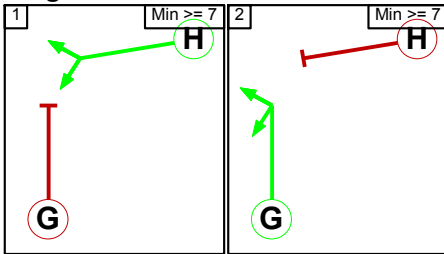


Full Input Data And Results

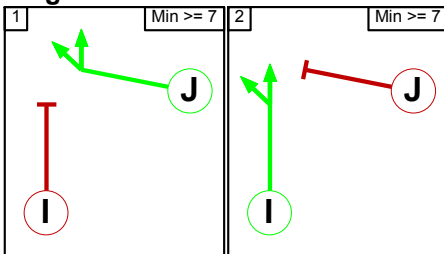
Stage Stream: 2



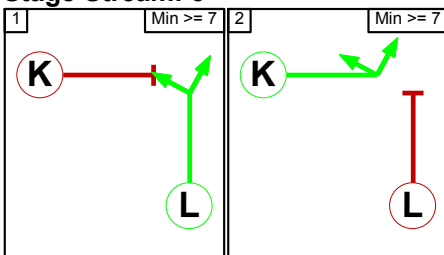
Stage Stream: 3



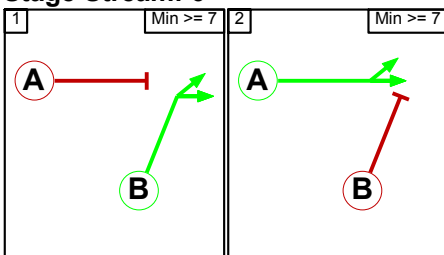
Stage Stream: 4



Stage Stream: 5



Stage Stream: 6



Phase Delays

Stage Stream: 1

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

Stage Stream: 2

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

Full Input Data And Results

Stage Stream: 3

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

Stage Stream: 4

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

Stage Stream: 5

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

Stage Stream: 6

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

Prohibited Stage Change

Stage Stream: 1

	To Stage	
From Stage	1	2
	1	5
	2	5

Stage Stream: 2

	To Stage	
From Stage	1	2
	1	5
	2	5

Stage Stream: 3

	To Stage	
From Stage	1	2
	1	5
	2	5

Stage Stream: 4

	To Stage	
From Stage	1	2
	1	5
	2	5

Stage Stream: 5

	To Stage	
From Stage	1	2
	1	5
	2	5

Full Input Data And Results
Stage Stream: 6

		To Stage	
		1	2
From Stage	1		5
	2	5	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Met Office Roundabout

There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: Met Office 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 (Circ@Weather Way)	U	L	2	3	50.0	User	1900	-	-	-	-	-
1/2 (Circ@Weather Way)	U	L	2	3	50.0	User	1900	-	-	-	-	-
1/3 (Circ@Weather Way)	U	L	2	3	50.0	User	1900	-	-	-	-	-
2/1 (Weather Way)	U	K	2	3	60.0	User	1800	-	-	-	-	-
2/2 (Weather Way)	U	K	2	3	7.0	User	1800	-	-	-	-	-
2/3 (Weather Way)	U	K	2	3	60.0	User	1800	-	-	-	-	-
3/1 (Circ@Millennium Way)	U	B	2	3	5.2	User	1900	-	-	-	-	-
3/2 (Circ@Millennium Way)	U	B	2	3	60.0	User	1900	-	-	-	-	-
3/3 (Circ@Millennium Way)	U	B	2	3	60.0	User	1900	-	-	-	-	-
4/1 (Millennium Way)	U	A	2	3	8.9	User	1800	-	-	-	-	-
4/2 (Millennium Way)	U	A	2	3	60.0	User	1800	-	-	-	-	-
4/3 (Millennium Way)	U	A	2	3	60.0	User	1800	-	-	-	-	-
5/1 (Circ@Warfield Road)	U	D	2	3	60.0	User	1900	-	-	-	-	-
5/2 (Circ@Warfield Road)	U	D	2	3	6.4	User	1900	-	-	-	-	-
5/3 (Circ@Warfield Road)	U	D	2	3	60.0	User	1900	-	-	-	-	-
6/1 (Warfield Road)	U	C	2	3	8.0	User	1800	-	-	-	-	-
6/2 (Warfield Road)	U	C	2	3	60.0	User	1800	-	-	-	-	-
7/1 (Circ@Park Road)	U	F	2	3	60.0	User	1900	-	-	-	-	-
7/2 (Circ@Park Road)	U	F	2	3	8.7	User	1900	-	-	-	-	-

Full Input Data And Results

7/3 (Circ@Park Road)	U	F	2	3	60.0	User	1900	-	-	-	-	-
8/1 (Park Road)	U	E	2	3	8.0	User	1800	-	-	-	-	-
8/2 (Park Road)	U	E	2	3	60.0	User	1800	-	-	-	-	-
9/1 (Circ@London Road)	U	H	2	3	1.0	User	1900	-	-	-	-	-
9/2 (Circ@London Road)	U	H	2	3	35.0	User	1900	-	-	-	-	-
9/3 (Circ@London Road)	U	H	2	3	60.0	User	1900	-	-	-	-	-
10/1 (London Road)	U	G	2	3	7.8	User	1800	-	-	-	-	-
10/2 (London Road)	U	G	2	3	60.0	User	1800	-	-	-	-	-
10/3 (London Road)	U	G	2	3	60.0	User	1800	-	-	-	-	-
11/1 (Circ@Chruch Road)	U	J	2	3	1.7	User	1900	-	-	-	-	-
11/2 (Circ@Chruch Road)	U	J	2	3	7.0	User	1900	-	-	-	-	-
11/3 (Circ@Chruch Road)	U	J	2	3	60.0	User	1900	-	-	-	-	-
12/1 (Church Road)	U	I	2	3	38.0	User	1800	-	-	-	-	-
12/2 (Church Road)	U	I	2	3	60.0	User	1800	-	-	-	-	-
12/3 (Church Road)	U	I	2	3	10.0	User	1800	-	-	-	-	-
13/1 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
14/1 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
15/1 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
15/2 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
16/1 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
16/2 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
17/1 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
17/2 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
18/1 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

18/2 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
----------------	---	--	---	---	------	-----	---	---	---	---	---	---

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2016 AM Peak'	08:00	09:00	01:00	
2: '2016 PM Peak'	17:00	18:00	01:00	
3: '2016 Saturday Peak'	15:00	16:00	01:00	

Scenario 1: 'AM Peak' (FG1: '2016 AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination						
		A	B	C	D	E	F	Tot.
Origin	A	0	54	167	199	63	220	703
	B	10	0	173	206	65	228	682
	C	199	138	0	79	170	598	1184
	D	89	62	204	0	77	269	701
	E	0	0	0	0	0	4	4
	F	208	145	476	567	179	0	1575
	Tot.	506	399	1020	1051	554	1319	4849

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: AM Peak
Junction: Met Office Roundabout	
1/1	787
1/2	826
1/3	404
2/1 (with short)	4(In) 4(Out)
2/2 (short)	0
2/3	0
3/1	298
3/2	200
3/3	204
4/1 (short)	353
4/2 (with short)	829(In) 476(Out)
4/3	746
5/1	345
5/2	507
5/3	919
6/1 (short)	205
6/2 (with short)	703(In) 498(Out)
7/1	658
7/2	842
7/3	575
8/1 (short)	309
8/2 (with short)	682(In) 373(Out)
9/1	789
9/2	490
9/3	458
10/1 (short)	249
10/2 (with short)	731(In) 482(Out)
10/3	453
11/1	477
11/2	662
11/3	731
12/1	202
12/2 (with short)	499(In) 233(Out)
12/3 (short)	266

Full Input Data And Results

13/1	506
14/1	399
15/1	745
15/2	275
16/1	868
16/2	183
17/1	515
17/2	39
18/1	791
18/2	528

Full Input Data And Results

Lane Saturation Flows

Junction: Met Office 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 (Circ@Weather Way Lane 1)							1900	1900
1/2 (Circ@Weather Way Lane 2)							1900	1900
1/3 (Circ@Weather Way Lane 3)							1900	1900
2/1 (Weather Way Lane 1)							1800	1800
2/2 (Weather Way Lane 2)							1800	1800
2/3 (Weather Way Lane 3)							1800	1800
3/1 (Circ@Millennium Way Lane 1)							1900	1900
3/2 (Circ@Millennium Way Lane 2)							1900	1900
3/3 (Circ@Millennium Way Lane 3)							1900	1900
4/1 (Millennium Way Lane 1)							1800	1800
4/2 (Millennium Way Lane 2)							1800	1800
4/3 (Millennium Way Lane 3)							1800	1800
5/1 (Circh@Warfield Road Lane 1)							1900	1900
5/2 (Circh@Warfield Road Lane 2)							1900	1900
5/3 (Circh@Warfield Road Lane 3)							1900	1900
6/1 (Warfield Road Lane 1)							1800	1800
6/2 (Warfield Road Lane 2)							1800	1800
7/1 (Circ@Park Road Lane 1)							1900	1900
7/2 (Circ@Park Road Lane 2)							1900	1900
7/3 (Circ@Park Road Lane 3)							1900	1900
8/1 (Park Road Lane 1)							1800	1800
8/2 (Park Road Lane 2)							1800	1800
9/1 (Circ@London Road Lane 1)							1900	1900

Full Input Data And Results

9/2 (Circ@London Road Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
9/3 (Circ@London Road Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
10/1 (London Road Lane 1)	This lane uses a directly entered Saturation Flow	1800	1800
10/2 (London Road Lane 2)	This lane uses a directly entered Saturation Flow	1800	1800
10/3 (London Road Lane 3)	This lane uses a directly entered Saturation Flow	1800	1800
11/1 (Circ@Chruch Road Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
11/2 (Circ@Chruch Road Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
11/3 (Circ@Chruch Road Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
12/1 (Church Road Lane 1)	This lane uses a directly entered Saturation Flow	1800	1800
12/2 (Church Road Lane 2)	This lane uses a directly entered Saturation Flow	1800	1800
12/3 (Church Road Lane 3)	This lane uses a directly entered Saturation Flow	1800	1800
13/1 (Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
14/1 (Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
15/1 (Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
15/2 (Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
16/1 (Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
16/2 (Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
17/1 (Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
17/2 (Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
18/1 (Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
18/2 (Exit Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Scenario 2: 'PM Peak' (FG2: '2016 PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination							
	A	B	C	D	E	F	Tot.	
Origin	A	0	54	197	104	28	214	597
B	10	0	172	92	25	188	487	
C	237	158	0	79	74	558	1106	
D	147	98	317	0	49	346	957	
E	1	1	2	1	0	25	30	
F	351	233	758	402	110	0	1854	
Tot.	746	544	1446	678	286	1331	5031	

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: PM Peak
Junction: Met Office Roundabout	
1/1	950
1/2	750
1/3	573
2/1 (with short)	27(In) 26(Out)
2/2 (short)	1
2/3	3
3/1	395
3/2	257
3/3	320
4/1 (short)	584
4/2 (with short)	1201(In) 617(Out)
4/3	653
5/1	490
5/2	650
5/3	940
6/1 (short)	175
6/2 (with short)	597(In) 422(Out)
7/1	771
7/2	966
7/3	396
8/1 (short)	217
8/2 (with short)	487(In) 270(Out)
9/1	508
9/2	254
9/3	412
10/1 (short)	153
10/2 (with short)	644(In) 491(Out)
10/3	462
11/1	237
11/2	668
11/3	697
12/1	331
12/2 (with short)	626(In) 211(Out)
12/3 (short)	415

Full Input Data And Results

13/1	746
14/1	544
15/1	857
15/2	589
16/1	587
16/2	91
17/1	261
17/2	25
18/1	975
18/2	356

Full Input Data And Results

Lane Saturation Flows

Junction: Met Office 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 (Circ@Weather Way Lane 1)							1900	1900
1/2 (Circ@Weather Way Lane 2)							1900	1900
1/3 (Circ@Weather Way Lane 3)							1900	1900
2/1 (Weather Way Lane 1)							1800	1800
2/2 (Weather Way Lane 2)							1800	1800
2/3 (Weather Way Lane 3)							1800	1800
3/1 (Circ@Millennium Way Lane 1)							1900	1900
3/2 (Circ@Millennium Way Lane 2)							1900	1900
3/3 (Circ@Millennium Way Lane 3)							1900	1900
4/1 (Millennium Way Lane 1)							1800	1800
4/2 (Millennium Way Lane 2)							1800	1800
4/3 (Millennium Way Lane 3)							1800	1800
5/1 (Circ@Warfield Road Lane 1)							1900	1900
5/2 (Circ@Warfield Road Lane 2)							1900	1900
5/3 (Circ@Warfield Road Lane 3)							1900	1900
6/1 (Warfield Road Lane 1)							1800	1800
6/2 (Warfield Road Lane 2)							1800	1800
7/1 (Circ@Park Road Lane 1)							1900	1900
7/2 (Circ@Park Road Lane 2)							1900	1900
7/3 (Circ@Park Road Lane 3)							1900	1900
8/1 (Park Road Lane 1)							1800	1800
8/2 (Park Road Lane 2)							1800	1800
9/1 (Circ@London Road Lane 1)							1900	1900

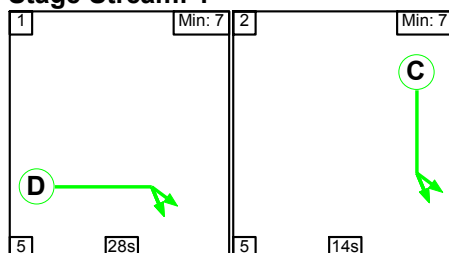
Full Input Data And Results

9/2 (Circ@London Road Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
9/3 (Circ@London Road Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
10/1 (London Road Lane 1)	This lane uses a directly entered Saturation Flow	1800	1800
10/2 (London Road Lane 2)	This lane uses a directly entered Saturation Flow	1800	1800
10/3 (London Road Lane 3)	This lane uses a directly entered Saturation Flow	1800	1800
11/1 (Circ@Chruch Road Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
11/2 (Circ@Chruch Road Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
11/3 (Circ@Chruch Road Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
12/1 (Church Road Lane 1)	This lane uses a directly entered Saturation Flow	1800	1800
12/2 (Church Road Lane 2)	This lane uses a directly entered Saturation Flow	1800	1800
12/3 (Church Road Lane 3)	This lane uses a directly entered Saturation Flow	1800	1800
13/1 (Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
14/1 (Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
15/1 (Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
15/2 (Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
16/1 (Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
16/2 (Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
17/1 (Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
17/2 (Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
18/1 (Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
18/2 (Exit Lane 2)	Infinite Saturation Flow	Inf	Inf

Scenario 1: 'AM Peak' (FG1: '2016 AM Peak', Plan 1: 'Network Control Plan 1')

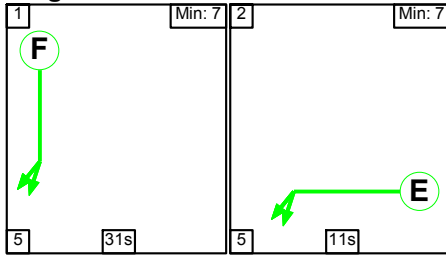
Stage Sequence Diagram

Stage Stream: 1

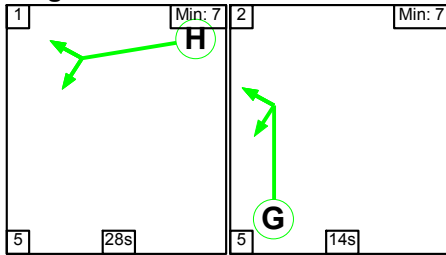


Full Input Data And Results

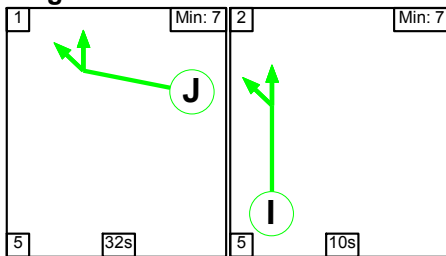
Stage Stream: 2



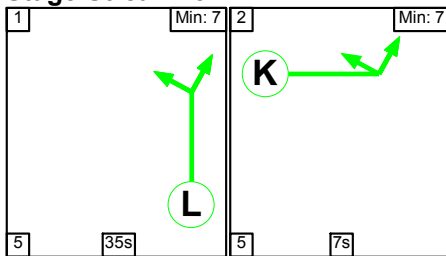
Stage Stream: 3



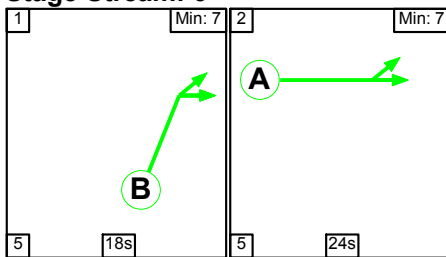
Stage Stream: 4



Stage Stream: 5



Stage Stream: 6



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	28	14
Change Point	39	20

Full Input Data And Results

Stage Stream: 2

Stage	1	2
Duration	31	11
Change Point	42	26

Stage Stream: 3

Stage	1	2
Duration	28	14
Change Point	48	29

Stage Stream: 4

Stage	1	2
Duration	32	10
Change Point	32	17

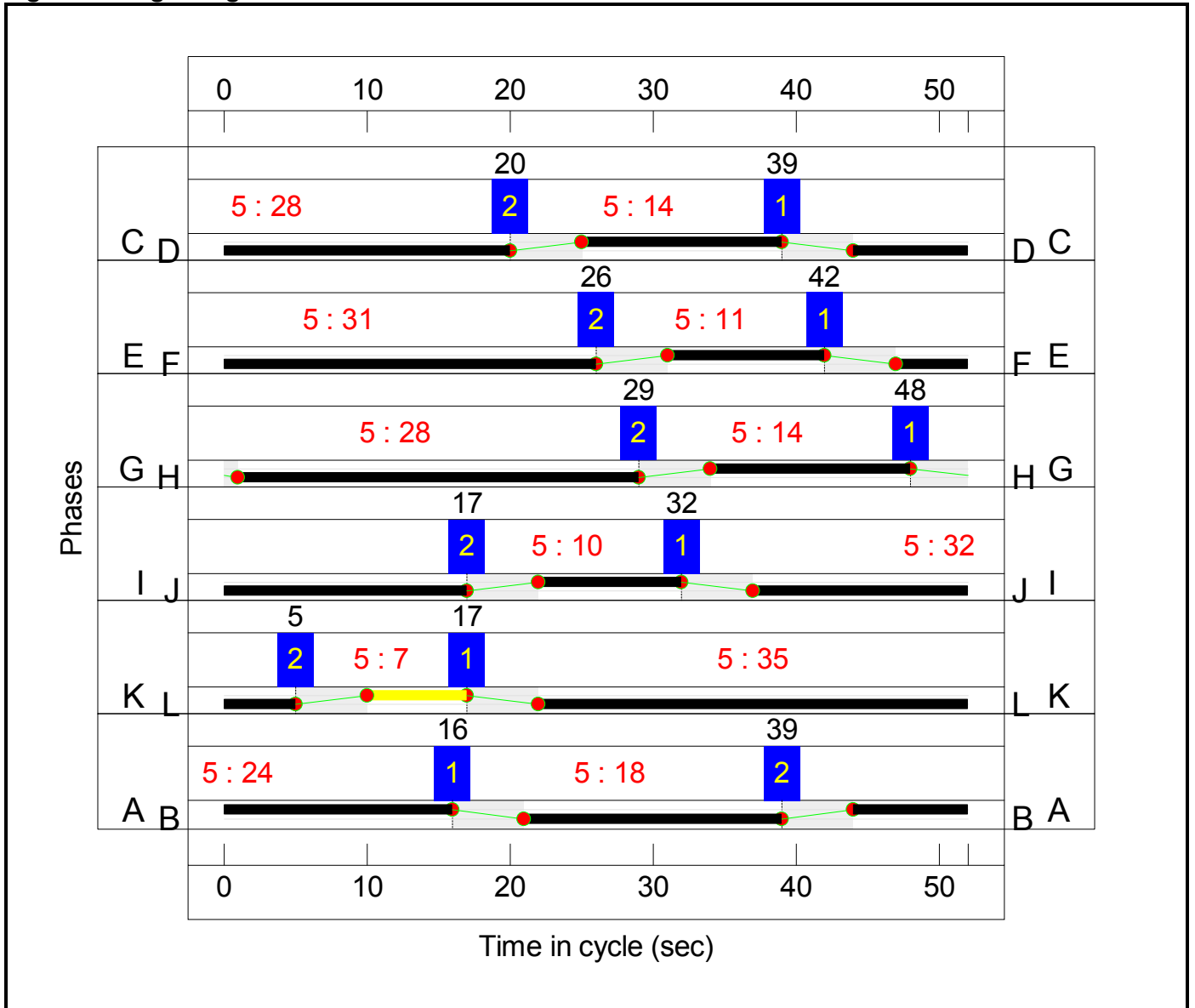
Stage Stream: 5

Stage	1	2
Duration	35	7
Change Point	17	5

Stage Stream: 6

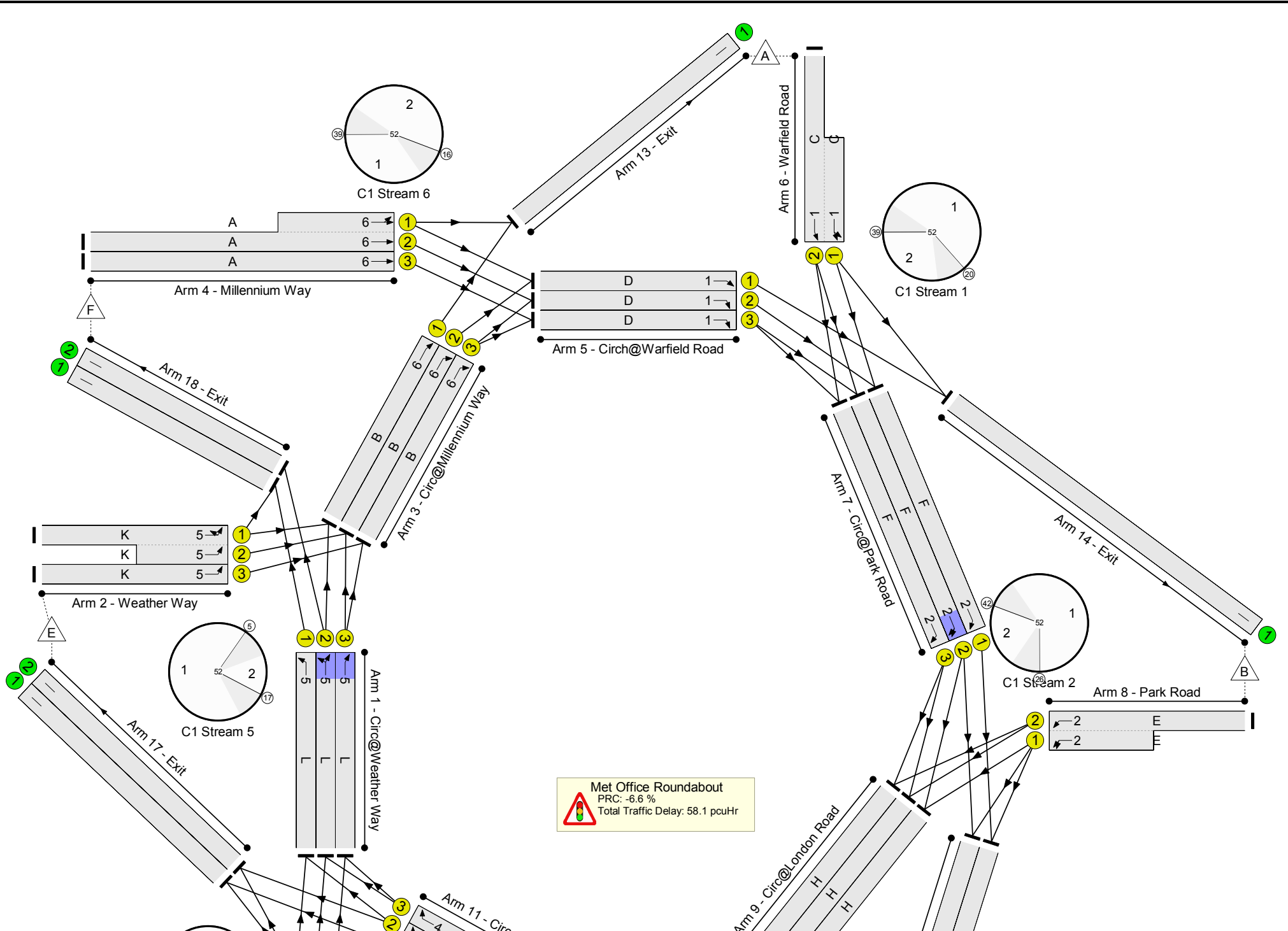
Stage	1	2
Duration	18	24
Change Point	16	39

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	95.9%
Met Office Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	95.9%
1/1	Circ@Weather Way Left	U	5	N/A	L		1	35	-	787	1900	1315	59.8%
1/2	Circ@Weather Way Ahead Left	U	5	N/A	L		1	35	-	826	1900	1315	62.8%
1/3	Circ@Weather Way Ahead	U	5	N/A	L		1	35	-	404	1900	1315	30.7%
2/1+2/2	Weather Way Left U-Turn	U	5	N/A	K		1	7	-	4	1800:1800	277+0	1.4 : 0.0%
2/3	Weather Way Left	U	5	N/A	K		1	7	-	0	1800	277	0.0%
3/1	Circ@Millennium Way Ahead	U	6	N/A	B		1	18	-	298	1900	694	42.9%
3/2	Circ@Millennium Way Right	U	6	N/A	B		1	18	-	200	1900	694	28.8%
3/3	Circ@Millennium Way Right	U	6	N/A	B		1	18	-	204	1900	694	29.4%
4/2+4/1	Millennium Way Ahead Ahead2	U	6	N/A	A		1	24	-	829	1800:1800	778+577	61.2 : 61.2%
4/3	Millennium Way Ahead	U	6	N/A	A		1	24	-	746	1800	865	86.2%
5/1	Circh@Warfield Road Ahead	U	1	N/A	D		1	28	-	345	1900	1060	32.6%
5/2	Circh@Warfield Road Right	U	1	N/A	D		1	28	-	507	1900	1060	47.8%
5/3	Circh@Warfield Road Right	U	1	N/A	D		1	28	-	919	1900	1060	86.7%
6/2+6/1	Warfield Road Ahead Left	U	1	N/A	C		1	14	-	703	1800:1800	519+214	95.9 : 95.9%
7/1	Circ@Park Road Ahead	U	2	N/A	F		1	31	-	658	1900	1169	56.3%
7/2	Circ@Park Road Right Ahead	U	2	N/A	F		1	31	-	842	1900	1169	72.0%

Full Input Data And Results

7/3	Circ@Park Road Right	U	2	N/A	F		1	31	-	575	1900	1169	49.2%
8/2+8/1	Park Road Left Left2	U	2	N/A	E		1	11	-	682	1800:1800	415+344	89.8 : 89.8%
9/1	Circ@London Road Ahead	U	3	N/A	H		1	28	-	789	1900	1060	74.5%
9/2	Circ@London Road Right Ahead	U	3	N/A	H		1	28	-	490	1900	1060	46.2%
9/3	Circ@London Road Right	U	3	N/A	H		1	28	-	458	1900	1060	43.2%
10/2+10/1	London Road Left U-Turn	U	3	N/A	G		1	14	-	731	1800:1800	519+268	92.8 : 92.8%
10/3	London Road Left	U	3	N/A	G		1	14	-	453	1800	519	87.2%
11/1	Circ@Chruch Road Ahead	U	4	N/A	J		1	32	-	477	1900	1206	39.6%
11/2	Circ@Chruch Road Right Ahead	U	4	N/A	J		1	32	-	662	1900	1206	54.9%
11/3	Circ@Chruch Road Right	U	4	N/A	J		1	32	-	731	1900	1206	60.6%
12/1	Church Road Ahead Left	U	4	N/A	I		1	10	-	202	1800	381	53.1%
12/2+12/3	Church Road Ahead	U	4	N/A	I		1	10	-	499	1800:1800	381+381	61.2 : 69.9%
13/1	Exit	U	N/A	N/A	-		-	-	-	506	Inf	Inf	0.0%
14/1	Exit	U	N/A	N/A	-		-	-	-	399	Inf	Inf	0.0%
15/1	Exit	U	N/A	N/A	-		-	-	-	745	Inf	Inf	0.0%
15/2	Exit	U	N/A	N/A	-		-	-	-	275	Inf	Inf	0.0%
16/1	Exit	U	N/A	N/A	-		-	-	-	868	Inf	Inf	0.0%
16/2	Exit	U	N/A	N/A	-		-	-	-	183	Inf	Inf	0.0%
17/1	Exit	U	N/A	N/A	-		-	-	-	515	Inf	Inf	0.0%
17/2	Exit	U	N/A	N/A	-		-	-	-	39	Inf	Inf	0.0%
18/1	Exit	U	N/A	N/A	-		-	-	-	791	Inf	Inf	0.0%
18/2	Exit	U	N/A	N/A	-		-	-	-	528	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	0	0	0	31.3	26.8	0.0	58.1	-	-	-	-
Met Office Roundabout	-	-	0	0	0	31.3	26.8	0.0	58.1	-	-	-	-
1/1	787	787	-	-	-	0.4	0.0	-	0.4	2.0	2.9	0.0	2.9
1/2	826	826	-	-	-	0.8	0.0	-	0.8	3.4	7.2	0.0	7.2
1/3	404	404	-	-	-	0.0	0.0	-	0.0	0.2	0.1	0.0	0.1
2/1+2/2	4	4	-	-	-	0.0	0.0	-	0.0	25.6	0.0	0.0	0.1
2/3	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	298	298	-	-	-	1.2	0.0	-	1.2	14.3	3.0	0.0	3.0
3/2	200	200	-	-	-	0.7	0.0	-	0.7	13.3	2.0	0.0	2.0
3/3	204	204	-	-	-	0.2	0.0	-	0.2	2.8	0.3	0.0	0.3
4/2+4/1	829	829	-	-	-	2.1	0.8	-	2.9	12.6	4.8	0.8	5.5
4/3	746	746	-	-	-	2.5	3.0	-	5.5	26.3	9.5	3.0	12.5
5/1	345	345	-	-	-	0.8	0.2	-	1.1	11.4	2.9	0.2	3.2
5/2	507	507	-	-	-	0.1	0.0	-	0.1	0.7	0.6	0.0	0.6
5/3	919	919	-	-	-	0.4	0.0	-	0.4	1.6	3.7	0.0	3.7
6/2+6/1	703	703	-	-	-	3.4	7.7	-	11.1	56.8	7.1	7.7	14.8
7/1	658	658	-	-	-	0.6	0.6	-	1.3	6.9	2.8	0.6	3.5
7/2	842	842	-	-	-	0.4	0.0	-	0.4	1.9	2.1	0.0	2.1
7/3	575	575	-	-	-	1.3	0.0	-	1.3	8.3	5.5	0.0	5.5
8/2+8/1	682	682	-	-	-	3.6	4.0	-	7.6	40.1	5.2	4.0	9.2
9/1	789	789	-	-	-	0.9	0.0	-	0.9	4.3	4.6	0.0	4.6
9/2	490	490	-	-	-	0.6	0.0	-	0.6	4.6	3.3	0.0	3.3
9/3	458	458	-	-	-	1.1	0.4	-	1.5	11.9	6.6	0.4	7.0
10/2+10/1	731	731	-	-	-	3.5	5.4	-	8.9	43.8	6.7	5.4	12.1
10/3	453	453	-	-	-	2.2	3.1	-	5.3	42.4	6.2	3.1	9.3
11/1	477	477	-	-	-	0.5	0.0	-	0.5	3.9	3.7	0.0	3.7

Full Input Data And Results

11/2	662	662	-	-	-	0.1	0.0	-	0.1	0.3	0.1	0.0	0.1
11/3	731	731	-	-	-	0.1	0.0	-	0.1	0.3	0.1	0.0	0.1
12/1	202	202	-	-	-	1.0	0.6	-	1.6	28.2	2.6	0.6	3.1
12/2+12/3	499	499	-	-	-	2.6	0.9	-	3.5	25.6	3.5	0.9	4.5
13/1	506	506	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/1	399	399	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
15/1	745	745	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
15/2	275	275	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
16/1	868	868	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
16/2	183	183	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
17/1	515	515	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
17/2	39	39	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
18/1	791	791	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
18/2	528	528	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

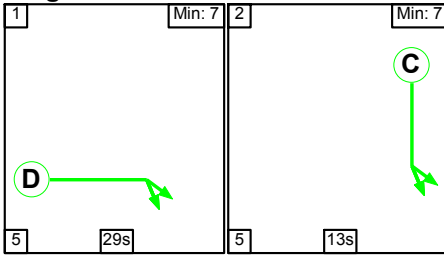
C1	Stream: 1 PRC for Signalled Lanes (%)	-6.6	Total Delay for Signalled Lanes (pcuHr):	12.70	Cycle Time (s):	52
C1	Stream: 2 PRC for Signalled Lanes (%)	0.2	Total Delay for Signalled Lanes (pcuHr):	10.61	Cycle Time (s):	52
C1	Stream: 3 PRC for Signalled Lanes (%)	-3.1	Total Delay for Signalled Lanes (pcuHr):	17.31	Cycle Time (s):	52
C1	Stream: 4 PRC for Signalled Lanes (%)	28.8	Total Delay for Signalled Lanes (pcuHr):	5.76	Cycle Time (s):	52
C1	Stream: 5 PRC for Signalled Lanes (%)	43.3	Total Delay for Signalled Lanes (pcuHr):	1.27	Cycle Time (s):	52
C1	Stream: 6 PRC for Signalled Lanes (%)	4.4	Total Delay for Signalled Lanes (pcuHr):	10.43	Cycle Time (s):	52
	PRC Over All Lanes (%)	-6.6	Total Delay Over All Lanes(pcuHr):	58.08		

Full Input Data And Results

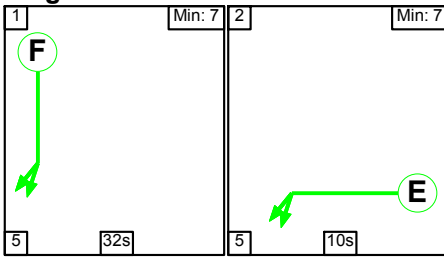
Scenario 2: 'PM Peak' (FG2: '2016 PM Peak', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

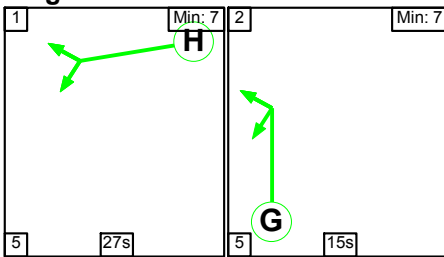
Stage Stream: 1



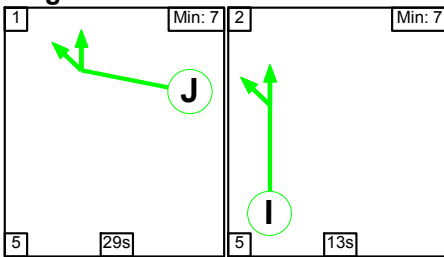
Stage Stream: 2



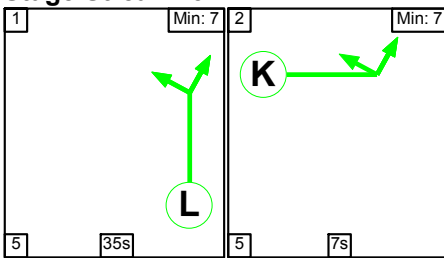
Stage Stream: 3



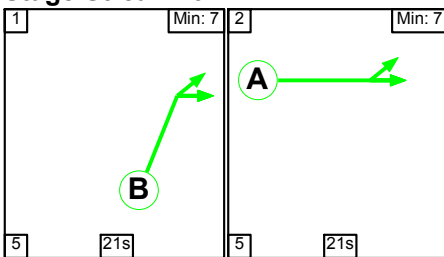
Stage Stream: 4



Stage Stream: 5



Stage Stream: 6



Full Input Data And Results

Stage Timings

Stage Stream: 1

Stage	1	2
Duration	29	13
Change Point	18	0

Stage Stream: 2

Stage	1	2
Duration	32	10
Change Point	20	5

Stage Stream: 3

Stage	1	2
Duration	27	15
Change Point	42	22

Stage Stream: 4

Stage	1	2
Duration	29	13
Change Point	24	6

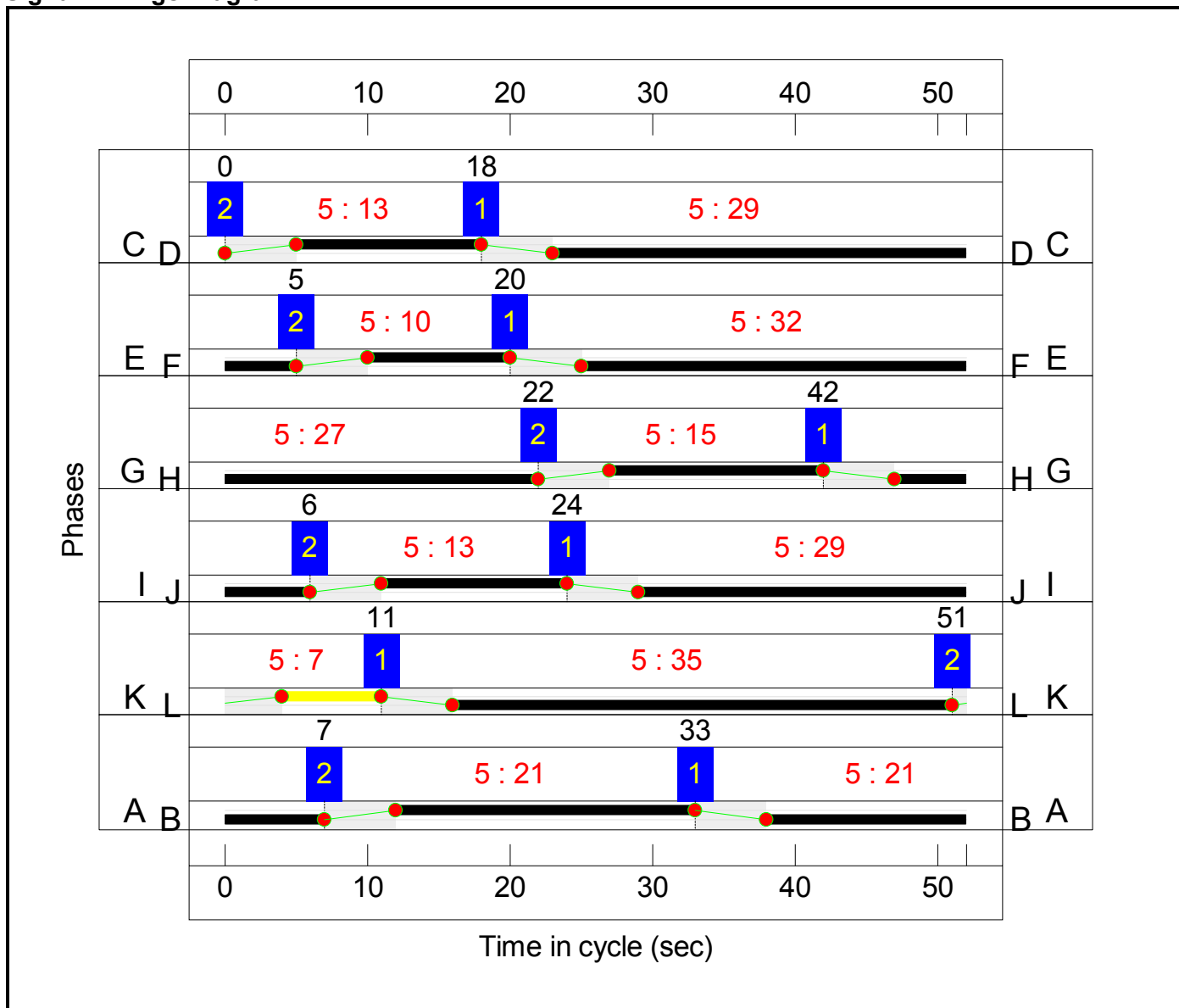
Stage Stream: 5

Stage	1	2
Duration	35	7
Change Point	11	51

Stage Stream: 6

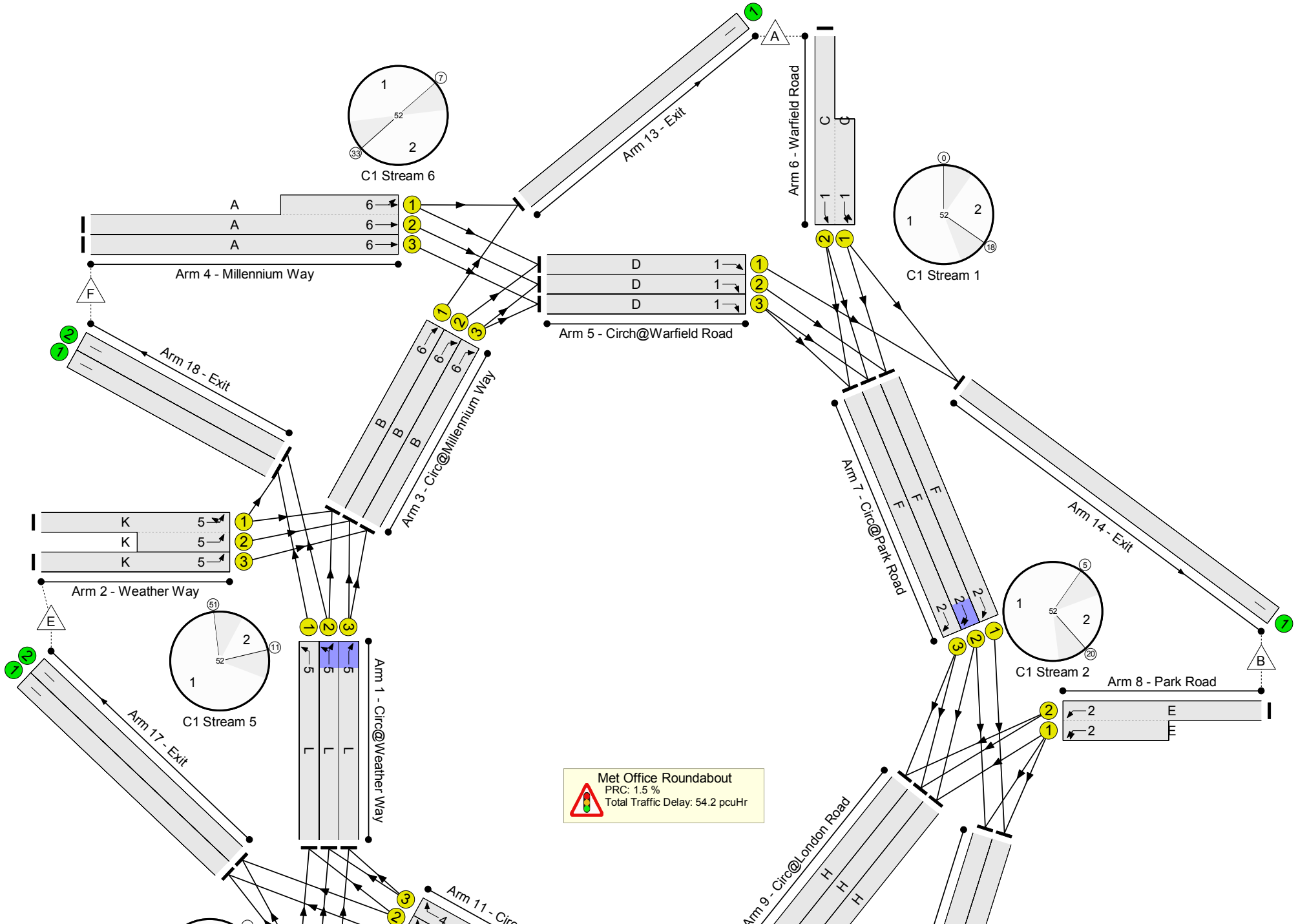
Stage	1	2
Duration	21	21
Change Point	33	7

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	88.7%
Met Office Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	88.7%
1/1	Circ@Weather Way Left	U	5	N/A	L		1	35	-	950	1900	1315	72.2%
1/2	Circ@Weather Way Ahead Left	U	5	N/A	L		1	35	-	750	1900	1315	57.0%
1/3	Circ@Weather Way Ahead	U	5	N/A	L		1	35	-	573	1900	1315	43.6%
2/1+2/2	Weather Way Left U-Turn	U	5	N/A	K		1	7	-	27	1800:1800	277+11	9.4 : 9.4%
2/3	Weather Way Left	U	5	N/A	K		1	7	-	3	1800	277	1.1%
3/1	Circ@Millennium Way Ahead	U	6	N/A	B		1	21	-	395	1900	804	49.1%
3/2	Circ@Millennium Way Right	U	6	N/A	B		1	21	-	257	1900	804	32.0%
3/3	Circ@Millennium Way Right	U	6	N/A	B		1	21	-	320	1900	804	39.8%
4/2+4/1	Millennium Way Ahead Ahead2	U	6	N/A	A		1	21	-	1201	1800:1800	708+670	87.1 : 87.1%
4/3	Millennium Way Ahead	U	6	N/A	A		1	21	-	653	1800	762	85.7%
5/1	Circh@Warfield Road Ahead	U	1	N/A	D		1	29	-	490	1900	1096	44.7%
5/2	Circh@Warfield Road Right	U	1	N/A	D		1	29	-	650	1900	1096	59.3%
5/3	Circh@Warfield Road Right	U	1	N/A	D		1	29	-	940	1900	1096	85.8%
6/2+6/1	Warfield Road Ahead Left	U	1	N/A	C		1	13	-	597	1800:1800	485+201	87.1 : 87.1%
7/1	Circ@Park Road Ahead	U	2	N/A	F		1	32	-	771	1900	1206	63.9%
7/2	Circ@Park Road Right Ahead	U	2	N/A	F		1	32	-	966	1900	1206	80.1%

Full Input Data And Results

7/3	Circ@Park Road Right	U	2	N/A	F		1	32	-	396	1900	1206	32.8%
8/2+8/1	Park Road Left Left2	U	2	N/A	E		1	10	-	487	1800:1800	381+370	70.9 : 58.6%
9/1	Circ@London Road Ahead	U	3	N/A	H		1	27	-	508	1900	1023	49.7%
9/2	Circ@London Road Right Ahead	U	3	N/A	H		1	27	-	254	1900	1023	24.8%
9/3	Circ@London Road Right	U	3	N/A	H		1	27	-	412	1900	1023	40.3%
10/2+10/1	London Road Left U-Turn	U	3	N/A	G		1	15	-	644	1800:1800	554+173	88.7 : 88.7%
10/3	London Road Left	U	3	N/A	G		1	15	-	462	1800	554	83.4%
11/1	Circ@Chruch Road Ahead	U	4	N/A	J		1	29	-	237	1900	1096	21.6%
11/2	Circ@Chruch Road Right Ahead	U	4	N/A	J		1	29	-	668	1900	1096	60.9%
11/3	Circ@Chruch Road Right	U	4	N/A	J		1	29	-	697	1900	1096	63.6%
12/1	Church Road Ahead Left	U	4	N/A	I		1	13	-	331	1800	485	68.3%
12/2+12/3	Church Road Ahead	U	4	N/A	I		1	13	-	626	1800:1800	246+485	85.6 : 85.6%
13/1	Exit	U	N/A	N/A	-		-	-	-	746	Inf	Inf	0.0%
14/1	Exit	U	N/A	N/A	-		-	-	-	544	Inf	Inf	0.0%
15/1	Exit	U	N/A	N/A	-		-	-	-	857	Inf	Inf	0.0%
15/2	Exit	U	N/A	N/A	-		-	-	-	589	Inf	Inf	0.0%
16/1	Exit	U	N/A	N/A	-		-	-	-	587	Inf	Inf	0.0%
16/2	Exit	U	N/A	N/A	-		-	-	-	91	Inf	Inf	0.0%
17/1	Exit	U	N/A	N/A	-		-	-	-	261	Inf	Inf	0.0%
17/2	Exit	U	N/A	N/A	-		-	-	-	25	Inf	Inf	0.0%
18/1	Exit	U	N/A	N/A	-		-	-	-	975	Inf	Inf	0.0%
18/2	Exit	U	N/A	N/A	-		-	-	-	356	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	0	0	0	32.5	21.7	0.0	54.2	-	-	-	-
Met Office Roundabout	-	-	0	0	0	32.5	21.7	0.0	54.2	-	-	-	-
1/1	950	950	-	-	-	0.5	0.0	-	0.5	1.8	5.5	0.0	5.5
1/2	750	750	-	-	-	0.5	0.0	-	0.5	2.3	4.6	0.0	4.6
1/3	573	573	-	-	-	0.0	0.0	-	0.0	0.2	0.1	0.0	0.1
2/1+2/2	27	27	-	-	-	0.1	0.1	-	0.2	25.9	0.3	0.1	0.4
2/3	3	3	-	-	-	0.0	0.0	-	0.0	25.6	0.0	0.0	0.0
3/1	395	395	-	-	-	0.6	0.0	-	0.6	5.1	2.4	0.0	2.4
3/2	257	257	-	-	-	0.3	0.0	-	0.3	4.9	1.5	0.0	1.5
3/3	320	320	-	-	-	1.3	0.0	-	1.3	14.5	4.6	0.0	4.6
4/2+4/1	1201	1201	-	-	-	4.3	3.3	-	7.6	22.8	7.7	3.3	11.0
4/3	653	653	-	-	-	2.5	2.9	-	5.3	29.3	8.5	2.9	11.4
5/1	490	490	-	-	-	0.7	0.4	-	1.1	8.3	3.9	0.4	4.3
5/2	650	650	-	-	-	0.9	0.0	-	0.9	5.0	8.9	0.0	8.9
5/3	940	940	-	-	-	1.0	0.0	-	1.0	3.7	9.4	0.0	9.4
6/2+6/1	597	597	-	-	-	2.9	3.1	-	6.0	36.3	5.7	3.1	8.9
7/1	771	771	-	-	-	0.4	0.9	-	1.3	6.0	1.8	0.9	2.7
7/2	966	966	-	-	-	0.6	0.0	-	0.6	2.2	3.2	0.0	3.2
7/3	396	396	-	-	-	0.7	0.0	-	0.7	6.6	3.9	0.0	3.9
8/2+8/1	487	487	-	-	-	2.5	0.9	-	3.5	25.5	3.6	0.9	4.5
9/1	508	508	-	-	-	1.3	0.0	-	1.3	9.0	6.7	0.0	6.7
9/2	254	254	-	-	-	0.4	0.0	-	0.4	5.0	2.3	0.0	2.3
9/3	412	412	-	-	-	1.0	0.3	-	1.4	11.9	3.4	0.3	3.7
10/2+10/1	644	644	-	-	-	2.9	3.6	-	6.5	36.4	6.7	3.6	10.3
10/3	462	462	-	-	-	2.2	2.4	-	4.5	35.4	6.2	2.4	8.6
11/1	237	237	-	-	-	0.1	0.0	-	0.1	1.0	0.4	0.0	0.4

Full Input Data And Results

11/2	668	668	-	-	-	0.1	0.0	-	0.1	0.6	1.0	0.0	1.0
11/3	697	697	-	-	-	0.2	0.0	-	0.2	0.9	1.6	0.0	1.6
12/1	331	331	-	-	-	1.6	1.1	-	2.6	28.6	4.2	1.1	5.3
12/2+12/3	626	626	-	-	-	3.0	2.8	-	5.8	33.5	5.6	2.8	8.5
13/1	746	746	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/1	544	544	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
15/1	857	857	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
15/2	589	589	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
16/1	587	587	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
16/2	91	91	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
17/1	261	261	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
17/2	25	25	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
18/1	975	975	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
18/2	356	356	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1	Stream: 1 PRC for Signalled Lanes (%)	3.4	Total Delay for Signalled Lanes (pcuHr):	9.02	Cycle Time (s):	52
C1	Stream: 2 PRC for Signalled Lanes (%)	12.3	Total Delay for Signalled Lanes (pcuHr):	6.06	Cycle Time (s):	52
C1	Stream: 3 PRC for Signalled Lanes (%)	1.5	Total Delay for Signalled Lanes (pcuHr):	14.03	Cycle Time (s):	52
C1	Stream: 4 PRC for Signalled Lanes (%)	5.1	Total Delay for Signalled Lanes (pcuHr):	8.81	Cycle Time (s):	52
C1	Stream: 5 PRC for Signalled Lanes (%)	24.6	Total Delay for Signalled Lanes (pcuHr):	1.19	Cycle Time (s):	52
C1	Stream: 6 PRC for Signalled Lanes (%)	3.3	Total Delay for Signalled Lanes (pcuHr):	15.12	Cycle Time (s):	52
	PRC Over All Lanes (%)	1.5	Total Delay Over All Lanes(pcuHr):	54.24		

**MET OFFICE
ROUNDAABOUT
LINSIG
PROPOSED
INFORMATION**

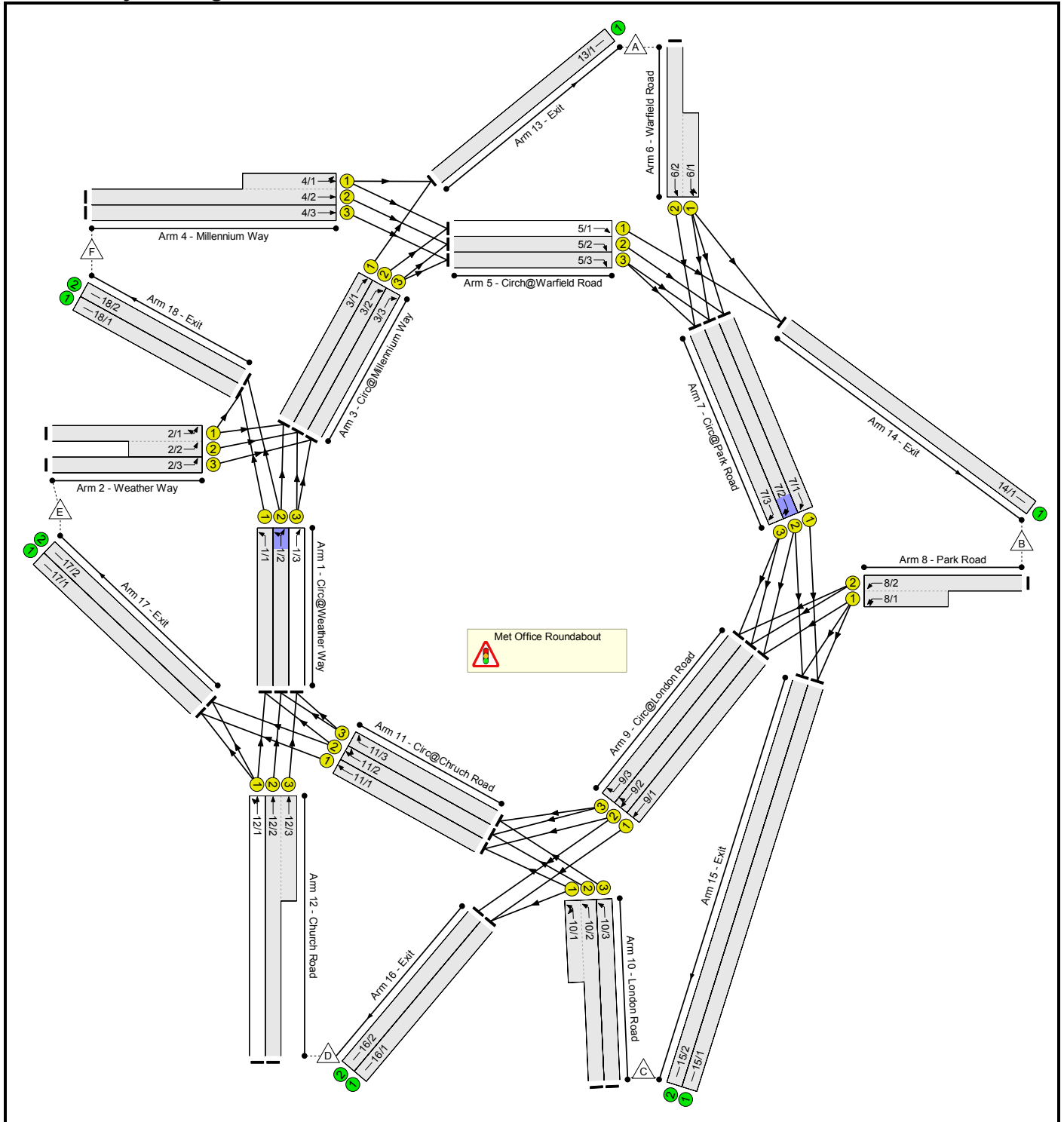
Full Input Data And Results

User and Project Details

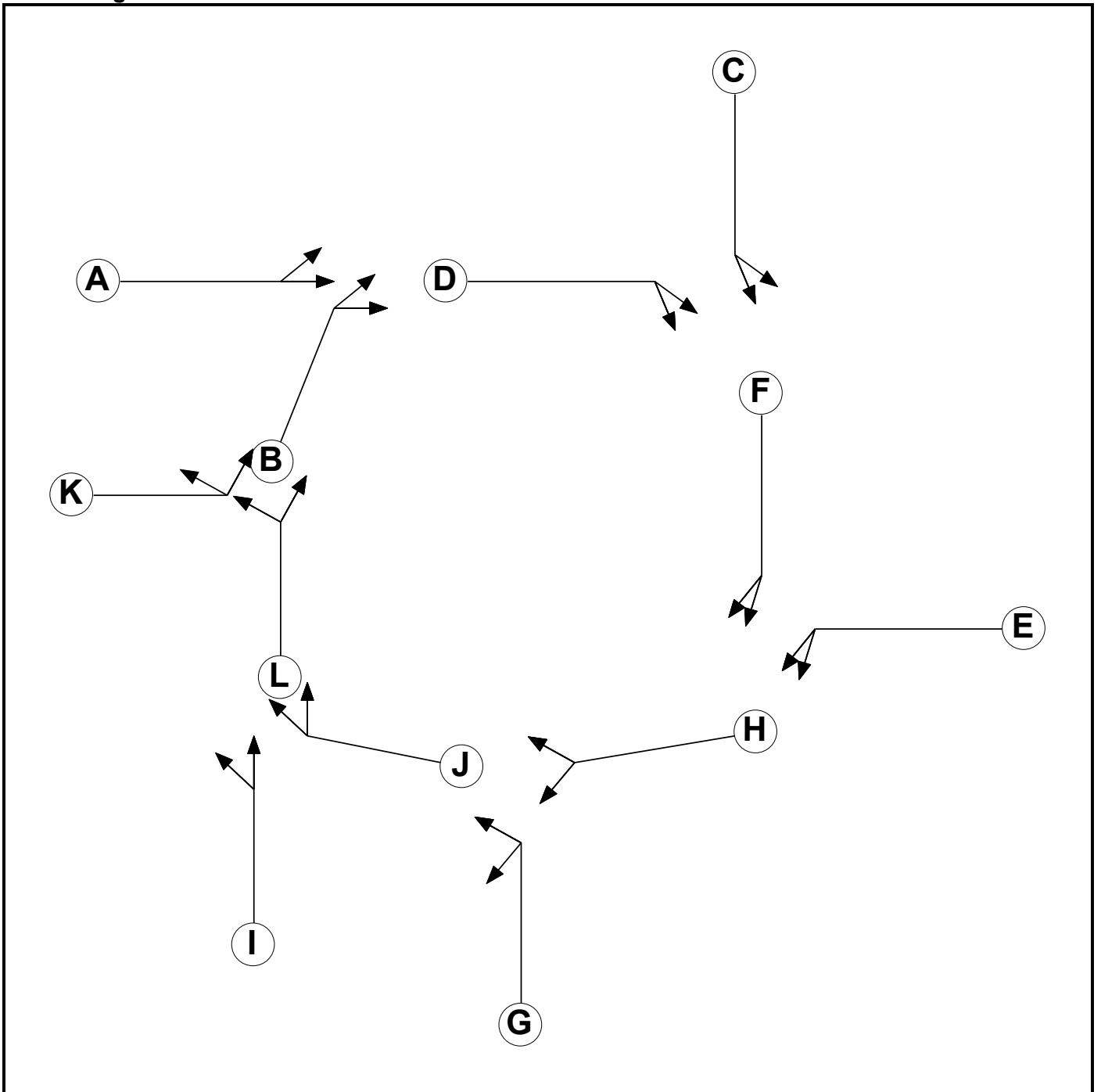
Project:	
Title:	
Location:	
File name:	Met Office Roundabout Existing 20141017 (White lining changes).lsg3x
Author:	
Company:	
Address:	
Notes:	

THIS IS ACTUALLY THE PROPOSED LAYOUT, BUT TITLE RELATES TO EXISTING
KERB LINE LAYOUT WITH CHANGES TO WHITE LINES

Network Layout Diagram



Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	6		7	7
B	Traffic	6		7	7
C	Traffic	1		7	7
D	Traffic	1		7	7
E	Traffic	2		7	7
F	Traffic	2		7	7
G	Traffic	3		7	7
H	Traffic	3		7	7
I	Traffic	4		7	7
J	Traffic	4		7	7
K	Traffic	5		7	7
L	Traffic	5		7	7

Full Input Data And Results

Phase Intergrens Matrix

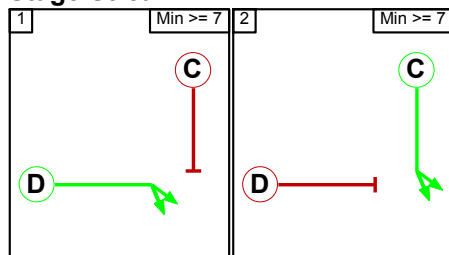
		Starting Phase											
		A	B	C	D	E	F	G	H	I	J	K	L
Terminating Phase	A	5	-	-	-	-	-	-	-	-	-	-	-
	B	-	5	-	-	-	-	-	-	-	-	-	-
	C	-	-	5	-	-	-	-	-	-	-	-	-
	D	-	-	-	5	-	-	-	-	-	-	-	-
	E	-	-	-	-	5	-	-	-	-	-	-	-
	F	-	-	-	-	-	5	-	-	-	-	-	-
	G	-	-	-	-	-	-	5	-	-	-	-	-
	H	-	-	-	-	-	-	-	5	-	-	-	-
	I	-	-	-	-	-	-	-	-	5	-	-	-
	J	-	-	-	-	-	-	-	-	-	5	-	-
	K	-	-	-	-	-	-	-	-	-	-	5	-
	L	-	-	-	-	-	-	-	-	-	-	-	5

Phases in Stage

Stream	Stage No.	Phases in Stage
1	1	D
1	2	C
2	1	F
2	2	E
3	1	H
3	2	G
4	1	J
4	2	I
5	1	L
5	2	K
6	1	B
6	2	A

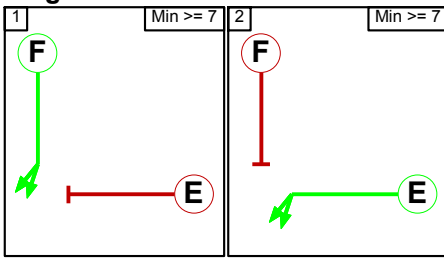
Stage Diagram

Stage Stream: 1

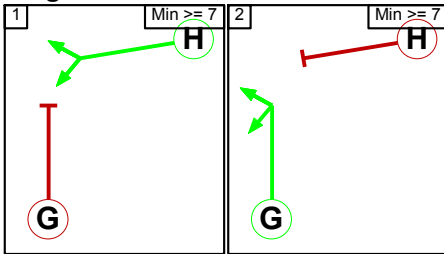


Full Input Data And Results

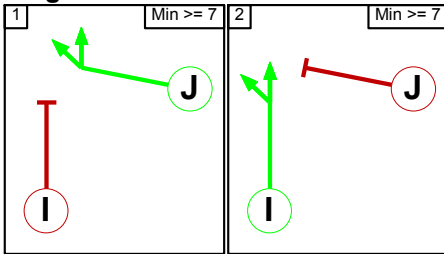
Stage Stream: 2



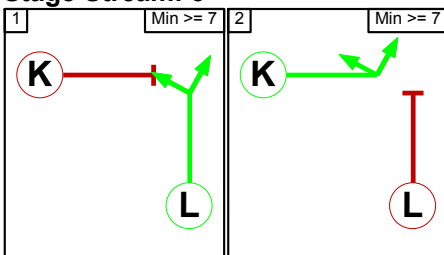
Stage Stream: 3



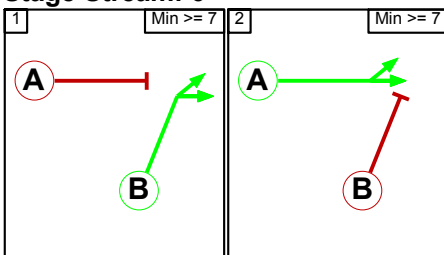
Stage Stream: 4



Stage Stream: 5



Stage Stream: 6



Phase Delays

Stage Stream: 1

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

Stage Stream: 2

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

Full Input Data And Results

Stage Stream: 3

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

Stage Stream: 4

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

Stage Stream: 5

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

Stage Stream: 6

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

Prohibited Stage Change

Stage Stream: 1

	To Stage	
From Stage	1	2
	1	5
	2	5

Stage Stream: 2

	To Stage	
From Stage	1	2
	1	5
	2	5

Stage Stream: 3

	To Stage	
From Stage	1	2
	1	5
	2	5

Stage Stream: 4

	To Stage	
From Stage	1	2
	1	5
	2	5

Stage Stream: 5

	To Stage	
From Stage	1	2
	1	5
	2	5

Full Input Data And Results
Stage Stream: 6

		To Stage	
		1	2
From Stage	1		5
	2	5	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Met Office Roundabout

There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: Met Office 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 (Circ@Weather Way)	U	L	2	3	50.0	User	1900	-	-	-	-	-
1/2 (Circ@Weather Way)	U	L	2	3	50.0	User	1900	-	-	-	-	-
1/3 (Circ@Weather Way)	U	L	2	3	50.0	User	1900	-	-	-	-	-
2/1 (Weather Way)	U	K	2	3	60.0	User	1800	-	-	-	-	-
2/2 (Weather Way)	U	K	2	3	7.0	User	1800	-	-	-	-	-
2/3 (Weather Way)	U	K	2	3	60.0	User	1800	-	-	-	-	-
3/1 (Circ@Millennium Way)	U	B	2	3	5.2	User	1900	-	-	-	-	-
3/2 (Circ@Millennium Way)	U	B	2	3	60.0	User	1900	-	-	-	-	-
3/3 (Circ@Millennium Way)	U	B	2	3	60.0	User	1900	-	-	-	-	-
4/1 (Millennium Way)	U	A	2	3	8.9	User	1800	-	-	-	-	-
4/2 (Millennium Way)	U	A	2	3	60.0	User	1800	-	-	-	-	-
4/3 (Millennium Way)	U	A	2	3	60.0	User	1800	-	-	-	-	-
5/1 (Circ@Warfield Road)	U	D	2	3	60.0	User	1900	-	-	-	-	-
5/2 (Circ@Warfield Road)	U	D	2	3	6.4	User	1900	-	-	-	-	-
5/3 (Circ@Warfield Road)	U	D	2	3	60.0	User	1900	-	-	-	-	-
6/1 (Warfield Road)	U	C	2	3	8.0	User	1800	-	-	-	-	-
6/2 (Warfield Road)	U	C	2	3	60.0	User	1800	-	-	-	-	-
7/1 (Circ@Park Road)	U	F	2	3	60.0	User	1900	-	-	-	-	-
7/2 (Circ@Park Road)	U	F	2	3	8.7	User	1900	-	-	-	-	-

Full Input Data And Results

7/3 (Circ@Park Road)	U	F	2	3	60.0	User	1900	-	-	-	-	-
8/1 (Park Road)	U	E	2	3	8.0	User	1800	-	-	-	-	-
8/2 (Park Road)	U	E	2	3	60.0	User	1800	-	-	-	-	-
9/1 (Circ@London Road)	U	H	2	3	1.0	User	1900	-	-	-	-	-
9/2 (Circ@London Road)	U	H	2	3	35.0	User	1900	-	-	-	-	-
9/3 (Circ@London Road)	U	H	2	3	60.0	User	1900	-	-	-	-	-
10/1 (London Road)	U	G	2	3	7.8	User	1800	-	-	-	-	-
10/2 (London Road)	U	G	2	3	60.0	User	1800	-	-	-	-	-
10/3 (London Road)	U	G	2	3	60.0	User	1800	-	-	-	-	-
11/1 (Circ@Chruch Road)	U	J	2	3	1.7	User	1900	-	-	-	-	-
11/2 (Circ@Chruch Road)	U	J	2	3	7.0	User	1900	-	-	-	-	-
11/3 (Circ@Chruch Road)	U	J	2	3	60.0	User	1900	-	-	-	-	-
12/1 (Church Road)	U	I	2	3	38.0	User	1800	-	-	-	-	-
12/2 (Church Road)	U	I	2	3	60.0	User	1800	-	-	-	-	-
12/3 (Church Road)	U	I	2	3	10.0	User	1800	-	-	-	-	-
13/1 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
14/1 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
15/1 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
15/2 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
16/1 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
16/2 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
17/1 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
17/2 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
18/1 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

18/2 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
----------------	---	--	---	---	------	-----	---	---	---	---	---	---

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2016 AM Peak'	08:00	09:00	01:00	
2: '2016 PM Peak'	17:00	18:00	01:00	

Scenario 1: 'AM Peak' (FG1: '2016 AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination							
	A	B	C	D	E	F	Tot.	
Origin	A	0	54	167	199	63	220	703
	B	10	0	173	206	65	228	682
	C	199	138	0	79	170	598	1184
	D	89	62	204	0	77	269	701
	E	0	0	0	0	0	4	4
	F	208	145	476	567	179	0	1575
	Tot.	506	399	1020	1051	554	1319	4849

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: AM Peak
Junction: Met Office Roundabout	
1/1	783
1/2	830
1/3	404
2/1 (with short)	4(In) 4(Out)
2/2 (short)	0
2/3	0
3/1	298
3/2	200
3/3	204
4/1 (short)	353
4/2 (with short)	829(In) 476(Out)
4/3	746
5/1	345
5/2	532
5/3	894
6/1 (short)	370
6/2 (with short)	703(In) 333(Out)
7/1	618
7/2	810
7/3	647
8/1 (short)	268
8/2 (with short)	682(In) 414(Out)
9/1	676
9/2	603
9/3	458
10/1 (short)	249
10/2 (with short)	733(In) 484(Out)
10/3	451
11/1	477
11/2	677
11/3	716
12/1	183
12/2 (with short)	518(In) 252(Out)
12/3 (short)	266

Full Input Data And Results

13/1	506
14/1	399
15/1	705
15/2	315
16/1	755
16/2	296
17/1	515
17/2	39
18/1	787
18/2	532

Full Input Data And Results

Lane Saturation Flows

Junction: Met Office 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 (Circ@Weather Way Lane 1)							1900	1900
1/2 (Circ@Weather Way Lane 2)							1900	1900
1/3 (Circ@Weather Way Lane 3)							1900	1900
2/1 (Weather Way Lane 1)							1800	1800
2/2 (Weather Way Lane 2)							1800	1800
2/3 (Weather Way Lane 3)							1800	1800
3/1 (Circ@Millennium Way Lane 1)							1900	1900
3/2 (Circ@Millennium Way Lane 2)							1900	1900
3/3 (Circ@Millennium Way Lane 3)							1900	1900
4/1 (Millennium Way Lane 1)							1800	1800
4/2 (Millennium Way Lane 2)							1800	1800
4/3 (Millennium Way Lane 3)							1800	1800
5/1 (Circ@Warfield Road Lane 1)							1900	1900
5/2 (Circ@Warfield Road Lane 2)							1900	1900
5/3 (Circ@Warfield Road Lane 3)							1900	1900
6/1 (Warfield Road Lane 1)							1800	1800
6/2 (Warfield Road Lane 2)							1800	1800
7/1 (Circ@Park Road Lane 1)							1900	1900
7/2 (Circ@Park Road Lane 2)							1900	1900
7/3 (Circ@Park Road Lane 3)							1900	1900
8/1 (Park Road Lane 1)							1800	1800
8/2 (Park Road Lane 2)							1800	1800
9/1 (Circ@London Road Lane 1)							1900	1900

Full Input Data And Results

9/2 (Circ@London Road Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
9/3 (Circ@London Road Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
10/1 (London Road Lane 1)	This lane uses a directly entered Saturation Flow	1800	1800
10/2 (London Road Lane 2)	This lane uses a directly entered Saturation Flow	1800	1800
10/3 (London Road Lane 3)	This lane uses a directly entered Saturation Flow	1800	1800
11/1 (Circ@Chruch Road Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
11/2 (Circ@Chruch Road Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
11/3 (Circ@Chruch Road Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
12/1 (Church Road Lane 1)	This lane uses a directly entered Saturation Flow	1800	1800
12/2 (Church Road Lane 2)	This lane uses a directly entered Saturation Flow	1800	1800
12/3 (Church Road Lane 3)	This lane uses a directly entered Saturation Flow	1800	1800
13/1 (Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
14/1 (Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
15/1 (Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
15/2 (Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
16/1 (Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
16/2 (Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
17/1 (Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
17/2 (Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
18/1 (Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
18/2 (Exit Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Scenario 2: 'PM Peak' (FG2: '2016 PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination							
	A	B	C	D	E	F	Tot.	
Origin	A	0	54	197	104	28	214	597
B	10	0	172	92	25	188	487	
C	237	158	0	79	74	558	1106	
D	147	98	317	0	49	346	957	
E	1	1	2	1	0	25	30	
F	351	233	758	402	110	0	1854	
Tot.	746	544	1446	678	286	1331	5031	

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: PM Peak
Junction: Met Office Roundabout	
1/1	904
1/2	796
1/3	573
2/1 (with short)	27(In) 26(Out)
2/2 (short)	1
2/3	3
3/1	395
3/2	257
3/3	320
4/1 (short)	584
4/2 (with short)	1245(In) 661(Out)
4/3	609
5/1	490
5/2	718
5/3	872
6/1 (short)	317
6/2 (with short)	597(In) 280(Out)
7/1	737
7/2	856
7/3	540
8/1 (short)	244
8/2 (with short)	487(In) 243(Out)
9/1	391
9/2	371
9/3	412
10/1 (short)	153
10/2 (with short)	643(In) 490(Out)
10/3	463
11/1	237
11/2	692
11/3	673
12/1	261
12/2 (with short)	696(In) 281(Out)
12/3 (short)	415

Full Input Data And Results

13/1	746
14/1	544
15/1	823
15/2	623
16/1	470
16/2	208
17/1	261
17/2	25
18/1	929
18/2	402

Full Input Data And Results

Lane Saturation Flows

Junction: Met Office 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 (Circ@Weather Way Lane 1)							1900	1900
1/2 (Circ@Weather Way Lane 2)							1900	1900
1/3 (Circ@Weather Way Lane 3)							1900	1900
2/1 (Weather Way Lane 1)							1800	1800
2/2 (Weather Way Lane 2)							1800	1800
2/3 (Weather Way Lane 3)							1800	1800
3/1 (Circ@Millennium Way Lane 1)							1900	1900
3/2 (Circ@Millennium Way Lane 2)							1900	1900
3/3 (Circ@Millennium Way Lane 3)							1900	1900
4/1 (Millennium Way Lane 1)							1800	1800
4/2 (Millennium Way Lane 2)							1800	1800
4/3 (Millennium Way Lane 3)							1800	1800
5/1 (Circh@Warfield Road Lane 1)							1900	1900
5/2 (Circh@Warfield Road Lane 2)							1900	1900
5/3 (Circh@Warfield Road Lane 3)							1900	1900
6/1 (Warfield Road Lane 1)							1800	1800
6/2 (Warfield Road Lane 2)							1800	1800
7/1 (Circ@Park Road Lane 1)							1900	1900
7/2 (Circ@Park Road Lane 2)							1900	1900
7/3 (Circ@Park Road Lane 3)							1900	1900
8/1 (Park Road Lane 1)							1800	1800
8/2 (Park Road Lane 2)							1800	1800
9/1 (Circ@London Road Lane 1)							1900	1900

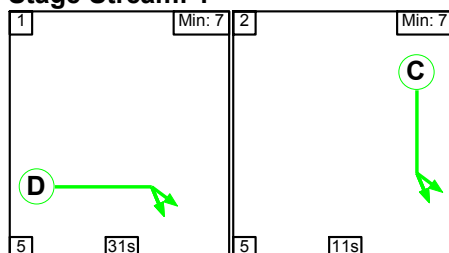
Full Input Data And Results

9/2 (Circ@London Road Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
9/3 (Circ@London Road Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
10/1 (London Road Lane 1)	This lane uses a directly entered Saturation Flow	1800	1800
10/2 (London Road Lane 2)	This lane uses a directly entered Saturation Flow	1800	1800
10/3 (London Road Lane 3)	This lane uses a directly entered Saturation Flow	1800	1800
11/1 (Circ@Chruch Road Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
11/2 (Circ@Chruch Road Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
11/3 (Circ@Chruch Road Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
12/1 (Church Road Lane 1)	This lane uses a directly entered Saturation Flow	1800	1800
12/2 (Church Road Lane 2)	This lane uses a directly entered Saturation Flow	1800	1800
12/3 (Church Road Lane 3)	This lane uses a directly entered Saturation Flow	1800	1800
13/1 (Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
14/1 (Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
15/1 (Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
15/2 (Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
16/1 (Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
16/2 (Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
17/1 (Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
17/2 (Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
18/1 (Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
18/2 (Exit Lane 2)	Infinite Saturation Flow	Inf	Inf

Scenario 1: 'AM Peak' (FG1: '2016 AM Peak', Plan 1: 'Network Control Plan 1')

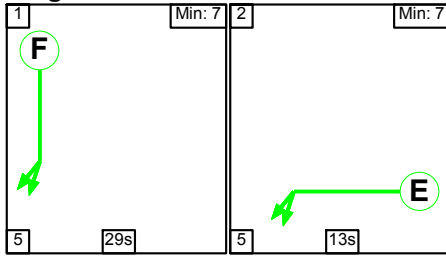
Stage Sequence Diagram

Stage Stream: 1

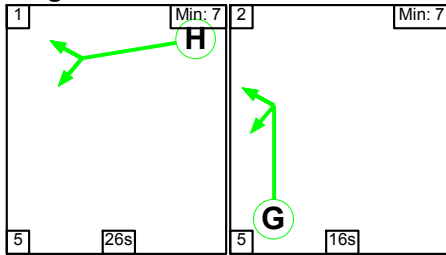


Full Input Data And Results

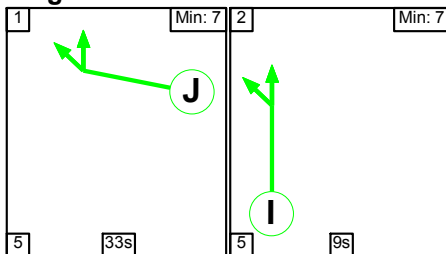
Stage Stream: 2



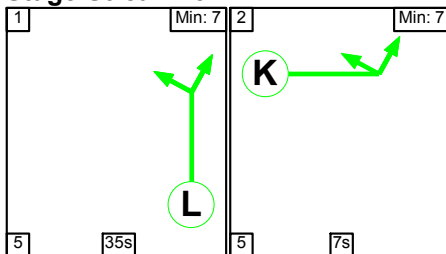
Stage Stream: 3



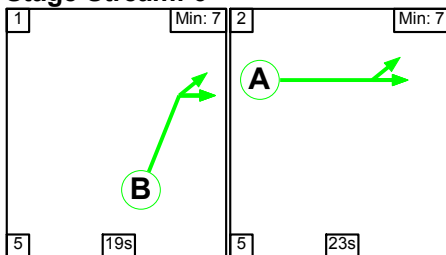
Stage Stream: 4



Stage Stream: 5



Stage Stream: 6



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	31	11
Change Point	23	7

Full Input Data And Results

Stage Stream: 2

Stage	1	2
Duration	29	13
Change Point	34	16

Stage Stream: 3

Stage	1	2
Duration	26	16
Change Point	5	36

Stage Stream: 4

Stage	1	2
Duration	33	9
Change Point	37	23

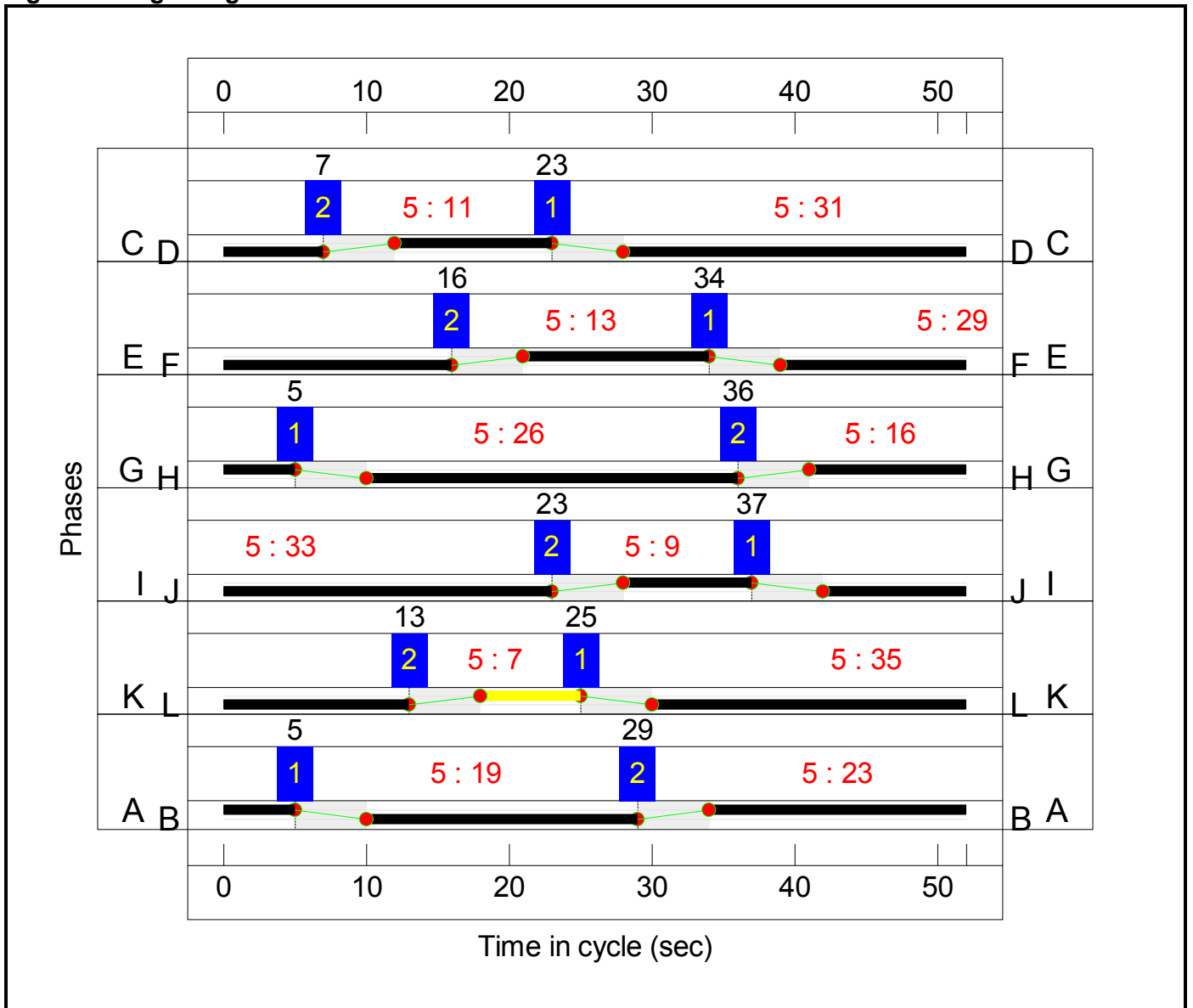
Stage Stream: 5

Stage	1	2
Duration	35	7
Change Point	25	13

Stage Stream: 6

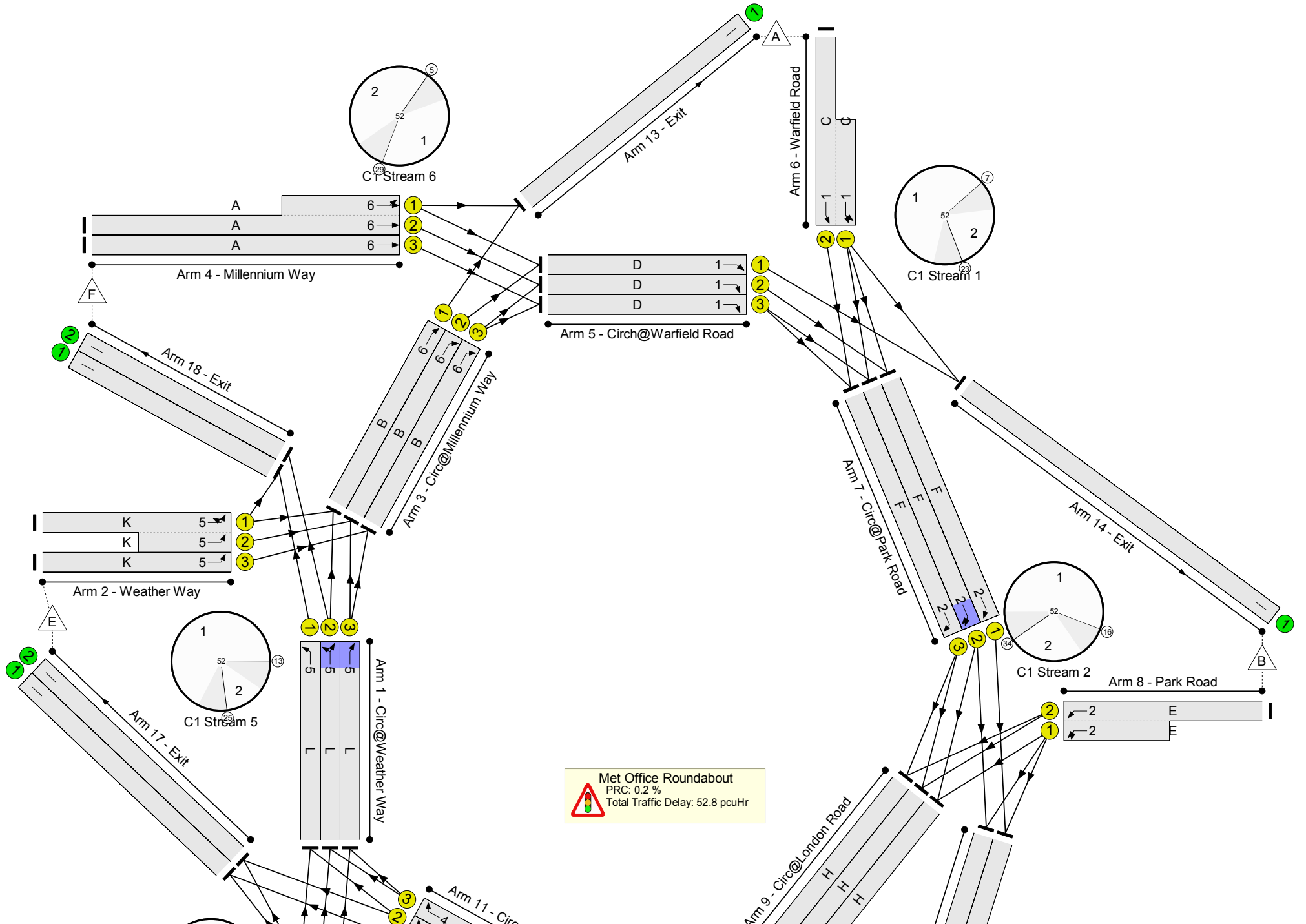
Stage	1	2
Duration	19	23
Change Point	5	29

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	89.8%
Met Office Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	89.8%
1/1	Circ@Weather Way Left	U	5	N/A	L		1	35	-	783	1900	1315	59.5%
1/2	Circ@Weather Way Ahead Left	U	5	N/A	L		1	35	-	830	1900	1315	63.1%
1/3	Circ@Weather Way Ahead	U	5	N/A	L		1	35	-	404	1900	1315	30.7%
2/1+2/2	Weather Way Left U-Turn	U	5	N/A	K		1	7	-	4	1800:1800	277+0	1.4 : 0.0%
2/3	Weather Way Left	U	5	N/A	K		1	7	-	0	1800	277	0.0%
3/1	Circ@Millennium Way Ahead	U	6	N/A	B		1	19	-	298	1900	731	40.8%
3/2	Circ@Millennium Way Right	U	6	N/A	B		1	19	-	200	1900	731	27.4%
3/3	Circ@Millennium Way Right	U	6	N/A	B		1	19	-	204	1900	731	27.9%
4/2+4/1	Millennium Way Ahead Ahead2	U	6	N/A	A		1	23	-	829	1800:1800	759+563	62.8 : 62.8%
4/3	Millennium Way Ahead	U	6	N/A	A		1	23	-	746	1800	831	89.8%
5/1	Circh@Warfield Road Ahead	U	1	N/A	D		1	31	-	345	1900	1169	29.5%
5/2	Circh@Warfield Road Right	U	1	N/A	D		1	31	-	532	1900	1169	45.5%
5/3	Circh@Warfield Road Right	U	1	N/A	D		1	31	-	894	1900	1169	76.5%
6/2+6/1	Warfield Road Ahead Left	U	1	N/A	C		1	11	-	703	1800:1800	415+415	80.2 : 89.1%
7/1	Circ@Park Road Ahead	U	2	N/A	F		1	29	-	618	1900	1096	56.4%
7/2	Circ@Park Road Right Ahead	U	2	N/A	F		1	29	-	810	1900	1096	73.9%

Full Input Data And Results

7/3	Circ@Park Road Right	U	2	N/A	F		1	29	-	647	1900	1096	59.0%
8/2+8/1	Park Road Left Left2	U	2	N/A	E		1	13	-	682	1800:1800	485+314	85.4 : 85.4%
9/1	Circ@London Road Ahead	U	3	N/A	H		1	26	-	676	1900	987	68.5%
9/2	Circ@London Road Right Ahead	U	3	N/A	H		1	26	-	603	1900	987	61.1%
9/3	Circ@London Road Right	U	3	N/A	H		1	26	-	458	1900	987	46.4%
10/2+10/1	London Road Left U-Turn	U	3	N/A	G		1	16	-	733	1800:1800	588+303	82.2 : 82.2%
10/3	London Road Left	U	3	N/A	G		1	16	-	451	1800	588	76.6%
11/1	Circ@Chruch Road Ahead	U	4	N/A	J		1	33	-	477	1900	1242	38.4%
11/2	Circ@Chruch Road Right Ahead	U	4	N/A	J		1	33	-	677	1900	1242	54.5%
11/3	Circ@Chruch Road Right	U	4	N/A	J		1	33	-	716	1900	1242	57.6%
12/1	Church Road Ahead Left	U	4	N/A	I		1	9	-	183	1800	346	52.9%
12/2+12/3	Church Road Ahead	U	4	N/A	I		1	9	-	518	1800:1800	346+346	72.8 : 76.8%
13/1	Exit	U	N/A	N/A	-		-	-	-	506	Inf	Inf	0.0%
14/1	Exit	U	N/A	N/A	-		-	-	-	399	Inf	Inf	0.0%
15/1	Exit	U	N/A	N/A	-		-	-	-	705	Inf	Inf	0.0%
15/2	Exit	U	N/A	N/A	-		-	-	-	315	Inf	Inf	0.0%
16/1	Exit	U	N/A	N/A	-		-	-	-	755	Inf	Inf	0.0%
16/2	Exit	U	N/A	N/A	-		-	-	-	296	Inf	Inf	0.0%
17/1	Exit	U	N/A	N/A	-		-	-	-	515	Inf	Inf	0.0%
17/2	Exit	U	N/A	N/A	-		-	-	-	39	Inf	Inf	0.0%
18/1	Exit	U	N/A	N/A	-		-	-	-	787	Inf	Inf	0.0%
18/2	Exit	U	N/A	N/A	-		-	-	-	532	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	0	0	0	35.3	17.5	0.0	52.8	-	-	-	-
Met Office Roundabout	-	-	0	0	0	35.3	17.5	0.0	52.8	-	-	-	-
1/1	783	783	-	-	-	0.4	0.0	-	0.4	1.8	2.2	0.0	2.2
1/2	830	830	-	-	-	0.4	0.0	-	0.4	1.6	2.7	0.0	2.7
1/3	404	404	-	-	-	0.0	0.0	-	0.0	0.3	0.1	0.0	0.1
2/1+2/2	4	4	-	-	-	0.0	0.0	-	0.0 (0.0+0.0)	25.6 (25.6:0.0)	0.0	0.0	0.1
2/3	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	298	298	-	-	-	0.9	0.0	-	0.9	10.5	4.2	0.0	4.2
3/2	200	200	-	-	-	0.5	0.0	-	0.5	9.1	2.4	0.0	2.4
3/3	204	204	-	-	-	1.2	0.0	-	1.2	21.9	2.9	0.0	2.9
4/2+4/1	829	829	-	-	-	2.3	0.8	-	3.1 (1.8+1.3)	13.5 (13.9:13.0)	5.0	0.8	5.9
4/3	746	746	-	-	-	2.7	4.0	-	6.7	32.3	9.7	4.0	13.8
5/1	345	345	-	-	-	0.8	0.2	-	1.0	10.2	3.0	0.2	3.2
5/2	532	532	-	-	-	0.3	0.0	-	0.3	2.2	1.2	0.0	1.2
5/3	894	894	-	-	-	0.8	0.0	-	0.8	3.1	2.8	0.0	2.8
6/2+6/1	703	703	-	-	-	3.7	2.6	-	6.4 (3.0+3.4)	32.7 (32.4:32.9)	5.1	2.6	7.8
7/1	618	618	-	-	-	0.5	0.6	-	1.2	6.8	2.4	0.6	3.1
7/2	810	810	-	-	-	1.7	0.0	-	1.7	7.6	8.1	0.0	8.1
7/3	647	647	-	-	-	1.9	0.0	-	1.9	10.6	5.9	0.0	5.9
8/2+8/1	682	682	-	-	-	3.3	2.8	-	6.1 (3.8+2.3)	32.1 (32.8:31.1)	5.6	2.8	8.4
9/1	676	676	-	-	-	1.7	0.0	-	1.7	9.2	8.5	0.0	8.5
9/2	603	603	-	-	-	1.3	0.0	-	1.3	7.5	6.6	0.0	6.6
9/3	458	458	-	-	-	1.2	0.4	-	1.6	12.9	3.7	0.4	4.2

Full Input Data And Results

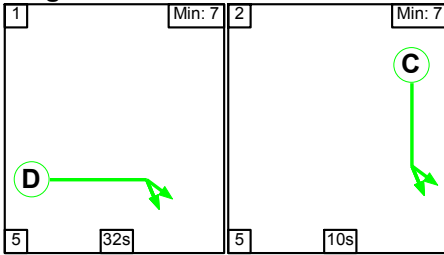
10/2+10/1	733	733	-	-	-	3.1	2.3	-	5.4 (3.7+1.7)	26.4 (27.2:24.7)	6.3	2.3	8.6																																																	
10/3	451	451	-	-	-	2.0	1.6	-	3.6	28.5	5.8	1.6	7.4																																																	
11/1	477	477	-	-	-	0.5	0.0	-	0.5	3.5	1.8	0.0	1.8																																																	
11/2	677	677	-	-	-	0.1	0.0	-	0.1	0.6	0.9	0.0	0.9																																																	
11/3	716	716	-	-	-	0.3	0.0	-	0.3	1.3	1.9	0.0	1.9																																																	
12/1	183	183	-	-	-	1.0	0.6	-	1.5	29.9	2.3	0.6	2.9																																																	
12/2+12/3	518	518	-	-	-	2.9	1.5	-	4.3 (2.1+2.2)	30.0 (29.9:30.1)	3.6	1.5	5.1																																																	
13/1	506	506	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0																																																	
14/1	399	399	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0																																																	
15/1	705	705	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0																																																	
15/2	315	315	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0																																																	
16/1	755	755	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0																																																	
16/2	296	296	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0																																																	
17/1	515	515	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0																																																	
17/2	39	39	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0																																																	
18/1	787	787	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0																																																	
18/2	532	532	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0																																																	
<table> <tbody> <tr> <td>C1</td> <td>Stream: 1 PRC for Signalled Lanes (%)</td> <td>1.0</td> <td>Total Delay for Signalled Lanes (pcuHr):</td> <td>8.47</td> <td>Cycle Time (s):</td> <td>52</td> </tr> <tr> <td>C1</td> <td>Stream: 2 PRC for Signalled Lanes (%)</td> <td>5.4</td> <td>Total Delay for Signalled Lanes (pcuHr):</td> <td>10.87</td> <td>Cycle Time (s):</td> <td>52</td> </tr> <tr> <td>C1</td> <td>Stream: 3 PRC for Signalled Lanes (%)</td> <td>9.4</td> <td>Total Delay for Signalled Lanes (pcuHr):</td> <td>13.56</td> <td>Cycle Time (s):</td> <td>52</td> </tr> <tr> <td>C1</td> <td>Stream: 4 PRC for Signalled Lanes (%)</td> <td>17.1</td> <td>Total Delay for Signalled Lanes (pcuHr):</td> <td>6.66</td> <td>Cycle Time (s):</td> <td>52</td> </tr> <tr> <td>C1</td> <td>Stream: 5 PRC for Signalled Lanes (%)</td> <td>42.6</td> <td>Total Delay for Signalled Lanes (pcuHr):</td> <td>0.82</td> <td>Cycle Time (s):</td> <td>52</td> </tr> <tr> <td>C1</td> <td>Stream: 6 PRC for Signalled Lanes (%)</td> <td>0.2</td> <td>Total Delay for Signalled Lanes (pcuHr):</td> <td>12.41</td> <td>Cycle Time (s):</td> <td>52</td> </tr> <tr> <td></td> <td>PRC Over All Lanes (%)</td> <td>0.2</td> <td>Total Delay Over All Lanes(pcuHr):</td> <td>52.79</td> <td></td> <td></td> </tr> </tbody> </table>														C1	Stream: 1 PRC for Signalled Lanes (%)	1.0	Total Delay for Signalled Lanes (pcuHr):	8.47	Cycle Time (s):	52	C1	Stream: 2 PRC for Signalled Lanes (%)	5.4	Total Delay for Signalled Lanes (pcuHr):	10.87	Cycle Time (s):	52	C1	Stream: 3 PRC for Signalled Lanes (%)	9.4	Total Delay for Signalled Lanes (pcuHr):	13.56	Cycle Time (s):	52	C1	Stream: 4 PRC for Signalled Lanes (%)	17.1	Total Delay for Signalled Lanes (pcuHr):	6.66	Cycle Time (s):	52	C1	Stream: 5 PRC for Signalled Lanes (%)	42.6	Total Delay for Signalled Lanes (pcuHr):	0.82	Cycle Time (s):	52	C1	Stream: 6 PRC for Signalled Lanes (%)	0.2	Total Delay for Signalled Lanes (pcuHr):	12.41	Cycle Time (s):	52		PRC Over All Lanes (%)	0.2	Total Delay Over All Lanes(pcuHr):	52.79		
C1	Stream: 1 PRC for Signalled Lanes (%)	1.0	Total Delay for Signalled Lanes (pcuHr):	8.47	Cycle Time (s):	52																																																								
C1	Stream: 2 PRC for Signalled Lanes (%)	5.4	Total Delay for Signalled Lanes (pcuHr):	10.87	Cycle Time (s):	52																																																								
C1	Stream: 3 PRC for Signalled Lanes (%)	9.4	Total Delay for Signalled Lanes (pcuHr):	13.56	Cycle Time (s):	52																																																								
C1	Stream: 4 PRC for Signalled Lanes (%)	17.1	Total Delay for Signalled Lanes (pcuHr):	6.66	Cycle Time (s):	52																																																								
C1	Stream: 5 PRC for Signalled Lanes (%)	42.6	Total Delay for Signalled Lanes (pcuHr):	0.82	Cycle Time (s):	52																																																								
C1	Stream: 6 PRC for Signalled Lanes (%)	0.2	Total Delay for Signalled Lanes (pcuHr):	12.41	Cycle Time (s):	52																																																								
	PRC Over All Lanes (%)	0.2	Total Delay Over All Lanes(pcuHr):	52.79																																																										

Full Input Data And Results

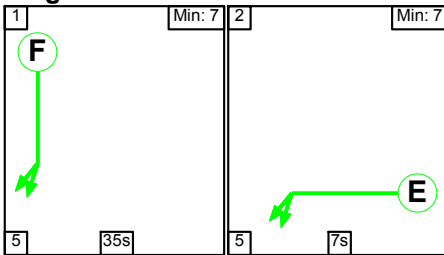
Scenario 2: 'PM Peak' (FG2: '2016 PM Peak', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

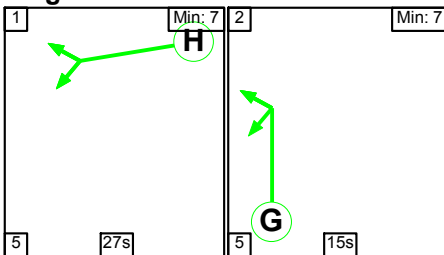
Stage Stream: 1



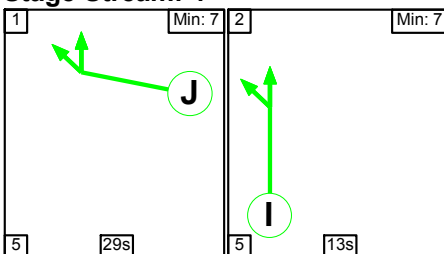
Stage Stream: 2



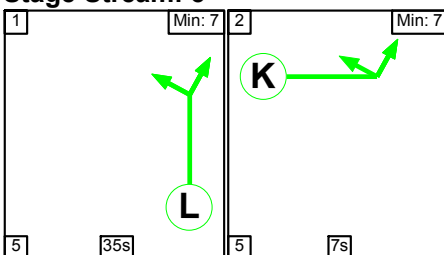
Stage Stream: 3



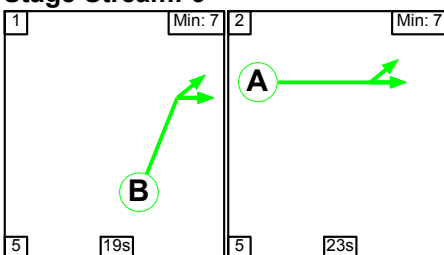
Stage Stream: 4



Stage Stream: 5



Stage Stream: 6



Full Input Data And Results

Stage Timings

Stage Stream: 1

Stage	1	2
Duration	32	10
Change Point	42	27

Stage Stream: 2

Stage	1	2
Duration	35	7
Change Point	49	37

Stage Stream: 3

Stage	1	2
Duration	27	15
Change Point	22	2

Stage Stream: 4

Stage	1	2
Duration	29	13
Change Point	44	26

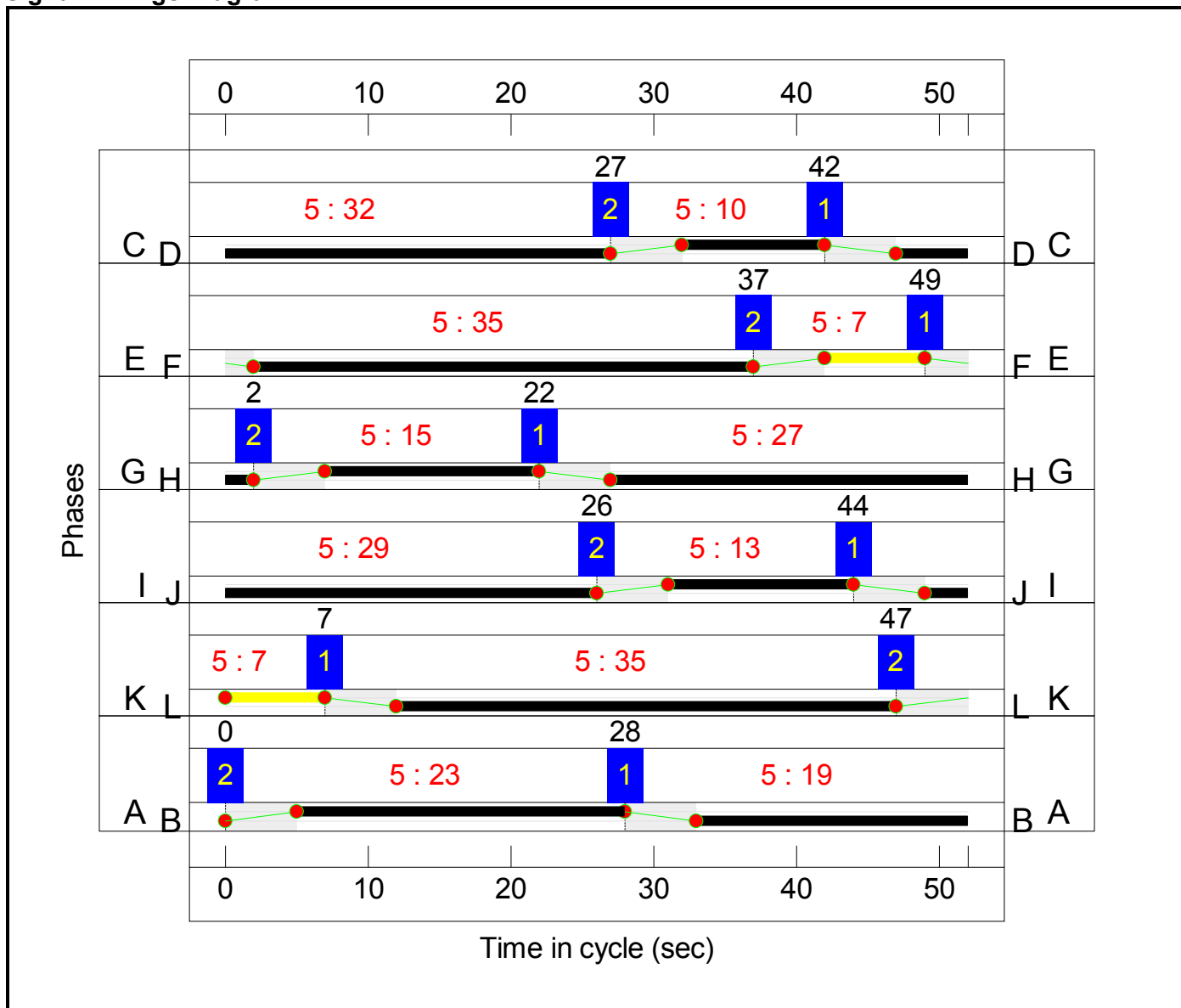
Stage Stream: 5

Stage	1	2
Duration	35	7
Change Point	7	47

Stage Stream: 6

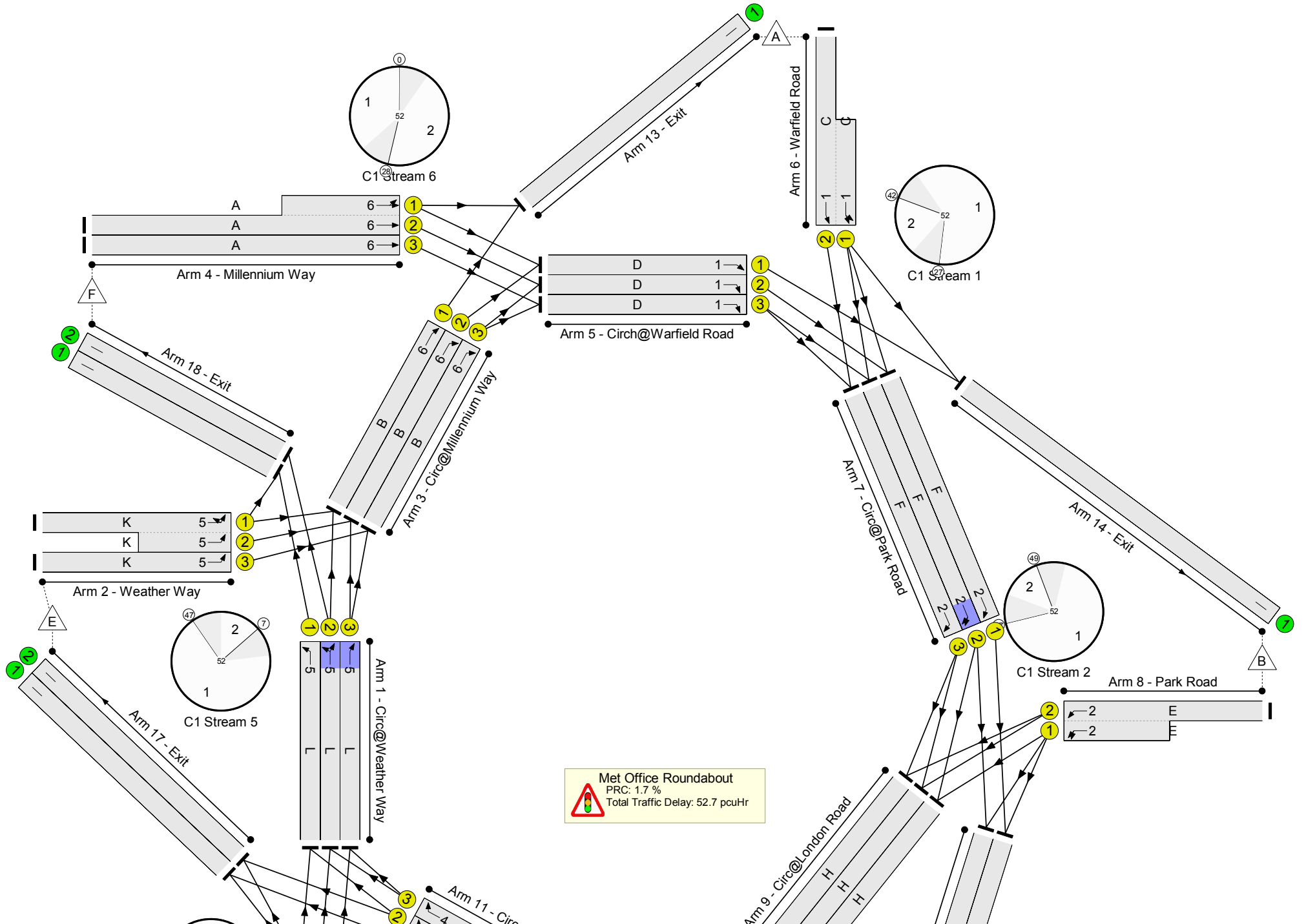
Stage	1	2
Duration	19	23
Change Point	28	0

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	88.5%
Met Office Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	88.5%
1/1	Circ@Weather Way Left	U	5	N/A	L		1	35	-	904	1900	1315	68.7%
1/2	Circ@Weather Way Ahead Left	U	5	N/A	L		1	35	-	796	1900	1315	60.5%
1/3	Circ@Weather Way Ahead	U	5	N/A	L		1	35	-	573	1900	1315	43.6%
2/1+2/2	Weather Way Left U-Turn	U	5	N/A	K		1	7	-	27	1800:1800	277+11	9.4 : 9.4%
2/3	Weather Way Left	U	5	N/A	K		1	7	-	3	1800	277	1.1%
3/1	Circ@Millennium Way Ahead	U	6	N/A	B		1	19	-	395	1900	731	54.1%
3/2	Circ@Millennium Way Right	U	6	N/A	B		1	19	-	257	1900	731	35.2%
3/3	Circ@Millennium Way Right	U	6	N/A	B		1	19	-	320	1900	731	43.8%
4/2+4/1	Millennium Way Ahead Ahead2	U	6	N/A	A		1	23	-	1245	1800:1800	748+661	88.4 : 88.4%
4/3	Millennium Way Ahead	U	6	N/A	A		1	23	-	609	1800	831	73.3%
5/1	Circh@Warfield Road Ahead	U	1	N/A	D		1	32	-	490	1900	1206	40.6%
5/2	Circh@Warfield Road Right	U	1	N/A	D		1	32	-	718	1900	1206	59.5%
5/3	Circh@Warfield Road Right	U	1	N/A	D		1	32	-	872	1900	1206	72.3%
6/2+6/1	Warfield Road Ahead Left	U	1	N/A	C		1	10	-	597	1800:1800	381+381	73.5 : 83.3%
7/1	Circ@Park Road Ahead	U	2	N/A	F		1	35	-	737	1900	1315	56.0%
7/2	Circ@Park Road Right Ahead	U	2	N/A	F		1	35	-	856	1900	1315	65.1%

Full Input Data And Results

7/3	Circ@Park Road Right	U	2	N/A	F		1	35	-	540	1900	1315	41.1%
8/2+8/1	Park Road Left Left2	U	2	N/A	E		1	7	-	487	1800:1800	277+277	87.8 : 88.1%
9/1	Circ@London Road Ahead	U	3	N/A	H		1	27	-	391	1900	1023	38.2%
9/2	Circ@London Road Right Ahead	U	3	N/A	H		1	27	-	371	1900	1023	36.3%
9/3	Circ@London Road Right	U	3	N/A	H		1	27	-	412	1900	1023	40.3%
10/2+10/1	London Road Left U-Turn	U	3	N/A	G		1	15	-	643	1800:1800	554+173	88.5 : 88.5%
10/3	London Road Left	U	3	N/A	G		1	15	-	463	1800	554	83.6%
11/1	Circ@Chruch Road Ahead	U	4	N/A	J		1	29	-	237	1900	1096	21.6%
11/2	Circ@Chruch Road Right Ahead	U	4	N/A	J		1	29	-	692	1900	1096	63.1%
11/3	Circ@Chruch Road Right	U	4	N/A	J		1	29	-	673	1900	1096	61.4%
12/1	Church Road Ahead Left	U	4	N/A	I		1	13	-	261	1800	485	53.9%
12/2+12/3	Church Road Ahead	U	4	N/A	I		1	13	-	696	1800:1800	328+485	85.6 : 85.6%
13/1	Exit	U	N/A	N/A	-		-	-	-	746	Inf	Inf	0.0%
14/1	Exit	U	N/A	N/A	-		-	-	-	544	Inf	Inf	0.0%
15/1	Exit	U	N/A	N/A	-		-	-	-	823	Inf	Inf	0.0%
15/2	Exit	U	N/A	N/A	-		-	-	-	623	Inf	Inf	0.0%
16/1	Exit	U	N/A	N/A	-		-	-	-	470	Inf	Inf	0.0%
16/2	Exit	U	N/A	N/A	-		-	-	-	208	Inf	Inf	0.0%
17/1	Exit	U	N/A	N/A	-		-	-	-	261	Inf	Inf	0.0%
17/2	Exit	U	N/A	N/A	-		-	-	-	25	Inf	Inf	0.0%
18/1	Exit	U	N/A	N/A	-		-	-	-	929	Inf	Inf	0.0%
18/2	Exit	U	N/A	N/A	-		-	-	-	402	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	0	0	0	31.8	20.8	0.0	52.7	-	-	-	-
Met Office Roundabout	-	-	0	0	0	31.8	20.8	0.0	52.7	-	-	-	-
1/1	904	904	-	-	-	0.5	0.0	-	0.5	2.1	4.2	0.0	4.2
1/2	796	796	-	-	-	0.6	0.0	-	0.6	2.5	3.4	0.0	3.4
1/3	573	573	-	-	-	0.2	0.0	-	0.2	1.0	0.5	0.0	0.5
2/1+2/2	27	27	-	-	-	0.1	0.1	-	0.2 (0.2+0.0)	25.9 (25.9:25.9)	0.3	0.1	0.4
2/3	3	3	-	-	-	0.0	0.0	-	0.0	25.6	0.0	0.0	0.0
3/1	395	395	-	-	-	0.6	0.0	-	0.6	5.1	3.7	0.0	3.7
3/2	257	257	-	-	-	0.3	0.0	-	0.3	4.3	2.4	0.0	2.4
3/3	320	320	-	-	-	0.1	0.0	-	0.1	1.6	0.4	0.0	0.4
4/2+4/1	1245	1245	-	-	-	4.0	3.6	-	7.6 (4.1+3.5)	22.1 (22.4:21.7)	8.1	3.6	11.7
4/3	609	609	-	-	-	1.9	1.4	-	3.3	19.4	7.1	1.4	8.5
5/1	490	490	-	-	-	0.6	0.3	-	1.0	7.0	3.5	0.3	3.9
5/2	718	718	-	-	-	0.4	0.0	-	0.4	1.9	1.3	0.0	1.3
5/3	872	872	-	-	-	0.5	0.0	-	0.5	1.9	3.2	0.0	3.2
6/2+6/1	597	597	-	-	-	3.2	1.8	-	5.0 (2.3+2.7)	30.1 (29.9:30.3)	4.3	1.8	6.1
7/1	737	737	-	-	-	0.1	0.6	-	0.7	3.4	1.7	0.6	2.3
7/2	856	856	-	-	-	1.4	0.0	-	1.4	5.9	7.9	0.0	7.9
7/3	540	540	-	-	-	1.2	0.0	-	1.2	8.0	4.5	0.0	4.5
8/2+8/1	487	487	-	-	-	2.9	3.3	-	6.2 (3.1+3.1)	46.0 (46.0:46.0)	3.4	3.3	6.7
9/1	391	391	-	-	-	0.5	0.0	-	0.5	4.7	3.3	0.0	3.3
9/2	371	371	-	-	-	0.5	0.0	-	0.5	4.8	3.3	0.0	3.3
9/3	412	412	-	-	-	1.0	0.3	-	1.4	12.1	3.1	0.3	3.5

Full Input Data And Results

10/2+10/1	643	643	-	-	-	2.9	3.5	-	6.4 (5.0+1.4)	36.1 (36.9:33.5)	6.7	3.5	10.2																																																	
10/3	463	463	-	-	-	2.2	2.4	-	4.6	35.6	6.2	2.4	8.6																																																	
11/1	237	237	-	-	-	0.5	0.0	-	0.5	8.3	2.0	0.0	2.0																																																	
11/2	692	692	-	-	-	0.5	0.0	-	0.5	2.7	1.6	0.0	1.6																																																	
11/3	673	673	-	-	-	0.6	0.0	-	0.6	3.0	1.8	0.0	1.8																																																	
12/1	261	261	-	-	-	1.2	0.6	-	1.8	24.3	3.2	0.6	3.8																																																	
12/2+12/3	696	696	-	-	-	3.4	2.8	-	6.2 (2.4+3.8)	32.1 (31.2:32.8)	5.6	2.8	8.5																																																	
13/1	746	746	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0																																																	
14/1	544	544	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0																																																	
15/1	823	823	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0																																																	
15/2	623	623	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0																																																	
16/1	470	470	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0																																																	
16/2	208	208	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0																																																	
17/1	261	261	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0																																																	
17/2	25	25	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0																																																	
18/1	929	929	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0																																																	
18/2	402	402	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0																																																	
<table> <tbody> <tr> <td>C1</td> <td>Stream: 1 PRC for Signalled Lanes (%)</td> <td>8.1</td> <td>Total Delay for Signalled Lanes (pcuHr):</td> <td>6.78</td> <td>Cycle Time (s):</td> <td>52</td> </tr> <tr> <td>C1</td> <td>Stream: 2 PRC for Signalled Lanes (%)</td> <td>2.1</td> <td>Total Delay for Signalled Lanes (pcuHr):</td> <td>9.54</td> <td>Cycle Time (s):</td> <td>52</td> </tr> <tr> <td>C1</td> <td>Stream: 3 PRC for Signalled Lanes (%)</td> <td>1.7</td> <td>Total Delay for Signalled Lanes (pcuHr):</td> <td>13.41</td> <td>Cycle Time (s):</td> <td>52</td> </tr> <tr> <td>C1</td> <td>Stream: 4 PRC for Signalled Lanes (%)</td> <td>5.1</td> <td>Total Delay for Signalled Lanes (pcuHr):</td> <td>9.58</td> <td>Cycle Time (s):</td> <td>52</td> </tr> <tr> <td>C1</td> <td>Stream: 5 PRC for Signalled Lanes (%)</td> <td>31.0</td> <td>Total Delay for Signalled Lanes (pcuHr):</td> <td>1.44</td> <td>Cycle Time (s):</td> <td>52</td> </tr> <tr> <td>C1</td> <td>Stream: 6 PRC for Signalled Lanes (%)</td> <td>1.8</td> <td>Total Delay for Signalled Lanes (pcuHr):</td> <td>11.93</td> <td>Cycle Time (s):</td> <td>52</td> </tr> <tr> <td></td> <td>PRC Over All Lanes (%)</td> <td>1.7</td> <td>Total Delay Over All Lanes(pcuHr):</td> <td>52.68</td> <td></td> <td></td> </tr> </tbody> </table>														C1	Stream: 1 PRC for Signalled Lanes (%)	8.1	Total Delay for Signalled Lanes (pcuHr):	6.78	Cycle Time (s):	52	C1	Stream: 2 PRC for Signalled Lanes (%)	2.1	Total Delay for Signalled Lanes (pcuHr):	9.54	Cycle Time (s):	52	C1	Stream: 3 PRC for Signalled Lanes (%)	1.7	Total Delay for Signalled Lanes (pcuHr):	13.41	Cycle Time (s):	52	C1	Stream: 4 PRC for Signalled Lanes (%)	5.1	Total Delay for Signalled Lanes (pcuHr):	9.58	Cycle Time (s):	52	C1	Stream: 5 PRC for Signalled Lanes (%)	31.0	Total Delay for Signalled Lanes (pcuHr):	1.44	Cycle Time (s):	52	C1	Stream: 6 PRC for Signalled Lanes (%)	1.8	Total Delay for Signalled Lanes (pcuHr):	11.93	Cycle Time (s):	52		PRC Over All Lanes (%)	1.7	Total Delay Over All Lanes(pcuHr):	52.68		
C1	Stream: 1 PRC for Signalled Lanes (%)	8.1	Total Delay for Signalled Lanes (pcuHr):	6.78	Cycle Time (s):	52																																																								
C1	Stream: 2 PRC for Signalled Lanes (%)	2.1	Total Delay for Signalled Lanes (pcuHr):	9.54	Cycle Time (s):	52																																																								
C1	Stream: 3 PRC for Signalled Lanes (%)	1.7	Total Delay for Signalled Lanes (pcuHr):	13.41	Cycle Time (s):	52																																																								
C1	Stream: 4 PRC for Signalled Lanes (%)	5.1	Total Delay for Signalled Lanes (pcuHr):	9.58	Cycle Time (s):	52																																																								
C1	Stream: 5 PRC for Signalled Lanes (%)	31.0	Total Delay for Signalled Lanes (pcuHr):	1.44	Cycle Time (s):	52																																																								
C1	Stream: 6 PRC for Signalled Lanes (%)	1.8	Total Delay for Signalled Lanes (pcuHr):	11.93	Cycle Time (s):	52																																																								
	PRC Over All Lanes (%)	1.7	Total Delay Over All Lanes(pcuHr):	52.68																																																										