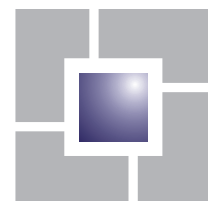




Langstone Technology Park Havant

*Response to Consultees on transport and
highways matters*

October 2019



david tucker associates
transport planning consultants

Langstone Technology Park Havant

Response to consultees on transport and highways matters

23rd October 2019
RJM/20428-06e Response

Prepared by:

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Prepared For:

AG Langstone B.V. and Trinity Investment Management

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This note has been prepared in response to a number of highways and transport matters raised by consultees to planning application APP/19/00703:

- Highways England response offered no objection.
- Havant Borough Council Environmental Health response from Mr Mark Moss dated 28th August 2019 has commented on the routeing of MGV and HGV traffic to and from the site. Specifically confirmation is sought on this traffic will be using the Brookside Road site entrance in relation to the proposed erection of new industrial units within part of the existing south car park. This note confirms and clarifies that this is the case. In addition, vehicular tracking is provided which shows that the internal road layout has been constrained to prevent routeing of HGVs within the site.
- Havant Borough Council Environmental Health response from Jonathan Driver dated 17th August 2019 raises concerns about the consistency of the traffic forecasts in the Transport Assessment and the Air Quality Appraisal. Concerns are also raised regarding the validation of the traffic modelling; a reinterpretation of the modelling results is put forward, the targets within the Travel Plan are queried. These points are addressed below.
- Hampshire Countryside Service response (undated) from Sam Thwaites requests that improvements are made to Havant Footpath 51. This point is addressed below
- Hampshire County Council Economy Transport and Environment Department response from Ben Clifton/Chris Hirst on transport and highways matters dated 11th September 2019. The following information is requested:
 - Up-to-date PIA data for the most recent 5-year period;
 - Investigation into bus stop improvements on Langstone Road;
 - Further discussions with HCC regarding improvements to Footpath 51;
 - Confirmation regarding how a route through the site for vehicular traffic will be provided in perpetuity;
 - Confirmation regarding the type of gym facility to be provided, and whether this will generate additional trips;
 - Confirmation as to how HGV access from Langstone Road will be discouraged;
 - Junction modelling for A27/Langstone Roundabout;
 - Provision of the model files for review;
 - Confirmation regarding calculation of current occupation levels and provision of historic occupation levels; and
 - Changes to the Travel Plan in line with the comments raised above.
- Havant Borough Council Planning Policy response from Jade Ellis dated 16th August 2019 comments on the proposed parking provision including provision for electric vehicles.

These are responded to below with additional information appended where appropriate.

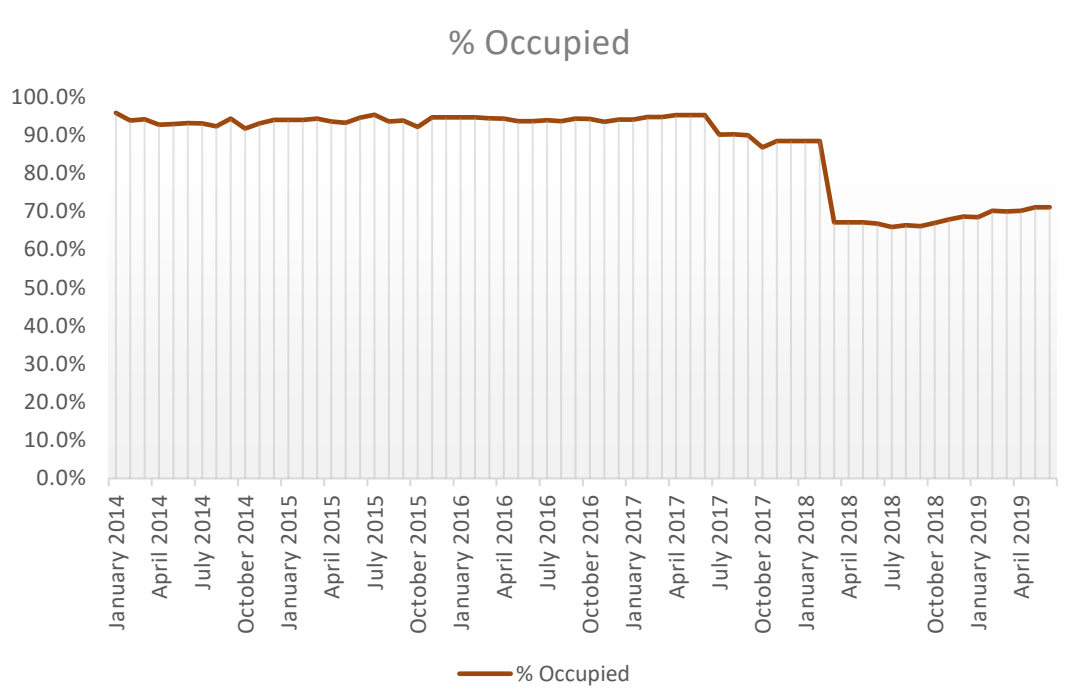
	Consultee Comment	DTA Response
Road safety	HCC: Personal Injury Accident (PIA) data has been obtained between 01/01/14 – 31/12/18. It is noted that this accident data is out of date and should be updated to provide the most recent report on road accidents in the area.	The information included within the TA was the most currently available in June 2019, a month prior to preparation of the documents. Nevertheless updated accident data has been obtained from Hampshire Constabulary. Additional data has been provided for the period 1 st January to 31 st March 2019 during which period there were a further 3 incidents; 1 serious and 2 slight. This data does not change the appraisal of the safety performance of the local road network however it is attached in full at Appendix A .
Bus services	HCC: Through pre-application discussions, the Highway Authority requested that improvements to the bus stops were investigated to increase the uptake of sustainable travel from the site. The TA does not review the existing facilities nor make reference to any potential improvements. The Highway Authority therefore request that improvements to bus facilities are investigated.	Details of the existing bus stop provision are shown on DTA Drawing 20428-03 and attached at Appendix B. On Park Road South the bus stops are served by the Coastliner and town centre services. These are well equipped with shelters, seating, lighting and service information. On Langstone Road the bus stops are served by the town centre service, the northbound stop is well equipped with a shelter, seating, lighting and service information. The southbound stop, which is primarily a disembarkation point given the relatively small downstream catchment (circa 5%) is equipped with a flag, information panel and is lit. On this basis any improvements to the stops are unlikely to materially change behaviour and as such it is considered that improvements are not warranted.
Walking and cycling	HCC: An audit has been undertaken, stating that the route is of a “high standard, with comprehensive coverage, with no evident deficiencies”. The Highway Authority does not agree with this view and has since reviewed the status of the path. The path is low lying and is overlapped by the river in the winter months, requiring surfacing and revetment to ensure the path is available	Details of the existing walking routes through the site are shown on DTA Drawing 20428-04 and attached at Appendix C. As can be seen from the plan the lit surfaced routes through the site are directly related to the pedestrian desire lines for the existing and planned development on the site. From Solent Road through the underpass Footpath 51 is well surfaced and lit and suitable for year round use. There are no practical works to defend this section from flooding and the underpass already has limited headroom.



	all year round. A contribution will therefore be sought towards the improvement of this footpath.	South of the underpass Footpath 51 is lower lying and provides an alternative recreational route that does not provide essential connectivity and is of no relevance to the development proposed.
Proposed development	HCC: Travel demand implications of the gym should be considered in greater detail	The gym is an existing facility currently has a GFA of 335m². The gym is not exclusively for employees on the site but is open to the wider business and residential communities. The building within which the gym is located will be demolished as part of the redevelopment proposals. The presence of the gym on the site is likely to reduce the peak hour demand as employees arrive on site early before work or stay later to go to the gym. This is likely to more than compensate for any external demand. The overall numbers are however very small and inclusion of these trips as wholly new trips make a marginal change in the overall travel demands generated by the site. It is proposed to find new accommodation within the Park for the gym i.e. there will be no new building. It is anticipated that the gym would have a GFA 200m² i.e. there would be a consolidation relative to the existing facility. In terms of trip generation, based on the attached TRICS appraisal, details attached at Appendix D, the gym is currently likely to generate around 6vph in the AM peak, 15vph in the PM peak and 145vpd over a day. In the future this would decrease to 4vph. 9vph and 87vpd for each of the respective time periods. Overall therefore the gym travel demand is potentially higher in the baseline scenario than the development scenarios. In the medium term, when sufficient demand is generated from with the site, it is likely that the gym would be closed to the wider public.

Parking layout	HCC: No dimensions have been included on the drawing detailing the size of the parking bays. Confirmation is therefore required that the bays and aisle widths meet the minimum standards. It is noted that there is an overall increase in the number of parking spaces on site, facilitating a greater number of staff onsite at any given time. The number of spaces provided should comply with the new floor space provision to ensure no overspill parking takes place within the highway.	New parking bays have been provided at 2.4m wide, 4.95m depth with 6.1m aisle widths. The number of parking spaces will increase by circa 1.8%. This maintains the existing parking ratio for the existing development at 1 per 32m². Parking for the new development has been provided in line with current standards with appropriate allowance made for flexibility in land use.
	HCC: Drawing number 0155 section A-A shows that vehicle overhang is not accommodated. A minimum 600mm width verge should be provided. In addition, the new slope is too steep, it is suggested that the existing slope is replicated to provide a gentle gradient.	AWW drawing number 0155 has been updated with the bund profile modified with respect to the slope gradient and requirement for a verge. This has been addressed in full.
Internal site layout	HCC: A continuous shared use path should be provided from the new units located in the south western corner of the park to Footpath 51 to ensure a complete route is provided to the redeveloped area.	There is an existing footway between the south western corner of the site and Footpath 51 at the A27 underpass. There are two changes on the application drawings. The footpath along the eastern side of the new units has been widened and a direct link provided to the site spine road. This provides a more direct route for employees. A footway along the northern edge of the parking area in the northeast corner of the site has been provided to so that employees do not need to walk through the car park. These changes are shown on DTA Drawing 20428-04 and attached at Appendix C Cyclists would use the internal road network. These are low speed, low traffic volume routes particularly in the eastern part of the site where there are few HGV movements.

HGV movements	HCC: Want a comparison of the current number of HGV movements against the expected number of movements following the redevelopment utilising the two access points. Further consideration should be given to reducing HGV movements through the Langstone Road site access	The surveys show that the site currently generates on average 46 HGV movements per day. Based on full occupancy this would pro-rata increase to 70 HGV movements per day. The TRICS appraisal estimated that at full occupation the site would generate 137 HGV movements per day including 67 HGV movements related to the B8 warehouse elements. Currently the warehouse, which is external to the application areas, houses a datacentre and therefore the actual HGV generation from this element is minimal albeit the fall back would be to revert to its original warehouse function and this was reflected in the 100% occupancy estimates. In the future, the B1(c) and B8 scenarios would increase the HGVs to 170 movements per day and the 267 movements per day respectively. If the datacentre remains both of these will be reduced by 67 movements per day but none of the assessments make this assumption as a worst case has been adopted. In terms of routeing, the surveys show that currently 61% HGV route via the West. This proportion closely correlates to the expected generation of the office buildings on the eastern part of the site. In vehicle number terms this element will be unchanged but the overall proportion will decrease as the uplift in demand will be routed via the western access.
	HCC: The internal site layout is not considered sufficient for discouraging HGV usage of the Langstone Road access alone. Further consideration should be given towards reducing HGV movements through the Langstone site access.	HGVs are able to turn both sides of the Park however there is no direct route through other than within the car parks to allow car drivers to use either access point as at present. Appropriate internal signage will be provided to direct HGVs as shown on DTA Drawing 20428-04 and attached at Appendix E . This will be supported by geometric constraints to ensure adherence by large vehicles. It is anticipated that routeing instructions would be provided to delivery drivers in advance through the Travel Plan process.
Existing traffic generation	HCC: The TA states that around 70% of the floor space within the site is occupied but does not specify the origin of this data. The Highway Authority requests that further detail is provided to evidence the current level of occupation and also	The below graph is based on data provide by the estate management team covering a period of approximately 5 years to June 2019 (when the traffic surveys were undertaken)

	requests historic occupation levels going back at least 5 years.	% Occupied  — % Occupied
u-turners	HCC: Whilst there is a level of daily variance in u-turn movements, it is evident that this action is commonplace to avoid the right turn queuing into the park. Further consideration should be given to potential measures that would reduce the number of u-turning movements.	As set out at para 6.6 of TA there is a pattern of u-turning at the junctions immediately to the south of the site access. This was observed to take place in the AM and PM peak periods during periods of high and low right turning demand into the site. Therefore whilst there may be an element of drivers 'queue jumping' it is equally likely that drivers are not anticipating sufficiently well in advance. There is very little existing signage or road markings to assist drivers. The TA therefore recommends at 6.6.9 that improved signage is provided. If drivers do miss their turn into the site it is important that they turn around in a suitable and safe location. Whilst there have been no apparent accidents involving u-turners it is proposed at 6.6.9 to ban such movements at junction to the south of the access. This will also discourage deliberate u-turn movements.



Southmoor Road	HCC: Recommend that internal roads are to HCC standards. Given the benefit the through route provides in aiding congestion issues on Hayling Island, the Highway Authority require that this route is provided and secured as part of this application. The through route should be secured via a suitable mechanism in perpetuity	The internal road layout within the site does not perform such a public function and there is no requirement identified with current planning policy to develop such a route. It would not be straight forward to change the function of the route in its existing or proposed configuration. Moreover such a change would be unrelated to the proposed development.
Consistency of traffic forecasts	HBC EHO (JD) Identified inconsistencies between the TA and AQ appraisal	In the Transport Assessment the car driver trips are distributed in accordance with the Census 2011 journey to work data for the middle super output area. These trips were assigned to the site accesses taking into account the observed pattern at these accesses. The AQ appraisals extend the assignment of traffic beyond that which was directly considered within the Transport Assessment. This assignment has been extended to quantify traffic flow reductions on individual movements through the A27 junction. This extended assignment is summarised in proportional terms in Figure 1 below. The updated AQ appraisal is consistent with this assignment.

Langstone Technology Park

Planning Application APP/19/00703

Response to consultees on highways and transport matters



Figure 1 Distribution of site traffic based on census data



Further details of the traffic forecasts are attached at **Appendix F**.



Modelling	HCC: It is noted that junction modelling has been undertaken for Langstone Road/Site Access and Brockhampton Road/Southmoor Road/Harts Farm Way Roundabout but not for the A27/Langstone Roundabout. Junction modelling should be undertaken at this roundabout when considering the 4 scenarios assessed within the current TA.	Contrary to the response HCC explicitly did not require modelling at the A27 roundabout so long as there was no change or a reduction in traffic as a consequence of the proposals. As set out in the written response <i>‘the A27/Langstone roundabout is of key strategic value and is identified as having cumulative harm as a result of emerging local plan development. Therefore this junction will need to be considered within the TA’</i>. As set out in the TA the travel demand to and from the site through this junction will decrease as a result of the development and therefore there is not harm than can be attributable to the development and detailed modelling of the junction is not warranted. The total net reduction of traffic was identified within the TA Tables 20-22 (these have been further updated below) and these confirm that there will be a decrease at the East access.
	HCC: To allow for a comprehensive review of the junction modelling undertaken to date, the Highway Authority requests that the model files for all 3 of the aforementioned junctions are provided to check that the relevant parameters are accurate. Detailed comments will be provided once these model files have been reviewed. However, after an initial review of the outputs, it is noted that the model shows that there is little queuing and delay in and out of the site accesses, despite onsite observations showing high levels of queuing. It is unclear if the models have been calibrated to reflect the current situation on the ground.	A description of the modelling of the Langstone Road site access is provided at section 6.10 of the TA including the validation of queuing against the modelling. This modelling does replicate that the existing pattern of queuing and that the variance can be explained by the variation in the arrival profile at the junction (i.e. modulation of the arrival profile into platoons by the upstream signal junction) and the configuration of the minor arm. It is acknowledged within the Transport Assessment that the PICADY modelling of the Langstone Road site access underestimates the capacity of the minor arm although this ‘does not fully reflect the proximity of the Langstone Road funnel/flaring to the south or the lane gain to the north’ (para 6.10.3). ‘The funnel/flaring primarily affects the ahead movements through the junction. It is evident that the funnel where Hayling Island bound traffic merges into a single lane in combination with junctions to the south, can interfere with free flow of traffic (and this is implied in the queue surveys). This does not however impact on the accuracy of the performance metrics and the comparability of scenarios set out below’ (para 6.10.4).



	The lane gain to the north of the junction is likely to increase the left turn capacity, i.e. where vehicles are able to merge more efficiently than would be the case without the lane gain. This can be represented by an intercept correction (capacity adjustment to increase the maximum theoretical throughput) although the left turn is not sufficiently saturated to accurately measure this. For robustness therefore no correction has been applied (para 6.10.5). As set out in para 6.10.5 in the base case it is clear that the minor arm is not operating at capacity during the current peak periods and therefore it is not possible to determine the additional capacity achieved by the lane gain i.e. where the intercept value lies. For this reason, the forecast queuing of 13-16 vehicles in the central PM peak period is unlikely to be realised. With respect to inbound queuing, the PICADY modelling of the right turn in queuing is less than the observed average queues. This is unsurprising given the proximity of A27 gyratory such that the arrival profile of traffic from the upstream junction is not uniform rather modulated into platoons. There is no direct means within PICADY to modulate the arrival patterns of traffic in this fashion and therefore the testing was carried out outside of the PICADY model which allows very limited refinement of the right turn in modelling. Instead this was tested in LINSIG whereby the slope (f_c) and intercept (F) values from the PICADY model were applied to a priority link feed by an upstream signal controlled link which modulated the arrival profile. This priority link is opposed within the model by unconstrained link which carries the northbound traffic on Langstone Road. Under this test the observed and forecast mean queues are 6 vehicles in the AM peak. This explains the queuing pattern rather than the inherent capacity of the layout. This methodology was applied to all future scenario options demonstrating a reduction in queue lengths against the fallback position. Note that there are instances of queue lengths in excess of the mean queue lengths as would be expected. However comparison of the mean and instantaneous maximum, drawn by both the HBC EHO (JD) and HCC is not valid.
--	---



		Ultimately the junction does and will operate within capacity and instances of excess queuing relative to the existing storage will remain infrequent and of short duration. Model files will be separately provided. These have been updated relative to the Transport Assessment with the addition of the gym traffic flows. These result in slightly higher demand but overall the conclusions are unchanged. Further details are provided in Appendix F
Travel Plan	HCC: various	Updated TP has been prepared. The main change is the revision of the mode shift target to a 10% reduction in single occupancy vehicles. This target will apply to the employment areas which are subject to the planning application.



APPENDIX A

Updated Personal Injury Accident Data

Accidents between dates 01/01/2019 and 31/03/2019 (3) months

Selection:

Selected using Pre-defined Query : ; Refined using Accidents
within selected Polygons -HC - RPU Statistics Request ("AW
CHQ/SR/1019/234 LANGSTONE ROAD")

Notes:

Selected Polygon:AW CHQ/SR/1019/234 LANGSTONE ROAD

44190020934 18/01/2019 Time 0830 Vehicles 2 Casualties 1 Slight
E:471607 N: 105488 First Road: U Road Type Single carriageway
Speed limit: 40 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: Central reservation Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

VEH1 (VAN) TRAVELLING S ALONG LANGSTONE ROAD FAILED TO SLOW FOR TRAFFIC AHEAD AND
COLLIDED WITH THE REAR OF VEH2 (CAR) TRAVELLING S IN FRONT.

Occurred on LANGSTONE ROAD AT JUNCTION WITH SOUTHBROOK ROAD, HAVANT, HAMPSHIRE.

Vehicle Reference 1 Van or Goods 3.5 tonnes mgw and under Going ahead other
Vehicle movement from N to S No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 63 Male
Not hit and run Breath test Negative
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 52 Female Passenger Severity: Slight
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Not car passenger

Vehicle Reference 2 Car Stopping
Vehicle movement from N to S No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Back Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 75 Male
Not hit and run Breath test Negative
Left hand drive: No

Accidents between dates 01/01/2019 and 31/03/2019 (3) months

Selection:

Notes:

Selected using Pre-defined Query : ; Refined using Accidents
within selected Polygons -HC - RPU Statistics Request ("AW
CHQ/SR/1019/234 LANGSTONE ROAD")

44190029156 24/01/2019 Time 1615 Vehicles 2 Casualties 1 Serious
E:471621 N: 105589 First Road: A 3023 Road Type Single carriageway
Speed limit: 40 Junction Detail: T & Stag Jct Give way or controlled Unclassified
Crossing: Control None Facilities: None within 50m Road surface Dry
Darkness: street lighting unknown Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

VEH1 (M/CYCLE) TRAVELLING S ALONG A3023 LANGSTONE ROAD FILTERING PAST SLOW MOVING
TRAFFIC FAILS TO SEE VEH2 (CAR) IN FRONT INDICATING TO TURN RIGHT. VEH2 TURNED RIGHT AND
VEH1 COLLIDED WITH THE OFFSIDE.

Occurred on A3023 LANGSTONE ROAD AT JUNCTION WITH LANGBROOK CLOSE, HAVANT, HAMPSHIRE.

Vehicle Reference 1 Motor Cycle over 50 cc and up to 125cc Overtaking moving vehicle O/S
Vehicle movement from N to S No tow / articulation Leaving the main road
On main carriageway Skidded
Location at impact Jct Approach First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 42 Male
Not hit and run Breath test Not applicable
Left hand drive: No
Casualty Reference: 1 Vehicle: 1 Age: 42 Male Driver/rider Severity: Serious
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Vehicle Reference 2 Car Turning right
Vehicle movement from N to W No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Jct Approach First impact Did not impact Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 71 Male
Not hit and run Breath test Negative
Left hand drive: No

Accidents between dates 01/01/2019 and 31/03/2019 (3) months

Selection:

Notes:

Selected using Pre-defined Query : ; Refined using Accidents
within selected Polygons -HC - RPU Statistics Request ("AW
CHQ/SR/1019/234 LANGSTONE ROAD")

44190083019 09/03/2019 Time 1130 Vehicles 2 Casualties 1 Serious
E:471652 N: 105928 First Road: A 3023 Road Type Single carriageway
Speed limit: 60 Junction Detail: Roundabout Automatic traffic signal B 2149
Crossing: Control None Facilities: None within 50m Road surface Dry
Daylight Fine without high winds
Special Conditions at Site None Carriageway Hazards: None
Place accident reported: At scene DfT Special Projects:

Causation			
Factor:	Participant:	Confidence:	
1st: Disobeyed automatic traffic signal	Vehicle 2	Very Likely	
2nd:			
3rd:			
4th:			
5th:			
6th:			

VEH1 (M/CYCLE) TRAVELLING S ALONG B2149 PARK ROAD SOUTH ENTERS ROUNDABOUT ON A GREEN
ATS. VEH2 (CAR) TRAVELLING E AROUND THE ROUNDABOUT FAILS TO COMPLY WITH ED ATS AND
COLLIDES WITH VEH1.

Occurred on A3023 LANGSTONE ROAD AT JUNCTION WITH B2149 PARK ROAD SOUTH, HAVANT,
HAMPSHIRE.

Vehicle Reference 1 Motorcycle over 500cc Starting
Vehicle movement from N to S No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 62 Male
Not hit and run Breath test Negative
Left hand drive: No

Casualty Reference: 1 Vehicle: 1 Age: 62 Male Driver/rider Severity: Serious
Not a pupil
Seatbelt Not Applicable Cycle helmet: Not a cyclist

Vehicle Reference 2 Car Going ahead other
Vehicle movement from S to E No tow / articulation Leaving the main road
On main carriageway No skidding, jack-knifing or overturning
Location at impact Mid Junction - on roundabout or r First impact Front Hit vehicle:
Hit object in road None Off road: None
Did not leave carr Age of Driver 80 Male
Not hit and run Breath test Negative
Left hand drive: No

Accidents between dates **01/01/2019 and 31/03/2019** (3) months

Selection:

Selected using Pre-defined Query : ; Refined using Accidents within selected Polygons -HC - RPU Statistics Request ("AW CHQ/SR/1019/234 LANGSTONE ROAD")

Notes:

Accidents involving:

	Fatal	Serious	Slight	Total
Motor vehicles only (excluding 2-wheels)	0	0	1	1
2-wheeled motor vehicles	0	2	0	2
Pedal cycles	0	0	0	0
Horses & other	0	0	0	0
Total	0	2	1	3

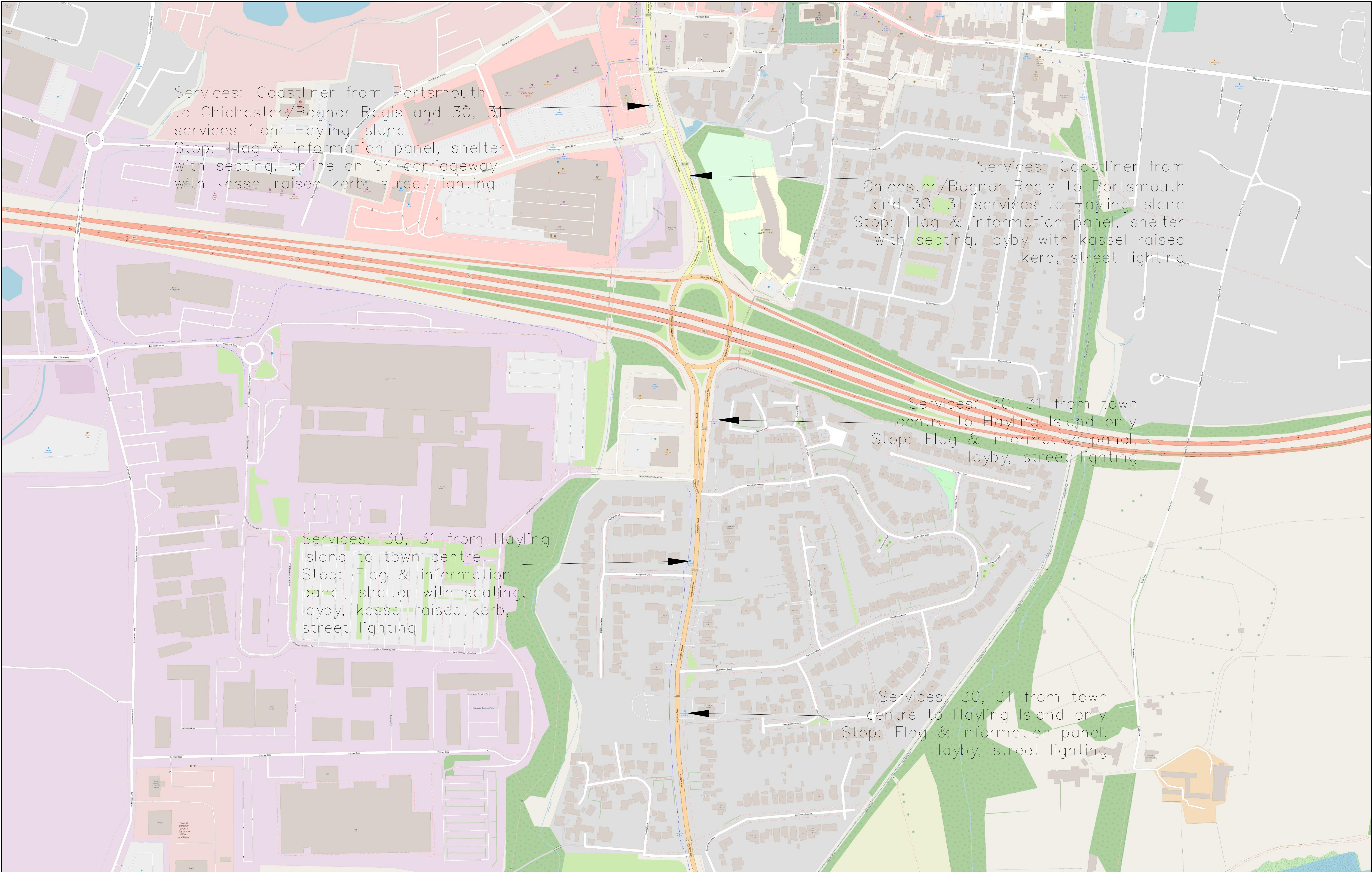
Casualties:

	Fatal	Serious	Slight	Total
Vehicle driver	0	0	0	0
Passenger	0	0	1	1
Motorcycle rider	0	2	0	2
Cyclist	0	0	0	0
Pedestrian	0	0	0	0
Other	0	0	0	0
Total	0	2	1	3



APPENDIX B

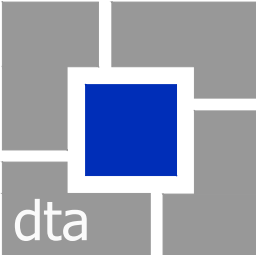
Bus stop review



Based upon the ORDNANCE SURVEY MAPS with the permission of THE CONTROLLER OF HER MAJESTY'S STATIONERY OFFICE,
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REV	DESCRIPTION	DRAWN	INITIALS	DATE	DRAWING STATUS	CHECKED BY	DATE



david tucker associates
transport planning consultants

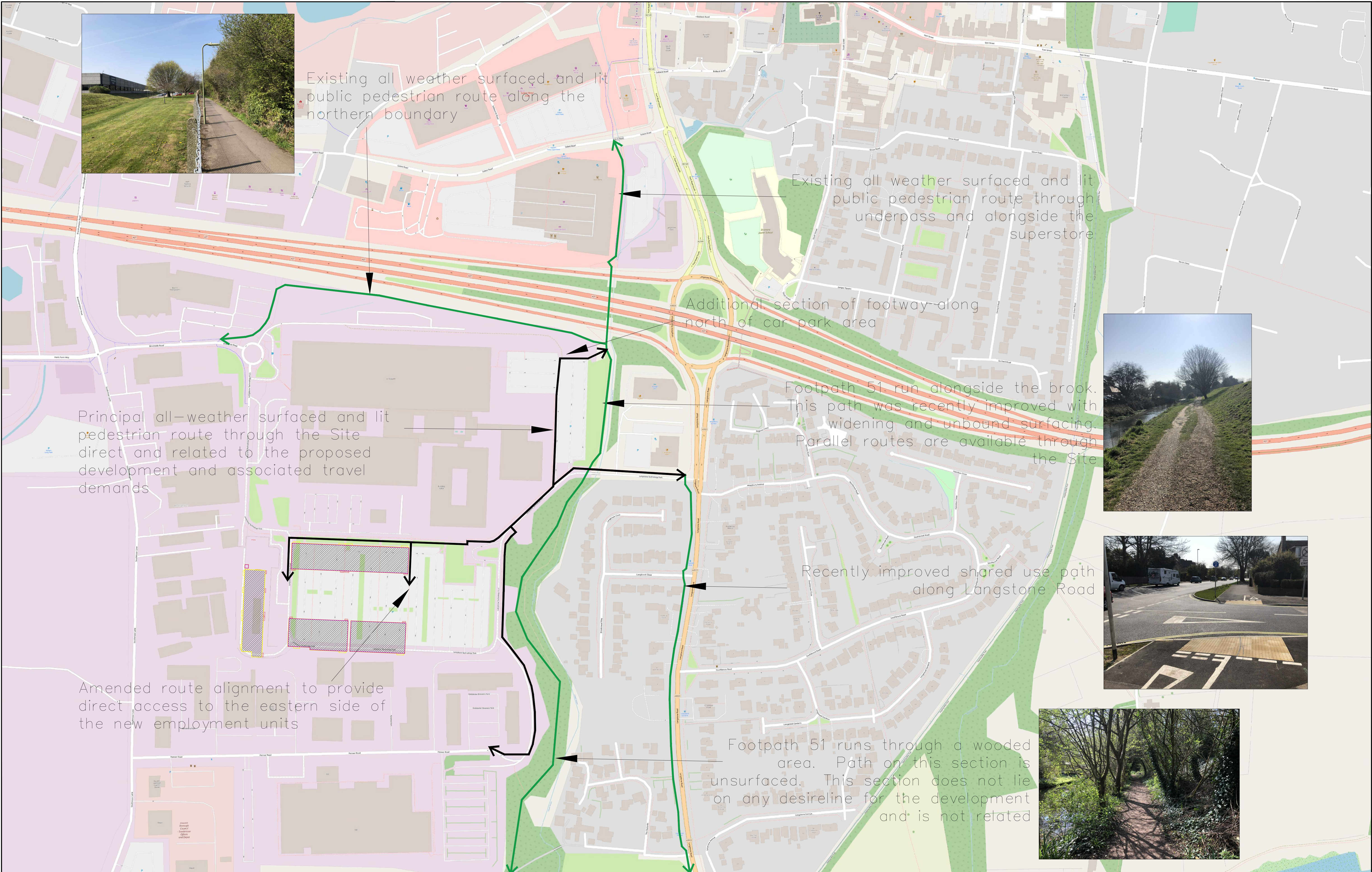
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www.dtatransportation.co.uk

JOB TITLE		CLIENT	
LANGSTONE TECHNOLOGY PARK		LANGSTONE BV & TRINITY IM	
DRAWING TITLE			
REVIEW OF LOCAL BUS STOP PROVISION			
SCALE	DRAWN BY	DATE	DRAWING No
1:10000@A1	RJM	07/10/19	20428-03
			REVISION

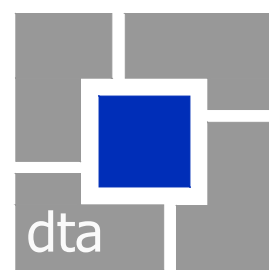


APPENDIX C

Walking route review



Based upon the ORDNANCE SURVEY MAPS with the permission of THE CONTROLLER OF HER MAJESTY'S STATIONERY OFFICE, © Crown Copyright AL 100030412 © David Tucker Associates	REV	DESCRIPTION	DRAWN	INITIALS	DATE	DRAWING STATUS	CHECKED BY	DATE	 david tucker associates transport planning consultants Forester House, Doctors Lane Henley-in-Arden Warwickshire B95 5AW Tel: +44(0)1564 793598 Fax: +44(0)1564 793983 www.dtatransportation.co.uk	JOB TITLE	LANGSTONE TECHNOLOGY PARK		CLIENT	LANGSTONE BV & TRINITY IM	
										DRAWING TITLE					
										WALKING AND CYCLING ROUTES					
										SCALE	DRAWN BY	DATE	DRAWING No	REVISION	
										1:10000@A1	RM	04/10/19	20428-04	B	



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APPENDIX D

TRICS – gym

Calculation Reference: AUDIT-623801-191007-1003

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 07 - LEISURE
Category : K - FITNESS CLUB (PRIVATE)
VEHICLES

Selected regions and areas:

01	GREATER LONDON	
	EN ENFIELD	1 days
06	WEST MIDLANDS	
	WK WARWICKSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	1 days
09	NORTH	
	CB CUMBRIA	1 days

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

Secondary Filtering selection:

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

Parameter: Gross floor area
Actual Range: 404 to 650 (units: sqm)
Range Selected by User: 204 to 800 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/11 to 15/10/16

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

Selected survey days:

Tuesday	3 days
Thursday	1 days

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

Selected survey types:

Manual count	4 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	1
Edge of Town	2

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

Selected Location Sub Categories:

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

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

Secondary Filtering selection:

Use Class:

D2 4 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

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

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

Population within 5 miles:

5,001 to 25,000 2 days
50,001 to 75,000 1 days
500,001 or More 1 days

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

Car ownership within 5 miles:

0.6 to 1.0 3 days
1.1 to 1.5 1 days

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

Travel Plan:

No 4 days

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

PTAL Rating:

No PTAL Present 3 days
5 Very Good 1 days

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

LIST OF SITES relevant to selection parameters

1	CB-07-K-01	FITNESS CLUB	CUMBRIA
	COWPER ROAD		
	PENRITH		
	GILWILLY IND. ESTATE		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	650 sqm	
	Survey date: TUESDAY	10/06/14	Survey Type: MANUAL
2	EN-07-K-01	FIT4LESS	ENFIELD
	OLD PARK AVENUE		
	ENFIELD		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Gross floor area:	550 sqm	
	Survey date: TUESDAY	17/11/15	Survey Type: MANUAL
3	NY-07-K-01	FITNESS CLUB	NORTH YORKSHIRE
	RIVER VIEW ROAD		
	RIPON		
	Edge of Town		
	No Sub Category		
	Total Gross floor area:	404 sqm	
	Survey date: TUESDAY	27/09/16	Survey Type: MANUAL
4	WK-07-K-01	STRENGTH & FITNESS GYM	WARWICKSHIRE
	FAR GOSFORD STREET		
	COVENTRY		
	Edge of Town Centre		
	Built-Up Zone		
	Total Gross floor area:	554 sqm	
	Survey date: THURSDAY	17/10/13	Survey Type: MANUAL

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

TRIP RATE for Land Use 07 - LEISURE/K - FITNESS CLUB (PRIVATE)

VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	4	540	2.085	4	540	0.185	4	540	2.270
07:00 - 08:00	4	540	1.019	4	540	1.622	4	540	2.641
08:00 - 09:00	4	540	0.880	4	540	0.880	4	540	1.760
09:00 - 10:00	4	540	1.529	4	540	0.880	4	540	2.409
10:00 - 11:00	4	540	1.529	4	540	1.761	4	540	3.290
11:00 - 12:00	4	540	1.066	4	540	0.880	4	540	1.946
12:00 - 13:00	4	540	0.834	4	540	1.715	4	540	2.549
13:00 - 14:00	4	540	1.344	4	540	1.576	4	540	2.920
14:00 - 15:00	4	540	1.019	4	540	0.741	4	540	1.760
15:00 - 16:00	4	540	0.880	4	540	0.973	4	540	1.853
16:00 - 17:00	4	540	1.390	4	540	1.112	4	540	2.502
17:00 - 18:00	4	540	2.966	4	540	1.437	4	540	4.403
18:00 - 19:00	4	540	2.132	4	540	2.873	4	540	5.005
19:00 - 20:00	4	540	2.132	4	540	2.085	4	540	4.217
20:00 - 21:00	4	540	0.741	4	540	1.715	4	540	2.456
21:00 - 22:00	4	540	0.139	4	540	0.741	4	540	0.880
22:00 - 23:00	2	477	0.105	2	477	0.314	2	477	0.419
23:00 - 24:00									
Total Rates:			21.790			21.490			43.280

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

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

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Parameter summary

Trip rate parameter range selected: 404 - 650 (units: sqm)
Survey date range: 01/01/11 - 15/10/16
Number of weekdays (Monday-Friday): 4
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 0
Surveys manually removed from selection: 0

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

TRIP RATE for Land Use 07 - LEISURE/K - FITNESS CLUB (PRIVATE)

TAXIS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	4	540	0.000	4	540	0.000	4	540	0.000
07:00 - 08:00	4	540	0.000	4	540	0.000	4	540	0.000
08:00 - 09:00	4	540	0.000	4	540	0.000	4	540	0.000
09:00 - 10:00	4	540	0.000	4	540	0.000	4	540	0.000
10:00 - 11:00	4	540	0.000	4	540	0.000	4	540	0.000
11:00 - 12:00	4	540	0.046	4	540	0.046	4	540	0.092
12:00 - 13:00	4	540	0.000	4	540	0.000	4	540	0.000
13:00 - 14:00	4	540	0.046	4	540	0.046	4	540	0.092
14:00 - 15:00	4	540	0.000	4	540	0.000	4	540	0.000
15:00 - 16:00	4	540	0.000	4	540	0.000	4	540	0.000
16:00 - 17:00	4	540	0.046	4	540	0.046	4	540	0.092
17:00 - 18:00	4	540	0.000	4	540	0.000	4	540	0.000
18:00 - 19:00	4	540	0.046	4	540	0.046	4	540	0.092
19:00 - 20:00	4	540	0.000	4	540	0.000	4	540	0.000
20:00 - 21:00	4	540	0.000	4	540	0.000	4	540	0.000
21:00 - 22:00	4	540	0.000	4	540	0.000	4	540	0.000
22:00 - 23:00	2	477	0.000	2	477	0.000	2	477	0.000
23:00 - 24:00									
Total Rates:			0.184			0.184			0.368

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

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

TRIP RATE for Land Use 07 - LEISURE/K - FITNESS CLUB (PRIVATE)
CYCLISTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	4	540	0.000	4	540	0.000	4	540	0.000
07:00 - 08:00	4	540	0.000	4	540	0.000	4	540	0.000
08:00 - 09:00	4	540	0.000	4	540	0.000	4	540	0.000
09:00 - 10:00	4	540	0.000	4	540	0.000	4	540	0.000
10:00 - 11:00	4	540	0.046	4	540	0.000	4	540	0.046
11:00 - 12:00	4	540	0.000	4	540	0.000	4	540	0.000
12:00 - 13:00	4	540	0.046	4	540	0.046	4	540	0.092
13:00 - 14:00	4	540	0.000	4	540	0.000	4	540	0.000
14:00 - 15:00	4	540	0.000	4	540	0.046	4	540	0.046
15:00 - 16:00	4	540	0.000	4	540	0.000	4	540	0.000
16:00 - 17:00	4	540	0.000	4	540	0.000	4	540	0.000
17:00 - 18:00	4	540	0.000	4	540	0.000	4	540	0.000
18:00 - 19:00	4	540	0.000	4	540	0.000	4	540	0.000
19:00 - 20:00	4	540	0.000	4	540	0.000	4	540	0.000
20:00 - 21:00	4	540	0.000	4	540	0.000	4	540	0.000
21:00 - 22:00	4	540	0.000	4	540	0.000	4	540	0.000
22:00 - 23:00	2	477	0.000	2	477	0.000	2	477	0.000
23:00 - 24:00									
Total Rates:			0.092			0.092			0.184

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

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

TRIP RATE for Land Use 07 - LEISURE/K - FITNESS CLUB (PRIVATE)

CARS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	4	540	0.185	4	540	0.046	4	540	0.231
07:00 - 08:00	4	540	0.278	4	540	0.093	4	540	0.371
08:00 - 09:00	4	540	0.278	4	540	0.185	4	540	0.463
09:00 - 10:00	4	540	0.463	4	540	0.371	4	540	0.834
10:00 - 11:00	4	540	0.510	4	540	0.510	4	540	1.020
11:00 - 12:00	4	540	0.185	4	540	0.232	4	540	0.417
12:00 - 13:00	4	540	0.232	4	540	0.232	4	540	0.464
13:00 - 14:00	4	540	0.463	4	540	0.371	4	540	0.834
14:00 - 15:00	4	540	0.417	4	540	0.324	4	540	0.741
15:00 - 16:00	4	540	0.093	4	540	0.324	4	540	0.417
16:00 - 17:00	4	540	0.185	4	540	0.093	4	540	0.278
17:00 - 18:00	4	540	0.927	4	540	0.232	4	540	1.159
18:00 - 19:00	4	540	0.880	4	540	1.112	4	540	1.992
19:00 - 20:00	4	540	0.695	4	540	0.880	4	540	1.575
20:00 - 21:00	4	540	0.371	4	540	0.695	4	540	1.066
21:00 - 22:00	4	540	0.139	4	540	0.463	4	540	0.602
22:00 - 23:00	2	477	0.105	2	477	0.314	2	477	0.419
23:00 - 24:00									
Total Rates:		6.406			6.477			12.883	

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

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

TRIP RATE for Land Use 07 - LEISURE/K - FITNESS CLUB (PRIVATE)
 LGVS
 Calculation factor: 100 sqm
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	4	540	0.185	4	540	0.046	4	540	0.231
07:00 - 08:00	4	540	0.093	4	540	0.139	4	540	0.232
08:00 - 09:00	4	540	0.000	4	540	0.046	4	540	0.046
09:00 - 10:00	4	540	0.000	4	540	0.000	4	540	0.000
10:00 - 11:00	4	540	0.046	4	540	0.046	4	540	0.092
11:00 - 12:00	4	540	0.046	4	540	0.046	4	540	0.092
12:00 - 13:00	4	540	0.000	4	540	0.000	4	540	0.000
13:00 - 14:00	4	540	0.000	4	540	0.046	4	540	0.046
14:00 - 15:00	4	540	0.046	4	540	0.000	4	540	0.046
15:00 - 16:00	4	540	0.046	4	540	0.000	4	540	0.046
16:00 - 17:00	4	540	0.000	4	540	0.000	4	540	0.000
17:00 - 18:00	4	540	0.046	4	540	0.000	4	540	0.046
18:00 - 19:00	4	540	0.046	4	540	0.093	4	540	0.139
19:00 - 20:00	4	540	0.000	4	540	0.000	4	540	0.000
20:00 - 21:00	4	540	0.000	4	540	0.046	4	540	0.046
21:00 - 22:00	4	540	0.000	4	540	0.000	4	540	0.000
22:00 - 23:00	2	477	0.000	2	477	0.000	2	477	0.000
23:00 - 24:00									
Total Rates:		0.554			0.508				1.062

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

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

TRIP RATE for Land Use 07 - LEISURE/K - FITNESS CLUB (PRIVATE)
MOTOR CYCLES
 Calculation factor: 100 sqm
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	4	540	0.000	4	540	0.000	4	540	0.000
07:00 - 08:00	4	540	0.000	4	540	0.000	4	540	0.000
08:00 - 09:00	4	540	0.000	4	540	0.000	4	540	0.000
09:00 - 10:00	4	540	0.000	4	540	0.000	4	540	0.000
10:00 - 11:00	4	540	0.000	4	540	0.000	4	540	0.000
11:00 - 12:00	4	540	0.000	4	540	0.000	4	540	0.000
12:00 - 13:00	4	540	0.000	4	540	0.000	4	540	0.000
13:00 - 14:00	4	540	0.000	4	540	0.000	4	540	0.000
14:00 - 15:00	4	540	0.046	4	540	0.000	4	540	0.046
15:00 - 16:00	4	540	0.046	4	540	0.046	4	540	0.092
16:00 - 17:00	4	540	0.000	4	540	0.000	4	540	0.000
17:00 - 18:00	4	540	0.093	4	540	0.046	4	540	0.139
18:00 - 19:00	4	540	0.000	4	540	0.046	4	540	0.046
19:00 - 20:00	4	540	0.000	4	540	0.000	4	540	0.000
20:00 - 21:00	4	540	0.000	4	540	0.000	4	540	0.000
21:00 - 22:00	4	540	0.000	4	540	0.000	4	540	0.000
22:00 - 23:00	2	477	0.000	2	477	0.000	2	477	0.000
23:00 - 24:00									
Total Rates:			0.185			0.138			0.323

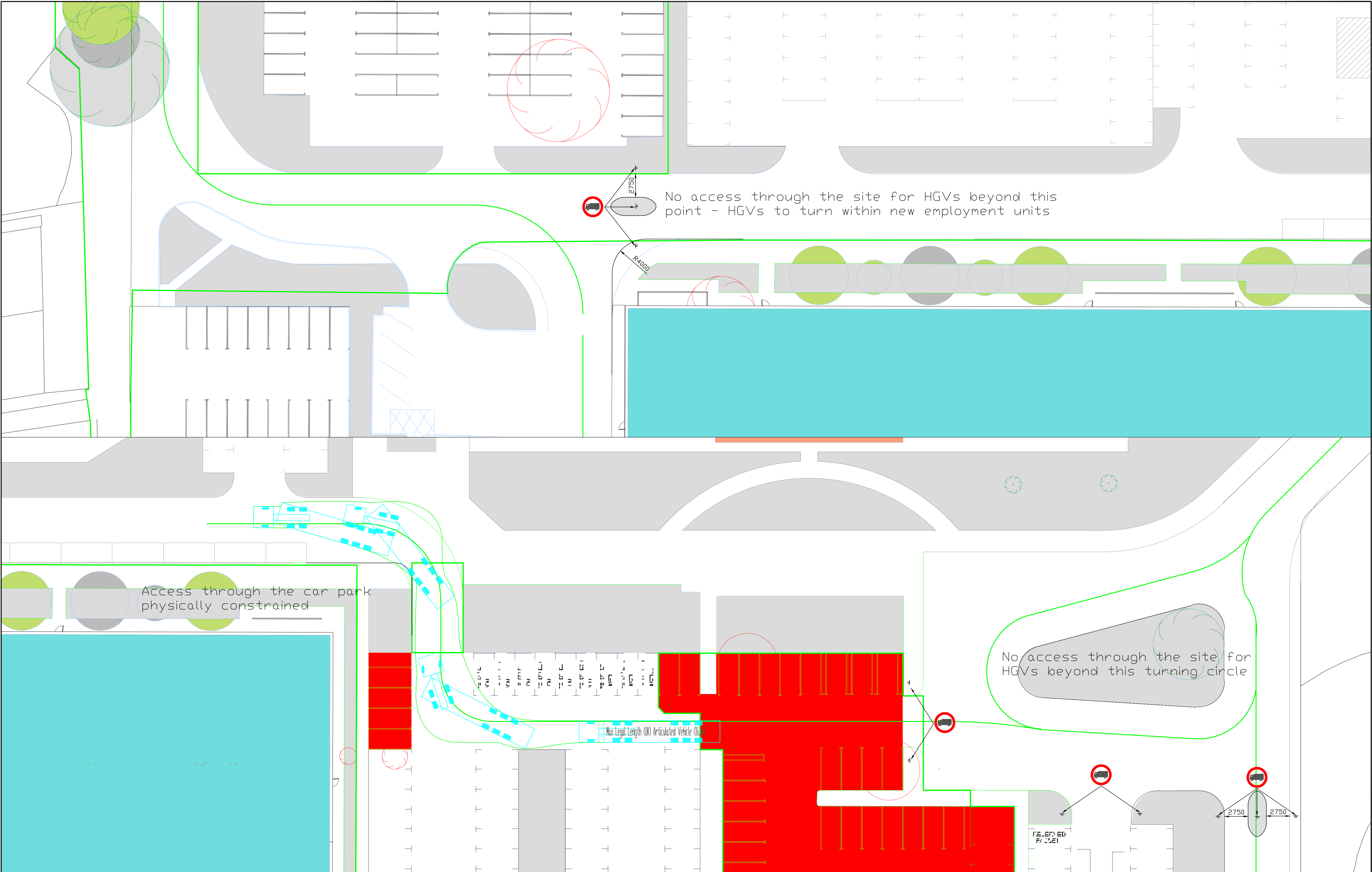
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are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

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



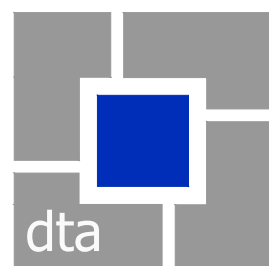
APPENDIX E

HGV Routeing Restrictions



Based upon the ORDNANCE SURVEY MAPS with the permission of THE CONTROLLER OF HER MAJESTY'S STATIONERY OFFICE,
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REV	DESCRIPTION	DRAWN	INITIALS	DATE	DRAWING STATUS	CHECKED BY	DATE



david tucker associates
transport planning consultants
Forester House, Doctors Lane
Henley-in-Arden
Warwickshire B95 5AW
Tel: +44(0)1564 793598
Fax: +44(0)1564 793983
www.dtatransportation.co.uk

JOB TITLE LANGSTONE TECHNOLOGY PARK		CLIENT LANGSTONE BV & TRINITY IM	
DRAWING TITLE HGV ROUTEING RESTRICTIONS			
SCALE 1: 2000@A1	DRAWN BY RM	DATE 16/10/19	DRAWING No 20428-05
			REVISION



APPENDIX F

Amended Traffic Forecasts and Modelling



The following tables show the AM and PM peak travel demands for the site including an explicit allowance for gym related traffic.

EXISTING		All veh			Lights			HGV		
AM Peak	GFA	in	out	2-way	In	Out	Total	in	out	2-way
B1(c)	5868	13	4	17	12	2	15	1	1	2
B1(a)	41155	696	95	790	693	93	786	2	2	4
B1(b)	3647	55	7	62	55	7	62	0	0	1
B8	5568	6	3	10	4	2	6	2	2	4
Gym	335	3	3	6	3	3	6	0	0	0
Nursery		13	10	25	13	10	25	0	0	0
Total		787	122	911	781	117	899	6	5	11
EXISTING		All veh			Lights			HGV		
PM Peak	GFA	in	out	2-way	In	Out	Total	in	out	2-way
B1(c)	5868	2	12	13	2	12	13	0	0	0
B1(a)	41155	66	609	675	64	607	671	2	2	4
B1(b)	3647	5	43	47	5	42	47	0	0	0
B8	5568	2	4	7	1	3	4	1	2	3
Gym	335	10	5	15	10	5	15	0	0	0
Nursery		9	10	21	9	10	21	0	0	0
Total		93	683	779	90	679	771	3	4	7

OPT2 (B1c)		All veh			Lights			HGV		
AM Peak	GFA	in	out	2-way	In	Out	Total	in	out	2-way
B1(c)	14878	34	9	43	31	6	37	3	3	6
B1(a)	39233	663	90	753	661	88	749	2	2	4
B1(b)	2183	33	4	37	33	4	37	0	0	0
B8	5568	6	3	10	4	2	6	2	2	4
Gym	200	2	2	4	2	2	4	0	0	0
Nursery		13	10	25	13	10	25	0	0	0
Total		752	119	872	744	112	858	7	7	14
OPT2 (B1c)		All veh			Lights			HGV		
PM Peak	GFA	in	out	2-way	In	Out	Total	in	out	2-way
B1(c)	14878	4	30	34	4	30	34	0	0	0
B1(a)	39233	63	581	643	61	579	639	2	2	4
B1(b)	2183	3	26	28	3	25	28	0	0	0
B8	5568	2	4	6	1	3	3	1	2	3
Gym	200	6	3	9	6	3	9	0	0	0
Nursery		9	10	20	9	10	20	0	0	0
Total		87	654	741	84	650	734	3	4	7

OPT2 (B8)		All veh			Lights			HGV		
AM Peak	GFA	in	out	2-way	In	Out	Total	in	out	2-way
B1(c)	2303	5	1	7	5	1	6	0	0	1
B1(a)	39233	663	90	753	661	88	749	2	2	4
B1(b)	2183	33	4	37	33	4	37	0	0	0
B8	18143	20	11	33	13	5	20	7	5	13
Gym	200	2	2	4	2	2	4	0	0	0
Nursery		13	10	25	13	10	25	0	0	0
Total		736	119	859	727	111	841	10	8	18
OPT2 (B8)		All veh			Lights			HGV		
PM Peak	GFA	in	out	2-way	In	Out	Total	in	out	2-way
B1(c)	2303	1	5	5	1	5	5	0	0	0
B1(a)	39233	63	581	643	61	579	639	2	2	4
B1(b)	2183	3	26	28	3	25	28	0	0	0
B8	18143	5	15	22	2	9	13	4	5	9
Gym	200	6	3	9	6	3	9	0	0	0
Nursery		9	10	20	9	10	20	0	0	0
Total		87	639	728	81	631	714	6	8	13

Table 17 within the Transport Assessment summarised the traffic generation of the site and this has changed slightly with the addition of the gym traffic as per the above tables.

Table 1 Comparison of traffic generation

All Veh	AM Peak			PM Peak		
	In	Out	2-way	In	Out	2-way
Existing layout @100% occupancy	786	122	908	97	683	780
Proposed redevelopment - B1c/B2 Scenario	751	119	870	91	653	744
Proposed redevelopment - B8 Scenario	736	119	855	91	638	729
HGVs	AM Peak			PM Peak		
	In	Out	2-way	In	Out	2-way
Existing layout @100% occupancy	5	5	10	3	4	7
Proposed redevelopment - B1c/B2 Scenario	7	7	14	3	4	7
Proposed redevelopment - B8 Scenario	10	8	18	6	8	12

Table 20 to **Table 22** however incorrectly disaggregated the overall demand such that the sum of the accesses was greater than the whole. The corrected tables are below factoring in again the gym related traffic.

Table 20 Net change in traffic AM peak

All Veh	Langstone Road				Brookside			
	Volume		Net Change (Relative to existing)		Volume		Net Change (Relative to existing)	
	In	Out	In	Out	In	Out	In	Out
Existing layout @100% occupancy	408	39	-	-	379	83	-	-
Proposed development - B1c Scenario	388	37	-19	-2	363	81	-16	-2
Proposed development - B8 Scenario	379	37	-29	-2	357	82	-22	-1
HGVs	Langstone Road				Brookside			
	Volume		Net Change (Relative to existing)		Volume		Net Change (Relative to existing)	
	In	Out	In	Out	In	Out	In	Out
Existing layout @100% occupancy	1	1	-	-	4	4	-	-
Proposed development - B1c Scenario	1	1	0	0	6	6	2	2
Proposed development - B8 Scenario	1	1	0	0	9	7	5	3

Table 21 Net change in traffic PM peak

All Veh	Langstone Road				Brookside			
	Volume		Net Change (Relative to existing)		Volume		Net Change (Relative to existing)	
	In	Out	In	Out	In	Out	In	Out
Existing layout @100% occupancy	35	457	-	-	62	226	-	-
Proposed development - B1c Scenario	33	437	-2	-20	58	216	-4	-10
Proposed development - B8 Scenario	32	424	-3	-32	59	214	-3	-12
HGVs	Langstone Road				Brookside			
	Volume		Net Change (Relative to existing)		Volume		Net Change (Relative to existing)	
	In	Out	In	Out	In	Out	In	Out
Existing layout @100% occupancy	1	1	-	-	2	3	-	-
Proposed development - B1c Scenario	1	1	0	0	2	3	0	0
Proposed development - B8 Scenario	1	1	0	0	5	7	3	4

Table 22 Net change in traffic 12hr

All Veh	Langstone Road				Brookside			
	Volume		Net Change (Relative to existing)		Volume		Net Change (Relative to existing)	
	In	Out	In	Out	In	Out	In	Out
Existing layout @100% occupancy	1550	1714	-	-	1573	1372	-	-
Proposed development - B1c Scenario	1505	1648	-45	-66	1552	1342	-22	-30
Proposed development - B8 Scenario	1435	1591	-115	-124	1524	1345	-50	-27
HGVs	Langstone Road				Brookside			
	Volume		Net Change (Relative to existing)		Volume		Net Change (Relative to existing)	
	In	Out	In	Out	In	Out	In	Out
Existing layout @100% occupancy	13	13	-	-	49	51	-	-
Proposed development - B1c Scenario	10	10	-3	-3	68	69	+19	+18
Proposed development - B8 Scenario	10	10	-3	-3	110	117	+61	+65

The ARCADY models have been re-run based on the revised flows inclusive of the gym and the updated **Table 23 – 26** are below.

Table 2 Harts Farm Way Roundabout (2019)

	AM			PM		
	Q (PCU)	Delay (s)	RFC	Q (PCU)	Delay (s)	RFC
Existing layout @70% occupancy						
1 –Brockhampton Rd	0.8	4.99	0.44	0.3	2.87	0.24
2 – Brookside Rd	0.1	6.65	0.10	0.2	5.38	0.20
3 - Southmoor Lane	0.2	3.33	0.15	0.6	4.19	0.36
4 - Harts Farm Way	1.7	7.43	0.62	0.4	4.06	0.25
Existing layout @100% occupancy						
1 –Brockhampton Rd	0.8	5.30	0.45	0.3	2.87	0.24
2 – Brookside Rd	0.2	7.04	0.14	0.4	6.14	0.30
3 - Southmoor Lane	0.2	3.35	0.15	0.6	4.45	0.37
4 - Harts Farm Way	2.0	8.50	0.67	0.4	4.13	0.25
Proposed redevelopment - B1c Scenario						
1 –Brockhampton Rd	0.8	5.15	0.44	0.3	2.87	0.24
2 – Brookside Rd	0.2	7.18	0.14	0.4	6.04	0.28
3 - Southmoor Lane	0.2	3.33	0.15	0.6	4.41	0.37
4 - Harts Farm Way	2.0	8.25	0.66	0.4	4.11	0.25
Proposed redevelopment - B8 Scenario						
1 –Brockhampton Rd	0.8	5.03	0.43	0.3	2.86	0.24
2 – Brookside Rd	0.1	6.91	0.11	0.4	6.14	0.28
3 - Southmoor Lane	0.2	3.20	0.13	0.6	4.37	0.36
4 - Harts Farm Way	1.8	7.85	0.64	0.3	4.11	0.25

Table 3 Harts Farm Way Roundabout (2024)

	AM			PM		
	Q (PCU)	Delay (s)	RFC	Q (PCU)	Delay (s)	RFC
Proposed redevelopment - B1c Scenario						
1 – Brockhampton Rd	0.9	5.40	0.46	0.3	2.92	0.25
2 – Brookside Rd	0.2	7.44	0.14	0.4	6.15	0.29
3 - Southmoor Lane	0.2	3.38	0.16	0.6	4.58	0.39
4 - Harts Farm Way	2.1	8.80	0.68	0.4	4.18	0.26
Proposed redevelopment - B8 Scenario						
1 – Brockhampton Rd	0.8	5.36	0.46	0.3	2.90	0.25
2 – Brookside Rd	0.2	7.62	0.14	0.4	6.25	0.28
3 - Southmoor Lane	0.2	3.39	0.16	0.6	4.53	0.38
4 - Harts Farm Way	2.1	8.68	0.67	0.4	4.18	0.26

As previously **Table 25** provides the direct PICADY outputs for the right turn in grayed out as these movements are modelled in LINSIG to take account of the modulated arrival profile and these are shown (not grayed) within the below tables.

Table 4 Langstone Road Site Access (2019)

	AM			PM		
	Q (PCU)	Delay (s)	RFC	Q (PCU)	Delay (s)	RFC
Existing layout @70% occupancy						
Site Access LT	0.1	11.14	0.09	2.2	26.54	0.70
Site Access RT	0.1	43.87	0.09	0.3	23.40	0.26
Langstone Rd RT	2.1	27.73	0.68	0.1	7.43	0.11
	5.9	25.0	0.71	0.1	-	0.11
Existing layout @100% occupancy						
Site Access LT	0.2	12.56	0.15	22.9	176.24	1.06
Site Access RT	0.2	62.91	0.19	0.6	28.03	0.38
Langstone Rd RT	8.6	86.29	0.94	0.1	7.62	0.11
	11.9	68.9	0.94	0.1	-	0.11
Proposed redevelopment - B1c Scenario						
Site Access LT	0.2	12.20	0.14	15.9	132.70	1.01
Site Access RT	0.2	55.16	0.16	0.6	27.21	0.37
Langstone Rd RT	6.1	65.45	0.89	0.1	7.59	0.11
	9.6	51.0	0.89	0.1	-	0.11
Proposed redevelopment - B8 Scenario						
Site Access LT	0.2	12.16	0.14	12.4	109.20	0.98
Site Access RT	0.2	52.09	0.14	0.5	26.70	0.35
Langstone Rd RT	5.4	58.68	0.87	0.1	7.57	0.11
	9.1	46.5	0.87	0.1	-	0.11



Table 5 Langstone Road Site Access (2024)

	AM			PM		
	Q (PCU)	Delay (s)	RFC	Q (PCU)	Delay (s)	RFC
2024 Proposed redevelopment - B1c Scenario						
Site Access LT	0.2	12.95	0.15	15.9	132.70	1.04
Site Access RT	0.2	77.61	0.21	0.6	27.21	0.39
Langstone Rd RT	7.6	81.59	0.92	0.1	7.59	0.11
	10.8	63.9	0.93	0.1	3.8	0.11
2024 Proposed redevelopment - B8 Scenario						
Site Access LT	0.2	12.87	0.15	15.0	128.82	1.01
Site Access RT	0.1	71.52	0.18	0.6	30.18	0.38
Langstone Rd RT	6.6	72.40	0.90	0.2	7.71	0.11
	10.0	56.9	0.91	0.1	3.8	0.11



APPENDIX G

Modelling Reports

Junctions 9	
ARCADY 9 - Roundabout Module	
Version: 9.5.0.6896 © Copyright TRL Limited, 2018	
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk	
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution	

Filename: Brookside Roundabout RevA.j9
Path: P:\20000's\20428\Junction Assessments
Report generation date: 22/10/2019 17:14:15

-
- »Existing, AM
 - »Existing, PM
 - »DO - Minimum, AM
 - »DO - Minimum, PM
 - »OPT2 B1c, AM
 - »OPT2 B1c, PM
 - »OPT2 B8, AM
 - »OPT2 B8, PM
 - »2024 OPT2 B1c, AM
 - »2024 OPT2 B1c, PM
 - »2024 OPT2 B8, AM
 - »2024 OPT2 B8, PM

Summary of junction performance

	AM				PM			
	Q (PCU)	Delay (s)	RFC	Res Cap	Q (PCU)	Delay (s)	RFC	Res Cap
	Existing							
1 - Brockhampton	0.8	4.99	0.44	46 % [4 - Harts Farm Way]	0.3	2.87	0.24	94 % [3 - Southmoor Lane]
2 - Brookside	0.1	6.65	0.10		0.2	5.39	0.20	
3 - Southmoor Lane	0.2	3.33	0.15		0.6	4.19	0.36	
4 - Harts Farm Way	1.7	7.43	0.62		0.4	4.06	0.25	
	DO - Minimum							
1 - Brockhampton	0.8	5.30	0.45	36 % [4 - Harts Farm Way]	0.3	2.87	0.24	83 % [3 - Southmoor Lane]
2 - Brookside	0.2	7.04	0.14		0.4	6.14	0.30	
3 - Southmoor Lane	0.2	3.35	0.15		0.6	4.45	0.37	
4 - Harts Farm Way	2.0	8.50	0.67		0.4	4.13	0.25	
	OPT2 B1c							
1 - Brockhampton	0.8	5.15	0.44	38 % [4 - Harts Farm Way]	0.3	2.87	0.24	85 % [3 - Southmoor Lane]
2 - Brookside	0.2	7.18	0.14		0.4	6.04	0.28	
3 - Southmoor Lane	0.2	3.33	0.15		0.6	4.41	0.37	
4 - Harts Farm Way	2.0	8.25	0.66		0.4	4.11	0.25	
	OPT2 B8							
1 - Brockhampton	0.8	5.03	0.43	42 % [4 - Harts Farm Way]	0.3	2.86	0.24	86 % [3 - Southmoor Lane]
2 - Brookside	0.1	6.91	0.11		0.4	6.14	0.28	
3 - Southmoor Lane	0.2	3.20	0.13		0.6	4.37	0.36	
4 - Harts Farm Way	1.8	7.85	0.64		0.4	4.11	0.25	
	2024 OPT2 B1c							
1 - Brockhampton	0.9	5.40	0.46	34 % [4 - Harts Farm Way]	0.3	2.92	0.25	79 % [3 - Southmoor Lane]
2 - Brookside	0.2	7.44	0.14		0.4	6.15	0.29	
3 - Southmoor Lane	0.2	3.38	0.16		0.6	4.58	0.39	
4 - Harts Farm Way	2.1	8.80	0.68		0.4	4.18	0.26	
	2024 OPT2 B8							
1 - Brockhampton	0.9	5.36	0.46	35 % [4 - Harts Farm Way]	0.3	2.90	0.25	80 % [3 - Southmoor Lane]
2 - Brookside	0.2	7.62	0.14		0.4	6.25	0.28	
3 - Southmoor Lane	0.2	3.39	0.16		0.6	4.53	0.38	
4 - Harts Farm Way	2.1	8.68	0.67		0.4	4.18	0.26	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of Av. delay per arriving vehicle. Res Cap indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

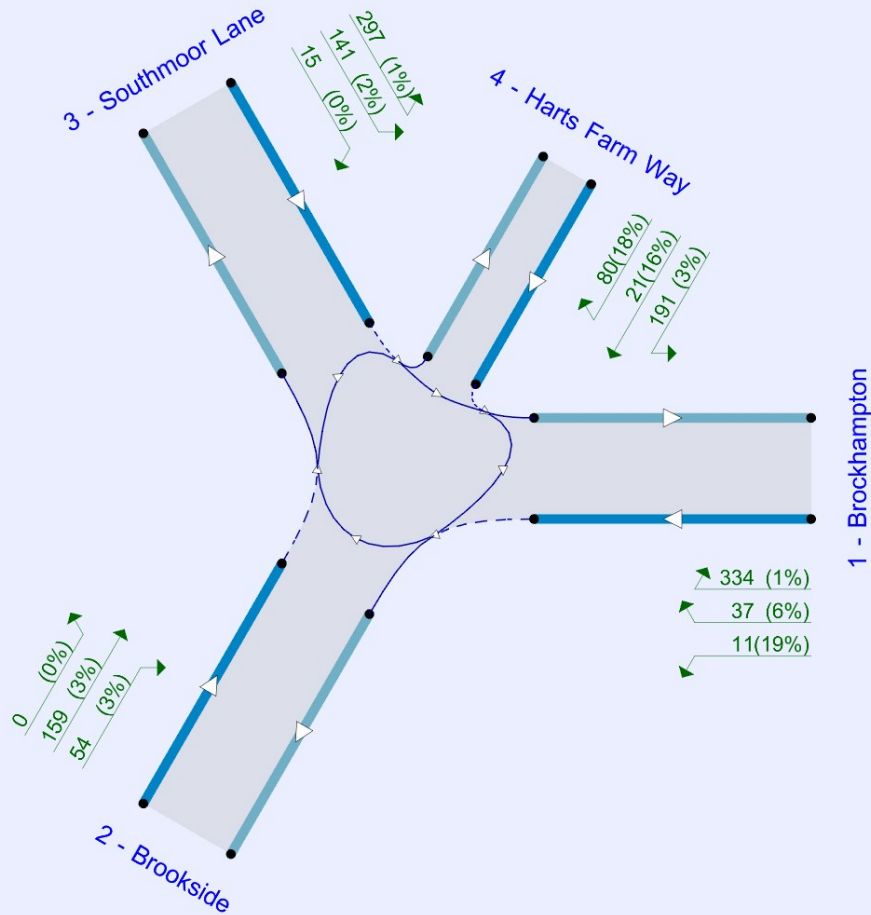
File summary

File Description

Title	Brookside Roundabout
Location	Langstone Technology Park
Site number	
Date	20/06/2019
Version	
Status	(new file)
Identifier	
Client	AG Langstone BV
Jobnumber	20428
Enumerator	DTA\arcady
Description	

Units

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



Flows show original traffic demand (PCU/hr).

The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Q Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Av. Delay threshold (s)	Q threshold (PCU)
5.75			✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	Existing	AM	ONE HOUR	07:45	09:15	15	✓
D2	Existing	PM	ONE HOUR	16:45	18:15	15	✓
D3	DO - Minimum	AM	ONE HOUR	07:45	09:15	15	✓
D4	DO - Minimum	PM	ONE HOUR	16:45	18:15	15	✓
D5	OPT2 B1c	AM	ONE HOUR	07:45	09:15	15	✓
D6	OPT2 B1c	PM	ONE HOUR	16:45	18:15	15	✓
D7	OPT2 B8	AM	ONE HOUR	07:45	09:15	15	✓
D8	OPT2 B8	PM	ONE HOUR	16:45	18:15	15	✓
D9	2024 OPT2 B1c	AM	ONE HOUR	07:45	09:15	15	✓
D10	2024 OPT2 B1c	PM	ONE HOUR	16:45	18:15	15	✓
D11	2024 OPT2 B8	AM	ONE HOUR	07:45	09:15	15	✓
D12	2024 OPT2 B8	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

Existing, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Brookside Roundabout	Standard Roundabout		1, 2, 3, 4	6.03	A

Junction Network Options

Driving side	Lighting	Res Cap (%)	First arm reaching threshold
Left	Normal/unknown	46	4 - Harts Farm Way

Arms

Arms

Arm	Name	Description
1	Brockhampton	
2	Brookside	
3	Southmoor Lane	
4	Harts Farm Way	

Roundabout Geometry

Arm	V (m)	E (m)	I' (m)	R (m)	D (m)	PHI (deg)	Exit only
1 - Brockhampton	3.70	6.56	14.1	40.0	25.9	14.0	
2 - Brookside	3.13	4.23	9.6	10.0	27.7	43.0	
3 - Southmoor Lane	3.95	6.60	22.8	9.6	25.9	29.0	
4 - Harts Farm Way	3.80	5.50	17.4	9.8	27.7	45.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Brockhampton	0.702	1778
2 - Brookside	0.504	1080
3 - Southmoor Lane	0.645	1694
4 - Harts Farm Way	0.563	1384

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	Existing	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Brockhampton		ONE HOUR	✓	520	100.000
2 - Brookside		ONE HOUR	✓	59	100.000
3 - Southmoor Lane		ONE HOUR	✓	200	100.000
4 - Harts Farm Way		ONE HOUR	✓	743	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Brockhampton	2 - Brookside	3 - Southmoor Lane	4 - Harts Farm Way
	1 - Brockhampton	1	77	183	259
	2 - Brookside	21	0	6	32
	3 - Southmoor Lane	79	7	0	114
	4 - Harts Farm Way	151	223	369	0

Vehicle Mix

HV %s

	To				
From		1 - Brockhampton	2 - Brookside	3 - Southmoor Lane	4 - Harts Farm Way
	1 - Brockhampton	0	1	1	5
	2 - Brookside	11	0	7	0
	3 - Southmoor Lane	11	40	0	18
	4 - Harts Farm Way	5	2	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Brockhampton	0.44	4.99	0.8	A	477	716
2 - Brookside	0.10	6.65	0.1	A	54	81
3 - Southmoor Lane	0.15	3.33	0.2	A	184	275
4 - Harts Farm Way	0.62	7.43	1.7	A	682	1023

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	391	98	449	1463	0.268	390	189	0.0	0.4	3.451	A
2 - Brookside	44	11	609	774	0.057	44	230	0.0	0.1	5.148	A
3 - Southmoor Lane	151	38	235	1543	0.098	150	418	0.0	0.1	2.992	A
4 - Harts Farm Way	559	140	81	1339	0.418	556	304	0.0	0.7	4.728	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	467	117	538	1401	0.334	467	226	0.4	0.5	3.968	A
2 - Brookside	53	13	729	713	0.074	53	276	0.1	0.1	5.690	A
3 - Southmoor Lane	180	45	281	1513	0.119	180	501	0.1	0.2	3.125	A
4 - Harts Farm Way	668	167	97	1330	0.502	667	364	0.7	1.0	5.588	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	573	143	658	1316	0.435	571	277	0.5	0.8	4.970	A
2 - Brookside	65	16	892	631	0.103	65	337	0.1	0.1	6.631	A
3 - Southmoor Lane	220	55	344	1472	0.150	220	613	0.2	0.2	3.327	A
4 - Harts Farm Way	818	205	119	1317	0.621	816	445	1.0	1.7	7.359	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	573	143	659	1315	0.435	573	277	0.8	0.8	4.993	A
2 - Brookside	65	16	894	630	0.103	65	338	0.1	0.1	6.646	A
3 - Southmoor Lane	220	55	345	1472	0.150	220	614	0.2	0.2	3.328	A
4 - Harts Farm Way	818	205	119	1317	0.621	818	446	1.7	1.7	7.430	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	467	117	540	1399	0.334	469	227	0.8	0.5	3.991	A
2 - Brookside	53	13	732	712	0.075	53	277	0.1	0.1	5.708	A
3 - Southmoor Lane	180	45	282	1512	0.119	180	503	0.2	0.2	3.130	A
4 - Harts Farm Way	668	167	97	1330	0.502	670	365	1.7	1.1	5.651	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	391	98	452	1461	0.268	392	190	0.5	0.4	3.473	A
2 - Brookside	44	11	612	772	0.058	45	232	0.1	0.1	5.165	A
3 - Southmoor Lane	151	38	236	1542	0.098	151	421	0.2	0.1	2.997	A
4 - Harts Farm Way	559	140	81	1338	0.418	561	305	1.1	0.7	4.780	A

Existing, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Brookside Roundabout	Standard Roundabout		1, 2, 3, 4	3.91	A

Junction Network Options

Driving side	Lighting	Res Cap (%)	First arm reaching threshold
Left	Normal/unknown	94	3 - Southmoor Lane

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	Existing	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Brockhampton		ONE HOUR	✓	371	100.000
2 - Brookside		ONE HOUR	✓	151	100.000
3 - Southmoor Lane		ONE HOUR	✓	442	100.000
4 - Harts Farm Way		ONE HOUR	✓	288	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Brockhampton	2 - Brookside	3 - Southmoor Lane	4 - Harts Farm Way
From	1 - Brockhampton	2	14	35	320
	2 - Brookside	38	0	0	113
	3 - Southmoor Lane	135	22	0	285
	4 - Harts Farm Way	183	26	77	2

Vehicle Mix

HV %s

	To				
		1 - Brockhampton	2 - Brookside	3 - Southmoor Lane	4 - Harts Farm Way
From	1 - Brockhampton	0	0	6	1
	2 - Brookside	0	0	0	1
	3 - Southmoor Lane	2	0	0	1
	4 - Harts Farm Way	3	0	18	100

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Brockhampton	0.24	2.87	0.3	A	340	511
2 - Brookside	0.20	5.39	0.2	A	139	208
3 - Southmoor Lane	0.36	4.19	0.6	A	406	608
4 - Harts Farm Way	0.25	4.06	0.4	A	264	396

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	279	70	95	1711	0.163	279	268	0.0	0.2	2.546	A
2 - Brookside	114	28	327	916	0.124	113	47	0.0	0.1	4.517	A
3 - Southmoor Lane	333	83	356	1464	0.227	332	84	0.0	0.3	3.215	A
4 - Harts Farm Way	217	54	148	1301	0.167	216	540	0.0	0.2	3.540	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	334	83	114	1698	0.196	333	322	0.2	0.2	2.674	A
2 - Brookside	136	34	392	883	0.154	136	56	0.1	0.2	4.850	A
3 - Southmoor Lane	397	99	427	1419	0.280	397	101	0.3	0.4	3.567	A
4 - Harts Farm Way	259	65	177	1285	0.202	259	647	0.2	0.3	3.743	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	408	102	140	1680	0.243	408	394	0.2	0.3	2.870	A
2 - Brookside	166	42	480	839	0.198	166	68	0.2	0.2	5.386	A
3 - Southmoor Lane	487	122	522	1357	0.359	486	123	0.4	0.6	4.180	A
4 - Harts Farm Way	317	79	217	1262	0.251	317	792	0.3	0.4	4.061	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	408	102	140	1680	0.243	408	394	0.3	0.3	2.870	A
2 - Brookside	166	42	480	839	0.198	166	68	0.2	0.2	5.393	A
3 - Southmoor Lane	487	122	523	1357	0.359	487	123	0.6	0.6	4.188	A
4 - Harts Farm Way	317	79	217	1262	0.251	317	793	0.4	0.4	4.064	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	334	83	114	1698	0.196	334	322	0.3	0.2	2.676	A
2 - Brookside	136	34	392	883	0.154	136	56	0.2	0.2	4.859	A
3 - Southmoor Lane	397	99	428	1418	0.280	398	101	0.6	0.4	3.574	A
4 - Harts Farm Way	259	65	177	1284	0.202	259	648	0.4	0.3	3.750	A

18:00 - 18:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	279	70	96	1711	0.163	280	270	0.2	0.2	2.552	A
2 - Brookside	114	28	328	915	0.124	114	47	0.2	0.1	4.529	A
3 - Southmoor Lane	333	83	358	1463	0.227	333	84	0.4	0.3	3.228	A
4 - Harts Farm Way	217	54	148	1301	0.167	217	543	0.3	0.2	3.547	A

DO - Minimum, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Brookside Roundabout	Standard Roundabout		1, 2, 3, 4	6.74	A

Junction Network Options

Driving side	Lighting	Res Cap (%)	First arm reaching threshold
Left	Normal/unknown	36	4 - Harts Farm Way

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	DO - Minimum	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Brockhampton		ONE HOUR	✓	521	100.000
2 - Brookside		ONE HOUR	✓	84	100.000
3 - Southmoor Lane		ONE HOUR	✓	199	100.000
4 - Harts Farm Way		ONE HOUR	✓	797	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Brockhampton	2 - Brookside	3 - Southmoor Lane	4 - Harts Farm Way
	1 - Brockhampton	1	96	158	266
	2 - Brookside	29	0	6	49
	3 - Southmoor Lane	79	6	0	114
	4 - Harts Farm Way	151	277	369	0

Vehicle Mix

HV %s

	To				
From		1 - Brockhampton	2 - Brookside	3 - Southmoor Lane	4 - Harts Farm Way
	1 - Brockhampton	0	1	1	5
	2 - Brookside	9	0	0	7
	3 - Southmoor Lane	11	0	0	18
	4 - Harts Farm Way	5	1	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Brockhampton	0.45	5.30	0.8	A	478	717
2 - Brookside	0.14	7.04	0.2	A	77	116
3 - Southmoor Lane	0.15	3.35	0.2	A	183	274
4 - Harts Farm Way	0.67	8.50	2.0	A	731	1097

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	392	98	488	1435	0.273	391	195	0.0	0.4	3.549	A
2 - Brookside	63	16	595	781	0.081	63	284	0.0	0.1	5.373	A
3 - Southmoor Lane	150	37	259	1527	0.098	149	399	0.0	0.1	2.988	A
4 - Harts Farm Way	600	150	86	1336	0.449	597	322	0.0	0.8	4.989	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	468	117	585	1367	0.343	468	233	0.4	0.5	4.123	A
2 - Brookside	76	19	713	722	0.105	75	340	0.1	0.1	5.973	A
3 - Southmoor Lane	179	45	310	1494	0.120	179	478	0.1	0.2	3.129	A
4 - Harts Farm Way	716	179	103	1326	0.540	715	385	0.8	1.2	6.045	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	574	143	715	1276	0.450	572	285	0.5	0.8	5.268	A
2 - Brookside	92	23	872	641	0.144	92	416	0.1	0.2	7.024	A
3 - Southmoor Lane	219	55	379	1450	0.151	219	585	0.2	0.2	3.345	A
4 - Harts Farm Way	878	219	126	1313	0.668	874	471	1.2	2.0	8.373	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	574	143	718	1274	0.450	574	286	0.8	0.8	5.298	A
2 - Brookside	92	23	874	640	0.144	92	417	0.2	0.2	7.045	A
3 - Southmoor Lane	219	55	380	1449	0.151	219	587	0.2	0.2	3.346	A
4 - Harts Farm Way	878	219	127	1313	0.668	877	472	2.0	2.0	8.496	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	468	117	589	1365	0.343	470	235	0.8	0.5	4.153	A
2 - Brookside	76	19	716	720	0.105	76	342	0.2	0.1	5.994	A
3 - Southmoor Lane	179	45	311	1493	0.120	179	481	0.2	0.2	3.134	A
4 - Harts Farm Way	716	179	104	1326	0.540	720	387	2.0	1.2	6.140	A

09:00 - 09:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	392	98	492	1433	0.274	393	196	0.5	0.4	3.573	A
2 - Brookside	63	16	599	779	0.081	63	286	0.1	0.1	5.395	A
3 - Southmoor Lane	150	37	260	1526	0.098	150	402	0.2	0.1	2.991	A
4 - Harts Farm Way	600	150	87	1335	0.449	602	323	1.2	0.8	5.057	A

DO - Minimum, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Brookside Roundabout	Standard Roundabout		1, 2, 3, 4	4.23	A

Junction Network Options

Driving side	Lighting	Res Cap (%)	First arm reaching threshold
Left	Normal/unknown	83	3 - Southmoor Lane

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	DO - Minimum	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Brockhampton		ONE HOUR	✓	370	100.000
2 - Brookside		ONE HOUR	✓	225	100.000
3 - Southmoor Lane		ONE HOUR	✓	440	100.000
4 - Harts Farm Way		ONE HOUR	✓	289	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Brockhampton	2 - Brookside	3 - Southmoor Lane	4 - Harts Farm Way
From	1 - Brockhampton	2	13	35	320
	2 - Brookside	57	0	0	168
	3 - Southmoor Lane	135	20	0	285
	4 - Harts Farm Way	185	25	77	2

Vehicle Mix

HV %s

	To				
		1 - Brockhampton	2 - Brookside	3 - Southmoor Lane	4 - Harts Farm Way
From	1 - Brockhampton	0	5	6	1
	2 - Brookside	1	0	0	1
	3 - Southmoor Lane	2	0	0	1
	4 - Harts Farm Way	3	4	18	100

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Brockhampton	0.24	2.87	0.3	A	340	509
2 - Brookside	0.30	6.14	0.4	A	206	310
3 - Southmoor Lane	0.37	4.45	0.6	A	404	606
4 - Harts Farm Way	0.25	4.13	0.4	A	265	398

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	279	70	93	1713	0.163	278	284	0.0	0.2	2.553	A
2 - Brookside	169	42	327	916	0.185	168	44	0.0	0.2	4.850	A
3 - Southmoor Lane	331	83	412	1428	0.232	330	84	0.0	0.3	3.320	A
4 - Harts Farm Way	218	54	160	1294	0.168	217	581	0.0	0.2	3.575	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	333	83	111	1700	0.196	332	340	0.2	0.2	2.680	A
2 - Brookside	202	51	392	883	0.229	202	52	0.2	0.3	5.324	A
3 - Southmoor Lane	396	99	493	1376	0.287	395	101	0.3	0.4	3.718	A
4 - Harts Farm Way	260	65	192	1276	0.204	260	696	0.2	0.3	3.792	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	407	102	136	1682	0.242	407	417	0.2	0.3	2.874	A
2 - Brookside	248	62	480	839	0.295	247	64	0.3	0.4	6.127	A
3 - Southmoor Lane	484	121	604	1305	0.371	484	123	0.4	0.6	4.442	A
4 - Harts Farm Way	318	80	235	1252	0.254	318	852	0.3	0.4	4.124	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	407	102	137	1682	0.242	407	417	0.3	0.3	2.874	A
2 - Brookside	248	62	480	839	0.295	248	64	0.4	0.4	6.139	A
3 - Southmoor Lane	484	121	604	1304	0.371	484	123	0.6	0.6	4.451	A
4 - Harts Farm Way	318	80	236	1252	0.254	318	853	0.4	0.4	4.129	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	333	83	112	1700	0.196	333	341	0.3	0.2	2.684	A
2 - Brookside	202	51	392	883	0.229	203	52	0.4	0.3	5.338	A
3 - Southmoor Lane	396	99	494	1375	0.288	396	101	0.6	0.4	3.732	A
4 - Harts Farm Way	260	65	193	1276	0.204	260	698	0.4	0.3	3.799	A

18:00 - 18:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	279	70	93	1713	0.163	279	286	0.2	0.2	2.556	A
2 - Brookside	169	42	329	915	0.185	170	44	0.3	0.2	4.871	A
3 - Southmoor Lane	331	83	414	1427	0.232	332	84	0.4	0.3	3.334	A
4 - Harts Farm Way	218	54	161	1293	0.168	218	584	0.3	0.2	3.584	A

OPT2 B1c, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Brookside Roundabout	Standard Roundabout		1, 2, 3, 4	6.57	A

Junction Network Options

Driving side	Lighting	Res Cap (%)	First arm reaching threshold
Left	Normal/unknown	38	4 - Harts Farm Way

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	OPT2 B1c	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Brockhampton		ONE HOUR	✓	510	100.000
2 - Brookside		ONE HOUR	✓	82	100.000
3 - Southmoor Lane		ONE HOUR	✓	199	100.000
4 - Harts Farm Way		ONE HOUR	✓	785	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Brockhampton	2 - Brookside	3 - Southmoor Lane	4 - Harts Farm Way
	1 - Brockhampton	1	92	158	259
	2 - Brookside	28	0	6	48
	3 - Southmoor Lane	79	6	0	114
	4 - Harts Farm Way	151	265	369	0

Vehicle Mix

HV %s

	To				
From		1 - Brockhampton	2 - Brookside	3 - Southmoor Lane	4 - Harts Farm Way
	1 - Brockhampton	0	2	1	5
	2 - Brookside	13	0	0	11
	3 - Southmoor Lane	11	0	0	18
	4 - Harts Farm Way	5	2	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Brockhampton	0.44	5.15	0.8	A	468	702
2 - Brookside	0.14	7.18	0.2	A	75	113
3 - Southmoor Lane	0.15	3.33	0.2	A	183	274
4 - Harts Farm Way	0.66	8.25	2.0	A	720	1080

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	384	96	479	1442	0.266	382	194	0.0	0.4	3.503	A
2 - Brookside	62	15	590	783	0.079	61	272	0.0	0.1	5.507	A
3 - Southmoor Lane	150	37	252	1532	0.098	149	399	0.0	0.1	2.979	A
4 - Harts Farm Way	591	148	85	1336	0.442	588	316	0.0	0.8	4.938	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	458	115	574	1375	0.333	458	232	0.4	0.5	4.049	A
2 - Brookside	74	18	706	725	0.102	74	326	0.1	0.1	6.111	A
3 - Southmoor Lane	179	45	302	1499	0.119	179	478	0.1	0.2	3.117	A
4 - Harts Farm Way	706	176	102	1327	0.532	704	378	0.8	1.2	5.949	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	562	140	702	1285	0.437	560	284	0.5	0.8	5.120	A
2 - Brookside	90	23	864	645	0.140	90	398	0.1	0.2	7.161	A
3 - Southmoor Lane	219	55	369	1456	0.150	219	585	0.2	0.2	3.328	A
4 - Harts Farm Way	864	216	125	1314	0.658	861	463	1.2	1.9	8.144	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	562	140	705	1283	0.438	561	285	0.8	0.8	5.146	A
2 - Brookside	90	23	866	644	0.140	90	400	0.2	0.2	7.183	A
3 - Southmoor Lane	219	55	370	1455	0.151	219	587	0.2	0.2	3.329	A
4 - Harts Farm Way	864	216	126	1314	0.658	864	464	1.9	2.0	8.252	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	458	115	578	1372	0.334	460	234	0.8	0.5	4.076	A
2 - Brookside	74	18	710	723	0.102	74	328	0.2	0.1	6.131	A
3 - Southmoor Lane	179	45	303	1499	0.119	179	481	0.2	0.2	3.119	A
4 - Harts Farm Way	706	176	103	1326	0.532	709	379	2.0	1.2	6.036	A

09:00 - 09:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	384	96	483	1439	0.267	385	195	0.5	0.4	3.524	A
2 - Brookside	62	15	594	781	0.079	62	274	0.1	0.1	5.531	A
3 - Southmoor Lane	150	37	253	1531	0.098	150	402	0.2	0.1	2.984	A
4 - Harts Farm Way	591	148	86	1336	0.442	592	317	1.2	0.8	5.000	A

OPT2 B1c, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Brookside Roundabout	Standard Roundabout		1, 2, 3, 4	4.18	A

Junction Network Options

Driving side	Lighting	Res Cap (%)	First arm reaching threshold
Left	Normal/unknown	85	3 - Southmoor Lane

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	OPT2 B1c	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Brockhampton		ONE HOUR	✓	370	100.000
2 - Brookside		ONE HOUR	✓	216	100.000
3 - Southmoor Lane		ONE HOUR	✓	439	100.000
4 - Harts Farm Way		ONE HOUR	✓	286	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Brockhampton	2 - Brookside	3 - Southmoor Lane	4 - Harts Farm Way
From	1 - Brockhampton	2	13	35	320
	2 - Brookside	55	0	0	161
	3 - Southmoor Lane	135	19	0	285
	4 - Harts Farm Way	183	24	77	2

Vehicle Mix

HV %s

	To				
		1 - Brockhampton	2 - Brookside	3 - Southmoor Lane	4 - Harts Farm Way
From	1 - Brockhampton	0	6	6	1
	2 - Brookside	1	0	0	1
	3 - Southmoor Lane	2	0	0	1
	4 - Harts Farm Way	3	5	18	100

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Brockhampton	0.24	2.87	0.3	A	340	509
2 - Brookside	0.28	6.04	0.4	A	198	297
3 - Southmoor Lane	0.37	4.41	0.6	A	403	604
4 - Harts Farm Way	0.25	4.11	0.4	A	262	394

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	279	70	91	1714	0.163	278	281	0.0	0.2	2.551	A
2 - Brookside	163	41	327	916	0.178	162	42	0.0	0.2	4.810	A
3 - Southmoor Lane	331	83	405	1433	0.231	329	84	0.0	0.3	3.305	A
4 - Harts Farm Way	215	54	158	1295	0.166	214	576	0.0	0.2	3.563	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	333	83	110	1701	0.196	332	337	0.2	0.2	2.678	A
2 - Brookside	194	49	392	883	0.220	194	50	0.2	0.3	5.266	A
3 - Southmoor Lane	395	99	485	1381	0.286	394	101	0.3	0.4	3.695	A
4 - Harts Farm Way	257	64	189	1278	0.201	257	690	0.2	0.3	3.778	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	407	102	134	1684	0.242	407	412	0.2	0.3	2.871	A
2 - Brookside	238	59	480	839	0.284	237	62	0.3	0.4	6.031	A
3 - Southmoor Lane	483	121	594	1311	0.369	483	123	0.4	0.6	4.402	A
4 - Harts Farm Way	315	79	232	1254	0.251	315	844	0.3	0.4	4.106	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	407	102	134	1684	0.242	407	413	0.3	0.3	2.871	A
2 - Brookside	238	59	480	839	0.284	238	62	0.4	0.4	6.040	A
3 - Southmoor Lane	483	121	595	1311	0.369	483	123	0.6	0.6	4.411	A
4 - Harts Farm Way	315	79	232	1253	0.251	315	846	0.4	0.4	4.109	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	333	83	110	1701	0.196	333	338	0.3	0.2	2.679	A
2 - Brookside	194	49	392	883	0.220	195	50	0.4	0.3	5.276	A
3 - Southmoor Lane	395	99	486	1380	0.286	395	101	0.6	0.4	3.706	A
4 - Harts Farm Way	257	64	190	1277	0.201	257	691	0.4	0.3	3.782	A

18:00 - 18:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	279	70	92	1714	0.163	279	283	0.2	0.2	2.554	A
2 - Brookside	163	41	328	915	0.178	163	42	0.3	0.2	4.827	A
3 - Southmoor Lane	331	83	407	1432	0.231	331	84	0.4	0.3	3.316	A
4 - Harts Farm Way	215	54	159	1295	0.166	216	579	0.3	0.2	3.574	A

OPT2 B8, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Brookside Roundabout	Standard Roundabout		1, 2, 3, 4	6.34	A

Junction Network Options

Driving side	Lighting	Res Cap (%)	First arm reaching threshold
Left	Normal/unknown	42	4 - Harts Farm Way

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	OPT2 B8	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Brockhampton		ONE HOUR	✓	498	100.000
2 - Brookside		ONE HOUR	✓	64	100.000
3 - Southmoor Lane		ONE HOUR	✓	174	100.000
4 - Harts Farm Way		ONE HOUR	✓	772	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Brockhampton	2 - Brookside	3 - Southmoor Lane	4 - Harts Farm Way
	1 - Brockhampton	1	94	157	246
	2 - Brookside	22	0	5	37
	3 - Southmoor Lane	71	6	0	97
	4 - Harts Farm Way	144	271	357	0

Vehicle Mix

HV %s

	To				
From		1 - Brockhampton	2 - Brookside	3 - Southmoor Lane	4 - Harts Farm Way
	1 - Brockhampton	0	3	1	5
	2 - Brookside	16	0	0	13
	3 - Southmoor Lane	11	0	0	18
	4 - Harts Farm Way	5	2	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Brockhampton	0.43	5.03	0.8	A	457	685
2 - Brookside	0.11	6.91	0.1	A	59	88
3 - Southmoor Lane	0.13	3.20	0.2	A	160	239
4 - Harts Farm Way	0.64	7.85	1.8	A	708	1063

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	375	94	475	1445	0.259	373	178	0.0	0.4	3.467	A
2 - Brookside	48	12	570	793	0.061	48	278	0.0	0.1	5.451	A
3 - Southmoor Lane	131	33	229	1546	0.085	131	389	0.0	0.1	2.908	A
4 - Harts Farm Way	581	145	75	1342	0.433	578	285	0.0	0.8	4.835	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	448	112	569	1379	0.325	447	214	0.4	0.5	3.991	A
2 - Brookside	58	14	683	736	0.078	57	333	0.1	0.1	5.984	A
3 - Southmoor Lane	156	39	275	1517	0.103	156	466	0.1	0.1	3.025	A
4 - Harts Farm Way	694	174	90	1334	0.520	693	341	0.8	1.1	5.774	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	548	137	696	1290	0.425	547	261	0.5	0.8	5.003	A
2 - Brookside	70	18	836	660	0.107	70	407	0.1	0.1	6.893	A
3 - Southmoor Lane	192	48	336	1477	0.130	191	570	0.1	0.2	3.201	A
4 - Harts Farm Way	850	212	110	1322	0.643	847	418	1.1	1.8	7.757	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	548	137	698	1288	0.426	548	262	0.8	0.8	5.027	A
2 - Brookside	70	18	838	658	0.107	70	408	0.1	0.1	6.908	A
3 - Southmoor Lane	192	48	337	1477	0.130	192	571	0.2	0.2	3.202	A
4 - Harts Farm Way	850	212	110	1322	0.643	850	418	1.8	1.8	7.847	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	448	112	572	1376	0.325	449	215	0.8	0.5	4.015	A
2 - Brookside	58	14	686	735	0.078	58	335	0.1	0.1	6.000	A
3 - Southmoor Lane	156	39	276	1516	0.103	157	468	0.2	0.1	3.029	A
4 - Harts Farm Way	694	174	90	1334	0.520	697	342	1.8	1.1	5.850	A

09:00 - 09:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	375	94	478	1442	0.260	375	180	0.5	0.4	3.490	A
2 - Brookside	48	12	574	791	0.061	48	280	0.1	0.1	5.469	A
3 - Southmoor Lane	131	33	231	1545	0.085	131	392	0.1	0.1	2.913	A
4 - Harts Farm Way	581	145	75	1342	0.433	583	286	1.1	0.8	4.894	A

OPT2 B8, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Brookside Roundabout	Standard Roundabout		1, 2, 3, 4	4.18	A

Junction Network Options

Driving side	Lighting	Res Cap (%)	First arm reaching threshold
Left	Normal/unknown	86	3 - Southmoor Lane

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	OPT2 B8	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Brockhampton		ONE HOUR	✓	368	100.000
2 - Brookside		ONE HOUR	✓	213	100.000
3 - Southmoor Lane		ONE HOUR	✓	435	100.000
4 - Harts Farm Way		ONE HOUR	✓	283	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Brockhampton	2 - Brookside	3 - Southmoor Lane	4 - Harts Farm Way
From	1 - Brockhampton	2	11	35	320
	2 - Brookside	54	0	0	159
	3 - Southmoor Lane	135	15	0	285
	4 - Harts Farm Way	183	21	77	2

Vehicle Mix

HV %s

	To				
		1 - Brockhampton	2 - Brookside	3 - Southmoor Lane	4 - Harts Farm Way
From	1 - Brockhampton	0	19	6	1
	2 - Brookside	3	0	0	3
	3 - Southmoor Lane	2	0	0	1
	4 - Harts Farm Way	3	16	18	100

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Brockhampton	0.24	2.86	0.3	A	338	507
2 - Brookside	0.28	6.14	0.4	A	195	293
3 - Southmoor Lane	0.36	4.37	0.6	A	399	599
4 - Harts Farm Way	0.25	4.11	0.4	A	260	390

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	277	69	86	1718	0.161	276	280	0.0	0.2	2.544	A
2 - Brookside	160	40	327	916	0.175	159	35	0.0	0.2	4.899	A
3 - Southmoor Lane	327	82	403	1434	0.228	326	84	0.0	0.3	3.288	A
4 - Harts Farm Way	213	53	154	1297	0.164	212	575	0.0	0.2	3.583	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	331	83	103	1706	0.194	331	336	0.2	0.2	2.667	A
2 - Brookside	191	48	392	883	0.217	191	42	0.2	0.3	5.359	A
3 - Southmoor Lane	391	98	482	1383	0.283	391	101	0.3	0.4	3.671	A
4 - Harts Farm Way	254	64	185	1280	0.199	254	688	0.2	0.3	3.789	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	405	101	126	1689	0.240	405	411	0.2	0.3	2.856	A
2 - Brookside	235	59	480	839	0.280	234	52	0.3	0.4	6.127	A
3 - Southmoor Lane	479	120	591	1313	0.365	478	123	0.4	0.6	4.362	A
4 - Harts Farm Way	312	78	226	1257	0.248	311	842	0.3	0.4	4.111	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	405	101	127	1689	0.240	405	412	0.3	0.3	2.856	A
2 - Brookside	235	59	480	839	0.280	235	52	0.4	0.4	6.137	A
3 - Southmoor Lane	479	120	591	1313	0.365	479	123	0.6	0.6	4.372	A
4 - Harts Farm Way	312	78	227	1257	0.248	312	843	0.4	0.4	4.114	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	331	83	104	1706	0.194	331	337	0.3	0.2	2.669	A
2 - Brookside	191	48	392	883	0.217	192	42	0.4	0.3	5.372	A
3 - Southmoor Lane	391	98	483	1382	0.283	392	101	0.6	0.4	3.685	A
4 - Harts Farm Way	254	64	186	1280	0.199	255	690	0.4	0.3	3.796	A

18:00 - 18:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	277	69	87	1717	0.161	277	282	0.2	0.2	2.549	A
2 - Brookside	160	40	328	915	0.175	161	35	0.3	0.2	4.916	A
3 - Southmoor Lane	327	82	405	1433	0.229	328	84	0.4	0.3	3.302	A
4 - Harts Farm Way	213	53	155	1297	0.164	213	577	0.3	0.2	3.591	A

2024 OPT2 B1c, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Brookside Roundabout	Standard Roundabout		1, 2, 3, 4	6.93	A

Junction Network Options

Driving side	Lighting	Res Cap (%)	First arm reaching threshold
Left	Normal/unknown	34	4 - Harts Farm Way

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2024 OPT2 B1c	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Brockhampton		ONE HOUR	✓	529	100.000
2 - Brookside		ONE HOUR	✓	82	100.000
3 - Southmoor Lane		ONE HOUR	✓	208	100.000
4 - Harts Farm Way		ONE HOUR	✓	808	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Brockhampton	2 - Brookside	3 - Southmoor Lane	4 - Harts Farm Way
	1 - Brockhampton	1	92	165	271
	2 - Brookside	28	0	6	48
	3 - Southmoor Lane	83	6	0	119
	4 - Harts Farm Way	158	265	385	0

Vehicle Mix

HV %s

	To				
From		1 - Brockhampton	2 - Brookside	3 - Southmoor Lane	4 - Harts Farm Way
	1 - Brockhampton	0	2	1	5
	2 - Brookside	13	0	0	11
	3 - Southmoor Lane	11	0	0	18
	4 - Harts Farm Way	5	2	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Brockhampton	0.46	5.40	0.9	A	485	728
2 - Brookside	0.14	7.44	0.2	A	75	113
3 - Southmoor Lane	0.16	3.38	0.2	A	191	286
4 - Harts Farm Way	0.68	8.80	2.1	A	741	1112

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	398	100	491	1433	0.278	397	202	0.0	0.4	3.580	A
2 - Brookside	62	15	616	770	0.080	61	272	0.0	0.1	5.610	A
3 - Southmoor Lane	157	39	261	1526	0.103	156	416	0.0	0.1	3.006	A
4 - Harts Farm Way	608	152	88	1334	0.456	605	328	0.0	0.9	5.064	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	476	119	589	1365	0.348	475	242	0.4	0.5	4.173	A
2 - Brookside	74	18	738	709	0.104	74	326	0.1	0.1	6.260	A
3 - Southmoor Lane	187	47	312	1492	0.125	187	499	0.1	0.2	3.153	A
4 - Harts Farm Way	726	182	106	1325	0.548	725	393	0.9	1.2	6.171	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	582	146	719	1273	0.458	581	296	0.5	0.9	5.361	A
2 - Brookside	90	23	902	626	0.144	90	398	0.1	0.2	7.419	A
3 - Southmoor Lane	229	57	382	1447	0.158	229	610	0.2	0.2	3.378	A
4 - Harts Farm Way	890	222	130	1311	0.678	886	481	1.2	2.1	8.658	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	582	146	722	1271	0.458	582	297	0.9	0.9	5.395	A
2 - Brookside	90	23	905	625	0.145	90	400	0.2	0.2	7.443	A
3 - Southmoor Lane	229	57	383	1447	0.158	229	612	0.2	0.2	3.380	A
4 - Harts Farm Way	890	222	130	1311	0.679	890	482	2.1	2.1	8.796	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	476	119	593	1362	0.349	477	244	0.9	0.6	4.204	A
2 - Brookside	74	18	742	707	0.104	74	328	0.2	0.1	6.289	A
3 - Southmoor Lane	187	47	314	1492	0.125	187	502	0.2	0.2	3.156	A
4 - Harts Farm Way	726	182	106	1324	0.548	730	395	2.1	1.3	6.279	A

09:00 - 09:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	398	100	495	1430	0.278	399	204	0.6	0.4	3.603	A
2 - Brookside	62	15	620	768	0.080	62	274	0.1	0.1	5.635	A
3 - Southmoor Lane	157	39	262	1525	0.103	157	420	0.2	0.1	3.009	A
4 - Harts Farm Way	608	152	89	1334	0.456	610	330	1.3	0.9	5.134	A

2024 OPT2 B1c, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Brookside Roundabout	Standard Roundabout		1, 2, 3, 4	4.27	A

Junction Network Options

Driving side	Lighting	Res Cap (%)	First arm reaching threshold
Left	Normal/unknown	79	3 - Southmoor Lane

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2024 OPT2 B1c	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Brockhampton		ONE HOUR	✓	386	100.000
2 - Brookside		ONE HOUR	✓	216	100.000
3 - Southmoor Lane		ONE HOUR	✓	457	100.000
4 - Harts Farm Way		ONE HOUR	✓	297	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Brockhampton	2 - Brookside	3 - Southmoor Lane	4 - Harts Farm Way
From	1 - Brockhampton	2	13	37	334
	2 - Brookside	55	0	0	161
	3 - Southmoor Lane	141	19	0	297
	4 - Harts Farm Way	191	24	80	2

Vehicle Mix

HV %s

	To				
		1 - Brockhampton	2 - Brookside	3 - Southmoor Lane	4 - Harts Farm Way
From	1 - Brockhampton	0	6	6	1
	2 - Brookside	1	0	0	1
	3 - Southmoor Lane	2	0	0	1
	4 - Harts Farm Way	3	5	18	100

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Brockhampton	0.25	2.92	0.3	A	354	531
2 - Brookside	0.29	6.15	0.4	A	198	297
3 - Southmoor Lane	0.39	4.58	0.6	A	419	629
4 - Harts Farm Way	0.26	4.18	0.4	A	273	409

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	291	73	94	1712	0.170	290	292	0.0	0.2	2.576	A
2 - Brookside	163	41	341	908	0.179	162	42	0.0	0.2	4.856	A
3 - Southmoor Lane	344	86	415	1426	0.241	343	88	0.0	0.3	3.364	A
4 - Harts Farm Way	224	56	163	1293	0.173	223	596	0.0	0.2	3.600	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	347	87	112	1699	0.204	347	349	0.2	0.3	2.710	A
2 - Brookside	194	49	409	875	0.222	194	50	0.2	0.3	5.330	A
3 - Southmoor Lane	411	103	498	1373	0.299	410	105	0.3	0.4	3.789	A
4 - Harts Farm Way	267	67	195	1275	0.209	267	713	0.2	0.3	3.826	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	425	106	137	1682	0.253	425	428	0.3	0.3	2.916	A
2 - Brookside	238	59	501	828	0.287	237	62	0.3	0.4	6.136	A
3 - Southmoor Lane	503	126	609	1301	0.387	502	129	0.4	0.6	4.564	A
4 - Harts Farm Way	327	82	239	1250	0.262	327	873	0.3	0.4	4.174	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	425	106	138	1682	0.253	425	428	0.3	0.3	2.916	A
2 - Brookside	238	59	501	828	0.287	238	62	0.4	0.4	6.147	A
3 - Southmoor Lane	503	126	610	1301	0.387	503	129	0.6	0.6	4.576	A
4 - Harts Farm Way	327	82	239	1250	0.262	327	874	0.4	0.4	4.179	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	347	87	113	1699	0.204	347	350	0.3	0.3	2.712	A
2 - Brookside	194	49	409	874	0.222	195	50	0.4	0.3	5.344	A
3 - Southmoor Lane	411	103	499	1372	0.299	412	105	0.6	0.4	3.801	A
4 - Harts Farm Way	267	67	195	1274	0.210	267	715	0.4	0.3	3.833	A

18:00 - 18:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	291	73	94	1712	0.170	291	293	0.3	0.2	2.581	A
2 - Brookside	163	41	343	908	0.179	163	42	0.3	0.2	4.876	A
3 - Southmoor Lane	344	86	418	1425	0.241	344	88	0.4	0.3	3.379	A
4 - Harts Farm Way	224	56	164	1292	0.173	224	598	0.3	0.2	3.612	A

2024 OPT2 B8, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Brookside Roundabout	Standard Roundabout		1, 2, 3, 4	6.87	A

Junction Network Options

Driving side	Lighting	Res Cap (%)	First arm reaching threshold
Left	Normal/unknown	35	4 - Harts Farm Way

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2024 OPT2 B8	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Brockhampton		ONE HOUR	✓	528	100.000
2 - Brookside		ONE HOUR	✓	82	100.000
3 - Southmoor Lane		ONE HOUR	✓	208	100.000
4 - Harts Farm Way		ONE HOUR	✓	803	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Brockhampton	2 - Brookside	3 - Southmoor Lane	4 - Harts Farm Way
	1 - Brockhampton	1	91	165	271
	2 - Brookside	28	0	5	49
	3 - Southmoor Lane	83	6	0	119
	4 - Harts Farm Way	158	260	385	0

Vehicle Mix

HV %s

	To				
From		1 - Brockhampton	2 - Brookside	3 - Southmoor Lane	4 - Harts Farm Way
	1 - Brockhampton	0	3	1	5
	2 - Brookside	16	0	0	13
	3 - Southmoor Lane	11	0	0	18
	4 - Harts Farm Way	5	2	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Brockhampton	0.46	5.36	0.9	A	485	727
2 - Brookside	0.14	7.62	0.2	A	75	113
3 - Southmoor Lane	0.16	3.39	0.2	A	191	286
4 - Harts Farm Way	0.67	8.68	2.1	A	737	1105

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	398	99	487	1436	0.277	396	202	0.0	0.4	3.574	A
2 - Brookside	62	15	616	770	0.080	61	267	0.0	0.1	5.741	A
3 - Southmoor Lane	157	39	262	1525	0.103	156	416	0.0	0.1	3.011	A
4 - Harts Farm Way	605	151	88	1334	0.453	601	329	0.0	0.8	5.036	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	475	119	584	1368	0.347	474	242	0.4	0.5	4.159	A
2 - Brookside	74	18	738	709	0.104	74	320	0.1	0.1	6.407	A
3 - Southmoor Lane	187	47	313	1492	0.125	187	498	0.1	0.2	3.158	A
4 - Harts Farm Way	722	180	106	1325	0.545	720	394	0.8	1.2	6.126	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	581	145	714	1277	0.455	580	296	0.5	0.9	5.331	A
2 - Brookside	90	23	902	626	0.144	90	392	0.1	0.2	7.593	A
3 - Southmoor Lane	229	57	383	1447	0.158	229	609	0.2	0.2	3.384	A
4 - Harts Farm Way	884	221	130	1311	0.674	881	482	1.2	2.1	8.549	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	581	145	717	1275	0.456	581	297	0.9	0.9	5.364	A
2 - Brookside	90	23	905	625	0.145	90	393	0.2	0.2	7.618	A
3 - Southmoor Lane	229	57	384	1446	0.158	229	611	0.2	0.2	3.386	A
4 - Harts Farm Way	884	221	130	1311	0.674	884	483	2.1	2.1	8.680	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	475	119	588	1365	0.348	476	244	0.9	0.6	4.189	A
2 - Brookside	74	18	742	707	0.104	74	322	0.2	0.1	6.434	A
3 - Southmoor Lane	187	47	315	1491	0.125	187	501	0.2	0.2	3.164	A
4 - Harts Farm Way	722	180	106	1324	0.545	725	396	2.1	1.3	6.228	A

09:00 - 09:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	398	99	491	1433	0.277	398	204	0.6	0.4	3.599	A
2 - Brookside	62	15	620	768	0.080	62	269	0.1	0.1	5.767	A
3 - Southmoor Lane	157	39	263	1524	0.103	157	419	0.2	0.1	3.014	A
4 - Harts Farm Way	605	151	89	1334	0.453	606	331	1.3	0.9	5.106	A

2024 OPT2 B8, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Brookside Roundabout	Standard Roundabout		1, 2, 3, 4	4.26	A

Junction Network Options

Driving side	Lighting	Res Cap (%)	First arm reaching threshold
Left	Normal/unknown	80	3 - Southmoor Lane

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2024 OPT2 B8	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - Brockhampton		ONE HOUR	✓	384	100.000
2 - Brookside		ONE HOUR	✓	213	100.000
3 - Southmoor Lane		ONE HOUR	✓	453	100.000
4 - Harts Farm Way		ONE HOUR	✓	294	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Brockhampton	2 - Brookside	3 - Southmoor Lane	4 - Harts Farm Way
From	1 - Brockhampton	2	11	37	334
	2 - Brookside	54	0	0	159
	3 - Southmoor Lane	141	15	0	297
	4 - Harts Farm Way	191	21	80	2

Vehicle Mix

HV %s

	To				
		1 - Brockhampton	2 - Brookside	3 - Southmoor Lane	4 - Harts Farm Way
From	1 - Brockhampton	0	19	6	1
	2 - Brookside	3	0	0	3
	3 - Southmoor Lane	2	0	0	1
	4 - Harts Farm Way	3	16	18	100

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Brockhampton	0.25	2.90	0.3	A	352	529
2 - Brookside	0.28	6.25	0.4	A	195	293
3 - Southmoor Lane	0.38	4.53	0.6	A	416	624
4 - Harts Farm Way	0.26	4.18	0.4	A	270	405

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	289	72	88	1716	0.168	288	291	0.0	0.2	2.568	A
2 - Brookside	160	40	342	908	0.177	159	35	0.0	0.2	4.946	A
3 - Southmoor Lane	341	85	413	1428	0.239	340	88	0.0	0.3	3.349	A
4 - Harts Farm Way	221	55	159	1295	0.171	220	594	0.0	0.2	3.613	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	345	86	106	1704	0.203	345	348	0.2	0.3	2.699	A
2 - Brookside	191	48	409	875	0.219	191	42	0.2	0.3	5.423	A
3 - Southmoor Lane	407	102	495	1375	0.296	407	105	0.3	0.4	3.763	A
4 - Harts Farm Way	264	66	190	1277	0.207	264	711	0.2	0.3	3.836	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	423	106	130	1687	0.251	422	427	0.3	0.3	2.900	A
2 - Brookside	235	59	501	828	0.283	234	52	0.3	0.4	6.234	A
3 - Southmoor Lane	499	125	606	1303	0.383	498	129	0.4	0.6	4.522	A
4 - Harts Farm Way	324	81	233	1253	0.258	323	871	0.3	0.4	4.178	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	423	106	130	1687	0.251	423	427	0.3	0.3	2.901	A
2 - Brookside	235	59	501	828	0.283	235	52	0.4	0.4	6.246	A
3 - Southmoor Lane	499	125	607	1303	0.383	499	129	0.6	0.6	4.534	A
4 - Harts Farm Way	324	81	233	1253	0.258	324	872	0.4	0.4	4.182	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	345	86	106	1704	0.203	346	349	0.3	0.3	2.703	A
2 - Brookside	191	48	409	874	0.219	192	42	0.4	0.3	5.440	A
3 - Southmoor Lane	407	102	496	1374	0.296	408	105	0.6	0.4	3.776	A
4 - Harts Farm Way	264	66	191	1277	0.207	265	713	0.4	0.3	3.842	A

18:00 - 18:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Brockhampton	289	72	89	1716	0.168	289	292	0.3	0.2	2.573	A
2 - Brookside	160	40	343	908	0.177	161	35	0.3	0.2	4.964	A
3 - Southmoor Lane	341	85	415	1426	0.239	341	88	0.4	0.3	3.361	A
4 - Harts Farm Way	221	55	160	1294	0.171	222	597	0.3	0.2	3.622	A

Junctions 9	
PICADY 9 - Priority Intersection Module	
Version: 9.5.0.6896 © Copyright TRL Limited, 2018	
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Filename: Langstone Tjunction RevF.j9
Path: P:\20000's\20428\Junction Assessments
Report generation date: 23/10/2019 10:14:34

-
- »Existing 70%, AM
 - »Existing 70%, PM
 - »Existing 100%, AM
 - »Existing 100%, PM
 - »Scenario B1c/B2, AM
 - »Scenario B1c/B2, PM
 - »Scenario B8, AM
 - »Scenario B8, PM
 - »Scenario B1c/B2 2024, AM
 - »Scenario B1c/B2 2024, PM
 - »Scenario B8 2024, AM
 - »Scenario B8 2024, PM

Summary of junction performance

	AM				PM			
	Q (PCU)	Delay (s)	RFC	Res Cap	Q (PCU)	Delay (s)	RFC	Res Cap
	Existing 70%							
Stream B-C	0.1	11.14	0.09	-5 % [Stream B-A]	2.2	26.54	0.70	6 % [Stream B-C]
Stream B-A	0.1	43.87	0.09		0.3	23.40	0.26	
Stream C-B	2.1	27.73	0.68		0.1	7.43	0.11	
	Existing 100%							
Stream B-C	0.2	12.56	0.15	-10 % [Stream C-B]	22.9	176.24	1.06	-17 % [Stream B-C]
Stream B-A	0.2	62.91	0.19		0.6	28.03	0.38	
Stream C-B	8.6	86.29	0.94		0.1	7.62	0.11	
	Scenario B1c/B2							
Stream B-C	0.2	12.20	0.14	-8 % [Stream C-B]	15.9	132.70	1.01	-15 % [Stream B-C]
Stream B-A	0.2	55.16	0.16		0.6	27.21	0.37	
Stream C-B	6.1	65.45	0.89		0.1	7.59	0.11	
	Scenario B8							
Stream B-C	0.2	12.16	0.14	-7 % [Stream C-B]	12.4	109.20	0.98	-13 % [Stream B-C]
Stream B-A	0.2	52.09	0.14		0.5	26.70	0.35	
Stream C-B	5.4	58.68	0.87		0.1	7.57	0.11	
	Scenario B1c/B2 2024							
Stream B-C	0.2	12.95	0.15	-10 % [Stream B-A]	19.2	156.22	1.04	-16 % [Stream B-C]
Stream B-A	0.2	77.61	0.21		0.6	30.84	0.39	
Stream C-B	7.6	81.59	0.92		0.1	7.74	0.11	
	Scenario B8 2024							
Stream B-C	0.2	12.87	0.15	-9 % [Stream B-A]	15.0	128.82	1.01	-14 % [Stream B-C]
Stream B-A	0.2	71.52	0.18		0.6	30.18	0.38	
Stream C-B	6.6	72.40	0.90		0.1	7.71	0.11	

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of Av. delay per arriving vehicle. Res Cap indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

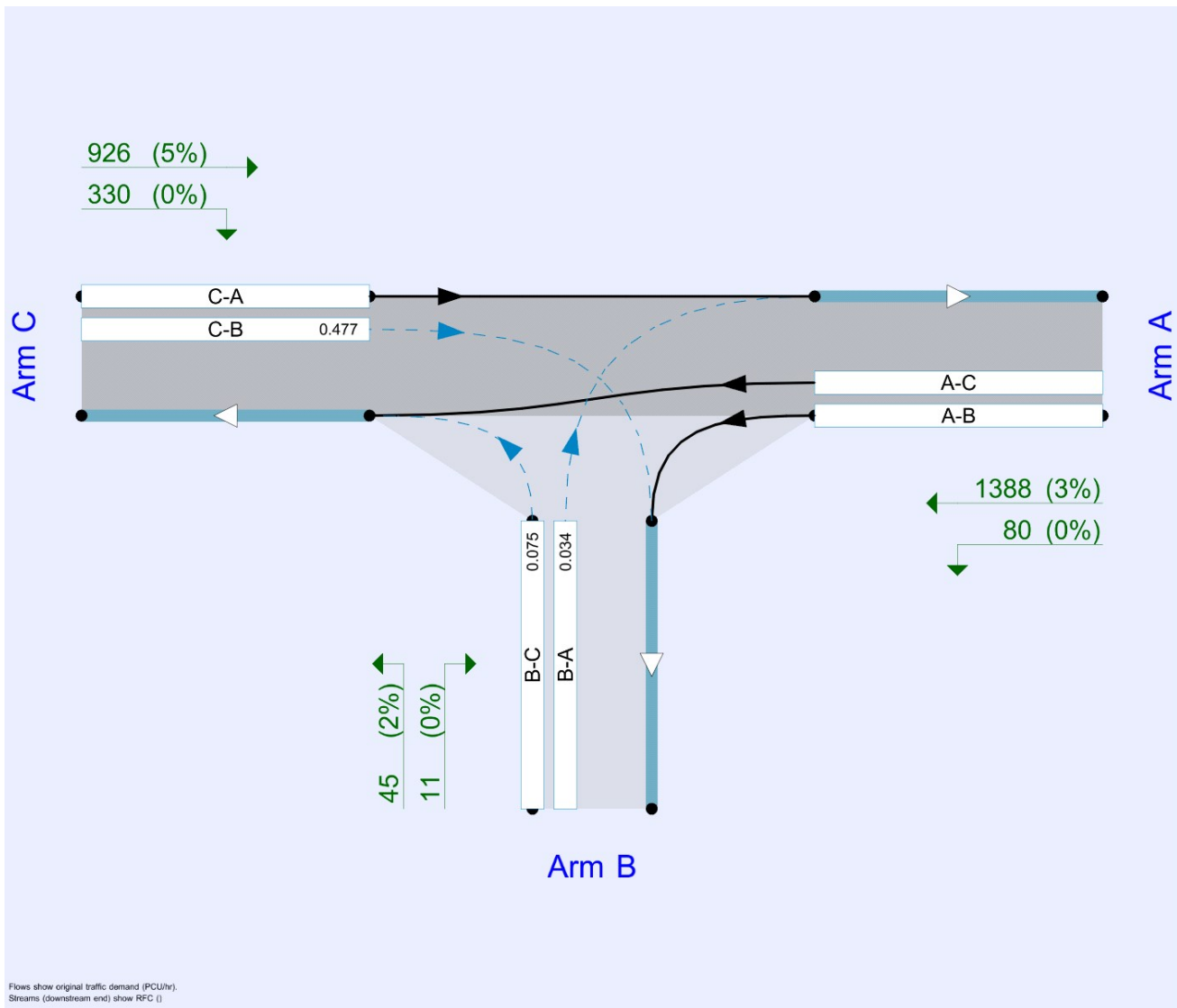
File summary

File Description

Title	Langstone Road Site Access
Location	Langstone Road, Havant
Site number	
Date	20/06/2019
Version	
Status	(new file)
Identifier	
Client	Trinity Investment Management
Jobnumber	20428
Enumerator	DTA\arcady
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Q Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Av. Delay threshold (s)	Q threshold (PCU)
5.75	✓	✓	✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	Existing 70%	AM	ONE HOUR	07:45	09:15	15	✓
D2	Existing 70%	PM	ONE HOUR	16:45	18:15	15	✓
D3	Existing 100%	AM	ONE HOUR	07:45	09:15	15	✓
D4	Existing 100%	PM	ONE HOUR	16:45	18:15	15	✓
D5	Scenario B1c/B2	AM	ONE HOUR	07:45	09:15	15	✓
D6	Scenario B1c/B2	PM	ONE HOUR	16:45	18:15	15	✓
D7	Scenario B8	AM	ONE HOUR	07:45	09:15	15	✓
D8	Scenario B8	PM	ONE HOUR	16:45	18:15	15	✓
D9	Scenario B1c/B2 2024	AM	ONE HOUR	07:45	09:15	15	✓
D10	Scenario B1c/B2 2024	PM	ONE HOUR	16:45	18:15	15	✓
D11	Scenario B8 2024	AM	ONE HOUR	07:45	09:15	15	✓
D12	Scenario B8 2024	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

Existing 70%, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Q percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Langstone Road	T-Junction	Two-way		2.86	A

Junction Network Options

Driving side	Lighting	Res Cap (%)	First arm reaching threshold
Left	Normal/unknown	-5	Stream B-A

Arms

Arms

Arm	Name	Description	Arm type
A	Langstone Road South		Major
B	Site Access		Minor
C	Langstone Road North		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	12.00	✓	3.50	✓	3.60	150.0		-

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

Minor Arm Geometry

Arm	Minor arm type	Lane Width (Left) (m)	Lane Width (Right) (m)	Visibility to left (m)	Visibility to right (m)
B	Two lanes	3.25	3.25	120	33

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	589	0.074	0.186	0.117	0.265
1	B-C	661	0.075	0.189	-	-
1	C-B	762	0.218	0.218	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	Existing 70%	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1476	100.000
B		ONE HOUR	✓	38	100.000
C		ONE HOUR	✓	1179	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	88	1388
	B	8	0	30
	C	926	253	0

Vehicle Mix

HV %s

	To			
		A	B	C
	A	0	2	3
	B	14	0	0
	C	5	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Q (PCU)	Max Q95 (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Qing Delay (PCU-min)	Av. Qing Delay (s)	Rate of Qing Delay (PCU-min/min)	Inclusive Total Qing Delay (PCU-min)	Inclusive Av. Qing Delay (s)
B-C	0.09	11.14	0.1	0.5	B	28	41	6.63	9.64	0.07	6.63	9.64
B-A	0.09	43.87	0.1	0.6	E	7	11	5.10	27.80	0.06	5.10	27.80
C-A						850	1275					
C-B	0.68	27.73	2.1	10.3	D	232	348	102.77	17.71	1.14	102.79	17.71
A-B						81	121					
A-C						1274	1910					

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	23	6	455	0.050	22	0.0	0.1	8.309	A
B-A	6	2	258	0.023	6	0.0	0.0	16.329	C
C-A	697	174			697				
C-B	190	48	519	0.367	188	0.0	0.6	10.804	B
A-B	66	17			66				
A-C	1045	261			1045				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	27	7	415	0.065	27	0.1	0.1	9.278	A
B-A	7	2	193	0.037	7	0.0	0.0	22.138	C
C-A	832	208			832				
C-B	227	57	472	0.482	226	0.6	0.9	14.545	B
A-B	79	20			79				
A-C	1248	312			1248				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	33	8	357	0.093	33	0.1	0.1	11.118	B
B-A	9	2	104	0.085	9	0.0	0.1	43.151	E
C-A	1020	255			1020				
C-B	279	70	407	0.684	274	0.9	2.0	26.247	D
A-B	97	24			97				
A-C	1528	382			1528				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	33	8	356	0.093	33	0.1	0.1	11.137	B
B-A	9	2	103	0.086	9	0.1	0.1	43.866	E
C-A	1020	255			1020				
C-B	279	70	407	0.684	278	2.0	2.1	27.731	D
A-B	97	24			97				
A-C	1528	382			1528				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	27	7	415	0.065	27	0.1	0.1	9.292	A
B-A	7	2	191	0.038	7	0.1	0.0	22.400	C
C-A	832	208			832				
C-B	227	57	472	0.482	232	2.1	1.0	15.242	C
A-B	79	20			79				
A-C	1248	312			1248				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	23	6	455	0.050	23	0.1	0.1	8.320	A
B-A	6	2	257	0.023	6	0.0	0.0	16.419	C
C-A	697	174			697				
C-B	190	48	519	0.367	192	1.0	0.6	11.049	B
A-B	66	17			66				
A-C	1045	261			1045				

Qing Delay Results for each time segment
07:45 - 08:00

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	0.75	0.05	8.309	A
B-A	0.38	0.03	16.329	C
C-B	8.06	0.54	10.804	B

08:00 - 08:15

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	1.01	0.07	9.278	A
B-A	0.62	0.04	22.138	C
C-B	12.81	0.85	14.545	B

08:15 - 08:30

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	1.46	0.10	11.118	B
B-A	1.38	0.09	43.151	E
C-B	26.57	1.77	26.247	D

08:30 - 08:45

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	1.52	0.10	11.137	B
B-A	1.55	0.10	43.866	E
C-B	30.55	2.04	27.731	D

08:45 - 09:00

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	1.09	0.07	9.292	A
B-A	0.74	0.05	22.400	C
C-B	15.51	1.03	15.242	C

09:00 - 09:15

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	0.81	0.05	8.320	A
B-A	0.44	0.03	16.419	C
C-B	9.27	0.62	11.049	B

Q Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.05	0.00	0.00	0.05	0.05			N/A	N/A
B-A	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-B	0.57	0.55	1.00	1.40	1.45			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.07	0.03	0.25	0.45	0.48			N/A	N/A
B-A	0.04	0.03	0.29	0.52	0.55			N/A	N/A
C-B	0.90	0.10	0.91	1.25	1.68			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.10	0.03	0.26	0.47	0.50			N/A	N/A
B-A	0.10	0.03	0.30	0.54	0.57			N/A	N/A
C-B	1.99	0.03	0.32	3.43	10.27			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.10	0.03	0.25	0.45	0.48			N/A	N/A
B-A	0.10	0.03	0.29	0.51	0.54			N/A	N/A
C-B	2.07	0.03	0.30	2.24	9.58			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.07	0.00	0.00	0.07	0.07			N/A	N/A
B-A	0.05	0.00	0.00	0.05	0.05			N/A	N/A
C-B	0.96	0.05	0.48	2.07	3.12			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.05	0.00	0.00	0.05	0.05			N/A	N/A
B-A	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-B	0.59	0.04	0.35	1.30	2.25			N/A	N/A

Existing 70%, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Q percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Langstone Road	T-Junction	Two-way		3.34	A

Junction Network Options

Driving side	Lighting	Res Cap (%)	First arm reaching threshold
Left	Normal/unknown	6	Stream B-C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	Existing 70%	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	898	100.000
B		ONE HOUR	✓	331	100.000
C		ONE HOUR	✓	1483	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
From	A	0	22	876
	B	49	0	282
	C	1427	56	0

Vehicle Mix

HV %s

	To			
		A	B	C
From	A	0	0	3
	B	0	0	0
	C	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Q (PCU)	Max Q95 (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Qng Delay (PCU-min)	Av. Qng Delay (s)	Rate of Qng Delay (PCU-min/min)	Inclusive Total Qng Delay (PCU-min)	Inclusive Av. Qng Delay (s)
B-C	0.70	26.54	2.2	11.0	D	259	388	114.31	17.67	1.27	114.34	17.67
B-A	0.26	23.40	0.3	1.5	C	45	67	19.40	17.26	0.22	19.40	17.26
C-A						1309	1964					
C-B	0.11	7.43	0.1	0.5	A	51	77	8.78	6.83	0.10	8.78	6.83
A-B						20	30					
A-C						804	1206					

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	212	53	520	0.408	210	0.0	0.7	11.510	B
B-A	37	9	328	0.112	36	0.0	0.1	12.311	B
C-A	1074	269			1074				
C-B	42	11	614	0.069	42	0.0	0.1	6.288	A
A-B	17	4			17				
A-C	659	165			659				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	254	63	490	0.517	252	0.7	1.0	15.041	C
B-A	44	11	278	0.159	44	0.1	0.2	15.377	C
C-A	1283	321			1283				
C-B	50	13	586	0.086	50	0.1	0.1	6.726	A
A-B	20	5			20				
A-C	788	197			788				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	310	78	445	0.697	306	1.0	2.1	25.132	D
B-A	54	13	208	0.260	53	0.2	0.3	23.224	C
C-A	1571	393			1571				
C-B	62	15	546	0.113	62	0.1	0.1	7.429	A
A-B	24	6			24				
A-C	964	241			964				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	310	78	445	0.698	310	2.1	2.2	26.544	D
B-A	54	13	208	0.260	54	0.3	0.3	23.402	C
C-A	1571	393			1571				
C-B	62	15	546	0.113	62	0.1	0.1	7.432	A
A-B	24	6			24				
A-C	964	241			964				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	254	63	489	0.518	258	2.2	1.1	15.823	C
B-A	44	11	278	0.159	45	0.3	0.2	15.492	C
C-A	1283	321			1283				
C-B	50	13	586	0.086	50	0.1	0.1	6.729	A
A-B	20	5			20				
A-C	788	197			788				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	212	53	519	0.409	214	1.1	0.7	11.844	B
B-A	37	9	328	0.112	37	0.2	0.1	12.378	B
C-A	1074	269			1074				
C-B	42	11	614	0.069	42	0.1	0.1	6.295	A
A-B	17	4			17				
A-C	659	165			659				

Qing Delay Results for each time segment

16:45 - 17:00

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	9.53	0.64	11.510	B
B-A	1.78	0.12	12.311	B
C-B	1.07	0.07	6.288	A

17:00 - 17:15

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	14.72	0.98	15.041	C
B-A	2.66	0.18	15.377	C
C-B	1.37	0.09	6.726	A

17:15 - 17:30

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	28.43	1.90	25.132	D
B-A	4.77	0.32	23.224	C
C-B	1.85	0.12	7.429	A

17:30 - 17:45

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	32.57	2.17	26.544	D
B-A	5.14	0.34	23.402	C
C-B	1.90	0.13	7.432	A

17:45 - 18:00

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	17.94	1.20	15.823	C
B-A	3.04	0.20	15.492	C
C-B	1.45	0.10	6.729	A

18:00 - 18:15

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	11.12	0.74	11.844	B
B-A	2.00	0.13	12.378	B
C-B	1.14	0.08	6.295	A

Q Variation Results for each time segment

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.68	0.55	1.00	1.40	1.45			N/A	N/A
B-A	0.12	0.00	0.00	0.12	0.12			N/A	N/A
C-B	0.07	0.00	0.00	0.07	0.07			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.04	0.11	0.99	1.64	1.94			N/A	N/A
B-A	0.18	0.00	0.00	0.18	0.18			N/A	N/A
C-B	0.09	0.03	0.25	0.45	0.48			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	2.12	0.03	0.32	3.76	11.00			N/A	N/A
B-A	0.34	0.03	0.26	0.47	0.50			N/A	N/A
C-B	0.13	0.03	0.26	0.47	0.49			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	2.21	0.03	0.30	2.21	9.76			N/A	N/A
B-A	0.34	0.03	0.32	1.18	1.46			N/A	N/A
C-B	0.13	0.03	0.25	0.45	0.48			N/A	N/A

17:45 - 18:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.11	0.05	0.49	2.61	3.88			N/A	N/A
B-A	0.19	0.00	0.00	0.19	0.19			N/A	N/A
C-B	0.09	0.00	0.00	0.09	0.09			N/A	N/A

18:00 - 18:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.71	0.04	0.36	1.65	2.80			N/A	N/A
B-A	0.13	0.00	0.00	0.13	0.13			N/A	N/A
C-B	0.07	0.00	0.00	0.07	0.07			N/A	N/A

Existing 100%, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Q percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Langstone Road	T-Junction	Two-way		11.16	B

Junction Network Options

Driving side	Lighting	Res Cap (%)	First arm reaching threshold
Left	Normal/unknown	-10	Stream C-B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	Existing 100%	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1472	100.000
B		ONE HOUR	✓	59	100.000
C		ONE HOUR	✓	1273	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	84	1388
	B	12	0	47
	C	926	347	0

Vehicle Mix

HV %s

		To		
		A	B	C
From	A	0	0	3
	B	0	0	3
	C	5	1	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Q (PCU)	Max Q95 (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Qng Delay (PCU-min)	Av. Qng Delay (s)	Rate of Qng Delay (PCU-min/min)	Inclusive Total Qng Delay (PCU-min)	Inclusive Av. Qng Delay (s)
B-C	0.15	12.56	0.2	0.5	B	43	65	11.36	10.54	0.13	11.37	10.54
B-A	0.19	62.91	0.2	1.2	F	11	17	9.12	33.13	0.10	9.12	33.13
C-A						850	1275					
C-B	0.94	86.29	8.6	38.3	F	318	478	294.19	36.96	3.27	294.25	36.97
A-B						77	116					
A-C						1274	1910					

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	9	454	0.078	35	0.0	0.1	8.833	A
B-A	9	2	239	0.038	9	0.0	0.0	15.620	C
C-A	697	174			697				
C-B	261	65	520	0.502	257	0.0	1.0	13.598	B
A-B	63	16			63				
A-C	1045	261			1045				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	42	11	412	0.102	42	0.1	0.1	10.002	B
B-A	11	3	170	0.063	11	0.0	0.1	22.536	C
C-A	832	208			832				
C-B	312	78	473	0.660	309	1.0	1.8	21.578	C
A-B	76	19			76				
A-C	1248	312			1248				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	52	13	349	0.148	52	0.1	0.2	12.462	B
B-A	13	3	76	0.175	13	0.1	0.2	56.805	F
C-A	1020	255			1020				
C-B	382	96	408	0.936	362	1.8	6.9	61.322	F
A-B	92	23			92				
A-C	1528	382			1528				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	52	13	347	0.149	52	0.2	0.2	12.563	B
B-A	13	3	70	0.188	13	0.2	0.2	62.906	F
C-A	1020	255			1020				
C-B	382	96	408	0.936	375	6.9	8.6	86.291	F
A-B	92	23			92				
A-C	1528	382			1528				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	42	11	412	0.103	42	0.2	0.1	10.044	B
B-A	11	3	162	0.067	11	0.2	0.1	23.951	C
C-A	832	208			832				
C-B	312	78	473	0.660	338	8.6	2.1	30.998	D
A-B	76	19			76				
A-C	1248	312			1248				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	9	454	0.078	36	0.1	0.1	8.856	A
B-A	9	2	237	0.038	9	0.1	0.0	15.810	C
C-A	697	174			697				
C-B	261	65	520	0.502	265	2.1	1.0	14.455	B
A-B	63	16			63				
A-C	1045	261			1045				

Qing Delay Results for each time segment

07:45 - 08:00

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	1.24	0.08	8.833	A
B-A	0.55	0.04	15.620	C
C-B	13.69	0.91	13.598	B

08:00 - 08:15

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	1.69	0.11	10.002	B
B-A	0.94	0.06	22.536	C
C-B	24.97	1.66	21.578	C

08:15 - 08:30

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	2.56	0.17	12.462	B
B-A	2.62	0.17	56.805	F
C-B	76.41	5.09	61.322	F

08:30 - 08:45

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	2.67	0.18	12.563	B
B-A	3.18	0.21	62.906	F
C-B	117.41	7.83	86.291	F

08:45 - 09:00

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	1.85	0.12	10.044	B
B-A	1.20	0.08	23.951	C
C-B	44.88	2.99	30.998	D

09:00 - 09:15

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	1.35	0.09	8.856	A
B-A	0.64	0.04	15.810	C
C-B	16.84	1.12	14.455	B

Q Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.09	0.00	0.00	0.09	0.09			N/A	N/A
B-A	0.04	0.00	0.00	0.04	0.04			N/A	N/A
C-B	0.99	0.55	1.01	1.42	1.47			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.12	0.00	0.00	0.12	0.12			N/A	N/A
B-A	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-B	1.83	0.07	1.09	4.22	5.96			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.18	0.03	0.27	0.48	0.51			N/A	N/A
B-A	0.20	0.03	0.27	0.49	1.16			N/A	N/A
C-B	6.88	0.12	2.63	18.12	25.96			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.18	0.03	0.26	0.47	0.49			N/A	N/A
B-A	0.22	0.03	0.26	0.47	0.50			N/A	N/A
C-B	8.59	0.08	1.60	24.62	38.34			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.12	0.00	0.00	0.12	0.12			N/A	N/A
B-A	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-B	2.10	0.04	0.38	5.47	10.71			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.09	0.00	0.00	0.09	0.09			N/A	N/A
B-A	0.04	0.00	0.00	0.04	0.04			N/A	N/A
C-B	1.05	0.03	0.30	1.08	4.79			N/A	N/A

Existing 100%, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Q percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Langstone Road	T-Junction	Two-way		26.31	D

Junction Network Options

Driving side	Lighting	Res Cap (%)	First arm reaching threshold
Left	Normal/unknown	-17	Stream B-C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	Existing 100%	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	897	100.000
B		ONE HOUR	✓	486	100.000
C		ONE HOUR	✓	1484	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
From	A	0	21	876
	B	72	0	414
	C	1427	57	0

Vehicle Mix

HV %s

	To			
		A	B	C
From	A	0	0	3
	B	0	0	1
	C	1	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Q (PCU)	Max Q95 (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Qng Delay (PCU-min)	Av. Qng Delay (s)	Rate of Qng Delay (PCU-min/min)	Inclusive Total Qng Delay (PCU-min)	Inclusive Av. Qng Delay (s)
B-C	1.06	176.24	22.9	58.0	F	380	570	697.57	73.45	7.75	697.73	73.47
B-A	0.38	28.03	0.6	2.7	D	66	99	32.27	19.53	0.36	32.27	19.54
C-A						1309	1964					
C-B	0.11	7.62	0.1	0.5	A	52	78	9.16	7.00	0.10	9.16	7.00
A-B						19	29					
A-C						804	1206					

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	312	78	513	0.608	306	0.0	1.5	17.028	C
B-A	54	14	328	0.165	53	0.0	0.2	13.067	B
C-A	1074	269			1074				
C-B	43	11	614	0.070	43	0.0	0.1	6.446	A
A-B	16	4			16				
A-C	659	165			659				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	372	93	480	0.775	366	1.5	3.0	30.069	D
B-A	65	16	278	0.233	64	0.2	0.3	16.847	C
C-A	1283	321			1283				
C-B	51	13	586	0.087	51	0.1	0.1	6.896	A
A-B	19	5			19				
A-C	788	197			788				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	456	114	430	1.059	410	3.0	14.5	98.690	F
B-A	79	20	208	0.382	78	0.3	0.6	27.567	D
C-A	1571	393			1571				
C-B	63	16	546	0.115	63	0.1	0.1	7.621	A
A-B	23	6			23				
A-C	964	241			964				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	456	114	430	1.061	422	14.5	22.9	176.242	F
B-A	79	20	207	0.382	79	0.6	0.6	28.033	D
C-A	1571	393			1571				
C-B	63	16	546	0.115	63	0.1	0.1	7.624	A
A-B	23	6			23				
A-C	964	241			964				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	372	93	480	0.776	446	22.9	4.6	109.831	F
B-A	65	16	277	0.233	66	0.6	0.3	17.107	C
C-A	1283	321			1283				
C-B	51	13	586	0.087	51	0.1	0.1	6.902	A
A-B	19	5			19				
A-C	788	197			788				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	312	78	512	0.608	324	4.6	1.6	20.231	C
B-A	54	14	328	0.165	55	0.3	0.2	13.189	B
C-A	1074	269			1074				
C-B	43	11	614	0.070	43	0.1	0.1	6.453	A
A-B	16	4			16				
A-C	659	165			659				

Qing Delay Results for each time segment
16:45 - 17:00

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	20.09	1.34	17.028	C
B-A	2.76	0.18	13.067	B
C-B	1.11	0.07	6.446	A

17:00 - 17:15

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	39.74	2.65	30.069	D
B-A	4.26	0.28	16.847	C
C-B	1.43	0.10	6.896	A

17:15 - 17:30

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	141.82	9.45	98.690	F
B-A	8.16	0.54	27.567	D
C-B	1.93	0.13	7.621	A

17:30 - 17:45

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	282.36	18.82	176.242	F
B-A	8.97	0.60	28.033	D
C-B	1.98	0.13	7.624	A

17:45 - 18:00

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	185.05	12.34	109.831	F
B-A	4.97	0.33	17.107	C
C-B	1.52	0.10	6.902	A

18:00 - 18:15

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	28.52	1.90	20.231	C
B-A	3.15	0.21	13.189	B
C-B	1.19	0.08	6.453	A

Q Variation Results for each time segment

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.48	0.51	1.36	1.99	2.56			N/A	N/A
B-A	0.19	0.00	0.00	0.19	0.19			N/A	N/A
C-B	0.08	0.00	0.00	0.08	0.08			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	3.03	0.09	1.07	7.46	10.54			N/A	N/A
B-A	0.30	0.00	0.00	0.30	0.30			N/A	N/A
C-B	0.10	0.03	0.26	0.46	0.49			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	14.53	1.32	11.10	29.46	36.81			N/A	N/A
B-A	0.59	0.03	0.27	0.59	1.06			N/A	N/A
C-B	0.13	0.03	0.26	0.48	0.50			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	22.93	2.46	17.87	46.55	57.98			N/A	N/A
B-A	0.60	0.03	0.32	1.26	2.73			N/A	N/A
C-B	0.13	0.03	0.26	0.46	0.49			N/A	N/A

17:45 - 18:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	4.60	0.05	0.49	13.08	22.65			N/A	N/A
B-A	0.31	0.03	0.26	0.47	0.49			N/A	N/A
C-B	0.10	0.00	0.00	0.10	0.10			N/A	N/A

18:00 - 18:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.64	0.03	0.29	1.64	7.11			N/A	N/A
B-A	0.20	0.03	0.25	0.45	0.48			N/A	N/A
C-B	0.08	0.00	0.00	0.08	0.08			N/A	N/A

Scenario B1c/B2, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Q percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Langstone Road	T-Junction	Two-way		8.18	A

Junction Network Options

Driving side	Lighting	Res Cap (%)	First arm reaching threshold
Left	Normal/unknown	-8	Stream C-B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	Scenario B1c/B2	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1468	100.000
B		ONE HOUR	✓	56	100.000
C		ONE HOUR	✓	1256	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	80	1388
	B	11	0	45
	C	926	330	0

Vehicle Mix

HV %s

	To			
	A	B	C	
From	A	0	0	3
	B	0	0	2
	C	5	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Q (PCU)	Max Q95 (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Qng Delay (PCU-min)	Av. Qng Delay (s)	Rate of Qng Delay (PCU-min/min)	Inclusive Total Qng Delay (PCU-min)	Inclusive Av. Qng Delay (s)
B-C	0.14	12.20	0.2	0.5	B	41	62	10.65	10.31	0.12	10.65	10.31
B-A	0.16	55.16	0.2	1.0	F	10	15	7.74	30.69	0.09	7.74	30.69
C-A						850	1275					
C-B	0.89	65.45	6.1	31.3	F	303	454	230.65	30.47	2.56	230.70	30.47
A-B						73	110					
A-C						1274	1910					

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	34	8	455	0.075	34	0.0	0.1	8.696	A
B-A	8	2	243	0.034	8	0.0	0.0	15.334	C
C-A	697	174			697				
C-B	248	62	521	0.477	245	0.0	0.9	12.952	B
A-B	60	15			60				
A-C	1045	261			1045				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	40	10	413	0.098	40	0.1	0.1	9.821	A
B-A	10	2	175	0.057	10	0.0	0.1	21.819	C
C-A	832	208			832				
C-B	297	74	474	0.626	294	0.9	1.6	19.776	C
A-B	72	18			72				
A-C	1248	312			1248				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	50	12	351	0.141	49	0.1	0.2	12.131	B
B-A	12	3	81	0.149	12	0.1	0.2	51.558	F
C-A	1020	255			1020				
C-B	363	91	409	0.888	349	1.6	5.3	50.783	F
A-B	88	22			88				
A-C	1528	382			1528				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	50	12	350	0.142	50	0.2	0.2	12.196	B
B-A	12	3	77	0.157	12	0.2	0.2	55.160	F
C-A	1020	255			1020				
C-B	363	91	409	0.888	360	5.3	6.1	65.447	F
A-B	88	22			88				
A-C	1528	382			1528				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	40	10	413	0.098	41	0.2	0.1	9.855	A
B-A	10	2	169	0.058	10	0.2	0.1	22.726	C
C-A	832	208			832				
C-B	297	74	474	0.626	314	6.1	1.8	24.728	C
A-B	72	18			72				
A-C	1248	312			1248				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	34	8	455	0.075	34	0.1	0.1	8.716	A
B-A	8	2	241	0.034	8	0.1	0.0	15.489	C
C-A	697	174			697				
C-B	248	62	521	0.477	252	1.8	0.9	13.612	B
A-B	60	15			60				
A-C	1045	261			1045				

Qing Delay Results for each time segment

07:45 - 08:00

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	1.17	0.08	8.696	A
B-A	0.49	0.03	15.334	C
C-B	12.44	0.83	12.952	B

08:00 - 08:15

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	1.59	0.11	9.821	A
B-A	0.83	0.06	21.819	C
C-B	21.99	1.47	19.776	C

08:15 - 08:30

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	2.38	0.16	12.131	B
B-A	2.21	0.15	51.558	F
C-B	61.39	4.09	50.783	F

08:30 - 08:45

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	2.49	0.17	12.196	B
B-A	2.60	0.17	55.160	F
C-B	86.16	5.74	65.447	F

08:45 - 09:00

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	1.73	0.12	9.855	A
B-A	1.04	0.07	22.726	C
C-B	33.61	2.24	24.728	C

09:00 - 09:15

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	1.28	0.09	8.716	A
B-A	0.57	0.04	15.489	C
C-B	15.05	1.00	13.612	B

Q Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.08	0.00	0.00	0.08	0.08			N/A	N/A
B-A	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-B	0.89	0.55	1.00	1.41	1.46			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.11	0.00	0.00	0.11	0.11			N/A	N/A
B-A	0.06	0.00	0.00	0.06	0.06			N/A	N/A
C-B	1.59	0.07	1.05	3.52	4.86			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.16	0.03	0.26	0.48	0.50			N/A	N/A
B-A	0.16	0.03	0.27	0.49	1.02			N/A	N/A
C-B	5.25	0.07	1.43	14.75	22.79			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.17	0.03	0.26	0.46	0.49			N/A	N/A
B-A	0.18	0.03	0.25	0.45	0.48			N/A	N/A
C-B	6.12	0.05	0.48	17.47	31.35			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.11	0.00	0.00	0.11	0.11			N/A	N/A
B-A	0.06	0.00	0.00	0.06	0.06			N/A	N/A
C-B	1.78	0.04	0.38	4.69	8.81			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.08	0.00	0.00	0.08	0.08			N/A	N/A
B-A	0.04	0.00	0.00	0.04	0.04			N/A	N/A
C-B	0.94	0.03	0.30	1.37	4.59			N/A	N/A

Scenario B1c/B2, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Q percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Langstone Road	T-Junction	Two-way		19.32	C

Junction Network Options

Driving side	Lighting	Res Cap (%)	First arm reaching threshold
Left	Normal/unknown	-15	Stream B-C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	Scenario B1c/B2	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	897	100.000
B		ONE HOUR	✓	466	100.000
C		ONE HOUR	✓	1482	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
From	A	0	21	876
	B	69	0	397
	C	1427	55	0

Vehicle Mix

HV %s

	To			
		A	B	C
From	A	0	0	3
	B	0	0	1
	C	1	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Q (PCU)	Max Q95 (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Qing Delay (PCU-min)	Av. Qing Delay (s)	Rate of Qing Delay (PCU-min/min)	Inclusive Total Qing Delay (PCU-min)	Inclusive Av. Qing Delay (s)
B-C	1.01	132.70	15.9	50.6	F	364	546	496.58	54.53	5.52	496.71	54.54
B-A	0.37	27.21	0.6	2.5	D	63	95	30.30	19.14	0.34	30.31	19.15
C-A						1309	1964					
C-B	0.11	7.59	0.1	0.5	A	50	76	8.80	6.98	0.10	8.81	6.98
A-B						19	29					
A-C						804	1206					

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	299	75	514	0.582	294	0.0	1.3	16.069	C
B-A	52	13	329	0.158	51	0.0	0.2	12.946	B
C-A	1074	269			1074				
C-B	41	10	614	0.067	41	0.0	0.1	6.429	A
A-B	16	4			16				
A-C	659	165			659				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	357	89	482	0.741	352	1.3	2.6	26.857	D
B-A	62	16	278	0.223	62	0.2	0.3	16.609	C
C-A	1283	321			1283				
C-B	49	12	586	0.084	49	0.1	0.1	6.873	A
A-B	19	5			19				
A-C	788	197			788				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	437	109	432	1.011	403	2.6	11.0	81.166	F
B-A	76	19	208	0.365	75	0.3	0.6	26.802	D
C-A	1571	393			1571				
C-B	61	15	546	0.111	60	0.1	0.1	7.587	A
A-B	23	6			23				
A-C	964	241			964				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	437	109	432	1.012	417	11.0	15.9	132.697	F
B-A	76	19	208	0.365	76	0.6	0.6	27.212	D
C-A	1571	393			1571				
C-B	61	15	546	0.111	61	0.1	0.1	7.589	A
A-B	23	6			23				
A-C	964	241			964				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	357	89	481	0.742	407	15.9	3.4	63.860	F
B-A	62	16	278	0.223	63	0.6	0.3	16.838	C
C-A	1283	321			1283				
C-B	49	12	586	0.084	50	0.1	0.1	6.879	A
A-B	19	5			19				
A-C	788	197			788				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	299	75	513	0.582	306	3.4	1.5	18.081	C
B-A	52	13	328	0.158	52	0.3	0.2	13.059	B
C-A	1074	269			1074				
C-B	41	10	614	0.067	41	0.1	0.1	6.436	A
A-B	16	4			16				
A-C	659	165			659				

Qing Delay Results for each time segment
16:45 - 17:00

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	18.26	1.22	16.069	C
B-A	2.62	0.17	12.946	B
C-B	1.07	0.07	6.429	A

17:00 - 17:15

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	34.57	2.30	26.857	D
B-A	4.03	0.27	16.609	C
C-B	1.38	0.09	6.873	A

17:15 - 17:30

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	113.17	7.54	81.166	F
B-A	7.63	0.51	26.802	D
C-B	1.85	0.12	7.587	A

17:30 - 17:45

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	204.02	13.60	132.697	F
B-A	8.36	0.56	27.212	D
C-B	1.90	0.13	7.589	A

17:45 - 18:00

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	102.25	6.82	63.860	F
B-A	4.68	0.31	16.838	C
C-B	1.46	0.10	6.879	A

18:00 - 18:15

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	24.30	1.62	18.081	C
B-A	2.99	0.20	13.059	B
C-B	1.14	0.08	6.436	A

Q Variation Results for each time segment

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.34	0.55	1.24	1.76	1.92			N/A	N/A
B-A	0.18	0.00	0.00	0.18	0.18			N/A	N/A
C-B	0.07	0.00	0.00	0.07	0.07			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	2.59	0.08	1.39	6.28	8.88			N/A	N/A
B-A	0.28	0.00	0.00	0.28	0.28			N/A	N/A
C-B	0.09	0.03	0.26	0.46	0.49			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	11.03	0.57	7.16	24.89	32.54			N/A	N/A
B-A	0.55	0.03	0.27	0.55	0.91			N/A	N/A
C-B	0.13	0.03	0.27	0.48	0.50			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	15.95	0.49	9.69	37.97	50.63			N/A	N/A
B-A	0.56	0.03	0.32	1.15	2.48			N/A	N/A
C-B	0.13	0.03	0.26	0.46	0.49			N/A	N/A

17:45 - 18:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	3.36	0.04	0.41	9.14	17.22			N/A	N/A
B-A	0.29	0.03	0.25	0.46	0.48			N/A	N/A
C-B	0.10	0.00	0.00	0.10	0.10			N/A	N/A

18:00 - 18:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.46	0.03	0.30	1.49	6.63			N/A	N/A
B-A	0.19	0.03	0.25	0.45	0.48			N/A	N/A
C-B	0.07	0.00	0.00	0.07	0.07			N/A	N/A

Scenario B8, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Q percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Langstone Road	T-Junction	Two-way		7.23	A

Junction Network Options

Driving side	Lighting	Res Cap (%)	First arm reaching threshold
Left	Normal/unknown	-7	Stream C-B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	Scenario B8	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1466	100.000
B		ONE HOUR	✓	56	100.000
C		ONE HOUR	✓	1249	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	78	1388
	B	10	0	46
	C	926	323	0

Vehicle Mix

HV %s

		To		
		A	B	C
From	A	0	0	3
	B	0	0	2
	C	5	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Q (PCU)	Max Q95 (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Qng Delay (PCU-min)	Av. Qng Delay (s)	Rate of Qng Delay (PCU-min/min)	Inclusive Total Qng Delay (PCU-min)	Inclusive Av. Qng Delay (s)
B-C	0.14	12.16	0.2	0.5	B	42	63	10.87	10.30	0.12	10.87	10.30
B-A	0.14	52.09	0.2	0.9	F	9	14	6.80	29.65	0.08	6.80	29.65
C-A						850	1275					
C-B	0.87	58.68	5.4	28.4	F	296	445	210.45	28.40	2.34	210.50	28.41
A-B						72	107					
A-C						1274	1910					

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	9	455	0.076	34	0.0	0.1	8.707	A
B-A	8	2	244	0.031	7	0.0	0.0	15.186	C
C-A	697	174			697				
C-B	243	61	521	0.467	240	0.0	0.9	12.709	B
A-B	59	15			59				
A-C	1045	261			1045				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	41	10	414	0.100	41	0.1	0.1	9.825	A
B-A	9	2	177	0.051	9	0.0	0.1	21.462	C
C-A	832	208			832				
C-B	290	73	474	0.612	288	0.9	1.5	19.116	C
A-B	70	18			70				
A-C	1248	312			1248				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	51	13	353	0.143	50	0.1	0.2	12.104	B
B-A	11	3	83	0.132	11	0.1	0.1	49.241	E
C-A	1020	255			1020				
C-B	356	89	410	0.868	343	1.5	4.7	47.100	E
A-B	86	21			86				
A-C	1528	382			1528				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	51	13	352	0.144	51	0.2	0.2	12.158	B
B-A	11	3	80	0.138	11	0.1	0.2	52.091	F
C-A	1020	255			1020				
C-B	356	89	410	0.868	353	4.7	5.4	58.685	F
A-B	86	21			86				
A-C	1528	382			1528				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	41	10	414	0.100	42	0.2	0.1	9.857	A
B-A	9	2	172	0.052	9	0.2	0.1	22.220	C
C-A	832	208			832				
C-B	290	73	474	0.612	305	5.4	1.7	23.023	C
A-B	70	18			70				
A-C	1248	312			1248				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	9	455	0.076	35	0.1	0.1	8.721	A
B-A	8	2	243	0.031	8	0.1	0.0	15.331	C
C-A	697	174			697				
C-B	243	61	521	0.467	246	1.7	0.9	13.303	B
A-B	59	15			59				
A-C	1045	261			1045				

Qing Delay Results for each time segment

07:45 - 08:00

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	1.20	0.08	8.707	A
B-A	0.44	0.03	15.186	C
C-B	11.97	0.80	12.709	B

08:00 - 08:15

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	1.63	0.11	9.825	A
B-A	0.75	0.05	21.462	C
C-B	20.89	1.39	19.116	C

08:15 - 08:30

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	2.43	0.16	12.104	B
B-A	1.93	0.13	49.241	E
C-B	56.23	3.75	47.100	E

08:30 - 08:45

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	2.54	0.17	12.158	B
B-A	2.25	0.15	52.091	F
C-B	76.46	5.10	58.685	F

08:45 - 09:00

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	1.77	0.12	9.857	A
B-A	0.92	0.06	22.220	C
C-B	30.51	2.03	23.023	C

09:00 - 09:15

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	1.30	0.09	8.721	A
B-A	0.51	0.03	15.331	C
C-B	14.39	0.96	13.303	B

Q Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.08	0.00	0.00	0.08	0.08			N/A	N/A
B-A	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-B	0.86	0.55	1.00	1.41	1.46			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.11	0.00	0.00	0.11	0.11			N/A	N/A
B-A	0.05	0.00	0.00	0.05	0.05			N/A	N/A
C-B	1.51	0.08	1.04	3.21	4.46			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.17	0.03	0.26	0.48	0.50			N/A	N/A
B-A	0.14	0.03	0.27	0.48	0.92			N/A	N/A
C-B	4.72	0.06	1.03	13.42	21.49			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.17	0.03	0.26	0.46	0.49			N/A	N/A
B-A	0.15	0.03	0.25	0.45	0.48			N/A	N/A
C-B	5.38	0.04	0.43	14.79	28.43			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.11	0.00	0.00	0.11	0.11			N/A	N/A
B-A	0.06	0.00	0.00	0.06	0.06			N/A	N/A
C-B	1.67	0.04	0.39	4.42	8.13			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.08	0.00	0.00	0.08	0.08			N/A	N/A
B-A	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-B	0.90	0.03	0.30	1.46	4.46			N/A	N/A

Scenario B8, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Q percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Langstone Road	T-Junction	Two-way		15.67	C

Junction Network Options

Driving side	Lighting	Res Cap (%)	First arm reaching threshold
Left	Normal/unknown	-13	Stream B-C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	Scenario B8	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	896	100.000
B		ONE HOUR	✓	453	100.000
C		ONE HOUR	✓	1481	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
From	A	0	20	876
	B	67	0	386
	C	1427	54	0

Vehicle Mix

HV %s

	To			
		A	B	C
From	A	0	0	3
	B	0	0	1
	C	1	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Q (PCU)	Max Q95 (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Qing Delay (PCU-min)	Av. Qing Delay (s)	Rate of Qing Delay (PCU-min/min)	Inclusive Total Qing Delay (PCU-min)	Inclusive Av. Qing Delay (s)
B-C	0.98	109.20	12.4	46.3	F	354	531	405.49	45.79	4.51	405.60	45.80
B-A	0.35	26.70	0.5	2.3	D	61	92	29.04	18.90	0.32	29.05	18.90
C-A						1309	1964					
C-B	0.11	7.57	0.1	0.5	A	50	74	8.63	6.96	0.10	8.63	6.96
A-B						18	28					
A-C						804	1206					

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	291	73	514	0.565	286	0.0	1.3	15.495	C
B-A	50	13	329	0.153	50	0.0	0.2	12.867	B
C-A	1074	269			1074				
C-B	41	10	614	0.066	40	0.0	0.1	6.418	A
A-B	15	4			15				
A-C	659	165			659				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	347	87	483	0.719	343	1.3	2.4	25.065	D
B-A	60	15	278	0.216	60	0.2	0.3	16.452	C
C-A	1283	321			1283				
C-B	49	12	586	0.083	48	0.1	0.1	6.859	A
A-B	18	4			18				
A-C	788	197			788				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	425	106	434	0.979	398	2.4	9.2	71.264	F
B-A	74	18	208	0.354	73	0.3	0.5	26.325	D
C-A	1571	393			1571				
C-B	59	15	546	0.109	59	0.1	0.1	7.566	A
A-B	22	6			22				
A-C	964	241			964				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	425	106	433	0.981	412	9.2	12.4	109.197	F
B-A	74	18	208	0.354	74	0.5	0.5	26.697	D
C-A	1571	393			1571				
C-B	59	15	546	0.109	59	0.1	0.1	7.569	A
A-B	22	6			22				
A-C	964	241			964				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	347	87	482	0.720	385	12.4	2.9	46.692	E
B-A	60	15	278	0.216	61	0.5	0.3	16.664	C
C-A	1283	321			1283				
C-B	49	12	586	0.083	49	0.1	0.1	6.862	A
A-B	18	4			18				
A-C	788	197			788				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	291	73	514	0.565	297	2.9	1.4	17.093	C
B-A	50	13	329	0.153	51	0.3	0.2	12.971	B
C-A	1074	269			1074				
C-B	41	10	614	0.066	41	0.1	0.1	6.425	A
A-B	15	4			15				
A-C	659	165			659				

Qing Delay Results for each time segment

16:45 - 17:00

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	17.18	1.15	15.495	C
B-A	2.53	0.17	12.867	B
C-B	1.05	0.07	6.418	A

17:00 - 17:15

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	31.66	2.11	25.065	D
B-A	3.87	0.26	16.452	C
C-B	1.35	0.09	6.859	A

17:15 - 17:30

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	97.48	6.50	71.264	F
B-A	7.29	0.49	26.325	D
C-B	1.82	0.12	7.566	A

17:30 - 17:45

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	163.52	10.90	109.197	F
B-A	7.97	0.53	26.697	D
C-B	1.86	0.12	7.569	A

17:45 - 18:00

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	73.38	4.89	46.692	E
B-A	4.50	0.30	16.664	C
C-B	1.43	0.10	6.862	A

18:00 - 18:15

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	22.28	1.49	17.093	C
B-A	2.88	0.19	12.971	B
C-B	1.12	0.07	6.425	A

Q Variation Results for each time segment

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.25	0.56	1.16	1.59	1.81			N/A	N/A
B-A	0.18	0.00	0.00	0.18	0.18			N/A	N/A
C-B	0.07	0.00	0.00	0.07	0.07			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	2.35	0.08	1.31	5.63	7.92			N/A	N/A
B-A	0.27	0.00	0.00	0.27	0.27			N/A	N/A
C-B	0.09	0.03	0.26	0.46	0.49			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	9.16	0.25	5.00	22.22	30.11			N/A	N/A
B-A	0.52	0.03	0.26	0.52	0.82			N/A	N/A
C-B	0.12	0.03	0.27	0.48	0.50			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	12.42	0.17	5.44	32.71	46.25			N/A	N/A
B-A	0.54	0.03	0.32	1.07	2.30			N/A	N/A
C-B	0.12	0.03	0.26	0.46	0.49			N/A	N/A

17:45 - 18:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	2.90	0.04	0.40	7.77	14.92			N/A	N/A
B-A	0.28	0.03	0.25	0.45	0.48			N/A	N/A
C-B	0.09	0.00	0.00	0.09	0.09			N/A	N/A

18:00 - 18:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.36	0.03	0.30	1.59	6.35			N/A	N/A
B-A	0.18	0.03	0.25	0.45	0.48			N/A	N/A
C-B	0.07	0.00	0.00	0.07	0.07			N/A	N/A

Scenario B1c/B2 2024, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Q percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Langstone Road	T-Junction	Two-way		9.84	A

Junction Network Options

Driving side	Lighting	Res Cap (%)	First arm reaching threshold
Left	Normal/unknown	-10	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	Scenario B1c/B2 2024	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1530	100.000
B		ONE HOUR	✓	56	100.000
C		ONE HOUR	✓	1297	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	80	1450
	B	11	0	45
	C	967	330	0

Vehicle Mix

HV %s

	To			
	A	B	C	
From	A	0	0	3
	B	0	0	2
	C	5	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Q (PCU)	Max Q95 (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Qng Delay (PCU-min)	Av. Qng Delay (s)	Rate of Qng Delay (PCU-min/min)	Inclusive Total Qng Delay (PCU-min)	Inclusive Av. Qng Delay (s)
B-C	0.15	12.95	0.2	0.5	B	41	62	11.08	10.73	0.12	11.08	10.73
B-A	0.21	77.61	0.2	1.3	F	10	15	9.59	38.00	0.11	9.59	38.00
C-A						887	1331					
C-B	0.92	81.59	7.6	35.6	F	303	454	267.44	35.33	2.97	267.49	35.33
A-B						73	110					
A-C						1331	1996					

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	34	8	446	0.076	34	0.0	0.1	8.883	A
B-A	8	2	231	0.036	8	0.0	0.0	16.176	C
C-A	728	182			728				
C-B	248	62	510	0.487	245	0.0	0.9	13.431	B
A-B	60	15			60				
A-C	1092	273			1092				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	40	10	402	0.101	40	0.1	0.1	10.118	B
B-A	10	2	160	0.062	10	0.0	0.1	23.943	C
C-A	869	217			869				
C-B	297	74	462	0.643	294	0.9	1.7	21.113	C
A-B	72	18			72				
A-C	1304	326			1304				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	50	12	335	0.148	49	0.1	0.2	12.821	B
B-A	12	3	63	0.192	11	0.1	0.2	69.101	F
C-A	1065	266			1065				
C-B	363	91	394	0.922	345	1.7	6.3	59.161	F
A-B	88	22			88				
A-C	1596	399			1596				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	50	12	333	0.149	50	0.2	0.2	12.949	B
B-A	12	3	58	0.208	12	0.2	0.2	77.608	F
C-A	1065	266			1065				
C-B	363	91	394	0.922	358	6.3	7.6	81.594	F
A-B	88	22			88				
A-C	1596	399			1596				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	40	10	402	0.101	41	0.2	0.1	10.164	B
B-A	10	2	153	0.065	11	0.2	0.1	25.413	D
C-A	869	217			869				
C-B	297	74	462	0.643	320	7.6	1.9	28.839	D
A-B	72	18			72				
A-C	1304	326			1304				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	34	8	446	0.076	34	0.1	0.1	8.908	A
B-A	8	2	228	0.036	8	0.1	0.0	16.366	C
C-A	728	182			728				
C-B	248	62	510	0.487	252	1.9	1.0	14.198	B
A-B	60	15			60				
A-C	1092	273			1092				

Qing Delay Results for each time segment

07:45 - 08:00

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	1.20	0.08	8.883	A
B-A	0.52	0.03	16.176	C
C-B	12.87	0.86	13.431	B

08:00 - 08:15

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	1.64	0.11	10.118	B
B-A	0.91	0.06	23.943	C
C-B	23.32	1.55	21.113	C

08:15 - 08:30

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	2.51	0.17	12.821	B
B-A	2.84	0.19	69.101	F
C-B	70.38	4.69	59.161	F

08:30 - 08:45

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	2.63	0.18	12.949	B
B-A	3.53	0.24	77.608	F
C-B	105.45	7.03	81.594	F

08:45 - 09:00

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	1.79	0.12	10.164	B
B-A	1.18	0.08	25.413	D
C-B	39.70	2.65	28.839	D

09:00 - 09:15

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	1.30	0.09	8.908	A
B-A	0.61	0.04	16.366	C
C-B	15.72	1.05	14.198	B

Q Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.08	0.00	0.00	0.08	0.08			N/A	N/A
B-A	0.04	0.00	0.00	0.04	0.04			N/A	N/A
C-B	0.93	0.55	1.00	1.41	1.46			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.11	0.00	0.00	0.11	0.11			N/A	N/A
B-A	0.06	0.00	0.00	0.06	0.06			N/A	N/A
C-B	1.70	0.07	1.05	3.85	5.44			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.17	0.03	0.26	0.48	0.50			N/A	N/A
B-A	0.22	0.03	0.27	0.49	1.27			N/A	N/A
C-B	6.26	0.10	2.01	16.82	24.54			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.18	0.03	0.26	0.46	0.49			N/A	N/A
B-A	0.25	0.03	0.27	0.49	0.87			N/A	N/A
C-B	7.65	0.06	1.41	22.11	35.63			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.12	0.00	0.00	0.12	0.12			N/A	N/A
B-A	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-B	1.93	0.04	0.38	5.00	9.77			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.08	0.00	0.00	0.08	0.08			N/A	N/A
B-A	0.04	0.03	0.25	0.45	0.48			N/A	N/A
C-B	0.98	0.03	0.30	1.06	4.54			N/A	N/A

Scenario B1c/B2 2024, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Q percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Langstone Road	T-Junction	Two-way		21.93	C

Junction Network Options

Driving side	Lighting	Res Cap (%)	First arm reaching threshold
Left	Normal/unknown	-16	Stream B-C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	Scenario B1c/B2 2024	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	935	100.000
B		ONE HOUR	✓	466	100.000
C		ONE HOUR	✓	1543	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
From	A	0	21	914
	B	69	0	397
	C	1488	55	0

Vehicle Mix

HV %s

	To			
		A	B	C
From	A	0	0	3
	B	0	0	1
	C	1	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Q (PCU)	Max Q95 (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Qing Delay (PCU-min)	Av. Qing Delay (s)	Rate of Qing Delay (PCU-min/min)	Inclusive Total Qing Delay (PCU-min)	Inclusive Av. Qing Delay (s)
B-C	1.04	156.22	19.2	53.7	F	364	546	580.72	63.76	6.45	580.86	63.78
B-A	0.39	30.84	0.6	2.9	D	63	95	33.03	20.87	0.37	33.04	20.87
C-A						1365	2048					
C-B	0.11	7.74	0.1	0.5	A	50	76	8.94	7.09	0.10	8.94	7.09
A-B						19	29					
A-C						839	1258					

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	299	75	508	0.589	293	0.0	1.4	16.482	C
B-A	52	13	318	0.163	51	0.0	0.2	13.461	B
C-A	1120	280			1120				
C-B	41	10	608	0.068	41	0.0	0.1	6.499	A
A-B	16	4			16				
A-C	688	172			688				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	357	89	474	0.753	351	1.4	2.7	28.269	D
B-A	62	16	265	0.234	62	0.2	0.3	17.642	C
C-A	1338	334			1338				
C-B	49	12	578	0.086	49	0.1	0.1	6.970	A
A-B	19	5			19				
A-C	822	205			822				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	437	109	422	1.036	398	2.7	12.6	90.828	F
B-A	76	19	192	0.395	75	0.3	0.6	30.236	D
C-A	1638	410			1638				
C-B	61	15	537	0.113	60	0.1	0.1	7.733	A
A-B	23	6			23				
A-C	1006	252			1006				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	437	109	421	1.038	411	12.6	19.2	156.222	F
B-A	76	19	192	0.395	76	0.6	0.6	30.842	D
C-A	1638	410			1638				
C-B	61	15	537	0.113	61	0.1	0.1	7.736	A
A-B	23	6			23				
A-C	1006	252			1006				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	357	89	473	0.754	419	19.2	3.7	83.915	F
B-A	62	16	265	0.234	63	0.6	0.3	17.943	C
C-A	1338	334			1338				
C-B	49	12	578	0.086	50	0.1	0.1	6.976	A
A-B	19	5			19				
A-C	822	205			822				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	299	75	507	0.589	308	3.7	1.5	18.866	C
B-A	52	13	318	0.163	52	0.3	0.2	13.590	B
C-A	1120	280			1120				
C-B	41	10	608	0.068	41	0.1	0.1	6.506	A
A-B	16	4			16				
A-C	688	172			688				

Qing Delay Results for each time segment
16:45 - 17:00

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	18.70	1.25	16.482	C
B-A	2.72	0.18	13.461	B
C-B	1.08	0.07	6.499	A

17:00 - 17:15

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	36.15	2.41	28.269	D
B-A	4.26	0.28	17.642	C
C-B	1.40	0.09	6.970	A

17:15 - 17:30

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	125.69	8.38	90.828	F
B-A	8.50	0.57	30.236	D
C-B	1.89	0.13	7.733	A

17:30 - 17:45

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	240.06	16.00	156.222	F
B-A	9.43	0.63	30.842	D
C-B	1.94	0.13	7.736	A

17:45 - 18:00

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	134.71	8.98	83.915	F
B-A	5.01	0.33	17.943	C
C-B	1.48	0.10	6.976	A

18:00 - 18:15

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	25.41	1.69	18.866	C
B-A	3.12	0.21	13.590	B
C-B	1.15	0.08	6.506	A

Q Variation Results for each time segment

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.37	0.53	1.28	1.84	2.00			N/A	N/A
B-A	0.19	0.00	0.00	0.19	0.19			N/A	N/A
C-B	0.07	0.00	0.00	0.07	0.07			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	2.73	0.08	1.42	6.69	9.49			N/A	N/A
B-A	0.30	0.00	0.00	0.30	0.30			N/A	N/A
C-B	0.09	0.03	0.26	0.46	0.49			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	12.61	1.09	9.02	26.87	34.24			N/A	N/A
B-A	0.62	0.03	0.27	0.62	1.32			N/A	N/A
C-B	0.13	0.03	0.27	0.48	0.50			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	19.19	1.46	13.66	41.90	53.73			N/A	N/A
B-A	0.63	0.03	0.32	1.37	2.87			N/A	N/A
C-B	0.13	0.03	0.26	0.46	0.49			N/A	N/A

17:45 - 18:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	3.73	0.04	0.43	10.35	19.06			N/A	N/A
B-A	0.31	0.03	0.27	0.48	0.64			N/A	N/A
C-B	0.10	0.00	0.00	0.10	0.10			N/A	N/A

18:00 - 18:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.51	0.03	0.29	1.51	6.59			N/A	N/A
B-A	0.20	0.03	0.25	0.45	0.48			N/A	N/A
C-B	0.08	0.00	0.00	0.08	0.08			N/A	N/A

Scenario B8 2024, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Q percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Langstone Road	T-Junction	Two-way		8.59	A

Junction Network Options

Driving side	Lighting	Res Cap (%)	First arm reaching threshold
Left	Normal/unknown	-9	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	Scenario B8 2024	AM	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1528	100.000
B		ONE HOUR	✓	56	100.000
C		ONE HOUR	✓	1290	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	78	1450
	B	10	0	46
	C	967	323	0

Vehicle Mix

HV %s

	To			
	A	B	C	
From	A	0	0	3
	B	0	0	2
	C	5	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Q (PCU)	Max Q95 (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Qng Delay (PCU-min)	Av. Qng Delay (s)	Rate of Qng Delay (PCU-min/min)	Inclusive Total Qng Delay (PCU-min)	Inclusive Av. Qng Delay (s)
B-C	0.15	12.87	0.2	0.5	B	42	63	11.30	10.71	0.13	11.30	10.71
B-A	0.18	71.52	0.2	1.2	F	9	14	8.32	36.25	0.09	8.32	36.25
C-A						887	1331					
C-B	0.90	72.40	6.6	32.6	F	296	445	241.35	32.57	2.68	241.40	32.58
A-B						72	107					
A-C						1331	1996					

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	9	446	0.078	34	0.0	0.1	8.889	A
B-A	8	2	232	0.032	7	0.0	0.0	16.016	C
C-A	728	182			728				
C-B	243	61	511	0.476	240	0.0	0.9	13.171	B
A-B	59	15			59				
A-C	1092	273			1092				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	41	10	403	0.103	41	0.1	0.1	10.121	B
B-A	9	2	162	0.056	9	0.0	0.1	23.518	C
C-A	869	217			869				
C-B	290	73	462	0.628	287	0.9	1.6	20.371	C
A-B	70	18			70				
A-C	1304	326			1304				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	51	13	337	0.150	50	0.1	0.2	12.768	B
B-A	11	3	65	0.168	10	0.1	0.2	65.067	F
C-A	1065	266			1065				
C-B	356	89	395	0.901	340	1.6	5.6	54.649	F
A-B	86	21			86				
A-C	1596	399			1596				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	51	13	335	0.151	51	0.2	0.2	12.869	B
B-A	11	3	61	0.180	11	0.2	0.2	71.516	F
C-A	1065	266			1065				
C-B	356	89	395	0.901	351	5.6	6.6	72.405	F
A-B	86	21			86				
A-C	1596	399			1596				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	41	10	403	0.103	42	0.2	0.1	10.160	B
B-A	9	2	156	0.058	10	0.2	0.1	24.710	C
C-A	869	217			869				
C-B	290	73	462	0.628	310	6.6	1.8	26.266	D
A-B	70	18			70				
A-C	1304	326			1304				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	9	446	0.078	35	0.1	0.1	8.913	A
B-A	8	2	230	0.033	8	0.1	0.0	16.189	C
C-A	728	182			728				
C-B	243	61	511	0.476	247	1.8	0.9	13.859	B
A-B	59	15			59				
A-C	1092	273			1092				

Qing Delay Results for each time segment

07:45 - 08:00

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	1.22	0.08	8.889	A
B-A	0.47	0.03	16.016	C
C-B	12.37	0.82	13.171	B

08:00 - 08:15

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	1.68	0.11	10.121	B
B-A	0.81	0.05	23.518	C
C-B	22.12	1.47	20.371	C

08:15 - 08:30

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	2.56	0.17	12.768	B
B-A	2.45	0.16	65.067	F
C-B	64.18	4.28	54.649	F

08:30 - 08:45

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	2.68	0.18	12.869	B
B-A	3.00	0.20	71.516	F
C-B	92.52	6.17	72.405	F

08:45 - 09:00

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	1.83	0.12	10.160	B
B-A	1.04	0.07	24.710	C
C-B	35.17	2.34	26.266	D

09:00 - 09:15

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	1.33	0.09	8.913	A
B-A	0.54	0.04	16.189	C
C-B	15.00	1.00	13.859	B

Q Variation Results for each time segment

07:45 - 08:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.08	0.00	0.00	0.08	0.08			N/A	N/A
B-A	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-B	0.89	0.55	1.00	1.41	1.46			N/A	N/A

08:00 - 08:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.11	0.00	0.00	0.11	0.11			N/A	N/A
B-A	0.06	0.00	0.00	0.06	0.06			N/A	N/A
C-B	1.61	0.07	1.04	3.58	4.95			N/A	N/A

08:15 - 08:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.18	0.03	0.26	0.48	0.50			N/A	N/A
B-A	0.19	0.03	0.27	0.49	1.15			N/A	N/A
C-B	5.58	0.08	1.34	15.42	23.23			N/A	N/A

08:30 - 08:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.18	0.03	0.26	0.46	0.49			N/A	N/A
B-A	0.21	0.03	0.26	0.46	0.49			N/A	N/A
C-B	6.62	0.05	0.75	19.10	32.62			N/A	N/A

08:45 - 09:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.12	0.00	0.00	0.12	0.12			N/A	N/A
B-A	0.06	0.00	0.00	0.06	0.06			N/A	N/A
C-B	1.81	0.04	0.38	4.71	8.97			N/A	N/A

09:00 - 09:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	0.09	0.00	0.00	0.09	0.09			N/A	N/A
B-A	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-B	0.94	0.03	0.30	1.20	4.47			N/A	N/A

Scenario B8 2024, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Q percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Langstone Road	T-Junction	Two-way		17.81	C

Junction Network Options

Driving side	Lighting	Res Cap (%)	First arm reaching threshold
Left	Normal/unknown	-14	Stream B-C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	Scenario B8 2024	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	934	100.000
B		ONE HOUR	✓	453	100.000
C		ONE HOUR	✓	1542	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
From	A	0	20	914
	B	67	0	386
	C	1488	54	0

Vehicle Mix

HV %s

	To			
		A	B	C
From	A	0	0	3
	B	0	0	1
	C	1	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Q (PCU)	Max Q95 (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Qng Delay (PCU-min)	Av. Qng Delay (s)	Rate of Qng Delay (PCU-min/min)	Inclusive Total Qng Delay (PCU-min)	Inclusive Av. Qng Delay (s)
B-C	1.01	128.82	15.0	49.0	F	354	531	466.74	52.71	5.19	466.85	52.72
B-A	0.38	30.18	0.6	2.7	D	61	92	31.61	20.57	0.35	31.62	20.57
C-A						1365	2048					
C-B	0.11	7.71	0.1	0.5	A	50	74	8.76	7.07	0.10	8.76	7.07
A-B						18	28					
A-C						839	1258					

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	291	73	509	0.571	285	0.0	1.3	15.879	C
B-A	50	13	318	0.159	50	0.0	0.2	13.375	B
C-A	1120	280			1120				
C-B	41	10	608	0.067	40	0.0	0.1	6.489	A
A-B	15	4			15				
A-C	688	172			688				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	347	87	475	0.730	342	1.3	2.5	26.305	D
B-A	60	15	266	0.227	60	0.2	0.3	17.466	C
C-A	1338	334			1338				
C-B	49	12	578	0.084	48	0.1	0.1	6.955	A
A-B	18	4			18				
A-C	822	205			822				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	425	106	423	1.004	393	2.5	10.5	79.683	F
B-A	74	18	193	0.383	73	0.3	0.6	29.631	D
C-A	1638	410			1638				
C-B	59	15	537	0.111	59	0.1	0.1	7.711	A
A-B	22	6			22				
A-C	1006	252			1006				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	425	106	423	1.006	407	10.5	15.0	128.820	F
B-A	74	18	193	0.383	74	0.6	0.6	30.183	D
C-A	1638	410			1638				
C-B	59	15	537	0.111	59	0.1	0.1	7.714	A
A-B	22	6			22				
A-C	1006	252			1006				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	347	87	474	0.732	394	15.0	3.1	58.828	F
B-A	60	15	265	0.227	61	0.6	0.3	17.744	C
C-A	1338	334			1338				
C-B	49	12	578	0.084	49	0.1	0.1	6.962	A
A-B	18	4			18				
A-C	822	205			822				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	291	73	508	0.572	298	3.1	1.4	17.713	C
B-A	50	13	318	0.159	51	0.3	0.2	13.498	B
C-A	1120	280			1120				
C-B	41	10	608	0.067	41	0.1	0.1	6.496	A
A-B	15	4			15				
A-C	688	172			688				

Qing Delay Results for each time segment
16:45 - 17:00

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	17.57	1.17	15.879	C
B-A	2.63	0.18	13.375	B
C-B	1.06	0.07	6.489	A

17:00 - 17:15

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	33.03	2.20	26.305	D
B-A	4.10	0.27	17.466	C
C-B	1.37	0.09	6.955	A

17:15 - 17:30

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	108.11	7.21	79.683	F
B-A	8.11	0.54	29.631	D
C-B	1.85	0.12	7.711	A

17:30 - 17:45

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	192.52	12.83	128.820	F
B-A	8.97	0.60	30.183	D
C-B	1.90	0.13	7.714	A

17:45 - 18:00

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	92.38	6.16	58.828	F
B-A	4.81	0.32	17.744	C
C-B	1.45	0.10	6.962	A

18:00 - 18:15

Stream	Qing total delay (PCU-min)	Qing rate of delay (PCU-min/min)	Av. delay per arriving vehicle (s)	Unsignalised level of service
B-C	23.13	1.54	17.713	C
B-A	3.00	0.20	13.498	B
C-B	1.13	0.08	6.496	A

Q Variation Results for each time segment

16:45 - 17:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.29	0.55	1.20	1.69	1.87			N/A	N/A
B-A	0.19	0.00	0.00	0.19	0.19			N/A	N/A
C-B	0.07	0.00	0.00	0.07	0.07			N/A	N/A

17:00 - 17:15

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	2.47	0.08	1.33	5.95	8.46			N/A	N/A
B-A	0.29	0.00	0.00	0.29	0.29			N/A	N/A
C-B	0.09	0.03	0.26	0.46	0.49			N/A	N/A

17:15 - 17:30

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	10.47	0.46	6.60	23.98	31.56			N/A	N/A
B-A	0.59	0.03	0.27	0.59	1.21			N/A	N/A
C-B	0.13	0.03	0.27	0.48	0.50			N/A	N/A

17:30 - 17:45

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	14.97	0.38	8.63	36.38	49.03			N/A	N/A
B-A	0.60	0.03	0.32	1.29	2.70			N/A	N/A
C-B	0.13	0.03	0.26	0.46	0.49			N/A	N/A

17:45 - 18:00

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	3.14	0.04	0.40	8.48	16.19			N/A	N/A
B-A	0.30	0.03	0.26	0.46	0.49			N/A	N/A
C-B	0.09	0.00	0.00	0.09	0.09			N/A	N/A

18:00 - 18:15

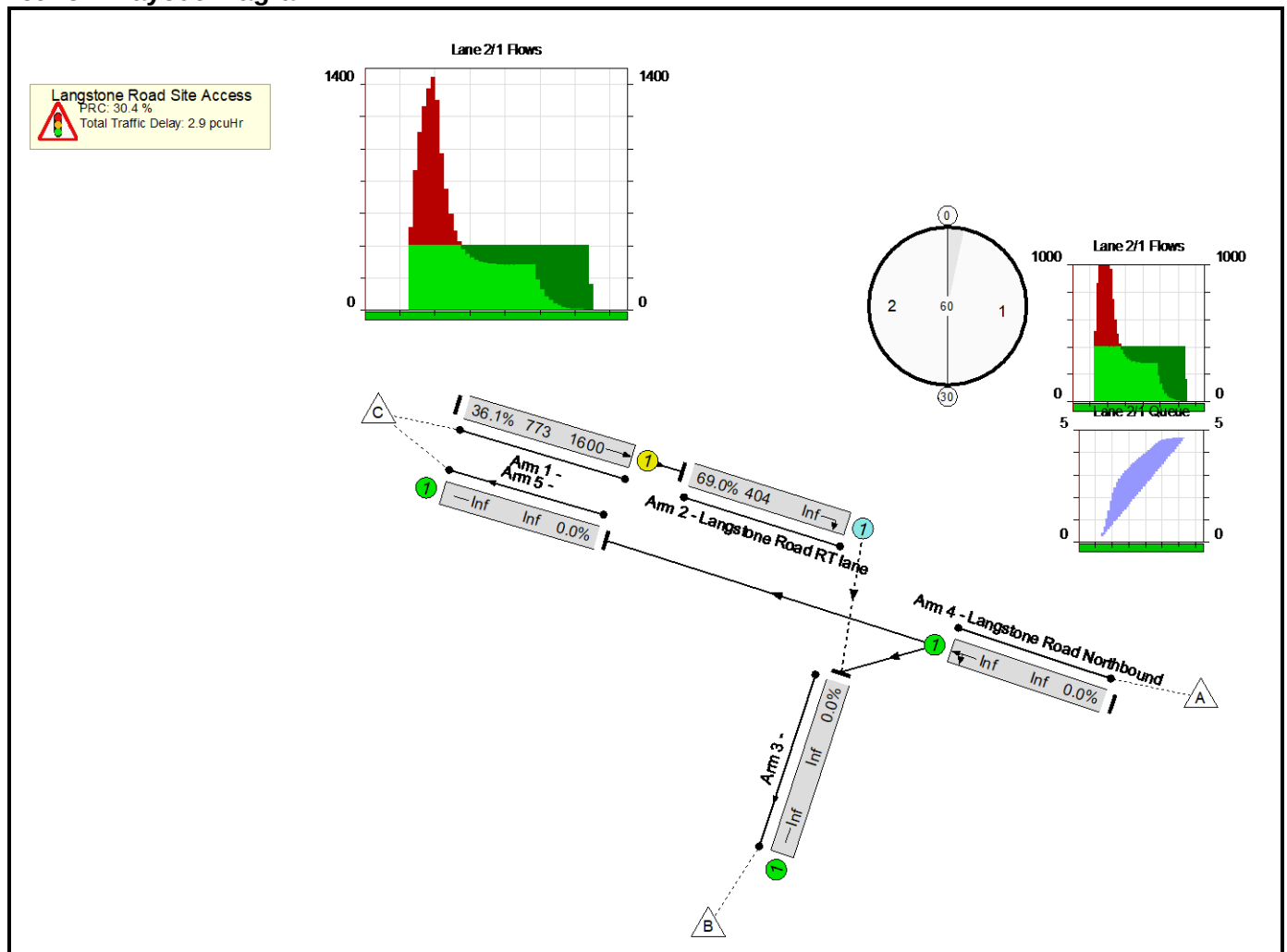
Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-C	1.40	0.03	0.30	1.40	6.31			N/A	N/A
B-A	0.19	0.03	0.25	0.45	0.48			N/A	N/A
C-B	0.07	0.00	0.00	0.07	0.07			N/A	N/A

Basic Results Summary
Basic Results Summary

User and Project Details

Project:	Langstone Technology Park
Title:	Langstone Road Site Access
Location:	
Client:	Trinity Investment Management
Additional detail:	
File name:	Right Turn appraisal RevB.lsg3x
Author:	RM
Company:	David Tucker Associates
Address:	Henley in Arden

Scenario 1: '2019 AM Survey' (FG1: 'AM Existing 70%', Plan 1: 'Network Control Plan 1')
Network Layout Diagram



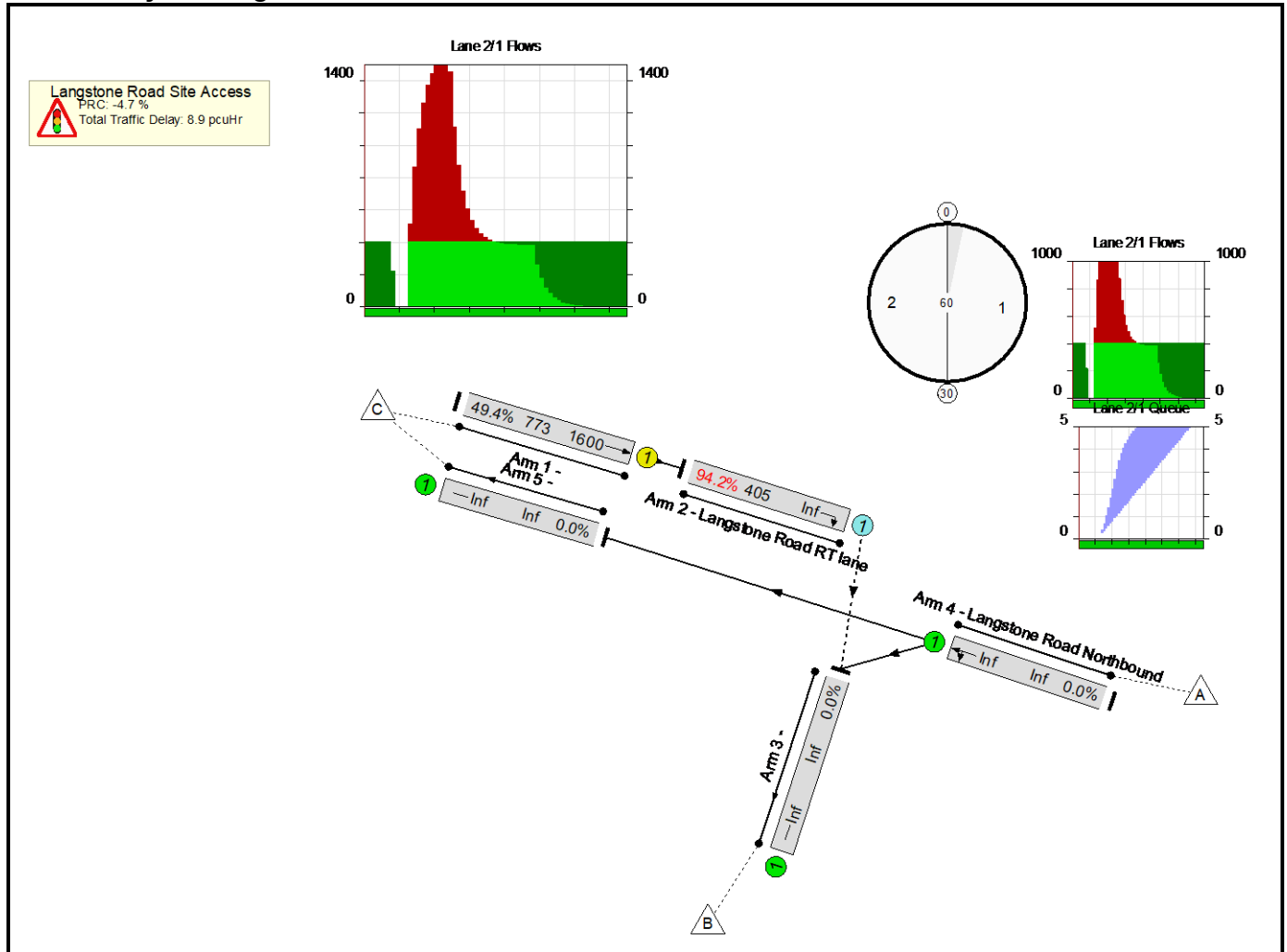
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Langstone Road Site Access	-	-	-		-	-	-	-	-	-	69.0%	279	0	0	2.9	-	-
Langstone Road Site Access	-	-	-		-	-	-	-	-	-	69.0%	279	0	0	2.9	-	-
1/1	Ahead	U	A		1	28	-	279	1600	773	36.1%	-	-	-	1.0	13.3	3.1
2/1	Langstone Road RT lane Right	O	-		-	-	-	279	Inf	404	69.0%	279	0	0	1.9	24.0	5.7
C1 PRC for Signalled Lanes (%): 149.5 Total Delay for Signalled Lanes (pcuHr): 1.03 Cycle Time (s): 60 PRC Over All Lanes (%): 30.4 Total Delay Over All Lanes(pcuHr): 2.90																	

Basic Results Summary

Scenario 2: '2019 AM 100% Occ' (FG2: 'AM Existing 100%', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



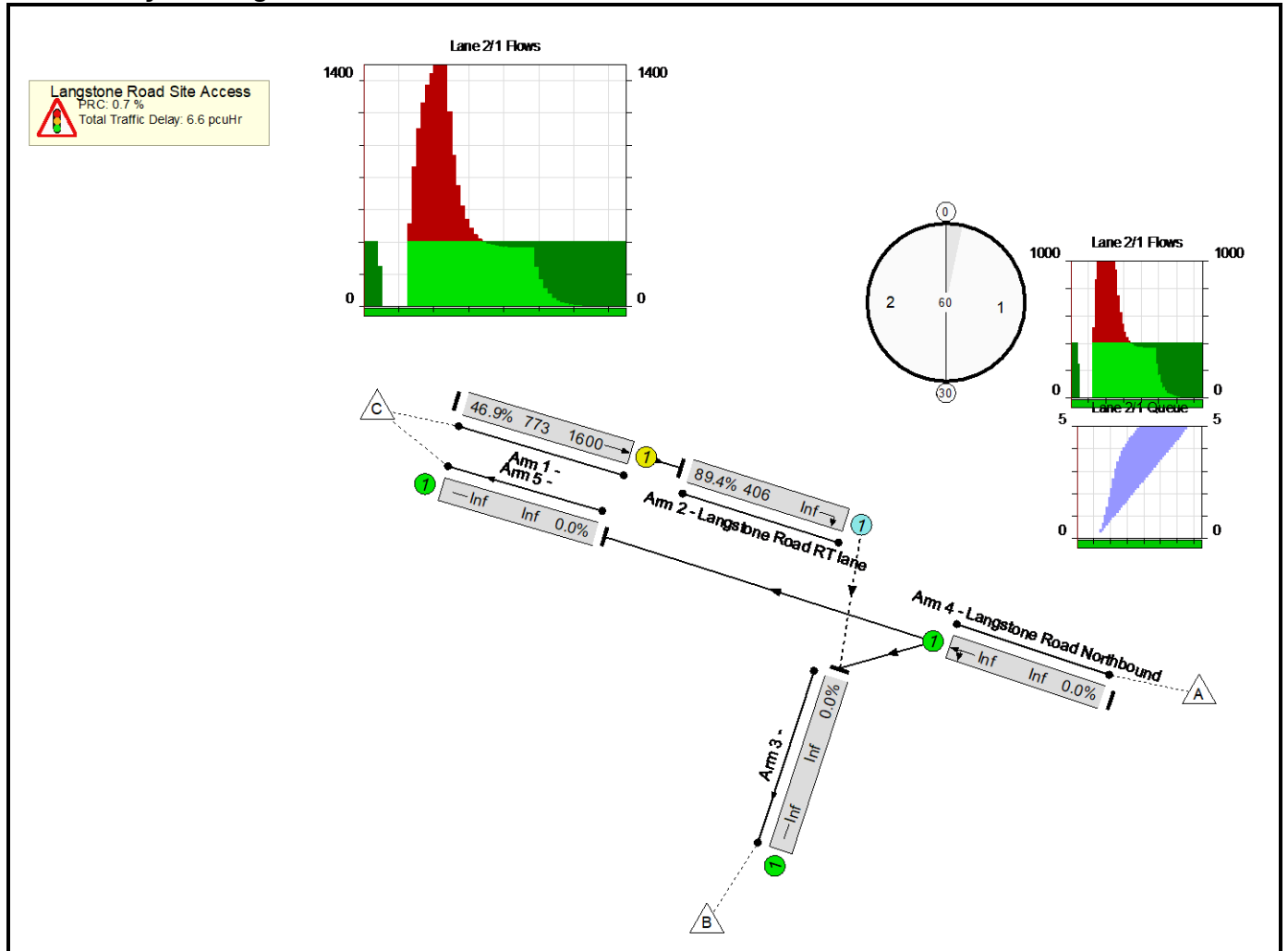
Network Results

[illegible]

Basic Results Summary

Scenario 3: '2019 AM B1C/B2' (FG3: 'AM B1C', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



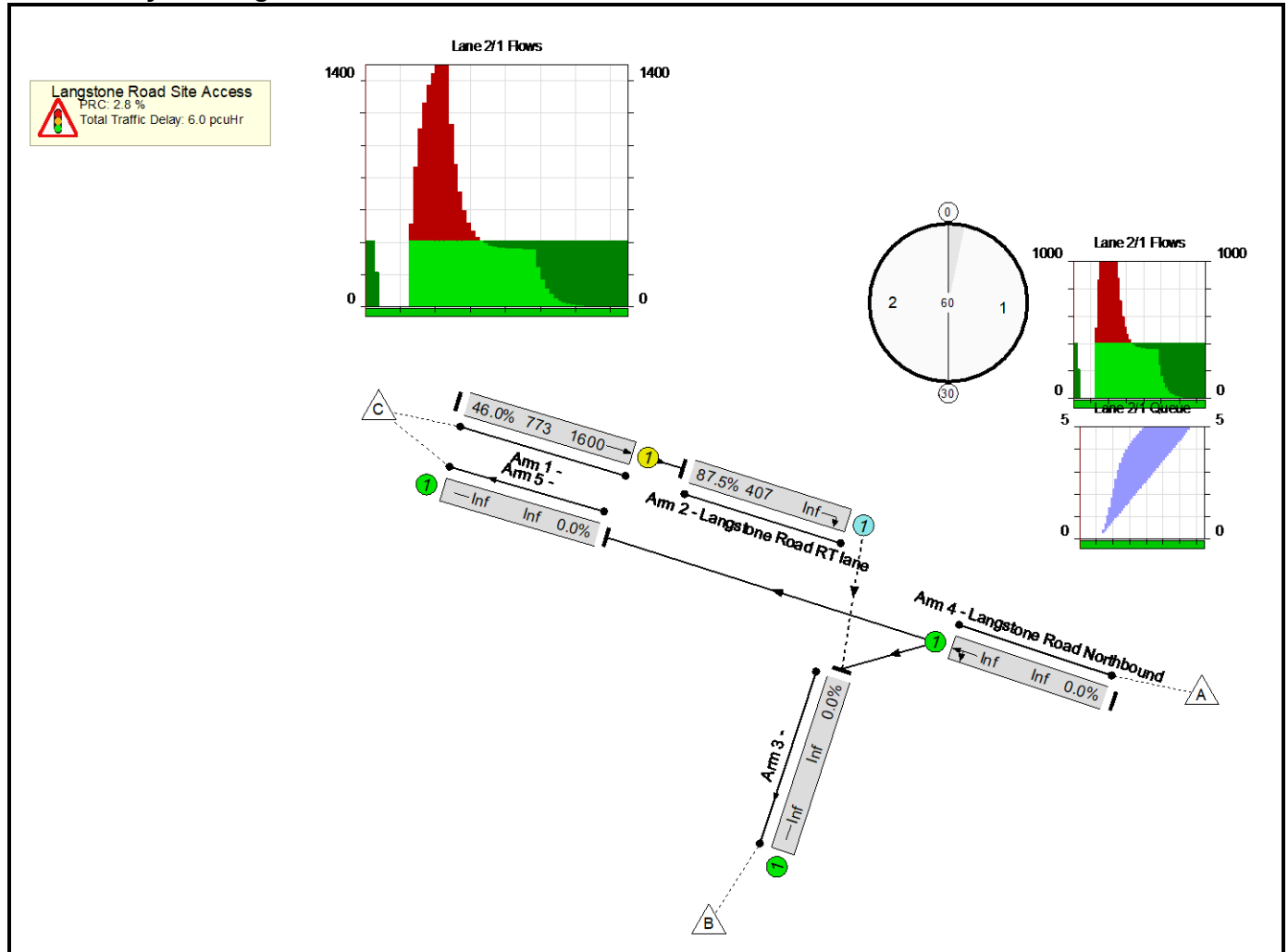
Network Results

[illegible]

Basic Results Summary

Scenario 4: '2019 AM B8' (FG4: 'AM B8', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Network Results

[illegible]

Network Layout Diagram

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Langstone Road Site Access	-	-	-		-	-	-	-	-	-	92.8%	363	0	0	7.9	-	-
Langstone Road Site Access	-	-	-		-	-	-	-	-	-	92.8%	363	0	0	7.9	-	-
1/1	Ahead	U	A		1	28	-	363	1600	773	46.9%	-	-	-	1.5	14.7	4.5
2/1	Langstone Road RT lane Right	O	-		-	-	-	363	Inf	391	92.8%	363	0	0	6.4	63.9	10.8
C1 PRC for Signalled Lanes (%): 91.7 Total Delay for Signalled Lanes (pcuHr): 1.49 Cycle Time (s): 60 PRC Over All Lanes (%): -3.1 Total Delay Over All Lanes(pcuHr): 7.93																	

Network Layout Diagram

Network Results

[illegible]

Network Layout Diagram

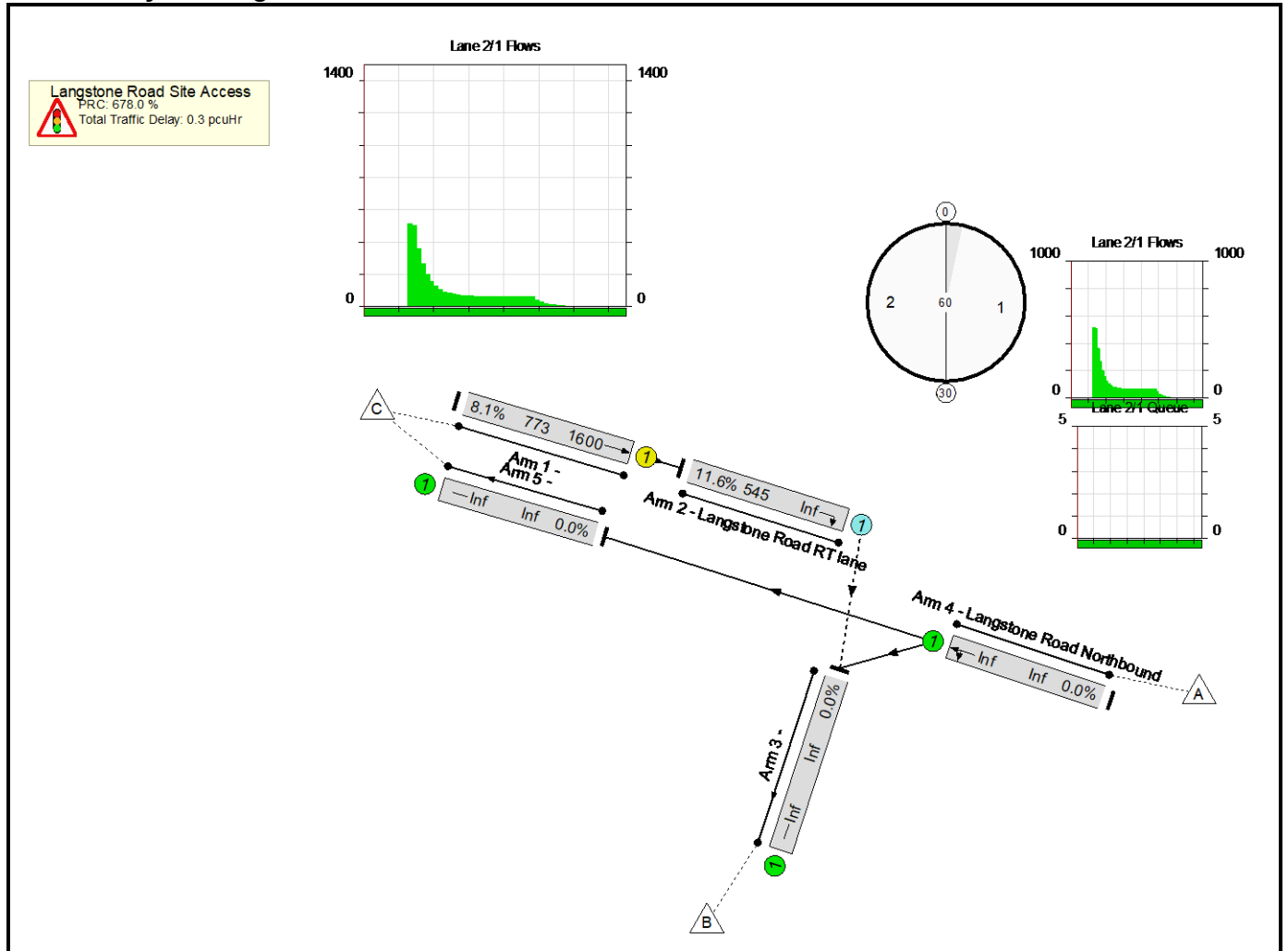
Network Results

[illegible]

Basic Results Summary

Scenario 8: '2019 PM 100% Occ' (FG8: 'PM Existing @100%', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Network Results

[illegible]

Network Layout Diagram

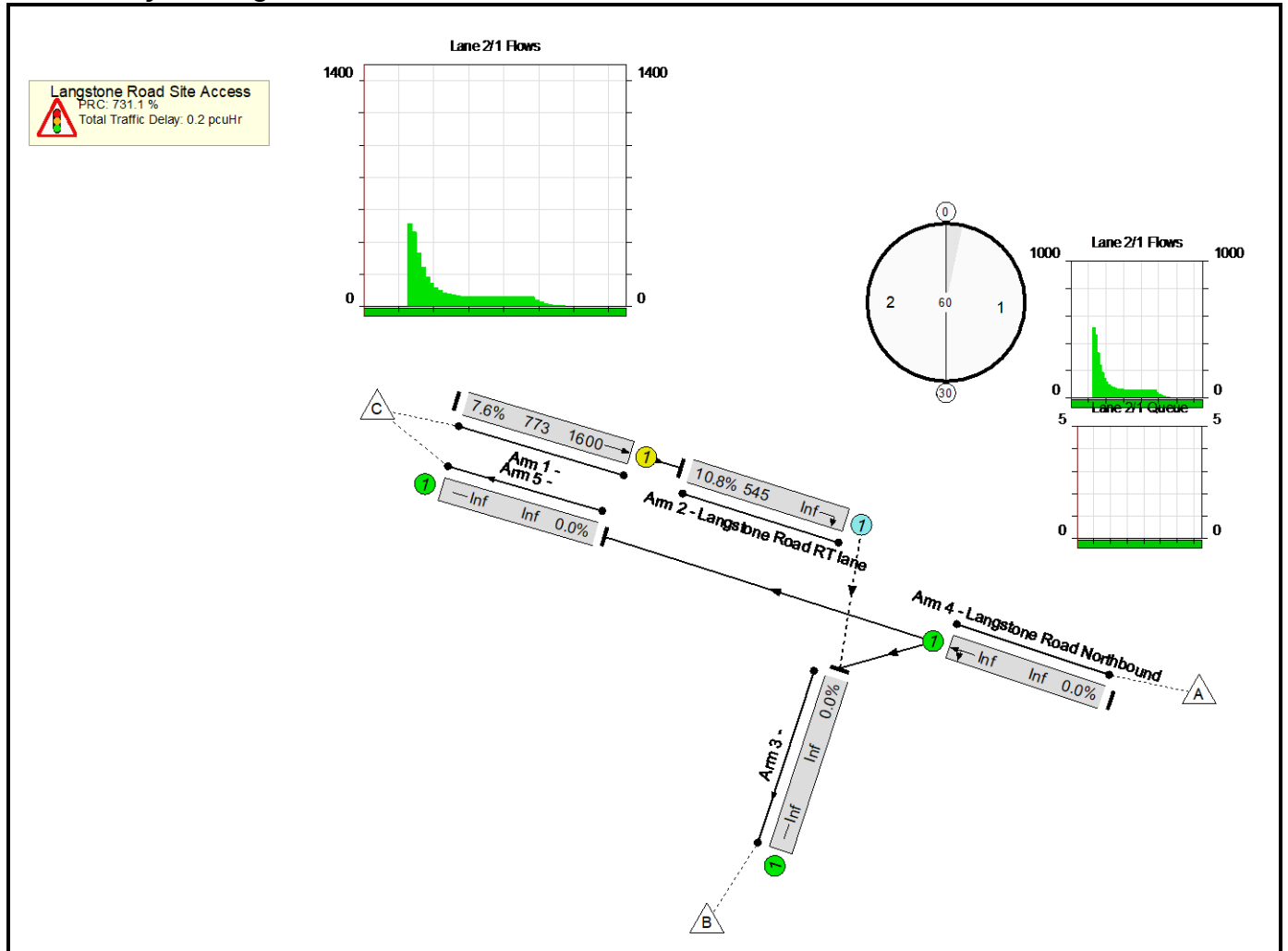
Network Results

[illegible]

Basic Results Summary

Scenario 10: '2019 PM B8' (FG10: 'PM B8', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



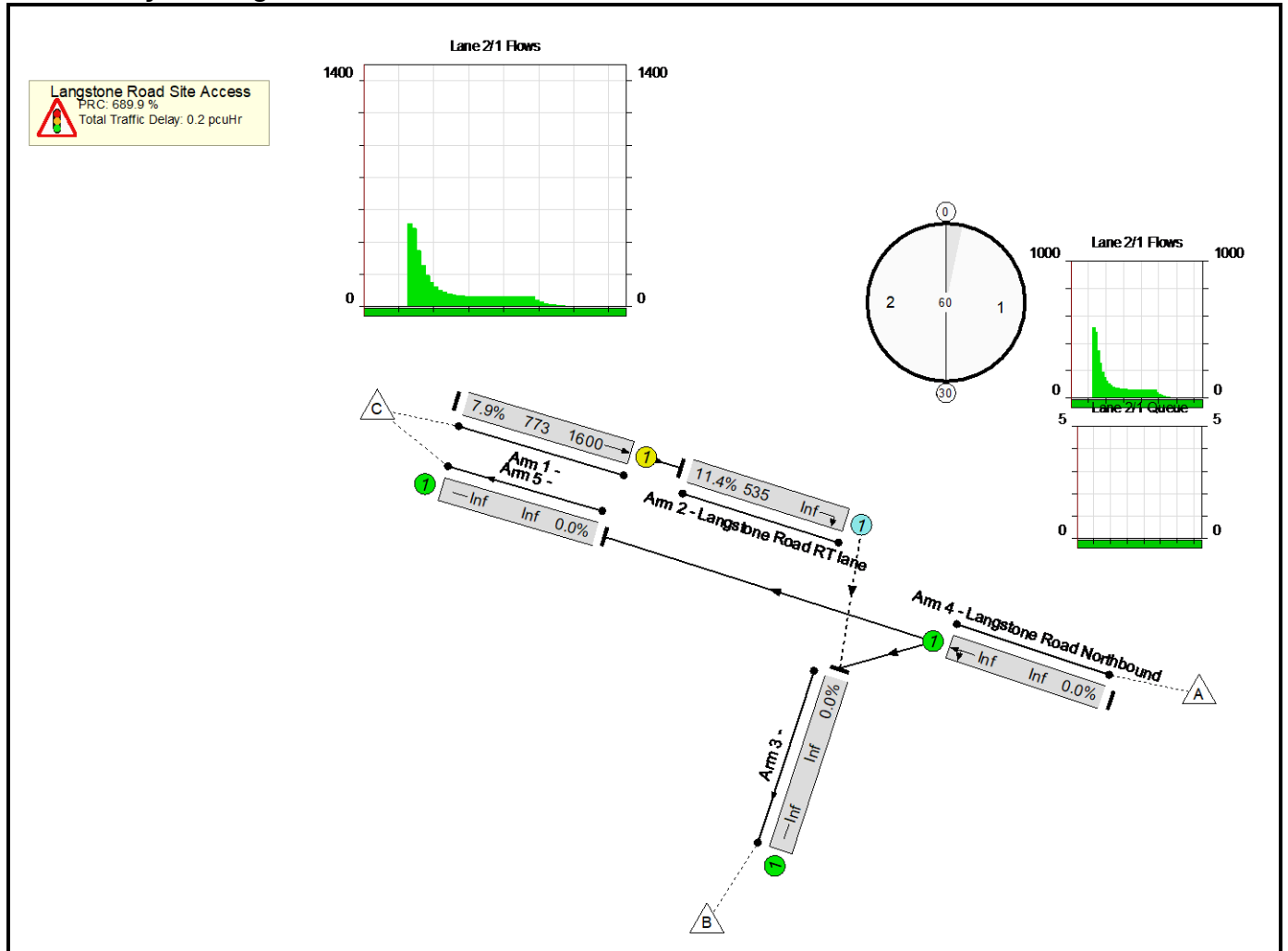
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Langstone Road Site Access	-	-	-		-	-	-	-	-	-	10.8%	59	0	0	0.2	-	-
Langstone Road Site Access	-	-	-		-	-	-	-	-	-	10.8%	59	0	0	0.2	-	-
1/1	Ahead	U	A		1	28	-	59	1600	773	7.6%	-	-	-	0.2	10.9	0.6
2/1	Langstone Road RT lane Right	O	-		-	-	-	59	Inf	545	10.8%	59	0	0	0.1	3.7	0.1
C1 PRC for Signalled Lanes (%): 1079.7 PRC Over All Lanes (%): 731.1 Total Delay for Signalled Lanes (pcuHr): 0.18 Total Delay Over All Lanes(pcuHr): 0.24 Cycle Time (s): 60																	

Basic Results Summary

Scenario 11: '2024 PM B1C' (FG11: '2024 PM B1C', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Network Results

[illegible]

Network Layout Diagram

Network Results

[illegible]



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