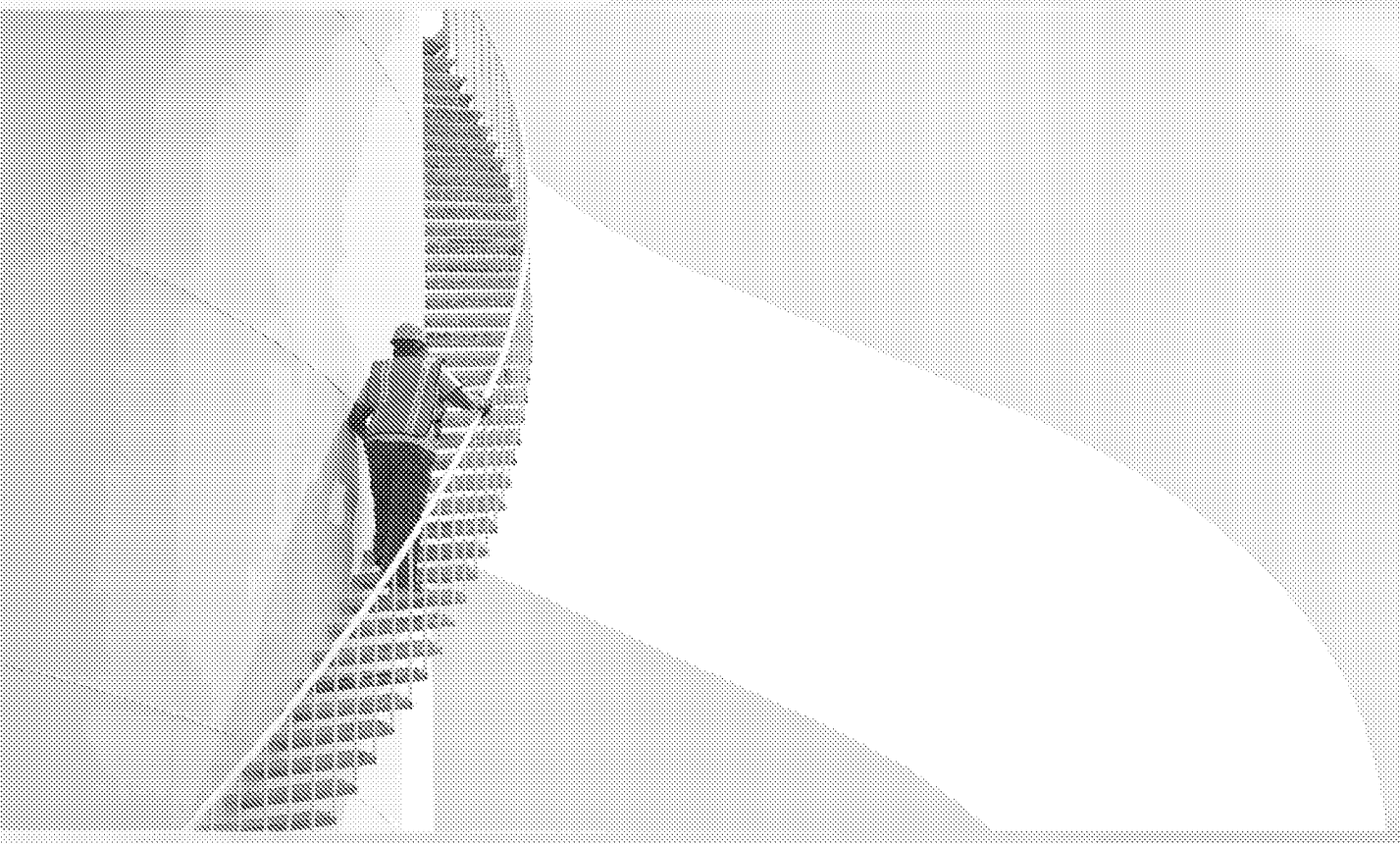
Cala Homes

Land at Westergate

Transport Assessment Addendum



ARUN DISTRICT COUNCIL AL/11/24/OUT

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1. Introduction

1.1. Preamble

1.1.1. Comments have been provided by West Sussex County Council (WSCC), National Rail and National Highways regarding the Transport Assessment which was submitted in support of the planning application for development at the Land East of Westergate (AL/11/24/OUT).

1.1.2. This Transport Assessment Addendum (TAA) provides the applicant's responses to the comments provided by the above authorities.

1.1.3. A summary of the comments provided by each authority can be found in Section 1.3, with further information provided where appropriate in Section 2 through Section 4.

1.2. Report Structure

1.2.1. The remainder of this TAA Is set out as follows:

- **Section 2**: Provides updated 2028 interim scenario assessments for the A29 / Barnham Road roundabout and A29 / Nyton Road priority junction;
- **Section 3**: Includes responses to WSCC on the design of the proposed site access junction and additional junction capacity modelling to include the Woodgate level crossing; and
- **Section 4**: Responds to comments made by National Highways.

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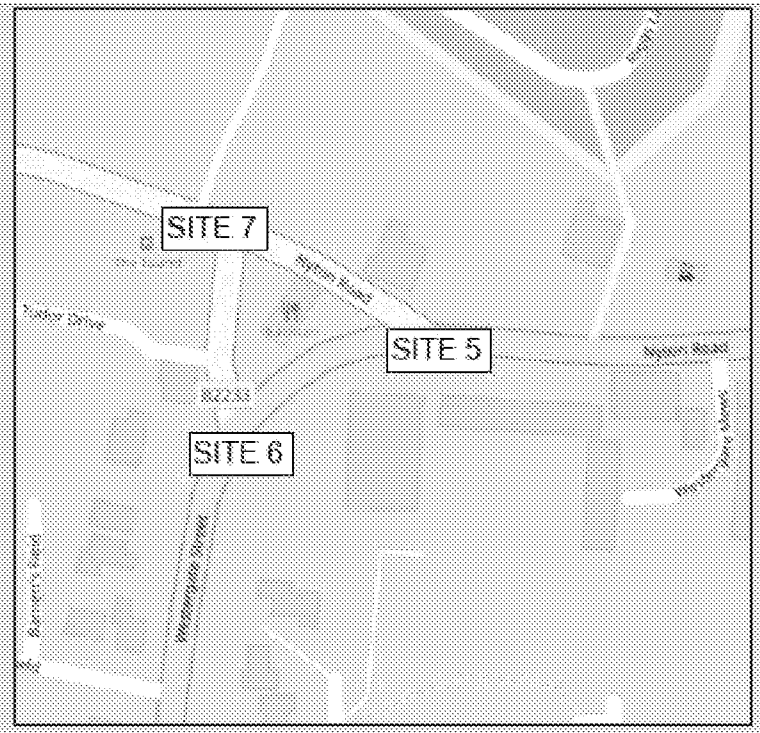
1.3. Summary of Comments Received

1.3.1. Table 1-1 provides a summary of comments received by WSCC, National Rail and National Highways on the transport material submitted in support of the planning application.

Table 1-1 – Log of Comments

Ref	Source	Topic	Highway Authority Comment / Task	Response
1	WSCC	Junction Capacity Assessments / Modelling Scenarios	Clarification from the applicant about the junction locations modelled (baseline and future scenarios).	This was discussed at a meeting held with WSCC on 23rd May 2024 where it was noted that the TA contained errors in relation to junction and table headings within Section 3.13 (baseline junction capacity assessments) and Section 7.3 to 7.6 (forecast year junction capacity assessments. To clarify, within all junction capacity assessments sites 5-8 are as follows: Site 5: A29 / Nyton Road eastern junction; Site 6: A29 / Nyton Road southern junction; Site 7: B2233 Nyton Road / Nyton Road northern junction; and Site 8: A29 / A259 / Felpham Relief Road roundabout The numbering of junction capacity assessments orf the A29 / Nyton Road junction has also been included below for reference.

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2	WSCC	Junction Capacity Assessments / Modelling Scenarios	Under 'Assessment Scenarios', the Highway Authority has observed that the Barratt-David Wilson site (circa 600 homes) does not appear to have been included in the 2038 'Do Something' assessment (this would bring the overall BEW scheme to 4,250). Additionally, Parcel SC1 (BN/11/22) is referred to	It was clarified within the meeting with WSCC held on 23rd May 2024 that the Do-Something scenario modelled in the original TA contains all relevant sites. In respect to the number of dwellings assessed for the wider BEW allocation, the model contained the following in the Do Something Scenario: ▪ 45 and 30 dwellings at Landacres and Boweries Site; ▪ 510 dwellings at the Barratt Homes Site; and ▪ 165 dwellings at the Pye Homes site. These wider site allocation assumptions are the same as was included in the modelling undertaken in support of planning application BN/11/22/OUT for their 2031 future year assessments and with the response provided by Pell Frischmann

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			as having 1,200 homes, whereas 1,250 homes are being promoted as part of that planning application (adding the additional 50 AND the BDW site would bring the overall BEW figure to 4,300). Applicant to reply to this and, where necessary, adjust modelling accordingly.	in their response provided to West Sussex County Council Consultation dated 23rd June 2022 as part of planning application BN/11/22/OUT. BN/11/22/OUT however considered 350 dwellings on the Land at Westergate (Cala Homes) site. To inform the junction capacity assessments contained within the TA and this TAA, the trip generation was subtracted from CATM modelling outputs from the BN/11/22/OUT planning application and replaced with trip generation associated with 400 units (using trip generation described in Section 6.2 of the TA). This therefore aligns with the proposals for the planning application. Whilst it is accepted that this includes an assessment of 1,200 dwellings on Parcel SC1 rather than 1,250 which have been applied for, the assessment of an additional 50 units is would have a negligible impact on the overall transport network and would not alter the conclusions of the TA or TAA.
3	WSCC	Junction Capacity Assessments / Modelling Scenarios	Under modelling scenarios, for A27/A29 Western Roundabout, the applicant states that for modelling purposes, the scheme has been used within all junction capacity assessments in the TA for the A27/Arundel Road/ A29 Fontwell Avenue roundabout, with and without the improvements? Why is this?	This is a text error within the TA (paragraph 7.2.7) which was clarified within a meeting with WSCC. For clarity, junction capacity modelling has been completed for the A27 / A29 Eastern Roundabout without the identified Local Plan mitigation scheme to demonstrate that the Cala development can come forward prior to completion of these works. The A27 / A29 Western Roundabout (A27/Arundel Road/ A29 Fontwell Avenue) has been assessed using the traffic signal scheme which was implemented at this junction in summer 2023. This does not impact upon transport modelling reported in the originally submitted TA and this matter is now resolved.
4	WSCC	Junction Capacity Assessments / Modelling Scenarios	For A29/A259 Felpham/Bognor Regis Relief Road Roundabout, the applicant has stated that because the scheme is yet to be implemented, junction capacity assessments for the A29/A259 junction have been completed using the	The TA included an assessment of the existing A29 / A259 roundabout to demonstrate how much development could come forward without implementation of the Local Plan mitigation scheme. This showed that the existing roundabout could accommodate traffic associated with the proposed Cala development and Parcel SC1 in the forecast year of 2031 This was completed to show how many dwellings could be constructed without the committed improvement scheme being in place. This item was resolved in a meeting with WSCC.

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			improvement scheme only where the junction is forecast to operate close to capacity or over capacity. Why is this?	
5	WSCC	Junction Capacity Assessments / Modelling Scenarios	For Site 3: A29 - Barnham Road under 'Scenario 3' of the future scenario modelling. Do the results assume Phase 1 of the new A29 is constructed and open to traffic?	Scenarios 1-4 assessed within the TA assume that Phase 1 of the new A29 (north of Barnham Road) is open to traffic. The interim scenario, included in Section 7.7 of the TA, provided an assessment of the A29 / Barnham Road (war memorial) roundabout and A29 / Nyton Road priority junction in 2026 and 2028 without Phase 1of the A29 being open to traffic. Following the meeting with WSCC on the 23rd May 2024, it was agreed that a revised interim assessment was to be completed of these junctions as provided in Section 2 of this TAA. This revised interim scenario has demonstrated that up to 300 units could be delivered on the Cala Homes site prior to completion of Phase 1 of the new A29. Full junction capacity outputs for this interim scenario are included in Appendix A of this TAA.
6	WSCC	Junction Capacity Assessments / Modelling Scenarios	For Site 5: Westergate Street-Nyton Road (East Junction) under 'Scenario 3'. Do the results assume that Phase 1 of the new A29 is constructed and open to traffic?	
7	WSCC	Junction Capacity Assessments / Modelling Scenarios	Does the mentioned interim scenario in the summary of Scenario 3 include Phase 1 of the new A29 being open to traffic. Applicant to respond.	
8	WSCC	Junction Capacity Assessments / Modelling Scenarios	Under 'Scenario 4' Junction Assessment Summary, applicant to confirm how many dwellings have been included in the modelling.	Please refer to the response provided to WSCC comment 2, which details the number of units assessed within the junction capacity assessments
9	WSCC	Masterplan	*Applicant to provide details of timing and delivery of bridge on E-W Link.*	A Collaboration Agreement in place between Cala Homes and other land owners associated with the Barnham Eastergate Westergate strategic site stating that the section of East West Link Road between Westergate Street and the eastern site boundary (including bridge onto the adjacent land to the east) will be constructed

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				within two years of the commencement of development. The Collaboration Agreement also limits Cala Homes to a maximum build-out rate of 50 dwellings per year, meaning the bridge will be constructed by the time the 100th dwelling is complete. The East-West Link Road bridge will operate as a bus, pedestrian and cycle only bridge until the full A29 realignment is constructed and open to traffic.
10	WSCC	Modelling Scenarios and Junction Modelling	Applicant to state whether additional residential development off Meadow Close for 89 units has been factored into the junction capacity and traffic signals assessments. If not, modelling will need to be updated.	This was not included in the TA as what not requested through scoping discussions and refused prior to submission of the Cala planning application. It is now understood however that the site has received planning permission through appeal. Updated junction capacity assessments of the A29 / Meadow Way / Site Access traffic signal junction including traffic associated with the Meadow Way development are included within Section 3 of this TAA. These revised assessments demonstrate that the junction continues to operate within capacity in the 2031 Do-Something + BEW Development (Scenario 3) which has the highest volume of traffic using the junction out of these assessed within the TA. Full junction capacity outputs for these revised assessments are included in Appendix C of this TAA
11	WSCC	Access Junction	Applicant to consider cycle facilities at site access junction (e.g. advance stop lines, cycles paths etc) plus extension of footway (or possibly cycleway) on the north side of the new access and then eastwards.	Please see Section 3 of this TAA.
12	WSCC	Access Junction	What are the level crossing queue lengths by direction as a result of the development as a consequence of the new signals at the site access? And what queues arise for	Additional LinSig modelling of the A29 / Meadow Way / Site Access traffic signal junction and level crossing is provided in Section 3 of this TAA. This includes details of proposed signal staging and forecast queue lengths.

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			northbound traffic as a result of the new signals being at red?	
13	WSCC	Access Junction	What is turning capacity of the new site access junction and how will it work (as right-hand turn pockets seem small)? and does the phasing allow for (northbound) straight ahead and right turns only at the same time?	
14	WSCC	Access Junction	Applicant to confirm whether approval, in-principle has been obtained from Sussex Police for the yellow box marking.	It was agreed at a meeting with WSCC that this matter would be covered at detailed design through the S278 process. This item is therefore resolved.
15	WSCC	Access Junction	It's unclear why the predicted flows for 2038 are halving in 7 years from 2031; the highest total flows through the junction in the AM peak are 1737 for 2031 compared to 911 for 2038 and PM of 1646 in 2031 vs 810 in 2038. Is the assumption that the full A29 would be open to traffic at this stage? Please clarify. If not, can you provide evidence for the 2038 figures?	Clarification was provided at them meeting with WSCC on 23rd May that the reduction in traffic on the A29 Westergate Street is a result of the full A29 realignment becoming open to traffic. This item is therefore resolved.
16	WSCC	Access Junction	Ignoring the 2038 figures, the calculations suggest that the	Please see the response provided to WSCC comment 12 and 13.

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			junction might work; adding in the impact of MOVA operation (generally accepted to be an improvement of 10% in practical reserve capacity) shows the junction operating with between 8.6% & 17.9% capacity depending on the scenario and whether the additional flows associated with the BEW development are taken into consideration or not (TT note - although we previously concluded that the junction would **not** work with the E-W link open and the A29 not complete). However, given there isn't huge capacity remaining within the junction based off the 2031 models, assuming traffic volumes do increase, there is still a concern that there will not be capacity within the junction for this future growth.	
17	WSCC	Access Junction	The biggest concern is that the impact of the level crossing ¼ mile south doesn't appear to have been included. The staging has a significant proportion of the	Additional LinSig modelling of the A29 / Meadow Way / Site Access traffic signal junction and level crossing is provided in Section 3 of this TAA

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			time for north & southbound traffic to receive green (stage 2) however given the frequency at which the level crossing gates are down and queues currently witnessed along the A29, it is our assumption that the modelling will continue to allow traffic to flow into the back of this queue, potentially blocking vehicles exiting the side roads. As this junction will eventually be a key point in east/west flows, therefore as much as possible will need to be done to prevent queuing through the junction.	
18	WSCC	Masterplan	With regard to the extent of the audit, it does not appear to have considered the E-W link road running eastwards (including the bridge). If this forms part of the detailed component of the scheme, this should form part of the Stage 1 process. Applicant to address, please.	A Road Safety Audit is in progress and will be shared with the WSCC along with an appropriate Designer's Response w/c 17th June 2024. The audit will include consideration of the E-W link road running eastwards, including the bridge.
19	WSCC	Masterplan	Bridge design to be amended as-per comments, including segregated cycle routes on both sides.	Clarification was provided by WSCC that their preference is for a segregated cycle track to be provided on one side of the EW link road, as has been proposed. This item is therefore resolved.

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20	WSCC	Masterplan	Applicant to provide details of discussions with emergency services and refuse providers about the scheme and internal layout.	Drawing LAW-WSP-ZZ-ZZ-C-DR-0006 included in Appendix B of this TAA has been updated to include provision of a removable bollard on Pine Close where the existing priority junction onto the A29 will be closed to traffic as part of the A29 / Meadow Way / Site Access traffic signal scheme. This will allow emergency service vehicles to access the site should the traffic signal junction itself become blocked.
21	WSCC	Masterplan	Provision of swept-path analysis of site access junction for a selection of vehicles, including cars, buses and other large vehicles likely to use it	Drawing No. 3258-ATR-010 Rev. B contained within Appendix B has been updated to include swept path analysis of a 12m refuse vehicle, compared to the 9m refuse vehicle which was included in the swept path analysis contained within the original TA.
22	WSCC	Travel Plan	Travel Plan to be updated. A Framework Travel Plan has been submitted as part of the planning application. It sets out trip rate reduction target over a five-year period plus key measures and attributes of the Plan to promote and encourage use of greener travel modes, such as walking, cycling and increased use of public transport. With regard to measures, it is noted that £50 travel vouchers are to be offered to households. However, latest WSCC Travel Plan policy requires £150 vouchers. Additionally, 'penalty' measures should also be included in any action plan should trip rate reduction	The Travel Plan has been updated based on these comments and is provided in Appendix E of this TAA.

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			levels not be met during the plan period. SAM surveys must also form part of any final Plan. It is also recommended that the Travel Plan attempts to align with those for other sites within the BEW Strategic Location, including reference to (and inclusion of) the BEW Public Transport Strategy. List of measures should not be considered exhaustive (applicant to look at WSCC Travel Plan Guidance for all measures that should be considered).	
23	National Rail	Timetable changes	Network rail concern is around the cumulative impact, from both this application and the BEW application on the Woodgate Level Crossing. The TA does not reference the timetable changes that will affect the West Coastway Line from 3rd June 2024. The changes will see an increase in the number of stopping and non-stopping services align this route to and from Barnham station which will see an increase in downtime for the barriers at Woodgate Level Crossing.	Additional sensitivity tests of the level crossing have been completed to take account of the new West Coastway Line timetable, as summarised in Section 3 of this TAA.

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24	National Rail	Impact of level crossing on pedestrians	The impact of usage of the level crossing has been fully considered, especially around its use by pedestrians. The creation of new pedestrian's links with the BEW development will likely see a rise in footfall, particularly given the proximity of the existing Aldingbourne Primary School.	The number of pedestrians generated by the proposed development that will use the Woodgate level crossing has been quantified in Section 3 of this TAA.
25	National Highways	Policy Context	There is a requirement for reference and adherence to DfT Circular 01/2022. In accordance with DfT Circular 01/2022 there is a requirement for the vision for the development to be provided. Subsequently there is then a requirement to identify the measures which will be implemented to achieve the aims of the vision.	A review of trip rates and associated trip generation for the Proposed Development has been included within Section 4 of the TAA.
26	National Highways	Trip Rates and Trip Generators	The trip rates should be reviewed considering the proposed vision for the development and the measures which are planned to achieve the vision. The impact on the trip rates (e.g. modal shift to sustainable transport modes) should be identified.	

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27	National Highways		The trip distribution detailed calculations should be provided to demonstrate the data used to obtain the trip distribution for each trip type, the route choice for each distribution the numbers of trips within each of the three types.	Trip distribution for the Proposed Development has been calculated as described in Section 6.4 and Table 6.5 and TA. This uses a mix of journey to work information from the 2011 Census, data from the National Travel survey Table (NTS0502) and assumptions regarding distribution of trips to nearby schools and those related to shopping or other purposes. This has resulted in a robust assumption that 70% of trips associated with the Proposed Development route to or from the A27. In comparison, the distribution derived from the Chichester Area Transport Model used in the planning application for BN/11/22/OUT and accepted by National Highways has the following distribution from the site access junction in the 2031 Do Nothing Scenario: AM Peak Arrivals: 35% from North and 65% from South Departures: 70% from North and 30% from South PM Peak Arrivals: 46% from North and 54% from South Departures: 34% from North and 66% from South The trip distribution used within the TA and this TAA are therefore either comparable or provide a more robust assessment of development traffic using the A27 than the Transport Assessment methodology accepted by National Highways as part of other planning applications.
28	National Highways	Assessment Scenarios	The SRN junction assessment is, however, also required to be in accordance with other requirements of DfT Circular 01/2022. As the site is within the adopted Local Plan, assessment is required to be	As stated in response to WSCC comment 9, Cala Homes have entered into a Collaboration Agreement with other land owners associated with the Barnham Eastergate Westergate strategic site stating limiting Cala Homes to a maximum build-out rate of 50 dwellings per year. Assuming that construction starts in 2025, the site would be fully built out by 2032. All junction capacity assessments completed for the Proposed Development have been based upon forecast years of 2031 and 2038 using the Chichester Area

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			undertaken at the development opening year and include 'all relevant development that is consented or allocated where there is a reasonable degree of certainty will proceed within the next 3 years and include the full amount of development to be built'. There is need to demonstrate how the assessment scenarios align with the requirements of DfT circular 01/2022.	Transport Model (CATM). The CATM was used for the A29 Realignment business case and is fully compliant with Department for Transport WebTAG criteria. The forecast years available within CATM are as follows: • 2031: The end of the Arun Local Plan period; and • 2038: the date when the full A29 realignment and BEW strategic site south of the railway is anticipated to be completed. Whilst a 2032 forecast year is not available from CATM to align with the anticipated completion of the Cala Homes development it is noted that the 2031 scenario includes all 400 units of the Proposed Development and phase 1 of Parcel SC1 (1200 units, 61 CE care home units, 3FE primary schools) which has not yet received planning permission (BN/11/22/OUT). Given that junctions of the Strategic Road Network are forecast to operate within capacity in the 2031 scenario (as shown in Section 4 of this TAA), it can be inferred that this would also be the case for a 2032 opening year assessment when taking account of a revised build-out rate for Parcel SC1, which would be appropriate to use if developing a new forecast scenario/
29	National Highways	Junction Modelling	The presentation of results would be more helpful if the results for each assessment scenario are presented by junction, to allow clear comparison between scenarios at each junction.	Updated junction capacity assessments for junctions on the Strategic Road Network are included in Section 4 of this TAA.
30	National Highways	Junction Modelling	Fontwell East Roundabout - • The AM peak hour is 07:15-08:15- early for an AM peak and does not align with the times stated above.	Updated capacity assessments of the Fontwell East junction are included in Section 4 of this TAA with junction capacity outputs provided in Appendix F . These have been based upon geometries used as part of Transport Assessments completed in support of planning application BN/11/22/OUT and BE/134/22/OUT, noting that these were accepted by National Highways. All assessments undertaken have been based upon AM and PM peak hour traffic flows derived from the Chichester Area Traffic Model (CATM). These peak hour flows were provided as hourly totals only with no details of 15-minute demand

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			• The PM peak hour is 16:30-17:30 - does not align with the times stated in the report. • Traffic data has been input with the exact same data for each 15-minute time period (e.g. the demand profile is entirely flat during the assessment period) - justification for this is needed, what we typically expect is the 'one hour' profile to be used. • Geometry figures not clear in PDF - clarifications are needed. • Assessment appears to have been undertaken based on existing geometry, the report text noted that at para. 7.2.4 that the 2017 Enterprise Bognor Regis Transport Review (EBRTR) mitigation has been considered ' only where the existing layout is forecast to operate close to capacity' therefore clarification is required. • The 2016 observed queue data which is referred to should be provided. • The observed queue data which is used for	across each hour. It is noted however that use of a flat profile is also consistent with the assessment methodology used within Transport Assessments for planning application BN/11/22/OUT and BE/134/22/OUT. Please see the response to WSCC comment 3 regarding assessment of the EBTR scheme. Calibration and validation of the model is consistent with models used in support of planning application BN/11/22/OUT and BE/134/22/OUT and therefore is it not considered necessary to provide further information.

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			calibration/ validation is required to be the highest average 15-minute queue data on each arm (as opposed to lane). • Calibration and validation details should be provided, including details of intercept/ capacity adjustments (typically we expect 'direct' intercept adjustment, rather than capacity adjustment) and the resulting queue alignment against observed queues. • The report should include calibration/ validation tables which show the 2019 model queue against the observed queue for each time period, before and after calibration • The soft copy Junctions 10 input should be provided for review.	
31	National Highways	Junction Modelling	Fontwell West Roundabout: • We note that Appendix C of the TA contains the LinSig output, however we cannot see the 2019 Baseline Junctions	It is noted that the signalised roundabout was not in place in 2019 and therefore it would not be appropriate to complete a LinSig assessment of this layout. Geometries have been revived. Updated capacity assessments of the Fontwell West junction are included in Section 4 of this TAA with junction capacity outputs provided in Appendix F.

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			assessment, and this should be clarified. • A27 (north): lane widths are input as 5m, please review as we observe these lanes to be in the order of 4.5m, lane lengths are acceptable, radius to be reviewed. • Arundel Road: Lane widths are input as 3m, please review, based on aerial imagery lanes appear wider, we acknowledge parked cars, lane lengths are not reasonable, lane 2/1 is input as 5 PCUs, this appears to be 3PCU radius to be reviewed. • A29 Fontwell Avenue: lane widths are input as 3,75m, please review as based on aerial imagery lanes appear narrower, lane lengths are not reasonable, lane 3/1 is input as 5PCUs, this appears to be 1 PCU, radius to be reviewed.	

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			• A27 (West): lane widths are input as 4m, please review as we observe these lanes to be in the order of 3.75m, lane lengths should be 60 PCUs for 4/1 and 4/2 and 10 PCU for 4/3, radius to be reviewed. • Circulatory carriageway: radii to be reviewed, unput values are too large. • Please provide CAD drawing demonstrating measurement of all the geometric parameters. • Traffic signal details including stage. phase arrangements, intergreens and cycle time should be consistent with that is currently operating on site, suitable information should be provided to demonstrate this. • The soft copy input should be provided to allow a full review to be undertaken, including	

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			consideration of queue limits and connector details.	
32	National Highways	Junction Modelling	A27 Nyton Road Priority Junction: • The AM peak hour is 07:15-08:15- early for an AM peak and does not align with the times stated above. • The PM peak hour is 16:30-17:30 - does not align with the times stated in the report. • Traffic data has been input with the exact same data for each 15-minute time period (e.g. the demand profile is entirely flat during the assessment period) - justification for this is needed, what we typically expect is the 'one hour' profile to be used. • The geometry figures are not clear in the submitted PDF; hence clarifications are needed.	Updated capacity assessments of the A27 / Nyton Road junction are included in Section 4 of this TAA with junction capacity outputs provided in Appendix F. These have been based upon geometries used as part of Transport Assessment completed in support of planning application BN/11/22/OUT which has been accepted by National Highways. Please refer to responses to comment 30 regarding all other matters.

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			• Assessment has been undertaken based on existing geometry, 2017 EBRTR mitigation has not been considered as timeframe for mitigation is stated to be not confirmed. • The 2016 observed queue data which is referred to should be provided. • The observed queue data which is used for calibration/ validation is required to be the highest average 15-minute queue data on each arm (as opposed to lane) • Calibration and validation details should be provided, including details any capacity adjustments and the resulting queue alignment against observed queues. • The soft copy Junctions 10 input should be provided for review.	

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33	National Highways	Junction Modelling	Appendix C - Junction Capacity Assessments: • The junction assessment of the Fontwell East Roundabout 2017 EBRTR is not included, this should be provided if available including soft copy model input files and PDF outputs. • The junction assessment of the unsignalized Fotnwell West Roundabout is not included and this should be provided, including soft copy input files and PDF output files. • The TA includes details of the interim assessment at 2026 and 2028, however the model outputs are not provided within Appendix C, this should be clarified.	The Fontwell East Roundabout 2017 EBRTR scheme was not assessed within the TA and the existing junction was demonstrated to operated within capacity in all scenarios. The unsignalised Fontwell West roundabout was not assessed as the signalized scheme has already been constructed. Updated interim assessments for 2028 are provided in Section 2 of this TAA with junction capacity outputs included in Appendix A. These capacity assessments however have only been completed for the A29 / Nyton Road priority junction and A29 / Barnham Road roundabout as requested by WSCC. No interim junction capacity assessments have been completed for junctions on the A27.
34	National Highways	Traffic Flow Diagrams	Appendix F – Traffic Flow Diagrams • 2019 Baseline Traffic flows - How was this derived from the CATM, please provide details. • 2031 Do something Traffic Flows - derived from CATM, noted to be marginally different from	2019 baseline flows were derived from junction capacity assessment outputs included within Appendices for the Transport Assessment completed in support of planning application BN/11/22/OUT. The difference in 2031 Do-Something traffic flows reflects the different trip generation used within the TA for the Cala Homes development and the assumption that bridge on East-West Link Road would operate as a bus, ped and cycle link until the full A29 realignment is complete. This means not traffic can travel between the Cala Homes site and BEW Parcel SC1 in the 2031 scenario and instead has to use the existing A29.

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			figures contained within the BEW Parcel SC1 TA, please advise on the reason. • We note that paragraphs 6.6.2 and 6.6.3 provide information on how the Scenario 3 including BEW Parcel SC1 without E-W Link Road traffic flows were produced. Could you please provide further explanation with regard to these two paragraphs, as this not clear.	The extrapolation of data described in paragraph 6.6.2 and 6.6.3 or the TA allowed traffic associated with each site (Cala Homes and BEW Parcel SC1) to be identified and applied to a scenario without the East-West link road connection between the two sites.
35	National Highways	Travel Plan	The proposed measures are not deemed to be sufficient, additional measures should be developed associated with physical infrastructure/ services, in alignment with the development vision. Measures too focused on marketing and promotion and physical measures to be provided.	Further information on the Travel Plan is provided in Section 4 of this TAA whilst an updated version of the document is also included in Appendix E. Paragraph 5.4.3 of the Travel Plan states that funding for implementation, monitoring and management of the full Travel Plan will be secured via S106 contributions.
36	National Highways		The TP includes monitoring annually but there is a need for the TP to include identifying the requirement for additional measures to be considered.	

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37	National Highways		There is a need for firm financial commitments to support the objectives of the TP. This needs to be provided within the TP document.	

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2. Updated 2028 Interim Scenario

2.1. Introduction

2.1.1. This section provides an update to the interim scenario completed within Section 7.7 of the TA. This follows on a meeting with WSCC on 23rd May where the consideration of alternative assumptions was requested.

2.1.2. An interim assessment has been undertaken to understand that the how many units could be occupied on the Cala Homes site prior to completion of the first phase of the A29 realignment (between A29 Fontwell Avenue and B2233 Barnham Road), which is due to be completed in Spring 2027 (previously Spring 2026). Phase 1 of the A29 realignment will provide a route that bypasses the A29 / Barnham Road (War Memorial) roundabout whilst also having the potential to remove traffic from the A29 / Nyton Road priority junctions due to it offering a more direct route to the A27.

2.1.3. An update to the interim scenario has been produced for 2028 only assuming 300 units have been constructed on the Cala Homes site. This provides a robust assessment of potential construction progress of the Cala Homes Development noting the Collaboration Agreement detailed in Section 1 which limits construction to 50 units per year. It also provides an assessment of the Barnham Road roundabout and Nyton Road priority junction should Phase 1 of the A29 realignment be delayed by a further 12 months.

2.2. Assumptions

2.2.1. At the meeting held with WSCC on 23rd May the following inputs were requested to be included within the revised interim scenario:

- Traffic associated with the construction of up to 200 dwellings across the Barratt Homes, David Wilson Homes or BEW Parcel SC1 development sites; and
- Use of TEMPro 2019 to 2028 growth factors with an adjustment to account for the Arun Local Plan BEW allocation increasing from 2,400 dwellings to 3,000 dwellings.

2.2.2. In relation to these requests, it is noted that it would be normal practice when assessing sites that are allocated within the Local Plan to manually remove these from TEMPro growth factors to avoid double counting of the individual site trip generation. In this example, it would therefore mean that the 200 units related to Barratt Homes, David Wilson Homes or BEW Parcel SC1 plus the Cala Homes development would be removed from the TEMPro growth rates to avoid double counting.

2.2.3. For simplicity, the revised interim assessment has been completed using the 200 dwellings across Barratt Homes, David Wilson Homes or BEW Parcel SC1

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and 300 units on the Cala Homes development (assuming a 75% build-out) without adjustment of TEMPro growth factors.

2.2.4. To inform this assessment forecast traffic flows have been derived from the Transport Assessment completed for the Barratt Homes development.

2.2.5. For consistency, geometries used within this interim assessment has been updated to match those used in the TA produced for BN/11/22/OUT.

2.2.6. Full junction capacity assessment outputs for these interim scenarios are provided in **Appendix A**.

2.3. A29 / Barnham Road Roundabout

2.3.1. An update for the A29 / Barnham Road roundabout has been produced as summarised in **Table 2-1**.

Table 2-1 – A29 / Barnham Road (War Memorial) Roundabout 2028 Interim Scenario Junction Capacity Assessment

Arm	Approach	AM Peak			PM Peak		
		RFC	Total Delay	Modelled Queue	RFC	Total Delay	Modelled Queue
A	B2233 Barnham Road	0.67	10	2	0.60	4	1
B	A29 Nyton Road	0.47	4	1	0.39	3	1
C	A29 Fontwell Avenue	0.50	8	1	0.78	17	4

2.3.2. **Table 2-1** above forecasts the junction to be operating within capacity. The A29 Fontwell Avenue arm is approaching the point at which congestion would be expected to occur, which is an RFC figure of 0.85. In the PM peak, the RFC on this arm is 0.78, with an associated forecast delay of 17 seconds and queue of four PCUs. This arm has a lower RFC in the AM peak, reaching 0.50.

2.3.3. A29 Nyton Road has the most spare capacity at the junction, with an RFC of 0.47 in the AM Peak and 0.39 in the PM peak. The forecast delay and queues are also minimal in both peaks, with modelled queue of just one PCU.

2.3.4. The B2233 Barnham Road arm is also operating within capacity, with an RFC of 0.67 in the AM peak and 0.60 in the PM peak. The delay is slightly higher in the AM peak, reach 10 seconds, with a forecast queue of two PCUs. In the PM peak the forecast delay is four seconds and modelled queue is one PCU.

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2.4. A29 / Nyton Road East Priority Junction

2.4.1. An update for the A29 / Nyton Road East priority junction has been produced as summarised in **Table 2-2**.

Table 2-2 – A29 / Nyton Road East 2028 Interim Scenario Junction Capacity Assessment

Arm	Approach	AM Peak			PM Peak		
		RFC	Total Delay	Modelled Queue	RFC	Total Delay	Modelled Queue
B	B2233 Nyton Road	0.34	9	1	0.46	10	1
C	A29	0.89	40	11	0.34	7	1

2.4.2. The modelling results for the 2028 interim scenario show that the junction is forecast to operate within capacity. The B2233 Nyton Road arm has more spare capacity than the A29 arm. In the AM peak, the RFC is 0.34, with a delay of 9 seconds and minimal forecast queue of one PCU. In the PM peak it is slightly higher at 0.46, with a delay of 10 seconds and again a minimal forecast queue of one PCU.

2.4.3. The A29 arm exceeds the threshold at which congestion can be expected, reaching an RFC of 0.89 but operates within its theoretical capacity. This has an associated delay of 40 seconds and a projected queue of 11 PCUs. This is much lower in the PM peak, with an RFC of 0.34, a delay of 7 seconds and just one PCU in the forecast queue.

2.5. Conclusions of Interim Assessment

2.5.1. These interim assessments demonstrate that up to 300 units could be constructed and occupied on the Cala Homes site prior to completion of Phase 1 of the A29 realignment.

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3. Site Access Junction and Level Crossing

3.1. WSCC and National Rail Comments

3.1.1. WSCC and National Rail has made a number of comments related to the proposed A29 / Meadow Way / Site Access traffic signal junction, related to its design, operation and impact on the Woodgate level crossing located 550m to the south.

3.1.2. This section responds to these points through provision of clarifications and additional junction capacity assessments.

3.2. Site Access Design

3.2.1. In relation to the design of the site access junction WSCC has made the following comment:

Applicant to consider cycle facilities at site access junction (e.g. advance stop lines, cycles paths etc) plus extension of footway (or possibly cycleway) on the north side of the new access and then eastwards.

Applicant Response

Junction Intervisibility

3.2.2. The General Arrangement for the proposed site access junction is shown on Drawing LAW-WSP-ZZ-ZZ-C-DR-0006 in **Appendix B** of this TAA. Appendix E of the original Transport Assessment also includes Drawing LAW-WSP-ZZ-TP-DR-0001 which shows details of junction intervisibility, forward visibility and land ownership that was submitted as part of a Departures from Standard application.

3.2.3. The proposed A29 / Meadow Way is located in a constrained location with Departures from Standards required in relation to the following:

- Forward visibility on the northbound approach to the traffic signals;
- Intervisibility between the southern A29 arm, Meadow Way and site access;
- Forward visibility to the back of queuing traffic on the northbound approach to the traffic signals.

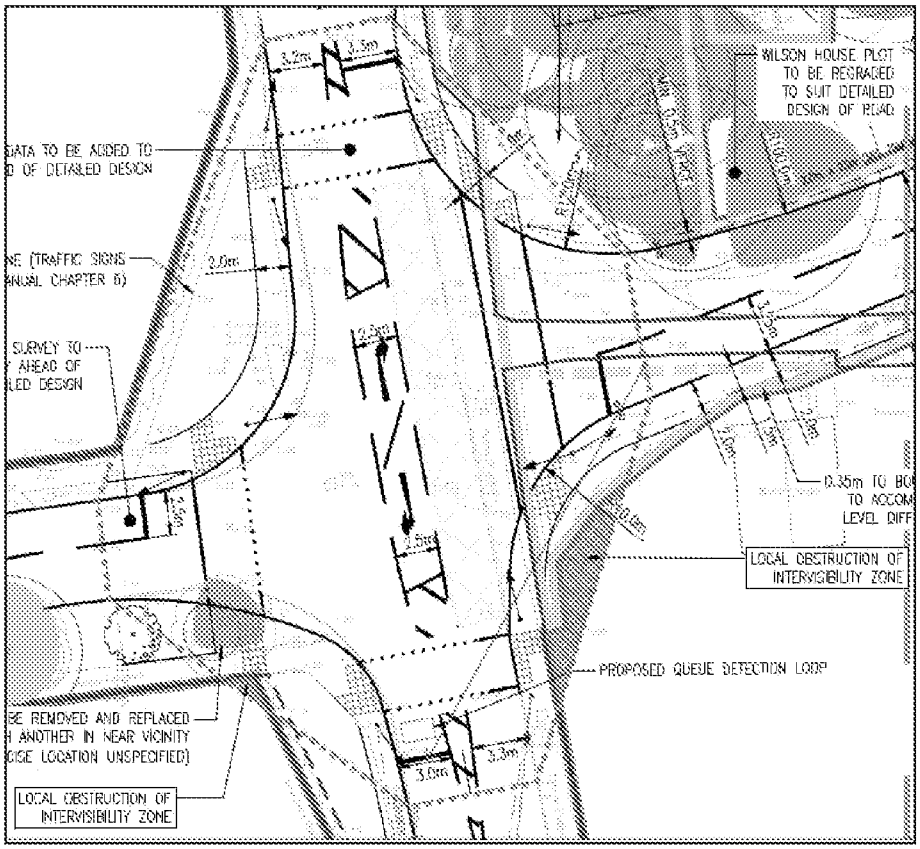
3.2.4. Following submission of the Transport Assessment as part of planning application AL/11/24/OUT these Departures from Standards have been approved by WSCC.

3.2.5. In relation to the request of install Advanced Stop Lines at the junction, whilst the proposed junction does not achieve full intervisibility to 2.5m back from the stop line it is noted that a driver would be able to see the front of a vehicle waiting at each stop line. The exiting junction intervisibility (shown by the red dashed line) and local obstructions between the southern, eastern and western

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arms is demonstrated on the screenshot of Drawing LAW-WSP-ZZ-TP-DR-0001 provided in **Figure 3-1** below.

Figure 3-1 - Screenshot of Drawing LAW-WSP-ZZ-TP-DR-0001 showing junction intervisibility



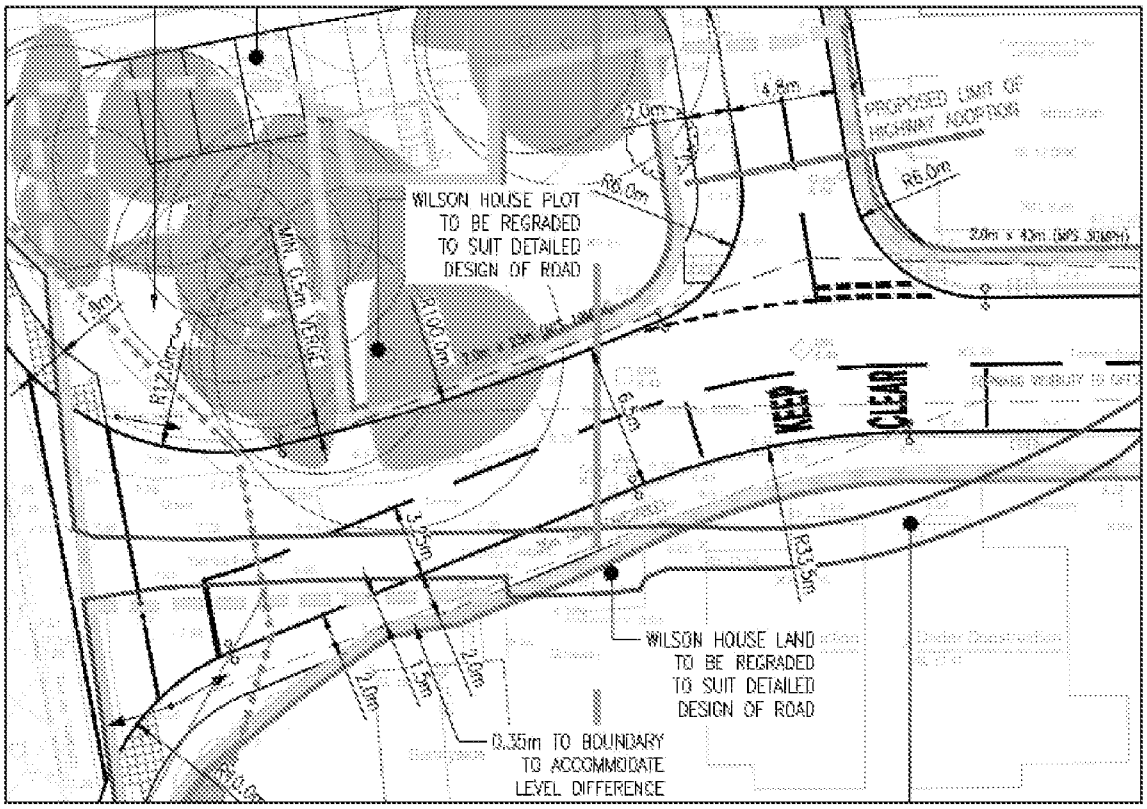
3.2.6. Taking account of exiting intervisibility and local obstructions, if Advanced Stop Lines were installed at the junction this would move vehicle stop lines back by 2.5m and remove visibility of vehicles waiting at the junction. It is therefore not considered feasible to install Advanced Stop Lines at the junction due to the detrimental impact of highway safety.

Provision of Cycleway or Footway on Northern Side of New Access

3.2.7. As shown on Drawing LAW-WSP-ZZ-TP-DR-0001 included in Appendix E of the original Transport Assessment, the parcel of land immediately north of the site access is within third party ownership and therefore cannot be used as part of the proposed access junction. This is shown on screenshot of Drawing LAW-WSP-ZZ-TP-DR-0001 provided in **Figure 3-2** with the third-party ownership bounded in orange.

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Figure 3-2 – Screenshot of Drawing LAW-WSP-ZZ-TP-DR-0001 land under third party ownership

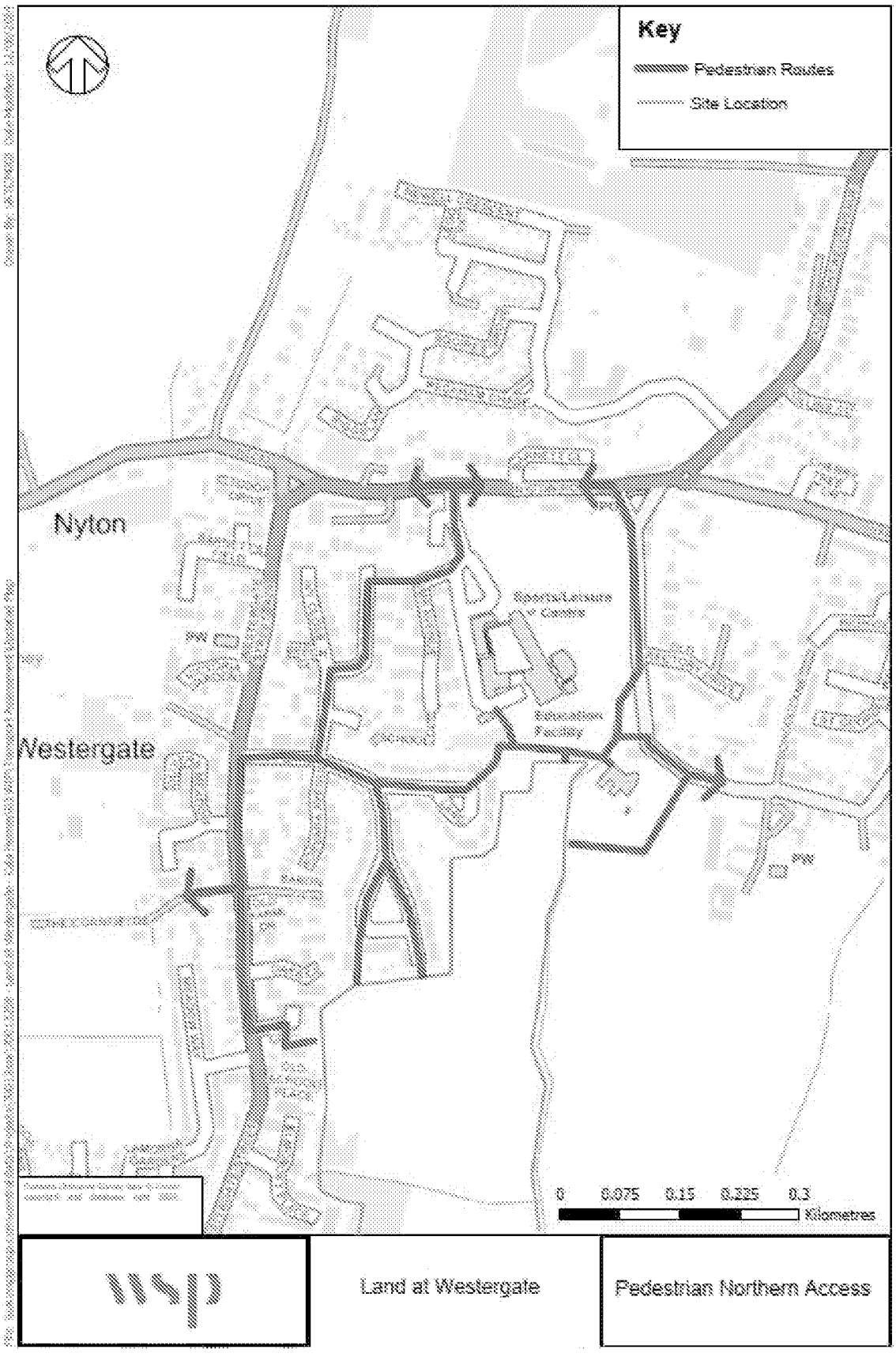


3.2.8. **Figure 3-2** shows that there is not sufficient space to provide a footway or dedicated cycle facility on the northern side of the site access junction. The land on the northern side of the carriageway is third-party owned, therefore it is not possible to extent the extent of highways northwards at this location.

3.2.9. However, it is expected that pedestrians and cyclists travelling to / from the north will primarily do so via Ivy Lane and St Richard's Road or by using internal pedestrian and cycling paths within the masterplan to connect onto upgraded Footpath 296 and 317. The pedestrian and cycle connections to / from the north are shown graphically in **Figure 3-3**.

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Figure 3-3 - Northern Pedestrian Access Routes



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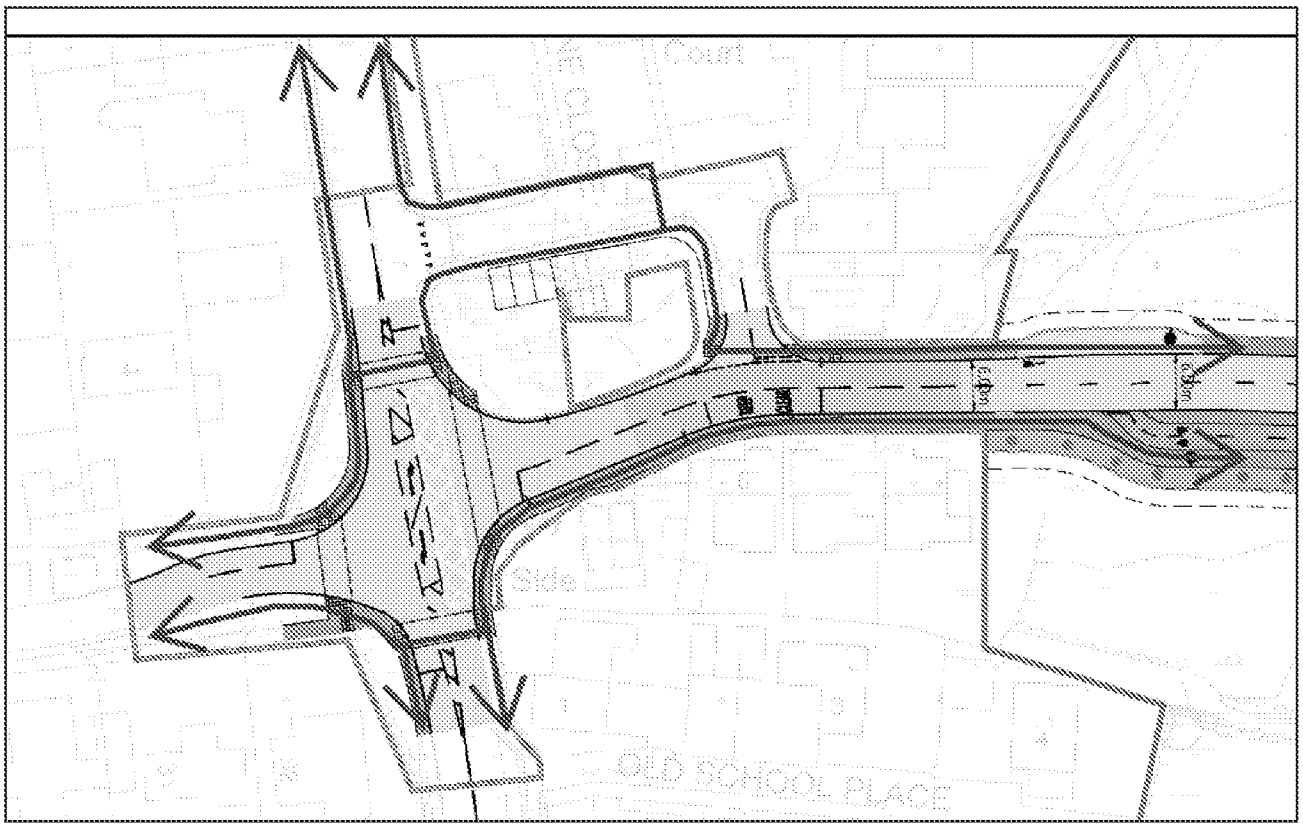
3.2.10. The route using Ivy Lane and St Richard's Road uses quiet residential streets and meets the A29 in close proximity to a signalised pedestrian crossing for connections to Aldingbourne Community Sports Centre. It also connects with Ems Road which provides connection to Westergate village centre via Footpath 303 and Line Avenue.

3.2.11. Footpath 317 connects into an existing shared use path at the northern side boundary, which provides direct access to Ormiston Six Villages Academy and Eastergate Church of England Primary School. Westergate village centre can also be accessed via Church Lane, which also provides a route towards Barnham village centre and railway station.

3.2.12. Footpath 296 is an unsurfaced path which also connects with Church Lane and Eastergate Church of England Primary School.

3.2.13. Noting the above, it is also noted that some pedestrians may route via the East-West Link Road and A29 in the vicinity of the site access. Where this is the case, pedestrians would be able to use footways along Pine Close to connect into the East-West Link Road as demonstrated on **Figure 3.4**.

Figure 3-4 - Pedestrian Routes at Access Junction



3.2.14. These routes provide a quieter journey for pedestrians and cyclists, which is safer, more comfortable and more pleasant. Therefore, although desirable, it is

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not deemed necessary to facilitate an extension of the footway eastwards, nor provide cycle facilities at the site access junction.

3.3. Operation of the Site Access and Impact on Woodgate Level Crossing

3.3.1. WSCC and National Rail have made a number of comments related to the operation of the proposed A29 / Meadow Way / Site Access traffic signal junction, its queue lengths and impact on the safe operation of the Woodgate level crossing.

Junction Capacity Assessment of Site Access Junction and Level Crossing

3.3.2. Further junction modelling has been undertaken in support of this TAA at the proposed site access junction. This additionally assessment includes additional traffic associated with the 89 unit development off Meadow Way for 89 units (AL/178/22/OUT which was granted outline planning permission 8th December 2023).

3.3.3. The update assessment of the access junction which has been undertaken is a LinSig model incorporating the proposed site access junction and level crossing This junction modelling has been undertaken for the following scenarios:

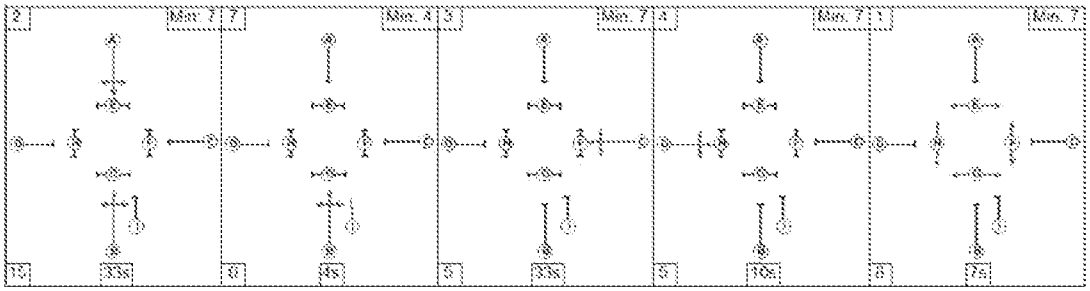
- 2031 Do-Something AM and PM Peaks Baseline + Development (Scenario 2 as described in Section 7.4 of the TA); and
- 2031 Do-Something AM Baseline + Development + BEW (Scenario 3 as described in Section 7.5 of the TA).

3.3.4. Assessments were only completed of the 2031 scenario because of the significant reduction in traffic that is predicted on the existing A29 once the full realignment in open in 2038. This was reflected in the junction capacity assessments completed for the site access junction for scenario 4 included in Section 7.6 of the TA

3.3.5. The traffic signal staging for the access junction used for all junction capacity modelling completed within the TA was set out in Figure 2 of the Site Access Assessment Technical Note which was included in Appendix G of the TA, this is replicated in **Figure 3-5** for ease of reference:

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Figure 3-5 - Staging used for access junction in originally submitted TA



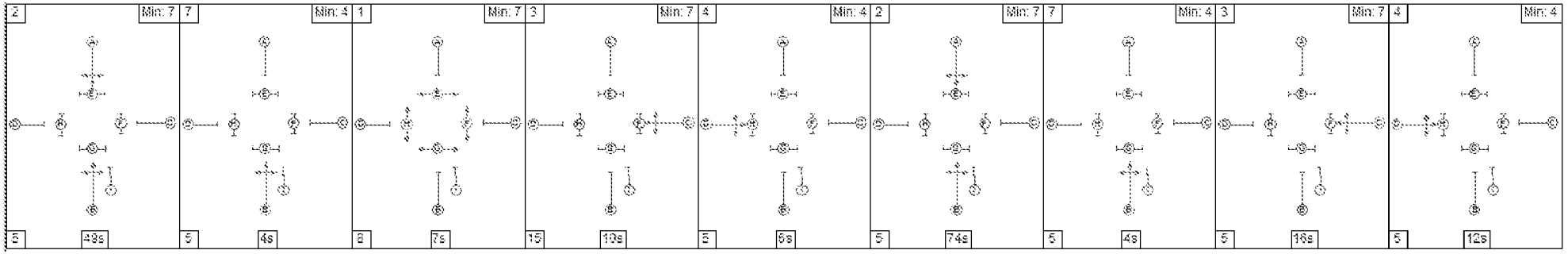
3.3.6. As can be seen above, this staging provide a robust assessment of the operation of the site access junction, which saw the pedestrian stage being called once every cycle. In addition, an early cut off was included on the A29 southbound approach which provided unopposed green time for northbound vehicles turning right into the site from the A29 southern approach.

3.3.7. For the purpose of this TAA, and in response to WSCC and National Rail comments this staging has been revised as to simulate the impact of the level closures. This revised staging is set out below. This model included the level crossing as a separate junction, which runs a separate cycle time to the access junction with a closure frequency of 10 times per hour. This frequency and duration of level crossing closures is in accordance with a survey of the Woodgate level crossing undertaken on 1st March 2022 between 07:00-10:00 and 16:00-19:00. Further information regarding the survey of the level crossing can be found in Section 3.3 of the originally submitted TA.

3.3.8. Given the incorporation of the level crossing into the LinSig model it is appropriate to consider an alternative traffic signal staging arrangement of the site access junction. This reflects the proposal for the junction to operate with Microprocessor Optimised Vehicle Actuation (MOVA) which will have the ability to extend or skip certain stages depending on whether or not the level crossing is open, closed or has just opened. The revised staging is shown in **Figure 3-6**.

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Figure 3-6 - TAA access junction staging



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3.3.9. The revised staging calls the pedestrian crossing every other cycle, with the A29 being called twice in a cycle to maximise capacity on these approaches. The Meadow Way stage has also been reduced to four seconds given the low levels of traffic that use this approach.

3.3.10. Further to the implementation of MOVA at the site access junction, it is also recommended that detection loops are installed between the level crossing and access junction to help manage the interactions between the two. To prevent southbound queueing from the level crossing impacting access and egress from the site, it is recommended that a queue is loop is installed on the A29 50m south of the junction for the southbound traffic. Once activated, the A29 southbound approach would be stopped as an early cut-off with the northbound movement continuing. This could also be linked to enabling extended green time to the side arms or to provide an all-red phase for pedestrians.

3.3.11. In the opposite direction, to mitigate the potential for queueing to extend back through the level crossing, a queue loop should be installed 50m north of the level crossing. When called, an extended green stage would be activated on the northbound approach to the traffic signal junction, thereby preventing the queue from reaching the level crossing.

3.3.12. The full inputs and outputs of this additional junction assessment are included in **Appendix C.** A summary of the results of this junction assessment of the Site Access and Level Crossing is shown in **Table 3-1** and **Table 3-2** below.

Table 3-1 - 2031 Do-Something AM and PM Baseline + Development (Access Junction)

Arm	AM				PM			
	DoS (%)	MMQ (pcu)	UQ End Red (pcu)	Delay (s/pcu)	DoS (%)	MMQ (pcu)	UQ End Red (pcu	Delay (s/pcu)
A29 (North)	69.3	20	11	31	78.7	32	15	33
Proposed Site Access	76.2	8	6	89	49.7	3	2	86
A29 (South)	70.0	21	12	24	48.6	15	10	17
Meadow Way	76.7	7	5	98	76.0	6	5	117
	Cycle Time: 240s Overall PRC: 17.3%				Cycle Time: 240s Overall PRC: 14.4%			

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3.3.13. The proposed site access junction is forecast operate within capacity in the 2031 with the Cala Homes site as a stand-alone site. As can be seen above, neither the Mean Maximum Queue (MMQ) or the Uniform Queue at the end of the red phase (UQ End Red) on the A29 (south) arm would extend back through the level crossing.

Table 3-2 - 2031 Do-Something AM and PM Baseline + Development (Level Crossing)

Arm	AM				PM			
	DoS (%)	MMQ (pcu)	UQ End Red (pcu)	Delay (s/pcu)	DoS (%)	MMQ (pcu)	UQ End Red (pcu)	Delay (s/pcu)
A29 (South)	83.8	139	92	153	45.7	55	38	40
A29 (North)	67.5	99	67	114	53.7	70	45	44
	Cycle Time: 3600s Overall PRC: 7.4%				Cycle Time: 3600s Overall PRC: 67.7%			

3.3.14. As can be seen above, the MMQ on the northern side of the level crossing is 99pcu, which equates to 570m in the AM peak. This level of queueing would extend on A29 back through the access junction of the site, between the existing junctions of A29 / Meadow Way and A29 / Pine Close. However, the UQ End Red is 67pcu, which equates to 386m. This suggests that only moving queues would block through the proposed access junction in this scenario, rather than the stationary UQ End Red.

3.3.15. In the PM peak, neither the MMQ nor the UQ End Red are forecast queue back through the proposed site access junction.

3.3.16. **Table 3-3** and **Table 3-4** show how the site access junction are forecast to operate in the 2031 scenario with Cala Homes and Phase 1 of BEW Parcel 1c (scenario 3 of the TA). Within this scenario, it is assumed that the East-West Link Road is closed for general traffic movements between the Cala Homes site and Parcel SC1.

Table 3-3 - 2031 Do-Something AM and PM Baseline + Development + BEW (Access Junction)

Arm	AM				PM			
	DoS (%)	MMQ (pcu)	UQ End Red (pcu)	Delay (s/pcu)	DoS (%)	MMQ (pcu)	UQ End Red (pcu)	Delay (s/pcu)
A29 (North)	75.5	24	12	32	80.6	33	15	33

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Proposed Site Access	76.6	7	5	88	55.1	3	3	89
A29 (South)	71.6	23	12	24	54.3	17	10	16
Meadow Way	71.1	5	3	97	77.2	5	3	124
	Cycle Time: 240s Overall PRC: 17.5%				Cycle Time: 240s Overall PRC: 11.7%			

3.3.17. As can be seen above, neither the Mean Maximum Queue (MMQ) or the Uniform Queue at the end of the red phase (UQ End Red) on the A29 (south) arm would extend back through the level crossing. The junction is able to operate within its theoretical capacity within both the AM and PM peak, with the maximum queue length being reached being 33pcu (190m) in the A29 (north) arm in the PM peak, reaching just south of the existing junction of A29 / The Cornfield.

Table 3-4 - 2031 Do-Something AM and PM Baseline + Development + BEW (Level Crossing)

Arm	AM				PM			
	DoS (%)	MMQ (pcu)	UQ End Red (pcu)	Delay (s/pcu)	DoS (%)	MMQ (pcu)	UQ End Red (pcu)	Delay (s/pcu)
A29 (South)	88.9	155	103	172	53.0	69	44	43
A29 (North)	75.7	118	75	130	56.6	76	47	45
	Cycle Time: 3600s Overall PRC: 1.2%				Cycle Time: 3600s Overall PRC: 59.0%			

3.3.18. In this scenario, in the AM peak, the MMQ on A29 (North) is forecast 118pcu (679m), and the UQ End Red is 75pcu (432m). This suggests that the moving queue (MMQ) would extend back through the proposed access junction, however that the stationary queue at end of the red phase would not. In the PM peak, neither the MMQ nor the UQ End Red extend from the level crossing through the proposed access junction.

Summary of Junction Capacity Assessments with Level Crossing

3.3.19. In summary, the additional junction assessments undertaken found that there would be interactions of queueing between the proposed access junction and the existing level crossing in the following scenarios:

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- 2031 DS + Development: in the AM peak, the moving queue (MMQ) from the northern arm of the level crossing will block through the proposed access junction.
- 2031 DS + Development + BEW: in the AM peak, the moving queue (MMQ) from the northern arm of the level crossing will block through the proposed access junction.

3.3.20. The stationary queue at the stop line (UQ End Red) did not extend beyond between the junction and level crossing any scenario. In the AM peak the moving queue (MMQ) is forecast to extend between the northern arm of the level crossing and site access junction (southbound direction). However, the northbound queue from the site access is not forecast to reach the level crossing in either the AM or PM peaks.

3.4. Impact of Timetable Changes of Level Crossing Closure Times

3.4.1. National Rail has made the following comment regarding updates the West Coastway Line timetable and its impact on closure times and queue lengths at the Woodgate level crossing.

3.4.2. Network rail concern is around the cumulative impact, from both this application and the BEW application on the Woodgate Level Crossing. The TA does not reference the timetable changes that will affect the West Coastway Line from 3rd June 2024. The changes will see an increase in the number of stopping and non-stopping services align this route to and from Barnham station which will see an increase in downtime for the barriers at Woodgate Level Crossing.

Site Access Junction and Level Crossing Sensitivity Test

3.4.3. National Rail changed their timetables on the West Coastway Line on the 3rd June 2024. To understand the impacts of the new timetable on the level crossing closures, we undertaken a review, this is summarised in **Table 3-5**.

Table 3-5 – Total trains passing though the level crossing.

	Eastbound	Westbound	Total trains passing through level crossing
AM Peak	7	7	14
PM Peak	6	6	12

3.4.4. A review of the proposed timetable suggests that in the AM peak there will be a total of eight level crossing closures lasting a total of 33 minutes of the hour, and in the PM peak there will be 10 level crossing closures, lasting 24 minutes out of the total hour. Further information regarding how level crossing closures were calculated is contained within **Appendix D**.

3.4.5. However, in order to ensure a robust assessment of the level crossing and associated queue lengths, a further sensitivity test has been undertaken of the site access and level

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crossing. In this sensitivity test, each level crossing closure within either peak hour was extended for one minute beyond the assessments included in Section 3.3. The level crossing closure minutes in each peak hour in the various assessment are set out in **Table 3-6**.

Table 3-6 – Level crossing closure minutes in peak hours

	Minutes within hour level crossing is modelled as closed	
	AM Peak	PM Peak
Original Assessment	30 minutes	19 minutes
Sensitivity Test	36 minutes	27 minutes

3.4.6. A summary of the results of the sensitivity tests is provided in **Table 3-7** and **Table 3-8** for the same scenarios and using the same signal staging as presented in Section 3.3. The full inputs and outputs of the LinSig assessment is provided in **Appendix C**.

Table 3-7 – Access Junction, 2031 Baseline + Development (Sensitivity Test)

Arm	AM				PM			
	DoS (%)	MMQ (pcu)	UQ End Red (pcu)	Delay (s/pcu)	DoS (%)	MMQ (pcu)	UQ End Red (pcu)	Delay (s/pcu)
A29 (North)	68.1	20	11	31	78.7	32	15	33
Proposed Site Access	76.2	8	6	89	49.7	3	2	86
A29 (South)	65.7	19	11	23	48.6	15	10	17
Meadow Way	76.7	7	5	98	76.0	6	5	117
	Cycle Time: 240s Overall PRC: 17.3%				Cycle Time: 240s Overall PRC: 14.4%			

3.4.7. The proposed access junction continues to operate within its theoretical capacity in this sensitivity test, in both the AM and PM peak. The queueing on A29 (south) would not block back through the level crossing with a maximum MMQ of 19pcu (109m) and UQ End Red queue of 11pcu (64m).

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Table 3-8 – Level Crossing, 2031 Baseline + Development (Sensitivity Test)

Arm	AM				PM			
	DoS (%)	MMQ (pcu)	UQ End Red (pcu)	Delay (s/pcu)	DoS (%)	MMQ (pcu)	UQ End Red (pcu)	Delay (s/pcu)
A29 (South)	106.5	304	253	863	57.1	101	70	107
A29 (North)	85.8	117	95	212	67.1	132	84	123
	Cycle Time: 3600s Overall PRC: -18.3 %				Cycle Time: 3600s Overall PRC: 34.1%			

3.4.8. As can be seen above, in this scenario, the operation of the access junction sees only minor impacts a result of the extended level crossing closures, the level crossing itself however sees extended queueing. The A29 (North) arm sees 95pcu (547m) of stationary queueing (UQ End Red) in the AM peak, which would reach the proposed access junction.

3.4.9. In the PM peak, the moving MMQ is forecast to be 132pcu (759m) on the northern side of the level crossing which would extend back through the proposed access junction. The stationary queue (UQ End Red) however would not, reaching a length of 84pcu (483m)

Table 3-9 - Access Junction, 2031 Baseline + Development + BEW (Sensitivity Test)

Arm	AM				PM			
	DoS (%)	MMQ (pcu)	UQ End Red (pcu)	Delay (s/pcu)	DoS (%)	MMQ (pcu)	UQ End Red (pcu)	Delay (s/pcu)
A29 (North)	68.8	20	12	28	80.6	33	15	33
Proposed Site Access	76.6	7	5	88	55.1	3	3	89
A29 (South)	63.4	19	11	21	54.3	17	10	16
Meadow Way	71.1	5	3	97	77.2	5	3	124
	Cycle Time: 240s Overall PRC: 17.5%				Cycle Time: 240s Overall PRC: 11.7%			

3.4.10. The proposed access junction continues to operate within its theoretical capacity in this sensitivity test, in both the AM and PM peak. In the AM peak the A29 (south) approach has a MMQ of 19pcu (110m) and UQ End Red queue of 11 pcu (64m) whilst in the PM peak the MMQ is forecast to be 17pcu (98m) and UQ End Red queue will be 10pcu (58m). This queueing will not extend back between the access junction and level crossing.

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Table 3-10 – Level Crossing, 2031 Baseline + Development + BEW (Sensitivity Test)

Arm	AM				PM			
	DoS (%)	MMQ (pcu)	UQ End Red (pcu)	Delay (s/pcu)	DoS (%)	MMQ (pcu)	UQ End Red (pcu)	Delay (s/pcu)
A29 (South)	113.0	457	383	1387	66.3	130	83	112
A29 (North)	96.1	158	128	301	70.8	146	90	120
	Cycle Time: 3600s Overall PRC: -25.6%				Cycle Time: 3600s Overall PRC: 27.1%			

3.4.11. **Table 3-10** shows that in the sensitivity test, the MMQ is forecast to be 158pcu (909m) and the UQ End Red queue is forecast to reach 128pcu (736m), both of which would extend back through proposed site access junction. In the PM peak, however, only the MMQ is forecast to extend through the access junction but the UQ Red queue is not, with the latter reaching a length of 90pcu (518m).

Summary of Level Crossing Sensitivity Test

3.4.12. These sensitivity tests assess the potential impact that extended level crossing closures would have on the operation of the access junction, and queueing at the level crossing itself.

3.4.13. The level crossing is forecast to block back through the access junction in the following scenarios:

- 2031 Baseline + Development (Sensitivity Test) AM peak, MMQ and UQ End Red both queue back through the access junction;
- 2031 Baseline + Development (Sensitivity Test) PM peak, MMQ queues back through the access junction, and the stationary (UQ End Red) queue would not;
- 2031 Baseline + Development + BEW (Sensitivity Test) AM peak, MMQ and UQ End Red both queue back through the access junction; and
- 2031 Baseline + Development +BEW (Sensitivity Test) PM peak, MMQ queues back through the access junction, and the stationary (UQ End Red) queue would not.

3.4.14. However, it should be highlighted that the sensitivity tests presented in **Table 3-7** to **Table 3-10** present a very robust assessment of level crossing closures, with an assumption that the crossing will be closed for 36 minutes of the AM peak hour and 27 minutes of the PM peak hour. This is an increase of six and eight minutes respectively above closures times surveyed the level crossing in 2022.

3.4.15. From reviewing the new timetable however (as shown in paragraph 3.4.3 to 3.4.5) it is anticipated that the increase in trains on the West Coastway Line will actually have little impact on the number of times the level crossing is closed and will not reach extent of level

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crossing closures modelled in these sensitivity tests the due to the times that these services will pass through the level crossing.

3.4.16. It is also important to highlight that the sensitivity tests presented in **Table 3-7** to **Table 3-10** show that the UQ Red End queue is only forecast to queue back through the junction in the 2031 Do Something + BEW scenario. This means that it is traffic associated with the wider BEW Parcel SC1 site that leads to stationary queuing through the junction rather than the Cala Homes development.

3.5. Impact of Additional Pedestrian Trips on Level Crossing

3.5.1. National Rail made the following comment on the impacts of additional pedestrian trips on the Woodgate level crossing:

The impact of usage of the level crossing has been fully considered, especially around its use by pedestrians. The creation of new pedestrian's links with the BEW development will likely see a rise in footfall, particularly given the proximity of the existing Aldingbourne Primary School.

Applicant's Response

3.5.2. To respond to this comment, it is necessary to consider the number of pedestrian trips that will be generated by the Proposed Development, in addition to their likely origins or destinations to determine the potential impact on Woodgate level crossing

3.5.3. Table 3-6 of the originally submitted TA contained the mode share from the 2011 Census for the Barnham ward in which the proposed development is located. This suggests that 5.76% of the existing population in this ward currently travel to work on foot. Table 6-4 of the originally submitted TA suggest 236 total two-way person trips in the AM peak, and 249 total two-way person trips in the PM peak. The pedestrian trips to and from the site are set out in **Table 3-11**.

Table 3-11 – Total pedestrian trip generation

Time Period	Arrival	Departure	Two-way
AM	4	10	14
PM	10	5	15

3.5.4. When combining the above trip generation with the trip distribution set out in Table 6-5 of the originally submitted TA, which showed 17.6% of trips in the AM peak and 19.6% of trips in the PM peak arriving / departing to / from A29 (south), where the level crossing is located. This is as the majority of employment, education and other facilities trips which are likely to generated will be north facing, as there is very little development to the south. For example, Westergate village centre, Aldingbourne Community Sports Centre, Aldingbourne Primary School, Ormiston Six Villages Academy, Eastergate Church of England Primary School and

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Barnham village centre are all trip attractors that can be reaches from the site without using the Woodgate level crossing.

3.5.5. Therefore, the number of pedestrians likely to be impacted by level crossing closures is as show in **Table 3-12**.

Table 3-12 – Pedestrians impacted by level crossing closures.

Time Period	Arrival	Departure	Two-way
AM	1	2	3
PM	2	1	3

3.5.6. As can be, seen it is forecast that a maximum of three pedestrian trips from the site will be impacted by level crossing closures in either peak period. This cannot be considered a significant impact.

Access to Aldingbourne Primary School

3.5.7. Aldingbourne Primary School is located approximately 250m south of the proposed access junction, on the western side of the carriageway on A29 Westergate Street. The proposed signalised crossings on Meadow Way and the A29 Westergate Street at the access junction ensures that continuous, segregated pedestrian access is available between the site and Aldingbourne Primary School. This provision will ensure safe crossing of the A29 that will not impact upon the Woodgate level crossing.

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4. Impact on Strategic Road Network

4.1. Introduction

4.1.1. This section provides detailed responses to National Highways comments received on the trip generation, Travel Plan, and junction capacity assessments completed for junctions on the A27.

4.2. Policy Context – DfT Circular 01/2022

4.2.1. DfT Circular 01/2022 states that transport planning should move away from 'predict and provide' to a methodology where the Transport Assessment starts within a vision of what the development proposals are seeking to achieve, before testing scenarios that determine the optimum design and transport infrastructure required to meet this vision.

4.2.2. The proposed Cala Homes development forms part of the Barnham Eastergate Westergate strategic allocation which under Policy H SP2c of the Arun Local Plan 2011-2031 must include the following:

The development must include at least 2,300 dwellings, provide a new community hub, high quality imaginative design layout for pedestrians, cyclists, equestrians and vehicles, access to local community, recreational and shopping facilities, jobs and accessible transport.

4.2.3. Further to this, in November 2020 Arun District Council approved a Framework Masterplan for the BEW strategic allocation, which provided guidance (the vision) for all future planning applications on the site to demonstrate how the requirements of Policy H SP2c can be delivered. In relation to highways and transport the masterplan includes the following commitments:

- Delivery of the realigned A29 include a bridge across the railway line;
- Integration with existing pedestrian and cycle links to the surrounding villages;
- Delivery of an East-West link between the existing A29 and realigned A29; and
- Establishment of a sustainable link to Barnham railway station.

4.2.4. The masterplan also states that infrastructure will be provided in a timely manner to mitigate the impact of the development.

4.2.5. The vision for the development has therefore already identified through the adopted policy contained within the Arun Local Plan 2011-2031 and approved Framework Masterplan.

Trip Generation

4.2.6. In relation to the vision for the development identified within a review has been undertaken of the trip generation used within the TA. An estimate of vehicle trip generation for the Cala Homes development has been calculated using residential trip rates derived from a traffic survey of Meadow Way and Ivy Lane, undertaken on 1st March 2022. This uses the same methodology as the Transport Assessment produced in support of planning application

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AL/15/17/PL. The traffic flow recorded was divided by the number of properties located within the Meadow Way and Ivy Lane cul-de-sac to determine the trip rates recorded in **Table 4-1** with resultant trip generation also shown in **Table 4-2**.

Table 4-1 - Vehicle Trip Rates used in TA.

Time Period	Arrival	Departure	Two-way
AM	0.151	0.382	0.533
PM	0.290	0.142	0.432

Table 4-2 - Vehicle Trip Generation used in TA.

Time Period	Arrival	Departure	Two-way
AM	60	153	213
PM	116	57	173

4.2.7. This is deemed to be a more representative method than using the TRICS database due to the close proximity of the traffic surveys to the proposed site.

4.2.8. By way of comparison, the trip rates derived from the Chichester Area Transport model (CATM) and used for all assessments of the BEW strategic allocation (planning application BN/11/22/OUT) and Land Est of Bersted (planning application BE/134/22/OUT) are shown in **Table 4-3** below. It is noted that these trip rates have been accepted by National Highways

Table 4-3 - Vehicle Trip Rates Derived from CATM

Time Period	Arrival	Departure	Two-way
AM	0.124	0.324	0.448
PM	0.312	0.161	0.473

4.2.9. The trips rates presented in **Table 4-3** would result in a net change in trip generation of approximately 34 and 17 vehicles across the AM and PM peaks, respectively. Furthermore, when considering the assumed trip distribution to / from the Cala Homes site, the difference in vehicles using the Strategic Road Network would be 24 in the AM peak and 12 in the PM peak.

4.2.10. These trips rates, whilst different to those used in the TA for the Cala Homes development are considered to be comparable. The trip rates used to assess other parts of the BEW strategic allocation have however been derived to consider the strategic nature and mixed-

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land-use of the masterplan. As such, when considering comparable nature of the trip generation estimates, it is not considered necessary to revise those used within the TA to reflect the vision of the BEW masterplan.

Use of Trip Generation in Determining Need for Mitigation

4.2.11. As noted in paragraph 4.2.1, DfT Circular 01/2022 aims to move away from transport planning methodology that predicts future travel demand and provides associated transport mitigation. In relation to mitigation schemes identified to support the Cala Homes development (and wider BEW strategic site), such mitigation was identified within the 2016 Arun Transport Study and 2017 Enterprise Bognor Regis Transport Review. The requirement for financial contributions towards these schemes was then confirmed through the Arun Infrastructure Delivery Plan (2016) WSCC / Arun District Council Local Plan Transport Mitigation Apportionment Study (2020). This has resulted in the following S106 contributions being requested by WSCC as part of this consultation response to the planning application for A27 improvements:

- £101,395.35 towards the A27 Fontwell East roundabout improvement scheme;
- £141,441.86 towards the A27 Fontwell West roundabout improvement scheme (already completed); and
- £30,511.63 towards the A27 / B2233 Nyton Road junction.

4.2.12. In relation to each of these contributions WSCC state that level of contribution, how it is to be used and / or how the works are delivered is to be agreed with National Highways. It is therefore considered that the option to move away from a predict and provide methodology is already in place with the potential for the S106 contributions to be used towards alternative schemes as appropriate. Indeed, the revised junction capacity assessments included in Section 4.4 show that the existing A27 junctions can accommodate traffic associated with the Cala Homes development in 2031 and that it is the wider Local Plan development that requires the identified mitigation schemes in the forecast year of 2038.

4.2.13. Based upon the above, the TA is considered to be policy compliant with DfT Circular 01/2022.

4.3. Impact of Trip Rates of Modal Shift

The trip rates should be reviewed considering the proposed vision for the development and the measures which are planned to achieve the vision. The impact on the trip rates (e.g. modal shift to sustainable transport modes) should be identified.

4.3.1. The impact of the mode shift which is planned to be achieved via the Travel Plan (15% reduction in private car trips) has now been assessed. The adjusted modal split following the achievement of the 15% reduction of private car trips is set out below in comparison to the existing mode split as set out in Table 3-6 of the originally submitted TA. The Mode shift set out aligns with that which is set out in the targets in Table 4-2 of the Travel Plan which is included in **Appendix D** of this document.

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4.3.2. These mode shift targets should be considered in the context of the wider BEW strategic allocation, noting that the ability to achieve significant levels of mode shift away from private car use will likely be limited until such time that additional infrastructure becomes available. For example, it is anticipated that mode shift to cycling and public transport would be limited in the short term but is likely to see a significant improvement once the East-West Link Road is fully constructed. This is because of the high quality and direct route to local facilities that will be provided within Parcel SC1 (including schools and local centre) and Barnham railway station whilst it will also not be possible to run a bus through the site until this link is complete.

4.3.3. The ability to achieve these targets in the short term will therefore be dependent upon measures outside of the control of Cala Homes but it is considered to set robust targets at the outset rather than a lower mode shift target which is not aligned with the vision for the development.

Table 4-4 - Mode split adjustments based upon Travel Plan targets.

	Existing Mode Split (Census 2011)	Adjusted Mode Split (Travel Plan Year 5 Target)	Net Change
Working from home	8.1%	10.1%	+2.0%
Train	8.3%	9.3%	+1.0%
Bus, Minibus, Coach	0.5%	3.5%	+3.0%
Taxi	0.1%	0.1%	-
Motorcycle, Scooter, Moped	0.8%	1.8%	+1.0%
Driving a Car	69.5%	54.5%	-15.0%
Passenger in Car	4.3%	6.3%	+2.0%
Bicycle	2.2%	5.2%	+3.0%
On Foot	5.8%	8.8%	+3.0%
Other	0.4%	0.4%	-

4.3.4. To understand the impact this vision mode share would have on trips to / from the development site, the adjusted modal split has been applied to the previously calculated two-way trip generation set out within Table 6-4 of the originally submitted TA.

Table 4-5 – Trip generation adjustments based upon Travel Plan targets.

	AM Peak (two-way trips)			PM Peak (two-way trips)		
	Baseline Trips	Target Trips	Net Chage	Baseline Trips	Target Trips	Net Chage
Working from home	19	24	+5	20	25	+5
Train	20	22	+2	21	23	+2

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Bus, Minibus, Coach	1	8	+7	1	9	+7
Taxi	0	0	-	0	0	-
Motorcycle, Scooter, Moped	2	4	+2	2	4	2
Driving a Car	164	129	-35	173	136	-37
Passenger in Car	10	15	+5	11	16	+5
Bicycle	5	12	+7	5	13	+7
On Foot	14	21	+7	14	22	+7
Other	1	1	-	1	1	0

4.3.5. As can be seen above, the mode shift which could be achieved by the Travel Plan would result in 35 less private car trips in the AM peak and 37 less in the PM peak. It should be noted that this is a five-year target, and that as the wider development of the BEW site is implemented, the complimentary infrastructure is likely to further encourage bus and cycle trips beyond the five-year targets assessed above.

4.4. Updated Junction Capacity Assessments

Introduction

4.4.1. Comments provided by National Highways requested that updates be made to the junction capacity assessments which were included in the original TA for the following junctions on their network:

- Fontwell East Roundabout;
- Fontwell West Roundabout; and
- A27 / Nyton Road Junction.

4.4.2. This section contains details of the updates made the junction capacity models as a result of National Highways comments, as well as providing updated summaries of the results of the junction capacity assessments included.

4.4.3. The full inputs and outputs of the updated modelling undertaken are included in **Appendix F**.

Fontwell East Roundabout

4.4.4. Geometry has been updated in this model to match the outputs of the modelling undertaken for this junction listed under application BE/134/22/OUT.

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Table 4-6 – A27 / A29 2031 Do-Nothing (Scenario 1) Junction Capacity Assessment

Arm	Approach	AM Peak			PM Peak		
		RFC	Total Delay	Modelled Queue	RFC	Total Delay	Modelled Queue
A	A29 (East)	0.59	8	2	0.86	27	7
B	A27 (South)	0.86	12	7	0.57	4	2
C	A27 (West)	0.68	5	3	0.78	6	4

4.4.5. The baseline 2031 scenario modelling shows that the junction is starting to operate at capacity, and congestion may be experienced. The A29 arm just exceeds the 0.85 RFC threshold in the PM peak, with a delay of 27 seconds and queue of 7 PCUs. The A27 (South) arm also reaches an RFC of 0.86 in the AM peak, with a delay of 12 seconds and queue of 7 PCUs.

4.4.6. The lowest RFC at the junction in on the A27 (South) arm in the PM peak, which is 0.57. This is a moderate figure but sits below the threshold of 0.85, at which congestion is likely to occur. The associated delay in the PM peak is 4 seconds, with a modelled queue of 2 PCUs.

Table 4-7 – A27 / A29 2031 Do-Something (Scenario 2) without BEW Parcel SC1 Junction Capacity Assessment

Arm	Approach	AM Peak			PM Peak		
		RFC	Total Delay	Modelled Queue	RFC	Total Delay	Modelled Queue
A	A29 (East)	0.59	7	2	0.87	28	7
B	A27 (South)	0.87	13	7	0.58	4	2
C	A27 (West)	0.69	5	3	0.79	6	4

4.4.7. The scenario 2 modelling outputs show the 2031 Do-Something results, which show the junction exceeds the threshold at which congestion is likely to occur but is still within capacity. The A29 (East) arm exceeds the 0.85 RFC threshold in the PM peak, reaching 0.87, with a delay of 28 seconds and a modelled queue of 7 PCUs. This is lower in the PM peak, with an RFC of 0.59.

4.4.8. The A27 (South) arm also exceeds the 0.85 RFC threshold, reaching 0.87 in the AM peak. This has an associated delay of 13 seconds and forecast queue of 7 PCUs. The A27 (West) arm is under the 0.85 RFC threshold in both peaks.

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4.4.9. This is a minimal decrease in capacity from the 2031 Do Nothing scenario. The RFC does not increase by more than 0.01 on any arm in either peak. The maximum increase in delay is by one second and there are no increases in forecast queue.

Table 4-8 – A27 / A29 2031 Do-Something with Phase 1 of BEW Parcel SC1 (Scenario 3) without BEW Junction Capacity Assessment

Arm	Approach	AM Peak			PM Peak		
		RFC	Total Delay	Modelled Queue	RFC	Total Delay	Modelled Queue
A	A29 (East)	0.58	8	2	0.92	40	10
B	A27 (South)	0.91	17	10	0.57	4	2
C	A27 (West)	0.70	5	3	0.79	6	5

4.4.10. The 2031 Scenario 3 modelling outputs show that the junction is forecast to operate within, but near capacity on some of its arms. The A29 (East) arm is nearing capacity in the PM peak, with an RFC of 0.92. This figure suggests that congestion will be experienced at the junction. This has an associated delay of 40 seconds and a forecast modelled queue of 10 PCUs. There is more available capacity in the AM peak, which has a lower RFC of 0.58. Delay and queueing is also lower in the AM peak, forecasting eight seconds delay and a queue of two PCUs.

4.4.11. The A27 (South) arm is also nearing capacity in the AM peak, with an RFC reaching 0.91. Forecast delay in this period is 17 seconds and the modelled queue is 10 PCUs. This is lower in the PM peak, with an RFC of 0.57, delay of four seconds and queue of two PCUs.

4.4.12. The A27 (West) arm operates below the RFC threshold at which congestion is expected (0.85) in both peak periods. This is 0.70 in the AM peak and 0.79 in the PM peak. Delay and queueing is minimal in both peaks, with the delay reaching six seconds and the queue reaching five PCUs in the PM peak.

4.4.13. There is a slightly bigger decrease in capacity from the 2031 Do Nothing scenario in comparison to Scenario 1. The largest increase in RFC is experienced on the A29 (East) arm in the PM peak, which increases by 0.06. The delay also increases by 13 seconds to 40 seconds, and the forecast queue increases by 3 PCUs, resulting in 10 forecast PCUs.

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Table 4-9 – A27 / A29 2038 Do-Something (Scenario 4) Junction Capacity Assessment

Arm	Approach	AM Peak			PM Peak		
		RFC	Total Delay	Modelled Queue	RFC	Total Delay	Modelled Queue
A	A29 (East)	0.64	9	2	1.06	134	40
B	A27 (South)	1.00	57	37	0.62	5	2
C	A27 (West)	0.78	7	4	0.84	8	6

4.4.14. In the final scenario, the Fontwell East Roundabout is forecast to reach capacity. Specifically, the A29 (East) arm exceeds capacity by 6% in the PM Peak, with an RFC of 1.06. This has a forecast delay of 134 seconds and a modelled queue of 40 PCUs. This is not the case in the AM peak however, and the RFC remains under the congestion threshold at 0.64.

4.4.15. The A27 (South) also reaches capacity, with an RFC of 1.00 in the AM peak. The delay and queue are forecast to reach 57 seconds and 37 PCUs respectively. This is lower in the PM peak, where the RFC is forecast at 0.62 with minimal delays of five seconds and queues of two PCUs.

4.4.16. The A27 (West) arm does not exceed the threshold where congestion is likely to occur, however in the PM peak the RFC is just below this threshold at 0.84. Delays in this period are forecast at eight seconds, with a modelled queue of six PCUs. The AM peak has slightly more available capacity, with the RFC at 0.78.

4.4.17. This is a more notable decrease in capacity from the 2031 Do Nothing scenario in the outputs for the 2038 Do Something Scenario 4 assessment. The largest increase in RFC is experienced on the A29 (East) arm in the PM peak, which increases by 0.20. There is also a notable increase in delay length, which is 134 seconds, a 107 second increase. The forecast queue also increases by 33 PCUs.

Fontwell East Roundabout – Local Plan Mitigation Scheme

4.4.18. As the Fontwell East Roundabout Junctions 10 model forecasts the junction to exceed capacity in 2038, a signalised model has been prepared in LinSig aligned with the Local Plan mitigation scheme. The modelled has been prepared to align with the previously submitted application BE/134/22/OUT. The traffic flows entered match the flows from Scenario 4 of the Junctions 10 model for the same junction.

4.4.19. The results are presented in **Table 4-10** below.

Table 4-10 – A27 / A29 2038 Do-Something (Scenario 4) Junction Capacity Assessment – Signalised Roundabout

Arm	Approach	Movement	AM Peak				PM Peak			
			DoS %	Total Delay	MMQ	UQ ED	DoS %	Total Delay	MMQ	UQ ED
A	A29 (East)	Left	84.1	49	8	5	87.9	48	11	6
		Ahead	87.2	55	9	5	88.9	51	11	6
B	A27 Arundel Road (South)	Left	87.9	32	15	7	84.3	36	11	6
		Left	89.8	33	17	8	87.2	38	13	7
		Ahead	55.0	17	7	5	10.5	17	1	1
C	A27 (West)	Left	53.9	8	7	4	56.7	10	8	4
		Ahead	44.4	7	6	4	50.2	9	7	4
		Ahead	37.9	7	4	3	7.4	15	14	6
D	Southern Circ	Internal Ahead	38.8	29	6	6	39.6	21	8	8
		Internal Right Ahead	28.3	28	6	6	37.7	20	8	8
		Internal Right	0.0	0	0	-	0.0	0	0	-
E	Western Circ	Internal Ahead	36.3	30	2	2	0.0	0	0	-
		Internal Right Ahead	51.9	32	3	3	4.4	11	1	1
		Internal Right	26.7	29	2	1	8.9	11	1	1
F	Eastern Circ	Ahead	47.0	4	3	1	53.0	5	5	1
		Ahead	44.2	5	4	3	74.3	7	3	2
		Right Ahead	7.8	11	2	2	3.5	11	1	1
Overall PRC / Cycle Time			0.3% PRC and 60s Cycle Time				1.2% PRC and 60s Cycle Time			

4.4.20. The results in **Table 4-10** show that when signalising the junction, the junction is able to operate at its theoretical capacity in both the AM and PM peak. In the AM Peak, the PRC is 0.3%, and in the PM Peak the PRC is 1.2%, meaning that there is spare capacity available at the junction. The forecast stationary queue (UQ ED) on the circulatory reaches eight PCUs, which could possibly cause congestion through the junction.

ARUN DISTRICT COUNCIL AL/11/24/OUT

Fontwell West Roundabout

4.4.21. Updates to the geometries of the LingSig model for Fontwell West Roundabout have been made in line with the comments provided by National Highways on this model. The updates made to the geometries are summarised below:

- Review undertaken of turning radii for all signalised arms;
- Update to lane widths on A27 (north);
- Updated of lane lengths on Arundel Road;
- Update of lane widths and lane lengths on A29 Fontwell Avenue; and
- Update of lane widths and lane lengths on A27 (west).

4.4.22. The input traffic flows remain unchanged from the originally submitted TA. A summary of the updated results for all scenarios is included in Table 4-11 through Table 4-14 below. The results for the 2031 Do Something scenario with the additional traffic from BEW Parcel SC1 again shows a slight worsening comparative to the baseline conditions. The moving queue (MMQ) on the A27 north arm increases from 13 PCU in the 2031 baseline to 26 PCU in this scenario.

4.4.23. However, the junction is still able to operate at its theoretical capacity in the AM peak and within its theoretical capacity in the PM peak. The forecast stationary queue (UQ ED) on the circulatory does not alter significantly from the 2031 base scenario.

Table 4-11 – A27 / A29 2031 Do-Nothing (Scenario 1) Junction Capacity Assessment Fontwell West Roundabout

Arm	Approach	AM Peak				PM Peak			
		DoS %	Total Delay	MMQ	UQ ED	DoS %	Total Delay	MMQ	UQ ED
A	A27 (north)	73.1	10	13	5	78.6	18	15	7
B	Arundel Road	8.8	2	0	-	9.0	2	0	-
C	Fontwell Avenue	92.3	31	17	-	44.6	5	2	-
D	A27 (west)	57.6	10	7	4	77.6	8	9	4
E	Circ (north)	83.5	50	7	4	80.7	31	10	6
F	Circ (west)	53.5	14	4	2	44.1	36	10	6
Overall PRC/ Cycle Time		-2.5% PRC and 60s Cycle Time				12.3% PRC and 60s Cycle Time			

4.4.24. The results in Table 4-11 show that in the 2031 baseline, the junction is able to operate at its theoretical capacity in the AM peak and within it its theoretical capacity in the PM peak. The stationary queue (UQ ED) forecast on the circulatory is six PCU, in theory this may block back through the junction.

ARUN DISTRICT COUNCIL AL/11/24/OUT

Table 4-12 – A27 / A29 2031 Do-Something without BEW Parcel SC1 (Scenario 2) Junction Capacity Assessment Fontwell West Roundabout

Arm	Approach	AM Peak				PM Peak			
		DoS %	Total Delay	MMQ	UQ ED	DoS %	Total Delay	MMQ	UQ ED
A	A27 (north)	71.6	9	12	5	79.6	18	15	7
B	Arundel Road	8.9	2	0	-	9.1	2	0	-
C	Fontwell Avenue	94.1	35	18	-	45.6	5	2	-
D	A27 (west)	59.0	11	7	4	77.7	8	9	4
E	Circ (north)	93.2	82	9	4	80.4	31	10	6
F	Circ (west)	51.6	12	4	2	45.6	37	3	2
Overall PRC/ Cycle Time		-4.5% PRC and 60s Cycle Time				11.9% PRC and 60s Cycle Time			

4.4.25. The results for the 2031 Do Something scenario, which includes the build out of the Cala Homes site shows a slight worsening comparative to the baseline, but the junction is still able to operate at its theoretical capacity in the AM peak and within it its theoretical capacity in the PM peak. The maximum increase in queueing seen is two PCU on the northern circulatory which increases the queue from seven PCU to nine PCU .

4.4.26. The forecast stationary queue (UQ ED) on the circulatory does not alter significantly from the 2031 base scenario.

Table 4-13 – A27 / A29 2031 Do-Something with BEW Parcel SC1 (Scenario 3) Junction Capacity Assessment Fontwell West Roundabout

Arm	Approach	AM Peak				PM Peak			
		DoS %	Total Delay	MMQ	UQ ED	DoS %	Total Delay	MMQ	UQ ED
A	A27 (north)	95.3	39	26	9	82.9	22	16	8
B	Arundel Road	10.2	2	1	-	5.5	2	0	-
C	Fontwell Avenue	95.9	45	22	-	44.1	5	2	-
D	A27 (west)	58.6	11	7	4	78.9	8	9	4
E	Circ (north)	48.6	15	5	4	84.1	31	11	6
F	Circ (west)	57.9	13	5	3	50.5	40	3	2
Overall PRC/ Cycle Time		-6.6% PRC and 60s Cycle Time				7.0% PRC and 60s Cycle Time			

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4.4.27. The results for the 2031 Do Something scenario with the additional traffic from BEW Parcel SC1 again shows a slight worsening comparative to the baseline conditions. The moving queue (MMQ) on the A27 (north) arm increases from 13 PCU in the 2031 baseline to 26 PCU in this scenario.

4.4.28. However, the junction is still able to operate at its theoretical capacity in the AM peak and within it its theoretical capacity in the PM peak. The forecast stationary queue (UQ ED) on the circulatory does not alter significantly from the 2031 base scenario.

Table 4-14 – A27 / A29 2038 Do-Something (Scenario 4) Junction Capacity Assessment Fontwell West Roundabout

Arm	Approach	AM Peak				PM Peak			
		DoS %	Total Delay	MMQ	UQ ED	DoS %	Total Delay	MMQ	UQ ED
A	A27 (north)	93.7	32	25	8	88.3	25	19	8
B	Arundel Road	12.6	2	1	-	6.9	2	0	-
C	Fontwell Avenue	94.2	40	19	-	56.8	8	4	-
D	A27 (west)	63.0	11	7	4	82.3	9	9	4
E	Circ (north)	69.6	22	7	5	88.6	39	13	5
F	Circ (west)	60.4	12	5	2	61.8	41	4	3
Overall PRC/ Cycle Time		-4.7% PRC and 60s Cycle Time				1.6% PRC and 60s Cycle Time			

4.4.29. The results for the 2038 Do Something scenario continue to demonstrate that the junction is able to operate at its theoretical capacity in the AM peak and within it its theoretical capacity in the PM peak. The maximum stationary queue (UQ ED) forecast is eight PCU long on the A27 (north arm). The forecast stationary queue (UQ ED) on the circulatory does not alter significantly from the 2031 base scenario.

A27 / Nyton Road

4.4.30. Geometry has been updated in this model to match the outputs of the modelling undertaken for this junction listed under application BN/11/22/OUT.

Table 4-15 –A27 / Nyton Road 2031 Do-Nothing (Scenario 1) Junction Capacity Assessment

Arm	Approach	AM Peak			PM Peak		
		RFC	Total Delay	Modelled Queue	RFC	Total Delay	Modelled Queue

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B	B2233 Nyton Road	0.14	1	1	0.08	1	1
C	A27 (West)	0.43	18	1	0.68	25	3

4.4.31. The 2031 Do-Nothing scenario modelling outputs show the junction to be operating within capacity. The RFC, delay and modelled queue are very low on B2233 Nyton Road, with the RFC being higher in the AM peak at 0.14. Delay and queueing are minimal in both peaks, forecasting just one second and one PCU.

4.4.32. The A27 (West) arm has less available capacity, reaching an RFC of 0.68 in the PM peak. This is below the threshold at which congestion is expected to occur (0.85), however there is a delay of 25 seconds and a queue of 3 PCUs. This is lower in the AM peak, with an RFC of 0.43, a delay of 18 seconds and 1 PCU in the modelled queue.

Table 4-16 –A27 / Nyton Road 2031 Do-Something without BEW Parcel SC1 (Scenario 2) Junction Capacity Assessment

Arm	Approach	AM Peak			PM Peak		
		RFC	Total Delay	Modelled Queue	RFC	Total Delay	Modelled Queue
B	B2233 Nyton Road	0.16	1	1	008	1	1
C	A27 (West)	0.47	20	1	0.79	37	4

4.4.33. The Scenario 2 modelling outputs show that the junction experiences a minimal decrease in capacity. The most notable decrease in capacity occurs on the A27 (West) arm in the PM peak, where the RFC increase by 0.09, to 0.79. This is still below the threshold at which congestion is expected to occur. The delay increases by 12 seconds to 37 seconds and the modelled queue increases by one PCU to four.

4.4.34. There is plenty of spare capacity available on the B2233 Nyton Road arm, which experiences the higher RFC in the AM peak, reaching 0.16. Delays and queues are forecast at a minimal one second and one PCU for both peaks.

Table 4-17 –A27 / Nyton Road 2031 Do-Something with BEW Parcel SC1 (Scenario 3) Junction Capacity Assessment

Arm	Approach	AM Peak			PM Peak		
		RFC	Total Delay	Modelled Queue	RFC	Total Delay	Modelled Queue

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B	B2233 Nyton Road	0.16	1	1	0.09	1	1
C	A27 (West)	0.47	20	1	0.76	32	3

4.4.35. The Scenario 3 modelling outputs show an equal or smaller decrease in capacity than the previous. The largest increase in RFC is on the A27 (West) arm, this time increasing by 0.08, to 0.76. In the AM peak the RFC increases by 0.04 to 0.47. As before, the B2233 Nyton Road modelling results show plenty of available capacity, with minimal delay and queuing.

4.4.36. The junction is forecast to operate below the threshold at which congestion is expected to occur.

Table 4-18 –A27 / Nyton Road 2038 Do-Something (Scenario 4) Junction Capacity Assessment

Arm	Approach	AM Peak			PM Peak		
		RFC	Total Delay	Modelled Queue	RFC	Total Delay	Modelled Queue
B	B2233 Nyton Road	0.21	1	1	0.11	1	1
C	A27 (West)	0.52	22	2	0.79	39	4

4.4.37. The Scenario 4 modelling outputs show a more moderate decrease in capacity at the junction, however all arms are still operating within capacity, and below the threshold at which congestion is expected to occur.

4.4.38. The highest RFC is on the A27 (West) arm in the PM peak, which reaches 0.79. This has an associated delay of 39 seconds and a modelled queue of four PCUs. In the AM Peak, the RFC is 0.52, suggesting a large amount of available capacity remaining at the junction in this peak period. This has a forecast delay of 22 seconds and two PCUs in the queue.

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Appendix A

Interim Scenario Junction Capacity Assessment Outputs

Confidential

Junctions 10

ARCADY 10 - Roundabout Module

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Filename: 3-A29 - Barnham Road AM 2021 dev 2028.j10
Path: \\uksou1ser01\Projects\70013258 - Land at Westergate -Cala Homes\D Design and Analysis\Transport\2022 TA\01092023_Updated Files\Junction Models_Updated\Revised Geometry
Report generation date: 14/06/2024 08:55:29

»A29 - Barnham Road - 2028 Base AM + Dev + Barratt, AM
»Junction Network
»Arms
»Traffic Demand
»Origin-Destination Data
»Vehicle Mix
»Detailed Demand Data
»Results

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
A29 - Barnham Road - 2028 Base AM + Dev + Barratt				
A - Barnham Road B2233	2.0	10.42	0.67	B
B - Nyton Road A29	0.9	3.82	0.47	A
C - Fontwell Avenue A29	1.0	7.66	0.50	A

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

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

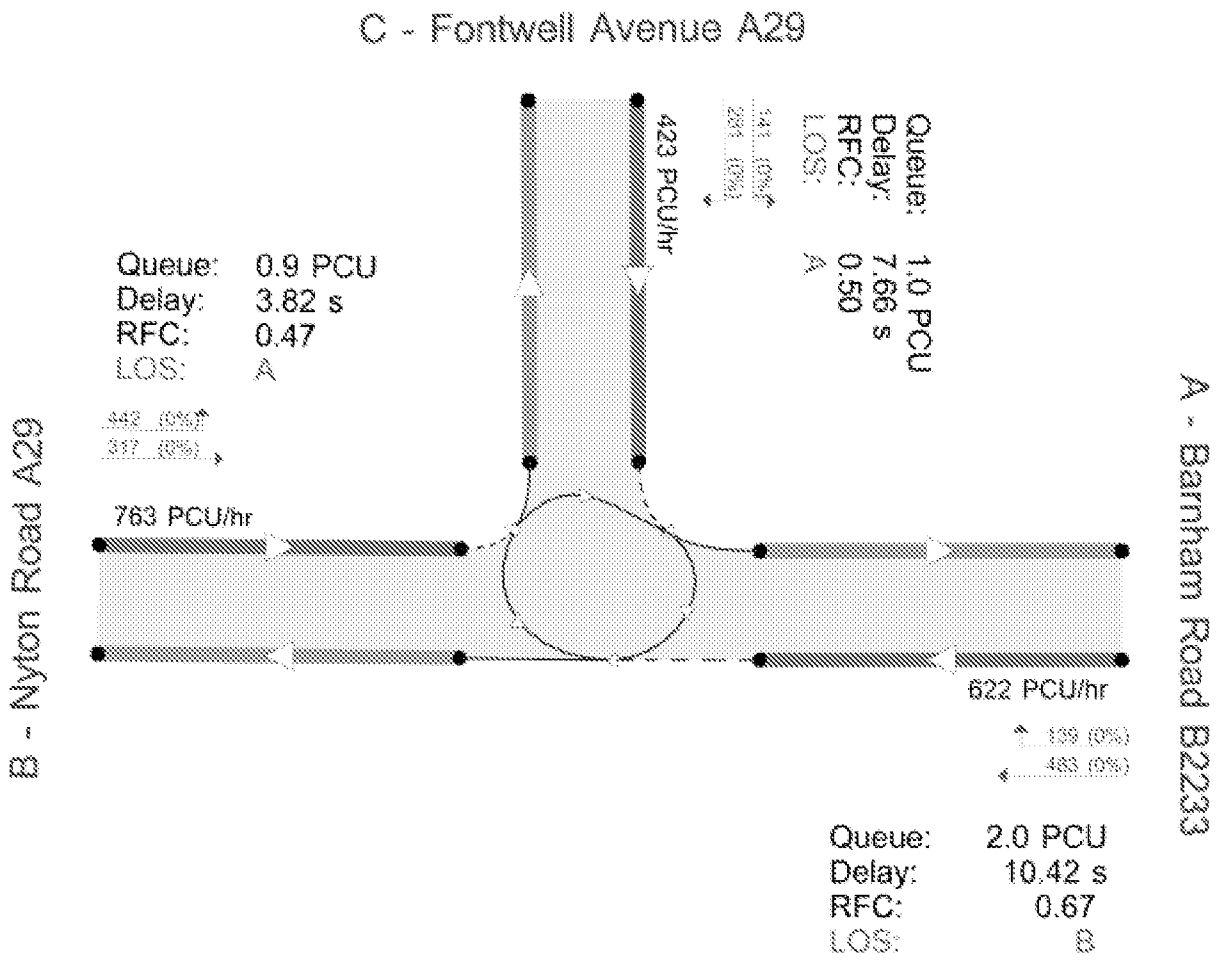
File summary

File Description

Title	A29 - Barnham Road
Location	
Site number	
Date	30/02/2012
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	wkhv001 [W11UK0378]
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	A29 - Barnham Road	✓	100.000	100.000

A29 - Barnham Road - 2028 Base AM + Dev + Barratt, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Nyton Road A29 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Demand Sets	D9 - 2028 Base AM + Dev + Barratt, AM	Demand Set 15: Scenario Name includes Time Period Name ('AM'). Are you sure this is correct?
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C	6.99	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.99	A

Arms

Arms

Arm	Name	Description	No give-way line
A	Barnham Road B2233		
B	Nyton Road A29		
C	Fontwell Avenue A29		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A - Barnham Road B2233	2.84	4.39	21.8	82.0	25.0	17.0		
B - Nyton Road A29	4.57	6.19	41.3	97.5	25.0	25.0		
C - Fontwell Avenue A29	3.83	4.83	0.7	7.7	25.0	93.0		

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Direct intercept adjustment (PCU/hr)
A - Barnham Road B2233	Direct	(ARCADY 6 CT10 Import)	-356
B - Nyton Road A29	Direct	(ARCADY 6 CT10 Import)	0
C - Fontwell Avenue A29	Direct	(ARCADY 6 CT10 Import)	-120

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - Barnham Road B2233	0.612	947
B - Nyton Road A29	0.719	1834
C - Fontwell Avenue A29	0.425	811

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

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - Barnham Road B2233	Direct		275
B - Nyton Road A29	Direct		0
C - Fontwell Avenue A29	Direct		275

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	2028 Base AM + Dev + Barratt	AM	ONE HOUR	07:15	08:45	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	Average Demand (PCU/hr)	Scaling Factor (%)
A - Barnham Road B2233		ONE HOUR	✓	822	100.000
B - Nyton Road A29		ONE HOUR	✓	783	100.000
C - Fontwell Avenue A29		ONE HOUR	✓	423	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Barnham Road B2233	B - Nyton Road A29	C - Fontwell Avenue A29
From	A - Barnham Road B2233	0	483	139
	B - Nyton Road A29	317	4	442
	C - Fontwell Avenue A29	141	281	1

Proportions

		To		
		A - Barnham Road B2233	B - Nyton Road A29	C - Fontwell Avenue A29
From	A - Barnham Road B2233	0.00	0.78	0.22
	B - Nyton Road A29	0.42	0.01	0.58
	C - Fontwell Avenue A29	0.33	0.66	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Barnham Road B2233	B - Nyton Road A29	C - Fontwell Avenue A29
From	A - Barnham Road B2233	0	0	0
	B - Nyton Road A29	0	0	0
	C - Fontwell Avenue A29	0	0	0

Average PCU Per Veh

		To		
		A - Barnham Road B2233	B - Nyton Road A29	C - Fontwell Avenue A29
From	A - Barnham Road B2233	1.000	1.000	1.000
	B - Nyton Road A29	1.000	1.000	1.000
	C - Fontwell Avenue A29	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:15-07:30	A - Barnham Road B2233	468	468
	B - Nyton Road A29	574	574
	C - Fontwell Avenue A29	318	318
07:30-07:45	A - Barnham Road B2233	559	559
	B - Nyton Road A29	686	686
	C - Fontwell Avenue A29	380	380
07:45-08:00	A - Barnham Road B2233	685	685
	B - Nyton Road A29	840	840
	C - Fontwell Avenue A29	466	466
08:00-08:15	A - Barnham Road B2233	685	685
	B - Nyton Road A29	840	840
	C - Fontwell Avenue A29	466	466
08:15-08:30	A - Barnham Road B2233	559	559
	B - Nyton Road A29	686	686
	C - Fontwell Avenue A29	380	380
08:30-08:45	A - Barnham Road B2233	468	468
	B - Nyton Road A29	574	574
	C - Fontwell Avenue A29	318	318

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Barnham Road B2233	0.67	10.42	2.0	B	571	856
B - Nyton Road A29	0.47	3.82	0.9	A	700	1050
C - Fontwell Avenue A29	0.52	7.56	1.0	A	388	582

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Barnham Road B2233	468	117	214	1092	0.429	465	348	0.0	0.7	5.723	A
B - Nyton Road A29	574	144	105	1518	0.378	573	575	0.0	0.5	2.887	A
C - Fontwell Avenue A29	318	80	241	984	0.324	317	438	0.0	0.5	5.381	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Barnham Road B2233	559	140	257	1065	0.525	558	418	0.7	1.1	7.071	A
B - Nyton Road A29	686	171	126	1803	0.380	685	689	0.5	0.6	3.218	A
C - Fontwell Avenue A29	380	95	288	954	0.398	380	523	0.5	0.6	5.157	A

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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Barnham Road B2233	685	171	314	1030	0.665	662	503	1.1	1.9	10.222	B
B - Nyton Road A29	840	210	153	1783	0.471	839	842	0.8	0.9	3.818	A
C - Fontwell Avenue A29	466	116	353	936	0.458	464	539	0.8	1.0	7.812	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Barnham Road B2233	685	171	315	1030	0.665	665	504	1.9	2.0	10.421	B
B - Nyton Road A29	840	210	154	1783	0.471	840	845	0.9	0.9	3.818	A
C - Fontwell Avenue A29	466	116	353	936	0.498	466	541	1.0	1.0	7.857	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Barnham Road B2233	559	140	258	1065	0.525	562	413	2.0	1.1	7.234	A
B - Nyton Road A29	686	171	127	1802	0.381	687	694	0.9	0.6	3.232	A
C - Fontwell Avenue A29	380	95	289	953	0.395	382	525	1.0	0.7	6.202	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Barnham Road B2233	468	117	216	1090	0.429	470	345	1.1	0.8	5.815	A
B - Nyton Road A29	574	144	106	1817	0.316	575	580	0.6	0.5	2.900	A
C - Fontwell Avenue A29	318	80	242	983	0.324	319	439	0.7	0.5	5.428	A

Junctions 10

ARCADY 10 - Roundabout Module

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Filename: 3-A29 - Barnham Road PM 2021 dev 2028.j10
Path: \\uksou1ser01\Projects\70013258 - Land at Westergate -Cala Homes\D Design and Analysis\Transport\2022 TA\01092023_Updated Files\Junction Models_Updated\Revised Geometry
Report generation date: 14/06/2024 08:59:46

»A29 - Barnham Road - 2028 Base PM + Dev + Barratt, PM
»Junction Network
»Arms
»Traffic Demand
»Origin-Destination Data
»Vehicle Mix
»Detailed Demand Data
»Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
A29 - Barnham Road - 2028 Base PM + Dev + Barratt				
A - Barnham Road B2233	0.1	4.34	0.08	A
B - Nyton Road A29	0.6	3.11	0.39	A
C - Fontwell Avenue A29	3.4	16.85	0.78	C

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

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

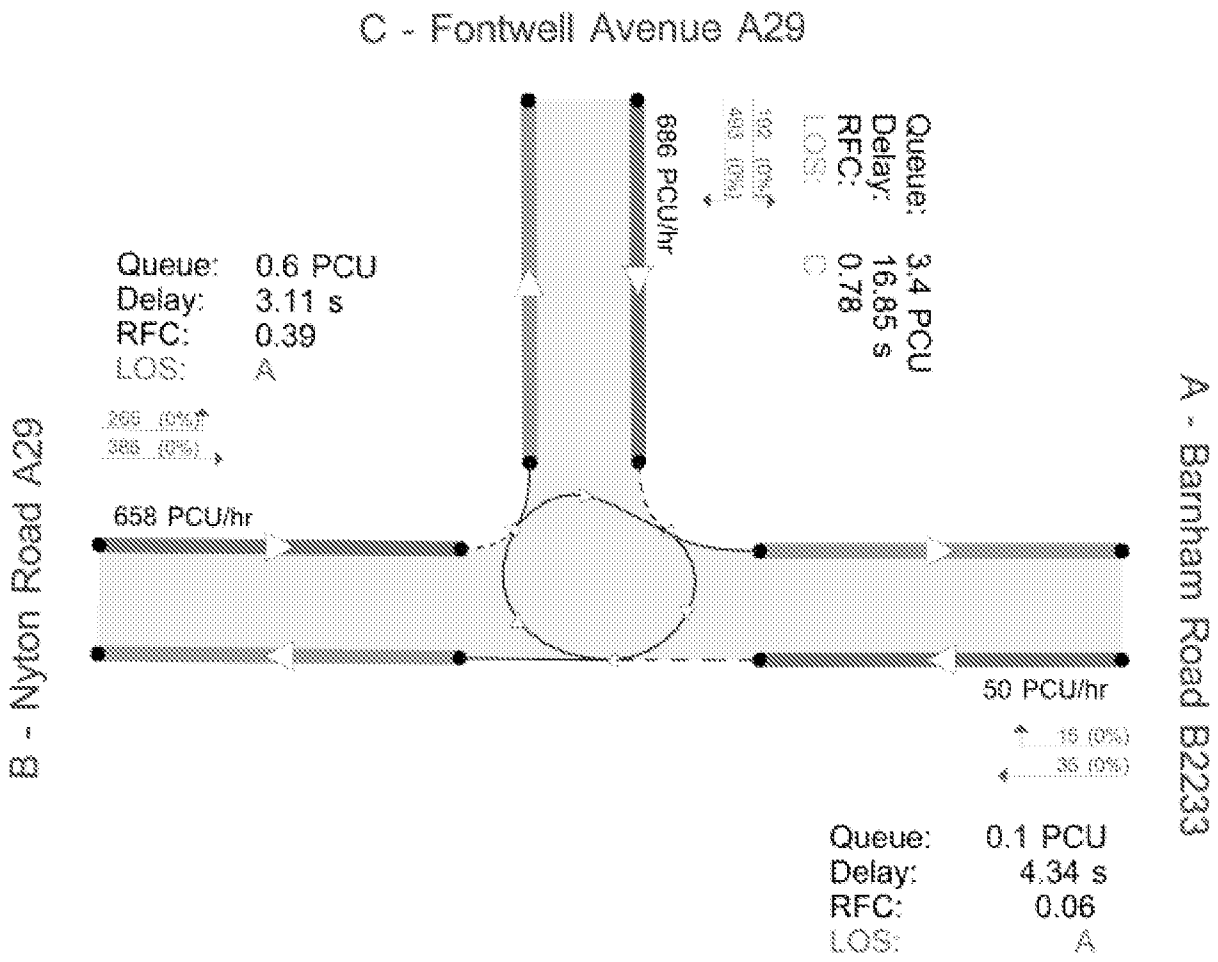
File summary

File Description

Title	A29 - Barnham Road
Location	
Site number	
Date	30/03/2018
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	[redacted]
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	A29 - Barnham Road	✓	100.000	100.000

A29 - Barnham Road - 2028 Base PM + Dev + Barratt, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	B - Nyton Road A29 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Demand Sets	D9 - 2028 Base PM + Dev + Barratt, PM	Demand Set 18: Scenario Name includes Time Period Name ('PM'). Are you sure this is correct?
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C	9.92	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	9.92	A

Arms

Arms

Arm	Name	Description	No give-way line
A	Barnham Road B2233		
B	Nyton Road A29		
C	Fontwell Avenue A29		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A - Barnham Road B2233	2.84	4.39	21.8	82.0	25.0	17.0		
B - Nyton Road A29	4.17	6.19	41.3	97.5	25.0	25.0		
C - Fontwell Avenue A29	3.83	4.83	0.7	7.7	25.0	93.0		

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Direct intercept adjustment (PCU/hr)
A - Barnham Road B2233	Direct	(ARCADY 6 CT10 Import)	-356
B - Nyton Road A29	Direct	(ARCADY 6 CT10 Import)	0
C - Fontwell Avenue A29	Direct	(ARCADY 6 CT10 Import)	-120

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - Barnham Road B2233	0.612	947
B - Nyton Road A29	0.719	1834
C - Fontwell Avenue A29	0.425	811

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

Arm Capacity Adjustments

Arm	Type	Reason	Direct capacity adjustment (PCU/hr)
A - Barnham Road B2233	Direct		275
B - Nyton Road A29	Direct		0
C - Fontwell Avenue A29	Direct		345

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	2028 Base PM + Dev + Barratt	PM	ONE HOUR	16:30	18:00	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	Average Demand (PCU/hr)	Scaling Factor (%)
A - Barnham Road B2233		ONE HOUR	✓	50	100.000
B - Nyton Road A29		ONE HOUR	✓	858	100.000
C - Fontwell Avenue A29		ONE HOUR	✓	882	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Barnham Road B2233	B - Nyton Road A29	C - Fontwell Avenue A29
From	A - Barnham Road B2233	0	35	15
	B - Nyton Road A29	385	8	265
	C - Fontwell Avenue A29	152	493	1

Proportions

		To		
		A - Barnham Road B2233	B - Nyton Road A29	C - Fontwell Avenue A29
From	A - Barnham Road B2233	0.00	0.70	0.30
	B - Nyton Road A29	0.59	0.01	0.40
	C - Fontwell Avenue A29	0.23	0.72	0.05

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Barnham Road B2233	B - Nyton Road A29	C - Fontwell Avenue A29
From	A - Barnham Road B2233	0	0	0
	B - Nyton Road A29	0	0	0
	C - Fontwell Avenue A29	0	0	0

Average PCU Per Veh

		To		
		A - Barnham Road B2233	B - Nyton Road A29	C - Fontwell Avenue A29
From	A - Barnham Road B2233	1.000	1.000	1.000
	B - Nyton Road A29	1.000	1.000	1.000
	C - Fontwell Avenue A29	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:30-16:45	A - Barnham Road B2233	38	38
	B - Nyton Road A29	495	495
	C - Fontwell Avenue A29	516	516
16:45-17:00	A - Barnham Road B2233	45	45
	B - Nyton Road A29	592	592
	C - Fontwell Avenue A29	617	617
17:00-17:15	A - Barnham Road B2233	55	55
	B - Nyton Road A29	724	724
	C - Fontwell Avenue A29	755	755
17:15-17:30	A - Barnham Road B2233	55	55
	B - Nyton Road A29	724	724
	C - Fontwell Avenue A29	755	755
17:30-17:45	A - Barnham Road B2233	45	45
	B - Nyton Road A29	592	592
	C - Fontwell Avenue A29	617	617
17:45-18:00	A - Barnham Road B2233	38	38
	B - Nyton Road A29	495	495
	C - Fontwell Avenue A29	516	516

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Barnham Road B2233	0.05	4.34	0.1	A	46	88
B - Nyton Road A29	0.39	3.11	0.6	A	504	936
C - Fontwell Avenue A29	0.78	16.85	3.4	C	629	944

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Barnham Road B2233	38	9	375	993	0.038	37	432	0.0	0.0	3.767	A
B - Nyton Road A29	495	124	12	1885	0.263	494	401	0.0	0.4	2.588	A
C - Fontwell Avenue A29	516	129	295	1029	0.504	512	211	0.0	1.0	6.964	A

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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Barnham Road B2233	45	11	450	947	0.047	45	518	0.0	0.0	3.889	A
B - Nyton Road A29	592	148	14	1883	0.314	591	480	0.4	0.5	2.788	A
C - Fontwell Avenue A29	617	154	353	1001	0.616	614	252	1.0	1.6	9.258	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Barnham Road B2233	55	14	548	887	0.062	55	833	0.0	0.1	4.325	A
B - Nyton Road A29	724	181	18	1881	0.385	724	585	0.5	0.8	3.109	A
C - Fontwell Avenue A29	755	189	432	967	0.781	748	359	1.8	3.3	15.946	C

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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Barnham Road B2233	55	14	552	884	0.062	55	835	0.1	0.1	4.343	A
B - Nyton Road A29	724	181	18	1881	0.385	724	589	0.5	0.8	3.112	A
C - Fontwell Avenue A29	755	189	433	967	0.781	755	359	1.8	3.4	15.854	C

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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Barnham Road B2233	46	11	456	843	0.048	45	523	0.1	0.1	4.938	A
B - Nyton Road A29	592	148	14	1883	0.314	592	487	0.5	0.5	2.789	A
C - Fontwell Avenue A29	617	154	354	1001	0.616	624	293	3.4	1.6	9.723	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Barnham Road B2233	38	9	360	990	0.038	38	435	0.1	0.0	3.779	A
B - Nyton Road A29	495	124	12	1885	0.263	496	405	0.5	0.4	2.591	A
C - Fontwell Avenue A29	516	129	296	1025	0.504	519	212	1.5	1.0	7.144	A

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.0.1.1519
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Filename: 6-Nyton Road_Westergate Street (East) 2028.j10
Path: \\uksou1ser01\Projects\70013258 - Land at Westergate -Cala Homes\D Design and Analysis\Transport\2022 TA\01092023_Updated Files\Junction Models_Updated\Revised Geometry
Report generation date: 14/06/2024 09:02:18

»2028 Base + Dev + Barratt, AM
»2028 Base + Dev + Barratt, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2028 Base + Dev + Barratt										
Stream B-C	D11	0.5	5.03	0.34	A	D12	0.8	10.24	0.46	B
Stream B-A		0.0	0.00	0.00	A		0.0	0.00	0.00	A
Stream C-AB		10.5	39.83	0.93	E		0.7	7.03	0.34	A

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

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

File summary

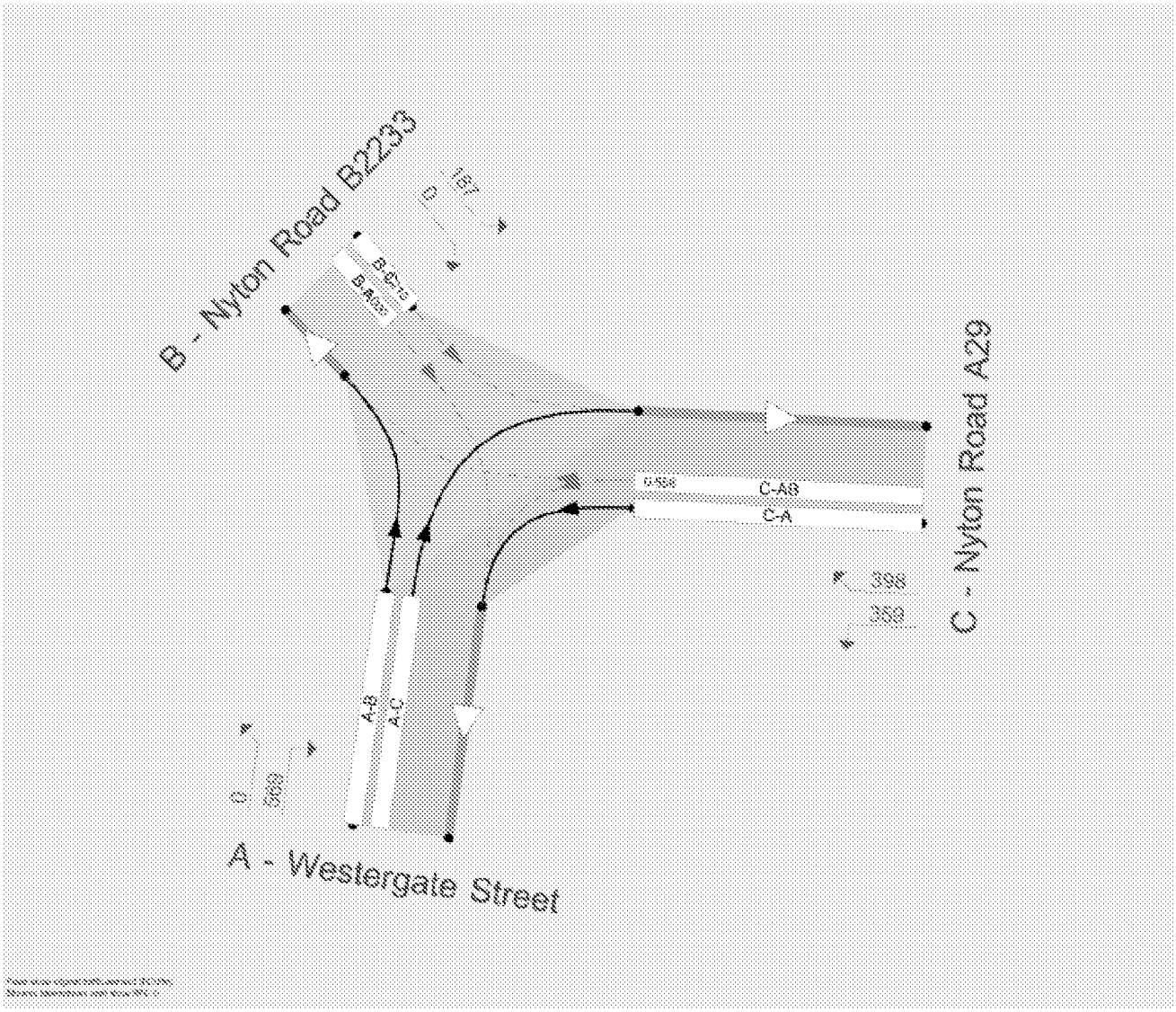
File Description

Title	6-Nyton Road_Westergate Street (East)
Location	
Site number	
Date	31/08/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	CORP\INCS04445
Description	

Units

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

ARUN DISTRICT COUNCIL AL/11/24/OUT



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

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
D11	2028 Base + Dev + Barratt	AM	ONE HOUR	07:15	09:45	15	✓
D12	2028 Base + Dev + Barratt	PM	ONE HOUR	16:30	19:00	15	✓

Analysis Set Details

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

2028 Base + Dev + Barratt, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	B - Nyton Road B2233 - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Nyton Road_Westergate Street (East)	T-Junction	Two-way	Two-way	Two-way		18.83	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	18.83	C

Arms

Arms

Arm	Name	Description	Arm type
A	Westergate Street		Major
B	Nyton Road B2233		Minor
C	Nyton Road A29		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Nyton Road A29	8.82			94.0	✓	1.00

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

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - Nyton Road B2233	One lane plus flare	10.00	5.97	3.05	3.01	3.01		1.00	25	137

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	562	0.088	0.223	0.140	0.318
B-C	768	0.103	0.261	-	-
C-B	828	0.214	0.214	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

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.

ARUN DISTRICT COUNCIL AL/11/24/OUT

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	2028 Base + Dev + Barratt	AM	ONE HOUR	07:15	09:45	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 G-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Westergate Street		ONE HOUR	✓	583	100.000
B - Nyton Road B2233		ONE HOUR	✓	187	100.000
C - Nyton Road A29		ONE HOUR	✓	757	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Westergate Street	B - Nyton Road B2233	C - Nyton Road A29
From	A - Westergate Street	0	0	589
	B - Nyton Road B2233	0	0	187
	C - Nyton Road A29	359	398	0

Proportions

		To		
		A - Westergate Street	B - Nyton Road B2233	C - Nyton Road A29
From	A - Westergate Street	0.00	0.00	1.00
	B - Nyton Road B2233	0.00	0.00	1.00
	C - Nyton Road A29	0.47	0.53	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Westergate Street	B - Nyton Road B2233	C - Nyton Road A29
From	A - Westergate Street	0	0	0
	B - Nyton Road B2233	0	0	0
	C - Nyton Road A29	0	0	0

Average PCU Per Veh

		To		
		A - Westergate Street	B - Nyton Road B2233	C - Nyton Road A29
From	A - Westergate Street	1.000	1.000	1.000
	B - Nyton Road B2233	1.000	1.000	1.000
	C - Nyton Road A29	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:15-07:30	A - Westergate Street	428	428
	B - Nyton Road B2233	141	141
	C - Nyton Road A29	570	570
07:30-07:45	A - Westergate Street	512	512
	B - Nyton Road B2233	168	168
	C - Nyton Road A29	681	681
07:45-08:00	A - Westergate Street	628	628
	B - Nyton Road B2233	206	206
	C - Nyton Road A29	833	833
08:00-08:15	A - Westergate Street	628	628
	B - Nyton Road B2233	206	206
	C - Nyton Road A29	833	833
08:15-08:30	A - Westergate Street	512	512
	B - Nyton Road B2233	168	168
	C - Nyton Road A29	681	681
08:30-08:45	A - Westergate Street	428	428
	B - Nyton Road B2233	141	141
	C - Nyton Road A29	570	570

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.34	9.03	0.5	A	172	257
B-A	0.00	0.00	0.0	A	0	0
C-AB	0.59	39.83	10.5	E	548	822
C-A					147	220
A-B					0	0
A-C					522	783

Main Results for each time segment

07:15 - 07:30

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	141	35	656	0.215	140	0.0	0.3	8.956	A
B-A	0	0	523	0.000	0	0.0	0.0	0.000	A
C-AB	384	96	668	0.558	378	0.0	1.5	11.460	B
C-A	185	47			185				
A-B	0	0			0				
A-C	428	107			428				

07:30 - 07:45

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	159	42	835	0.285	159	0.3	0.4	7.787	A
B-A	0	0	277	0.000	0	0.0	0.0	0.000	A
C-AB	511	128	742	0.689	509	1.5	2.9	16.257	C
C-A	189	42			189				
A-B	0	0			0				
A-C	512	128			512				

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	286	51	824	0.348	285	0.4	0.5	9.004	A
B-A	0	0	214	0.000	0	0.0	0.0	0.000	A
C-AB	748	187	845	0.885	724	2.9	8.1	29.796	D
C-A	85	21			85				
A-B	0	0			0				
A-C	839	187			839				

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	285	51	804	0.341	285	0.5	0.5	9.031	A
B-A	0	0	209	0.000	0	0.0	0.0	0.000	A
C-AB	748	187	845	0.885	743	8.1	10.5	39.831	E
C-A	85	21			85				
A-B	0	0			0				
A-C	828	187			828				

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	159	42	835	0.285	159	0.5	0.4	7.739	A
B-A	0	0	285	0.000	0	0.0	0.0	0.000	A
C-AB	511	128	742	0.689	539	10.5	3.4	29.831	D
C-A	189	42			189				
A-B	0	0			0				
A-C	512	128			512				

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	141	35	655	0.215	141	0.4	0.3	8.993	A
B-A	0	0	320	0.000	0	0.0	0.0	0.000	A
C-AB	384	96	688	0.558	381	3.4	1.7	12.621	B
C-A	185	47			185				
A-B	0	0			0				
A-C	433	107			433				

2028 Base + Dev + Barratt, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	B - Nyton Road B2233 - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Nyton Road_Westergate Street (East)	T-Junction	Two-way	Two-way	Two-way		2.87	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.87	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
D12	2028 Base + Dev + Barratt	PM	ONE HOUR	16:30	18:00	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	Average Demand (PCU/hr)	Scaling Factor (%)
A - Westergate Street		ONE HOUR	✓	411	100.000
B - Nyton Road B2233		ONE HOUR	✓	278	100.000
C - Nyton Road A29		ONE HOUR	✓	817	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Westergate Street	B - Nyton Road B2233	C - Nyton Road A29
From	A - Westergate Street	0	0	411
	B - Nyton Road B2233	0	0	278
	C - Nyton Road A29	654	163	0

Proportions

		To		
		A - Westergate Street	B - Nyton Road B2233	C - Nyton Road A29
From	A - Westergate Street	0.00	0.00	1.00
	B - Nyton Road B2233	0.00	0.00	1.00
	C - Nyton Road A29	0.80	0.20	0.00

Vehicle Mix

ARUN DISTRICT COUNCIL AL/11/24/OUT

Heavy Vehicle Percentages

		To		
		A - Westergate Street	B - Nyton Road B2233	C - Nyton Road A29
From	A - Westergate Street	0	0	0
	B - Nyton Road B2233	0	0	0
	C - Nyton Road A29	0	0	0

Average PCU Per Veh

		To		
		A - Westergate Street	B - Nyton Road B2233	C - Nyton Road A29
From	A - Westergate Street	1.000	1.000	1.000
	B - Nyton Road B2233	1.000	1.000	1.000
	C - Nyton Road A29	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:30-16:45	A - Westergate Street	309	309
	B - Nyton Road B2233	204	204
	C - Nyton Road A29	615	615
16:45-17:00	A - Westergate Street	389	389
	B - Nyton Road B2233	244	244
	C - Nyton Road A29	734	734
17:00-17:15	A - Westergate Street	453	453
	B - Nyton Road B2233	298	298
	C - Nyton Road A29	900	900
17:15-17:30	A - Westergate Street	453	453
	B - Nyton Road B2233	298	298
	C - Nyton Road A29	900	900
17:30-17:45	A - Westergate Street	389	389
	B - Nyton Road B2233	244	244
	C - Nyton Road A29	734	734
17:45-18:00	A - Westergate Street	309	309
	B - Nyton Road B2233	204	204
	C - Nyton Road A29	615	615

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.48	10.24	0.8	B	249	373
B-A	0.00	0.00	0.0	A	0	0
C-AB	0.34	7.03	0.7	A	198	298
C-A					551	827
A-B					0	0
A-C					377	565

Main Results for each time segment

16:30 - 16:45

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	204	51	687	0.297	202	0.0	0.4	7.399	A
B-A	0	0	375	0.000	0	0.0	0.0	0.000	A
C-AB	145	37	679	0.218	145	0.0	0.3	6.847	A
C-A	489	117			489				
A-B	0	0			0				
A-C	389	77			389				

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	244	61	672	0.363	243	0.4	0.6	8.388	A
B-A	0	0	345	0.000	0	0.0	0.0	0.000	A
C-AB	188	47	706	0.267	188	0.3	0.5	8.947	A
C-A	548	137			548				
A-B	0	0			0				
A-C	359	92			359				

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	298	75	650	0.459	297	0.8	0.8	10.259	B
B-A	0	0	282	0.000	0	0.0	0.0	0.000	A
C-AB	261	65	775	0.338	260	0.5	0.7	7.006	A
C-A	638	160			638				
A-B	0	0			0				
A-C	453	113			453				

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	298	75	650	0.459	298	0.8	0.8	10.238	B
B-A	0	0	282	0.000	0	0.0	0.0	0.000	A
C-AB	261	65	775	0.338	261	0.7	0.7	7.035	A
C-A	638	160			638				
A-B	0	0			0				
A-C	453	113			453				

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	244	61	672	0.363	245	0.6	0.6	8.453	A
B-A	0	0	345	0.000	0	0.0	0.0	0.000	A
C-AB	188	47	706	0.267	189	0.7	0.5	8.988	A
C-A	548	137			548				
A-B	0	0			0				
A-C	359	92			359				

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	294	51	887	0.297	295	0.5	0.4	7.487	A
B-A	0	0	375	0.000	0	0.0	0.0	0.000	A
C-AB	149	37	679	0.218	147	0.3	0.3	8.885	A
C-A	489	117			489				
A-B	0	0			0				
A-C	385	77			385				

Appendix B

Site Access Drawings

Confidential

ARUN DISTRICT COUNCIL AL/11/24/OUT

NOTES:

1. WE HAVE NOT SOUGHT TO BECOME AWARE OF ANY INFORMATION RELATED TO HAZARDS THAT MIGHT AFFECT THE CONSTRUCTION OR MAINTENANCE OF THIS PROJECT. UNDER THE CDM REGULATIONS ANY DESIGNERS WHO PROGRESS THESE PROPOSALS FURTHER WILL NEED TO RECONSIDER THE DESIGN BASED UPON ANY INFORMATION WHICH SUBSEQUENTLY BECOMES AVAILABLE.
2. THIS DESIGN IS BASED ON THE COLE & COLE TOPOGRAPHICAL SURVEY DATED JANUARY 2016 AND THE ADP ARCHITECTS MASTERPLAN FOR THE WILSON HOUSE DEVELOPMENT DATED NOVEMBER 2012.
3. THE 2016 TOPOGRAPHICAL SURVEY COORDINATE SYSTEM HAS BEEN USED; THE ADP MASTERPLAN WAS MOVED AND ALIGNED TO MATCH BASED ON THE PROPOSED HOUSE LOCATIONS AND THE SURVEYED HOUSE CONSTRUCTION OUTLINES.

KEY

- EXISTING HIGHWAY BOUNDARY (BASED ON TOPOGRAPHIC SURVEY (COLE & COLE, JANUARY 2016) AND WSCC HIGHWAY BOUNDARY INFORMATION (RECEIVED 07/12/2022)
- SIGNAL HEAD
- TACTILE PAVING (BUFF)
- TACTILE PAVING (RED)
- •B PEDESTRIAN BOLLARD (REMOVABLE TO PROVIDE EMERGENCY ACCESS IF REQUIRED)
- PUBLIC RIGHT OF WAY (PROW)

EXISTING ACCESS TO BE CLOSED TO VEHICLES WITH REMOVABLE BOLLARDS
NEW TREES PROPOSED (REFER TO LANDSCAPE PLANS)
PARKING BAYS TO BE RELOCATED TO ACCOMMODATE FOOTWAY
PROPOSED FOOTWAY
PROPOSED LIMIT OF HIGHWAY ADOPTION
MIN. 0.5m VERGE
KEEP CLEAR
F.P. 297
Meadow Way
Old School Place
10m
SCALE 1:250

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REV	DATE	BY	DESCRIPTION	CHK	APP
P04	14/06/2024	HL	UPDATED BOLLARDS	CW	CW
P03	02/02/2024	AW	SCALE BAR ADDED	JB	LRB
P02	22/09/2023	PM	SECOND ISSUE	LRB	CW
P01	01/09/2023	GLG	FIRST ISSUE	LRB	CW

DRAWING STATUS: B3 - FOR PLANNING

Grosvenor House
2 Grosvenor Square
Southampton
SO15 2BE, UK

T+ 44 (0) 2380 101 700
wsp.com

CLIENT: CALA HOMES

PROJECT: LAND AT WESTERGATE

ARCHITECT: -

TITLE: SITE ACCESS GENERAL ARRANGEMENT

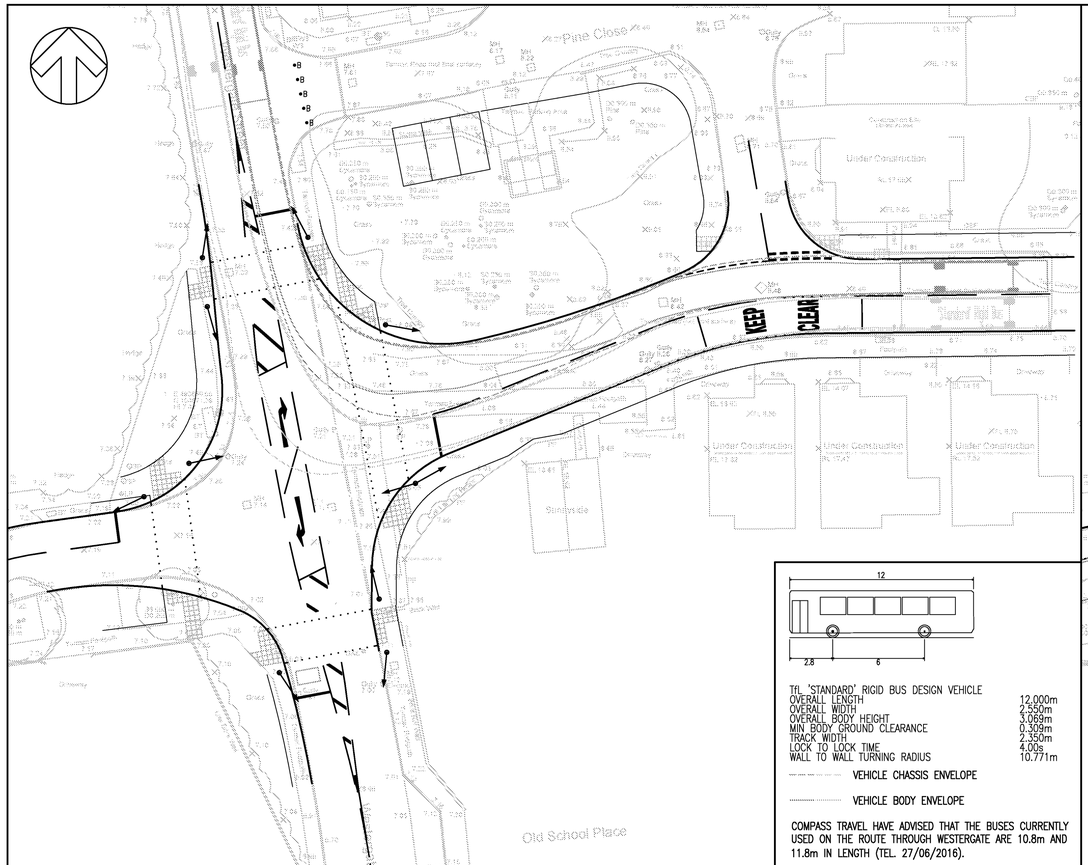
SCALE @ A1:	CHECKED:		APPROVED:
1:250	LRB		CW
PROJECT No:	DESIGNED:	DRAWN:	DATE:
70013258	GLG	GLG	September 23

DRAWING No: LAW-WSP-ZZ-ZZ-C-DR-00006 REV: P04

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File name: \\UK.WSPGROUP.COM\CENTRAL DATA\PROJECTS\70013XXX\70013258 - LAND AT WESTERGATE - CALA HOMES\03 WIP\DE DEVELOPMENT\03 DRAWINGS\LAW\WSP-ZZ-ZZ-C-DR-00006.DWG, printed on 14 June 2024 16:24:17, by Lyster, Hallan

ARUN DISTRICT COUNCIL A4/11/24/OUT



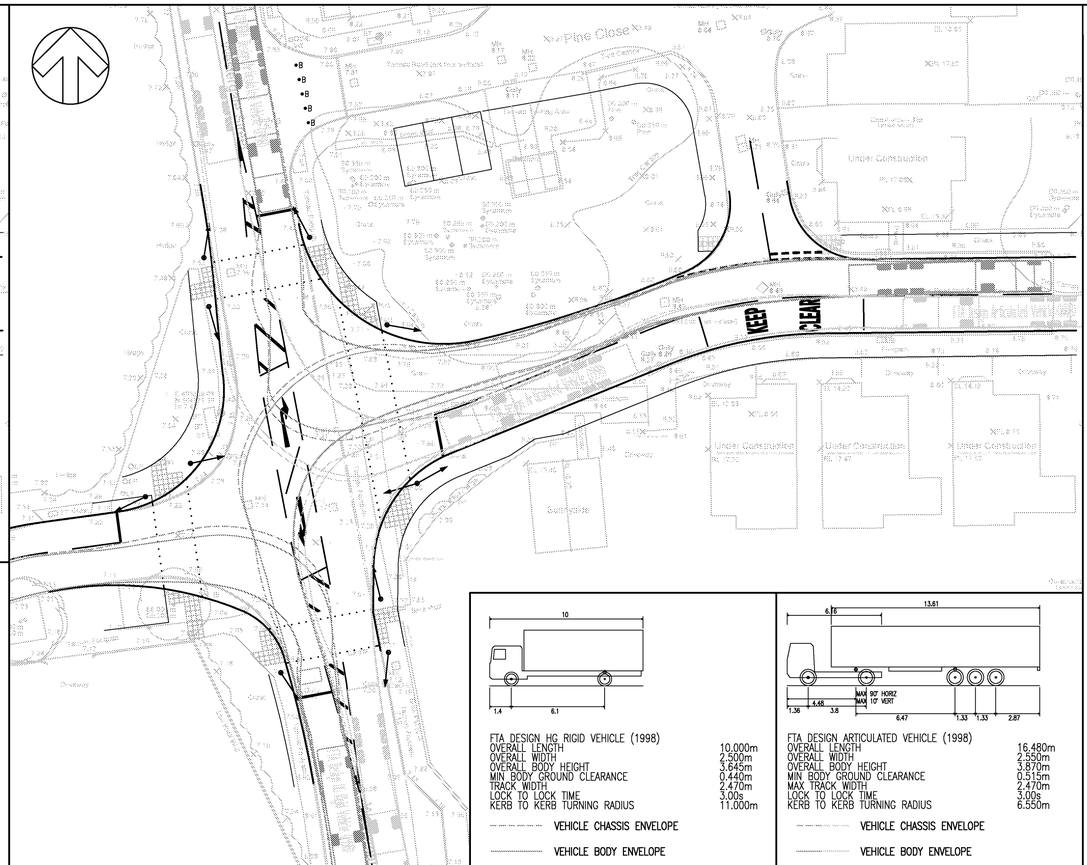
TfL 'STANDARD' RIGID BUS DESIGN VEHICLE

OVERALL LENGTH	12.000m
OVERALL WIDTH	2.550m
OVERALL BODY HEIGHT	3.069m
MIN BODY GROUND CLEARANCE	0.369m
TRACK WIDTH	2.350m
LOCK TO LOCK TIME	4.00s
WALL TO WALL TURNING RADIUS	10.771m

VEHICLE CHASSIS ENVELOPE

VEHICLE BODY ENVELOPE

COMPASS TRAVEL HAVE ADVISED THAT THE BUSES CURRENTLY USED ON THE ROUTE THROUGH WESTERGATE ARE 10.8m AND 11.8m IN LENGTH (TEL. 27/06/2016).



FTA DESIGN HG RIGID VEHICLE (1998)

OVERALL LENGTH	10.000m
OVERALL WIDTH	2.500m
OVERALL BODY HEIGHT	3.645m
MIN BODY GROUND CLEARANCE	0.440m
TRACK WIDTH	2.470m
LOCK TO LOCK TIME	3.00s
KERB TO KERB TURNING RADIUS	11.000m

VEHICLE CHASSIS ENVELOPE

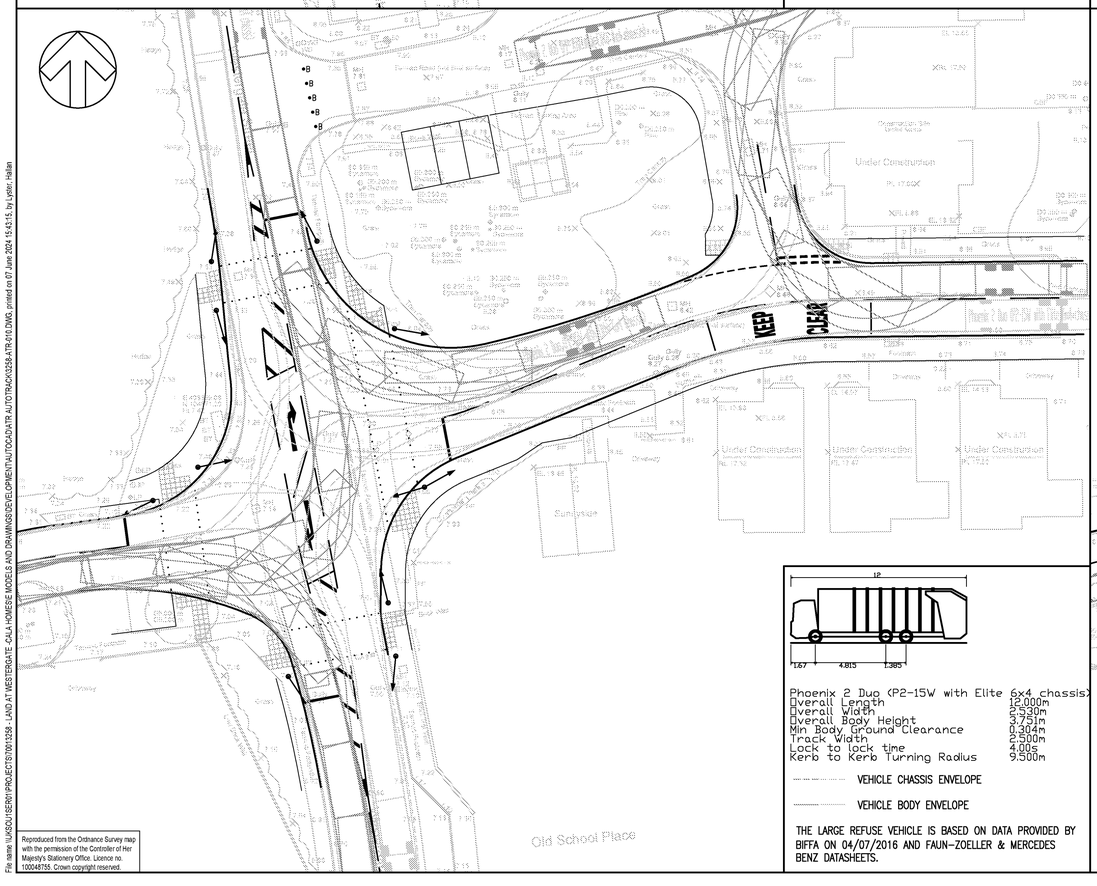
VEHICLE BODY ENVELOPE

FTA DESIGN ARTICULATED VEHICLE (1998)

OVERALL LENGTH	16.480m
OVERALL WIDTH	2.550m
OVERALL BODY HEIGHT	3.870m
MIN BODY GROUND CLEARANCE	0.515m
MAX TRACK WIDTH	2.470m
LOCK TO LOCK TIME	3.00s
KERB TO KERB TURNING RADIUS	6.550m

VEHICLE CHASSIS ENVELOPE

VEHICLE BODY ENVELOPE



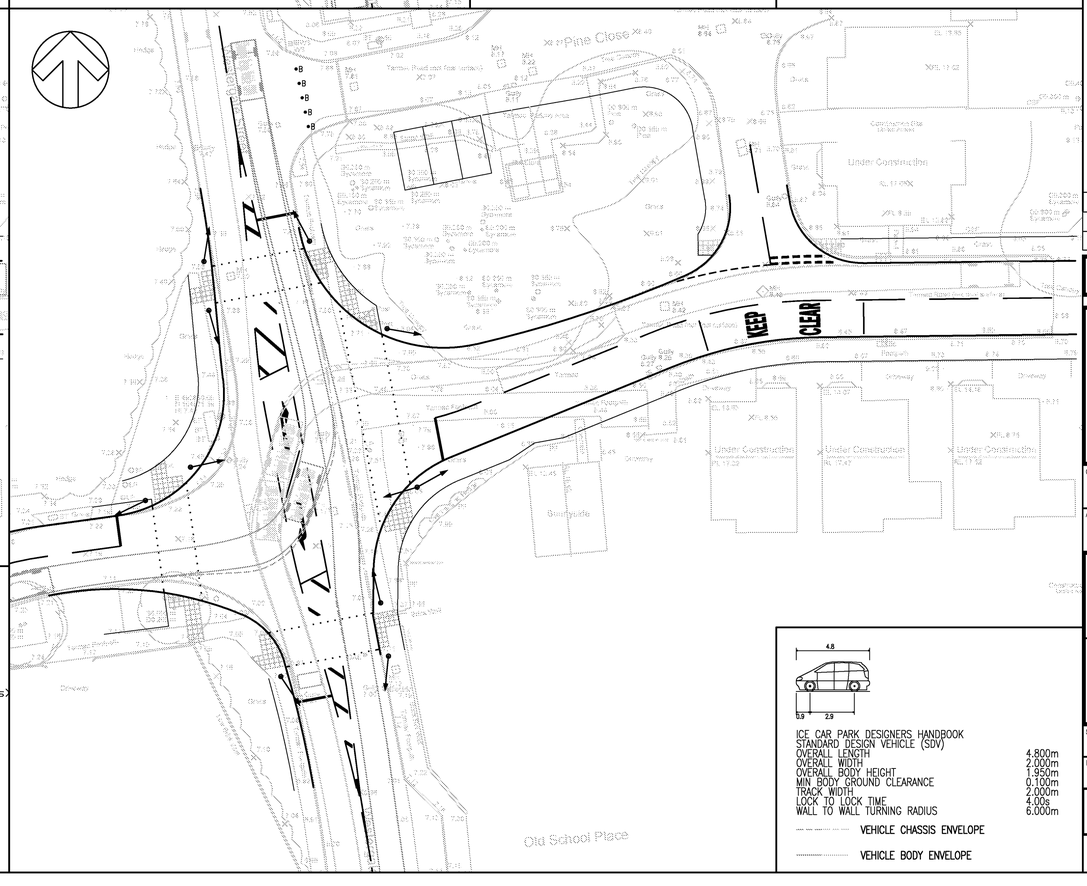
Phoenix 2 Duo (P2-15W with Elite 6x4 chassis)

Overall Length	12.000m
Overall Width	2.530m
Overall Body Height	3.751m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	9.500m

VEHICLE CHASSIS ENVELOPE

VEHICLE BODY ENVELOPE

THE LARGE REFUSE VEHICLE IS BASED ON DATA PROVIDED BY BIFFA ON 04/07/2016 AND FAUN-ZOELLER & MERCEDES BENZ DATASHEETS.



ICE CAR PARK DESIGNERS HANDBOOK
STANDARD DESIGN VEHICLE (SDV)

OVERALL LENGTH	4.800m
OVERALL WIDTH	2.000m
OVERALL BODY HEIGHT	1.950m
MIN BODY GROUND CLEARANCE	0.100m
TRACK WIDTH	2.000m
LOCK TO LOCK TIME	4.00s
WALL TO WALL TURNING RADIUS	6.000m

VEHICLE CHASSIS ENVELOPE

VEHICLE BODY ENVELOPE

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DO NOT SCALE

NOTES

1. VEHICLES HAVE BEEN TRACKED AT 16kph, EXCEPT FOR THE ARTICULATED HGV, THE NORTHBOUND LARGE REFUSE VEHICLE TURNING WESTBOUND AND PARKING CAR WHICH WERE TRACKED AT 5kph.
2. THIS DESIGN IS BASED ON THE COLE & COLE TOPOGRAPHICAL SURVEY DATED JANUARY 2016 AND THE ADP ARCHITECTS MASTERPLAN DATED NOVEMBER 2012.
3. THE 2016 TOPOGRAPHICAL SURVEY COORDINATE SYSTEM HAS BEEN USED; THE ADP MASTERPLAN WAS MOVED AND ALIGNED TO MATCH BASED ON THE PROPOSED HOUSE LOCATIONS AND THE SURVEYED HOUSE CONSTRUCTION OUTLINES.
4. REFER TO WSP | PARSONS BRINCKERHOFF DRAWING 3258/GA/006 FOR GENERAL ARRANGEMENT OF JUNCTION OPTION 3.

KEY

- SIGNAL HEAD
- •B PEDESTRIAN BOLLARD
- TACTILE PAVING (BUFF)
- TACTILE PAVING (RED)

UNTIL TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT LOCAL AUTHORITIES OR STATUTORY BODIES, IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR AND / OR EMPLOYER COMMENCE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT THEIR OWN RISK

REV	DATE	BY	DESCRIPTION	CHK	APP
B	07/06/2024	HL	UPDATED REFUGE TRACKING	SG	CW
A	09/11/2016	MFB	FIRST ISSUE	LB	CW

DRAWING STATUS: S2 - FOR INFORMATION

wsp
Grosvenor House, 2 Grosvenor Square, Southampton, SO15 2BE, UK
T+ 44 (0) 2380 101 700
wsp.com

CLIENT: CALA HOMES

ARCHITECT: OSP ARCHITCTURE

SITE/PROJECT: LAND AT WESTERGATE

TITLE: SITE ACCESS - OPTION 3, SWEPT PATH ANALYSIS BUS, ARTICULATED HGV, LARGE REFUSE TRUCK, CAR

SCALE @ A1:	CHECKED:	APPROVED:
1:250	LR	CW

PROJECT NO:	DESIGNED:	DRAWN:	DATE:
700132	MFB	M	June 24

DRAWING No: 3258-ATR-010 REV: B

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File name: \\UKSOU1SERP1\PROJECTS\700132\8 - LAND AT WESTERGATE -CALA HOMES\E MODELS AND DRAWINGS\DEVELOPMENT\AUTOCAD\ATR AUTOTRACK\3258-ATR-010.DWG, printed on 07 June 2024 15:43:15, by Lyster, Hallan

Appendix C

Site Access Junction Capacity Assessment Outputs

Confidential

Full Input Data And Results

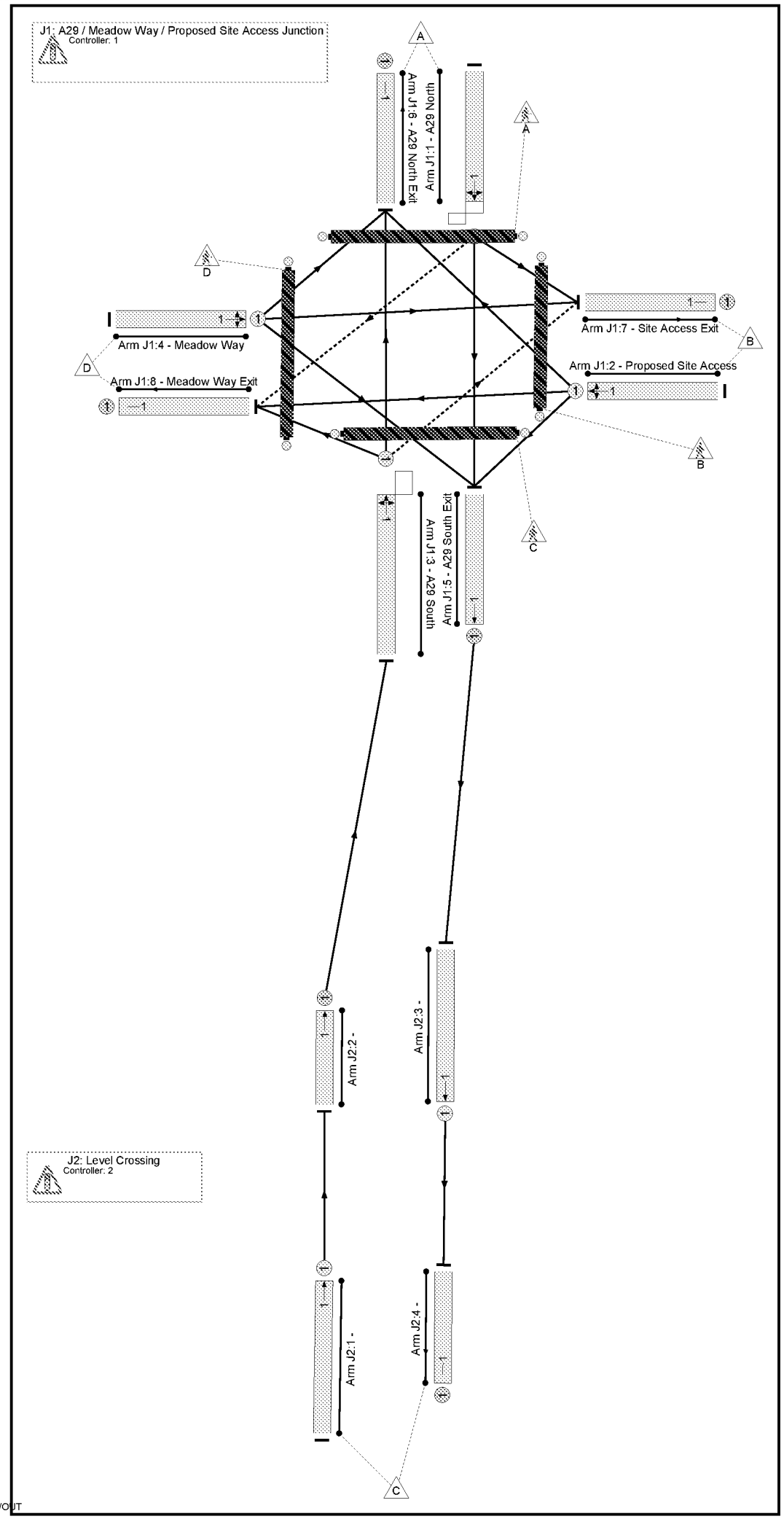
User and Project Details

Project:	**Land at Westergate, West Sussex**
Title:	**Proposed New Site Access Junction**
Location:	
Additional detail:	
File name:	Site Access-Meadow Way Signals WSP Staging TA with Level Crossing AM Peak 240s (Single Ped).lsg3x
Author:	UKPXM046
Company:	WSP Property & Development
Address:	Regus House, George Curl Way, Southampton, SO18 2RZ

Full Input Data And Results

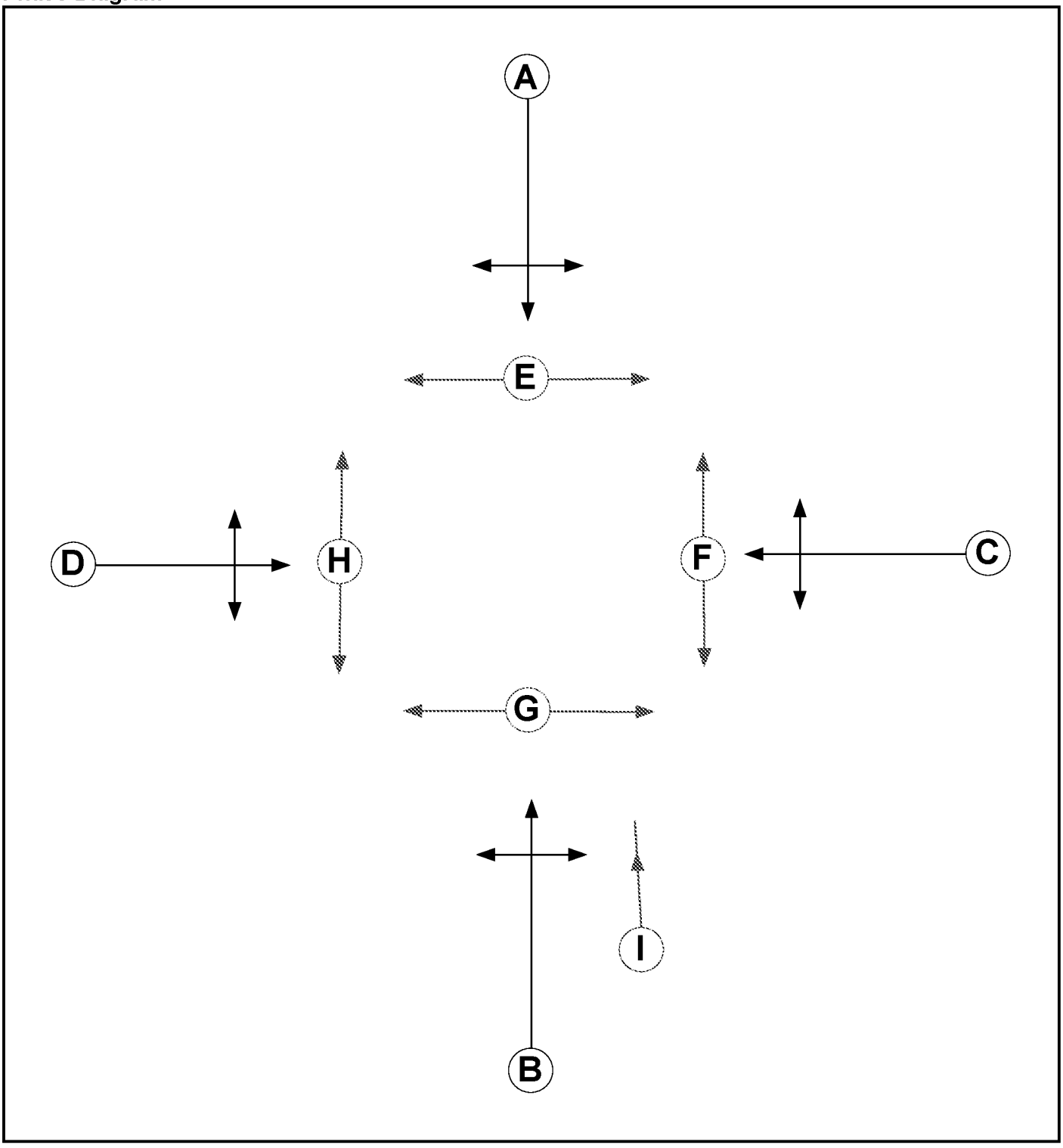
Network Layout Diagram

Full Input Data And Results



C1

Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		4	4
E	Pedestrian		7	7
F	Pedestrian		7	7
G	Pedestrian		7	7
H	Pedestrian		7	7
I	Ind. Arrow	B	4	4

Phase Intergreens Matrix

		Starting Phase								
		A	B	C	D	E	F	G	H	I
Terminating Phase	A		-	6	5	5	7	8	9	5
	B	-		5	5	8	8	5	7	-
	C	5	5		5	8	5	7	7	5
	D	5	5	6		8	7	8	5	5
	E	9	9	9	9		-	-	-	-
	F	15	15	15	15	-		-	-	8
	G	11	11	11	11	-	-		-	11
	H	8	8	8	8	-	-	-		-
	I	5	-	5	5	-	5	5	-	

Phases in Stage

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

Phase Delays

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

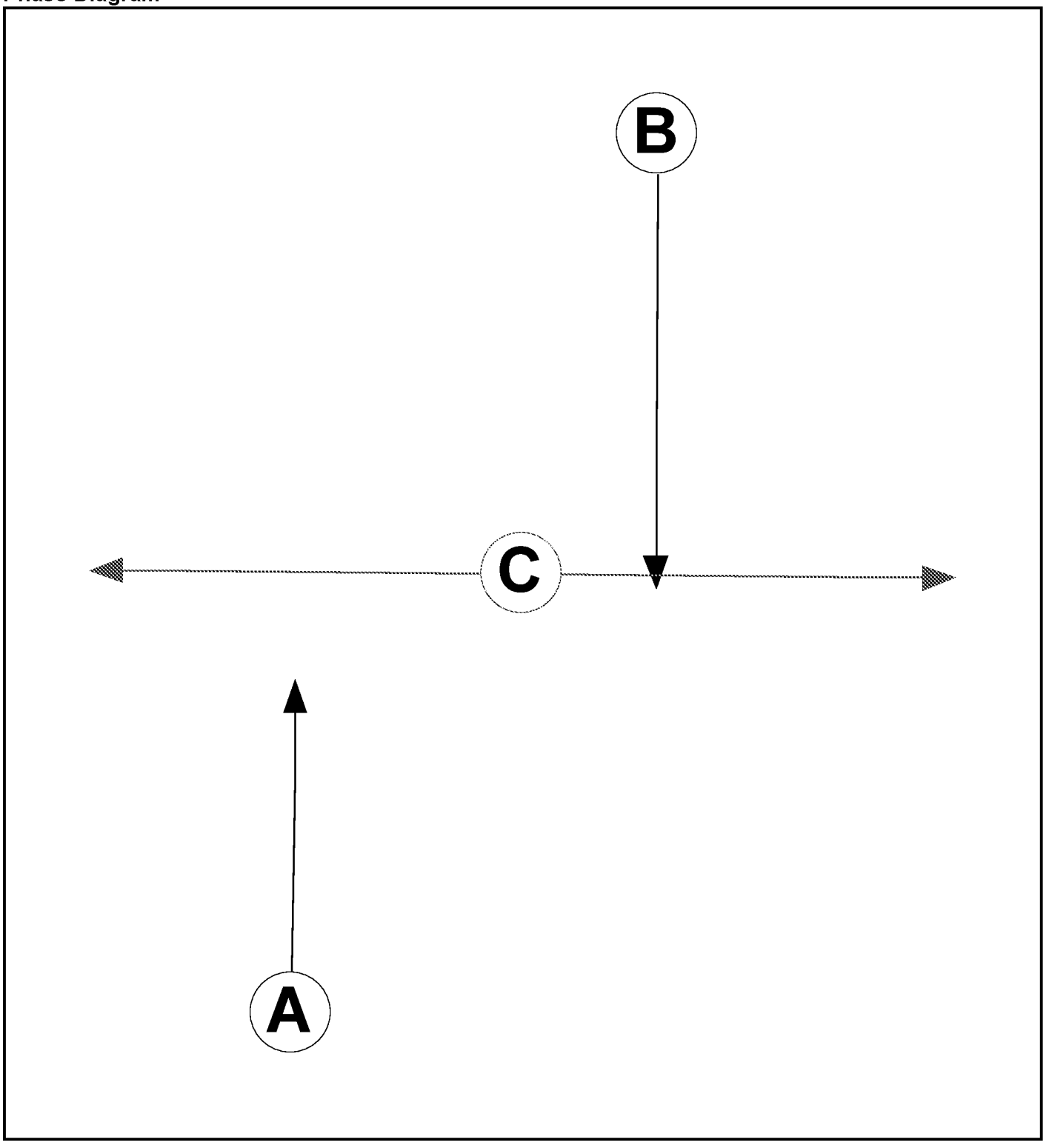
Full Input Data And Results

Prohibited Stage Change

		To Stage						
		1	2	3	4	5	6	7
From Stage	1		15	15	15	15	15	
	2	9		6	5	0	0	5
	3	8	5		5	5	5	5
	4	8	5	6		5	5	5
	5	8	2	5	5		2	0
	6	9	2	6	5	2		5
	7	8	5	5	5	0	5	

C2

Phase Diagram



Phase Input Data

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

Full Input Data And Results

Phase Intergreens Matrix

	Starting Phase			
Terminating Phase		A	B	C
	A		-	5
	B	-		5
	C	5	5	

Phases in Stage

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

Phase Delays

Stage Stream: 1

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

Prohibited Stage Change

Stage Stream: 1

	To Stage		
From Stage		1	2
	1		5
	2	5	

Full Input Data And Results

Give-Way Lane Input Data

Junction: J1: A29 / Meadow Way / Proposed Site Access Junction											
Lane	**Movement**	**Max Flow when Giving Way (PCU/Hr)**	**Min Flow when Giving Way (PCU/Hr)**	**Opposing Lane**	**Opp. Lane Coeff.**	**Opp. Mvmnts.**	**Right Turn Storage (PCU)**	**Non-Blocking Storage (PCU)**	**RTF**	**Right Turn Move up (s)**	**Max Turns in Intergreen (PCU)**
J1:1/1 (A29 North)	J1:8/1 (Right)	1439	0	J1:3/1	1.09	To J1:6/1 (Ahead) To J1:8/1 (Left)	2.00	1.00	0.50	2	2.00
J1:3/1 (A29 South)	J1:7/1 (Right)	1439	0	J1:1/1	1.09	To J1:5/1 (Ahead) To J1:7/1 (Left)	2.00	2.00	0.50	2	2.00

Junction: J2: Level Crossing
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: J1: A29 / Meadow Way / Proposed Site Access Junction												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
J1:1/1 (A29 North)	O	A	2	3	60.0	Geom	-	3.30	0.00	Y	Arm J1:5 Ahead	Inf
											Arm J1:7 Left	11.00
											Arm J1:8 Right	10.00
J1:2/1 (Proposed Site Access)	U	C	2	3	60.0	Geom	-	3.25	0.00	Y	Arm J1:5 Left	12.50
											Arm J1:6 Right	11.50
											Arm J1:8 Ahead	Inf
J1:3/1 (A29 South)	O	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm J1:6 Ahead	Inf
											Arm J1:7 Right	10.00
											Arm J1:8 Left	11.00
J1:4/1 (Meadow Way)	U	D	2	3	60.0	Geom	-	2.75	0.00	Y	Arm J1:5 Right	13.30
											Arm J1:6 Left	9.00
											Arm J1:7 Ahead	Inf
J1:5/1 (A29 South Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:6/1 (A29 North Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:7/1 (Site Access Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:8/1 (Meadow Way Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

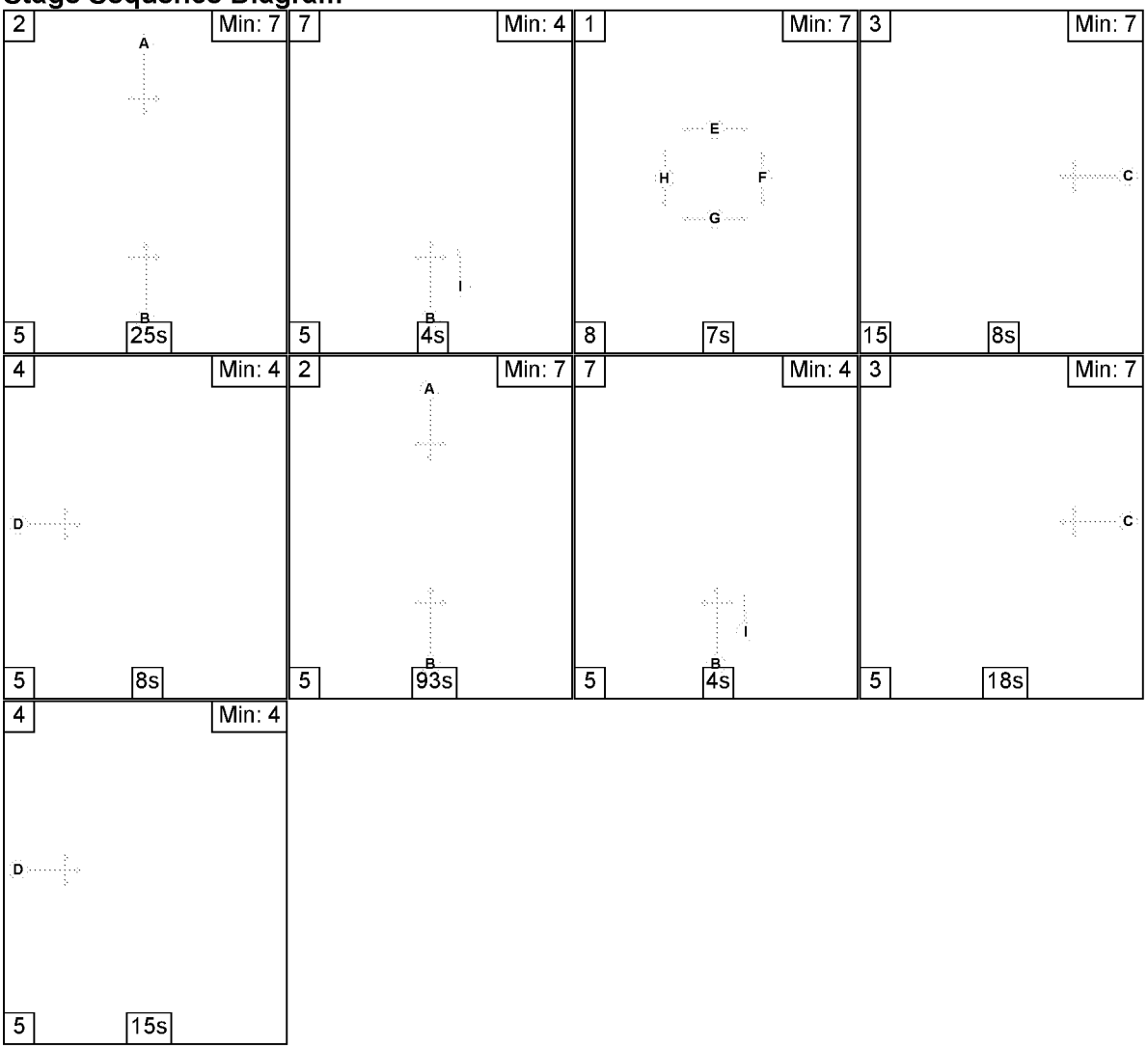
Junction: J2: Level Crossing												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
J2:1/1	U	A	2	3	60.0	Geom	-	3.25	0.00	Y	Arm J2:2 Ahead	Inf
J2:2/1	U		2	3	60.0	Inf	-	-	-	-	-	-
J2:3/1	U	B	2	3	60.0	Geom	-	3.25	0.00	Y	Arm J2:4 Ahead	Inf
J2:4/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2031 DS AM Baseline + Dev'	08:00	09:00	01:00	
2: '2031 DS AM Baseline + Dev + BEW'	08:00	09:00	01:00	

Scenario 1: '2031 DS AM Baseline + Dev' (FG1: '2031 DS AM Baseline + Dev', Plan 4: 'Network Control Plan 4')
C1

Stage Sequence Diagram

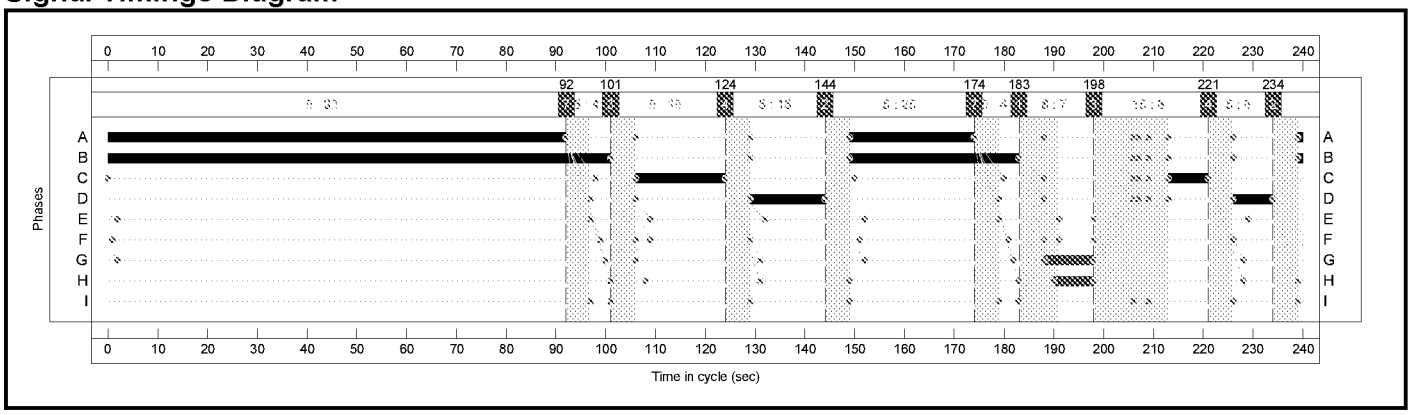


Full Input Data And Results

Stage Timings

Stage	2	7	1	3	4	2	7	3	4
Duration	25	4	7	8	8	93	4	18	15
Change Point	144	174	183	198	221	234	92	101	124

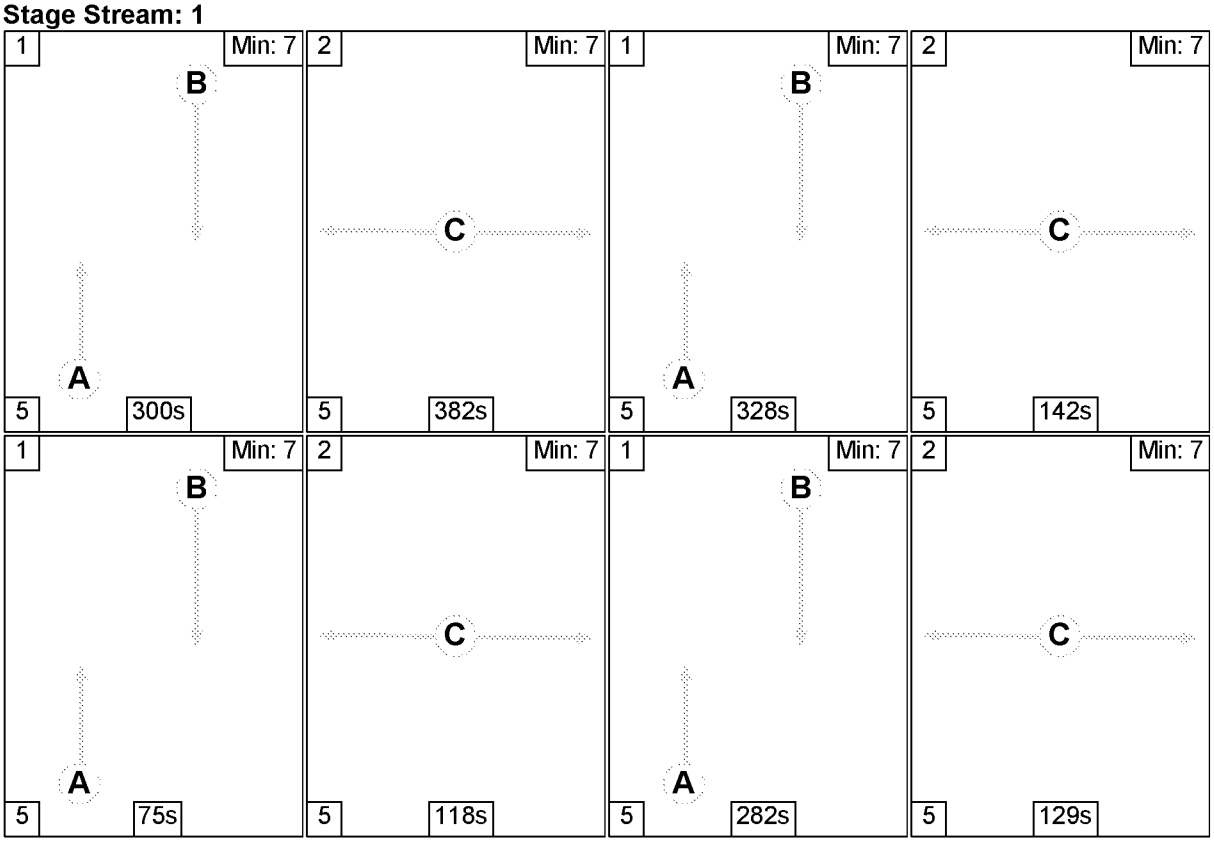
Signal Timings Diagram



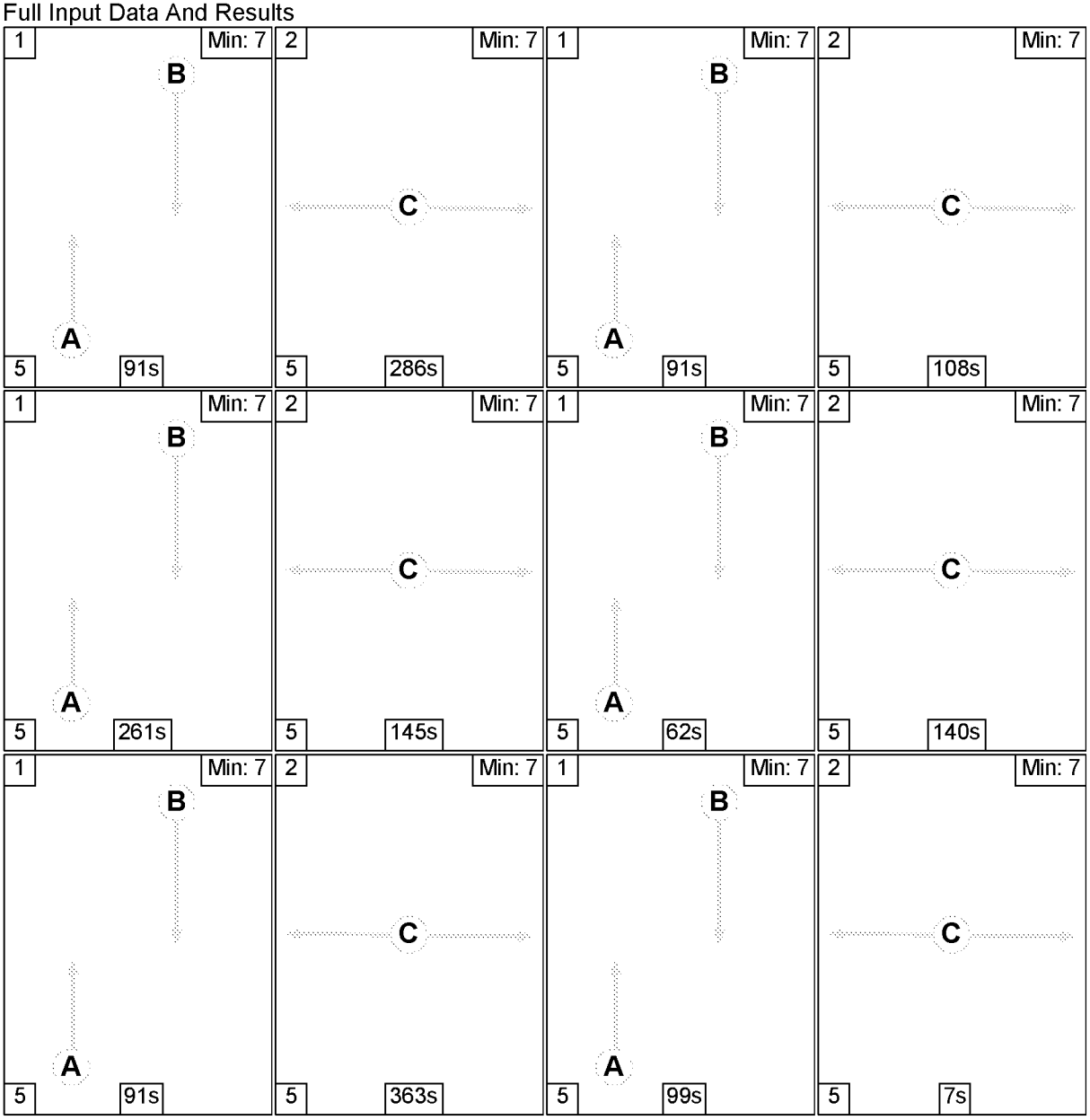
C2

Stage Sequence Diagram

Stage Stream: 1



Full Input Data And Results



Stage Timings

Stage Stream: 1

Stage	1	2	1	2	1	2	1	2	1	2
Duration	300	382	328	142	75	118	282	129	91	286
Change Point	0	305	692	1025	1172	1252	1375	1662	1796	1892

Stage	1	2	1	2	1	2	1	2	1	2
Duration	91	108	261	145	62	140	91	363	99	7
Change Point	2183	2279	2392	2658	2808	2875	3020	3116	3484	3588

Signal Timings Diagram

Full Input Data And Results

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	39	527	42	608
	B	98	0	55	0	153
	C	710	22	0	31	763
	D	98	0	33	0	131
	Tot.	906	61	615	73	1655

Traffic Lane Flows

Lane	Scenario 1: 2031 DS AM Baseline + Dev
Junction: J1: A29 / Meadow Way / Proposed Site Access Junction	
J1:1/1	608
J1:2/1	153
J1:3/1	763
J1:4/1	131
J1:5/1	615
J1:6/1	906
J1:7/1	64
J1:8/1	70
Junction: J2: Level Crossing	
J2:1/1	763
J2:2/1	763
J2:3/1	615
J2:4/1	615

Full Input Data And Results

Lane Saturation Flows

Junction: J1: A29 / Meadow Way / Proposed Site Access Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J1:1/1 (A29 North)	3.30	0.00	Y	Arm J1:5 Ahead	Inf	86.7 %	1909	1909
				Arm J1:7 Left	11.00	6.9 %		
				Arm J1:8 Right	10.00	6.4 %		
J1:2/1 (Proposed Site Access)	3.25	0.00	Y	Arm J1:5 Left	12.50	35.9 %	1722	1722
				Arm J1:6 Right	11.50	64.1 %		
				Arm J1:8 Ahead	Inf	0.0 %		
J1:3/1 (A29 South)	3.00	0.00	Y	Arm J1:6 Ahead	Inf	93.1 %	1896	1896
				Arm J1:7 Right	10.00	2.9 %		
				Arm J1:8 Left	11.00	4.1 %		
J1:4/1 (Meadow Way)	2.75	0.00	Y	Arm J1:5 Right	13.30	25.2 %	1639	1639
				Arm J1:6 Left	9.00	74.8 %		
				Arm J1:7 Ahead	Inf	0.0 %		
J1:5/1 (A29 South Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:6/1 (A29 North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:7/1 (Site Access Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:8/1 (Meadow Way Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Junction: J2: Level Crossing								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J2:1/1	3.25	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1940	1940
J2:2/1	Infinite Saturation Flow						Inf	Inf
J2:3/1	3.25	0.00	Y	Arm J2:4 Ahead	Inf	100.0 %	1940	1940
J2:4/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed New Site Access Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**83.8%**
J1: A29 / Meadow Way / Proposed Site Access Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**76.7%**
1/1	A29 North Ahead Left Right	O	N/A	N/A	C1:A		2	118	-	608	1909	877	69.3%
2/1	Proposed Site Access Left Right Ahead	U	N/A	N/A	C1:C		2	26	-	153	1722	201	76.2%
3/1	A29 South Ahead Right Left	O	N/A	N/A	C1:B		2	136	-	763	1896	1090	70.0%
4/1	Meadow Way Right Left Ahead	U	N/A	N/A	C1:D		2	23	-	131	1639	171	76.7%
5/1	A29 South Exit Ahead	U	N/A	N/A	-		-	-	-	615	Inf	Inf	0.0%
6/1	A29 North Exit	U	N/A	N/A	-		-	-	-	906	Inf	Inf	0.0%
7/1	Site Access Exit	U	N/A	N/A	-		-	-	-	64	Inf	Inf	0.0%
8/1	Meadow Way Exit	U	N/A	N/A	-		-	-	-	70	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	C1:E		1	7	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	C1:F		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	C1:G		1	10	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	C1:H		1	8	-	0	-	0	0.0%
J2: Level Crossing	-	-	**N/A**	-	-		-	-	-	-	-	-	**83.8%**
1/1	Ahead	U	2:1	N/A	C2:A		10	1680	-	763	1940	911	83.8%
2/1	Ahead	U	N/A	N/A	-		-	-	-	783	Inf	Inf	0.0%
3/1	Ahead	U	2:1	N/A	C2:B		10	1680	-	615	1940	911	67.5%

Full Input Data And Results

4/1		U	N/A	N/A	-		-	-	-	615	Inf	Inf	0.0%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Proposed New Site Access Junction	**-**	**-**	**48**	**7**	**6**	**60.1**	**8.8**	**0.2**	**69.2**	**-**	**-**	**-**	**-**
J1: A29 / Meadow Way / Proposed Site Access Junction	**-**	**-**	**48**	**7**	**6**	**11.9**	**5.3**	**0.2**	**17.5**	**-**	**-**	**-**	**-**
1/1	608	608	33	0	6	3.8	1.1	0.2	5.1	30.2	18.3	1.1	19.4
2/1	153	153	-	-	-	2.2	1.5	-	3.7	88.2	5.8	1.5	7.3
3/1	763	763	15	7	0	3.9	1.2	0.0	5.1	23.9	19.5	1.2	20.7
4/1	131	131	-	-	-	2.0	1.5	-	3.6	97.6	5.3	1.5	6.8
5/1	615	615	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	906	906	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	64	64	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	70	70	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
J2: Level Crossing	**-**	**-**	**0**	**0**	**0**	**48.2**	**3.5**	**0.0**	**51.7**	**-**	**-**	**-**	**-**
1/1	763	763	-	-	-	29.8	2.5	-	32.3	152.3	136.5	2.5	139.0
2/1	763	763	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	615	615	-	-	-	18.4	1.0	-	19.4	113.7	97.7	1.0	98.7
4/1	615	615	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

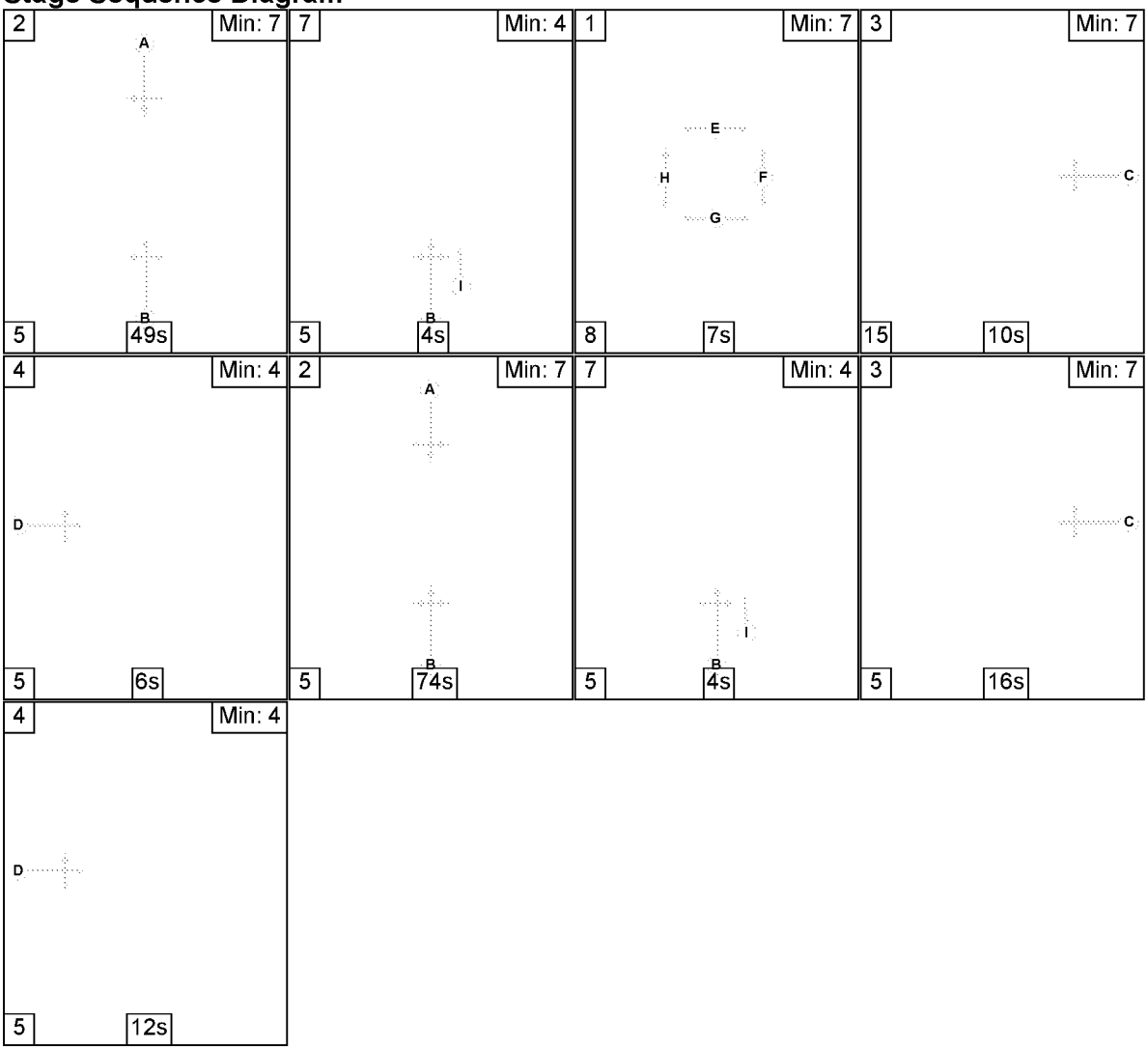
C1		PRC for Signalled Lanes (%):	17.3	Total Delay for Signalled Lanes (pcuHr):	17.47	Cycle Time (s): 240
C2	Stream: 1	PRC for Signalled Lanes (%):	7.4	Total Delay for Signalled Lanes (pcuHr):	51.71	Cycle Time (s): 3600
		PRC Over All Lanes (%):	7.4	Total Delay Over All Lanes(pcuHr):	69.18	

Full Input Data And Results

Scenario 2: '2031 DS AM Baseline + Dev + BEW' (FG2: '2031 DS AM Baseline + Dev + BEW', Plan 4: 'Network Control Plan 4')

C1

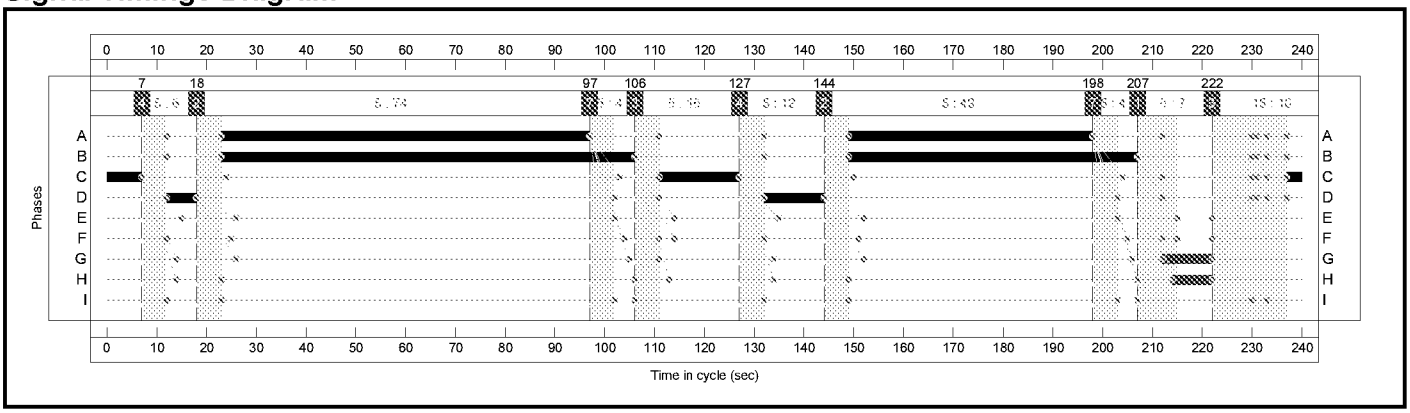
Stage Sequence Diagram



Stage Timings

Stage	2	7	1	3	4	2	7	3	4
Duration	49	4	7	10	6	74	4	16	12
Change Point	144	198	207	222	7	18	97	106	127

Signal Timings Diagram

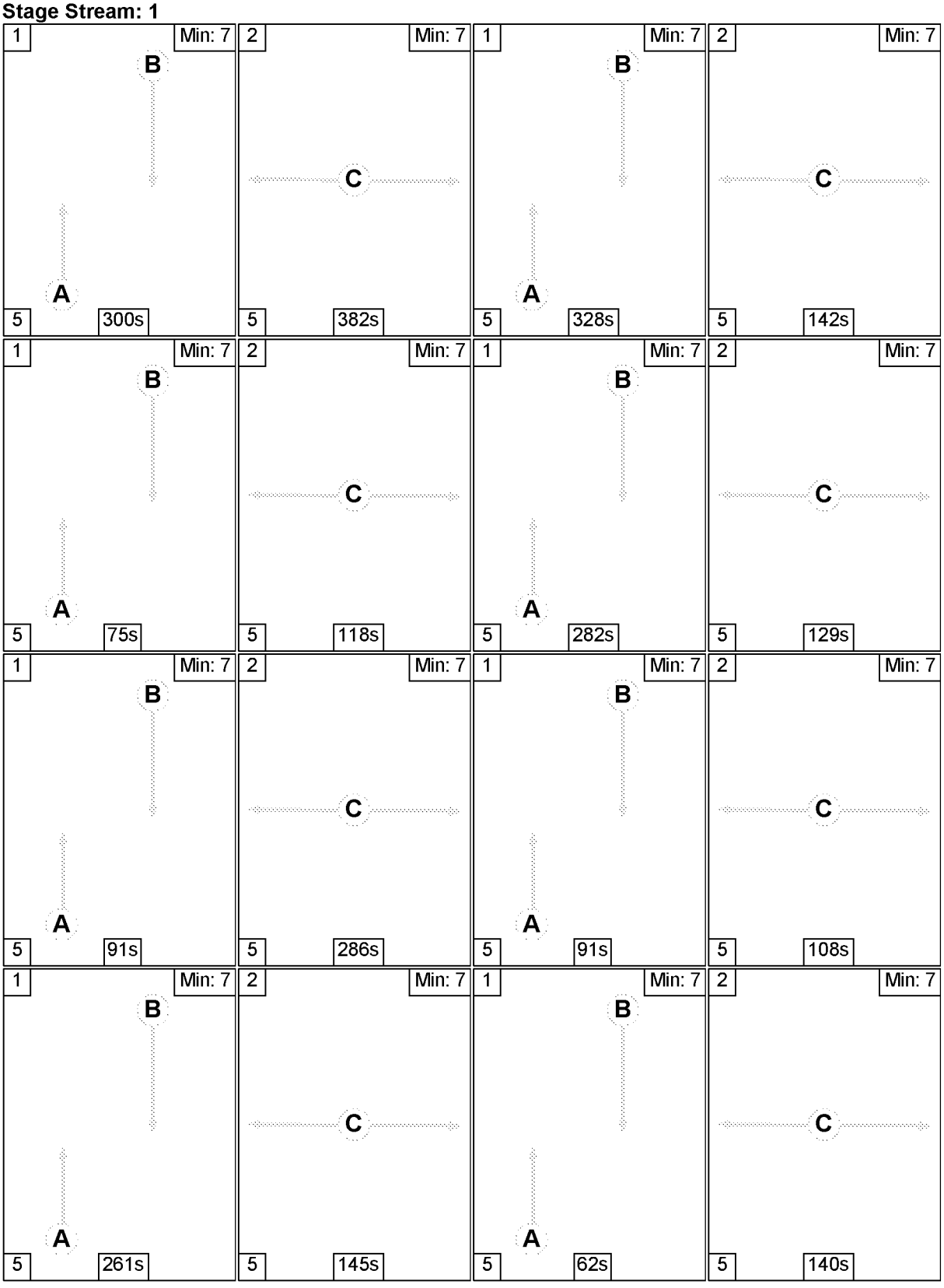


Full Input Data And Results

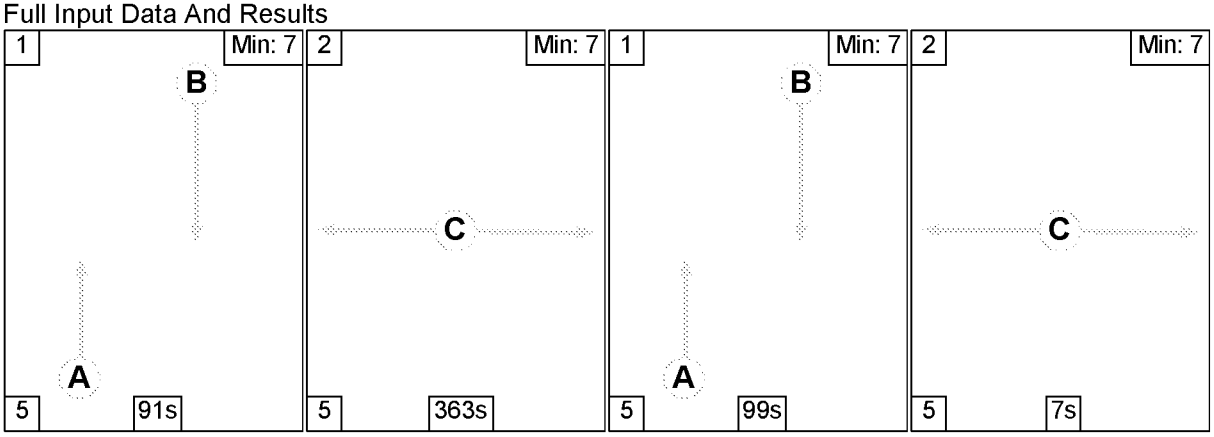
C2

Stage Sequence Diagram

Stage Stream: 1



Full Input Data And Results



Stage Timings

Stage Stream: 1

Stage	1	2	1	2	1	2	1	2	1	2
Duration	300	382	328	142	75	118	282	129	91	286
Change Point	0	305	692	1025	1172	1252	1375	1662	1796	1892

Stage	1	2	1	2	1	2	1	2	1	2
Duration	91	108	261	145	62	140	91	363	99	7
Change Point	2183	2279	2392	2658	2808	2875	3020	3116	3484	3588

Signal Timings Diagram

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	39	604	32	675
	B	98	0	55	1	154
	C	759	22	0	29	810
	D	63	5	30	0	98
	Tot.	920	66	689	62	1737

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2031 DS AM Baseline + Dev + BEW
Junction: J1: A29 / Meadow Way / Proposed Site Access Junction	
J1:1/1	675
J1:2/1	154
J1:3/1	810
J1:4/1	98
J1:5/1	689
J1:6/1	920
J1:7/1	59
J1:8/1	69
Junction: J2: Level Crossing	
J2:1/1	810
J2:2/1	810
J2:3/1	689
J2:4/1	689

Lane Saturation Flows

Junction: J1: A29 / Meadow Way / Proposed Site Access Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J1:1/1 (A29 North)	3.30	0.00	Y	Arm J1:5 Ahead	Inf	89.5 %	1916	1916
				Arm J1:7 Left	11.00	4.7 %		
				Arm J1:8 Right	10.00	5.8 %		
J1:2/1 (Proposed Site Access)	3.25	0.00	Y	Arm J1:5 Left	12.50	35.7 %	1723	1723
				Arm J1:6 Right	11.50	63.6 %		
				Arm J1:8 Ahead	Inf	0.6 %		
J1:3/1 (A29 South)	3.00	0.00	Y	Arm J1:6 Ahead	Inf	93.7 %	1898	1898
				Arm J1:7 Right	10.00	2.7 %		
				Arm J1:8 Left	11.00	3.6 %		
J1:4/1 (Meadow Way)	2.75	0.00	Y	Arm J1:5 Right	13.30	30.6 %	1655	1655
				Arm J1:6 Left	9.00	64.3 %		
				Arm J1:7 Ahead	Inf	5.1 %		
J1:5/1 (A29 South Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:6/1 (A29 North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:7/1 (Site Access Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:8/1 (Meadow Way Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J2: Level Crossing								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J2:1/1	3.25	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1940	1940
J2:2/1	Infinite Saturation Flow						Inf	Inf
J2:3/1	3.25	0.00	Y	Arm J2:4 Ahead	Inf	100.0 %	1940	1940
J2:4/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed New Site Access Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**88.9%**
J1: A29 / Meadow Way / Proposed Site Access Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**76.6%**
1/1	A29 North Ahead Left Right	O	N/A	N/A	C1:A		2	123	-	675	1916	894	75.5%
2/1	Proposed Site Access Left Right Ahead	U	N/A	N/A	C1:C		2	26	-	154	1723	201	76.6%
3/1	A29 South Ahead Right Left	O	N/A	N/A	C1:B		2	141	-	810	1898	1131	71.6%
4/1	Meadow Way Right Left Ahead	U	N/A	N/A	C1:D		2	18	-	98	1655	138	71.1%
5/1	A29 South Exit Ahead	U	N/A	N/A	-		-	-	-	889	Inf	Inf	0.0%
6/1	A29 North Exit	U	N/A	N/A	-		-	-	-	920	Inf	Inf	0.0%
7/1	Site Access Exit	U	N/A	N/A	-		-	-	-	59	Inf	Inf	0.0%
8/1	Meadow Way Exit	U	N/A	N/A	-		-	-	-	89	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	C1:E		1	7	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	C1:F		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	C1:G		1	10	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	C1:H		1	8	-	0	-	0	0.0%
J2: Level Crossing	-	-	**N/A**	-	-		-	-	-	-	-	-	**88.9%**
1/1	Ahead	U	2:1	N/A	C2:A		10	1680	-	810	1940	911	88.9%
2/1	Ahead	U	N/A	N/A	-		-	-	-	810	Inf	Inf	0.0%
3/1	Ahead	U	2:1	N/A	C2:B		10	1680	-	689	1940	911	75.7%

Full Input Data And Results

4/1		U	N/A	N/A	-		-	-	-	689	Inf	Inf	0.0%
Item	**Arriving (pcu)**	**Leaving (pcu)**	**Turners In Gaps (pcu)**	**Turners When Unopposed (pcu)**	**Turners In Intergreen (pcu)**	**Uniform Delay (pcuHr)**	**Rand + Oversat Delay (pcuHr)**	**Storage Area Uniform Delay (pcuHr)**	**Total Delay (pcuHr)**	**Av. Delay Per PCU (s/pcu)**	**Max. Back of Uniform Queue (pcu)**	**Rand + Oversat Queue (pcu)**	**Mean Max Queue (pcu)**
Network: Proposed New Site Access Junction	**-**	**-**	**59**	**1**	**1**	**69.8**	**10.7**	**0.2**	**80.8**	**-**	**-**	**-**	**-**
J1: A29 / Meadow Way / Proposed Site Access Junction	**-**	**-**	**59**	**1**	**1**	**11.7**	**5.5**	**0.2**	**17.4**	**-**	**-**	**-**	**-**
1/1	675	675	39	0	0	4.1	1.5	0.2	5.8	31.1	21.6	1.5	23.1
2/1	154	154	-	-	-	2.2	1.5	-	3.7	87.4	5.1	1.5	6.6
3/1	810	810	20	1	0	3.9	1.3	0.1	5.2	23.2	21.4	1.3	22.6
4/1	98	98	-	-	-	1.5	1.2	-	2.6	96.3	3.3	1.2	4.4
5/1	689	689	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	920	920	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	59	59	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	69	69	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
J2: Level Crossing	**-**	**-**	**0**	**0**	**0**	**58.1**	**5.3**	**0.0**	**63.3**	**-**	**-**	**-**	**-**
1/1	810	810	-	-	-	34.8	3.7	-	38.6	171.4	151.0	3.7	154.7
2/1	810	810	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	689	689	-	-	-	23.2	1.5	-	24.8	129.5	116.0	1.5	117.5
4/1	689	689	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1		PRC for Signalled Lanes (%):	17.5	Total Delay for Signalled Lanes (pcuHr):	17.42	Cycle Time (s): 240
C2	Stream: 1	PRC for Signalled Lanes (%):	1.2	Total Delay for Signalled Lanes (pcuHr):	63.34	Cycle Time (s): 3600
		PRC Over All Lanes (%):	1.2	Total Delay Over All Lanes(pcuHr):	80.76	

Full Input Data And Results

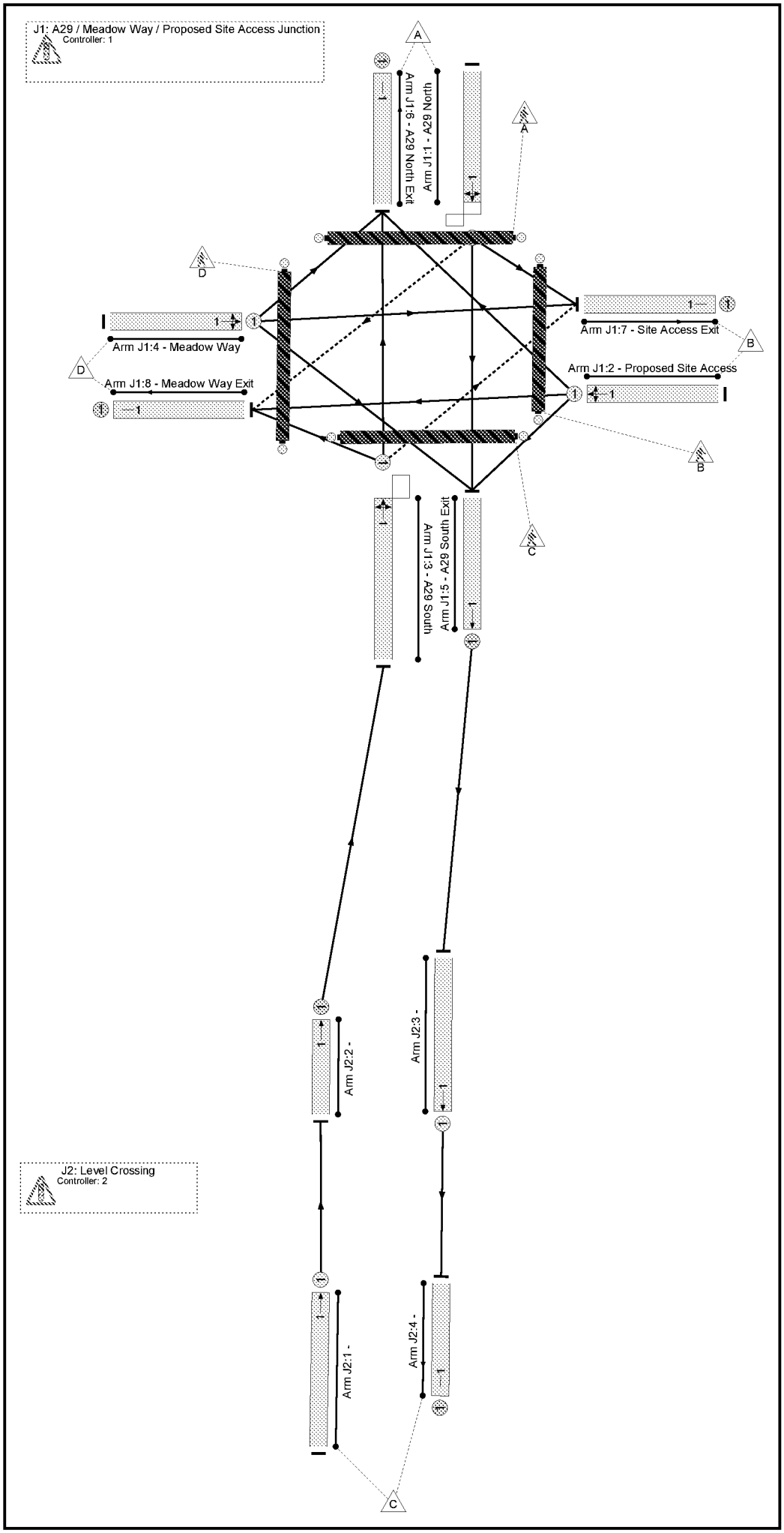
User and Project Details

Project:	**Land at Westergate, West Sussex**
Title:	**Proposed New Site Access Junction**
Location:	
Additional detail:	
File name:	Site Access-Meadow Way Signals WSP Staging TA with Level Crossing PM Peak 240s (Single Ped).lsg3x
Author:	UKPXM046
Company:	WSP Property & Development
Address:	Regus House, George Curl Way, Southampton, SO18 2RZ

Full Input Data And Results

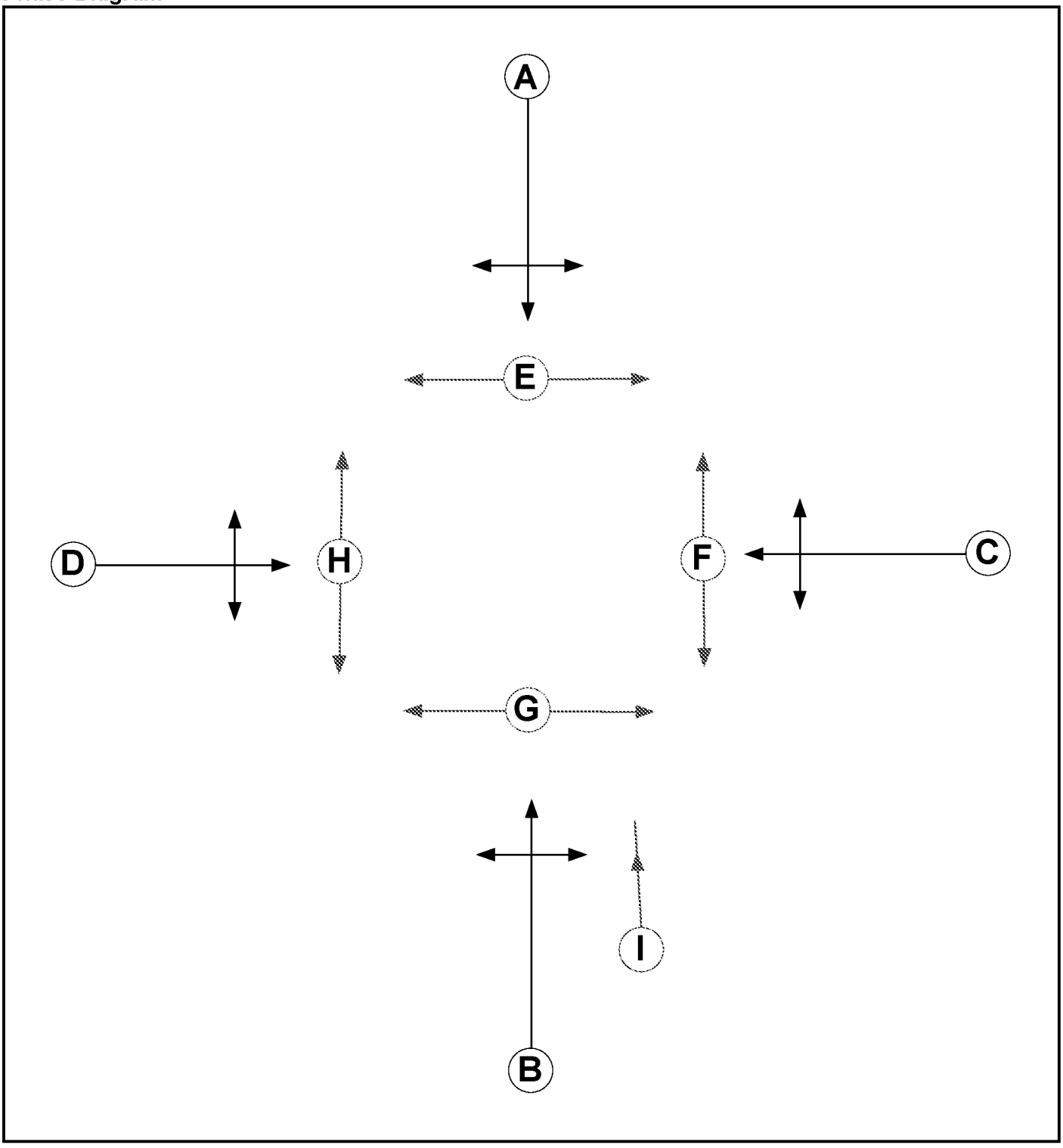
Network Layout Diagram

Full Input Data And Results



C1

Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		4	4
E	Pedestrian		7	7
F	Pedestrian		7	7
G	Pedestrian		7	7
H	Pedestrian		7	7
I	Ind. Arrow	B	4	4

Phase Intergreens Matrix

		Starting Phase								
		A	B	C	D	E	F	G	H	I
Terminating Phase	A		-	6	5	5	7	8	9	5
	B	-		5	5	8	8	5	7	-
	C	5	5		5	8	5	7	7	5
	D	5	5	6		8	7	8	5	5
	E	9	9	9	9		-	-	-	-
	F	15	15	15	15	-		-	-	8
	G	11	11	11	11	-	-		-	11
	H	8	8	8	8	-	-	-		-
	I	5	-	5	5	-	5	5	-	

Phases in Stage

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

Phase Delays

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

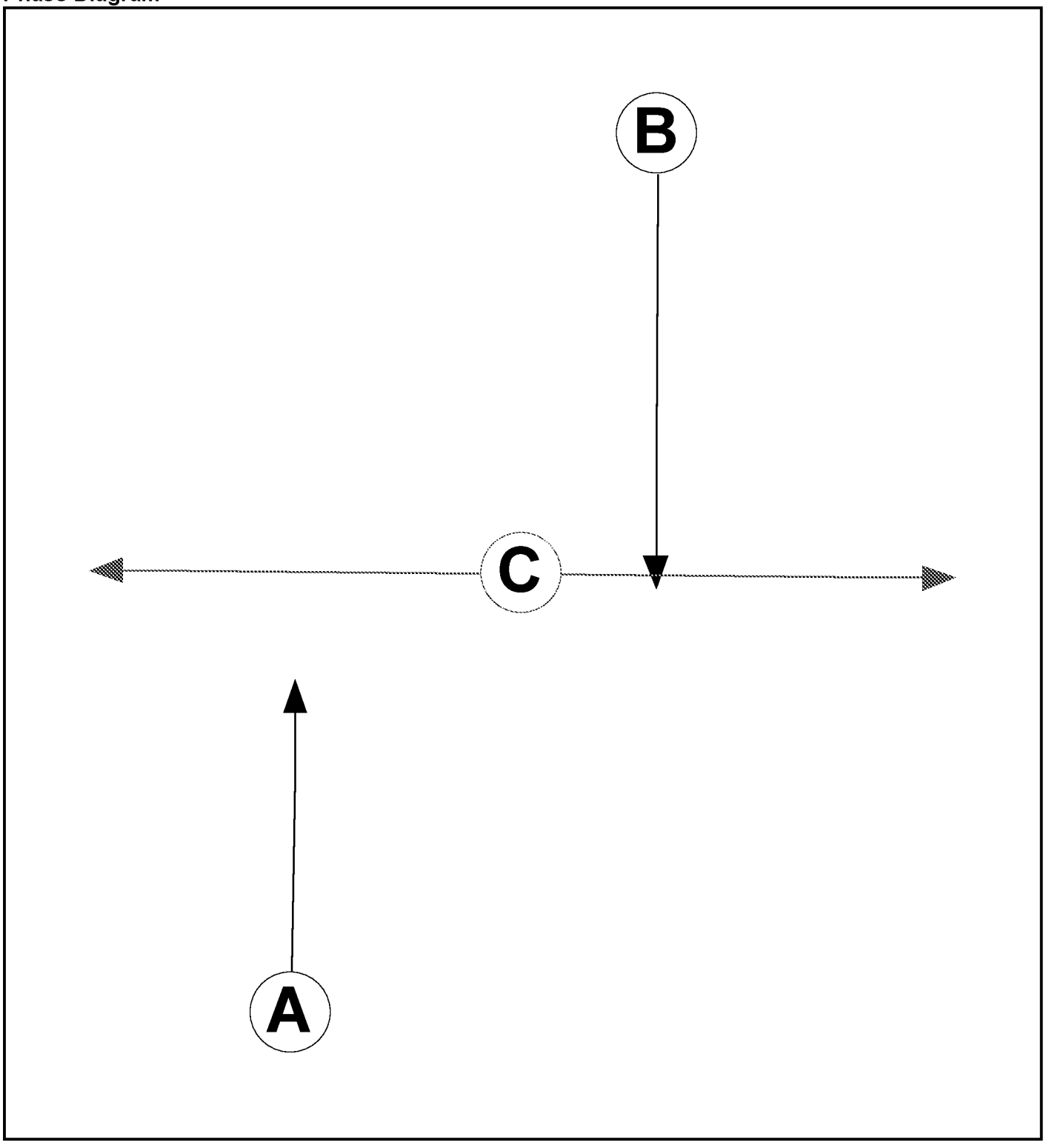
Full Input Data And Results

Prohibited Stage Change

		To Stage						
		1	2	3	4	5	6	7
From Stage	1		15	15	15	15	15	
	2	9		6	5	0	0	5
	3	8	5		5	5	5	5
	4	8	5	6		5	5	5
	5	8	2	5	5		2	0
	6	9	2	6	5	2		5
	7	8	5	5	5	0	5	

C2

Phase Diagram



Phase Input Data

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

Full Input Data And Results

Phase Intergreens Matrix

	Starting Phase			
Terminating Phase		A	B	C
	A		-	5
	B	-		5
	C	5	5	

Phases in Stage

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

Phase Delays

Stage Stream: 1

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

Prohibited Stage Change

Stage Stream: 1

	To Stage		
From Stage		1	2
	1		5
	2	5	

Full Input Data And Results

Give-Way Lane Input Data

Junction: J1: A29 / Meadow Way / Proposed Site Access Junction											
Lane	**Movement**	**Max Flow when Giving Way (PCU/Hr)**	**Min Flow when Giving Way (PCU/Hr)**	**Opposing Lane**	**Opp. Lane Coeff.**	**Opp. Mvmnts.**	**Right Turn Storage (PCU)**	**Non-Blocking Storage (PCU)**	**RTF**	**Right Turn Move up (s)**	**Max Turns in Intergreen (PCU)**
J1:1/1 (A29 North)	J1:8/1 (Right)	1439	0	J1:3/1	1.09	To J1:6/1 (Ahead) To J1:8/1 (Left)	2.00	1.00	0.50	2	2.00
J1:3/1 (A29 South)	J1:7/1 (Right)	1439	0	J1:1/1	1.09	To J1:5/1 (Ahead) To J1:7/1 (Left)	2.00	2.00	0.50	2	2.00

Junction: J2: Level Crossing
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: J1: A29 / Meadow Way / Proposed Site Access Junction												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
J1:1/1 (A29 North)	O	A	2	3	60.0	Geom	-	3.30	0.00	Y	Arm J1:5 Ahead	Inf
											Arm J1:7 Left	11.00
											Arm J1:8 Right	10.00
J1:2/1 (Proposed Site Access)	U	C	2	3	60.0	Geom	-	3.25	0.00	Y	Arm J1:5 Left	12.50
											Arm J1:6 Right	11.50
											Arm J1:8 Ahead	Inf
J1:3/1 (A29 South)	O	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm J1:6 Ahead	Inf
											Arm J1:7 Right	10.00
											Arm J1:8 Left	11.00
J1:4/1 (Meadow Way)	U	D	2	3	60.0	Geom	-	2.75	0.00	Y	Arm J1:5 Right	13.30
											Arm J1:6 Left	9.00
											Arm J1:7 Ahead	Inf
J1:5/1 (A29 South Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:6/1 (A29 North Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:7/1 (Site Access Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:8/1 (Meadow Way Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

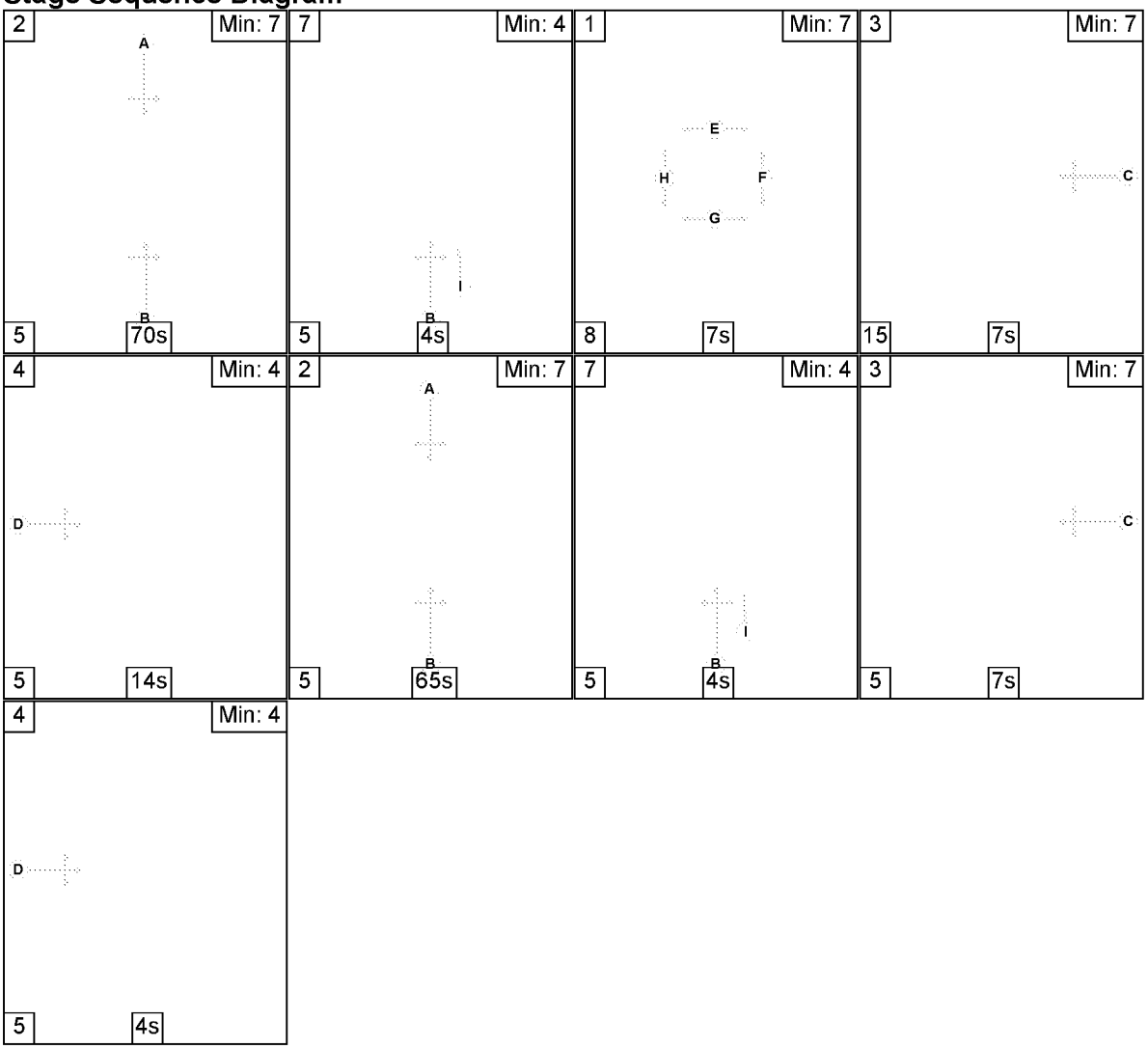
Junction: J2: Level Crossing												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
J2:1/1	U	A	2	3	60.0	Geom	-	3.25	0.00	Y	Arm J2:2 Ahead	Inf
J2:2/1	U		2	3	60.0	Inf	-	-	-	-	-	-
J2:3/1	U	B	2	3	60.0	Geom	-	3.25	0.00	Y	Arm J2:4 Ahead	Inf
J2:4/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2031 DS PM Baseline + Dev'	16:45	17:45	01:00	
2: '2031 DS PM Baseline + Dev + BEW'	16:45	17:45	01:00	

Scenario 1: '2031 DS PM Baseline + Dev' (FG1: '2031 DS PM Baseline + Dev', Plan 4: 'Network Control Plan 4')
C1

Stage Sequence Diagram

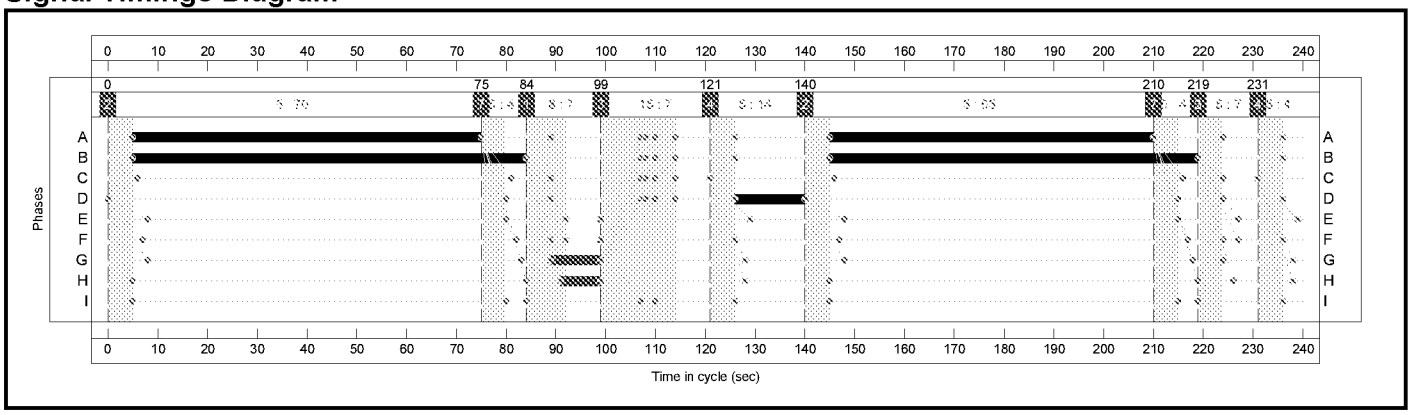


Full Input Data And Results

Stage Timings

Stage	2	7	1	3	4	2	7	3	4
Duration	70	4	7	7	14	65	4	7	4
Change Point	0	75	84	99	121	140	210	219	231

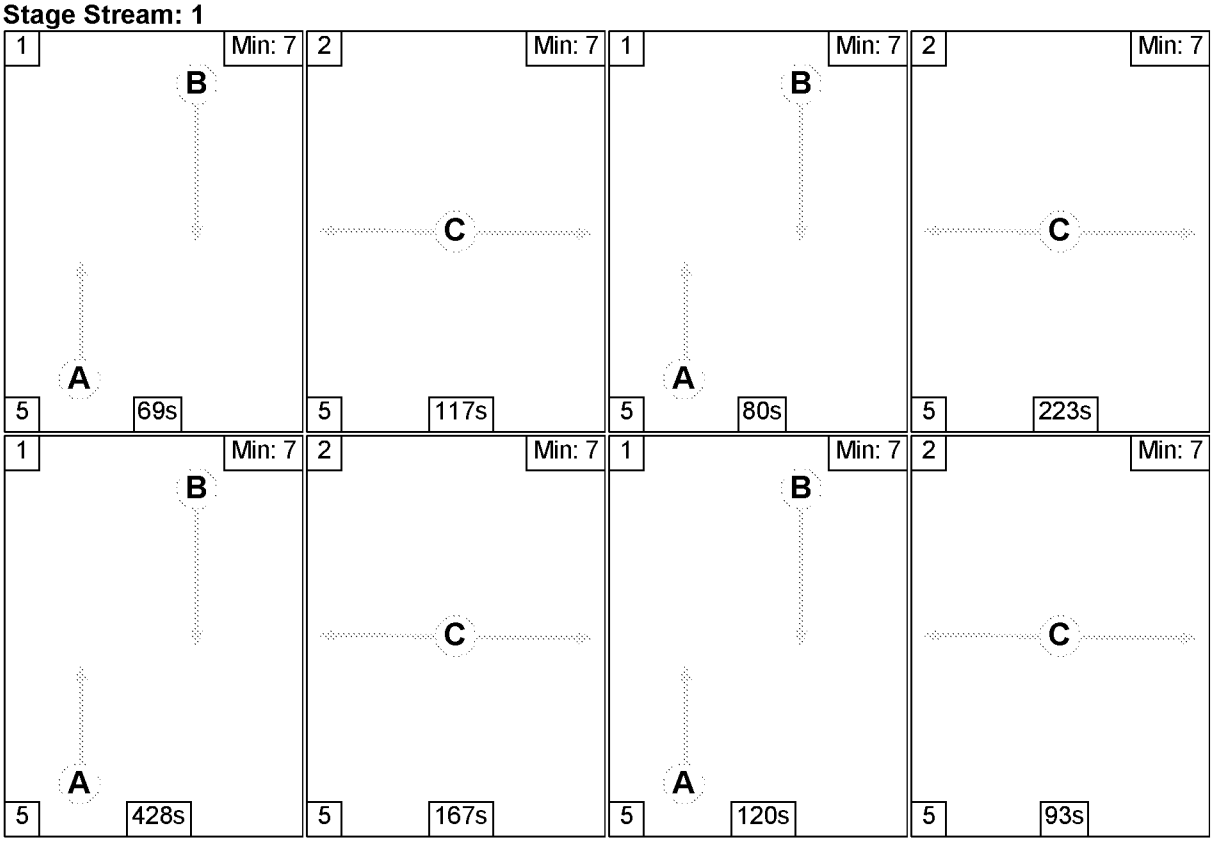
Signal Timings Diagram



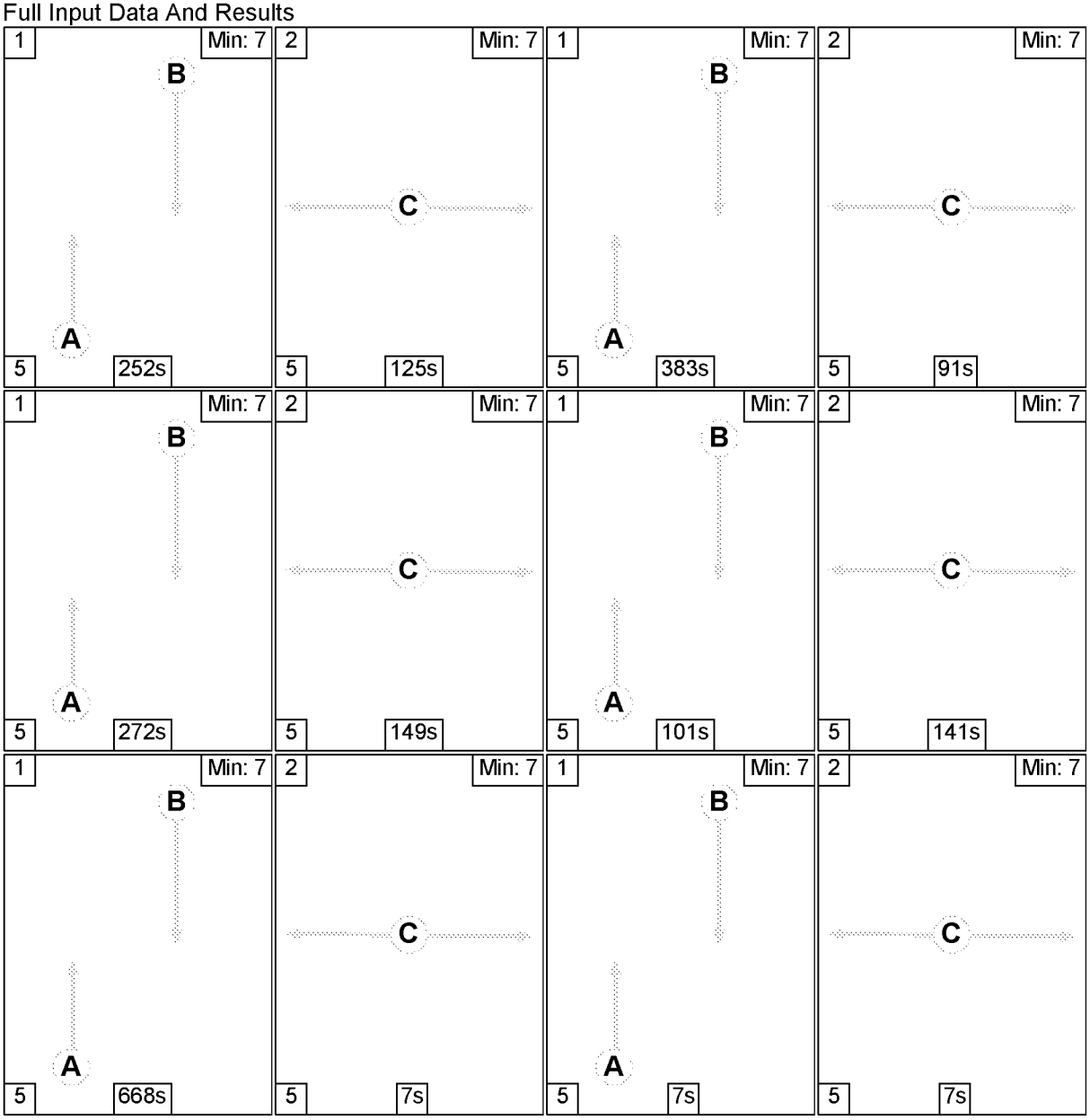
C2

Stage Sequence Diagram

Stage Stream: 1



Full Input Data And Results



Stage Timings

Stage Stream: 1

Stage	1	2	1	2	1	2	1	2	1	2
Duration	69	117	80	223	428	167	120	93	252	125
Change Point	0	74	196	281	509	942	1114	1239	1337	1594

Stage	1	2	1	2	1	2	1	2	1	2
Duration	383	91	272	149	101	141	668	7	7	7
Change Point	1724	2112	2208	2485	2639	2745	2891	3564	3576	3588

Signal Timings Diagram

Full Input Data And Results

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	77	640	72	789
	B	38	0	19	0	57
	C	507	39	0	42	588
	D	72	0	32	0	104
	Tot.	617	116	691	114	1538

Traffic Lane Flows

Lane	Scenario 1: 2031 DS PM Baseline + Dev
Junction: J1: A29 / Meadow Way / Proposed Site Access Junction	
J1:1/1	789
J1:2/1	57
J1:3/1	588
J1:4/1	104
J1:5/1	691
J1:6/1	617
J1:7/1	111
J1:8/1	119
Junction: J2: Level Crossing	
J2:1/1	588
J2:2/1	588
J2:3/1	691
J2:4/1	691

Full Input Data And Results

Lane Saturation Flows

Junction: J1: A29 / Meadow Way / Proposed Site Access Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J1:1/1 (A29 North)	3.30	0.00	Y	Arm J1:5 Ahead	Inf	81.1 %	1894	1894
				Arm J1:7 Left	11.00	9.1 %		
				Arm J1:8 Right	10.00	9.8 %		
J1:2/1 (Proposed Site Access)	3.25	0.00	Y	Arm J1:5 Left	12.50	33.3 %	1721	1721
				Arm J1:6 Right	11.50	66.7 %		
				Arm J1:8 Ahead	Inf	0.0 %		
J1:3/1 (A29 South)	3.00	0.00	Y	Arm J1:6 Ahead	Inf	86.2 %	1878	1878
				Arm J1:7 Right	10.00	6.6 %		
				Arm J1:8 Left	11.00	7.1 %		
J1:4/1 (Meadow Way)	2.75	0.00	Y	Arm J1:5 Right	13.30	30.8 %	1643	1643
				Arm J1:6 Left	9.00	69.2 %		
				Arm J1:7 Ahead	Inf	0.0 %		
J1:5/1 (A29 South Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:6/1 (A29 North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:7/1 (Site Access Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:8/1 (Meadow Way Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Junction: J2: Level Crossing								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J2:1/1	3.25	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1940	1940
J2:2/1	Infinite Saturation Flow						Inf	Inf
J2:3/1	3.25	0.00	Y	Arm J2:4 Ahead	Inf	100.0 %	1940	1940
J2:4/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed New Site Access Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**78.7%**
J1: A29 / Meadow Way / Proposed Site Access Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**78.7%**
1/1	A29 North Ahead Left Right	O	N/A	N/A	C1:A		2	135	-	789	1894	1003	78.7%
2/1	Proposed Site Access Left Right Ahead	U	N/A	N/A	C1:C		2	14	-	57	1721	115	49.7%
3/1	A29 South Ahead Right Left	O	N/A	N/A	C1:B		2	153	-	588	1878	1210	48.6%
4/1	Meadow Way Right Left Ahead	U	N/A	N/A	C1:D		2	18	-	104	1643	137	76.0%
5/1	A29 South Exit Ahead	U	N/A	N/A	-		-	-	-	691	Inf	Inf	0.0%
6/1	A29 North Exit	U	N/A	N/A	-		-	-	-	617	Inf	Inf	0.0%
7/1	Site Access Exit	U	N/A	N/A	-		-	-	-	111	Inf	Inf	0.0%
8/1	Meadow Way Exit	U	N/A	N/A	-		-	-	-	119	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	C1:E		1	7	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	C1:F		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	C1:G		1	10	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	C1:H		1	8	-	0	-	0	0.0%
J2: Level Crossing	-	-	**N/A**	-	-		-	-	-	-	-	-	**53.7%**
1/1	Ahead	U	2:1	N/A	C2:A		10	2380	-	588	1940	1288	45.7%
2/1	Ahead	U	N/A	N/A	-		-	-	-	586	Inf	Inf	0.0%
3/1	Ahead	U	2:1	N/A	C2:B		10	2380	-	691	1940	1288	53.7%

Full Input Data And Results

4/1		U	N/A	N/A	-		-	-	-	691	Inf	Inf	0.0%
Item	**Arriving (pcu)**	**Leaving (pcu)**	**Turners In Gaps (pcu)**	**Turners When Unopposed (pcu)**	**Turners In Intergreen (pcu)**	**Uniform Delay (pcuHr)**	**Rand + Oversat Delay (pcuHr)**	**Storage Area Uniform Delay (pcuHr)**	**Total Delay (pcuHr)**	**Av. Delay Per PCU (s/pcu)**	**Max. Back of Uniform Queue (pcu)**	**Rand + Oversat Queue (pcu)**	**Mean Max Queue (pcu)**
Network: Proposed New Site Access Junction	**-**	**-**	**107**	**8**	**2**	**24.0**	**5.2**	**0.2**	**29.4**	**-**	**-**	**-**	**-**
J1: A29 / Meadow Way / Proposed Site Access Junction	**-**	**-**	**107**	**8**	**2**	**10.2**	**4.2**	**0.2**	**14.6**	**-**	**-**	**-**	**-**
1/1	789	789	76	0	1	5.3	1.8	0.1	7.2	33.0	29.4	1.8	31.2
2/1	57	57	-	-	-	0.9	0.5	-	1.3	85.2	2.0	0.5	2.5
3/1	588	588	31	8	1	2.1	0.5	0.1	2.7	16.2	14.2	0.5	14.7
4/1	104	104	-	-	-	1.9	1.5	-	3.4	116.8	4.5	1.5	5.9
5/1	691	691	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	617	617	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	111	111	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	119	119	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
J2: Level Crossing	**-**	**-**	**0**	**0**	**0**	**13.8**	**1.0**	**0.0**	**14.8**	**-**	**-**	**-**	**-**
1/1	588	588	-	-	-	6.1	0.4	-	6.5	39.8	54.2	0.4	54.6
2/1	588	588	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	691	691	-	-	-	7.7	0.6	-	8.3	43.4	69.1	0.6	68.7
4/1	691	691	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

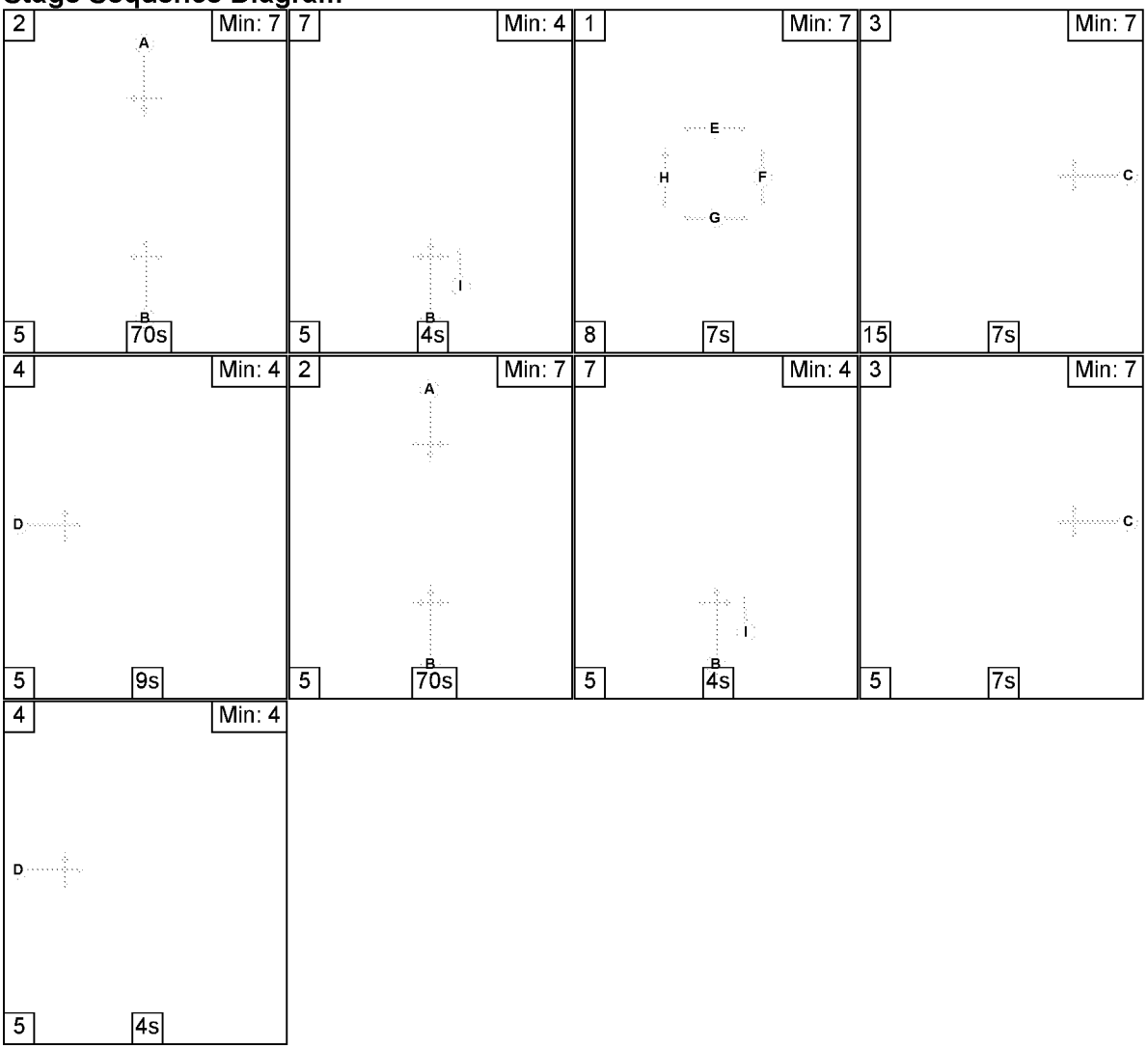
C1		PRC for Signalled Lanes (%):	14.4	Total Delay for Signalled Lanes (pcuHr):	14.60	Cycle Time (s): 240
C2	Stream: 1	PRC for Signalled Lanes (%):	67.7	Total Delay for Signalled Lanes (pcuHr):	14.83	Cycle Time (s): 3600
		PRC Over All Lanes (%):	14.4	Total Delay Over All Lanes(pcuHr):	29.43	

Full Input Data And Results

Scenario 2: '2031 DS PM Baseline + Dev + BEW' (FG2: '2031 DS PM Baseline + Dev + BEW', Plan 4: 'Network Control Plan 4')

C1

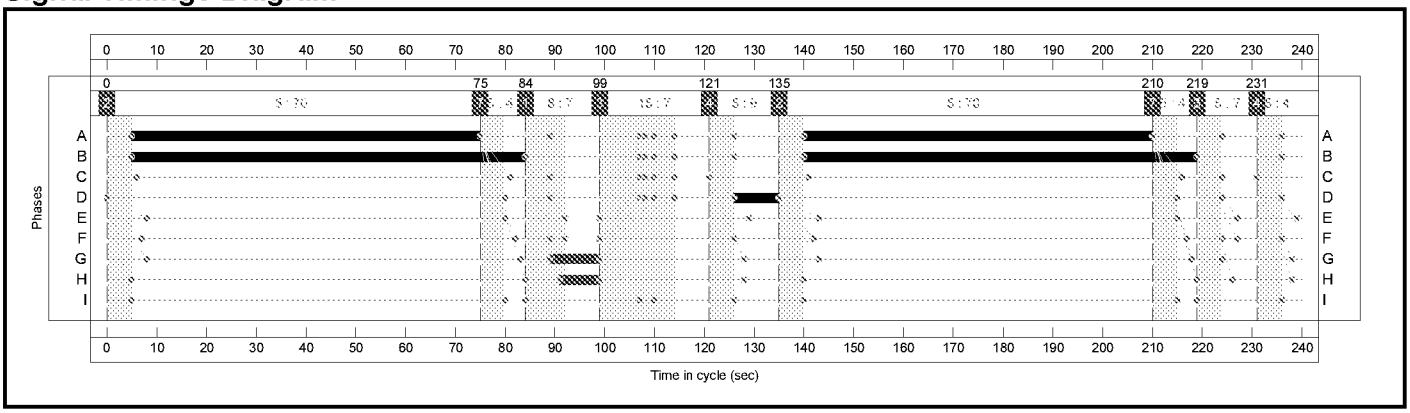
Stage Sequence Diagram



Stage Timings

Stage	2	7	1	3	4	2	7	3	4
Duration	70	4	7	7	9	70	4	7	4
Change Point	0	75	84	99	121	135	210	219	231

Signal Timings Diagram

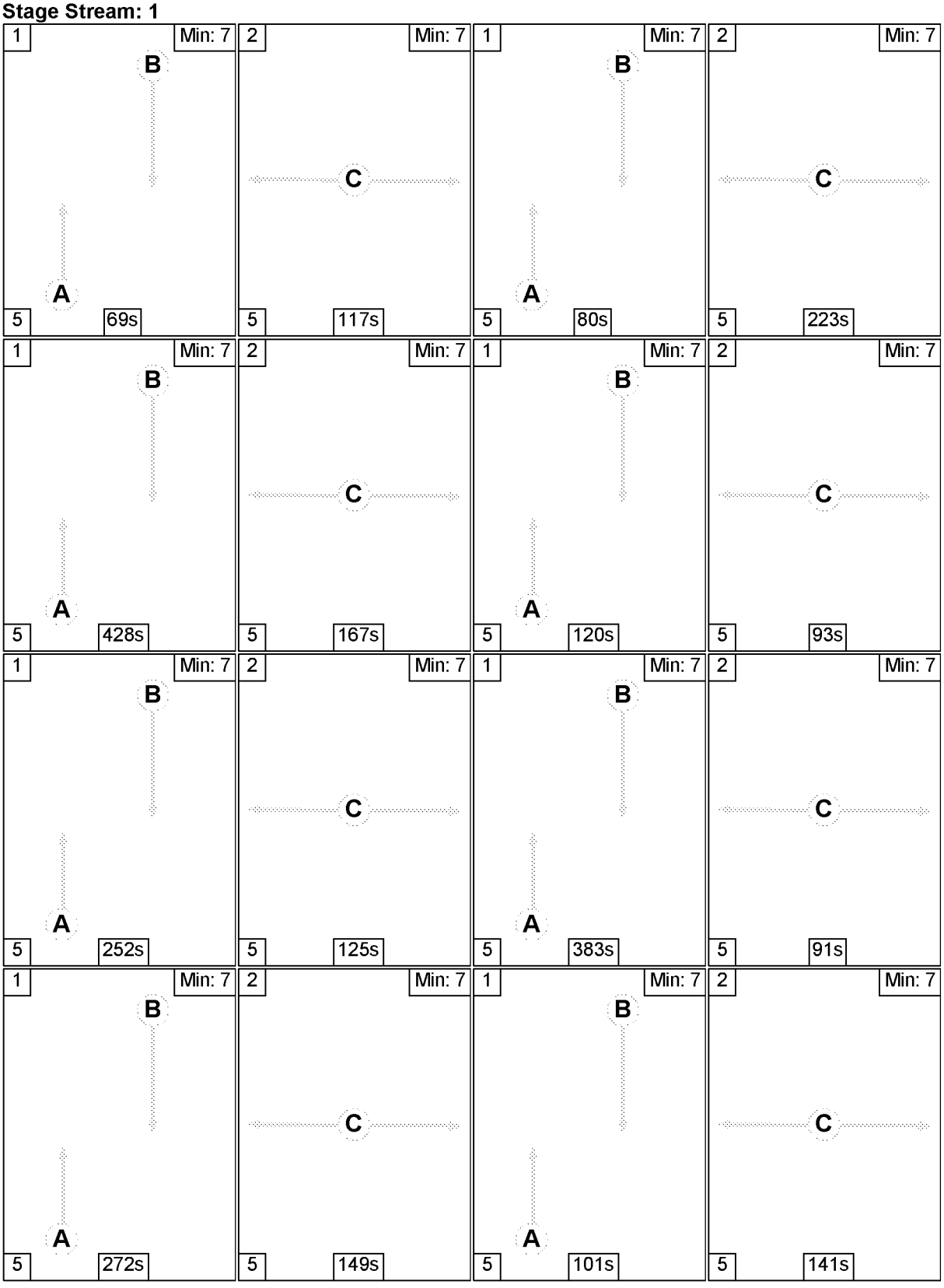


Full Input Data And Results

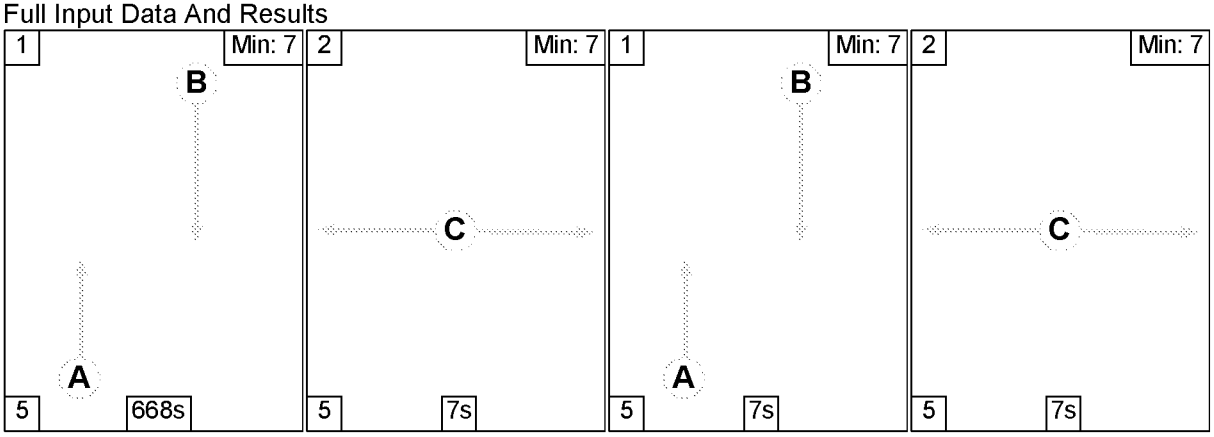
C2

Stage Sequence Diagram

Stage Stream: 1



Full Input Data And Results



Stage Timings

Stage Stream: 1

Stage	1	2	1	2	1	2	1	2	1	2
Duration	69	117	80	223	428	167	120	93	252	125
Change Point	0	74	196	281	509	942	1114	1239	1337	1594

Stage	1	2	1	2	1	2	1	2	1	2
Duration	383	91	272	149	101	141	668	7	7	7
Change Point	1724	2112	2208	2485	2639	2745	2891	3564	3576	3588

Signal Timings Diagram



Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	77	699	43	819
	B	38	0	19	7	64
	C	607	39	0	36	682
	D	54	16	11	0	81
	Tot.	699	132	729	86	1646

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2031 DS PM Baseline + Dev + BEW
Junction: J1: A29 / Meadow Way / Proposed Site Access Junction	
J1:1/1	819
J1:2/1	64
J1:3/1	682
J1:4/1	81
J1:5/1	729
J1:6/1	699
J1:7/1	98
J1:8/1	120
Junction: J2: Level Crossing	
J2:1/1	682
J2:2/1	682
J2:3/1	729
J2:4/1	729

Lane Saturation Flows

Junction: J1: A29 / Meadow Way / Proposed Site Access Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J1:1/1 (A29 North)	3.30	0.00	Y	Arm J1:5 Ahead	Inf	85.3 %	1905	1905
				Arm J1:7 Left	11.00	5.3 %		
				Arm J1:8 Right	10.00	9.4 %		
J1:2/1 (Proposed Site Access)	3.25	0.00	Y	Arm J1:5 Left	12.50	29.7 %	1743	1743
				Arm J1:6 Right	11.50	59.4 %		
				Arm J1:8 Ahead	Inf	10.9 %		
J1:3/1 (A29 South)	3.00	0.00	Y	Arm J1:6 Ahead	Inf	89.0 %	1885	1885
				Arm J1:7 Right	10.00	5.7 %		
				Arm J1:8 Left	11.00	5.3 %		
J1:4/1 (Meadow Way)	2.75	0.00	Y	Arm J1:5 Right	13.30	13.6 %	1678	1678
				Arm J1:6 Left	9.00	66.7 %		
				Arm J1:7 Ahead	Inf	19.8 %		
J1:5/1 (A29 South Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:6/1 (A29 North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:7/1 (Site Access Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:8/1 (Meadow Way Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J2: Level Crossing								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J2:1/1	3.25	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1940	1940
J2:2/1	Infinite Saturation Flow						Inf	Inf
J2:3/1	3.25	0.00	Y	Arm J2:4 Ahead	Inf	100.0 %	1940	1940
J2:4/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed New Site Access Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**80.6%**
J1: A29 / Meadow Way / Proposed Site Access Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**80.6%**
1/1	A29 North Ahead Left Right	O	N/A	N/A	C1:A		2	140	-	819	1905	1017	80.6%
2/1	Proposed Site Access Left Right Ahead	U	N/A	N/A	C1:C		2	14	-	64	1743	116	55.1%
3/1	A29 South Ahead Right Left	O	N/A	N/A	C1:B		2	158	-	682	1885	1257	54.3%
4/1	Meadow Way Right Left Ahead	U	N/A	N/A	C1:D		2	13	-	81	1678	105	77.2%
5/1	A29 South Exit Ahead	U	N/A	N/A	-		-	-	-	729	Inf	Inf	0.0%
6/1	A29 North Exit	U	N/A	N/A	-		-	-	-	689	Inf	Inf	0.0%
7/1	Site Access Exit	U	N/A	N/A	-		-	-	-	98	Inf	Inf	0.0%
8/1	Meadow Way Exit	U	N/A	N/A	-		-	-	-	120	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	C1:E		1	7	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	C1:F		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	C1:G		1	10	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	C1:H		1	8	-	0	-	0	0.0%
J2: Level Crossing	-	-	**N/A**	-	-		-	-	-	-	-	-	**56.6%**
1/1	Ahead	U	2:1	N/A	C2:A		10	2380	-	682	1940	1288	53.0%
2/1	Ahead	U	N/A	N/A	-		-	-	-	682	Inf	Inf	0.0%
3/1	Ahead	U	2:1	N/A	C2:B		10	2380	-	729	1940	1288	56.6%

Full Input Data And Results

4/1		U	N/A	N/A	-		-	-	-	729	Inf	Inf	0.0%
Item	**Arriving (pcu)**	**Leaving (pcu)**	**Turners In Gaps (pcu)**	**Turners When Unopposed (pcu)**	**Turners In Intergreen (pcu)**	**Uniform Delay (pcuHr)**	**Rand + Oversat Delay (pcuHr)**	**Storage Area Uniform Delay (pcuHr)**	**Total Delay (pcuHr)**	**Av. Delay Per PCU (s/pcu)**	**Max. Back of Uniform Queue (pcu)**	**Rand + Oversat Queue (pcu)**	**Mean Max Queue (pcu)**
Network: Proposed New Site Access Junction	-	-	**106**	**8**	**2**	**25.8**	**5.9**	**0.2**	**32.0**	-	-	-	-
J1: A29 / Meadow Way / Proposed Site Access Junction	-	-	**106**	**8**	**2**	**9.8**	**4.7**	**0.2**	**14.7**	-	-	-	-
1/1	819	819	76	0	1	5.3	2.0	0.1	7.5	32.8	30.7	2.0	32.7
2/1	64	64	-	-	-	1.0	0.6	-	1.6	88.4	2.2	0.6	2.8
3/1	682	682	30	8	1	2.3	0.6	0.1	2.9	15.5	16.3	0.6	16.9
4/1	81	81	-	-	-	1.3	1.5	-	2.8	123.8	3.0	1.5	4.5
5/1	729	729	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	699	699	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	98	98	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	120	120	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
J2: Level Crossing	-	-	**0**	**0**	**0**	**16.0**	**1.2**	**0.0**	**17.2**	-	-	-	-
1/1	682	682	-	-	-	7.6	0.6	-	8.2	43.0	67.6	0.6	68.2
2/1	682	682	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	729	729	-	-	-	8.4	0.7	-	9.1	44.8	75.1	0.7	75.8
4/1	729	729	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1		PRC for Signalled Lanes (%):	11.7	Total Delay for Signalled Lanes (pcuHr):	14.75	Cycle Time (s): 240
C2	Stream: 1	PRC for Signalled Lanes (%):	59.0	Total Delay for Signalled Lanes (pcuHr):	17.23	Cycle Time (s): 3600
		PRC Over All Lanes (%):	11.7	Total Delay Over All Lanes(pcuHr):	31.98	

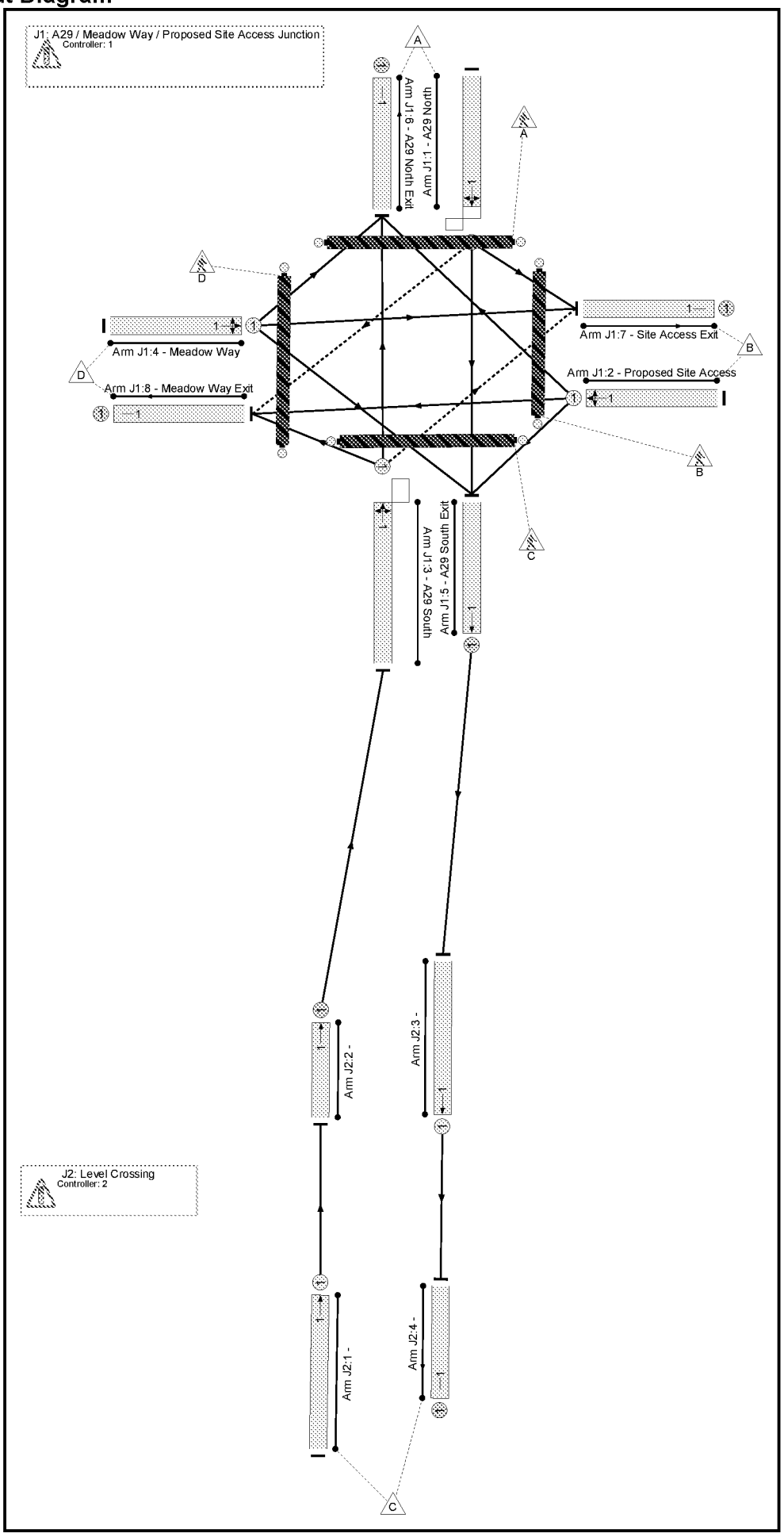
Full Input Data And Results

User and Project Details

Project:	**Land at Westergate, West Sussex**
Title:	**Proposed New Site Access Junction**
Location:	
Additional detail:	
File name:	Site Access-Meadow Way Signals WSP Staging TA with Level Crossing AM Sensitivity.lsg3x
Author:	UKPXM046
Company:	WSP Property & Development
Address:	Regus House, George Curl Way, Southampton, SO18 2RZ

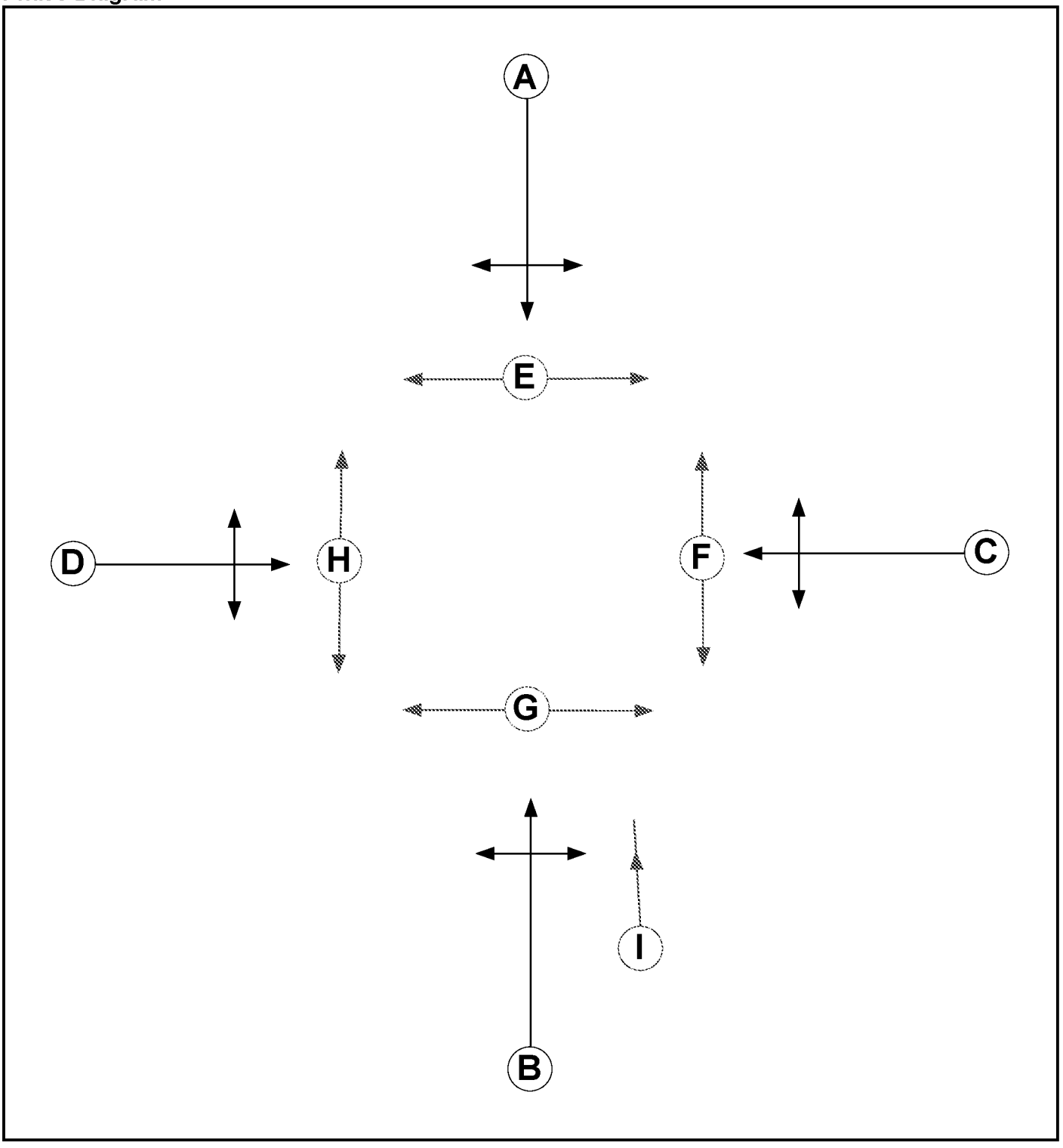
Full Input Data And Results

Network Layout Diagram



C1

Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		4	4
E	Pedestrian		7	7
F	Pedestrian		7	7
G	Pedestrian		7	7
H	Pedestrian		7	7
I	Ind. Arrow	B	4	4

Phase Intergreens Matrix

		Starting Phase								
		A	B	C	D	E	F	G	H	I
Terminating Phase	A		-	6	5	5	7	8	9	5
	B	-		5	5	8	8	5	7	-
	C	5	5		5	8	5	7	7	5
	D	5	5	6		8	7	8	5	5
	E	9	9	9	9		-	-	-	-
	F	15	15	15	15	-		-	-	8
	G	11	11	11	11	-	-		-	11
	H	8	8	8	8	-	-	-		-
	I	5	-	5	5	-	5	5	-	

Phases in Stage

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

Phase Delays

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

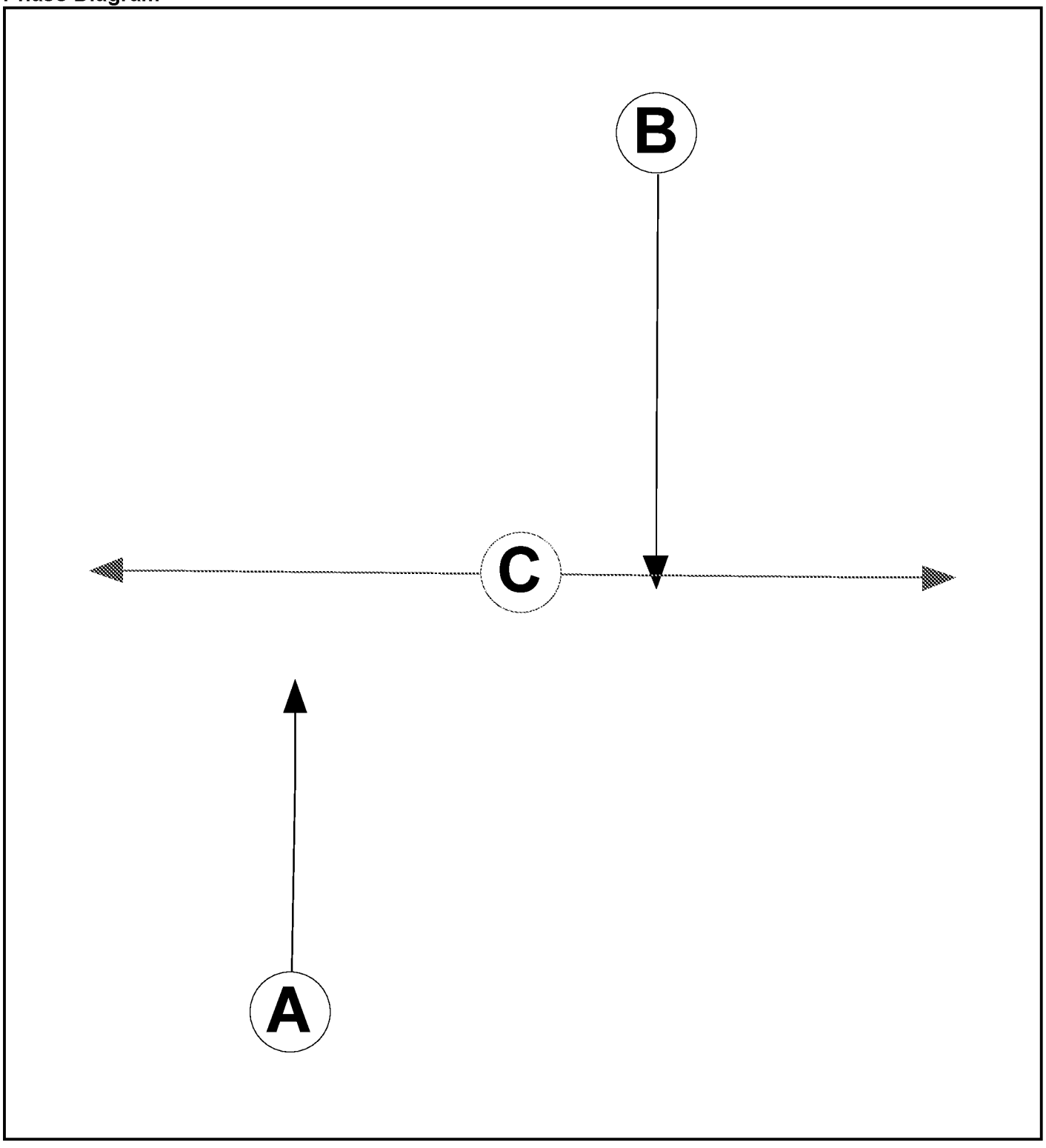
Full Input Data And Results

Prohibited Stage Change

		To Stage						
		1	2	3	4	5	6	7
From Stage	1		15	15	15	15	15	
	2	9		6	5	0	0	5
	3	8	5		5	5	5	5
	4	8	5	6		5	5	5
	5	8	2	5	5		2	0
	6	9	2	6	5	2		5
	7	8	5	5	5	0	5	

C2

Phase Diagram



Phase Input Data

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

Full Input Data And Results

Phase Intergreens Matrix

	Starting Phase			
Terminating Phase		A	B	C
	A		-	5
	B	-		5
	C	5	5	

Phases in Stage

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

Phase Delays

Stage Stream: 1

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

Prohibited Stage Change

Stage Stream: 1

	To Stage		
From Stage		1	2
	1		5
	2	5	

Full Input Data And Results

Give-Way Lane Input Data

Junction: J1: A29 / Meadow Way / Proposed Site Access Junction											
Lane	**Movement**	**Max Flow when Giving Way (PCU/Hr)**	**Min Flow when Giving Way (PCU/Hr)**	**Opposing Lane**	**Opp. Lane Coeff.**	**Opp. Mvmnts.**	**Right Turn Storage (PCU)**	**Non-Blocking Storage (PCU)**	**RTF**	**Right Turn Move up (s)**	**Max Turns in Intergreen (PCU)**
J1:1/1 (A29 North)	J1:8/1 (Right)	1439	0	J1:3/1	1.09	To J1:6/1 (Ahead) To J1:8/1 (Left)	2.00	1.00	0.50	2	2.00
J1:3/1 (A29 South)	J1:7/1 (Right)	1439	0	J1:1/1	1.09	To J1:5/1 (Ahead) To J1:7/1 (Left)	2.00	2.00	0.50	2	2.00

Junction: J2: Level Crossing
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: J1: A29 / Meadow Way / Proposed Site Access Junction												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
J1:1/1 (A29 North)	O	A	2	3	60.0	Geom	-	3.30	0.00	Y	Arm J1:5 Ahead	Inf
											Arm J1:7 Left	11.00
											Arm J1:8 Right	10.00
J1:2/1 (Proposed Site Access)	U	C	2	3	60.0	Geom	-	3.25	0.00	Y	Arm J1:5 Left	12.50
											Arm J1:6 Right	11.50
											Arm J1:8 Ahead	Inf
J1:3/1 (A29 South)	O	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm J1:6 Ahead	Inf
											Arm J1:7 Right	10.00
											Arm J1:8 Left	11.00
J1:4/1 (Meadow Way)	U	D	2	3	60.0	Geom	-	2.75	0.00	Y	Arm J1:5 Right	13.30
											Arm J1:6 Left	9.00
											Arm J1:7 Ahead	Inf
J1:5/1 (A29 South Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:6/1 (A29 North Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:7/1 (Site Access Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:8/1 (Meadow Way Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

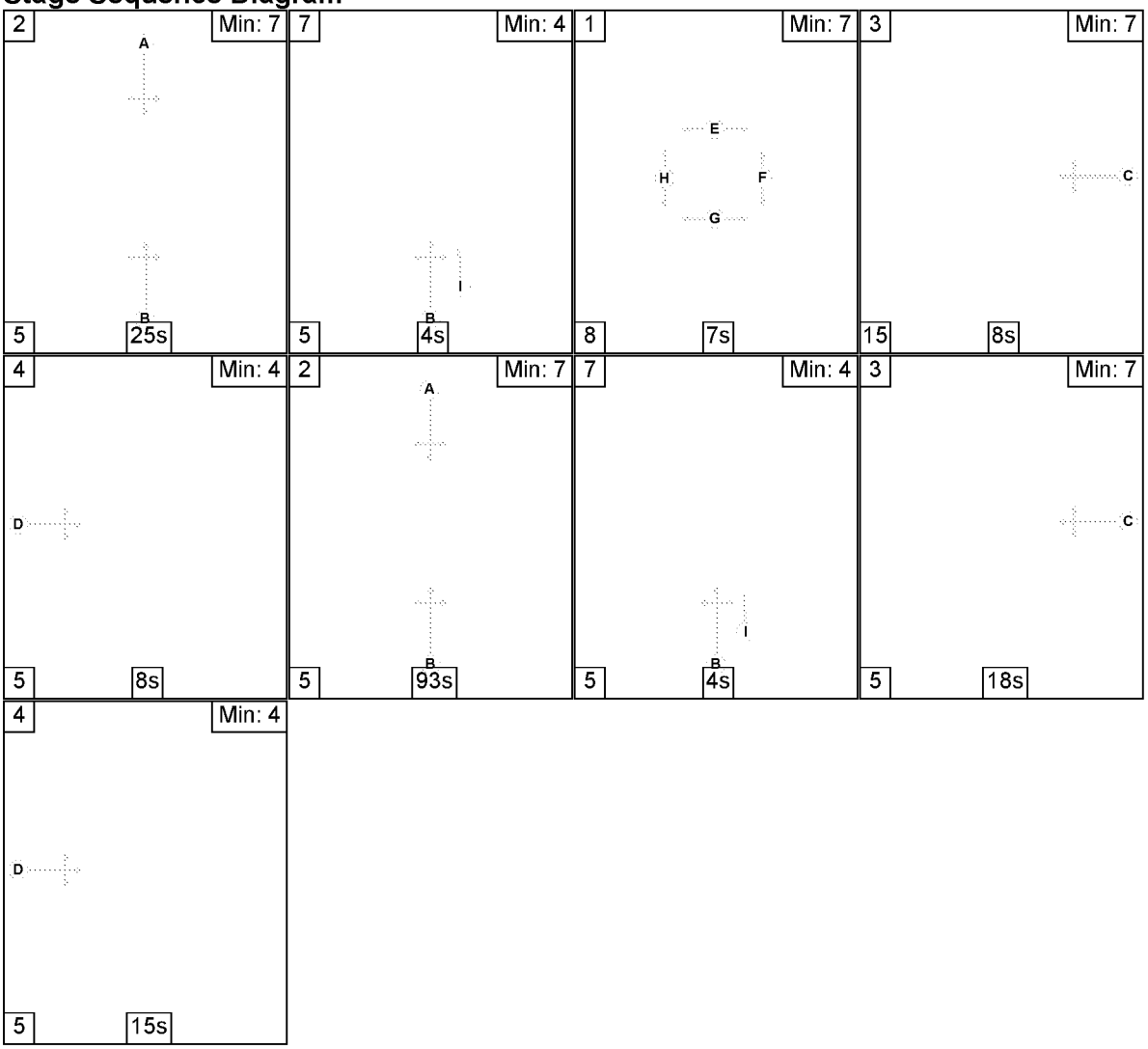
Junction: J2: Level Crossing												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
J2:1/1	U	A	2	3	60.0	Geom	-	3.25	0.00	Y	Arm J2:2 Ahead	Inf
J2:2/1	U		2	3	60.0	Inf	-	-	-	-	-	-
J2:3/1	U	B	2	3	60.0	Geom	-	3.25	0.00	Y	Arm J2:4 Ahead	Inf
J2:4/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2031 DS AM Baseline + Dev'	08:00	09:00	01:00	
2: '2031 DS AM Baseline + Dev + BEW'	08:00	09:00	01:00	

Scenario 1: '2031 DS AM Baseline + Dev' (FG1: '2031 DS AM Baseline + Dev', Plan 4: 'Network Control Plan 4')
C1

Stage Sequence Diagram

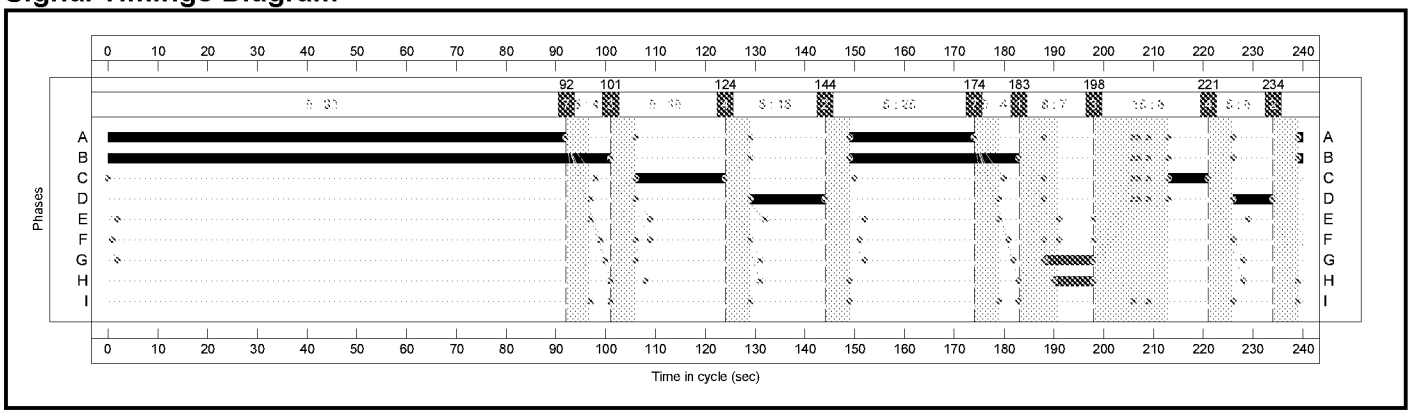


Full Input Data And Results

Stage Timings

Stage	2	7	1	3	4	2	7	3	4
Duration	25	4	7	8	8	93	4	18	15
Change Point	144	174	183	198	221	234	92	101	124

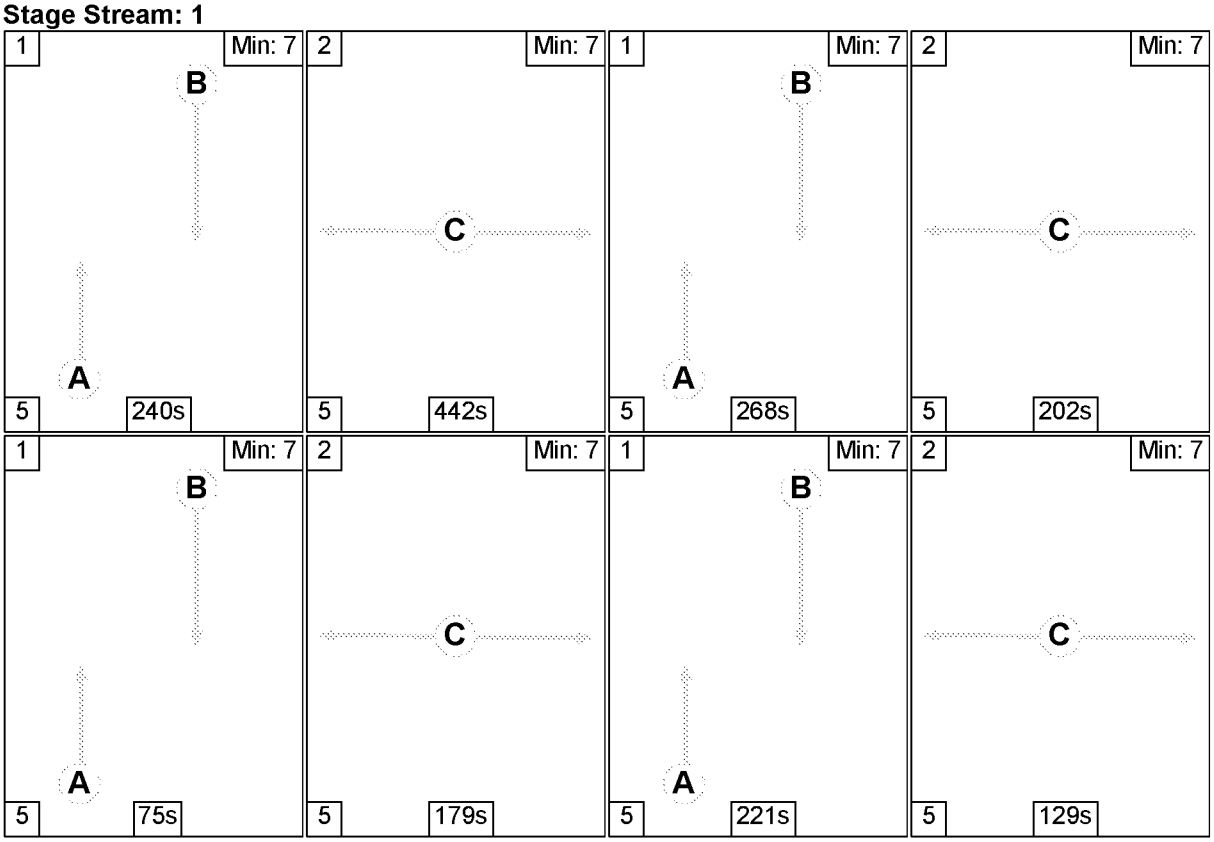
Signal Timings Diagram



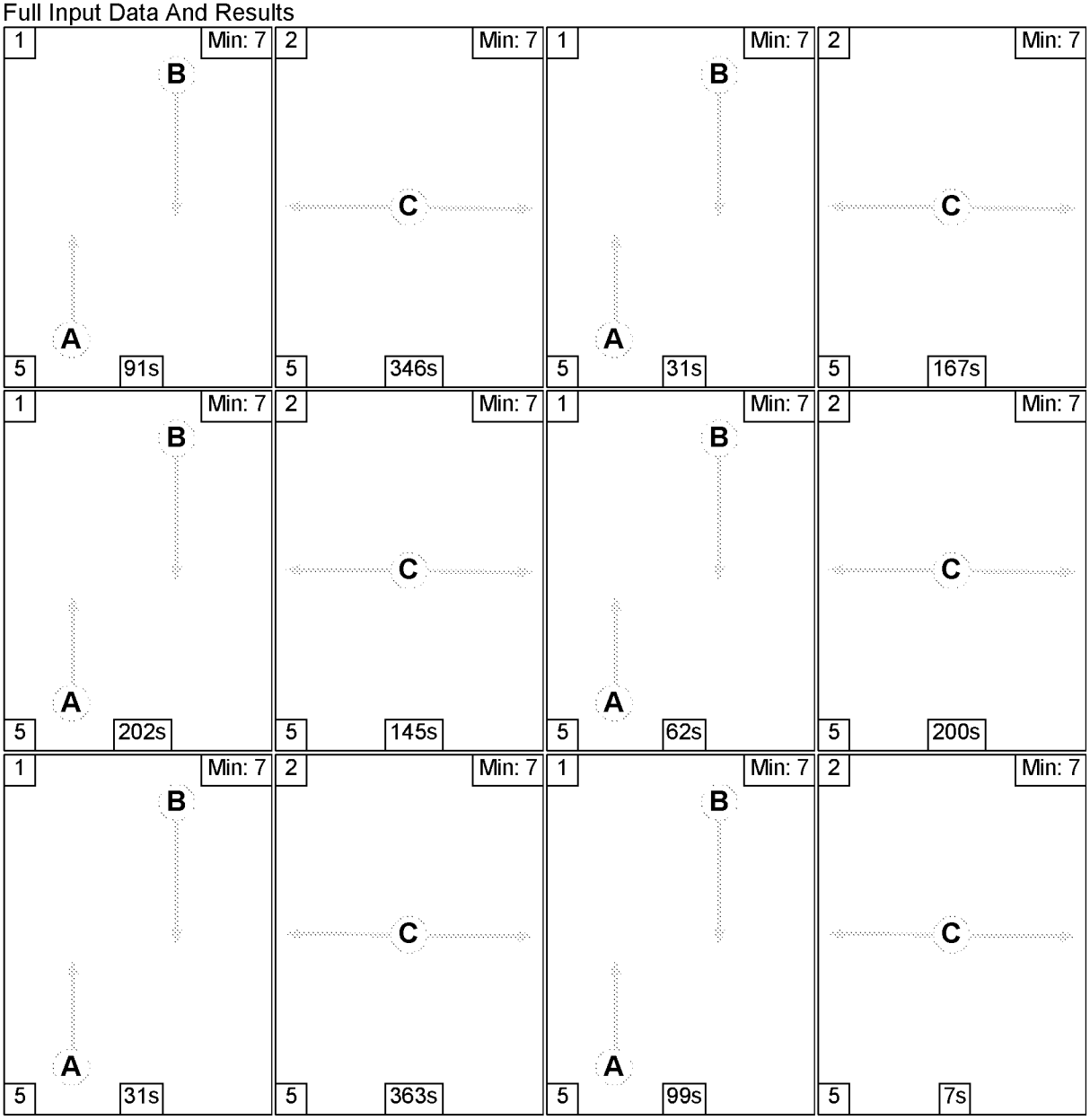
C2

Stage Sequence Diagram

Stage Stream: 1



Full Input Data And Results



Stage Timings

Stage Stream: 1

Stage	1	2	1	2	1	2	1	2	1	2
Duration	240	442	268	202	75	179	221	129	91	346
Change Point	0	245	692	965	1172	1252	1436	1662	1796	1892

Stage	1	2	1	2	1	2	1	2	1	2
Duration	31	167	202	145	62	200	31	363	99	7
Change Point	2243	2279	2451	2658	2808	2875	3080	3116	3484	3588

Signal Timings Diagram

Full Input Data And Results

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	39	527	42	608
	B	98	0	55	0	153
	C	710	22	0	31	763
	D	98	0	33	0	131
	Tot.	906	61	615	73	1655

Traffic Lane Flows

Lane	Scenario 1: 2031 DS AM Baseline + Dev
Junction: J1: A29 / Meadow Way / Proposed Site Access Junction	
J1:1/1	608
J1:2/1	153
J1:3/1	763
J1:4/1	131
J1:5/1	615
J1:6/1	906
J1:7/1	61
J1:8/1	73
Junction: J2: Level Crossing	
J2:1/1	763
J2:2/1	763
J2:3/1	615
J2:4/1	615

Full Input Data And Results

Lane Saturation Flows

Junction: J1: A29 / Meadow Way / Proposed Site Access Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J1:1/1 (A29 North)	3.30	0.00	Y	Arm J1:5 Ahead	Inf	86.7 %	1909	1909
				Arm J1:7 Left	11.00	6.4 %		
				Arm J1:8 Right	10.00	6.9 %		
J1:2/1 (Proposed Site Access)	3.25	0.00	Y	Arm J1:5 Left	12.50	35.9 %	1722	1722
				Arm J1:6 Right	11.50	64.1 %		
				Arm J1:8 Ahead	Inf	0.0 %		
J1:3/1 (A29 South)	3.00	0.00	Y	Arm J1:6 Ahead	Inf	93.1 %	1896	1896
				Arm J1:7 Right	10.00	2.9 %		
				Arm J1:8 Left	11.00	4.1 %		
J1:4/1 (Meadow Way)	2.75	0.00	Y	Arm J1:5 Right	13.30	25.2 %	1639	1639
				Arm J1:6 Left	9.00	74.8 %		
				Arm J1:7 Ahead	Inf	0.0 %		
J1:5/1 (A29 South Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:6/1 (A29 North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:7/1 (Site Access Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:8/1 (Meadow Way Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Junction: J2: Level Crossing								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J2:1/1	3.25	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1940	1940
J2:2/1	Infinite Saturation Flow						Inf	Inf
J2:3/1	3.25	0.00	Y	Arm J2:4 Ahead	Inf	100.0 %	1940	1940
J2:4/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed New Site Access Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**106.5%**
J1: A29 / Meadow Way / Proposed Site Access Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**76.7%**
1/1	A29 North Ahead Left Right	O	N/A	N/A	C1:A		2	118	-	608	1909	892	68.1%
2/1	Proposed Site Access Left Right Ahead	U	N/A	N/A	C1:C		2	26	-	153	1722	201	76.2%
3/1	A29 South Ahead Right Left	O	N/A	N/A	C1:B		2	136	-	763	1896	1090	65.7%
4/1	Meadow Way Right Left Ahead	U	N/A	N/A	C1:D		2	23	-	131	1639	171	76.7%
5/1	A29 South Exit Ahead	U	N/A	N/A	-		-	-	-	615	Inf	Inf	0.0%
6/1	A29 North Exit	U	N/A	N/A	-		-	-	-	906	Inf	Inf	0.0%
7/1	Site Access Exit	U	N/A	N/A	-		-	-	-	61	Inf	Inf	0.0%
8/1	Meadow Way Exit	U	N/A	N/A	-		-	-	-	73	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	C1:E		1	7	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	C1:F		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	C1:G		1	10	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	C1:H		1	8	-	0	-	0	0.0%
J2: Level Crossing	-	-	**N/A**	-	-		-	-	-	-	-	-	**106.5%**
1/1	Ahead	U	2:1	N/A	C2:A		10	1320	-	763	1940	717	106.5%
2/1	Ahead	U	N/A	N/A	-		-	-	-	763	Inf	Inf	0.0%
3/1	Ahead	U	2:1	N/A	C2:B		10	1320	-	615	1940	717	85.8%

Full Input Data And Results

4/1		U	N/A	N/A	-		-	-	-	815	Inf	Inf	0.0%
Item	**Arriving (pcu)**	**Leaving (pcu)**	**Turners In Gaps (pcu)**	**Turners When Unopposed (pcu)**	**Turners In Intergreen (pcu)**	**Uniform Delay (pcuHr)**	**Rand + Oversat Delay (pcuHr)**	**Storage Area Uniform Delay (pcuHr)**	**Total Delay (pcuHr)**	**Av. Delay Per PCU (s/pcu)**	**Max. Back of Uniform Queue (pcu)**	**Rand + Oversat Queue (pcu)**	**Mean Max Queue (pcu)**
Network: Proposed New Site Access Junction	-	-	**55**	**6**	**2**	**198.0**	**37.5**	**0.2**	**235.7**	-	-	-	-
J1: A29 / Meadow Way / Proposed Site Access Junction	-	-	**55**	**6**	**2**	**11.6**	**5.0**	**0.2**	**16.9**	-	-	-	-
1/1	608	608	41	0	1	3.9	1.1	0.2	5.1	30.2	17.9	1.1	19.0
2/1	153	153	-	-	-	2.2	1.5	-	3.7	88.2	5.8	1.5	7.3
3/1	717	717	14	6	0	3.5	1.0	0.0	4.5	22.5	17.5	1.0	18.5
4/1	131	131	-	-	-	2.0	1.5	-	3.6	97.6	5.3	1.5	6.8
5/1	615	615	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	663	663	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	60	60	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	71	71	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
J2: Level Crossing	-	-	**0**	**0**	**0**	**186.4**	**32.4**	**0.0**	**218.8**	-	-	-	-
1/1	763	717	-	-	-	153.2	29.6	-	182.7	862.2	274.2	29.6	303.8
2/1	717	717	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	615	615	-	-	-	33.2	2.9	-	36.1	211.2	113.6	2.9	116.5
4/1	615	615	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

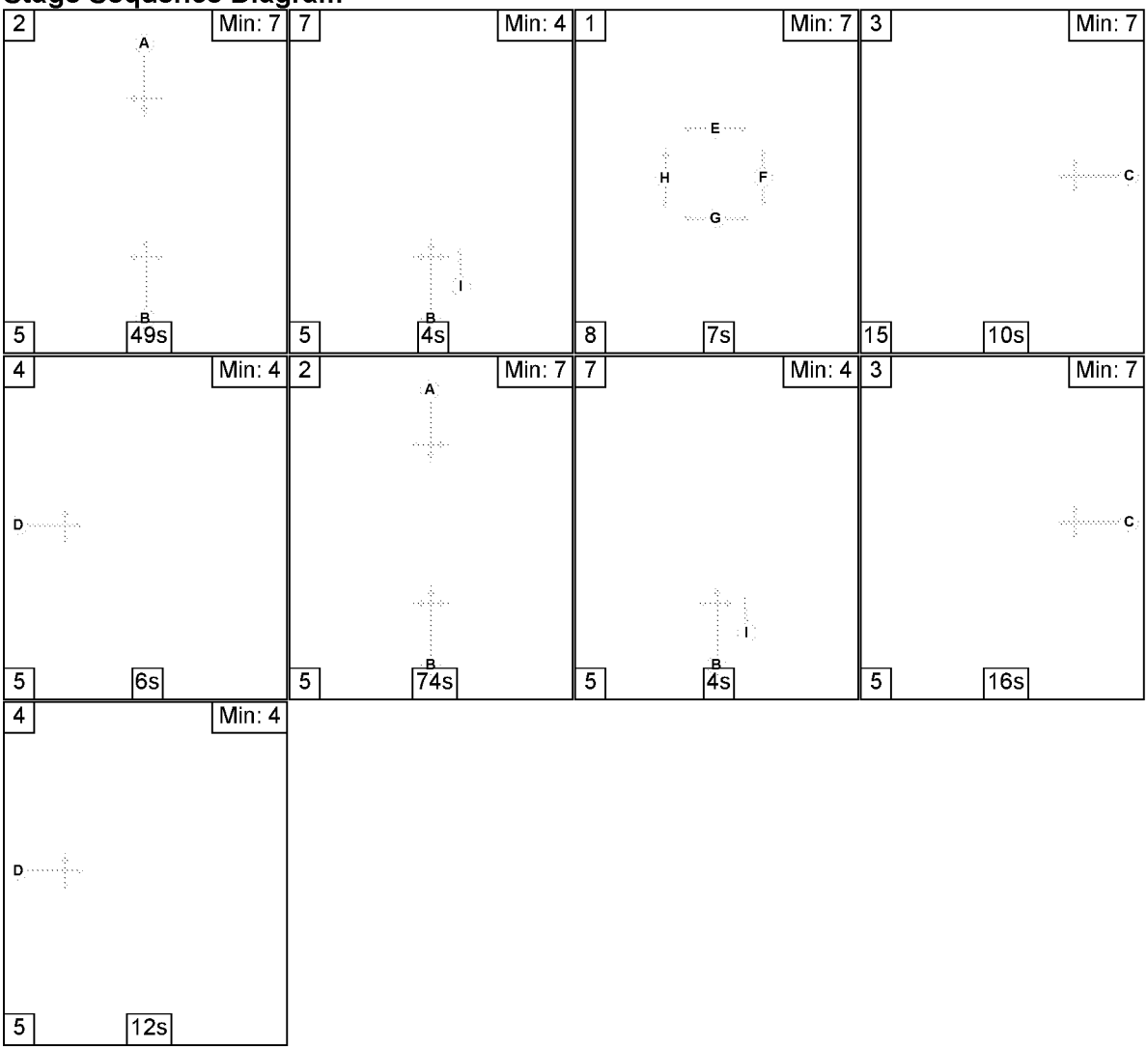
C1		PRC for Signalled Lanes (%):	17.3	Total Delay for Signalled Lanes (pcuHr):	16.88	Cycle Time (s): 240
C2	Stream: 1	PRC for Signalled Lanes (%):	-18.3	Total Delay for Signalled Lanes (pcuHr):	218.84	Cycle Time (s): 3600
		PRC Over All Lanes (%):	-18.3	Total Delay Over All Lanes(pcuHr):	235.72	

Full Input Data And Results

Scenario 2: '2031 DS AM Baseline + Dev + BEW' (FG2: '2031 DS AM Baseline + Dev + BEW', Plan 4: 'Network Control Plan 4')

C1

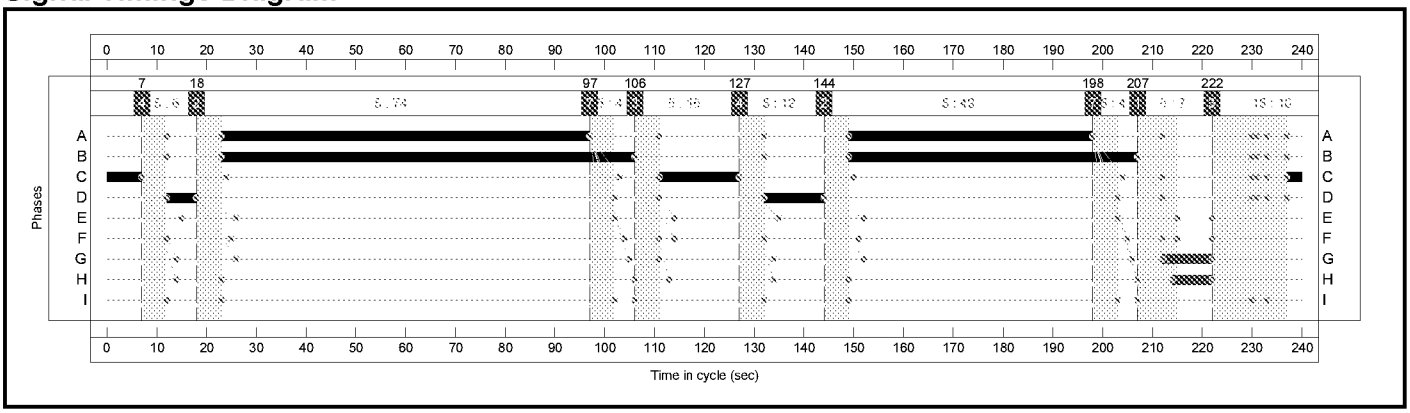
Stage Sequence Diagram



Stage Timings

Stage	2	7	1	3	4	2	7	3	4
Duration	49	4	7	10	6	74	4	16	12
Change Point	144	198	207	222	7	18	97	106	127

Signal Timings Diagram

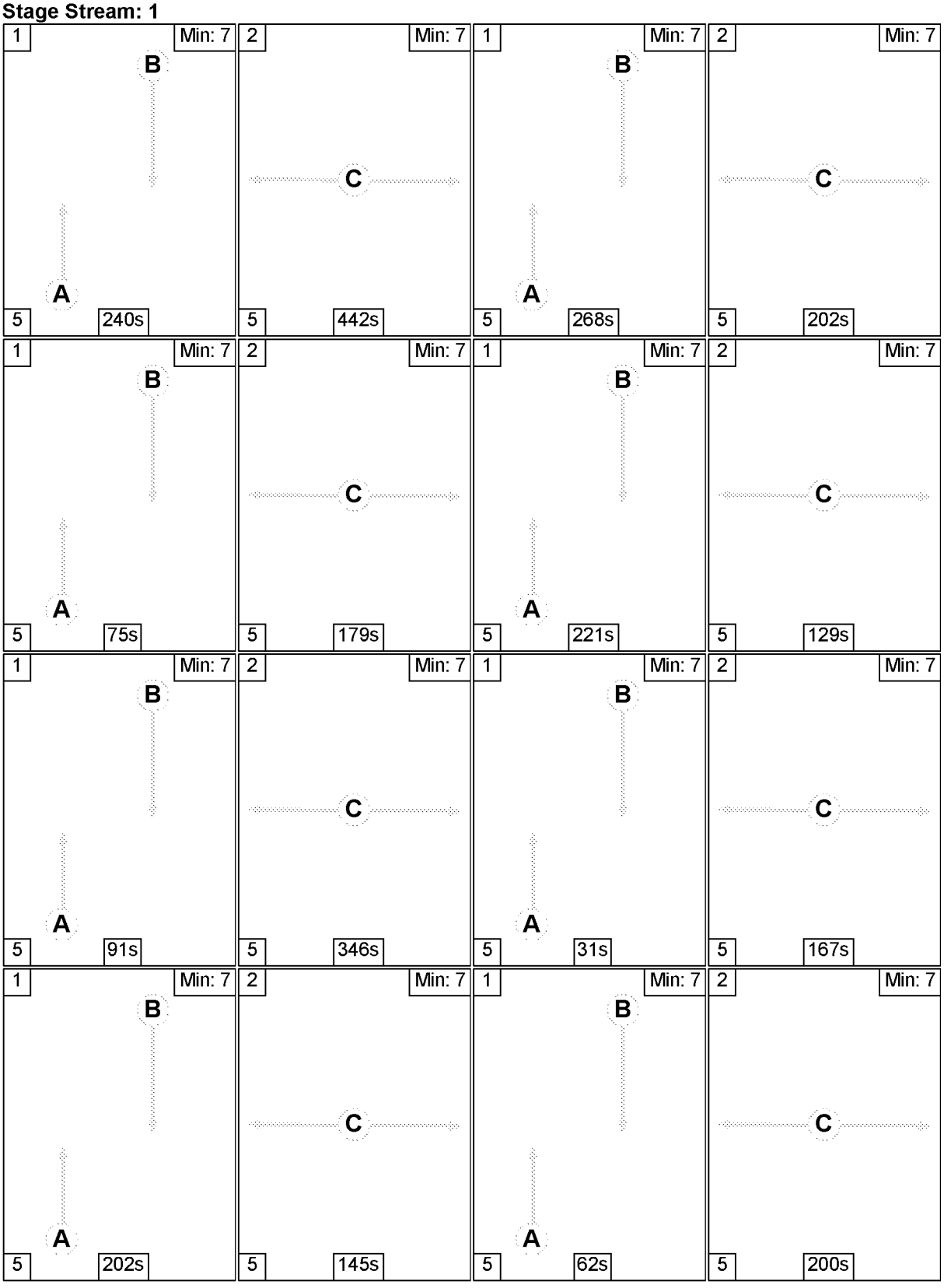


Full Input Data And Results

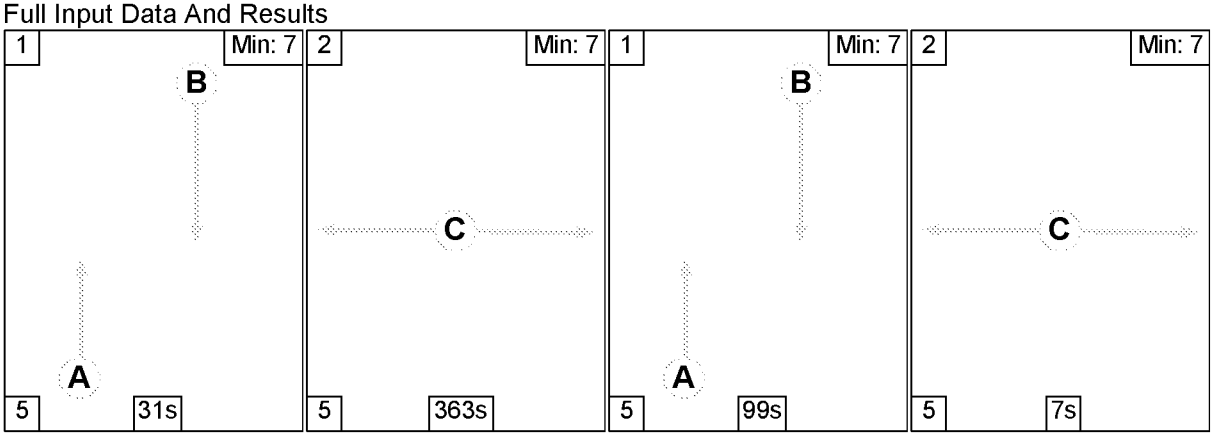
C2

Stage Sequence Diagram

Stage Stream: 1



Full Input Data And Results



Stage Timings

Stage Stream: 1

Stage	1	2	1	2	1	2	1	2	1	2
Duration	240	442	268	202	75	179	221	129	91	346
Change Point	0	245	692	965	1172	1252	1436	1662	1796	1892

Stage	1	2	1	2	1	2	1	2	1	2
Duration	31	167	202	145	62	200	31	363	99	7
Change Point	2243	2279	2451	2658	2808	2875	3080	3116	3484	3588

Signal Timings Diagram

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	39	604	32	675
	B	98	0	55	1	154
	C	759	22	0	29	810
	D	63	5	30	0	98
	Tot.	920	66	689	62	1737

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2031 DS AM Baseline + Dev + BEW
Junction: J1: A29 / Meadow Way / Proposed Site Access Junction	
J1:1/1	675
J1:2/1	154
J1:3/1	810
J1:4/1	98
J1:5/1	689
J1:6/1	920
J1:7/1	66
J1:8/1	62
Junction: J2: Level Crossing	
J2:1/1	810
J2:2/1	810
J2:3/1	689
J2:4/1	689

Lane Saturation Flows

Junction: J1: A29 / Meadow Way / Proposed Site Access Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J1:1/1 (A29 North)	3.30	0.00	Y	Arm J1:5 Ahead	Inf	89.5 %	1916	1916
				Arm J1:7 Left	11.00	5.8 %		
				Arm J1:8 Right	10.00	4.7 %		
J1:2/1 (Proposed Site Access)	3.25	0.00	Y	Arm J1:5 Left	12.50	35.7 %	1723	1723
				Arm J1:6 Right	11.50	63.6 %		
				Arm J1:8 Ahead	Inf	0.6 %		
J1:3/1 (A29 South)	3.00	0.00	Y	Arm J1:6 Ahead	Inf	93.7 %	1898	1898
				Arm J1:7 Right	10.00	2.7 %		
				Arm J1:8 Left	11.00	3.6 %		
J1:4/1 (Meadow Way)	2.75	0.00	Y	Arm J1:5 Right	13.30	30.6 %	1655	1655
				Arm J1:6 Left	9.00	64.3 %		
				Arm J1:7 Ahead	Inf	5.1 %		
J1:5/1 (A29 South Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:6/1 (A29 North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:7/1 (Site Access Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:8/1 (Meadow Way Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J2: Level Crossing								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J2:1/1	3.25	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1940	1940
J2:2/1	Infinite Saturation Flow						Inf	Inf
J2:3/1	3.25	0.00	Y	Arm J2:4 Ahead	Inf	100.0 %	1940	1940
J2:4/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed New Site Access Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**113.0%**
J1: A29 / Meadow Way / Proposed Site Access Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**76.6%**
1/1	A29 North Ahead Left Right	O	N/A	N/A	C1:A		2	123	-	675	1916	981	68.8%
2/1	Proposed Site Access Left Right Ahead	U	N/A	N/A	C1:C		2	26	-	154	1723	201	76.6%
3/1	A29 South Ahead Right Left	O	N/A	N/A	C1:B		2	141	-	810	1898	1131	63.4%
4/1	Meadow Way Right Left Ahead	U	N/A	N/A	C1:D		2	18	-	98	1655	138	71.1%
5/1	A29 South Exit Ahead	U	N/A	N/A	-		-	-	-	689	Inf	Inf	0.0%
6/1	A29 North Exit	U	N/A	N/A	-		-	-	-	820	Inf	Inf	0.0%
7/1	Site Access Exit	U	N/A	N/A	-		-	-	-	66	Inf	Inf	0.0%
8/1	Meadow Way Exit	U	N/A	N/A	-		-	-	-	82	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	C1:E		1	7	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	C1:F		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	C1:G		1	10	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	C1:H		1	8	-	0	-	0	0.0%
J2: Level Crossing	-	-	**N/A**	-	-		-	-	-	-	-	-	**113.0%**
1/1	Ahead	U	2:1	N/A	C2:A		10	1320	-	810	1940	717	113.0%
2/1	Ahead	U	N/A	N/A	-		-	-	-	810	Inf	Inf	0.0%
3/1	Ahead	U	2:1	N/A	C2:B		10	1320	-	689	1940	717	96.1%

Full Input Data And Results

4/1		U	N/A	N/A	-		-	-	-	889	Inf	Inf	0.0%
Item	**Arriving (pcu)**	**Leaving (pcu)**	**Turners In Gaps (pcu)**	**Turners When Unopposed (pcu)**	**Turners In Intergreen (pcu)**	**Uniform Delay (pcuHr)**	**Rand + Oversat Delay (pcuHr)**	**Storage Area Uniform Delay (pcuHr)**	**Total Delay (pcuHr)**	**Av. Delay Per PCU (s/pcu)**	**Max. Back of Uniform Queue (pcu)**	**Rand + Oversat Queue (pcu)**	**Mean Max Queue (pcu)**
Network: Proposed New Site Access Junction	-	-	**50**	**1**	**1**	**321.9**	**63.2**	**0.2**	**385.2**	-	-	-	-
J1: A29 / Meadow Way / Proposed Site Access Junction	-	-	**50**	**1**	**1**	**10.9**	**4.7**	**0.2**	**15.7**	-	-	-	-
1/1	675	675	32	0	0	4.0	1.1	0.1	5.2	28.0	18.9	1.1	20.0
2/1	154	154	-	-	-	2.2	1.5	-	3.7	87.4	5.1	1.5	6.6
3/1	717	717	18	1	0	3.2	0.9	0.1	4.1	20.6	17.5	0.9	18.4
4/1	98	98	-	-	-	1.5	1.2	-	2.6	96.3	3.3	1.2	4.4
5/1	889	889	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	833	833	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	63	63	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	59	59	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
J2: Level Crossing	-	-	**0**	**0**	**0**	**311.0**	**58.5**	**0.0**	**369.5**	-	-	-	-
1/1	810	717	-	-	-	261.4	50.6	-	312.0	1386.7	405.8	50.6	488.4
2/1	717	717	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	689	689	-	-	-	49.6	7.9	-	57.5	300.4	150.0	7.9	157.9
4/1	689	689	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1		PRC for Signalled Lanes (%):	17.5	Total Delay for Signalled Lanes (pcuHr):	15.71	Cycle Time (s): 240
C2	Stream: 1	PRC for Signalled Lanes (%):	-25.6	Total Delay for Signalled Lanes (pcuHr):	369.51	Cycle Time (s): 3600
		PRC Over All Lanes (%):	-25.6	Total Delay Over All Lanes(pcuHr):	385.22	

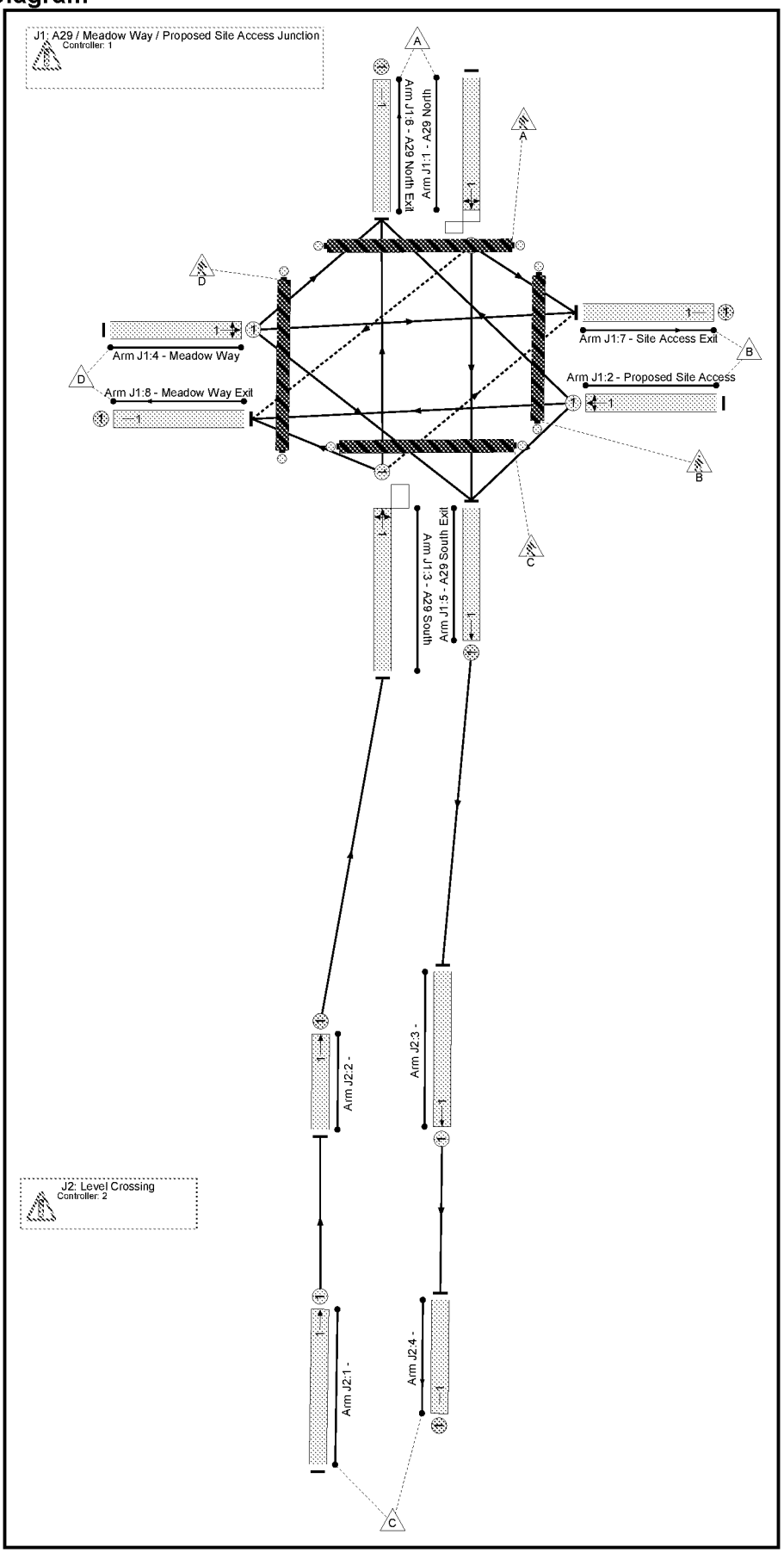
Full Input Data And Results

User and Project Details

Project:	**Land at Westergate, West Sussex**
Title:	**Proposed New Site Access Junction**
Location:	
Additional detail:	
File name:	Site Access-Meadow Way Signals WSP Staging TA with Level Crossing PM Sensitivity.lsg3x
Author:	UKPXM046
Company:	WSP Property & Development
Address:	Regus House, George Curl Way, Southampton, SO18 2RZ

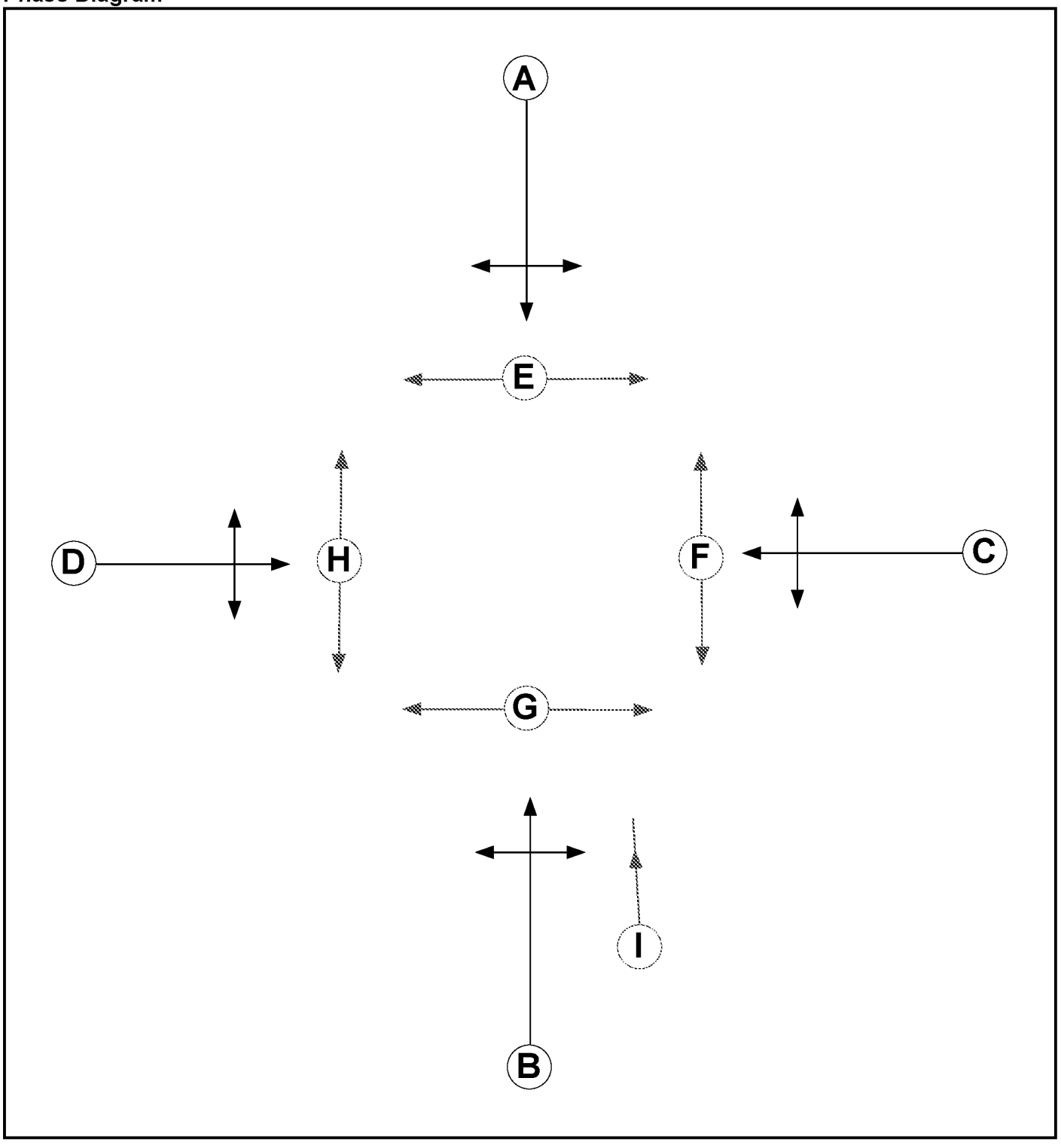
Full Input Data And Results

Network Layout Diagram



C1

Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		4	4
E	Pedestrian		7	7
F	Pedestrian		7	7
G	Pedestrian		7	7
H	Pedestrian		7	7
I	Ind. Arrow	B	4	4

Phase Intergreens Matrix

		Starting Phase								
		A	B	C	D	E	F	G	H	I
Terminating Phase	A		-	6	5	5	7	8	9	5
	B	-		5	5	8	8	5	7	-
	C	5	5		5	8	5	7	7	5
	D	5	5	6		8	7	8	5	5
	E	9	9	9	9		-	-	-	-
	F	15	15	15	15	-		-	-	8
	G	11	11	11	11	-	-		-	11
	H	8	8	8	8	-	-	-		-
	I	5	-	5	5	-	5	5	-	

Phases in Stage

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

Phase Delays

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

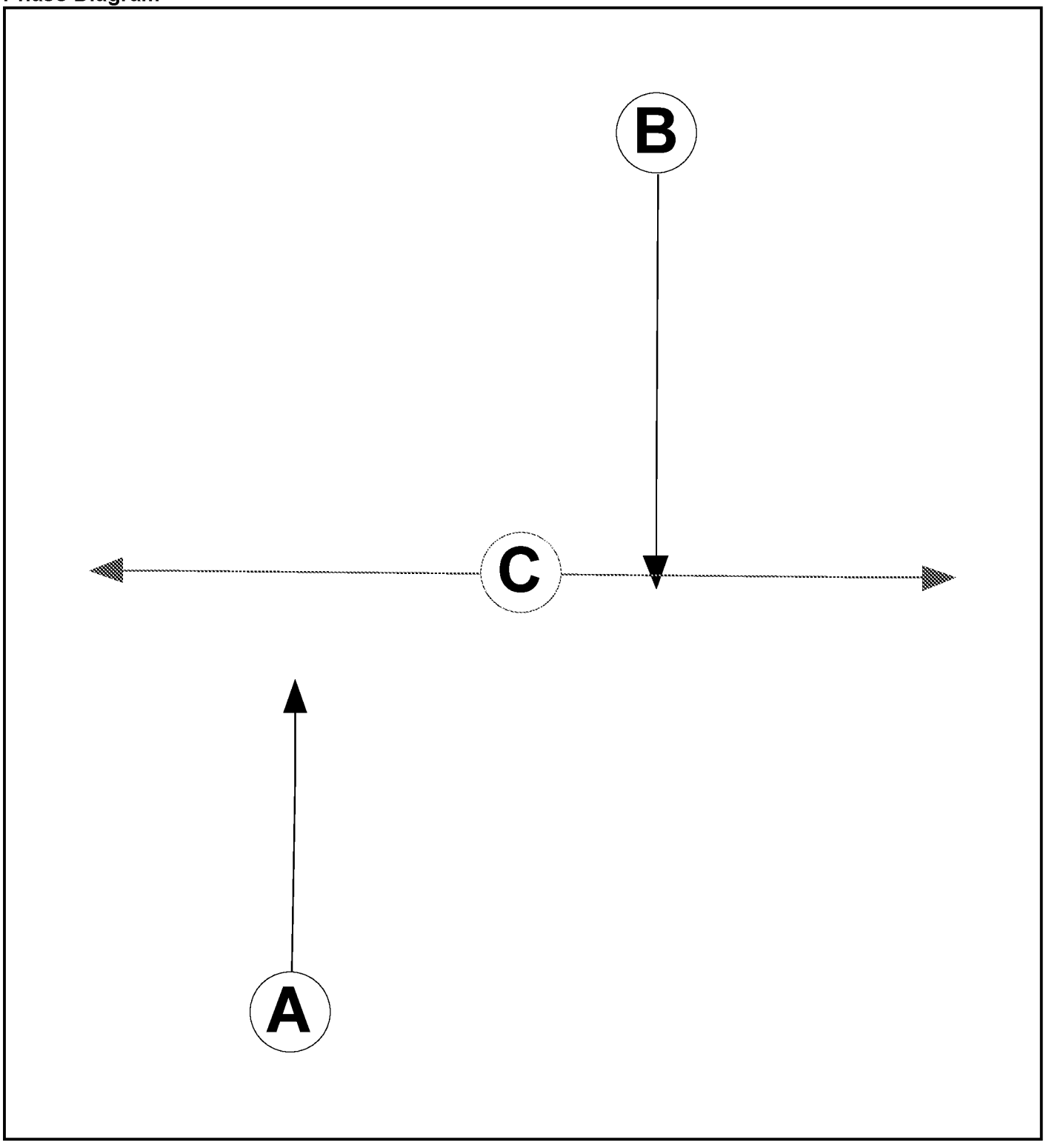
Full Input Data And Results

Prohibited Stage Change

		To Stage						
		1	2	3	4	5	6	7
From Stage	1		15	15	15	15	15	
	2	9		6	5	0	0	5
	3	8	5		5	5	5	5
	4	8	5	6		5	5	5
	5	8	2	5	5		2	0
	6	9	2	6	5	2		5
	7	8	5	5	5	0	5	

C2

Phase Diagram



Phase Input Data

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

Full Input Data And Results

Phase Intergreens Matrix

	Starting Phase			
Terminating Phase		A	B	C
	A		-	5
	B	-		5
	C	5	5	

Phases in Stage

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

Phase Delays

Stage Stream: 1

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

Prohibited Stage Change

Stage Stream: 1

	To Stage		
From Stage		1	2
	1		5
	2	5	

Full Input Data And Results

Give-Way Lane Input Data

Junction: J1: A29 / Meadow Way / Proposed Site Access Junction											
Lane	**Movement**	**Max Flow when Giving Way (PCU/Hr)**	**Min Flow when Giving Way (PCU/Hr)**	**Opposing Lane**	**Opp. Lane Coeff.**	**Opp. Mvmnts.**	**Right Turn Storage (PCU)**	**Non-Blocking Storage (PCU)**	**RTF**	**Right Turn Move up (s)**	**Max Turns in Intergreen (PCU)**
J1:1/1 (A29 North)	J1:8/1 (Right)	1439	0	J1:3/1	1.09	To J1:6/1 (Ahead) To J1:8/1 (Left)	2.00	1.00	0.50	2	2.00
J1:3/1 (A29 South)	J1:7/1 (Right)	1439	0	J1:1/1	1.09	To J1:5/1 (Ahead) To J1:7/1 (Left)	2.00	2.00	0.50	2	2.00

Junction: J2: Level Crossing
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: J1: A29 / Meadow Way / Proposed Site Access Junction												
Lane	**Lane Type**	**Phases**	**Start Disp.**	**End Disp.**	**Physical Length (PCU)**	**Sat Flow Type**	**Def User Saturation Flow (PCU/Hr)**	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Turns**	**Turning Radius (m)**
J1:1/1 (A29 North)	O	A	2	3	60.0	Geom	-	3.30	0.00	Y	Arm J1:5 Ahead	Inf
											Arm J1:7 Left	11.00
											Arm J1:8 Right	10.00
J1:2/1 (Proposed Site Access)	U	C	2	3	60.0	Geom	-	3.25	0.00	Y	Arm J1:5 Left	12.50
											Arm J1:6 Right	11.50
											Arm J1:8 Ahead	Inf
J1:3/1 (A29 South)	O	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm J1:6 Ahead	Inf
											Arm J1:7 Right	10.00
											Arm J1:8 Left	11.00
J1:4/1 (Meadow Way)	U	D	2	3	60.0	Geom	-	2.75	0.00	Y	Arm J1:5 Right	13.30
											Arm J1:6 Left	9.00
											Arm J1:7 Ahead	Inf
J1:5/1 (A29 South Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:6/1 (A29 North Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:7/1 (Site Access Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:8/1 (Meadow Way Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

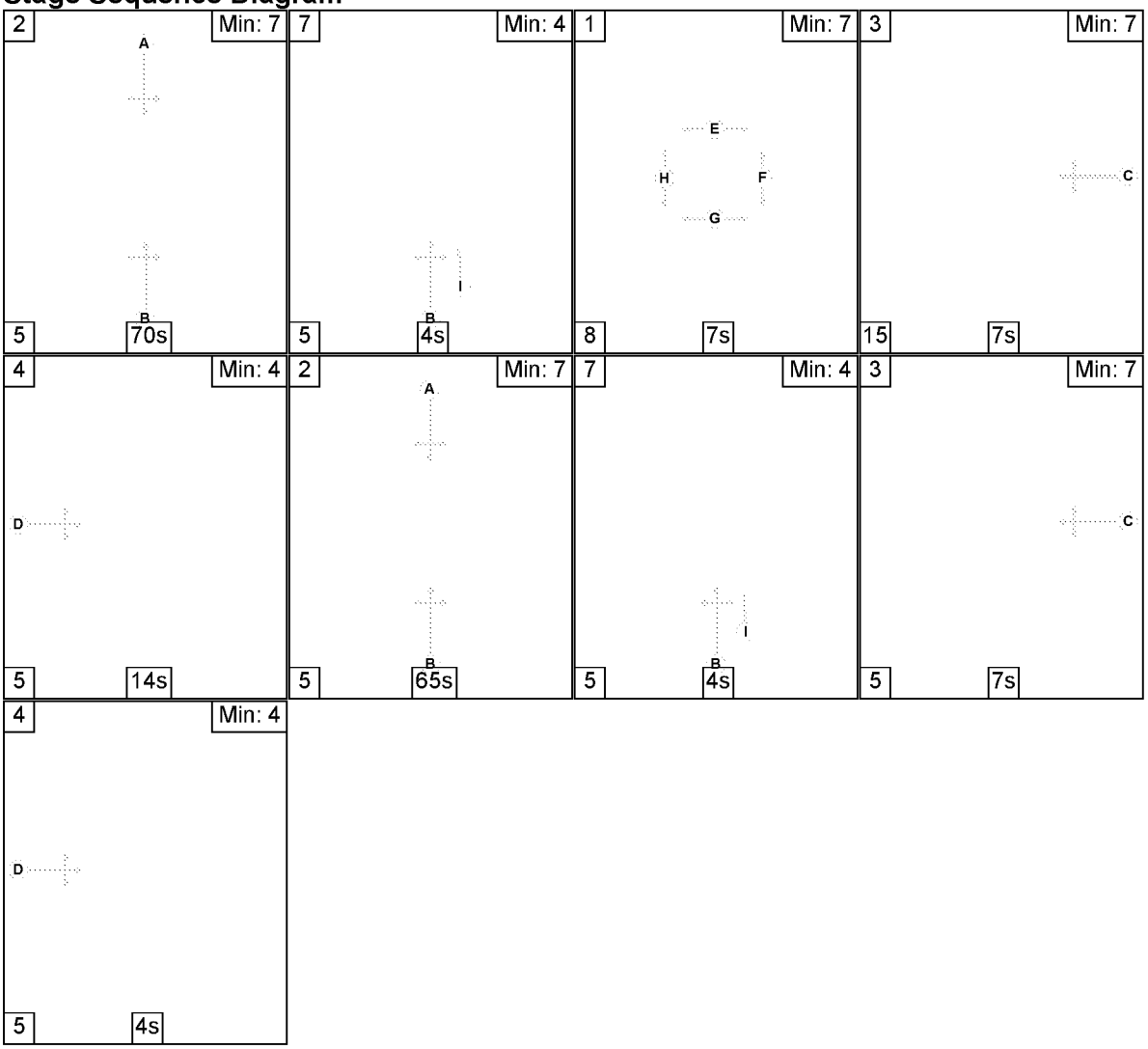
Junction: J2: Level Crossing												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
J2:1/1	U	A	2	3	60.0	Geom	-	3.25	0.00	Y	Arm J2:2 Ahead	Inf
J2:2/1	U		2	3	60.0	Inf	-	-	-	-	-	-
J2:3/1	U	B	2	3	60.0	Geom	-	3.25	0.00	Y	Arm J2:4 Ahead	Inf
J2:4/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2031 DS PM Baseline + Dev'	16:45	17:45	01:00	
2: '2031 DS PM Baseline + Dev + BEW'	16:45	17:45	01:00	

Scenario 1: '2031 DS PM Baseline + Dev' (FG1: '2031 DS PM Baseline + Dev', Plan 4: 'Network Control Plan 4')
C1

Stage Sequence Diagram

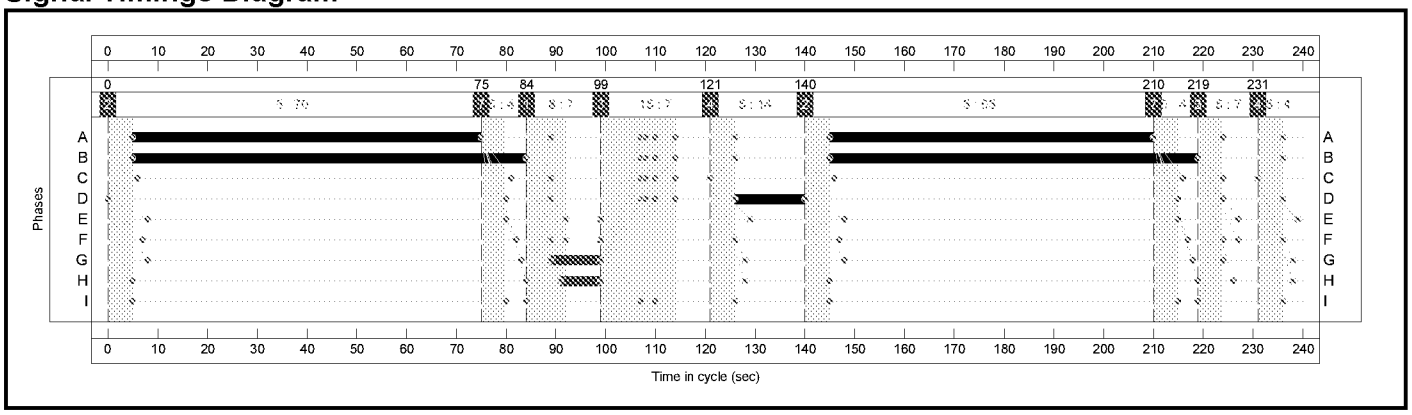


Full Input Data And Results

Stage Timings

Stage	2	7	1	3	4	2	7	3	4
Duration	70	4	7	7	14	65	4	7	4
Change Point	0	75	84	99	121	140	210	219	231

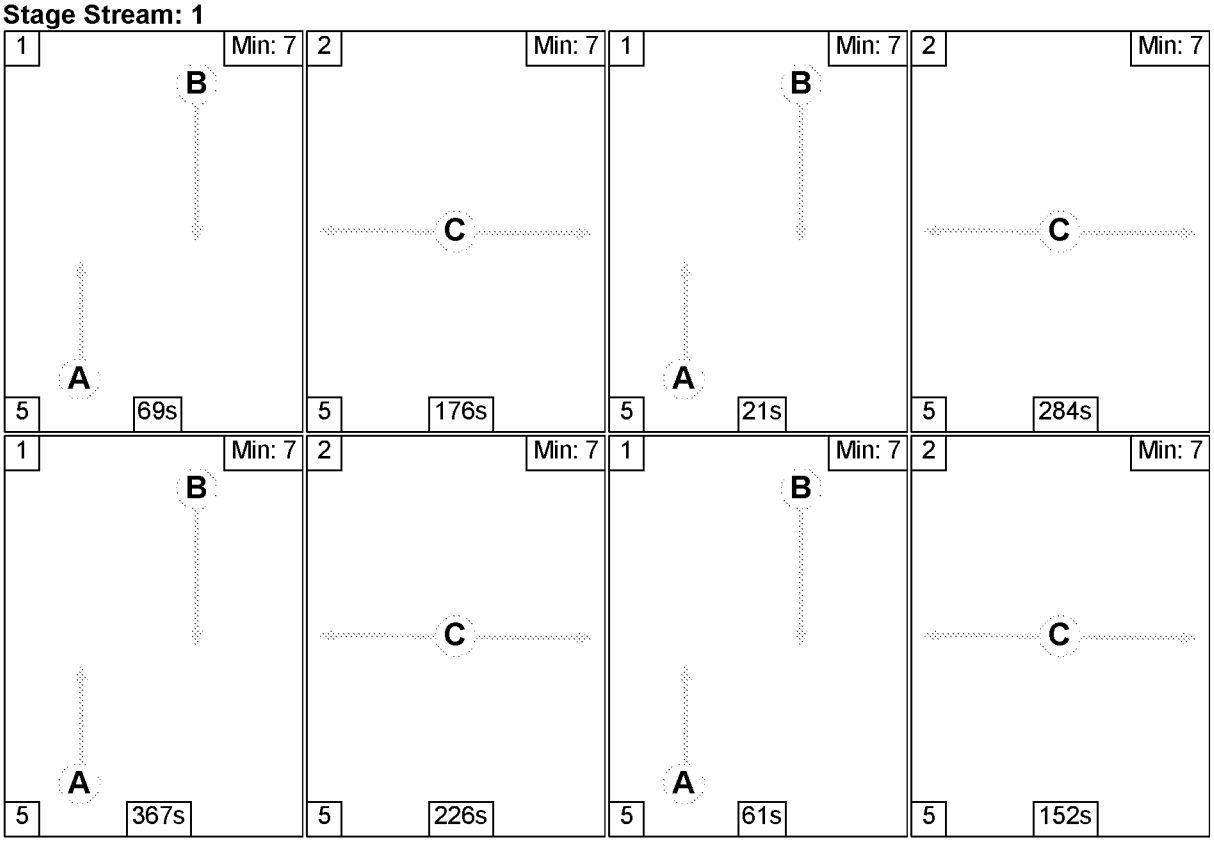
Signal Timings Diagram



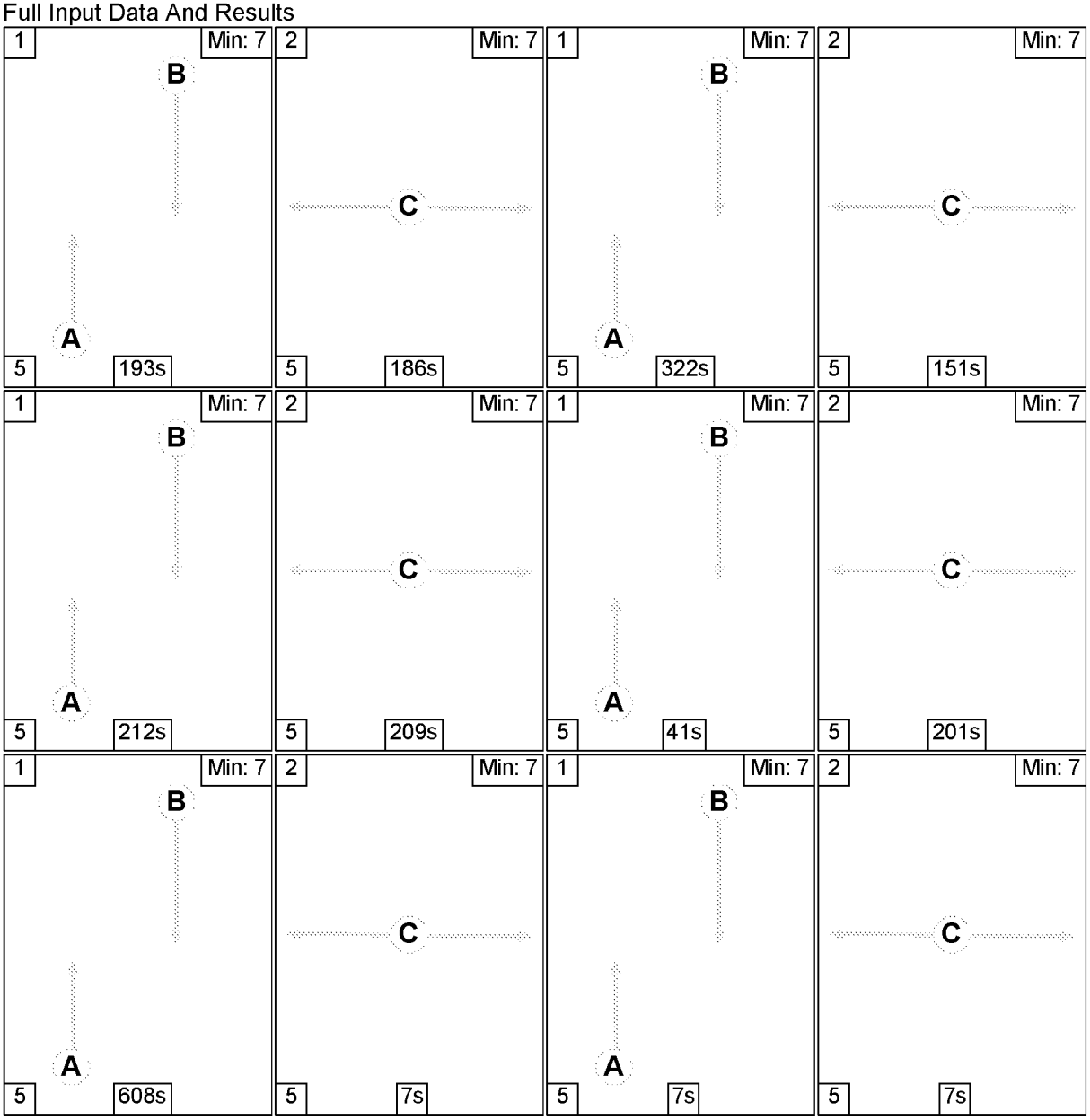
C2

Stage Sequence Diagram

Stage Stream: 1



Full Input Data And Results



Stage Timings

Stage Stream: 1

Stage	1	2	1	2	1	2	1	2	1	2
Duration	69	176	21	284	367	226	61	152	193	186
Change Point	0	74	255	281	570	942	1173	1239	1396	1594

Stage	1	2	1	2	1	2	1	2	1	2
Duration	322	151	212	209	41	201	608	7	7	7
Change Point	1785	2112	2268	2485	2699	2745	2951	3564	3576	3588

Signal Timings Diagram

Full Input Data And Results

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	77	640	72	789
	B	38	0	19	0	57
	C	507	39	0	42	588
	D	72	0	32	0	104
	Tot.	617	116	691	114	1538

Traffic Lane Flows

Lane	Scenario 1: 2031 DS PM Baseline + Dev
Junction: J1: A29 / Meadow Way / Proposed Site Access Junction	
J1:1/1	789
J1:2/1	57
J1:3/1	588
J1:4/1	104
J1:5/1	691
J1:6/1	617
J1:7/1	111
J1:8/1	119
Junction: J2: Level Crossing	
J2:1/1	588
J2:2/1	588
J2:3/1	691
J2:4/1	691

Full Input Data And Results

Lane Saturation Flows

Junction: J1: A29 / Meadow Way / Proposed Site Access Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J1:1/1 (A29 North)	3.30	0.00	Y	Arm J1:5 Ahead	Inf	81.1 %	1894	1894
				Arm J1:7 Left	11.00	9.1 %		
				Arm J1:8 Right	10.00	9.8 %		
J1:2/1 (Proposed Site Access)	3.25	0.00	Y	Arm J1:5 Left	12.50	33.3 %	1721	1721
				Arm J1:6 Right	11.50	66.7 %		
				Arm J1:8 Ahead	Inf	0.0 %		
J1:3/1 (A29 South)	3.00	0.00	Y	Arm J1:6 Ahead	Inf	86.2 %	1878	1878
				Arm J1:7 Right	10.00	6.6 %		
				Arm J1:8 Left	11.00	7.1 %		
J1:4/1 (Meadow Way)	2.75	0.00	Y	Arm J1:5 Right	13.30	30.8 %	1643	1643
				Arm J1:6 Left	9.00	69.2 %		
				Arm J1:7 Ahead	Inf	0.0 %		
J1:5/1 (A29 South Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:6/1 (A29 North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:7/1 (Site Access Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:8/1 (Meadow Way Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Junction: J2: Level Crossing								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J2:1/1	3.25	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1940	1940
J2:2/1	Infinite Saturation Flow						Inf	Inf
J2:3/1	3.25	0.00	Y	Arm J2:4 Ahead	Inf	100.0 %	1940	1940
J2:4/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed New Site Access Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**78.7%**
J1: A29 / Meadow Way / Proposed Site Access Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**78.7%**
1/1	A29 North Ahead Left Right	O	N/A	N/A	C1:A		2	135	-	789	1894	1003	78.7%
2/1	Proposed Site Access Left Right Ahead	U	N/A	N/A	C1:C		2	14	-	57	1721	115	49.7%
3/1	A29 South Ahead Right Left	O	N/A	N/A	C1:B		2	153	-	588	1878	1210	48.6%
4/1	Meadow Way Right Left Ahead	U	N/A	N/A	C1:D		2	18	-	104	1643	137	76.0%
5/1	A29 South Exit Ahead	U	N/A	N/A	-		-	-	-	691	Inf	Inf	0.0%
6/1	A29 North Exit	U	N/A	N/A	-		-	-	-	617	Inf	Inf	0.0%
7/1	Site Access Exit	U	N/A	N/A	-		-	-	-	111	Inf	Inf	0.0%
8/1	Meadow Way Exit	U	N/A	N/A	-		-	-	-	119	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	C1:E		1	7	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	C1:F		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	C1:G		1	10	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	C1:H		1	8	-	0	-	0	0.0%
J2: Level Crossing	-	-	**N/A**	-	-		-	-	-	-	-	-	**67.1%**
1/1	Ahead	U	2:1	N/A	C2:A		10	1901	-	588	1940	1030	57.1%
2/1	Ahead	U	N/A	N/A	-		-	-	-	586	Inf	Inf	0.0%
3/1	Ahead	U	2:1	N/A	C2:B		10	1901	-	691	1940	1030	67.1%

Full Input Data And Results

4/1		U	N/A	N/A	-		-	-	-	691	Inf	Inf	0.0%

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Proposed New Site Access Junction	**-**	**-**	**107**	**8**	**2**	**49.4**	**5.9**	**0.2**	**55.5**	**-**	**-**	**-**	**-**
J1: A29 / Meadow Way / Proposed Site Access Junction	**-**	**-**	**107**	**8**	**2**	**10.2**	**4.2**	**0.2**	**14.6**	**-**	**-**	**-**	**-**
1/1	789	789	76	0	1	5.3	1.8	0.1	7.2	33.0	29.4	1.8	31.2
2/1	57	57	-	-	-	0.9	0.5	-	1.3	85.2	2.0	0.5	2.5
3/1	588	588	31	8	1	2.1	0.5	0.1	2.7	16.2	14.2	0.5	14.7
4/1	104	104	-	-	-	1.9	1.5	-	3.4	116.8	4.5	1.5	5.9
5/1	691	691	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	617	617	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	111	111	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	119	119	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
J2: Level Crossing	**-**	**-**	**0**	**0**	**0**	**39.2**	**1.7**	**0.0**	**40.9**	**-**	**-**	**-**	**-**
1/1	588	588	-	-	-	16.8	0.7	-	17.5	107.0	100.0	0.7	100.7
2/1	588	588	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	691	691	-	-	-	22.4	1.0	-	23.4	122.1	130.6	1.0	131.6
4/1	691	691	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

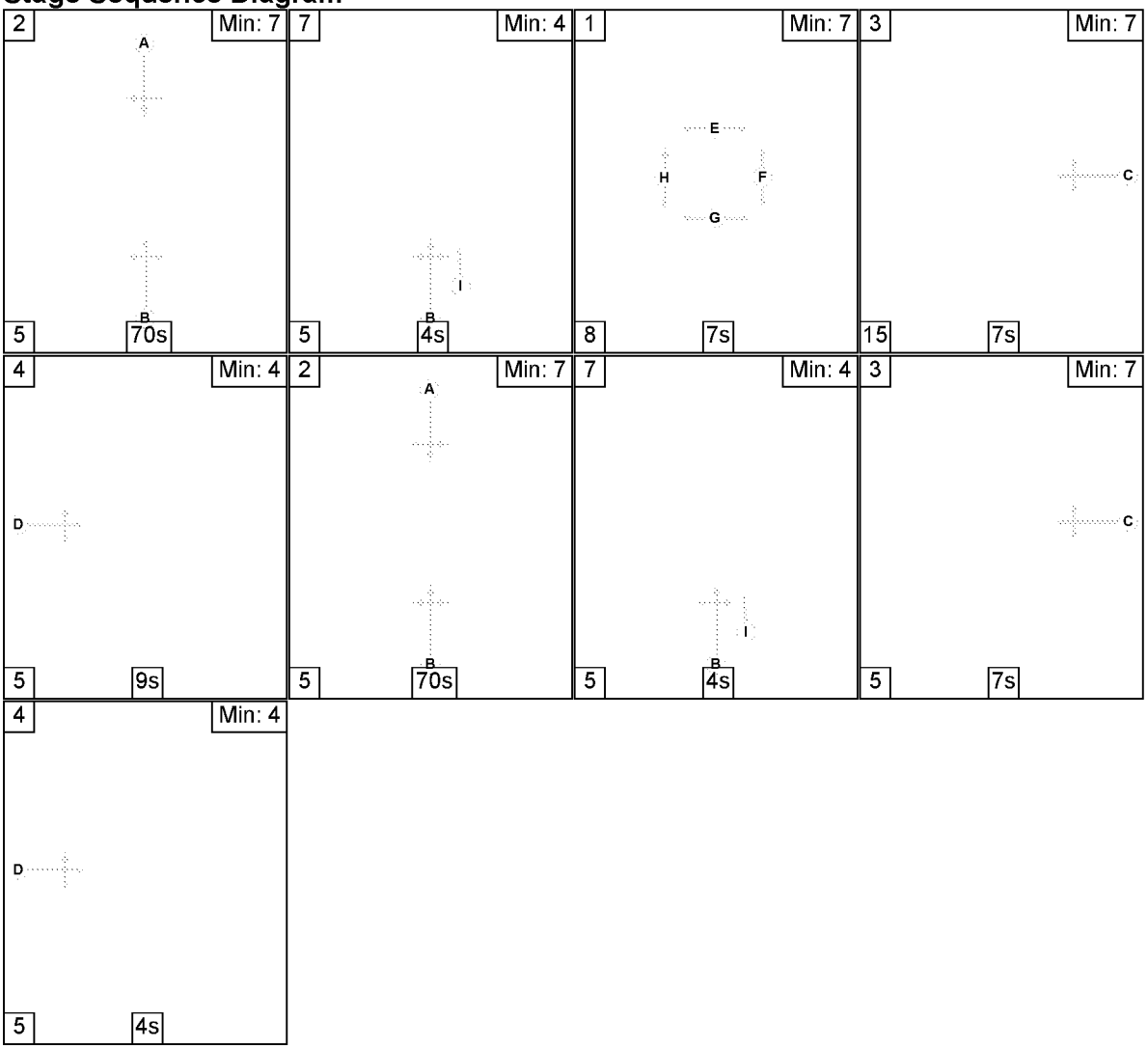
C1		PRC for Signalled Lanes (%):	14.4	Total Delay for Signalled Lanes (pcuHr):	14.60	Cycle Time (s): 240
C2	Stream: 1	PRC for Signalled Lanes (%):	34.1	Total Delay for Signalled Lanes (pcuHr):	40.91	Cycle Time (s): 3600
		PRC Over All Lanes (%):	14.4	Total Delay Over All Lanes(pcuHr):	55.50	

Full Input Data And Results

Scenario 2: '2031 DS PM Baseline + Dev + BEW' (FG2: '2031 DS PM Baseline + Dev + BEW', Plan 4: 'Network Control Plan 4')

C1

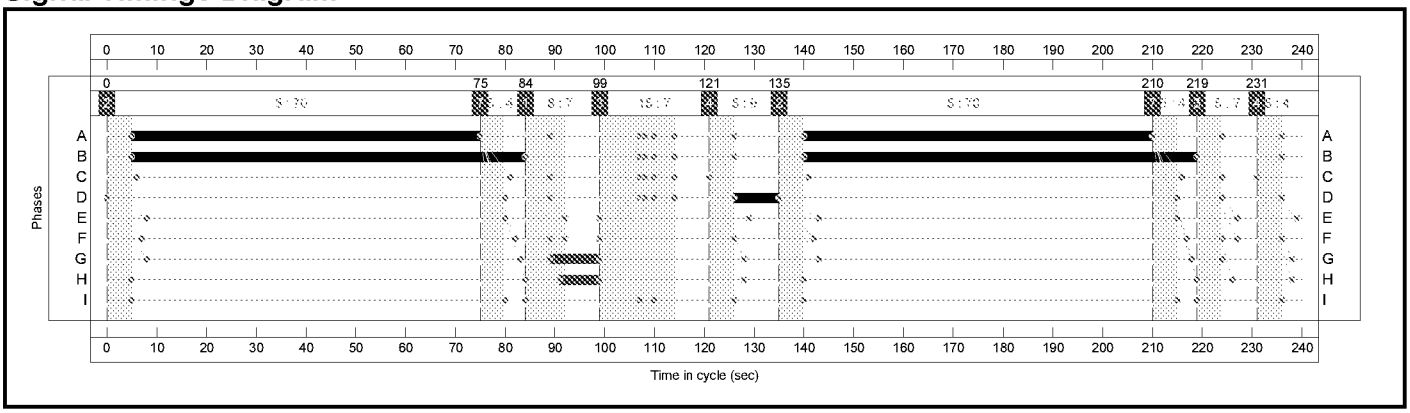
Stage Sequence Diagram



Stage Timings

Stage	2	7	1	3	4	2	7	3	4
Duration	70	4	7	7	9	70	4	7	4
Change Point	0	75	84	99	121	135	210	219	231

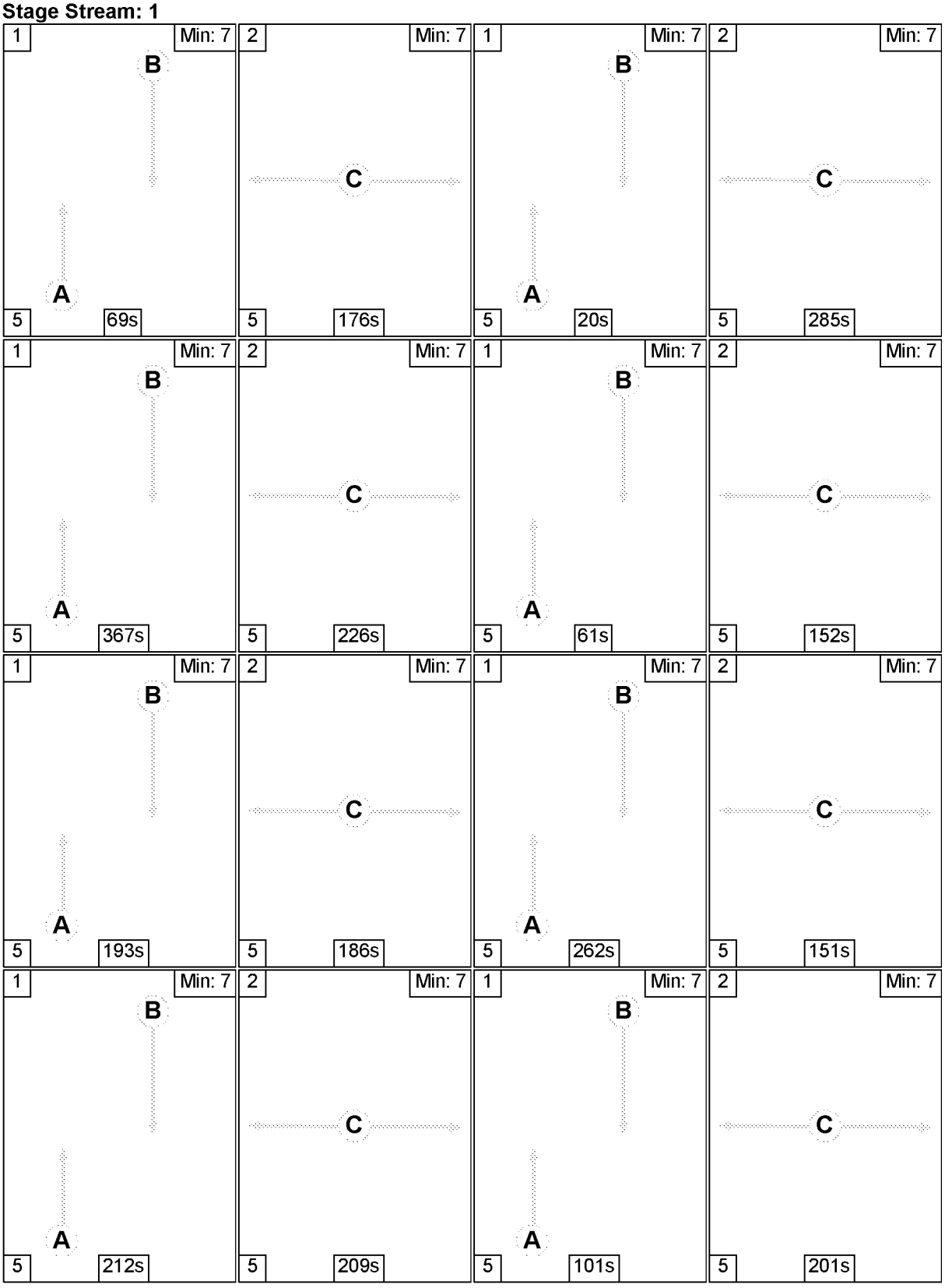
Signal Timings Diagram



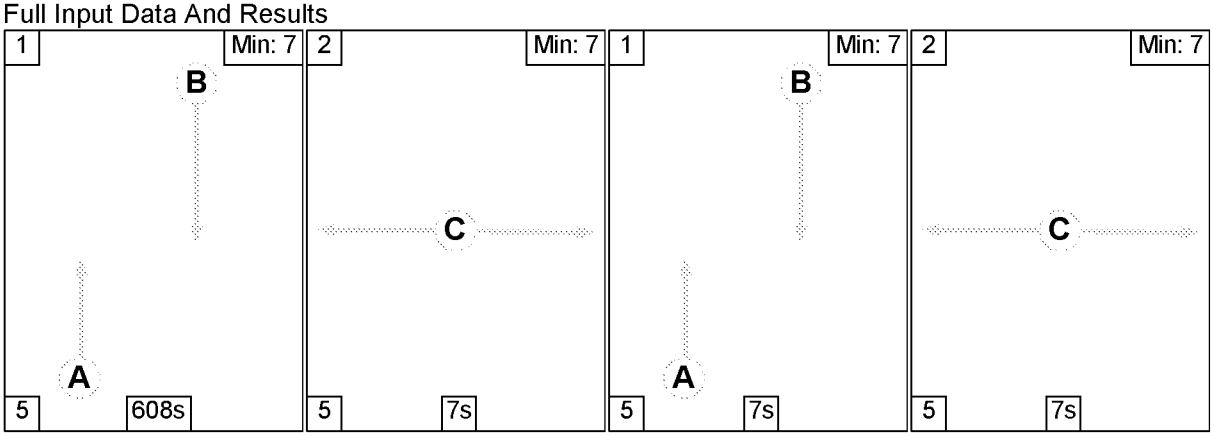
C2

Stage Sequence Diagram

Stage Stream: 1



Full Input Data And Results



Stage Timings

Stage Stream: 1

Stage	1	2	1	2	1	2	1	2	1	2
Duration	69	176	20	285	367	226	61	152	193	186
Change Point	0	74	255	280	570	942	1173	1239	1396	1594

Stage	1	2	1	2	1	2	1	2	1	2
Duration	262	151	212	209	101	201	608	7	7	7
Change Point	1785	2052	2208	2425	2639	2745	2951	3564	3576	3588

Signal Timings Diagram

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	77	699	43	819
	B	38	0	19	7	64
	C	607	39	0	36	682
	D	54	16	11	0	81
	Tot.	699	132	729	86	1646

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2031 DS PM Baseline + Dev + BEW
Junction: J1: A29 / Meadow Way / Proposed Site Access Junction	
J1:1/1	819
J1:2/1	64
J1:3/1	682
J1:4/1	81
J1:5/1	729
J1:6/1	699
J1:7/1	98
J1:8/1	120
Junction: J2: Level Crossing	
J2:1/1	682
J2:2/1	682
J2:3/1	729
J2:4/1	729

Lane Saturation Flows

Junction: J1: A29 / Meadow Way / Proposed Site Access Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J1:1/1 (A29 North)	3.30	0.00	Y	Arm J1:5 Ahead	Inf	85.3 %	1905	1905
				Arm J1:7 Left	11.00	5.3 %		
				Arm J1:8 Right	10.00	9.4 %		
J1:2/1 (Proposed Site Access)	3.25	0.00	Y	Arm J1:5 Left	12.50	29.7 %	1743	1743
				Arm J1:6 Right	11.50	59.4 %		
				Arm J1:8 Ahead	Inf	10.9 %		
J1:3/1 (A29 South)	3.00	0.00	Y	Arm J1:6 Ahead	Inf	89.0 %	1885	1885
				Arm J1:7 Right	10.00	5.7 %		
				Arm J1:8 Left	11.00	5.3 %		
J1:4/1 (Meadow Way)	2.75	0.00	Y	Arm J1:5 Right	13.30	13.6 %	1678	1678
				Arm J1:6 Left	9.00	66.7 %		
				Arm J1:7 Ahead	Inf	19.8 %		
J1:5/1 (A29 South Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:6/1 (A29 North Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:7/1 (Site Access Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:8/1 (Meadow Way Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J2: Level Crossing								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J2:1/1	3.25	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1940	1940
J2:2/1	Infinite Saturation Flow						Inf	Inf
J2:3/1	3.25	0.00	Y	Arm J2:4 Ahead	Inf	100.0 %	1940	1940
J2:4/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed New Site Access Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**80.6%**
J1: A29 / Meadow Way / Proposed Site Access Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**80.6%**
1/1	A29 North Ahead Left Right	O	N/A	N/A	C1:A		2	140	-	819	1905	1017	80.6%
2/1	Proposed Site Access Left Right Ahead	U	N/A	N/A	C1:C		2	14	-	64	1743	116	55.1%
3/1	A29 South Ahead Right Left	O	N/A	N/A	C1:B		2	158	-	682	1885	1257	54.3%
4/1	Meadow Way Right Left Ahead	U	N/A	N/A	C1:D		2	13	-	81	1678	105	77.2%
5/1	A29 South Exit Ahead	U	N/A	N/A	-		-	-	-	729	Inf	Inf	0.0%
6/1	A29 North Exit	U	N/A	N/A	-		-	-	-	889	Inf	Inf	0.0%
7/1	Site Access Exit	U	N/A	N/A	-		-	-	-	98	Inf	Inf	0.0%
8/1	Meadow Way Exit	U	N/A	N/A	-		-	-	-	120	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	N/A	-	C1:E		1	7	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	C1:F		1	7	-	0	-	0	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	C1:G		1	10	-	0	-	0	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	C1:H		1	8	-	0	-	0	0.0%
J2: Level Crossing	-	-	**N/A**	-	-		-	-	-	-	-	-	**70.8%**
1/1	Ahead	U	2:1	N/A	C2:A		10	1900	-	682	1940	1029	66.3%
2/1	Ahead	U	N/A	N/A	-		-	-	-	682	Inf	Inf	0.0%
3/1	Ahead	U	2:1	N/A	C2:B		10	1900	-	729	1940	1029	70.8%

Full Input Data And Results

4/1		U	N/A	N/A	-		-	-	-	729	Inf	Inf	0.0%
Item	**Arriving (pcu)**	**Leaving (pcu)**	**Turners In Gaps (pcu)**	**Turners When Unopposed (pcu)**	**Turners In Intergreen (pcu)**	**Uniform Delay (pcuHr)**	**Rand + Oversat Delay (pcuHr)**	**Storage Area Uniform Delay (pcuHr)**	**Total Delay (pcuHr)**	**Av. Delay Per PCU (s/pcu)**	**Max. Back of Uniform Queue (pcu)**	**Rand + Oversat Queue (pcu)**	**Mean Max Queue (pcu)**
Network: Proposed New Site Access Junction	-	-	**106**	**8**	**2**	**52.8**	**6.9**	**0.2**	**59.9**	-	-	-	-
J1: A29 / Meadow Way / Proposed Site Access Junction	-	-	**106**	**8**	**2**	**9.8**	**4.7**	**0.2**	**14.7**	-	-	-	-
1/1	819	819	76	0	1	5.3	2.0	0.1	7.5	32.8	30.7	2.0	32.7
2/1	64	64	-	-	-	1.0	0.6	-	1.6	88.4	2.2	0.6	2.8
3/1	682	682	30	8	1	2.3	0.6	0.1	2.9	15.5	16.3	0.6	16.9
4/1	81	81	-	-	-	1.3	1.5	-	2.8	123.8	3.0	1.5	4.5
5/1	729	729	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	699	699	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	98	98	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	120	120	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
J2: Level Crossing	-	-	**0**	**0**	**0**	**43.0**	**2.2**	**0.0**	**45.2**	-	-	-	-
1/1	682	682	-	-	-	20.1	1.0	-	21.1	111.2	128.5	1.0	129.5
2/1	682	682	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	729	729	-	-	-	22.9	1.2	-	24.1	119.2	144.0	1.2	145.2
4/1	729	729	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 11.7 Total Delay for Signalled Lanes (pcuHr): 14.75 Cycle Time (s): 240

C2 Stream: 1 PRC for Signalled Lanes (%): 27.1 Total Delay for Signalled Lanes (pcuHr): 45.19 Cycle Time (s): 3600

PRC Over All Lanes (%): 11.7 Total Delay Over All Lanes(pcuHr): 59.94

Appendix D

Estimated Woodgate Level Crossing Closures

Confidential

ARUN DISTRICT COUNCIL AL/11/24/OUT

	Chichester Railway Station	Level Crossing	Barnham Railway Station
08:00			Departing
08:01			
08:02			
08:03	Departing	Closure	
08:04		Closure	
08:05			
08:06			
08:07			
08:08	Arriving	Closure	Departing
08:09	Departing	Closure	
08:10		Closure	Arriving
08:11		Closure	
08:12		Closure	
08:13		Closure	
08:14	Departing	Closure	
08:15		Closure	
08:16	Arriving		Arriving
08:17			
08:18			Departing
08:19		Closure	
08:20	Departing	Closure	
08:21		Closure	
08:22		Closure	Arriving
08:23			
08:24			
08:25		Closure	Departing
08:26	Arriving	Closure	
08:27		Closure	Arriving
08:28		Closure	
08:29		Closure	
08:30			Departing
08:31			
08:32			
08:33	Both	Closure	
08:34		Closure	
08:35			
08:36			
08:37			
08:38	Arriving	Closure	Departing
08:39	Departing	Closure	
08:40		Closure	Arriving
08:41		Closure	
08:42		Closure	
08:43		Closure	
08:44	Departing	Closure	
08:45		Closure	
08:46	Arriving		
08:47			Arriving
08:48			
08:49		Closure	
08:50		Closure	
08:51			
08:52			Arriving
08:53			
08:54			
08:55			
08:56			
08:57			Departing
08:58			
08:59			
09:00		Closure	
09:01		Closure	
09:02			
09:03			
09:04			
09:05	Arriving		
09:06			

Total Closures: 8 Closures
33 minutes

	Chichester Railway Station	Level Crossing	Barnham Railway Station
16:59			Departing
17:00			
17:01			
17:02		Closure	
17:03		Closure	
17:04			
17:05			Departing
17:06			
17:07			
17:08	Arriving	Closure	
17:09	Departing	Closure	
17:10			
17:11			
17:12			
17:13			
17:14	Departing	Closure	
17:15		Closure	
17:16	Arriving		Arriving
17:17			Departing
17:18		Closure	
17:19		Closure	
17:20	Departing	Closure	
17:21		Closure	
17:22			Arriving
17:23			
17:24			
17:25		Closure	Departing
17:26	Arriving	Closure	
17:27		Closure	Arriving
17:28		Closure	
17:29			Departing
17:30			
17:31			
17:32		Closure	
17:33	Both	Closure	
17:34			
17:35			
17:36			
17:37			
17:38	Arriving	Closure	
17:39	Departing	Closure	
17:40			Arriving
17:41			
17:42			
17:43			
17:44	Departing	Closure	
17:45		Closure	
17:46			Arriving
17:47			
17:48			
17:49		Closure	
17:50		Closure	
17:51			
17:52			Arriving
17:53			
17:54			
17:55			Departing
17:56			
17:57			
17:58		Closure	
17:59		Closure	
18:00			
18:01			
18:02			
18:03	Arriving		
18:04			
18:05			

Total Closures: 10 Closures
24 minutes

Key:

- Level Crossing Closure
- Eastbound service
- Westbound service

Appendix E

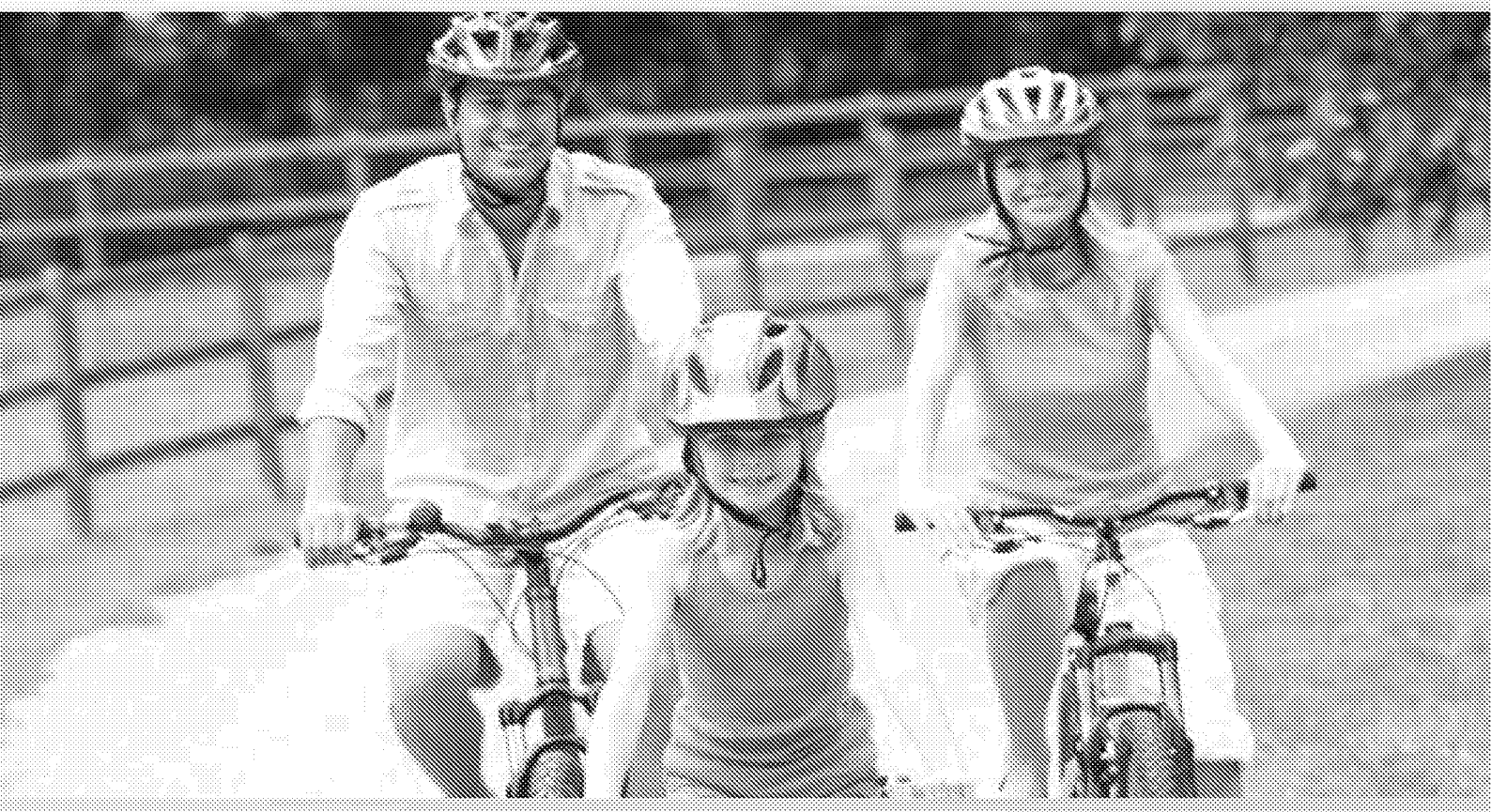
Updated Travel Plan

Confidential

Cala Homes South Home Counties

LAND EAST OF WESTERGATE

Framework Travel Plan



70013258-FTP
JUNE 2024

ARUN DISTRICT COUNCIL - 17/11/2024

CONFIDENTIAL

Cala Homes South Home Counties

LAND EAST OF WESTERGATE

Framework Travel Plan

ISSUE CONFIDENTIAL

PROJECT NO. 70013258

OUR REF. NO. 70013258-FTP

DATE: JUNE 2024

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ARUN DISTRICT COUNCIL AL/11/24/OUT

QUALITY CONTROL

Issue/revision	First issue	Revision 1	Revision 2	Revision 3	Revision 4	Revision 5
Remarks	First Issue	Second Issue				
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Prepared by	TM	TM				
Checked by	CW	PM				
Authorised by	CW	CW				
Project number	70013258					
Report number	70013258-FTP					
File reference	\\uksou1ser01.corp.pbwan.net\Projects\70013258 - Land at Westergate -Cala Homes\C Documents\Reports\TP\Travel Plan					

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1 INTRODUCTION

1.1 PREAMBLE

1.1.1. WSP has been commissioned by Cala Homes to provide transportation advice in support of the delivery of a residential-led development at the Land East of Westergate (the 'Site').

1.1.2. The site is located on land to the east of the A29 Westergate Street, accessed via a new traffic signal junction at Meadow Way / Pine Close. The proposed development will provide a total of 400 dwellings with associated car parking. As illustrated in Figure 1-1, the site is bordered by existing residential development to the west and by agricultural land to the east and forms part of the Barnham / Eastergate / Westergate (BEW) strategic development site. Proposals for the BEW strategic development include the realignment of the A29 to the east of the Cala Homes site to bypass the existing railway level crossing at Woodgate and provide a grade separated crossing to eliminate vehicle queues associated with the level crossing. The realignment of the A29 will run from the existing A29 to the north of Eastergate and connect to the existing alignment to the south of the railway. The realigned A29 will connect with the Cala Homes site and existing A29 alignment, via an East-West Link Road.

1.1.3. This Travel Plan relates is specifically designed to promote a variety of transport options for residents and visitors. The focus is on minimising any perceived reliance on single occupant car journeys by maximising awareness of sustainable forms of transport and supporting their use.

1.1.4. A Travel Plan is a long-term management approach and investment programme to encourage travel by sustainable transport options and reduce people's reliance on the private car. This involves looking at how a development is planned to function, the travel issues and opportunities apparent, and then introducing a package of measures aimed at promoting sustainable travel. A Travel Plan should be a living document which is reviewed on a regular basis and modified if progress toward desired outcomes is not being achieved.

1.1.5. This document has been prepared in accordance with the National Planning Policy Framework, updated in 2021. Paragraph 113 states that:

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

1.2 SITE CONTEXT

1.2.1. The location of the Site is shown in Figure 1-1 below.

ARUN DISTRICT COUNCIL AL/11/24/OUT

Date Modified: 05/09/2023

Drawn By: UKTCH003

Key

- Site Location
- A Road
- B Road

Crockerhill
Blackmill Lane
The Cottage
Blackmill Spinney
Littlehea
Dukes
Aldingbourne Drive
Hales Barn Farm
Level Mare Lane
Westergate Wood Cottages
Dell Cottage
Murrayfield Cottages
Clemmans Lane
Marsh La
Wandleys Lane
Nyton Stables
Norton Lane
Okehurst
Norton
Eastergate Lane
North Cholter Farm
Church Road
A259
B2233
Nyton
Eastergate
Cholter Farm
Aldingbourne
Westergate
Church Lane
Hook Lane
Rowe Mount
Park Farm
Decoy Farmhouse
West Barnham
Woodgate
New Barn
Fox House
New Barn Farm
Falting Ground Barn
A27
Lidsey
Aldingbourne Rife
Sack Lane Cottages
Shripney

0 0.1 0.2 0.4 0.6 0.8 Kilometres

Contains Ordnance Survey data © Crown copyright and database right 2023.

TITLE: Site Location

FIGURE No: 1-1

File: \\uksou1ser01.corp.pbwan.net\Projects\70013258 - Land at Westergate -Cala Homes\E Models and Drawings\DEVELOPMENT.GIS

1.2.2. The site is currently a greenfield site. There are various existing agricultural accesses onto the Site from the highway network, along with several Non-Motorised User accesses at the location of Public Rights of Ways and permissive paths that run through the Site.

1.3 TRAVEL PLAN OVERVIEW

1.3.1. This Travel Plan has been prepared to complement the transport strategy submitted in support of the Proposed Development, as set out within the Transport Assessment (TA). It captures current transport and mobility provision around the Site as well as the provision that will be available post-development.

1.3.2. These opportunities will be taken as the basis for detailed Full Travel Plan at the reserved matters stage of the planning process.

1.3.3. A travel plan involves identifying an appropriate package of measures aimed at promoting sustainable travel, with an emphasis on reducing reliance on single occupancy car journeys. A travel plan should establish a structured strategy with clear objectives and targets, supported by suitable policies and quality measures for implementation. Whilst the location of a development and its proximity to local amenities, facilities and services create underlying conditions to make sustainable travel choices a natural option amongst future users of this Site, it is acknowledged that communicating, incentivising and monitoring uptake of these opportunities is also critical to the success of any travel plan.

1.3.4. A travel plan should demonstrate a holistic approach by incorporating both the 'hard' engineering measures and the 'soft' marketing and management measures necessary to minimise use of motorised vehicular modes.

1.3.5. A travel plan is essentially a 'living' document requiring ongoing monitoring, review and revision to ensure it remains relevant to the development and those using the Site and provides continuous improvements for its duration. These aspirations and actions should be documented in a travel plan, the structure and content of which are dependent upon a range of factors including location, nature of development, the occupiers, and the end-users.

1.4 REPORT STRUCTURE

1.4.1. The reminder of this FTP has been structured as follows:

- Section 2: Policy Context;
- Section 3: Existing Conditions;
- Section 4: Travel Plan Vision, Objectives and Targets;
- Section 5: Travel Plan Framework Strategy;
- Section 6: Baseline Travel Demand;
- Section 7: Proposed Measures;
- Section 8: Monitoring and Review; and
- Section 9: Summary and Conclusion.

ARUN DISTRICT COUNCIL AL/11/24/OUT

2 POLICY CONTEXT

2.1 INTRODUCTION

2.1.1. This section summarises the relevant policies and best-practice guidance at a national, regional and local level that has been taken into account when preparing this FTP.

2.2 NATIONAL POLICY

NATIONAL PLANNING POLICY FRAMEWORK (2023)

2.2.1. Adopted in March 2012 and updated in September 2023, the National Planning Policy Framework (NPPF) embraces a presumption in favour of sustainable development. It seeks to reduce the complexity and improve the accessibly of the planning system, whilst protecting the environment and encouraging growth in a sustainable manner.

2.2.2. Regarding transport, the NPPF sets the aim of a transport system balanced in favour of sustainable transport modes to give people a real choice about how they travel. It also encourages solutions that support reductions in greenhouse gas emissions and reduce congestion.

2.2.3. The NPPF states that developments which generate significant amount of movement should be located where the need to travel will be minimised and the use of sustainable transport modes can be maximised.

2.2.4. In Section 9 of the NPPF, "*Promoting Sustainable Transport*", Paragraph 104 highlights the transport issues that should be considered during the earliest stages of plan-making and development proposals, so that:

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

2.2.5. Paragraph 105 relates to sustainable travel and states:

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

2.2.6. Paragraph 110 outlines the requirements for development that should be considered during the assessment of development proposals stating that it should be ensured:

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- *"Appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;*
- *Safe and suitable access to the Site can be achieved for all users;*
- *The design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code.*

2.2.7. Paragraph 112 states applications for development should:

- *"Give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;*
- *Address the needs of people with disabilities and reduced mobility in relation to all modes of transport;*
- *Create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;*
- *Allow for the efficient delivery of goods, and access by service and emergency vehicles; and*
- *Be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations."*

2.2.8. Paragraph 113 requires that:

"…all developments that will generate significant amounts of movement should be required to provide a travel plan..."

2.2.9. With reference to paragraphs 104 – 106 of the NPPF, the Proposed Development would provide new dwellings that will benefit from access to a range of non-car modes of transport and key local facilities and amenities.

2.2.10. Whilst the internal layout of the Site will be subject to reserved matters applications, the Site layout will reflect current national guidance and will ensure that appropriate opportunities to promote sustainable transport modes have been taken up. It will also ensure that priority is given first to pedestrian and cycle movements and second to public transport users, in accordance with paragraphs 110 and 112 of the NPPF. This includes an integrated network of walking / cycling routes (outside of those running alongside the carriageway) and access to suitably located bus stops.

ARUN DISTRICT COUNCIL AL/11/24/OUT

2.2.11. The demand for car travel will also sought to be reduced through the implementation of travel planning measures, incentivising sustainable modes of travel. A Travel Plan is hereby provided and it is anticipated that Full Travel Plans associated with land use (e.g. residential, school etc) will then be provided at the reserved matters stage – in accordance with paragraph 113 of the NPPF.

2.2.12. It is therefore considered that post-development, there will be an appropriate mix of uses across this area that will minimise the length of journeys required, particularly by car, amongst both existing and future residents in this area.

2.2.13. In line with paragraphs 107 – 108 of the NPPF, whilst the application is submitted in outline form with all matters reserved, car and cycle parking will be provided on-site in line with relevant local parking standards applicable for the area at that time. This will include the provision of electric vehicle charging infrastructure.

2.3 PLANNING PRACTICE GUIDANCE 'TRAVEL PLANS, TRANSPORT ASSESSMENTS AND STATEMENTS, (DFT, 2014)

2.3.1. This government guidance outlines key considerations for the preparation of travel plans, transport assessments and transport statements. The guidance explains that the purpose of these documents is to assess and mitigate the negative transport impacts of development and to promote sustainable development.

2.3.2. The guidance notes that travel plans are '*long long-term management strategies for integrating proposals for sustainable travel into the planning process. They are based on evidence of the anticipated transport impacts of development and set measures to promote and encourage sustainable travel (such as promoting walking and cycling)*'. It also notes that travel plans should not be used to unfairly penalise drivers and cut vehicular provision.

2.3.3. The guidance states that travel plans should evaluate and consider the following:

- *"benchmark travel data including trip generation databases;*
- *Information concerning the nature of the proposed development and the forecast level of trips by all modes of transport likely to be associated with the development;*
- *relevant information about existing travel habits in the surrounding area;*
- *proposals to reduce the need for travel to and from the site via all modes of transport; and*
- *provision of improved public transport services.*
- *parking strategy options (if appropriate – and having regard to national policy on parking standards and the need to avoid unfairly penalising motorists); and*
- *proposals to enhance the use of existing, new and improved public transport services and facilities for cycling and walking both by users of the development and by the wider community (including possible financial incentives)"*

2.3.4. It also states that travel plans should clearly set out what data is required, when it is required and establish a baseline for comparing progress towards targets

2.4 LOCAL POLICY

2.4.1. Transport policies within West Sussex County Council (WSCC) are set out within a suite of documents that sit under the framework of the West Sussex Transport Plan (WSTP). A selection of the key documents relevant to the WSTP (as set out therein) are listed below:

- **WSCC Road Safety Framework (2016-2026)** - outlines WSCC's vision for road safety.
- **WSCC Bus Strategy (2018-2026)** - sets out WSCC's aims and objectives for local bus and community transport in West Sussex.
- **WSCC Cycling & Walking Strategy (2016-2026)** - sets out WSCC's aims and objectives for active travel in West Sussex.
- **WSCC Electric Vehicle Strategy (2019)** - sets out WSCC's strategy to increase take up of electric and ultra-low emission vehicles: and,
- **WSCC Rights of Way Management Plan 2018-2028** - sets out WSCC's approach to managing the Public Rights of Way (PRoW) network.

2.4.2. A review of the WSTP itself is provided below. As and when the above documents are updated periodically, these will take into account the most up-to-date version of the WSTP.

WEST SUSSEX TRANSPORT PLAN (WSTP) 2022-2036, APRIL 2022

2.4.3. The West Sussex Transport Plan 2022-2036 (WSTP) was adopted by WSCC on 1st April 2022 and supports delivery of WSCC's transport plan and priorities.

2.4.4. The overarching vision of the WSTP is (paragraph 3.1):

"A West Sussex transport network in 2036 that works for communities in the Coastal West Sussex, Gatwick Diamond and Rural West Sussex economic areas by helping to address the spatial economic challenges of the County, level up the coastal economy and provide access to employment and services countywide.

The transport network will be on a pathway to achieve net zero carbon emissions by 2050 through more local living, increased use of electric vehicles and reduced use of fossil-fuels. It will also be safer, more efficient and resilient overall with more walking, cycling and use of public or shared transport and less congestion on major routes that connect West Sussex towns with Gatwick Airport, London and nearby cities. The transport network will connect communities and allow residents to live healthy lifestyles with good access to the West Sussex coast and the protected South Downs, High Weald and Chichester Harbour.

Active travel modes, public or shared transport will be attractive options in built up areas and between towns, and rural communities will have access to the services they need.

Transport impacts such as air pollution, noise and rat-running on adjacent communities and the environment will be minimised to protect a quality of life that reflects the characteristics of the County."

2.4.5. The WSTP sets out five 'thematic' and eight "area transport" strategies in order to achieve the vision. The thematic strategies comprise:

- **Active Travel Strategy** - facilitating greater use of active travel modes (e.g. walking and cycling);
- **Shared Transport Strategy** - facilitating a more efficient and customer focused bus network, using community transport and new mobility solutions where possible and viable;
- **Rail Strategy** - identifying priorities that will help the rail network to perform a strategic role in the transport network;
- **Access to Gatwick Airport Strategy** - supporting initiatives that will increase sustainable transport mode share;
- **Road Network Strategy** - enabling increased use of electric vehicles and sustainable modes of transport. Improve the efficiency of the most strategically important local roads and provide facilities for active travel and shared transport services.

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2.4.6. The Proposed Development is well aligned with the WSTP in respect to increasing sustainable travel behaviours, including active travel modes, and reducing reliance on the private motor car, particularly those fuelled by fossil fuels. There are a range of key local facilities and amenities available in the local area, which will be further enhanced by the amenities that will be provided on the BEW strategic site to minimise the number and length of journeys, amongst both future users of the Site.

ARUN LOCAL PLAN

2.4.7. Arun District Council adopted the Arun District Local Plan 2011-2031 in July 2018.

2.4.8. Section 15 states Arun's Local Plan strategic objectives for transport including reducing the need to travel and promote sustainable forms of transport, and contains the policies established to achieve these goals.

2.4.9. Policy H SP2c Barnham / Eastergate / Westergate has been established to ensure certain specifics are addressed in any planning proposal. The development must provide at least 2,300 dwellings, provide a new community hub, highly quality imaginative design layout for pedestrians, cyclists, equestrians and vehicles, access to local community, recreational and shopping facilities, jobs and accessible transport.

2.4.10. Policy T SP1 Transport and Development is established to ensure a reduction in congestion, provide safe access to the highway network and promote sustainable transport. This policy indicates that the Council will support development that reduces the need to travel by car, incorporates into the District's green infrastructure, contributes towards new road schemes and provides appropriate levels of car parking.

2.4.11. Policy T DM1 Sustainable Travel and Public Rights of Way is established to ensure developments have access to sustainable modes of transport. This policy indicates that development must be located within easy access of established public transport services, pedestrian and cycleway networks, make provision for cycling and pedestrian facilities, and contribute towards the provision of a joined-up cycle network and Public Rights of Way network.

2.5 BEW FRAMEWORK MASTERPLAN (REV P3) 2020

2.5.1. In November 2020 Arun District Council approved a Framework Masterplan for BEW strategic allocation. This Masterplan was produced to guide future planning applications on the site and demonstrates how the requirements in Policy H SP2c can be delivered. These requirements are stated to include the building of up to 4,300 new homes (2,300 within the Local Plan period), two primary schools and two local centres.

2.5.2. The Framework Masterplans seeks to promote sustainable modes of travel such as walking, cycling and use of public transport. The transport strategy will focus on encouraging a shift to active models of travel, with a view to facilitating access to an equitable, healthy and low carbon network.

2.5.3. The Framework Masterplan also notes that comprehensive Travel Plans will be prepared as part of future planning applications, including Travel Plans for new schools, residential dwellings and workplaces.

2.5.4. In relation to pedestrian and cycle connectivity the masterplan notes that routes will comprise a mix of on and off-street infrastructure, with segregated paths being provided north-south alongside the realigned A29 and between the existing A29 at Westergate and Barham station via an east-west link.

ARUN DISTRICT COUNCIL AL/11/24/OUT

3 EXISTING CONDITIONS

3.1 SITE LOCATION AND EXISTING USE

3.1.1. The development is located to the southern part of Westergate, on the eastern side of A29 Westergate Street. The site is bounded by A29 Westergate Street, residential housing to the north and agricultural land to the east. The site location is near the junction of A29 Westergate Street and Meadow Way.

3.1.2. A29 Westergate Street is a classified A road and provides a link from Fontwell onto Bognor Regis to the south. The road has junctions evenly spaced along its length providing access to mainly residential developments and is single carriageway until just north of Bognor Regis. There are generally no parking restrictions along the road and there are instances of parking occurring in front of residential properties. In the vicinity of the site the A29 has a posted speed limit of 30mph and street lighting, although 75 metres to the south of the site access there is a 20mph school zone for Aldingbourne Primary School.

3.1.3. A29 Westergate Street has a level railway crossing to the south of Hook Lane approximately 550 metres from the site entrance. The level crossing provides a signal-controlled crossing for the West Coastway Railway line for services between Barnham and Chichester stations. The level crossing is a barrier protected crossing that contains manned controlled barriers operated via CCTV. In advance of a train approaching the level crossing, amber warning lights are displayed to vehicles followed by a red light reinforced with the lowering of barriers to halt vehicles at the crossing point. Vehicles are held on the red light / barrier until the train has cleared the level crossing, when the barriers are raised and the lights extinguished. Barrier closure times are variable and are based on predetermined safety clearance times.

3.1.4. Meadow Way is a local residential street providing access to approximately 79 dwellings. Meadow Way has no through route and has a narrow carriageway width. There are no parking restrictions along the road.

3.1.5. Pine Close is a residential cul-de-sac providing access to approximately 10 dwellings. Pine Close is a no through road but does provide access to the Footpath 297. There are no parking restrictions in place.

3.1.6. A29 Westergate Street / Meadow Way junction is a priority-controlled T-junction with line-marking. There are junction approach warning signs south along A29 Westergate Street. There are no parking restrictions at the junction. Pine Close forms a priority controlled junction with A29 Westergate Street with tactile paving to facilitate pedestrian movement. Pine Close is located immediately to the north of the proposed site access which serves access to a number of dwellings. Pine Close forms a priority controlled junction with A29 Westergate Street with tactile paving to facilitate pedestrian movement.

3.2 PEDESTRIAN NETWORK

3.2.1. A29 Westergate Street has footways on both sides of the road. These footways extend north and south along the length of A29 Westergate Street providing a link to Aldingbourne tennis club, Aldingbourne Primary School and Aldingbourne Village Stores.

3.2.2. There is a pedestrian refuge island allowing for the crossing of A29 Westergate Street 120 metres to the south of the access point and there is a signalised pedestrian crossing allowing for controlled crossing of A29 Westergate Street approximately 400 metres to the north of the access point. There

is also a signalised crossing located approximately 280m to the south of the site access, providing a safe connection to Aldingbourne Primary School.

3.2.3. The existing Public Rights of Way (PRoW) network in the vicinity of the proposed development is shown in Figure 3-1. A number of footpaths route through the site proving connections to the north and west. These include:

- Footpath 297: routes from the A29 Westergate Street, along Pine Close and connects into St Richards Road thereby providing a connection towards Westergate village centre, Aldingbourne Community Sports Centre, Ormiston Academy Six Villages Academy and Six Villages Sports Centre and Eastergate Church of England Primary School;
- Footpath 298: provides a continuation of Footpath 297 on an east-west alignment connecting on Footpath 296;
- Footpath 300: routes from A29 Westergate Street and along Elmcroft Place and through the site on an east-west alignment also connecting into Footpath 296;
- Footpath 296: runs on a north-south alignment through the site and around the southern and eastern boundary of Eastergate Church of England Primary School before connecting into Church Lane; and
- Footpath 317: connects with Footpath 296 and provides a route out of the site via the northern boundary and existing shared use path that runs between Ivy Lane and Church Lane, proving a direct connection to Ormiston Academy Six Villages Academy and Six Villages Sports Centre and Eastergate Church of England Primary School.

3.2.4. There is also a number of permissive paths that route through the site in a north-south and east-west direction connecting into this PRoW network.

3.2.5. In addition the PRoW network provides a number of off-site connections:

- Footpath 299: routes from the A29 Westergate Street opposite Elmcroft Place on an east-west alignment and provides a connection to Hook Lane;
- Footpath 306: routes from the A29 Westergate Street opposite Ivy lane on an east-west alignment and provides a connection to Aldingbourne;
- Footpath 303: Elm Road, Lime Avenue and A29 Nyton Road;
- Footpath 321: Connects Church Lane to St Phillip Howard Roman Catholic High School and Barnham centre via Barnham Road.

ARUN DISTRICT COUNCIL AL/11/24/OUT

Date Modified:

Drawn By:

Key

- Site Boundary
- Bridleway
- Footpath

Ounces Barn
Park Farm
Cottage
Thicket Lane
Britten's Lane
Boxgrove Common
Hungerdown House
Oakwood House
Hainaker Barn Farm
Hainaker Barn Lane
Slindon Bottom Road
Slindon Bottom
Footfield
Park Lane
Slindon Road
Slindon Common
Crockerhill
Blackmill Lane
The Cottage
Blackmill Spinney
Littlewater Road
Dukes Road
Aldingbourne Drove
Clear Springs Farm
Arundel Road
East Hampnett
Hampnett Lane
Dell Cottage
Hales Barn Farm
Murrayfield Cottages
Westergate Wood Cottages
Fontwell
Fontwell Avenue
Denmans Lane
Handleys Lane
Nyton Stables
Nyton Lane
Norton
Okehurst
Eastergate Lane
Stoney Brook Farm
North Chalter Farm
Sheepwash Cottage
Church Road
Nyton Road
Nyton
Aldingbourne
Eastergate
Chalter Farm
Barnham Lane
Westergate
Hook Lane
Rowe Mouse
Church Lane
Westergate Street
Park Farm
Decoy Farmhouse
West Barnham
Barnham
Woodgate
New Barn
Lidsey Road
Fox House
New Barn Farm
Fatting Ground Barn
Lidsey
Shripney
Sack Lane Cottages

3575 375 375 377 376 3664 389 391_1 3748 368 391 3677 393 2825 392 312 314 292 310 311 315 294 3582 308 303 305 306 319 320 318 307 317 298 296 299 300 321 323 324 287 157 158 200 146 291 200 200 296 151 149 150 152

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0 0.125 0.25 0.5 0.75 1 Kilometres

wsp

TITLE:

Public Rights of Way

FIGURE No:

3-1

File:

ARUN DISTRICT COUNCIL AL/11/24/OUT

3.3 CYCLE NETWORK

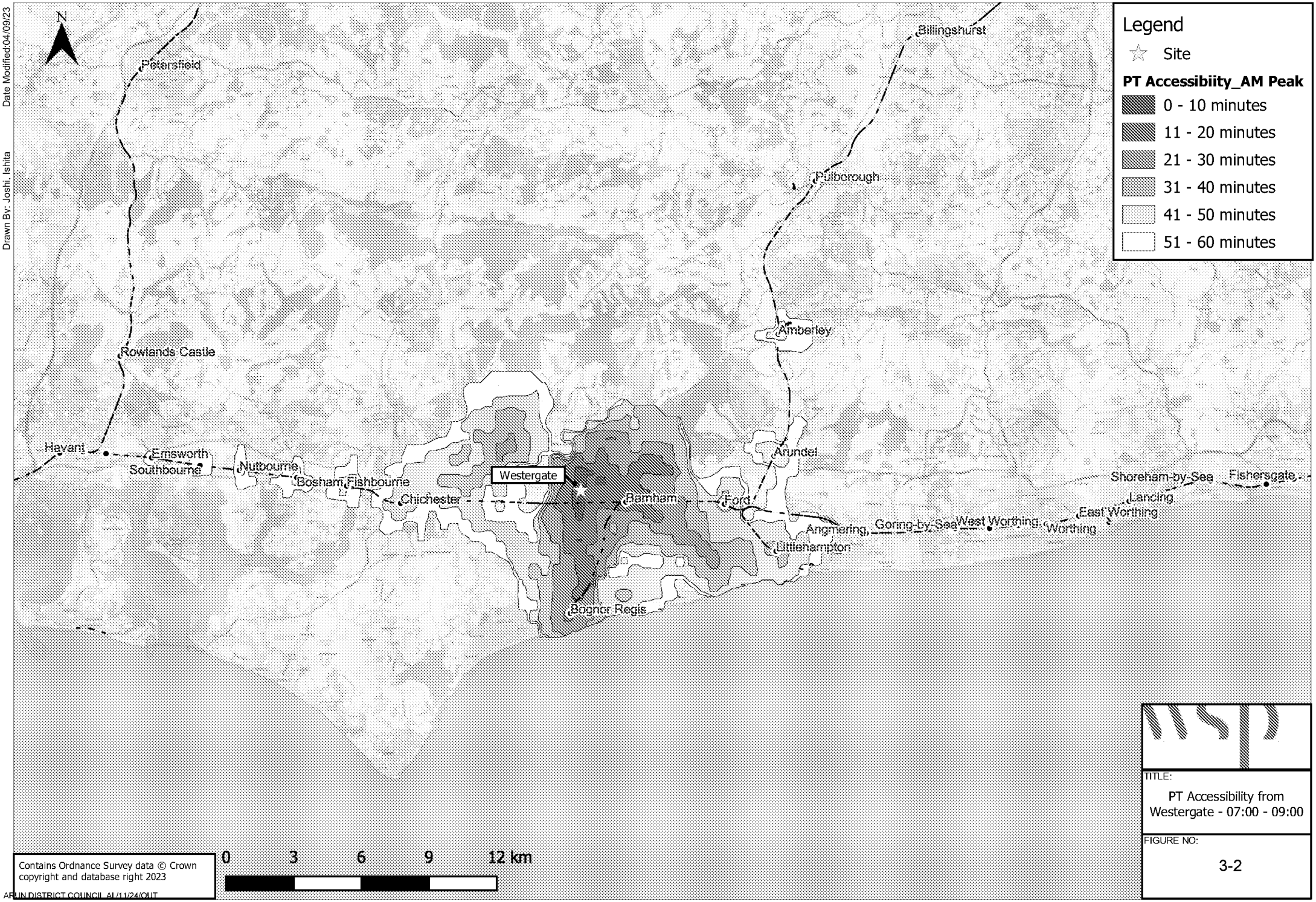
3.3.1. There is no existing dedicated cycle network in the vicinity of the development. The nearest cycle routes are found along A259 linking Chichester to Bognor Regis. This comprises the National Cycle Network Route 2 which is a long distance cycle route and, when complete, will link Dover with St Austell via the South Coast of England. The route is currently 361 miles long. The provision along the A259 includes an off-carriageway cycle route providing a safe and suitable cycling connection.

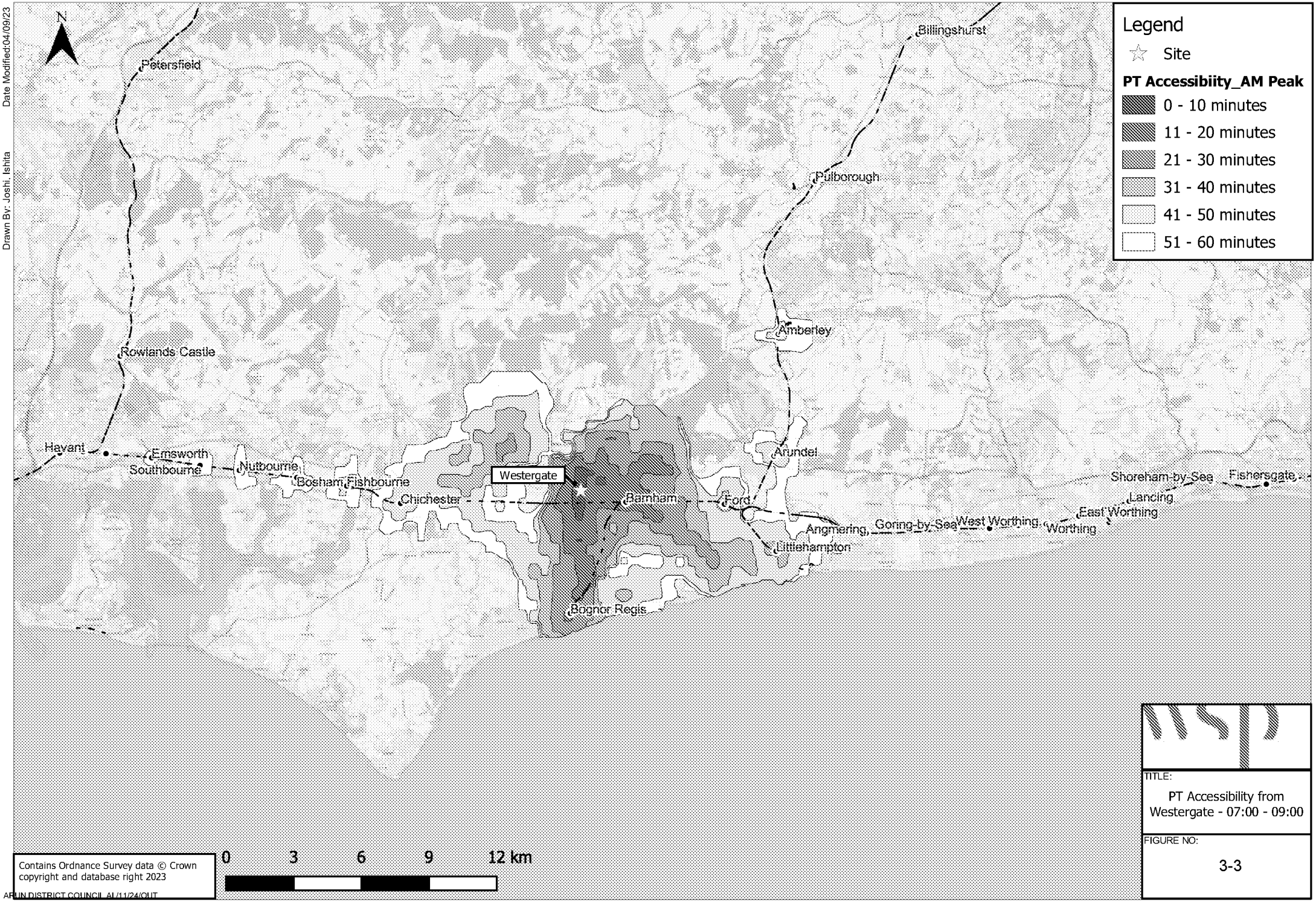
3.3.2. Although there are no dedicated cycle routes located in the immediate vicinity of the site, A29 Westergate Street has sufficient width to allow for on-road cycling, with sufficient visibility along the length of the road and at junctions along the route. Also, within the vicinity of the site observed speeds taken from the ATC surveys appear suitable for cycling. Additionally, the B2233 Barnham Road provides sufficient width to enable on-carriageway cycling to occur, providing a connection from the site to Barnham Rail Station.

3.4 PUBLIC TRANSPORT

3.4.1. This section outlines the bus and rail network in the vicinity of the site and Figure 3-2 and Figure 3-3 show the public transport accessibility in the AM and PM peak respectively.

ARUN DISTRICT COUNCIL AL/11/24/OUT


Date Modified:04/09/23
Drawn By: Joshi. Ishita
N
Legend
Site
PT Accessibiity_AM Peak
0 - 10 minutes
11 - 20 minutes
21 - 30 minutes
31 - 40 minutes
41 - 50 minutes
51 - 60 minutes
Billingshurst
Petersfield
Pulborough
Amberley
Rowlands Castle
Arundel
Havant
Emsworth
Southbourne
Nutbourne
Bosham
Fishbourne
Westergate
Chichester
Barnham
Ford
Shoreham-by-Sea
Fishersgate
Lancing
East Worthing
Worthing
West Worthing
Goring-by-Sea
Angmering
Littlehampton
Bognor Regis
0 3 6 9 12 km
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TITLE:
PT Accessibility from Westergate - 07:00 - 09:00
FIGURE NO:
3-2


Date Modified:04/09/23
Drawn By: Joshi. Ishita
N
Legend
Site
PT Accessibiity_AM Peak
0 - 10 minutes
11 - 20 minutes
21 - 30 minutes
31 - 40 minutes
41 - 50 minutes
51 - 60 minutes
Billingshurst
Petersfield
Pulborough
Amberley
Rowlands Castle
Arundel
Havant
Emsworth
Southbourne
Nutbourne
Bosham
Fishbourne
Westergate
Chichester
Barnham
Ford
Shoreham-by-Sea
Fishersgate
Lancing
East Worthing
Worthing
West Worthing
Goring-by-Sea
Angmering
Littlehampton
Bognor Regis
0 3 6 9 12 km
Contains Ordnance Survey data © Crown copyright and database right 2023
TITLE:
PT Accessibility from Westergate - 07:00 - 09:00
FIGURE NO:
3-3

BUS NETWORK

3.4.2. The closest bus stop is 150 metres to the south of the access point along A29 Westergate Street. There are both northbound and southbound bus stops in this location. A bus stop flag is provided on both sides of the street. The stops are located on the footpath and a firm level service is provided at the stop location.

3.4.3. The stops are served by bus Route 66 provided by Compass Bus. Route 66 travels from Bognor Regis to Yapton via Barnham as a loop service. Northbound services travel onto Barnham Station and southbound services travel towards Bognor Regis. Services are provided Monday to Saturday, with no Sunday service. Bus times have been sourced from the Compass Bus website and as shown in **Table 3-1**.

Table 3-1 – Route 66 Bus Times

Direction	Times					
Southbound	0754	0906	1106	1324	1542	1720
Northbound	0831	1031	1250	1505	1648	1753

Bus stops within a 15-minute walk north of the site also provide access to services 85 and 500. The number 85 operates between Chichester and Arundel, whilst the 500 bus runs between Littlehampton and Chichester. The route 85 and route 500 bus services are summarised in **Table 3-2** and **Table 3-3**, respectively.

Table 3-2 - Route 85 Bus Times from The Island

Direction	Times				
Westbound	0816	1016	1216	1416	1616
Eastbound	0928	1110	1310	1517	1659

Table 3-3 - Route 500 Bus Times from War Memorial

Direction	Start time	End time	Buses per Day	Frequency
Westbound	05:55	00:24	32	30 minutes
Eastbound	05:35	23:43	33	30 minutes

RAIL NETWORK

3.4.4. The closest rail station is located at Barnham Station which is located two miles along the road network from the site (A29 and Barnham Road). The station is accessible on foot, by bicycle, car or via bus Route 66 as above. The station is serviced by the West Coastway line which runs between Southampton and Brighton, and a spur line to Bognor Regis. Services are provided to Southampton, Portsmouth, Bognor Regis, Brighton and London Victoria.

3.4.5. Station facilities include the provision of bicycle parking, car park (pay and display spaces), step free access and refreshment facilities. Car parking is provided for general vehicles, parking for people with disabilities, and vehicles with electric car charging.

ARUN DISTRICT COUNCIL AL/11/24/OUT

3.4.6. Train services are provided by Great Western and Southern Rail with details of destinations available shown in **Table 3-4**.

Table 3-4 - Rail services from Barnham

Destination	Number per hour
Brighton	2
London Victoria	4
Littlehampton	2
Bognor Regis	4
Southampton Central	2
Portsmouth and Southsea	3
Portsmouth Harbour	1

3.5 WALKING AND CYCLING ACCESSIBILITY TO LOCAL FACILITIES

3.5.1. The routes to village and to local facilities can be seen in Figure 3-4 and Figure 3-5. These figures show approximate walking and cycling times from the site to facilities including schools, shops and Barnham Railway Station.

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Date Modified: 04/09/2023

Drawn By: ukkcm003

B2233

B2233

Key

Site

Facility Type

Hospital

GP Practice

Pharmacy

Dentists

Opticians

School Type

Primary

Secondary

Walking Accessibility (4.8kph)

Walk Speed: 4.8kph

0 to 10 Minutes (0 - 800 Metres)

10 to 20 Minutes (800 - 1600 Metres)

20 to 30 Minutes (1600 - 2400 Metres)

30 to 40 Minutes (2400 - 3200 Metres)

40 to 50 Minutes (3200 - 4000 Metres)

50 to 60 Minutes (4000 - 4800 Metres)

Other Facilities

Convenience Store

Petrol Station

Leisure Facilities

Post Office

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0 0.05 0.1 0.2 0.3 0.4 Kilometres

TITLE:

Local Facilities
Walking Distance

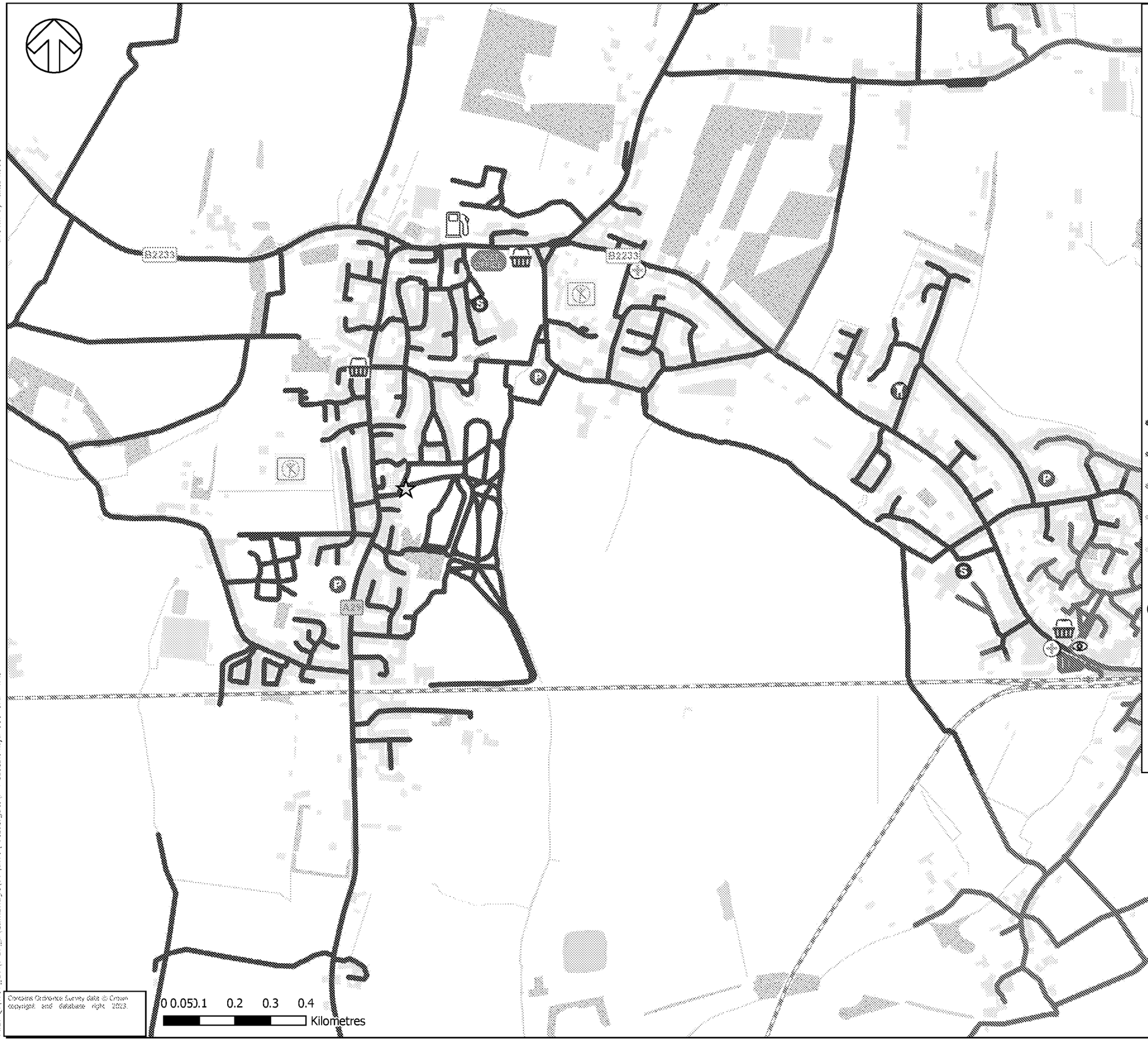
FIGURE No:

3-4

File: Q:\WSP_UK\WSP_D\Cambridge\DP\EWS\Westergate\PTAccessibilityInboundAM.mxd

Date Modified: 04/09/2023

Drawn By: ukkcm003



Key

Site

Facility Type

Hospital

GP Practice

Pharmacy

Dentists

Opticians

School Type

Primary

Secondary

Cycling Accessibility (16kph)

Cycle Speed: 16kph

0 to 10 Minutes (0 - 2667 Metres)

10 to 20 Minutes (2667 - 5333 Metres)

20 to 30 Minutes (5333 - 8000 Metres)

30 to 40 Minutes (8000 - 10667 Metres)

40 to 50 Minutes (10667 - 13333 Metres)

50 to 60 Minutes (13333 - 16000 Metres)

Other Facilities

Convenience Store

Petrol Station

Leisure Facilities

Post Office

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0 0.05 0.1 0.2 0.3 0.4 Kilometres

TITLE:

Local Facilities
Cycling Distance

FIGURE No:

3-5

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WALKING AND CYCLING DISTANCES

3.5.2. Manual for Streets states: "walking offers the greatest potential to replace short car trips, particularly those under 2km". The CIHT document 'Providing for Journeys on Foot', sets out further guidance pertaining to general recommended walking distances. This document advises that typically, 80% of all journeys under one mile (1.4km) are made on foot while 60% of all journeys under 2 miles (2.8km) are made on foot. It also sets out the following suggested acceptable maximum walking distances and may be used for 'planning and evaluation purposes.

3.5.3. CD 143 – Designing for walking, cycling and horse-riding provides requirements and advice for the design of walking, cycling and horse riding facilities adjacent to motorway and all purpose trunk road network.

3.5.4. On the basis of the above, it is apparent that the majority of people would walk to destinations that are up to in the order of approximately 3km away, although the 'preferred maximum' is typically 2km for commuting and school purposes and 1.2km for other destinations. It is also apparent that the vast majority of people would cycle to destinations that are up to in the order of approximately 5km away, with a significant proportion would also cycling to destinations 8km away.

CYCLING

3.5.5. LTN 1/20 – Cycle Infrastructure Design – provides guidance on cycling (and walking) distances, stating: "two out of every three personal trips are less than five miles [8km] in length – an achievable distance to cycle for most people, with many shorter journeys also suitable for walking."

3.5.6. The National Travel Survey highlights that the average cycle trip is currently 3.4 miles (5.5km) while Local Transport Note 1/04 highlights the average distance travelled by Non-Motorised Users (NMUs) at that time and suggests that "…journeys up to three times [the average distance] are not uncommon for regular commuters" accepting that "…fitness and physical ability, journey purpose…and conditions" are relevant factors. It should also be noted that this distance is an average distance, and consequently, some people are willing to cycle further than this distance regularly.

ACCESSIBLE FACILITIES

3.5.7. A significant number of facilities are accessible on foot or by bicycle from the site within the acceptable distances set out above. These are shown in Figure 3-4 and Figure 3-5. A primary school and secondary school can be walked to in under 10 minutes (based on an assumed walking speed of 4.8kph) and cycled to in less than five minutes (based on an assumed cycling speed of 16kph). Barnham town centre is approximately 3.1km away and offers a range of shops and services. There are bicycle stands provided on Yapton Road, making cycling to the village centre a realistic modal choice.

3.5.8. **Error! Reference source not found.Table 3-5** lists the nearest examples of several types of facility within 2.4km of the site, a distance which can be covered in approximately 30 minutes on foot or ten minutes by bicycle.

Table 3-5 - Accessibility to Local Facilities

ARUN DISTRICT COUNCIL AL/11/24/OUT

Facility Name	Location	Facility Type	Distance from Site Access on foot/ by bicycle
Aldingbourne Primary School	A29 Westergate Street	Primary School	400m
Aldingbourne Community Sports Centre	Olivers Meadow	Sports Centre	530m
Eastergate CE Primary School	Church Lane	Primary School	600m
Ormiston Six Villages Academy	Lime Avenue	Secondary School	680m
Six Villages Sports Centre	Lime Avenue	Sports Centre	680m
Hirange Supermarket	A29 Westergate Street	Convenience Store	7070m
Westergate Day Nursery	Lime Avenue	Nursery	900m
Eastergate Pre School	Barnham Road	Nursery	1,300m
The Croft Pharmacy, Eastergate	Barnham Road	Pharmacy	1,500m
Croft Surgery, Eastergate	Barnham Road	GP Practice	1,500m
Mr N Tsolis, Barnham	Downview Road	Dentist	1,900m

3.5.9. It can be seen from the information presented that the site has good accessibility to local facilities on foot or by bicycle.

ARUN DISTRICT COUNCIL AL/11/24/OUT

4 TRAVEL PLAN VISION, OBJECTIVES AND TARGETS

4.1 TRAVEL PLAN VISION

4.1.1. Having an overarching vision is useful to determine what kind of residential development it would be desirable to achieve from a sustainable mobility perspective. Therefore, the overarching vision statement for the Travel Plan is:

'The residential development at Westergate will accommodate residential and visitor journeys through a variety of integrated and sustainable transport options, with people able to access travel information on demand to make informed travel choices.'

4.1.2. This vision will assist in guiding the development, implementation, and evolution of this Travel Plan, helping to ensure residential and visitor journeys can be undertaken through a variety of integrated and sustainable travel options and thereby minimising the volume of single-occupancy car trips to and from the area. This will in turn alleviate traffic impacts on the surrounding highway network, reduce traffic congestion, improve air quality, and enhance the road safety characteristics of the local area.

4.2 TRAVEL PLAN OBJECTIVES

4.2.1. In pursuit of this vision, the Travel Plan for the Westergate residential development will be guided by specific objectives as set out below:

- To raise occupants' awareness of the sustainable modes of travel available for travel to and from the development;
- To raise occupants' awareness of the health, fitness and wellbeing benefits of walking and cycling for short journeys; and
- To facilitate travel by sustainable modes. These objectives will help define and shape investment decisions and the package of measures to be introduced, collectively helping to achieve the vision statement.

4.2.2. The objectives of the Travel Plan should be aligned with those of the wider BEW strategic site Travel Plans where possible.

4.3 TARGETS

4.3.1. The targets of this Travel Plan have been tailored to deliver its objectives. In order to successfully implement modal shift, Travel Plan targets must be Specific, Measurable, Achievable, Realistic and Timed (SMART).

4.3.2. There are two types of targets that could be considered to aid the Travel Plan in delivering its objectives, 'Action' targets and 'Aim' targets. 'Action' type targets are physical actions that can be achieved by specified date, for example the appointment of a Travel Plan Co-Ordinator (TPC). 'Aim' type targets are those which relate to outcomes achieved through the implementation of measures, for example, achieving a change in modal split from that noted in the baseline analysis.

ARUN DISTRICT COUNCIL AL/11/24/OUT

BASELINE MODE SHARE

4.3.3. In order to set a baseline to measure the progress of targets against, an examination has been made of the existing modal split of people residing locally to the proposed site using Method of Travel to Work data from the 2011 Census. It has been determined not to use 2021 Census Data due to the impacts of the UK COVID lockdowns on working patterns (i.e. remote working). Therefore, the use of 2011 Census Data is considered to be more representative The proposed development is located within the Barnham ward and any development in this area may reflect existing data trends before the introduction of travel plans.

Table 4-1 - Census Travel to Work Modes

Mode	Barnham Average share
Working from Home	8.1%
Train	8.3%
Bus, Minibus, Coach	0.5%
Taxi	0.1%
Motorcycle, Scooter, Moped	0.8%
Driving a Car	69.5%
Passenger in Car	4.3%
Bicycle	2.2%
On Foot	5.8%
Others	0.4%

4.3.4. The baseline mode share included in Error! Reference source not found. is included to give an indication of where improvements can be targeted and acts as a specific metric to set targets against. However, this mode share is for indicative purposes only and will therefore be confirmed by surveys of residents which shall be undertaken post-occupation. The proposed surveys are further detailed in the 'Monitoring' section of the Travel Plan.

AIM TARGETS

4.3.5. These types of targets would be quantifiable and would allow detailed evaluation of the main objectives of the Full Travel Plans to be made. They will be set out in detail as part of the Full Travel Plans and revised if necessary, after the baseline travel surveys are undertaken and analysed.

4.3.6. Aim type targets are generally based on achieving modal shift through reductions in car use, particularly cars only with a single occupant, and on increasing the use of sustainable modes such as walking and cycling.

4.3.7. It is noted that increases in walking, cycling and public transport mode shares would contribute to delivering a modal shift away from private car usage. Given the location of the Proposed Development there would be expected to be a natural modal shift towards these modes. Further promotion and

consideration of these modes would be provided at the time the targets are being established within the Full Travel Plan.

4.3.8. The difference between end-users' expected travel behaviour should be considered when establishing aim type targets for Full Travel Plan.

4.3.9. Any interim targets set out in the Full Travel Plans will be reviewed after the baseline travel surveys for each use have been undertaken.

4.3.10. The following 'Aim' target is set for the Travel Plan:

- A 15% reduction in the mode share held by 'Car (driver)' compared to that found in the initial survey post-occupation.

4.3.11. The table below shows a biennial breakdown of how the mode share of each mode could change in line with the target above in the specified five year period.

Table 4-2 - Mode Share

Mode	Baseline Mode Share – Year 1 (%)	Year 3	Year 5
Working from Home	8.1%	9.1%	10.1%
Train	8.3%	8.3%	9.3%
Bus, Minibus, Coach	0.5%	1.5%	3.5%
Taxi	0.1%	0.1%	0.1%
Motorcycle, Scooter, Moped	0.8%	1.8%	1.8%
Driving a Car	69.5%	63.5%	54.5%
Passenger in Car	4.3%	5.3%	6.3%
Bicycle	2.2%	3.2%	5.2%
On Foot	5.8%	6.8%	8.8%
Others	0.4%	0.4%	0.4%

4.3.12. This target aims to reduced single occupancy car use and will in turn aid progress towards a reduction in single occupancy car use in the area local to the proposals.

4.3.13. Targets relating to the increases in travel on foot, via bicycle and via public transport will not be set until the initial travel survey has been undertaken.

4.3.14. In the long-term, a greater level of Car (driver) reduction can be achieved in conjunction with future growth wider Barnham Eastergate and Westergate (BEW) strategic development. Once complete, the Proposed Development will benefit from a wide range of mixed-use facilities (including schools

and local centre) being in each reach on foot or my bicycle with the East-West Link Road providing a direct connection to these as well as Barnham village centre and railway station.

ACTION TYPE TARGETS

4.3.15. The following action type targets are recommended, noting these will be agreed in detail as part of the Full Travel Plan:

- Appoint a Travel Plan Coordinator (TPC) for the site prior to occupation of the Proposed Development;
- Cycle parking spaces to be provided in accordance with local standards. Cycle parking to be of a suitable type and to be provided in suitable locations (both in 'origin' and 'destination' terms) within the Site;
- It is envisaged that Travel Welcome Packs would be produced. These would promote the range of sustainable transport modes available locally and the key measures that are provided as part of the infrastructure on the Site and as part of the Full Travel Plan;
- Information could be provided to end-users via leaflets, notice boards across the Site, or by way of regular emails; and,
- A website detailing the range of local facilities and amenities within a reasonable distance of the Site could also be provided. This could also promote the health benefits of travel by foot and cycle.

TRAVEL PLAN MONITORING

4.3.16. Standardised Assessment Methodology (SAM) Survey has been developed by TRICs to assist and support travel plan monitoring by providing a standardised approach to undertaking multi-modal traffic surveys. The survey involves a site visit where details of parking provision, public transport accessibility and access points can be produced amongst a number of other points outlined on TRICS website. SAM Surveys will be produced as part of any final plan in order to assist with the monitoring of the site.PENALTY MEASURES

4.3.17. The application of penalty measures should also be considered to allow for the implementation of further Travel Plan measures where trip reduction targets have not been achieved within the monitoring period.

ARUN DISTRICT COUNCIL AL/11/24/OUT

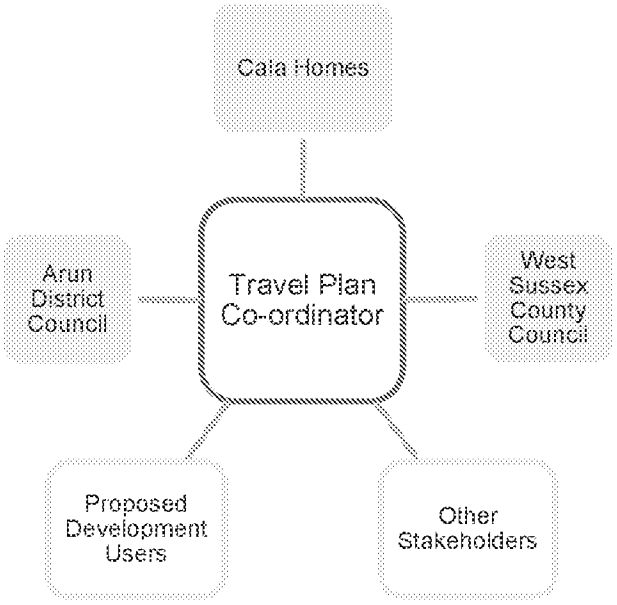
5 TRAVEL PLAN FRAMEWORK STRATEGY

5.1 MANAGEMENT

5.1.1. Overall responsibility of the Full Travel Plan will be with the Travel Plan Coordinator (TPC) that will be appointed in respect to the Site.

5.1.2. A management system will be set out that will require coordination between different agents and stakeholders to ensure that all interested parties are informed and have an input in the evolution of the Full Travel Plans. This management structure is indicatively shown in Figure 5-1 below.

Figure 5-1 - Travel Plan Management Structure



5.1.3. Specific details of people or groups acting on behalf of the above stakeholders will be detailed when the Full Travel Plan for the Proposed Development are prepared. Where possible, the Travel Plan strategy will be developed in coordination with those produced for the wider BEW strategic site to ensure that measures can be implemented that maximise potential trip reductions. It is however noted that this may not be possible and will be dependent upon construction programmes associated with each phase of the BEW development.

5.2 TRAVEL PLAN CO-ORDINATORS

5.2.1. At least one TPC will be appointed to take responsibility for the management of the Full Travel Plan for the Proposed Development.

5.2.2. The TPC role(s) will be funded directly by Cala Homes from the commencement of the Full Travel Plan and until the completion of the final monitoring surveys. After this time, it is envisaged that the TPC role time requirement will be reduced but will include keeping communications and public information up-to-date and relevant.

5.2.3. The responsibilities of the TPC can be summarised as:

- Giving advice and information on transport-related subjects to occupiers of the Proposed Development;
- On-Site co-ordination of data collection for monitoring of the Full Travel Plans;
- Ensuring information that is provided to users of the Site is up to date; and
- Helping establish and promote the individual measures in the Full Travel Plans.

5.3 MARKETING

5.3.1. It is recognised that a marketing and communication strategy is key to the success of any travel plan. The marketing strategy for the Full Travel Plan will aim to raise awareness of the key services and facilities available and to disseminate travel information, measures and schemes designed to encourage sustainable travel.

5.3.2. All occupiers of the Proposed Development will be made aware of the relevant Full Travel Plan, including its purpose and objectives, along with specific measures. Marketing will be undertaken between the point of sale and first occupation of each dwelling for the scheme.

5.3.3. Full details of the marketing strategy for the Site will be introduced within the Full Travel Plan.

5.4 SECURING THE FULL TRAVEL PLANS AND FUNDING

5.4.1. The provision of separate Full Travel Plan for the Proposed Development, together with the implementation of specific land use targets, is envisaged to be secured through a planning condition(s) / S106 Agreement.

5.4.2. A commitment to the Full Travel Plan strategy for the Site forms part of the commitment to implement, monitor and review the Full Travel Plans when submitted to and approved by either WSCC or Arun DC.

5.4.3. Funding for the implementation, monitoring and management of the Full Travel Plan would be secured by way of a S106 agreement.

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6 BASELINE TRAVEL DEMAND

6.1 BASELINE TRAVEL SURVEYS

RESIDENTIAL BASELINE TRAVEL SURVEY

6.1.1. It is anticipated that a baseline travel survey for the Proposed Development will be undertaken following a minimum of 50% unit occupation - although the exact threshold will be subject to discussion and agreement - which will provide a reasonable quantum of data from which the breakdown of baseline travel modes can be established. This will also allow for any necessary changes to be made to the Residential Full Travel Plan with respect the baseline results, such as refined targets for example.

6.1.2. The baseline surveys will be detailed in the Residential Full Travel Plan. It is envisaged that it will include residents' and visitors' trips, as well as servicing and deliveries, and will be SAM, iTRACE and TRICS compliant.

ARUN DISTRICT COUNCIL AL/11/24/OUT

7 PROPOSED MEASURES

7.1 INTRODUCTION

7.1.1. This section outlines some of the measures that could be incorporated into the Full Travel Plan and then implemented and reviewed as part of the strategy to maximise sustainable travel behaviour.

7.1.2. The measures have been grouped into two types, as follows, and considered in-turn in the following Sections:

- **Hard measures**: these are engineering measures incorporated into the design of the Proposed Development; and,
- **Soft measures**: these relate to marketing and management-type strategies, which would be implemented so that Site users' sustainable travel behaviour is maximised.

7.2 SITE-WIDE HARD MEASURES

7.2.1. As mentioned above, these measures refer to engineering measures incorporated into the design of the Proposed Development to promote sustainable travel. Many infrastructure aspects of the Proposed Development design will influence travel patterns from the outset.

7.2.2. Some 'hard' engineering measures are set out below; however, it should be noted that many of these elements will be fixed and agreed at the relevant reserved matters stage of the planning process, given that the subject application is in an outline form.

WALKING AND CYCLING STRATEGY

7.2.3. The full internal layout of the Proposed Development will be fixed at the reserved matters stage of the planning process, however various pedestrian and cycle links will be provided within the Site to create a network of 'walkable' and 'cyclable' streets that provide access north-south and east-west through the site to nearby local facilities.

7.2.4. The East-West Link Road, which forms a detailed element of the Planning Application, consists of a 6.5-7.3m single carriageway road with a 2m footway on the northern side of the link and 2m footway plus an LTN1/20 compliant 3m segregated bidirectional cycle route provided on the southern side of link. This East-West link road will connect the existing A29 Westergate Street to the realigned A29 and onto B2233 Barnham Road (near Barnham Station) as part of the BEW strategic site, providing a direct link for pedestrians and cyclists to Barnham Station, proposed local centres within the BEW site and Barnham village centre.

7.2.5. In addition, the site is well connected via existing footways and enhanced PRoW footpaths to surrounding residential areas, schools, village shopping and community facilities. Footpaths that fall within the red line boundary that will be upgraded as part of the development proposals are as follows:

- Footpath 297: routes from the A29 Westergate Street, along Pine Close and connects into St Richard's Road. This will provide connections north to Westergate village centre, Six Villages Sports Centre, Ormiston Six Villages Academy and Eastergate Church of England Primary School;
- Footpath 298: provides a continuation of Footpath 297 on an east-west alignment connecting on Footpath 296, thereby providing a connection into the north-south routes through the site;

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- Footpath 300: on an east-west alignment and connecting into the north-south routes through site; and
- Footpath 296 and 317: Provides a north-south connection with Footpath 298 and 300 to provide connections north to Westergate village centre, Six Villages Sports Centre, Ormiston Six Villages Academy and Eastergate Church of England Primary School.

7.2.6. Each of these routes, which also link into the wider pedestrian network and provide pedestrian connections to local facilities thereby removing the need to make trips by private car. Cyclists wishing to reach destinations to the north will be directed via the access onto St Richard's Road shown on via Ivy Lane and existing shared use path to Church Lane or onto the A29. This will also act as the route to access Barnham village centre and railway station prior to completion of the East-West link road.

7.2.7. Further details are provided in the TA that accompanies the application.

PARKING STRATEGY

7.2.8. The quantum, type and location of car and cycle parking provision will be provided in accordance with Arun District Council parking standards, as set out in the TA. In summary, the proposed parking strategy will:

- Provide users of the Proposed Development with car parking provision that satisfies their needs but does not encourage the use of private vehicles;
- Align with policy and best practice regarding provision of Electric Vehicle Charging Points (EVCP) to minimise carbon impact of car travel. This means that 100% of houses and garages with a driveway or garage will be provided with EV charging points; and
- Provide parking provision for cycles and other micro-mobility modes (such as e-scooters) in an adequate quantum and form at appropriate locations across the Site in order to accommodate all projected demands and encourage use of micro-mobility travel modes.

7.2.9. There is also the potential to incorporate cycle hire facilities on the Site, subject to further discussion and agreement.

PUBLIC TRANSPORT IMPROVEMENTS

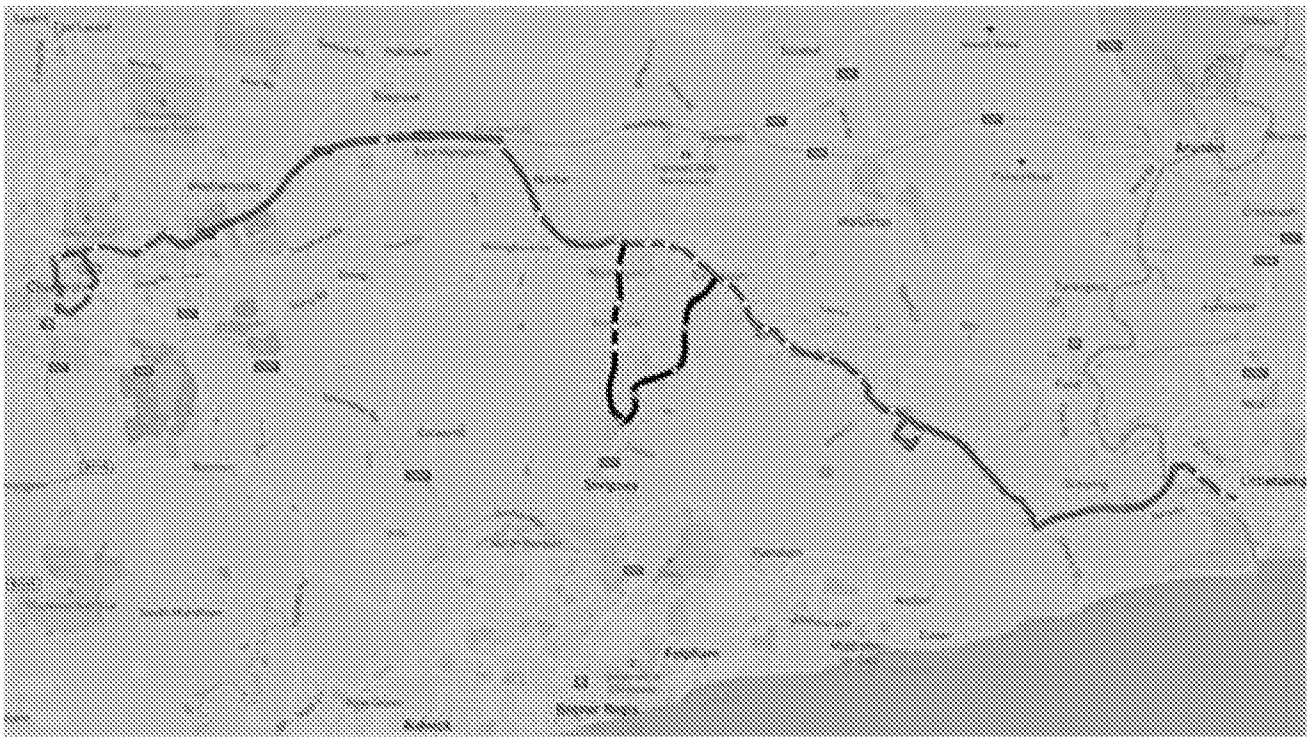
7.2.10. The BEW Public Transport Strategy (January 2023) details for improvement public transport connections throughout the site, to Barnham railway station and further afield. This includes proposals for a new bus service (55x) and frequency improvements to the existing 66A/C service.

7.2.11. The 55x service would connect Chichester and Littlehampton via Barnham Eastergate and Westergate strategic site. This would operate on a 30-minute headway and build to a 15-minutes over time with demand stimulated by the BEW development. This service would initially require financial contributions to fund its operation, with a S106 contribution towards such requested by WSCC

7.2.12. Figure 7-1, taken from the BEW Public Transport Strategy shows two possible options for the route, the black line reflecting a diversion to the site.

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Figure 7-1 - Proposed 55X Service Without BEW Development (pink) and with Development (black) ***(extract from Figure 5-1 of the BEW Public Transport Strategy)***



7.2.13. There are also aspirations to increase the frequency of the 66A/C from 3-4 times per day to half-hourly by 2030. The 66 service operates a circular route to / from Bognor Regis, connecting Westergate, Eastergate, Yapton and Barnham. This would align to WSCC's long-term aspirations for core bus services and would also require financial contributions to fund its operation.

7.2.14. New bus services should aim to tie in with the railway services, interchange between services and interchange with other services where possible to increase the reliability and efficiency of public transport in the area, increasing the overall usage.

MOBILITY HUBS

7.2.15. Mobility hubs provide a focal point for sustainable travel and have been shown to reduce carbon emissions and improve air quality. This is due to a number of factors including reducing car journeys. Active Travel infrastructure at mobility hubs also offers the opportunity for healthier travel.

7.2.16. The Mobility Hubs implemented as part of the BEW development proposals should:

- Decrease the use of private vehicles;
- Increase the accessibility of public transport, including making railway options more attractive;
- Increase access to active modes of transport;
- Combat urban / rural inequalities;
- Improve access to education and employment; and
- Improve the local public realm, creating a more pleasant, attractive, safe and inclusive environment for everyone to live.

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7.2.17. The BEW Public Transport Strategy focuses on a proposal for three mobility hub types; primary hub, town centre hub and campus hub.

- The primary hub will provide first mile / last mile connections between the development and Barnham Railway Station.
- The town centre hubs will be found in key locations within the development providing shared mobility hire opportunities, public transport, and demand responsive transit stops.
- The campus hubs will provide local residents with micromobility services, parcel lockers and 'Click & Collect' points, as well as providing space for community activities and convenient retail.

7.2.18. Such mobility hubs should be located to serve the needs of residents of the Cala Homes development in addition to eh wider BEW strategic site.

ADDITIONAL HARD MEASURES

7.2.19. A number of additional 'hard' engineering measures would be incorporated into the design of the Site to promote sustainable travel. Some potential 'hard' engineering measures are set out below, it should be noted that many of these elements are subject to further discussion and would be fixed and agreed at the relevant reserved matters stage of the planning process.

- On-site car club;
- E-bike docking and charging facilities;
- Digital capability to display live transport information as well as availability of bikes and publicly accessible fast charging points;
- Wayfinding and orientation information;
- Click and collect services, including package lockers;
- Bike maintenance / repair station;
- Home-working hubs that facilitate on-site working; and,
- Superfast broadband.

7.3 SOFT MEASURES

7.3.1. Soft measures refer primarily to marketing and management measures, as opposed to engineering measures incorporated into the design of the Proposed Development.

7.3.2. Examples of soft measures that could be implemented as part of the Full Travel Plan are provided below.

TPC APPOINTMENT

7.3.3. The TPC will be appointed prior to first occupation and will be responsible for managing and implementing the Full Travel Plan.

SUSTAINABLE TRAVEL WELCOME PACK

7.3.4. It is envisaged that new residents on first occupation to the homes would be provided with a Sustainable Travel Welcome Pack, promoting uptake of sustainable modes of transport and the various measures incorporated as part of the forthcoming Full Travel Plan.

7.3.5. Primarily, the welcome pack would highlight and promote the various 'hard' and 'soft' measures incorporated as part of the development. This could include the dissemination and promotion of the following, subject to further discussion and agreement:

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- Local on-Site and off-Site walking / cycling routes and facilities, including associated walk / cycle times to key destinations;
- On-Site cycle parking and EV parking arrangements;
- Local public transport options – including details of routes, timetable information, operators and fares;
- Rail season ticket costs;
- 'Doctor Bike' visits to the Site;
- Local cycle shop discounts;
- Free 'Sharing Your Journey to Work' scheme;
- Free 'Co-Wheels Car Club' membership
- Cycle training courses; and
- Local walking and cycling groups.

7.3.6. The Full Travel Plan document will also provide details of the appointed TPC and invite future residents to raise specific transport-related matters with them.

7.3.7. Moreover, information on the health benefits associated with alternative modes of transport could form part of the welcome packs.

NEWSLETTERS AND REGULAR COMMUNICATIONS

7.3.8. The TPCs will provide regular updates to users of the Proposed Development on the progress and issues related to the Full Travel Plans through regular newsletters and / or emails (in accordance with WSCC's travel plan management system). This would provide an opportunity to promote up and coming sustainable transport events within the Proposed Development and the surrounding area, as well as a chance to remind users of sustainable transport options and encourage the use of these modes.

7.3.9. Travel planning information boards will be located within the main sales office and in central areas of the development. This will raise awareness amongst residents of available transport choices, highlighting the benefits of sustainable travel associated with the location of the development.

PERSONAL TRAVEL PLANNING SERVICE AND SALES STAFF TRAINING

7.3.10. The TPC will be available to provide personalised travel planning advice to occupants of the development. The TPC can identify routes to public transport services to best meet journey requirements of occupants travelling to work, schools, and other key facilities.

7.3.11. The personalised journey planning service detailed above will also accommodate the specific journey planning requirements of mobility impaired occupants of the site.

7.3.12. Training will also be provided to sales staff that will be responsible for meeting with prospective residents. The training will ensure that sales staff are familiar with the vision and objectives of the Travel Plan and are able to communicate the sustainable travel opportunities to prospective buyers. Sales and marketing literature will also highlight the sustainable nature of the development, in terms of location and connectivity to local amenities.

TRAVEL INFORMATION WEBSITE

7.3.13. The TPC will develop a dedicated website for residents containing up-to-date and clear information regarding the sustainable travel options for access to and from the development. The website will include information about local public transport routes, local amenities and facilities, walking and

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cycling maps and additional links to car sharing opportunities, such as 'Co-Wheels' in Eastleigh who have agreed to provide an on-site vehicle.

7.3.14. Links to other travel information portals can also be provided on the website.

7.3.15. Apps that provide relevant on-to-go travel information will also be promoted to residents.

PROMOTIONAL EVENTS

7.3.16. Use of sustainable modes of transport will be promoted all year round and will be further encouraged through involvement in national promotional events. Some of these are:

- National Bike Week;
- Walk to Work Week;
- National Liftshare Day; and
- Challenges run through workplaces and local communities.

7.3.17. Information about these events will be included in the TIPs, as well as on the on-site information boards. Coordination of the events will be facilitated by the TPC.

7.4 PROMOTING WALKING AND CYCLING

7.4.1. The following schemes can be adopted by the TPC to promote walking and cycling to residents of the development:

- Provision of walking and cycle route maps, including information about the Sustrans National Cycle Network, which locally runs through Southampton, Eastleigh and up to Winchester and beyond;
- The offer of a £150 Halfords cycle purchase voucher, per household upon first occupation;
- If the resident surveys show a demand then a Bike User Group can be established, creating a community within the development for those who are interested to discuss best practice, cycle safety, routes etc;
- 'Bike Surgeries' or 'Bike Doctors' will be asked to attend sustainable travel events at the development, where those who cycle can have their bikes serviced and repaired;
- A bike hire / share scheme;
- Provision of cycle confidence training information;
- Information about cycle safety, security and best practice for winter cycling;
- Information about other community walking and cycling opportunities in the local area;
- Coordination with local schools to organise walking to school events for families living in the development.

7.4.2. The accessibility of the site by walking and cycling will be highlighted to residents and potential residents of the site by the TPC. Walking and cycling route maps should be provided to residents within the Travel Information Pack, including information on distances to key services and facilities.

7.4.3. The TPC also has the potential to provide personalised travel planning advice to residents, including information on the fastest routes to key destination and transport services, as well as the safest cycle routes.

7.4.4. Cycle parking should be provided to the most up-to-date standards for residential developments. The guidance set out in West Sussex County Council Guidance on Parking at New Developments (September 2020) is summarised in **Table 7-1** below.

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Table 7-1 – Minimum levels of cycle provision for new built residential spaces

Type	Dwelling Size	Cycle Provision (per unit)
Houses	Up to 4 rooms (1 & 2 beds)	1 space
Houses	5+ rooms (3+ beds)	2 spaces
Houses	Multiple occupation	1 space
Flats	Up to 3 rooms (1 & 2 bed)	0.5 spaces (if communal storage, otherwise same as 1 & 2 bed house)
Flats	4+ rooms (3+ beds)	1 space

7.5 PROMOTING PUBLIC TRANSPORT USE

7.5.1. The TPC will provide all residents with public transport timetables and maps for the local area. These will be provided in the TIPs and will include:

- Journey timetables for the local area and the wider rail network;
- Other methods of public transport available in the local area.

7.5.2. The TPC should collaborate with local public transport providers to improve services, negotiate discounts and offer trial initiatives as incentives for residents to use public transport. Public transport taster vouchers should be to a minimum value of £150 per household. Residents will need to complete and return a form to obtain the vouchers so that the uptake of the travel offer can be recorded and monitored.

7.6 PROMOTING EFFICIENT CAR USE

CAR PARKING MANAGEMENT

7.6.1. The development will provide car parking aligned with Arun District parking standards.

7.6.2. The need for private vehicle use is an inevitable at times and essential for certain households with specific needs. Where a private vehicle is used, it should be the target to minimise the emissions released from that vehicle.

ELECTRIC VEHICLES

7.6.3. Within the Travel Plan, there should be promotion of electric vehicles (Evs) and Ultra Low Emission Vehicles (ULEVs), with detail provided on the local availability and support of EV's and ULEV's, as well as information on the financial and environmental benefits of using them.

Electric vehicle charging points will be available within the development, with electric car charing available for all units with off-street parking. This will encourage the uptake of electric vehicles which do not emit harmful emissions.

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CAR SHARING

7.6.4. In order to ensure the most efficient levels of car usage, car sharing will be encouraged wherever possible. This will help to reduce the total number of journeys made by car in the first instance, whilst encouraging a pattern of more efficient car use.

7.6.5. West Sussex provides the opportunity to join car share communities via the following link: https://liftshare.com/uk/community/westsussexcarshare. This should be promoted within the newsletters and website.

CAR CLUB

7.6.6. Co-Wheels have agreed to provide one on-site car club vehicle for the three years of occupation, funded by the developer, which will be further promoted to residents by the TPC. Residents will be granted the first year of membership for free and provided with an amount of driving credit at no charge. The TPC will monitor the use and demand of the car club to determine whether the scheme requires more promotion or if additional cars could be added to the scheme.

7.6.7. Co-Wheels offer marketing material for on-site promotion of the car club. As a membership incentive, Co-Wheels can market free membership to residents as a benefit paid for by the developer to encourage scheme take-up upon first occupation. This entitles the occupier to a free £25 membership with no monthly fees, and £25 driving credit.

7.6.8. The overall aim is for the car club to become self-financing, which will benefit residents of Proposed Development and wider local community.

HOME WORKING AND SHOPPING

7.6.9. All dwellings will be fitted with broadband facilities providing the opportunity for residents to work and shop from home, therefore reducing the need for car-based travel to be undertaken.

7.7 LONG-TERM MODAL SHIFT

7.7.1. Initial modal shift is to be promoted by the measures contained within this Travel Plan, but is limited by the current wider transport network and facilities in the area. When there are active travel improvements or public transport improvements, the TPC should inform the residents of these changes.

7.7.2. A phased school bus service is planned for the development of the BEW Parcel SC1, as demand increases in line with the stages of the construction. Further discussions should be had with the local bus operators to incorporate the development of both sites into the service.

7.7.3. The East-West Link road will provide a key pedestrian and cycle connection between the Proposed Development and local facilities within BEW Parcel SC1, Barnham village centre and railway station.

7.7.4. As the development progresses, building upon the measures which have proved successful will aid with a continuous shift away from private vehicles. There is also potential to implement additional measures ensuring that the development upholds its commitment to sustainable travel.

7.7.5. If the mode shift target is not achieved, then additional 'penalty' measures should be implemented, with discussions being held with WSCC prior to the addition of any new measures in order to ensure their appropriateness. This could include enhancing existing measures such as greater discounts on

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bus tickets, car clubs, and cycle equipment, as well as any other new measures that are deemed appropriate.

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8 MONITORING AND REVIEW

8.1 INTRODUCTION

8.1.1. A programme of monitoring and review will be implemented to generate information by which the success of the Full Travel Plans will be evaluated. This will help to establish whether the agreed objectives and targets are being met. Monitoring and review will be the responsibility of TPC although the TPC may choose to appoint a third-party / consultant to undertake this process.

8.2 MONITORING AND REVIEW

8.2.1. The TPC will be responsible for monitoring the Full Travel Plans and for reporting any findings and updates to WSCC / ADC as appropriate.

8.2.2. Monitoring will include reporting the implementation of the Travel Plan Measures to WSCC / ADC. This is proportionate to the nature of the development and the objectives and targets of the Travel Plan. It will be the Cala's responsibility to report the following to WSCC / ADC within three months of completion of each item or on an annual basis where completion is phased:

- The completion and availability of the secured cycle parking provision;
- The completion and availability of the secured car parking provision;
- The completion and availability of broadband access in homes;
- The availability of a personalised journey planning service;
- The availability of a car club scheme;
- The dissemination of the Sustainable Travel Welcome Pack to occupants of each dwelling; and
- The provision and population of a Sustainable Travel Information Notice Board.

8.2.3. Travel surveys of residents are proposed to monitor progress against the mode share targets which have been set for the development. The scope of the surveys to be undertaken are as follows:

- Initial surveys to be undertaken one year after first occupation; and
- Full surveys will then be undertaken every other year until the fifth year following first occupation or longer if the development is not fully complete in that time-frame. In between full surveys, snapshot surveys will be conducted.

Table 8-1 - Monitoring Timetable

	Baseline (year 1)	Year 2	Year 3	Year 4	Year 5
Level of Report	This will be submitted one year after occupation and consist of the baseline survey results found in the updated Full Travel Plan and a monitoring report.	Snapshot Survey	Full Survey and Monitoring Report	Snapshot Survey	Full Survey and Monitoring Report

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8.2.4. The results of the travel surveys shall be reported to WSCC / ADC. Should the results demonstrate that adequate progress is not being made towards meeting the agreed targets, further measures will be considered to ensure that the targets are appropriately satisfied.

REVIEW

8.2.5. The TPC would report the results of the baseline / monitoring surveys to WSC / ADC within three months of receipt of the results. The approving authority, relevant stakeholders and the TPC would then review the results and, if appropriate, revise targets accordingly. The results of the travel surveys and any revised targets would then need to be included in subsequent revisions of the Full Travel Plan (or through Monitoring Reports), as appropriate.

8.3 ACTION PLAN

8.3.1. To enable specific actions to be monitored and tracked, an Action Plan would be provided as part of the Full Travel Plans, containing measurable outputs. An example of an Action Plan is given below.

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Table 8-2 – Example of Action Plan and Target Dates

Action	Target date	Funding	Responsibility
Appointment of TPC(s)	Prior to first occupation of each use	Cala	Cala
Agree Travel Plan Objectives with West Sussex County Council	Within three months of the commencement of the first phase of development	Cala	TPC
Agree Travel Plan Measures and Sustainable Travel Welcome Pack with West Sussex County Council	Within three months of the commencement of the first phase of development	Cala	Cala
Provisions of cycle parking secured through planning	Prior to first occupation or phased with progress of the development	Cala	Cala
Provision of car parking secured through planning	Prior to first occupation or phased with progress of the development	Cala	Cala
Availability of a car club / hiring scheme	Prior to first occupation of each dwelling		Co-wheels have agreed to provide a car club vehicle on-site
Availability of broadband access in homes	Prior to first occupation of each dwelling	Cala	Cala
Availability of a personalised journey planning service	Within three months of the commencement of the first phase of development	Cala	TPC
Promoting and issuing Co-wheels Car club incentives	At first occupation of each dwelling or within three months of the commencement of the first phase of development	Cala	TPC
Distribution of Sustainable Travel Welcome Packs	Upon first occupation of each use	Cala	TPC
Creation of sustainable travel website and noticeboards	Prior to first occupation	Cala	TPC
Baseline Surveys – TRICS compliant baseline surveys to be undertaken.	Within 6 months of 50% occupation of the dwellings and within 6 months of occupation of other uses.	Cala	TPC

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Action	Target date	Funding	Responsibility
Monitoring – Monitoring Report / Updated travel plan to be submitted to WSCC / ADC within three months of receiving the monitoring surveys results.	Within 3 months of each monitoring survey results being received	Cala	TPC

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9 SUMMARY AND CONCLUSIONS

9.1.1. WSP has commissioned by Cala Homes to provide transportation advice in support of the delivery of a residential-led development at the Land East of Westergate (the 'Site').

9.1.2. This Travel Plan outlines opportunities for encouraging future users of the Proposed Development to use sustainable travel modes. It is envisaged that this FTP will be taken as the basis for the production of a Full Travel Plan.

9.1.3. In summary, this FTP demonstrates:

- Cala Homes is committed to maximising sustainable travel;
- The Site is well located to facilitate travel by non-car modes;
- The accessibility credentials of the Site by non-car modes will be enhanced as part of the Proposed Development and / or subsequent reserved matters application through the provision of various 'hard' and 'soft' measures;
- It is projected that a significant proportion of trips will be undertaken by non-car modes, which will be further enhanced through the travel planning strategy;
- A framework strategy has been set out herein for the production of Full Travel Plan, detailing the likely management structure for these documents; and,
- A number of potential measures, monitoring strategies, marketing strategies, and mechanisms to secure and fund the Full Travel Plans have been identified. These matters would be subject to further discussion with WSCC / ADC and would be fixed as part of the Full Travel Plan for the site.

9.1.4. In conclusion, it is considered that the proposed travel planning strategy for the Site accords with relevant policy and best-practice guidance.

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2 Grosvenor Square
Southampton, Hampshire
SO15 2BE

wsp.com

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Appendix F

A27 Junction Capacity Assessment Outputs

Confidential

Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.0.1.1519

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Filename: 1 AM.j10
Path: \\uksou1ser01\Projects\70013258 - Land at Westergate -Cala Homes\D Design and Analysis\Transport\2022 TA\01092023_Updated Files\Junction Models_Updated\Revised Geometry
Report generation date: 13/06/2024 09:45:41

»A27 - A29 - 2019 Base, AM
»A27 - A29 - 2031 DM Baseline, AM
»A27 - A29 - 2031 DS Baseline + Dev, AM
»A27 - A29 - 2031 DS Base + Dev + BEW, AM
»A27 - A29 - 2038 DS Baseline + Dev + BEW, AM

Summary of junction performance

	AM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
A27 - A29 - 2019 Base					
A - A29 (East)	D1	1.5	7.19	0.58	A
B - A27 (South)		5.6	10.85	0.85	B
C - A27 (West)		2.6	4.81	0.70	A
A27 - A29 - 2031 DM Baseline					
A - A29 (East)	D2	1.6	7.60	0.59	A
B - A27 (South)		6.5	12.41	0.86	B
C - A27 (West)		2.3	4.51	0.68	A
A27 - A29 - 2031 DS Baseline + Dev					
A - A29 (East)	D3	1.6	7.46	0.59	A
B - A27 (South)		6.6	12.64	0.87	B
C - A27 (West)		2.4	4.60	0.69	A
A27 - A29 - 2031 DS Base + Dev + BEW					
A - A29 (East)	D4	1.6	7.62	0.58	A
B - A27 (South)		9.3	17.17	0.91	C
C - A27 (West)		2.5	4.86	0.70	A
A27 - A29 - 2038 DS Baseline + Dev + BEW					
A - A29 (East)	D5	1.9	9.36	0.64	A
B - A27 (South)		37.0	57.48	1.00	F
C - A27 (West)		3.7	6.86	0.78	A

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

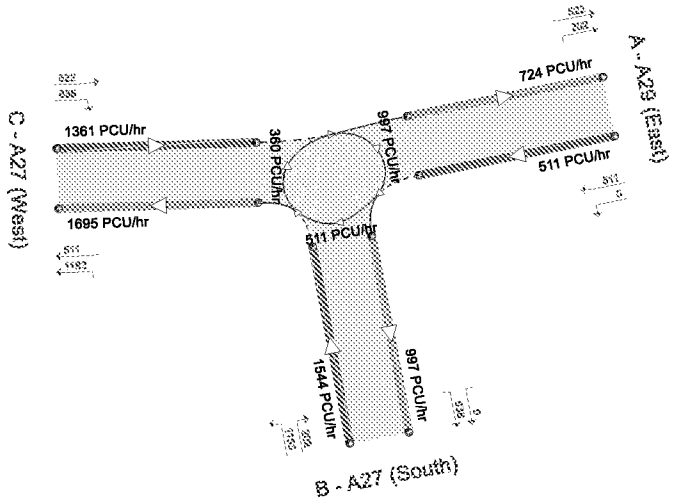
File summary

File Description

Title	A27 - A29
Location	Westergate
Site number	
Date	30/08/2016
Version	
Status	Existing Layout
Identifier	
Client	
Jobnumber	
Enumerator	UKPXM046
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed	Show lane queues	Show all PICADY	Calculate residual capacity	RFC Threshold	Average Delay	Queue threshold (PCU)	Use iterations	Max number of iterations

		queueing delay	in feet / metres	stream intercepts			threshold (s)		with HCM roundabouts	for roundabouts
5.75						0.85	36.00	20.00		500

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	2019 Base	AM	ONE HOUR	07:15	08:45	15	✓
D2	2031 DM Baseline	AM	ONE HOUR	07:15	08:45	15	✓
D3	2031 DS Baseline + Dev	AM	ONE HOUR	07:15	08:45	15	✓
D4	2031 DS Base + Dev + BEW	AM	ONE HOUR	07:15	08:45	15	✓
D5	2038 DS Baseline + Dev + BEW	AM	ONE HOUR	07:15	08:45	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	A27 - A29	✓	100.000	100.000

A27 - A29 - 2019 Base, 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	(untitled)	Standard Roundabout		A, B, C	7.70	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.70	A

Arms

Arms

Arm	Name	Description	No give-way line
A	A29 (East)		
B	A27 (South)		
C	A27 (West)		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A - A29 (East)	3.48	9.65	27.9	36.2	45.2	21.0		
B - A27 (South)	8.03	11.23	13.6	20.5	45.2	39.0		
C - A27 (West)	9.66	9.66	0.0	37.5	45.2	26.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - A29 (East)	0.753	2263
B - A27 (South)	0.852	2897
C - A27 (West)	0.898	3034

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	2019 Base	AM	ONE HOUR	07:15	08:45	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	Average Demand (PCU/hr)	Scaling Factor (%)
A - A29 (East)		ONE HOUR	✓	669	100.000
B - A27 (South)		ONE HOUR	✓	1737	100.000
C - A27 (West)		ONE HOUR	✓	1777	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A29 (East)	B - A27 (South)	C - A27 (West)
From	A - A29 (East)	0	2	667
	B - A27 (South)	169	84	1483
	C - A27 (West)	664	1101	12

Proportions

		To		
		A - A29 (East)	B - A27 (South)	C - A27 (West)
From	A - A29 (East)	0.00	0.00	1.00
	B - A27 (South)	0.10	0.05	0.85
	C - A27 (West)	0.37	0.62	0.01

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A29 (East)	B - A27 (South)	C - A27 (West)
From	A - A29 (East)	0	0	7
	B - A27 (South)	4	5	6
	C - A27 (West)	8	12	20

Average PCU Per Veh

		To		
		A - A29 (East)	B - A27 (South)	C - A27 (West)
From	A - A29 (East)	1.000	1.000	1.070
	B - A27 (South)	1.040	1.050	1.060
	C - A27 (West)	1.080	1.120	1.200

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:15-07:30	A - A29 (East)	503	503
	B - A27 (South)	1308	1308
	C - A27 (West)	1338	1338

07:30-07:45	A - A29 (East)	601	601
	B - A27 (South)	1562	1562
	C - A27 (West)	1598	1598
07:45-08:00	A - A29 (East)	736	736
	B - A27 (South)	1912	1912
	C - A27 (West)	1957	1957
08:00-08:15	A - A29 (East)	736	736
	B - A27 (South)	1912	1912
	C - A27 (West)	1957	1957
08:15-08:30	A - A29 (East)	601	601
	B - A27 (South)	1562	1562
	C - A27 (West)	1598	1598
08:30-08:45	A - A29 (East)	503	503
	B - A27 (South)	1308	1308
	C - A27 (West)	1338	1338

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A29 (East)	0.58	7.19	1.5	A	614	920
B - A27 (South)	0.85	10.85	5.6	B	1594	2391
C - A27 (West)	0.70	4.81	2.6	A	1631	2446

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	503	126	899	1587	0.317	501	626	0.0	0.5	3.542	A
B - A27 (South)	1308	327	509	2463	0.531	1303	891	0.0	1.2	3.268	A
C - A27 (West)	1338	335	190	2864	0.467	1334	1621	0.0	1.0	2.595	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	601	150	1075	1454	0.413	600	749	0.5	0.7	4.502	A
B - A27 (South)	1562	390	609	2378	0.657	1558	1066	1.2	2.0	4.626	A
C - A27 (West)	1598	399	228	2830	0.565	1596	1940	1.0	1.4	3.220	A

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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	736	184	1315	1274	0.578	733	915	0.7	1.4	7.088	A
B - A27 (South)	1912	478	744	2263	0.845	1899	1304	2.0	5.4	10.106	B
C - A27 (West)	1957	489	277	2785	0.703	1952	2366	1.4	2.6	4.749	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	736	184	1318	1271	0.579	736	918	1.4	1.5	7.192	A
B - A27 (South)	1912	478	747	2260	0.846	1912	1307	5.4	5.6	10.848	B
C - A27 (West)	1957	489	279	2784	0.703	1957	2379	2.6	2.6	4.809	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	601	150	1080	1451	0.414	604	753	1.5	0.8	4.564	A
B - A27 (South)	1562	390	613	2375	0.658	1576	1071	5.6	2.1	4.847	A
C - A27 (West)	1598	399	230	2828	0.565	1602	1958	2.6	1.4	3.260	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	503	126	903	1584	0.318	504	629	0.8	0.5	3.569	A
B - A27 (South)	1308	327	512	2461	0.531	1311	895	2.1	1.2	3.320	A
C - A27 (West)	1338	335	191	2862	0.467	1340	1631	1.4	1.0	2.615	A

A27 - A29 - 2031 DM Baseline, 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	(untitled)	Standard Roundabout		A, B, C	8.37	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS

Left	Normal/unknown	8.37	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
D2	2031 DM Baseline	AM	ONE HOUR	07:15	08:45	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	Average Demand (PCU/hr)	Scaling Factor (%)
A - A29 (East)		ONE HOUR	✓	685	100.000
B - A27 (South)		ONE HOUR	✓	1770	100.000
C - A27 (West)		ONE HOUR	✓	1711	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A29 (East)	B - A27 (South)	C - A27 (West)
From	A - A29 (East)	0	0	685
	B - A27 (South)	151	134	1485
	C - A27 (West)	664	1047	0

Proportions

		To		
		A - A29 (East)	B - A27 (South)	C - A27 (West)
From	A - A29 (East)	0.00	0.00	1.00
	B - A27 (South)	0.09	0.08	0.84
	C - A27 (West)	0.39	0.61	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A29 (East)	B - A27 (South)	C - A27 (West)
From	A - A29 (East)	0	0	12
	B - A27 (South)	5	6	7
	C - A27 (West)	7	10	0

Average PCU Per Veh

		To		
		A - A29 (East)	B - A27 (South)	C - A27 (West)
From	A - A29 (East)	1.000	1.000	1.120
	B - A27 (South)	1.050	1.060	1.070
	C - A27 (West)	1.070	1.100	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:15-07:30	A - A29 (East)	516	516
	B - A27 (South)	1333	1333
	C - A27 (West)	1288	1288
07:30-07:45	A - A29 (East)	616	616
	B - A27 (South)	1591	1591
	C - A27 (West)	1538	1538
07:45-08:00	A - A29 (East)	754	754

	B - A27 (South)	1949	1949
	C - A27 (West)	1884	1884
08:00-08:15	A - A29 (East)	754	754
	B - A27 (South)	1949	1949
	C - A27 (West)	1884	1884
08:15-08:30	A - A29 (East)	616	616
	B - A27 (South)	1591	1591
	C - A27 (West)	1538	1538
08:30-08:45	A - A29 (East)	516	516
	B - A27 (South)	1333	1333
	C - A27 (West)	1288	1288

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A29 (East)	0.59	7.60	1.6	A	629	943
B - A27 (South)	0.85	12.41	6.5	B	1624	2436
C - A27 (West)	0.68	4.51	2.3	A	1570	2355

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	516	129	887	1596	0.323	514	612	0.0	0.5	3.719	A
B - A27 (South)	1333	333	514	2459	0.542	1328	887	0.0	1.3	3.381	A
C - A27 (West)	1288	322	214	2842	0.453	1285	1627	0.0	0.9	2.510	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	616	154	1060	1465	0.420	615	732	0.5	0.8	4.735	A
B - A27 (South)	1591	398	615	2373	0.671	1588	1060	1.3	2.1	4.871	A
C - A27 (West)	1538	385	256	2805	0.548	1536	1947	0.9	1.3	3.084	A

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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	754	189	1297	1287	0.586	751	894	0.8	1.6	7.478	A

B - A27 (South)	1949	487	751	2257	0.86	1933	1297	2.1	6.2	11.333	B
C - A27 (West)	1884	471	311	2755	0.684	1880	2373	1.3	2.3	4.456	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	754	189	1300	1285	0.587	754	897	1.6	1.6	7.596	A
B - A27 (South)	1949	487	754	2254	0.865	1948	1300	6.2	6.5	12.413	B
C - A27 (West)	1884	471	314	2753	0.684	1884	2388	2.3	2.3	4.508	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	616	154	1065	1461	0.421	619	736	1.6	0.8	4.801	A
B - A27 (South)	1591	398	619	2369	0.672	1608	1065	6.5	2.2	5.159	A
C - A27 (West)	1538	385	259	2802	0.549	1542	1968	2.3	1.3	3.119	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	516	129	890	1593	0.324	517	615	0.8	0.5	3.749	A
B - A27 (South)	1333	333	517	2456	0.542	1336	890	2.2	1.3	3.444	A
C - A27 (West)	1288	322	215	2841	0.453	1290	1638	1.3	0.9	2.527	A

A27 - A29 - 2031 DS Baseline + Dev, 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	(untitled)	Standard Roundabout		A, B, C	8.48	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	8.48	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
D3	2031 DS Baseline + Dev	AM	ONE HOUR	07:15	08:45	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	Average Demand (PCU/hr)	Scaling Factor (%)
A - A29 (East)		ONE HOUR	✓	687	100.000
B - A27 (South)		ONE HOUR	✓	1774	100.000
C - A27 (West)		ONE HOUR	✓	1725	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A29 (East)	B - A27 (South)	C - A27 (West)
From	A - A29 (East)	0	0	687
	B - A27 (South)	151	134	1489
	C - A27 (West)	669	1056	0

Proportions

		To		
		A - A29 (East)	B - A27 (South)	C - A27 (West)
From	A - A29 (East)	0.00	0.00	1.00
	B - A27 (South)	0.09	0.08	0.84
	C - A27 (West)	0.39	0.61	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A29 (East)	B - A27 (South)	C - A27 (West)
From	A - A29 (East)	0	0	8
	B - A27 (South)	4	5	7
	C - A27 (West)	8	10	0

Average PCU Per Veh

		To		
		A - A29 (East)	B - A27 (South)	C - A27 (West)
From	A - A29 (East)	1.000	1.000	1.080
	B - A27 (South)	1.040	1.050	1.070
	C - A27 (West)	1.080	1.100	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:15-07:30	A - A29 (East)	517	517
	B - A27 (South)	1336	1336
	C - A27 (West)	1299	1299
07:30-07:45	A - A29 (East)	618	618
	B - A27 (South)	1595	1595
	C - A27 (West)	1551	1551
07:45-08:00	A - A29 (East)	756	756
	B - A27 (South)	1953	1953
	C - A27 (West)	1899	1899
08:00-08:15	A - A29 (East)	756	756
	B - A27 (South)	1953	1953
	C - A27 (West)	1899	1899

08:15-08:30	A - A29 (East)	618	618
	B - A27 (South)	1595	1595
	C - A27 (West)	1551	1551
08:30-08:45	A - A29 (East)	517	517
	B - A27 (South)	1336	1336
	C - A27 (West)	1299	1299

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A29 (East)	0.59	7.46	1.6	A	630	946
B - A27 (South)	0.87	12.64	6.6	B	1628	2442
C - A27 (West)	0.69	4.60	2.4	A	1583	2374

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	517	129	893	1591	0.325	515	615	0.0	0.5	3.608	A
B - A27 (South)	1336	334	515	2458	0.543	1331	893	0.0	1.3	3.388	A
C - A27 (West)	1299	325	214	2842	0.457	1295	1632	0.0	0.9	2.533	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	618	154	1068	1459	0.423	617	736	0.5	0.8	4.609	A
B - A27 (South)	1595	399	617	2371	0.673	1591	1068	1.3	2.2	4.895	A
C - A27 (West)	1551	388	256	2805	0.553	1549	1952	0.9	1.3	3.127	A

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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	756	189	1306	1280	0.591	753	900	0.8	1.5	7.343	A
B - A27 (South)	1953	488	753	2255	0.866	1937	1306	2.2	6.3	11.505	B
C - A27 (West)	1899	475	311	2755	0.689	1895	2379	1.3	2.4	4.551	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	756	189	1310	1277	0.592	756	903	1.5	1.6	7.461	A
B - A27 (South)	1953	488	756	2252	0.867	1952	1310	6.3	6.6	12.642	B
C - A27 (West)	1899	475	314	2753	0.690	1899	2395	2.4	2.4	4.604	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	618	154	1074	1455	0.424	621	740	1.6	0.8	4.676	A
B - A27 (South)	1595	399	621	2368	0.673	1612	1074	6.6	2.2	5.193	A
C - A27 (West)	1551	388	259	2802	0.553	1555	1974	2.4	1.4	3.163	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	517	129	897	1588	0.326	518	618	0.8	0.5	3.637	A
B - A27 (South)	1336	334	518	2455	0.544	1339	897	2.2	1.3	3.449	A
C - A27 (West)	1299	325	215	2841	0.457	1300	1643	1.4	0.9	2.556	A

A27 - A29 - 2031 DS Base + Dev + BEW, 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	(untitled)	Standard Roundabout		A, B, C	10.73	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	10.73	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

D4	2031 DS Base + Dev + BEW	AM	ONE HOUR	07:15	08:45	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	Average Demand (PCU/hr)	Scaling Factor (%)
A - A29 (East)		ONE HOUR	✓	674	100.000
B - A27 (South)		ONE HOUR	✓	1862	100.000
C - A27 (West)		ONE HOUR	✓	1683	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A29 (East)	**B - A27 (South)**	**C - A27 (West)**
From	**A - A29 (East)**	0	0	674
	B - A27 (South)	211	169	1482
	C - A27 (West)	654	1029	0

Proportions

		To		
		A - A29 (East)	**B - A27 (South)**	**C - A27 (West)**
From	**A - A29 (East)**	0.00	0.00	1.00
	B - A27 (South)	0.11	0.09	0.80
	C - A27 (West)	0.39	0.61	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A29 (East)	**B - A27 (South)**	**C - A27 (West)**
From	**A - A29 (East)**	0	0	12
	B - A27 (South)	5	6	7
	C - A27 (West)	7	10	0

Average PCU Per Veh

		To		
		A - A29 (East)	**B - A27 (South)**	**C - A27 (West)**
From	**A - A29 (East)**	1.000	1.000	1.120
	B - A27 (South)	1.050	1.060	1.070
	C - A27 (West)	1.070	1.100	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:15-07:30	**A - A29 (East)**	507	507
	B - A27 (South)	1402	1402
	C - A27 (West)	1267	1267
07:30-07:45	**A - A29 (East)**	606	606
	B - A27 (South)	1674	1674
	C - A27 (West)	1513	1513
07:45-08:00	**A - A29 (East)**	742	742
	B - A27 (South)	2050	2050
	C - A27 (West)	1853	1853
08:00-08:15	**A - A29 (East)**	742	742
	B - A27 (South)	2050	2050
	C - A27 (West)	1853	1853
08:15-08:30	**A - A29 (East)**	606	606
	B - A27 (South)	1674	1674
	C - A27 (West)	1513	1513

08:30-08:45	A - A29 (East)	507	507
	B - A27 (South)	1402	1402
	C - A27 (West)	1267	1267

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A29 (East)	0.58	7.62	1.6	A	618	928
B - A27 (South)	0.91	17.17	9.3	C	1709	2563
C - A27 (West)	0.70	4.86	2.5	A	1544	2317

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	507	127	899	1587	0.320	505	649	0.0	0.5	3.723	A
B - A27 (South)	1402	350	505	2466	0.568	1396	899	0.0	1.4	3.570	A
C - A27 (West)	1267	317	285	2778	0.456	1263	1617	0.0	0.9	2.579	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	606	151	1076	1454	0.417	605	776	0.5	0.8	4.743	A
B - A27 (South)	1674	418	605	2381	0.703	1670	1076	1.4	2.5	5.361	A
C - A27 (West)	1513	378	341	2728	0.555	1511	1934	0.9	1.3	3.214	A

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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	742	186	1314	1274	0.582	739	948	0.8	1.5	7.493	A
B - A27 (South)	2050	513	739	2267	0.904	2026	1314	2.5	8.6	14.640	B
C - A27 (West)	1853	463	413	2663	0.696	1849	2351	1.3	2.4	4.784	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service

A - A29 (East)	742	186	1319	1271	0.584	742	952	1.5	1.6	7.623	A
B - A27 (South)	2050	513	742	2265	0.905	2047	1319	8.6	9.3	17.171	C
C - A27 (West)	1853	463	418	2659	0.697	1853	2371	2.4	2.5	4.857	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	606	151	1082	1449	0.418	609	782	1.6	0.8	4.818	A
B - A27 (South)	1674	418	609	2378	0.704	1701	1082	9.3	2.6	5.888	A
C - A27 (West)	1513	378	347	2723	0.556	1517	1962	2.5	1.4	3.263	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	507	127	903	1583	0.320	509	652	0.8	0.5	3.754	A
B - A27 (South)	1402	350	509	2463	0.569	1406	903	2.6	1.4	3.648	A
C - A27 (West)	1267	317	287	2777	0.456	1269	1628	1.4	0.9	2.602	A

A27 - A29 - 2038 DS Baseline + Dev + BEW, 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	(untitled)	Standard Roundabout		A, B, C	30.13	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	30.13	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
D5	2038 DS Baseline + Dev + BEW	AM	ONE HOUR	07:15	08:45	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	Average Demand (PCU/hr)	Scaling Factor (%)
A - A29 (East)		ONE HOUR	✓	682	100.000
B - A27 (South)		ONE HOUR	✓	2060	100.000
C - A27 (West)		ONE HOUR	✓	1813	100.000

Origin Destination Data

Demand (PCU/hr)

		To		
		A - A29 (East)	B - A27 (South)	C - A27 (West)
From	A - A29 (East)	0	0	682
	B - A27 (South)	269	212	1579
	C - A27 (West)	696	1117	0

Proportions

		To		
		A - A29 (East)	B - A27 (South)	C - A27 (West)
From	A - A29 (East)	0.00	0.00	1.00
	B - A27 (South)	0.13	0.10	0.77
	C - A27 (West)	0.38	0.62	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A29 (East)	B - A27 (South)	C - A27 (West)
From	A - A29 (East)	0	0	8
	B - A27 (South)	4	5	7
	C - A27 (West)	8	10	0

Average PCU Per Veh

		To		
		A - A29 (East)	B - A27 (South)	C - A27 (West)
From	A - A29 (East)	1.000	1.000	1.080
	B - A27 (South)	1.040	1.050	1.070
	C - A27 (West)	1.080	1.100	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:15-07:30	A - A29 (East)	513	513
	B - A27 (South)	1551	1551
	C - A27 (West)	1365	1365
07:30-07:45	A - A29 (East)	613	613
	B - A27 (South)	1852	1852
	C - A27 (West)	1630	1630
07:45-08:00	A - A29 (East)	751	751
	B - A27 (South)	2268	2268
	C - A27 (West)	1996	1996
08:00-08:15	A - A29 (East)	751	751
	B - A27 (South)	2268	2268
	C - A27 (West)	1996	1996
08:15-08:30	A - A29 (East)	613	613
	B - A27 (South)	1852	1852
	C - A27 (West)	1630	1630
08:30-08:45	A - A29 (East)	513	513
	B - A27 (South)	1551	1551
	C - A27 (West)	1365	1365

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A29 (East)	0.64	9.36	1.9	A	626	939
B - A27 (South)	1.00	57.46	37.0	F	1890	2835
C - A27 (West)	0.78	6.86	3.7	A	1664	2495

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	513	128	997	1513	0.339	511	724	0.0	0.6	3.873	A
B - A27 (South)	1551	388	511	2461	0.630	1544	997	0.0	1.8	4.143	A
C - A27 (West)	1365	341	360	2711	0.504	1361	1695	0.0	1.1	2.903	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	613	153	1192	1366	0.449	612	866	0.6	0.9	5.148	A
B - A27 (South)	1852	463	612	2375	0.780	1845	1192	1.8	3.6	7.114	A
C - A27 (West)	1630	407	431	2648	0.616	1627	2026	1.1	1.7	3.845	A

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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	751	188	1450	1172	0.641	747	1048	0.9	1.9	9.057	A
B - A27 (South)	2268	567	747	2260	1.003	2181	1450	3.6	25.4	32.487	D
C - A27 (West)	1996	499	509	2577	0.775	1989	2419	1.7	3.6	6.597	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	751	188	1458	1166	0.644	751	1056	1.9	1.9	9.360	A
B - A27 (South)	2268	567	751	2257	1.005	2222	1458	25.4	37.0	57.479	F
C - A27 (West)	1996	499	519	2568	0.777	1996	2454	3.6	3.7	6.856	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	613	153	1213	1350	0.454	617	888	1.9	0.9	5.333	A
B - A27 (South)	1852	463	617	2371	0.781	1984	1213	37.0	4.0	13.418	B
C - A27 (West)	1630	407	463	2618	0.622	1638	2138	3.7	1.8	4.039	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	513	128	1003	1508	0.340	515	729	0.9	0.6	3.918	A
B - A27 (South)	1551	388	515	2458	0.631	1559	1003	4.0	1.8	4.302	A
C - A27 (West)	1365	341	364	2707	0.504	1368	1710	1.8	1.1	2.943	A

Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.0.1.1519
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Filename: 1 PM.j10
Path: \\uksou1ser01\Projects\70013258 - Land at Westergate -Cala Homes\D Design and Analysis\Transport\2022 TA\01092023_Updated Files\Junction Models_Updated\Revised Geometry
Report generation date: 13/06/2024 09:51:01

»A27 - A29 - 2019 Base, PM
»A27 - A29 - 2031 DM Baseline, PM
»A27 - A29 - 2031 DS Baseline + Dev, PM
»A27 - A29 - 2031 DS Baseline + Dev + BEW, PM
»A27 - A29 - 2038 DS Baseline + Dev + BEW, PM

Summary of junction performance

	PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
A27 - A29 - 2019 Base					
A - A29 (East)	D1	1.7	7.56	0.62	A
B - A27 (South)		1.3	3.80	0.55	A
C - A27 (West)		1.9	3.63	0.65	A
A27 - A29 - 2031 DM Baseline					
A - A29 (East)	D2	6.1	26.60	0.86	D
B - A27 (South)		1.5	4.32	0.57	A
C - A27 (West)		3.9	6.07	0.78	A
A27 - A29 - 2031 DS Baseline + Dev					
A - A29 (East)	D3	6.5	28.34	0.87	D
B - A27 (South)		1.5	4.35	0.58	A
C - A27 (West)		3.9	6.15	0.79	A
A27 - A29 - 2031 DS Baseline + Dev + BEW					
A - A29 (East)	D4	9.4	40.06	0.92	E
B - A27 (South)		1.5	4.37	0.57	A
C - A27 (West)		4.1	6.33	0.79	A
A27 - A29 - 2038 DS Baseline + Dev + BEW					
A - A29 (East)	D5	38.2	133.64	1.06	F
B - A27 (South)		1.8	4.89	0.62	A
C - A27 (West)		5.5	8.10	0.84	A

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

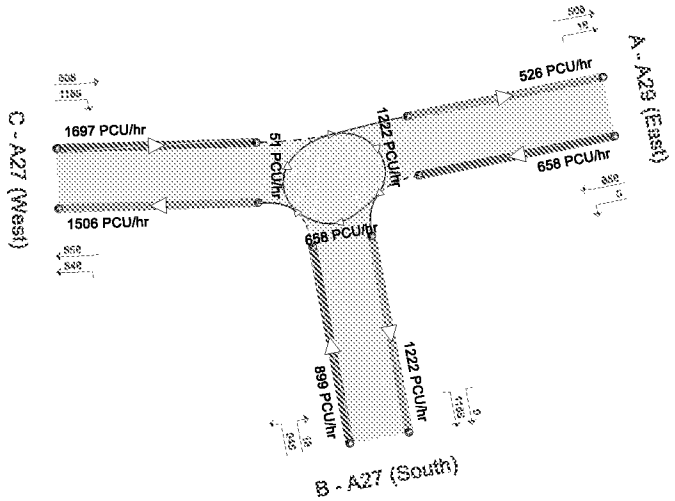
File summary

File Description

Title	A27 - A29
Location	Westergate
Site number	
Date	30/08/2016
Version	
Status	Existing Layout
Identifier	
Client	
Jobnumber	
Enumerator	UKPXM046
Description	

Units

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



Flows show modelled flow through junction (PCU/hr).
Time Segment: 16:00-16:45

The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed	Show lane queues	Show all PICADY	Calculate residual capacity	RFC Threshold	Average Delay	Queue threshold (PCU)	Use iterations	Max number of iterations

		queueing delay	in feet / metres	stream intercepts			threshold (s)		with HCM roundabouts	for roundabouts
5.75						0.85	36.00	20.00		500

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	2019 Base	PM	ONE HOUR	16:30	18:00	15	✓
D2	2031 DM Baseline	PM	ONE HOUR	16:30	18:00	15	✓
D3	2031 DS Baseline + Dev	PM	ONE HOUR	16:30	18:00	15	✓
D4	2031 DS Baseline + Dev + BEW	PM	ONE HOUR	16:30	18:00	15	✓
D5	2038 DS Baseline + Dev + BEW	PM	ONE HOUR	16:30	18:00	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	A27 - A29	✓	100.000	100.000

A27 - A29 - 2019 Base, 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	(untitled)	Standard Roundabout		A, B, C	4.48	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.48	A

Arms

Arms

Arm	Name	Description	No give-way line
A	A29 (East)		
B	A27 (South)		
C	A27 (West)		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A - A29 (East)	3.48	9.65	27.9	36.2	45.2	21.0		
B - A27 (South)	8.03	11.23	13.6	20.5	45.2	39.0		
C - A27 (West)	9.66	9.66	0.0	37.5	45.2	26.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - A29 (East)	0.753	2263
B - A27 (South)	0.852	2897
C - A27 (West)	0.898	3034

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	2019 Base	PM	ONE HOUR	16:30	18:00	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	Average Demand (PCU/hr)	Scaling Factor (%)
A - A29 (East)		ONE HOUR	✓	729	100.000
B - A27 (South)		ONE HOUR	✓	1109	100.000
C - A27 (West)		ONE HOUR	✓	1756	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A29 (East)	B - A27 (South)	C - A27 (West)
From	A - A29 (East)	0	13	716
	B - A27 (South)	50	29	1031
	C - A27 (West)	613	1132	11

Proportions

		To		
		A - A29 (East)	B - A27 (South)	C - A27 (West)
From	A - A29 (East)	0.00	0.02	0.98
	B - A27 (South)	0.04	0.03	0.93
	C - A27 (West)	0.35	0.64	0.01

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A29 (East)	B - A27 (South)	C - A27 (West)
From	A - A29 (East)	0	0	3
	B - A27 (South)	2	7	5
	C - A27 (West)	2	4	10

Average PCU Per Veh

		To		
		A - A29 (East)	B - A27 (South)	C - A27 (West)
From	A - A29 (East)	1.000	1.000	1.030
	B - A27 (South)	1.020	1.070	1.050
	C - A27 (West)	1.020	1.040	1.100

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:30-16:45	A - A29 (East)	549	549
	B - A27 (South)	835	835
	C - A27 (West)	1322	1322

16:45-17:00	A - A29 (East)	655	655
	B - A27 (South)	997	997
	C - A27 (West)	1579	1579
17:00-17:15	A - A29 (East)	802	802
	B - A27 (South)	1221	1221
	C - A27 (West)	1934	1934
17:15-17:30	A - A29 (East)	802	802
	B - A27 (South)	1221	1221
	C - A27 (West)	1934	1934
17:30-17:45	A - A29 (East)	655	655
	B - A27 (South)	997	997
	C - A27 (West)	1579	1579
17:45-18:00	A - A29 (East)	549	549
	B - A27 (South)	835	835
	C - A27 (West)	1322	1322

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A29 (East)	0.62	7.56	1.7	A	669	1003
B - A27 (South)	0.55	3.80	1.3	A	1018	1526
C - A27 (West)	0.65	3.63	1.9	A	1612	2417

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	549	137	880	1601	0.343	546	498	0.0	0.5	3.506	A
B - A27 (South)	835	209	545	2433	0.343	833	882	0.0	0.5	2.357	A
C - A27 (West)	1322	331	59	2982	0.443	1319	1319	0.0	0.8	2.232	A

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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	655	164	1052	1471	0.445	654	595	0.5	0.8	4.528	A
B - A27 (South)	997	249	652	2341	0.426	996	1055	0.5	0.8	2.806	A
C - A27 (West)	1579	395	70	2971	0.531	1577	1578	0.8	1.2	2.666	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	802	201	1288	1294	0.620	799	729	0.8	1.6	7.440	A
B - A27 (South)	1221	305	796	2218	0.550	1219	1291	0.8	1.3	3.771	A
C - A27 (West)	1934	483	86	2957	0.654	1931	1929	1.2	1.9	3.613	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	802	201	1290	1292	0.621	802	730	1.6	1.7	7.558	A
B - A27 (South)	1221	305	799	2216	0.551	1221	1293	1.3	1.3	3.796	A
C - A27 (West)	1934	483	86	2957	0.654	1934	1934	1.9	1.9	3.633	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	655	164	1055	1469	0.446	658	597	1.7	0.8	4.591	A
B - A27 (South)	997	249	656	2338	0.426	999	1058	1.3	0.8	2.826	A
C - A27 (West)	1579	395	70	2971	0.531	1582	1585	1.9	1.2	2.684	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	549	137	883	1599	0.343	550	500	0.8	0.5	3.536	A
B - A27 (South)	835	209	548	2430	0.344	836	885	0.8	0.6	2.370	A
C - A27 (West)	1322	331	59	2981	0.443	1324	1325	1.2	0.8	2.246	A

A27 - A29 - 2031 DM Baseline, 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	(untitled)	Standard Roundabout		A, B, C	9.62	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS

Left	Normal/unknown	9.62	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
D2	2031 DM Baseline	PM	ONE HOUR	16:30	18:00	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	Average Demand (PCU/hr)	Scaling Factor (%)
A - A29 (East)		ONE HOUR	✓	791	100.000
B - A27 (South)		ONE HOUR	✓	1122	100.000
C - A27 (West)		ONE HOUR	✓	2109	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A29 (East)	B - A27 (South)	C - A27 (West)
From	A - A29 (East)	0	0	791
	B - A27 (South)	22	53	1047
	C - A27 (West)	650	1459	0

Proportions

		To		
		A - A29 (East)	B - A27 (South)	C - A27 (West)
From	A - A29 (East)	0.00	0.00	1.00
	B - A27 (South)	0.02	0.05	0.93
	C - A27 (West)	0.31	0.69	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A29 (East)	B - A27 (South)	C - A27 (West)
From	A - A29 (East)	0	0	8
	B - A27 (South)	5	4	11
	C - A27 (West)	12	6	0

Average PCU Per Veh

		To		
		A - A29 (East)	B - A27 (South)	C - A27 (West)
From	A - A29 (East)	1.000	1.000	1.080
	B - A27 (South)	1.050	1.040	1.110
	C - A27 (West)	1.120	1.060	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:30-16:45	A - A29 (East)	596	596
	B - A27 (South)	845	845
	C - A27 (West)	1588	1588
16:45-17:00	A - A29 (East)	711	711
	B - A27 (South)	1009	1009
	C - A27 (West)	1896	1896
17:00-17:15	A - A29 (East)	871	871

	B - A27 (South)	1235	1235
	C - A27 (West)	2322	2322
17:15-17:30	A - A29 (East)	871	871
	B - A27 (South)	1235	1235
	C - A27 (West)	2322	2322
17:30-17:45	A - A29 (East)	711	711
	B - A27 (South)	1009	1009
	C - A27 (West)	1896	1896
17:45-18:00	A - A29 (East)	596	596
	B - A27 (South)	845	845
	C - A27 (West)	1588	1588

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A29 (East)	0.88	26.60	6.1	D	726	1089
B - A27 (South)	0.57	4.32	1.5	A	1030	1544
C - A27 (West)	0.78	6.07	3.9	A	1935	2903

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	596	149	1135	1409	0.423	592	504	0.0	0.8	4.742	A
B - A27 (South)	845	211	592	2392	0.353	842	1135	0.0	0.6	2.564	A
C - A27 (West)	1588	397	56	2984	0.532	1583	1378	0.0	1.2	2.761	A

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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	711	178	1357	1242	0.573	709	603	0.8	1.4	7.259	A
B - A27 (South)	1009	252	709	2293	0.440	1008	1357	0.6	0.9	3.092	A
C - A27 (West)	1896	474	67	2974	0.638	1893	1649	1.2	1.9	3.581	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	871	218	1659	1014	0.858	854	737	1.4	5.6	22.365	C

B - A27 (South)	1235	309	854	2169	0.570	1233	1659	0.9	1.4	4.241	A
C - A27 (West)	2322	581	82	2960	0.784	2314	2005	1.9	3.8	5.935	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	871	218	1665	1010	0.862	869	740	5.6	6.1	26.604	D
B - A27 (South)	1235	309	869	2157	0.573	1235	1665	1.4	1.5	4.318	A
C - A27 (West)	2322	581	83	2960	0.784	2322	2021	3.8	3.9	6.072	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	711	178	1365	1236	0.575	729	607	6.1	1.5	7.944	A
B - A27 (South)	1009	252	729	2275	0.443	1011	1365	1.5	0.9	3.154	A
C - A27 (West)	1896	474	68	2974	0.638	1904	1673	3.9	1.9	3.654	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	596	149	1140	1405	0.424	598	507	1.5	0.8	4.836	A
B - A27 (South)	845	211	598	2387	0.354	846	1140	0.9	0.6	2.583	A
C - A27 (West)	1588	397	57	2984	0.532	1590	1388	1.9	1.2	2.792	A

A27 - A29 - 2031 DS Baseline + Dev, 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	(untitled)	Standard Roundabout		A, B, C	10.02	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	10.02	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	2031 DS Baseline + Dev	PM	ONE HOUR	16:30	18:00	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	Average Demand (PCU/hr)	Scaling Factor (%)
A - A29 (East)		ONE HOUR	✓	797	100.000
B - A27 (South)		ONE HOUR	✓	1131	100.000
C - A27 (West)		ONE HOUR	✓	2118	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A29 (East)	B - A27 (South)	C - A27 (West)
From	A - A29 (East)	0	0	797
	B - A27 (South)	22	51	1058
	C - A27 (West)	653	1465	0

Proportions

		To		
		A - A29 (East)	B - A27 (South)	C - A27 (West)
From	A - A29 (East)	0.00	0.00	1.00
	B - A27 (South)	0.02	0.05	0.94
	C - A27 (West)	0.31	0.69	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A29 (East)	B - A27 (South)	C - A27 (West)
From	A - A29 (East)	0	0	8
	B - A27 (South)	9	2	10
	C - A27 (West)	12	6	0

Average PCU Per Veh

		To		
		A - A29 (East)	B - A27 (South)	C - A27 (West)
From	A - A29 (East)	1.000	1.000	1.080
	B - A27 (South)	1.090	1.020	1.100
	C - A27 (West)	1.120	1.060	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:30-16:45	A - A29 (East)	600	600
	B - A27 (South)	851	851
	C - A27 (West)	1595	1595
16:45-17:00	A - A29 (East)	716	716
	B - A27 (South)	1017	1017
	C - A27 (West)	1904	1904
17:00-17:15	A - A29 (East)	878	878
	B - A27 (South)	1245	1245
	C - A27 (West)	2332	2332
17:15-17:30	A - A29 (East)	878	878
	B - A27 (South)	1245	1245
	C - A27 (West)	2332	2332

17:30-17:45	A - A29 (East)	716	716
	B - A27 (South)	1017	1017
	C - A27 (West)	1904	1904
17:45-18:00	A - A29 (East)	600	600
	B - A27 (South)	851	851
	C - A27 (West)	1595	1595

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A29 (East)	0.87	28.34	6.5	D	731	1097
B - A27 (South)	0.58	4.35	1.5	A	1038	1557
C - A27 (West)	0.79	6.15	3.9	A	1944	2915

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	600	150	1138	1407	0.426	597	507	0.0	0.8	4.782	A
B - A27 (South)	851	213	597	2388	0.357	849	1138	0.0	0.6	2.563	A
C - A27 (West)	1595	399	55	2985	0.534	1590	1391	0.0	1.2	2.772	A

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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	716	179	1361	1239	0.578	714	606	0.8	1.5	7.368	A
B - A27 (South)	1017	254	714	2289	0.444	1016	1361	0.6	0.9	3.096	A
C - A27 (West)	1904	476	66	2976	0.640	1901	1664	1.2	1.9	3.603	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	878	219	1664	1011	0.868	860	741	1.5	5.9	23.426	C
B - A27 (South)	1245	311	860	2164	0.575	1243	1664	0.9	1.5	4.270	A
C - A27 (West)	2332	583	80	2962	0.787	2324	2022	1.9	3.9	6.005	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	878	219	1669	1007	0.871	875	743	5.9	6.5	28.335	D
B - A27 (South)	1245	311	875	2151	0.579	1245	1669	1.5	1.5	4.354	A
C - A27 (West)	2332	583	80	2962	0.787	2332	2040	3.9	3.9	6.148	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	716	179	1368	1233	0.581	736	609	6.5	1.5	8.127	A
B - A27 (South)	1017	254	736	2269	0.448	1019	1368	1.5	0.9	3.161	A
C - A27 (West)	1904	476	66	2975	0.640	1912	1690	3.9	1.9	3.677	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	600	150	1143	1403	0.428	603	509	1.5	0.8	4.877	A
B - A27 (South)	851	213	603	2383	0.357	853	1143	0.9	0.6	2.581	A
C - A27 (West)	1595	399	55	2985	0.534	1597	1400	1.9	1.2	2.803	A

A27 - A29 - 2031 DS Baseline + Dev + BEW, 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	(untitled)	Standard Roundabout		A, B, C	12.63	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	12.63	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

D4	2031 DS Baseline + Dev + BEW	PM	ONE HOUR	16:30	18:00	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	Average Demand (PCU/hr)	Scaling Factor (%)
A - A29 (East)		ONE HOUR	✓	823	100.000
B - A27 (South)		ONE HOUR	✓	1108	100.000
C - A27 (West)		ONE HOUR	✓	2132	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A29 (East)	**B - A27 (South)**	**C - A27 (West)**
From	**A - A29 (East)**	0	0	823
	B - A27 (South)	22	54	1032
	C - A27 (West)	647	1485	0

Proportions

		To		
		A - A29 (East)	**B - A27 (South)**	**C - A27 (West)**
From	**A - A29 (East)**	0.00	0.00	1.00
	B - A27 (South)	0.02	0.05	0.93
	C - A27 (West)	0.30	0.70	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A29 (East)	**B - A27 (South)**	**C - A27 (West)**
From	**A - A29 (East)**	0	0	8
	B - A27 (South)	5	4	11
	C - A27 (West)	12	6	0

Average PCU Per Veh

		To		
		A - A29 (East)	**B - A27 (South)**	**C - A27 (West)**
From	**A - A29 (East)**	1.000	1.000	1.080
	B - A27 (South)	1.050	1.040	1.110
	C - A27 (West)	1.120	1.060	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:30-16:45	**A - A29 (East)**	620	620
	B - A27 (South)	834	834
	C - A27 (West)	1605	1605
16:45-17:00	**A - A29 (East)**	740	740
	B - A27 (South)	996	996
	C - A27 (West)	1917	1917
17:00-17:15	**A - A29 (East)**	906	906
	B - A27 (South)	1220	1220
	C - A27 (West)	2347	2347
17:15-17:30	**A - A29 (East)**	906	906
	B - A27 (South)	1220	1220
	C - A27 (West)	2347	2347
17:30-17:45	**A - A29 (East)**	740	740
	B - A27 (South)	996	996
	C - A27 (West)	1917	1917

17:45-18:00	A - A29 (East)	620	620
	B - A27 (South)	834	834
	C - A27 (West)	1605	1605

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A29 (East)	0.82	40.09	9.4	E	755	1133
B - A27 (South)	0.57	4.37	1.5	A	1017	1525
C - A27 (West)	0.79	6.33	4.1	A	1956	2935

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	620	155	1155	1394	0.445	616	502	0.0	0.9	4.977	A
B - A27 (South)	834	209	616	2372	0.352	832	1155	0.0	0.6	2.580	A
C - A27 (West)	1605	401	57	2983	0.538	1600	1391	0.0	1.2	2.794	A

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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	740	185	1382	1223	0.605	737	601	0.9	1.6	7.941	A
B - A27 (South)	996	249	737	2269	0.439	995	1382	0.6	0.9	3.119	A
C - A27 (West)	1917	479	68	2973	0.645	1914	1664	1.2	1.9	3.653	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	906	227	1689	992	0.913	880	734	1.6	8.0	29.829	D
B - A27 (South)	1220	305	880	2147	0.568	1218	1689	0.9	1.4	4.272	A
C - A27 (West)	2347	587	84	2959	0.793	2339	2015	1.9	4.0	6.171	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service

A - A29 (East)	906	227	1694	988	0.917	901	737	8.0	9.4	40.036	E
B - A27 (South)	1220	305	901	2130	0.573	1220	1694	1.4	1.5	4.373	A
C - A27 (West)	2347	587	84	2959	0.793	2347	2037	4.0	4.1	6.329	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	740	185	1389	1217	0.608	771	604	9.4	1.7	9.285	A
B - A27 (South)	996	249	771	2240	0.445	998	1389	1.5	0.9	3.211	A
C - A27 (West)	1917	479	68	2973	0.645	1925	1701	4.1	2.0	3.732	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	620	155	1161	1390	0.446	623	505	1.7	0.9	5.094	A
B - A27 (South)	834	209	623	2366	0.353	835	1161	0.9	0.6	2.600	A
C - A27 (West)	1605	401	57	2983	0.538	1608	1401	2.0	1.3	2.828	A

A27 - A29 - 2038 DS Baseline + Dev + BEW, 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	(untitled)	Standard Roundabout		A, B, C	32.65	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	32.65	D

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	2038 DS Baseline + Dev + BEW	PM	ONE HOUR	16:30	18:00	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	Average Demand (PCU/hr)	Scaling Factor (%)
A - A29 (East)		ONE HOUR	✓	880	100.000
B - A27 (South)		ONE HOUR	✓	1198	100.000
C - A27 (West)		ONE HOUR	✓	2262	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A29 (East)	B - A27 (South)	C - A27 (West)
From	A - A29 (East)	0	0	880
	B - A27 (South)	24	44	1130
	C - A27 (West)	677	1585	0

Proportions

		To		
		A - A29 (East)	B - A27 (South)	C - A27 (West)
From	A - A29 (East)	0.00	0.00	1.00
	B - A27 (South)	0.02	0.04	0.94
	C - A27 (West)	0.30	0.70	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A29 (East)	B - A27 (South)	C - A27 (West)
From	A - A29 (East)	0	0	8
	B - A27 (South)	9	2	10
	C - A27 (West)	12	6	0

Average PCU Per Veh

		To		
		A - A29 (East)	B - A27 (South)	C - A27 (West)
From	A - A29 (East)	1.000	1.000	1.080
	B - A27 (South)	1.090	1.020	1.100
	C - A27 (West)	1.120	1.060	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:30-16:45	A - A29 (East)	663	663
	B - A27 (South)	902	902
	C - A27 (West)	1703	1703
16:45-17:00	A - A29 (East)	791	791
	B - A27 (South)	1077	1077
	C - A27 (West)	2033	2033
17:00-17:15	A - A29 (East)	969	969
	B - A27 (South)	1319	1319
	C - A27 (West)	2491	2491
17:15-17:30	A - A29 (East)	969	969
	B - A27 (South)	1319	1319
	C - A27 (West)	2491	2491
17:30-17:45	A - A29 (East)	791	791
	B - A27 (South)	1077	1077
	C - A27 (West)	2033	2033
17:45-18:00	A - A29 (East)	663	663
	B - A27 (South)	902	902
	C - A27 (West)	1703	1703

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - A29 (East)	1.08	133.54	39.2	F	808	1211
B - A27 (South)	0.62	4.89	1.8	A	1099	1649
C - A27 (West)	0.84	8.10	5.5	A	2076	3113

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	663	166	1222	1343	0.493	658	526	0.0	1.0	5.643	A
B - A27 (South)	902	225	658	2336	0.386	899	1222	0.0	0.7	2.744	A
C - A27 (West)	1703	426	51	2989	0.570	1697	1506	0.0	1.4	2.990	A

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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	791	198	1462	1163	0.680	786	629	1.0	2.2	10.199	B
B - A27 (South)	1077	269	786	2227	0.484	1076	1462	0.7	1.0	3.427	A
C - A27 (West)	2033	508	61	2980	0.682	2030	1801	1.4	2.3	4.070	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	969	242	1785	920	1.053	885	768	2.2	23.1	85.866	F
B - A27 (South)	1319	330	885	2142	0.616	1316	1785	1.0	1.7	4.761	A
C - A27 (West)	2491	623	75	2967	0.839	2478	2127	2.3	5.3	7.742	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	969	242	1793	914	1.061	905	772	23.1	39.2	133.637	F
B - A27 (South)	1319	330	905	2126	0.620	1319	1793	1.7	1.8	4.889	A

C - A27 (West)	2491	623	75	2967	0.839	2490	2149	5.3	5.5	8.102	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	791	198	1473	1154	0.685	938	634	33.2	2.5	31.702	D
B - A27 (South)	1077	269	938	2098	0.513	1079	1473	1.8	1.2	3.885	A
C - A27 (West)	2033	508	61	2979	0.683	2046	1956	5.5	2.3	4.210	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 side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - A29 (East)	663	166	1229	1338	0.495	668	529	2.5	1.1	5.852	A
B - A27 (South)	902	225	668	2327	0.388	904	1229	1.2	0.7	2.778	A
C - A27 (West)	1703	426	51	2988	0.570	1707	1521	2.3	1.4	3.033	A

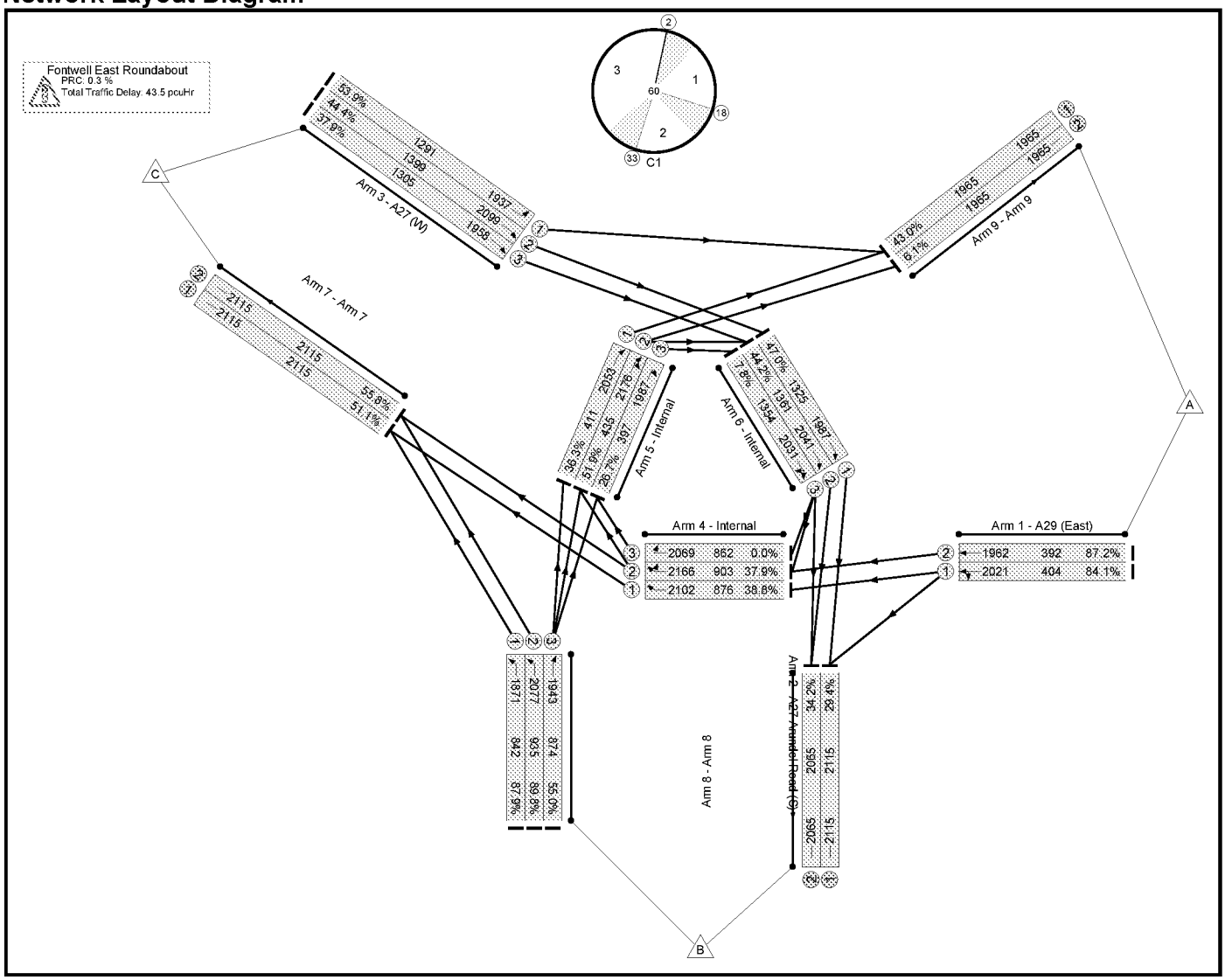
Basic Results Summary

User and Project Details

Project:	
Title:	
Location:	
Additional detail:	
File name:	Fontwell East Roundabout.lsg3x
Author:	
Company:	
Address:	

Scenario 1: '2038 DS Baseline + Dev + BEW AM Peak' (FG1: '2038 DS Baseline + Dev + BEW AM Peak', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**89.8%**	**0**	**0**	**0**	**43.5**	-	-
Fontwell East Roundabout	-	-	-		-	-	-	-	-	-	**89.8%**	**0**	**0**	**0**	**43.5**	-	-
1/1	A29 (East) Ahead Left	U	C		1	11	-	340	2021	404	84.1%	-	-	-	4.6	49.1	7.8
1/2	A29 (East) Ahead	U	C		1	11	-	342	1962	392	87.2%	-	-	-	5.2	55.1	8.5
2/1	A27 Arundel Road (S) Left	U	A		1	26	-	740	1871	842	87.9%	-	-	-	6.5	31.6	14.5
2/2	A27 Arundel Road (S) Left	U	A		1	26	-	839	2077	935	89.8%	-	-	-	7.6	32.6	16.9
2/3	A27 Arundel Road (S) Ahead	U	A		1	26	-	481	1943	874	55.0%	-	-	-	2.2	16.6	6.4
3/1	A27 (W) Left	U	B		1	39	-	696	1937	1291	53.9%	-	-	-	1.6	8.2	6.6
3/2	A27 (W) Ahead	U	B		1	39	-	622	2099	1399	44.4%	-	-	-	1.2	7.1	5.2
3/3	A27 (W) Ahead	U	B		1	39	-	495	1958	1305	37.9%	-	-	-	0.9	6.7	3.9
4/1	Internal Ahead	U	D		1	24	-	340	2102	876	38.8%	-	-	-	2.7	28.7	6.0
4/2	Internal Right Ahead	U	D		1	24	-	342	2166	903	37.9%	-	-	-	2.7	28.3	6.0
4/3	Internal Right	U	D		1	24	-	0	2069	862	0.0%	-	-	-	0.0	0.0	0.0
5/1	Internal Ahead	U	E		1	11	-	149	2053	411	36.3%	-	-	-	1.2	30.1	1.7
5/2	Internal Right Ahead	U	E		1	11	-	226	2176	435	51.9%	-	-	-	2.0	32.1	2.6
5/3	Internal Right	U	E		1	11	-	106	1987	397	26.7%	-	-	-	0.9	29.3	1.2
6/1	Internal Ahead	U	F		1	39	-	622	1987	1325	47.0%	-	-	-	0.7	3.8	2.7
6/2	Internal Ahead	U	F		1	39	-	601	2041	1361	44.2%	-	-	-	0.9	5.4	3.9

Basic Results Summary

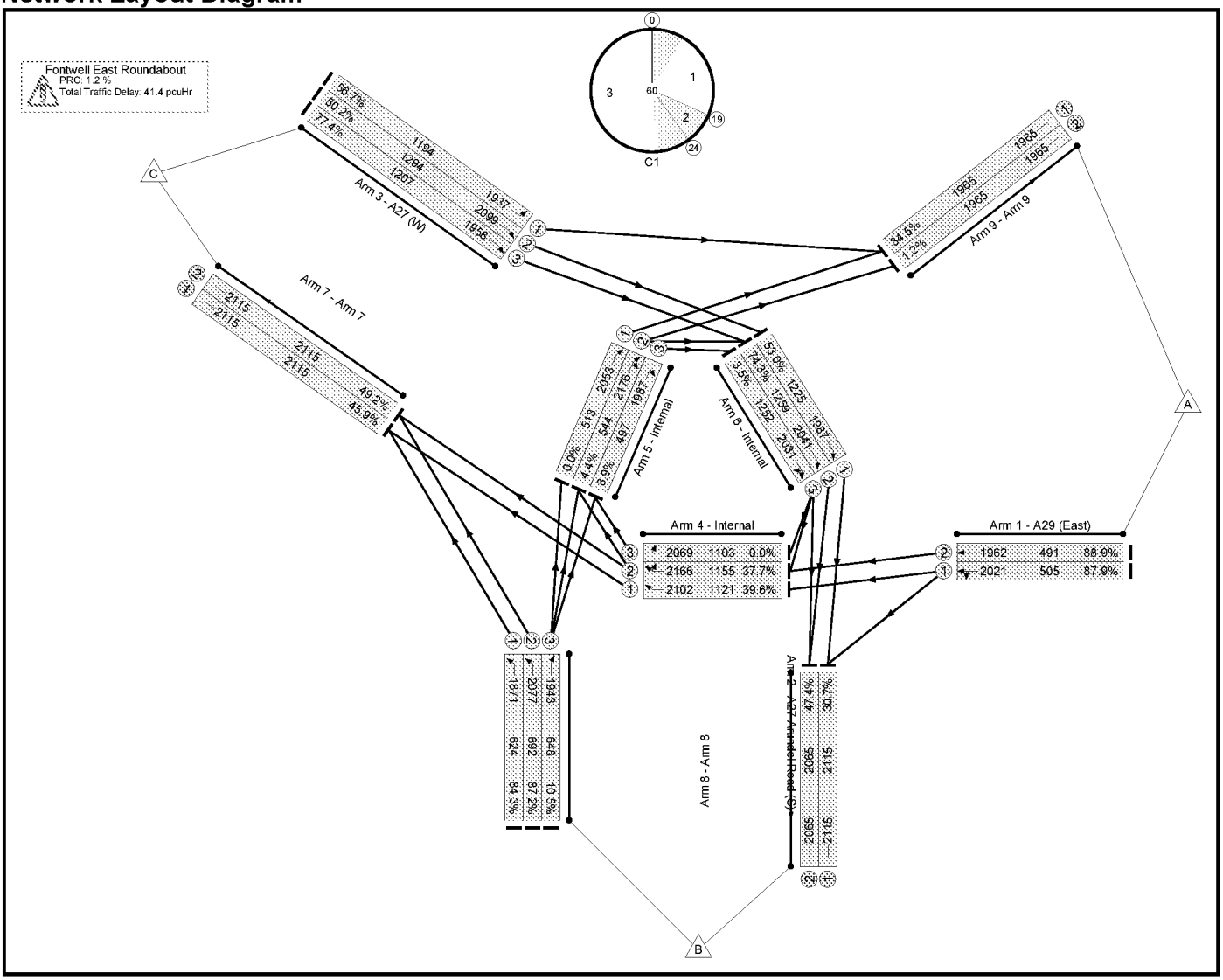
6/3	Internal Right Ahead	U	F		1	39	-	106	2031	1354	7.8%	-	-	-	0.3	10.7	1.8
7/1	Arm 7	U	-		-	-	-	1080	2115	2115	51.1%	-	-	-	0.5	1.7	0.5
7/2	Arm 7	U	-		-	-	-	1181	2115	2115	55.8%	-	-	-	0.6	1.9	2.4
8/1	Arm 8	U	-		-	-	-	622	2115	2115	29.4%	-	-	-	0.2	1.2	0.2
8/2	Arm 8	U	-		-	-	-	707	2065	2065	34.2%	-	-	-	0.4	2.1	7.4
9/1	Arm 9	U	-		-	-	-	845	1965	1965	43.0%	-	-	-	0.4	1.6	0.4
9/2	Arm 9	U	-		-	-	-	120	1965	1965	6.1%	-	-	-	0.0	1.0	0.0

C1 PRC for Signalled Lanes (%): 0.3 Total Delay for Signalled Lanes (pcuHr): 41.31 Cycle Time (s): 60
PRC Over All Lanes (%): 0.3 Total Delay Over All Lanes(pcuHr): 43.48

Basic Results Summary

Scenario 2: '2038 DS Baseline + Dev + BEW PM Peak' (FG2: '2038 DS Baseline + Dev + BEW PM Peak', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-		-	-	-	-	-	-	**88.9%**	**0**	**0**	**0**	**41.4**	-	-
Fontwell East Roundabout	-	-	-		-	-	-	-	-	-	**88.9%**	**0**	**0**	**0**	**41.4**	-	-
1/1	A29 (East) Ahead Left	U	C		1	14	-	444	2021	505	87.9%	-	-	-	5.9	48.2	10.3
1/2	A29 (East) Ahead	U	C		1	14	-	436	1962	491	88.9%	-	-	-	6.2	50.9	10.4
2/1	A27 Arundel Road (S) Left	U	A		1	19	-	526	1871	624	84.3%	-	-	-	5.3	36.1	10.6
2/2	A27 Arundel Road (S) Left	U	A		1	19	-	604	2077	692	87.2%	-	-	-	6.3	37.8	12.6
2/3	A27 Arundel Road (S) Ahead	U	A		1	19	-	68	1943	648	10.5%	-	-	-	0.3	17.0	0.8
3/1	A27 (W) Left	U	B		1	36	-	677	1937	1194	56.7%	-	-	-	1.9	10.3	7.2
3/2	A27 (W) Ahead	U	B		1	36	-	650	2099	1294	50.2%	-	-	-	1.7	9.2	6.5
3/3	A27 (W) Ahead	U	B		1	36	-	935	1958	1207	77.4%	-	-	-	3.9	15.0	13.1
4/1	Internal Ahead	U	D		1	31	-	444	2102	1121	39.6%	-	-	-	2.6	21.0	7.7
4/2	Internal Right Ahead	U	D		1	31	-	436	2166	1155	37.7%	-	-	-	2.5	20.4	7.6
4/3	Internal Right	U	D		1	31	-	0	2069	1103	0.0%	-	-	-	0.0	0.0	0.0
5/1	Internal Ahead	U	E		1	14	-	0	2053	513	0.0%	-	-	-	0.0	0.0	0.0
5/2	Internal Right Ahead	U	E		1	14	-	24	2176	544	4.4%	-	-	-	0.1	10.5	0.1
5/3	Internal Right	U	E		1	14	-	44	1987	497	8.9%	-	-	-	0.1	11.0	0.2
6/1	Internal Ahead	U	F		1	36	-	650	1987	1225	53.0%	-	-	-	0.8	4.6	4.5
6/2	Internal Ahead	U	F		1	36	-	935	2041	1259	74.3%	-	-	-	1.8	7.0	2.5

Basic Results Summary

6/3	Internal Right Ahead	U	F		1	36	-	44	2031	1252	3.5%	-	-	-	0.1	11.4	0.7
7/1	Arm 7	U	-		-	-	-	970	2115	2115	45.9%	-	-	-	0.4	1.6	0.4
7/2	Arm 7	U	-		-	-	-	1040	2115	2115	49.2%	-	-	-	0.5	1.7	4.1
8/1	Arm 8	U	-		-	-	-	650	2115	2115	30.7%	-	-	-	0.2	1.2	0.2
8/2	Arm 8	U	-		-	-	-	979	2065	2065	47.4%	-	-	-	0.5	1.7	0.5
9/1	Arm 9	U	-		-	-	-	677	1965	1965	34.5%	-	-	-	0.3	1.4	0.3
9/2	Arm 9	U	-		-	-	-	24	1965	1965	1.2%	-	-	-	0.0	0.9	0.0

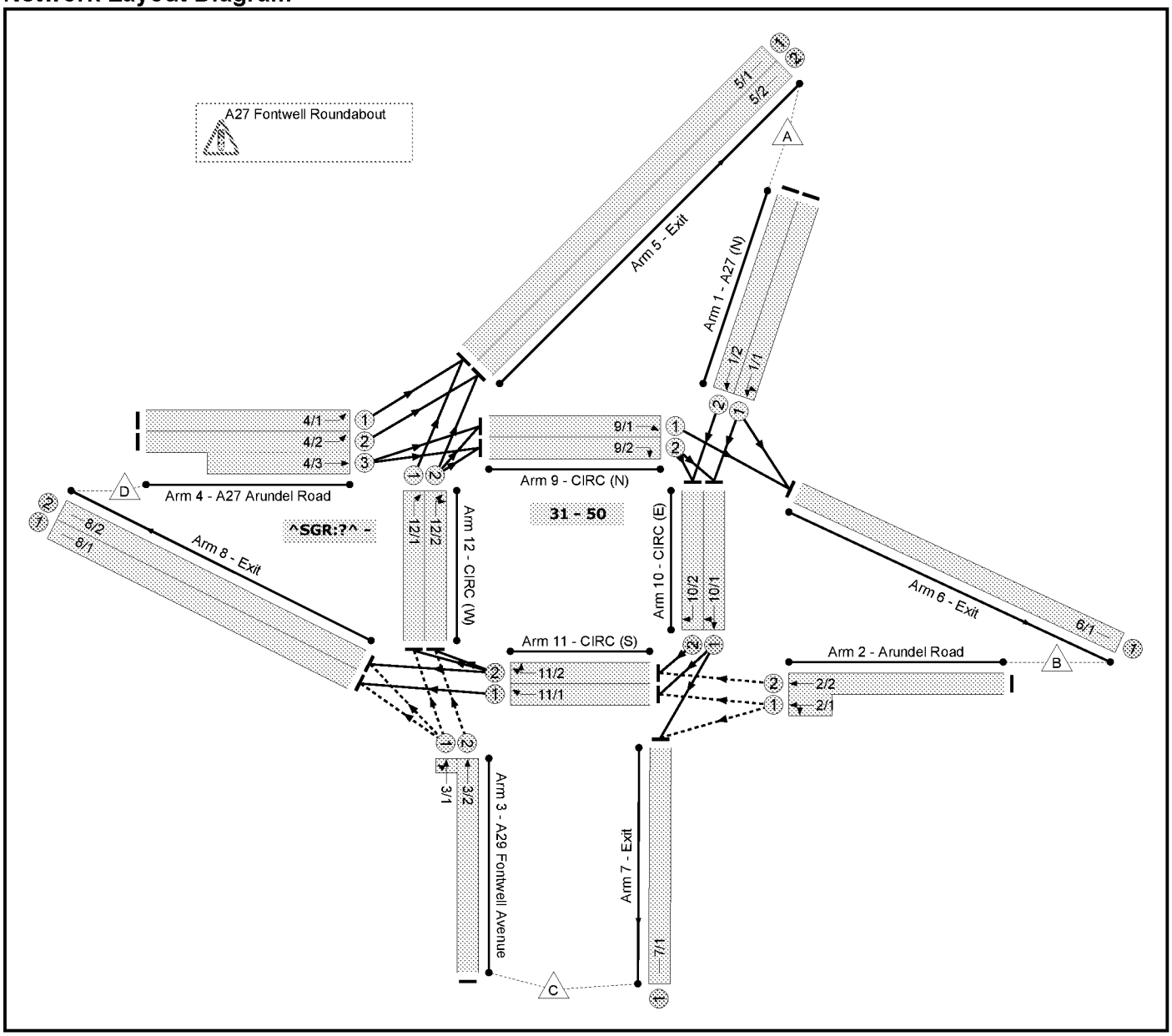
C1	PRC for Signalled Lanes (%):	1.2	Total Delay for Signalled Lanes (pcuHr):	39.57	Cycle Time (s): 60
	PRC Over All Lanes (%):	1.2	Total Delay Over All Lanes(pcuHr):	41.42	

Full Input Data And Results

User and Project Details

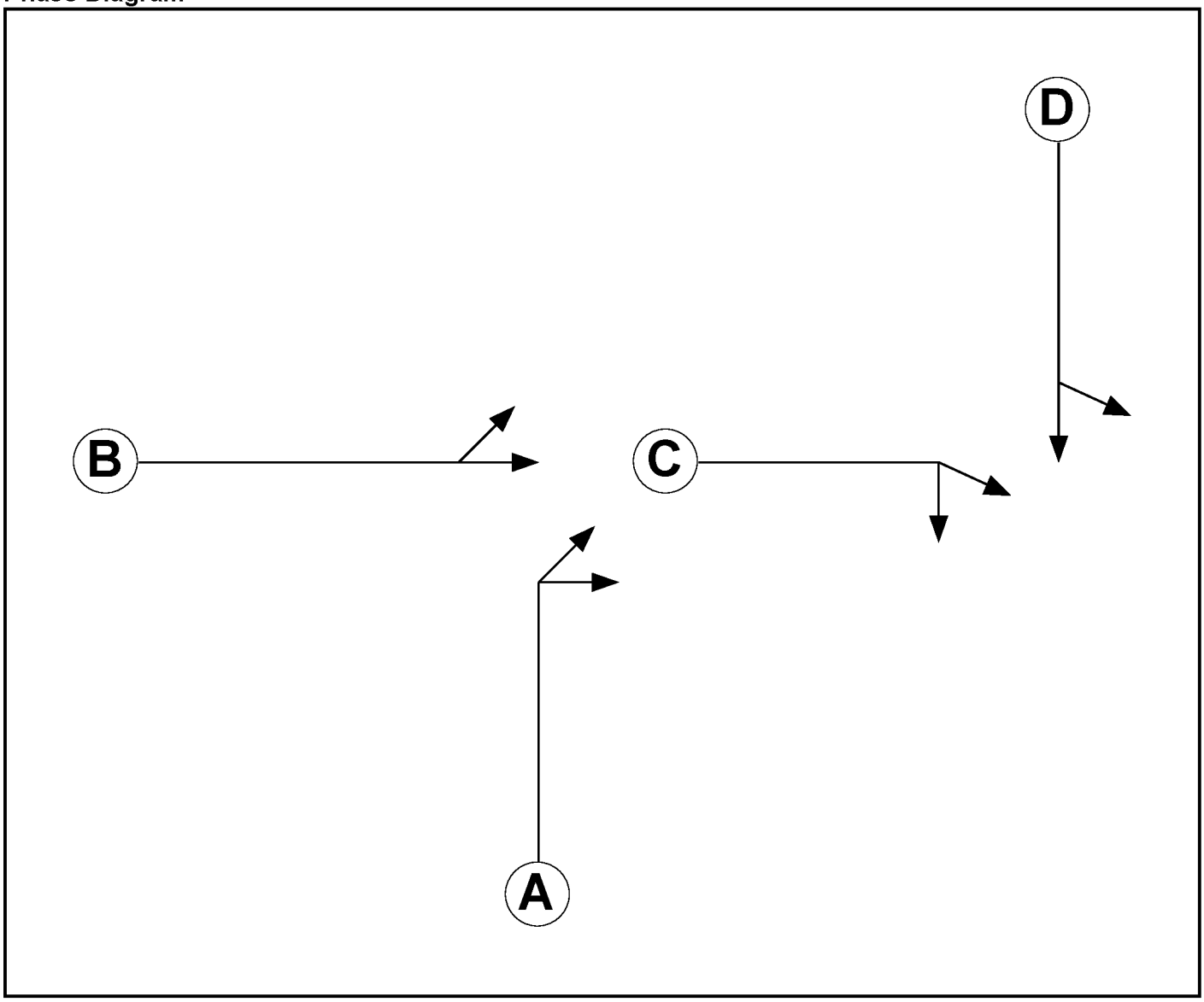
Project:	**Arun Transport Study**
Title:	**Proposed Signalised Layout**
Location:	A27 / Arundel Road / A29 Fontwell Avenue / A27 Arundel Road
Additional detail:	
File name:	3- A27 Fontwell - A29 Arundel.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Phase Input Data

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

Full Input Data And Results

Phase Intergreens Matrix

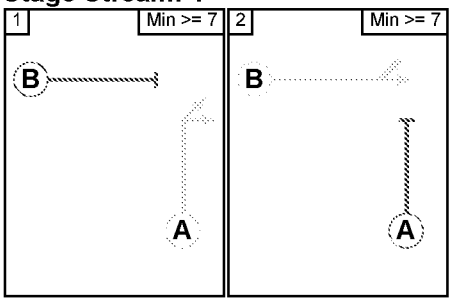
	Starting Phase			
Terminating Phase	A	B	C	D
A		5	-	-
B	5		-	-
C	-	-		5
D	-	-	5	

Phases in Stage

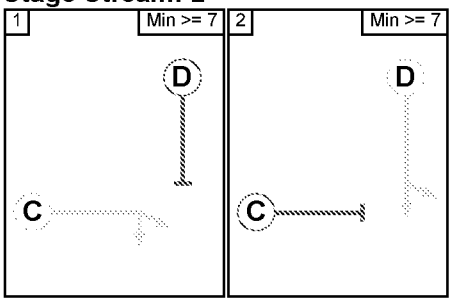
Stream	Stage No.	Phases in Stage
1	1	A
1	2	B
2	1	C
2	2	D

Stage Diagram

Stage Stream: 1



Stage Stream: 2



Phase Delays

Stage Stream: 1

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

Stage Stream: 2

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

Full Input Data And Results

Prohibited Stage Change

Stage Stream: 1

	To Stage		
From Stage		1	2
	1		5
	2	5	

Stage Stream: 2

	To Stage		
From Stage		1	2
	1		5
	2	5	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A27 Fontwell Roundabout											
Lane	**Movement**	**Max Flow when Giving Way (PCU/Hr)**	**Min Flow when Giving Way (PCU/Hr)**	**Opposing Lane**	**Opp. Lane Coeff.**	**Opp. Mvmnts.**	**Right Turn Storage (PCU)**	**Non-Blocking Storage (PCU)**	**RTF**	**Right Turn Move up (s)**	**Max Turns in Intergreen (PCU)**
2/1 (Arundel Road)	7/1 (Left)	1000	0	10/1	0.33	All	-	-	-	-	-
	11/1 (Ahead)	1000	0	10/2	0.33	All					
2/2 (Arundel Road)	11/2 (Ahead)	1000	0	10/2	0.33	All	-	-	-	-	-
3/1 (A29 Fontwell Avenue)	8/1 (Left)	1000	0	11/2	0.33	To 8/2 (Ahead)	-	-	-	-	-
	8/2 (Left)	1000	0	11/2	0.33	To 8/2 (Ahead)					
	12/1 (Ahead)	1000	0	11/2	0.33	All					
3/2 (A29 Fontwell Avenue)	12/2 (Ahead)	1000	0	11/2	0.33	All	-	-	-	-	-
				11/1	0.33	All					

Full Input Data And Results

Lane Input Data

Junction: A27 Fontwell Roundabout												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (A27 (N))	U	D	2	3	60.0	Geom	-	4.50	0.00	Y	Arm 6 Left	30.00
											Arm 10 Ahead	Inf
1/2 (A27 (N))	U	D	2	3	60.0	Geom	-	4.50	0.00	N	Arm 10 Ahead	Inf
2/1 (Arundel Road)	O		2	3	3.0	Geom	-	3.00	0.00	Y	Arm 7 Left	21.80
											Arm 11 Ahead	41.00
2/2 (Arundel Road)	O		2	3	60.0	Geom	-	3.00	0.00	Y	Arm 11 Ahead	41.00
3/1 (A29 Fontwell Avenue)	O		2	3	1.0	Geom	-	3.00	0.00	Y	Arm 8 Left	20.00
											Arm 12 Ahead	44.00
3/2 (A29 Fontwell Avenue)	O		2	3	60.0	Geom	-	3.00	0.00	Y	Arm 12 Ahead	250.00
4/1 (A27 Arundel Road)	U	B	2	3	60.0	Geom	-	3.75	0.00	Y	Arm 5 Left	Inf
4/2 (A27 Arundel Road)	U	B	2	3	60.0	Geom	-	3.75	0.00	N	Arm 5 Left	Inf
4/3 (A27 Arundel Road)	U	B	2	3	10.0	Geom	-	3.75	0.00	Y	Arm 9 Ahead	47.00
5/1 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
5/2 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/2 (Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
9/1 (CIRC (N))	U	C	2	3	3.8	Geom	-	5.00	0.00	Y	Arm 6 Ahead	38.00
9/2 (CIRC (N))	U	C	2	3	3.9	Geom	-	5.00	0.00	Y	Arm 10 Right	13.00
10/1 (CIRC (E))	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

10/2 (CIRC (E))	U		2	3	60.0	Inf	-	-	-	-	-	-
11/1 (CIRC (S))	U		2	3	60.0	Inf	-	-	-	-	-	-
11/2 (CIRC (S))	U		2	3	60.0	Inf	-	-	-	-	-	-
12/1 (CIRC (W))	U	A	2	3	3.5	Geom	-	5.00	0.00	Y	Arm 5 Right	24.00
12/2 (CIRC (W))	U	A	2	3	3.7	Geom	-	5.00	0.00	Y	Arm 5 Right	24.00
											Arm 9 Right	15.00

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2031 AM Base '	08:00	09:00	01:00	
2: '2031 PM Base'	17:00	18:00	01:00	
3: '2031 AM Base + Dev'	08:00	09:00	01:00	
4: '2031 PM Base + Dev'	17:00	18:00	01:00	
5: '2031 AM Base + Dev + BEW'	08:00	09:00	01:00	
6: '2031 PM Base + Dev + BEW'	17:00	18:00	01:00	
7: '2038 AM Base + Dev + BEW'	08:00	09:00	01:00	
8: '2038 PM Base + Dev + BEW'	17:00	18:00	01:00	

Scenario 1: '2031 AM Base' (FG1: '2031 AM Base ', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	0	157	2011	2168
	B	0	0	0	111	111
	C	598	0	0	266	864
	D	1112	31	264	2	1409
	Tot.	1710	31	421	2390	4552

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: 2031 AM Base
Junction: A27 Fontwell Roundabout	
1/1	1039
1/2	1129
2/1 (short)	56
2/2 (with short)	111(In) 55(Out)
3/1 (short)	562
3/2 (with short)	864(In) 302(Out)
4/1	530
4/2 (with short)	877(In) 582(Out)
4/3 (short)	295
5/1	826
5/2	884
6/1	31
7/1	421
8/1	1071
8/2	1317
9/1	31
9/2	264
10/1	1303
10/2	1129
11/1	938
11/2	1184
12/1	296
12/2	302

Full Input Data And Results

Lane Saturation Flows

Junction: A27 Fontwell Roundabout								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A27 (N))	4.50	0.00	Y	Arm 6 Left	30.00	0.0 %	2065	2065
				Arm 10 Ahead	Inf	100.0 %		
1/2 (A27 (N))	4.50	0.00	N	Arm 10 Ahead	Inf	100.0 %	2205	2205
2/1 (Arundel Road)	3.00	0.00	Y	Arm 7 Left	21.80	0.0 %	1847	1847
				Arm 11 Ahead	41.00	100.0 %		
2/2 (Arundel Road)	3.00	0.00	Y	Arm 11 Ahead	41.00	100.0 %	1847	1847
3/1 (A29 Fontwell Avenue)	3.00	0.00	Y	Arm 8 Left	20.00	47.3 %	1818	1818
				Arm 12 Ahead	44.00	52.7 %		
3/2 (A29 Fontwell Avenue)	3.00	0.00	Y	Arm 12 Ahead	250.00	100.0 %	1904	1904
4/1 (A27 Arundel Road)	3.75	0.00	Y	Arm 5 Left	Inf	100.0 %	1990	1990
4/2 (A27 Arundel Road)	3.75	0.00	N	Arm 5 Left	Inf	100.0 %	2130	2130
4/3 (A27 Arundel Road)	3.75	0.00	Y	Arm 9 Ahead	47.00	100.0 %	1928	1928
5/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (CIRC (N))	5.00	0.00	Y	Arm 6 Ahead	38.00	100.0 %	2035	2035
9/2 (CIRC (N))	5.00	0.00	Y	Arm 10 Right	13.00	100.0 %	1896	1896
10/1 (CIRC (E) Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (CIRC (E) Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1 (CIRC (S) Lane 1)	Infinite Saturation Flow						Inf	Inf
11/2 (CIRC (S) Lane 2)	Infinite Saturation Flow						Inf	Inf
12/1 (CIRC (W))	5.00	0.00	Y	Arm 5 Right	24.00	100.0 %	1991	1991
12/2	5.00	0.00	Y	Arm 5 Right	24.00	100.0 %	1991	1991

(CIRC (W))				Arm 9 Right	15.00	0.0 %		

Scenario 2: '2031 PM Base' (FG2: '2031 PM Base', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	0	301	1533	1834
	B	0	0	18	74	92
	C	233	0	0	183	416
	D	1876	101	481	3	2461
	Tot.	2109	101	800	1793	4803

Traffic Lane Flows

Lane	Scenario 2: 2031 PM Base
Junction: A27 Fontwell Roundabout	
1/1	881
1/2	953
2/1 (short)	55
2/2 (with short)	92(In) 37(Out)
3/1 (short)	300
3/2 (with short)	416(In) 116(Out)
4/1	975
4/2 (with short)	1483(In) 901(Out)
4/3 (short)	582
5/1	1092
5/2	1017
6/1	101
7/1	800
8/1	708
8/2	1082
9/1	101
9/2	481
10/1	1362
10/2	953
11/1	617
11/2	990
12/1	117
12/2	116

Full Input Data And Results

Lane Saturation Flows

Junction: A27 Fontwell Roundabout								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A27 (N))	4.50	0.00	Y	Arm 6 Left	30.00	0.0 %	2065	2065
				Arm 10 Ahead	Inf	100.0 %		
1/2 (A27 (N))	4.50	0.00	N	Arm 10 Ahead	Inf	100.0 %	2205	2205
2/1 (Arundel Road)	3.00	0.00	Y	Arm 7 Left	21.80	32.7 %	1829	1829
				Arm 11 Ahead	41.00	67.3 %		
2/2 (Arundel Road)	3.00	0.00	Y	Arm 11 Ahead	41.00	100.0 %	1847	1847
3/1 (A29 Fontwell Avenue)	3.00	0.00	Y	Arm 8 Left	20.00	61.0 %	1808	1808
				Arm 12 Ahead	44.00	39.0 %		
3/2 (A29 Fontwell Avenue)	3.00	0.00	Y	Arm 12 Ahead	250.00	100.0 %	1904	1904
4/1 (A27 Arundel Road)	3.75	0.00	Y	Arm 5 Left	Inf	100.0 %	1990	1990
4/2 (A27 Arundel Road)	3.75	0.00	N	Arm 5 Left	Inf	100.0 %	2130	2130
4/3 (A27 Arundel Road)	3.75	0.00	Y	Arm 9 Ahead	47.00	100.0 %	1928	1928
5/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (CIRC (N))	5.00	0.00	Y	Arm 6 Ahead	38.00	100.0 %	2035	2035
9/2 (CIRC (N))	5.00	0.00	Y	Arm 10 Right	13.00	100.0 %	1896	1896
10/1 (CIRC (E) Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (CIRC (E) Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1 (CIRC (S) Lane 1)	Infinite Saturation Flow						Inf	Inf
11/2 (CIRC (S) Lane 2)	Infinite Saturation Flow						Inf	Inf
12/1 (CIRC (W))	5.00	0.00	Y	Arm 5 Right	24.00	100.0 %	1991	1991
12/2	5.00	0.00	Y	Arm 5 Right	24.00	100.0 %	1991	1991

(CIRC (W))				Arm 9 Right	15.00	0.0 %		

Scenario 3: '2031 AM Base + Dev' (FG3: '2031 AM Base + Dev', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	0	163	2011	2174
	B	0	0	0	111	111
	C	612	0	0	268	880
	D	1112	31	265	2	1410
	Tot.	1724	31	428	2392	4575

Traffic Lane Flows

Lane	Scenario 3: 2031 AM Base + Dev
Junction: A27 Fontwell Roundabout	
1/1	1042
1/2	1132
2/1 (short)	56
2/2 (with short)	111(In) 55(Out)
3/1 (short)	572
3/2 (with short)	880(In) 308(Out)
4/1	530
4/2 (with short)	878(In) 582(Out)
4/3 (short)	296
5/1	834
5/2	890
6/1	31
7/1	428
8/1	1069
8/2	1321
9/1	31
9/2	265
10/1	1307
10/2	1132
11/1	935
11/2	1187
12/1	304
12/2	308

Full Input Data And Results

Lane Saturation Flows

Junction: A27 Fontwell Roundabout								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A27 (N))	4.50	0.00	Y	Arm 6 Left	30.00	0.0 %	2065	2065
				Arm 10 Ahead	Inf	100.0 %		
1/2 (A27 (N))	4.50	0.00	N	Arm 10 Ahead	Inf	100.0 %	2205	2205
2/1 (Arundel Road)	3.00	0.00	Y	Arm 7 Left	21.80	0.0 %	1847	1847
				Arm 11 Ahead	41.00	100.0 %		
2/2 (Arundel Road)	3.00	0.00	Y	Arm 11 Ahead	41.00	100.0 %	1847	1847
3/1 (A29 Fontwell Avenue)	3.00	0.00	Y	Arm 8 Left	20.00	46.9 %	1818	1818
				Arm 12 Ahead	44.00	53.1 %		
3/2 (A29 Fontwell Avenue)	3.00	0.00	Y	Arm 12 Ahead	250.00	100.0 %	1904	1904
4/1 (A27 Arundel Road)	3.75	0.00	Y	Arm 5 Left	Inf	100.0 %	1990	1990
4/2 (A27 Arundel Road)	3.75	0.00	N	Arm 5 Left	Inf	100.0 %	2130	2130
4/3 (A27 Arundel Road)	3.75	0.00	Y	Arm 9 Ahead	47.00	100.0 %	1928	1928
5/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (CIRC (N))	5.00	0.00	Y	Arm 6 Ahead	38.00	100.0 %	2035	2035
9/2 (CIRC (N))	5.00	0.00	Y	Arm 10 Right	13.00	100.0 %	1896	1896
10/1 (CIRC (E) Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (CIRC (E) Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1 (CIRC (S) Lane 1)	Infinite Saturation Flow						Inf	Inf
11/2 (CIRC (S) Lane 2)	Infinite Saturation Flow						Inf	Inf
12/1 (CIRC (W))	5.00	0.00	Y	Arm 5 Right	24.00	100.0 %	1991	1991
12/2	5.00	0.00	Y	Arm 5 Right	24.00	100.0 %	1991	1991

(CIRC (W))				Arm 9 Right	15.00	0.0 %		

Scenario 4: '2031 PM Base + Dev' (FG4: '2031 PM Base + Dev', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	5	318	1533	1856
	B	0	0	18	74	92
	C	241	0	0	184	425
	D	1874	101	483	3	2461
	Tot.	2115	106	819	1794	4834

Traffic Lane Flows

Lane	Scenario 4: 2031 PM Base + Dev
Junction: A27 Fontwell Roundabout	
1/1	891
1/2	965
2/1 (short)	55
2/2 (with short)	92(In) 37(Out)
3/1 (short)	305
3/2 (with short)	425(In) 120(Out)
4/1	974
4/2 (with short)	1484(In) 900(Out)
4/3 (short)	584
5/1	1095
5/2	1020
6/1	106
7/1	819
8/1	697
8/2	1094
9/1	101
9/2	483
10/1	1369
10/2	965
11/1	605
11/2	1002
12/1	121
12/2	120

Full Input Data And Results

Lane Saturation Flows

Junction: A27 Fontwell Roundabout								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A27 (N))	4.50	0.00	Y	Arm 6 Left	30.00	0.6 %	2064	2064
				Arm 10 Ahead	Inf	99.4 %		
1/2 (A27 (N))	4.50	0.00	N	Arm 10 Ahead	Inf	100.0 %	2205	2205
2/1 (Arundel Road)	3.00	0.00	Y	Arm 7 Left	21.80	32.7 %	1829	1829
				Arm 11 Ahead	41.00	67.3 %		
2/2 (Arundel Road)	3.00	0.00	Y	Arm 11 Ahead	41.00	100.0 %	1847	1847
3/1 (A29 Fontwell Avenue)	3.00	0.00	Y	Arm 8 Left	20.00	60.3 %	1809	1809
				Arm 12 Ahead	44.00	39.7 %		
3/2 (A29 Fontwell Avenue)	3.00	0.00	Y	Arm 12 Ahead	250.00	100.0 %	1904	1904
4/1 (A27 Arundel Road)	3.75	0.00	Y	Arm 5 Left	Inf	100.0 %	1990	1990
4/2 (A27 Arundel Road)	3.75	0.00	N	Arm 5 Left	Inf	100.0 %	2130	2130
4/3 (A27 Arundel Road)	3.75	0.00	Y	Arm 9 Ahead	47.00	100.0 %	1928	1928
5/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (CIRC (N))	5.00	0.00	Y	Arm 6 Ahead	38.00	100.0 %	2035	2035
9/2 (CIRC (N))	5.00	0.00	Y	Arm 10 Right	13.00	100.0 %	1896	1896
10/1 (CIRC (E) Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (CIRC (E) Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1 (CIRC (S) Lane 1)	Infinite Saturation Flow						Inf	Inf
11/2 (CIRC (S) Lane 2)	Infinite Saturation Flow						Inf	Inf
12/1 (CIRC (W))	5.00	0.00	Y	Arm 5 Right	24.00	100.0 %	1991	1991
12/2	5.00	0.00	Y	Arm 5 Right	24.00	100.0 %	1991	1991

(CIRC (W))				Arm 9 Right	15.00	0.0 %		

Scenario 5: '2031 AM Base + Dev + BEW' (FG5: '2031 AM Base + Dev + BEW', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	0	172	1983	2155
	B	0	0	0	129	129
	C	612	0	0	295	907
	D	1073	31	307	1	1412
	Tot.	1685	31	479	2408	4603

Traffic Lane Flows

Lane	Scenario 5: 2031 AM Base + Dev + BEW
Junction: A27 Fontwell Roundabout	
1/1	1034
1/2	1121
2/1 (short)	65
2/2 (with short)	129(In) 64(Out)
3/1 (short)	561
3/2 (with short)	907(In) 346(Out)
4/1	509
4/2 (with short)	902(In) 564(Out)
4/3 (short)	338
5/1	775
5/2	910
6/1	31
7/1	479
8/1	1074
8/2	1333
9/1	31
9/2	307
10/1	1341
10/2	1121
11/1	927
11/2	1185
12/1	266
12/2	346

Full Input Data And Results

Lane Saturation Flows

Junction: A27 Fontwell Roundabout								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A27 (N))	4.50	0.00	Y	Arm 6 Left	30.00	0.0 %	2065	2065
				Arm 10 Ahead	Inf	100.0 %		
1/2 (A27 (N))	4.50	0.00	N	Arm 10 Ahead	Inf	100.0 %	2205	2205
2/1 (Arundel Road)	3.00	0.00	Y	Arm 7 Left	21.80	0.0 %	1847	1847
				Arm 11 Ahead	41.00	100.0 %		
2/2 (Arundel Road)	3.00	0.00	Y	Arm 11 Ahead	41.00	100.0 %	1847	1847
3/1 (A29 Fontwell Avenue)	3.00	0.00	Y	Arm 8 Left	20.00	52.6 %	1814	1814
				Arm 12 Ahead	44.00	47.4 %		
3/2 (A29 Fontwell Avenue)	3.00	0.00	Y	Arm 12 Ahead	250.00	100.0 %	1904	1904
4/1 (A27 Arundel Road)	3.75	0.00	Y	Arm 5 Left	Inf	100.0 %	1990	1990
4/2 (A27 Arundel Road)	3.75	0.00	N	Arm 5 Left	Inf	100.0 %	2130	2130
4/3 (A27 Arundel Road)	3.75	0.00	Y	Arm 9 Ahead	47.00	100.0 %	1928	1928
5/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (CIRC (N))	5.00	0.00	Y	Arm 6 Ahead	38.00	100.0 %	2035	2035
9/2 (CIRC (N))	5.00	0.00	Y	Arm 10 Right	13.00	100.0 %	1896	1896
10/1 (CIRC (E) Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (CIRC (E) Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1 (CIRC (S) Lane 1)	Infinite Saturation Flow						Inf	Inf
11/2 (CIRC (S) Lane 2)	Infinite Saturation Flow						Inf	Inf
12/1 (CIRC (W))	5.00	0.00	Y	Arm 5 Right	24.00	100.0 %	1991	1991
12/2	5.00	0.00	Y	Arm 5 Right	24.00	100.0 %	1991	1991

(CIRC (W))				Arm 9 Right	15.00	0.0 %		

Scenario 6: '2031 PM Base + Dev + BEW' (FG6: '2031 PM Base + Dev + BEW', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	0	298	1522	1820
	B	0	0	0	75	75
	C	267	0	0	164	431
	D	1866	109	558	3	2536
	Tot.	2133	109	856	1764	4862

Traffic Lane Flows

Lane	Scenario 6: 2031 PM Base + Dev + BEW
Junction: A27 Fontwell Roundabout	
1/1	875
1/2	945
2/1 (short)	38
2/2 (with short)	75(In) 37(Out)
3/1 (short)	298
3/2 (with short)	431(In) 133(Out)
4/1	980
4/2 (with short)	1553(In) 886(Out)
4/3 (short)	667
5/1	1114
5/2	1019
6/1	109
7/1	856
8/1	697
8/2	1064
9/1	109
9/2	558
10/1	1433
10/2	945
11/1	615
11/2	982
12/1	134
12/2	133

Full Input Data And Results

Lane Saturation Flows

Junction: A27 Fontwell Roundabout								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A27 (N))	4.50	0.00	Y	Arm 6 Left	30.00	0.0 %	2065	2065
				Arm 10 Ahead	Inf	100.0 %		
1/2 (A27 (N))	4.50	0.00	N	Arm 10 Ahead	Inf	100.0 %	2205	2205
2/1 (Arundel Road)	3.00	0.00	Y	Arm 7 Left	21.80	0.0 %	1847	1847
				Arm 11 Ahead	41.00	100.0 %		
2/2 (Arundel Road)	3.00	0.00	Y	Arm 11 Ahead	41.00	100.0 %	1847	1847
3/1 (A29 Fontwell Avenue)	3.00	0.00	Y	Arm 8 Left	20.00	55.0 %	1812	1812
				Arm 12 Ahead	44.00	45.0 %		
3/2 (A29 Fontwell Avenue)	3.00	0.00	Y	Arm 12 Ahead	250.00	100.0 %	1904	1904
4/1 (A27 Arundel Road)	3.75	0.00	Y	Arm 5 Left	Inf	100.0 %	1990	1990
4/2 (A27 Arundel Road)	3.75	0.00	N	Arm 5 Left	Inf	100.0 %	2130	2130
4/3 (A27 Arundel Road)	3.75	0.00	Y	Arm 9 Ahead	47.00	100.0 %	1928	1928
5/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (CIRC (N))	5.00	0.00	Y	Arm 6 Ahead	38.00	100.0 %	2035	2035
9/2 (CIRC (N))	5.00	0.00	Y	Arm 10 Right	13.00	100.0 %	1896	1896
10/1 (CIRC (E) Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (CIRC (E) Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1 (CIRC (S) Lane 1)	Infinite Saturation Flow						Inf	Inf
11/2 (CIRC (S) Lane 2)	Infinite Saturation Flow						Inf	Inf
12/1 (CIRC (W))	5.00	0.00	Y	Arm 5 Right	24.00	100.0 %	1991	1991
12/2	5.00	0.00	Y	Arm 5 Right	24.00	100.0 %	1991	1991

(CIRC (W))				Arm 9 Right	15.00	0.0 %		

Scenario 7: '2038 AM Base + Dev + BEW' (FG7: '2038 AM Base + Dev + BEW', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	1	185	2077	2263
	B	12	0	0	130	142
	C	681	0	0	178	859
	D	1120	47	396	2	1565
	Tot.	1813	48	581	2387	4829

Traffic Lane Flows

Lane	Scenario 7: 2038 AM Base + Dev + BEW
Junction: A27 Fontwell Roundabout	
1/1	1092
1/2	1171
2/1 (short)	65
2/2 (with short)	142(In) 77(Out)
3/1 (short)	502
3/2 (with short)	859(In) 357(Out)
4/1	535
4/2 (with short)	1028(In) 585(Out)
4/3 (short)	443
5/1	867
5/2	946
6/1	48
7/1	581
8/1	1060
8/2	1325
9/1	47
9/2	396
10/1	1487
10/2	1171
11/1	971
11/2	1248
12/1	332
12/2	361

Full Input Data And Results

Lane Saturation Flows

Junction: A27 Fontwell Roundabout								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A27 (N))	4.50	0.00	Y	Arm 6 Left	30.00	0.1 %	2065	2065
				Arm 10 Ahead	Inf	99.9 %		
1/2 (A27 (N))	4.50	0.00	N	Arm 10 Ahead	Inf	100.0 %	2205	2205
2/1 (Arundel Road)	3.00	0.00	Y	Arm 7 Left	21.80	0.0 %	1847	1847
				Arm 11 Ahead	41.00	100.0 %		
2/2 (Arundel Road)	3.00	0.00	Y	Arm 11 Ahead	41.00	100.0 %	1847	1847
3/1 (A29 Fontwell Avenue)	3.00	0.00	Y	Arm 8 Left	20.00	35.5 %	1826	1826
				Arm 12 Ahead	44.00	64.5 %		
3/2 (A29 Fontwell Avenue)	3.00	0.00	Y	Arm 12 Ahead	250.00	100.0 %	1904	1904
4/1 (A27 Arundel Road)	3.75	0.00	Y	Arm 5 Left	Inf	100.0 %	1990	1990
4/2 (A27 Arundel Road)	3.75	0.00	N	Arm 5 Left	Inf	100.0 %	2130	2130
4/3 (A27 Arundel Road)	3.75	0.00	Y	Arm 9 Ahead	47.00	100.0 %	1928	1928
5/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (CIRC (N))	5.00	0.00	Y	Arm 6 Ahead	38.00	100.0 %	2035	2035
9/2 (CIRC (N))	5.00	0.00	Y	Arm 10 Right	13.00	100.0 %	1896	1896
10/1 (CIRC (E) Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (CIRC (E) Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1 (CIRC (S) Lane 1)	Infinite Saturation Flow						Inf	Inf
11/2 (CIRC (S) Lane 2)	Infinite Saturation Flow						Inf	Inf
12/1 (CIRC (W))	5.00	0.00	Y	Arm 5 Right	24.00	100.0 %	1991	1991
12/2	5.00	0.00	Y	Arm 5 Right	24.00	100.0 %	1991	1991

(CIRC (W))				Arm 9 Right	15.00	0.0 %		

Scenario 8: '2038 PM Base + Dev + BEW' (FG8: '2038 PM Base + Dev + BEW', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	0	339	1662	2001
	B	0	0	0	91	91
	C	327	0	0	201	528
	D	1935	205	560	3	2703
	Tot.	2262	205	899	1957	5323

Traffic Lane Flows

Lane	Scenario 8: 2038 PM Base + Dev + BEW
Junction: A27 Fontwell Roundabout	
1/1	963
1/2	1038
2/1 (short)	46
2/2 (with short)	91(In) 45(Out)
3/1 (short)	365
3/2 (with short)	528(In) 163(Out)
4/1	1035
4/2 (with short)	1665(In) 900(Out)
4/3 (short)	765
5/1	1199
5/2	1063
6/1	205
7/1	899
8/1	770
8/2	1184
9/1	205
9/2	560
10/1	1523
10/2	1038
11/1	670
11/2	1083
12/1	164
12/2	163

Full Input Data And Results

Lane Saturation Flows

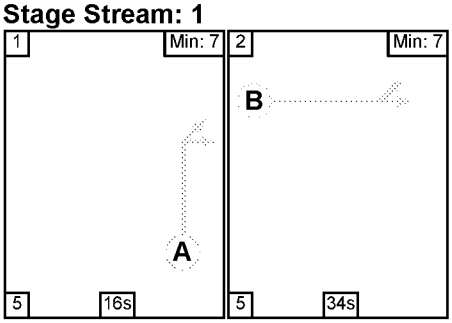
Junction: A27 Fontwell Roundabout								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A27 (N))	4.50	0.00	Y	Arm 6 Left	30.00	0.0 %	2065	2065
				Arm 10 Ahead	Inf	100.0 %		
1/2 (A27 (N))	4.50	0.00	N	Arm 10 Ahead	Inf	100.0 %	2205	2205
2/1 (Arundel Road)	3.00	0.00	Y	Arm 7 Left	21.80	0.0 %	1847	1847
				Arm 11 Ahead	41.00	100.0 %		
2/2 (Arundel Road)	3.00	0.00	Y	Arm 11 Ahead	41.00	100.0 %	1847	1847
3/1 (A29 Fontwell Avenue)	3.00	0.00	Y	Arm 8 Left	20.00	55.1 %	1812	1812
				Arm 12 Ahead	44.00	44.9 %		
3/2 (A29 Fontwell Avenue)	3.00	0.00	Y	Arm 12 Ahead	250.00	100.0 %	1904	1904
4/1 (A27 Arundel Road)	3.75	0.00	Y	Arm 5 Left	Inf	100.0 %	1990	1990
4/2 (A27 Arundel Road)	3.75	0.00	N	Arm 5 Left	Inf	100.0 %	2130	2130
4/3 (A27 Arundel Road)	3.75	0.00	Y	Arm 9 Ahead	47.00	100.0 %	1928	1928
5/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/2 (Exit Lane 2)	Infinite Saturation Flow						Inf	Inf
9/1 (CIRC (N))	5.00	0.00	Y	Arm 6 Ahead	38.00	100.0 %	2035	2035
9/2 (CIRC (N))	5.00	0.00	Y	Arm 10 Right	13.00	100.0 %	1896	1896
10/1 (CIRC (E) Lane 1)	Infinite Saturation Flow						Inf	Inf
10/2 (CIRC (E) Lane 2)	Infinite Saturation Flow						Inf	Inf
11/1 (CIRC (S) Lane 1)	Infinite Saturation Flow						Inf	Inf
11/2 (CIRC (S) Lane 2)	Infinite Saturation Flow						Inf	Inf
12/1 (CIRC (W))	5.00	0.00	Y	Arm 5 Right	24.00	100.0 %	1991	1991
12/2	5.00	0.00	Y	Arm 5 Right	24.00	100.0 %	1991	1991

(CIRC (W))				Arm 9 Right	15.00	0.0 %		

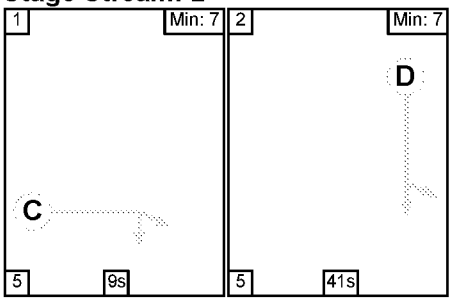
Scenario 1: '2031 AM Base' (FG1: '2031 AM Base ', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

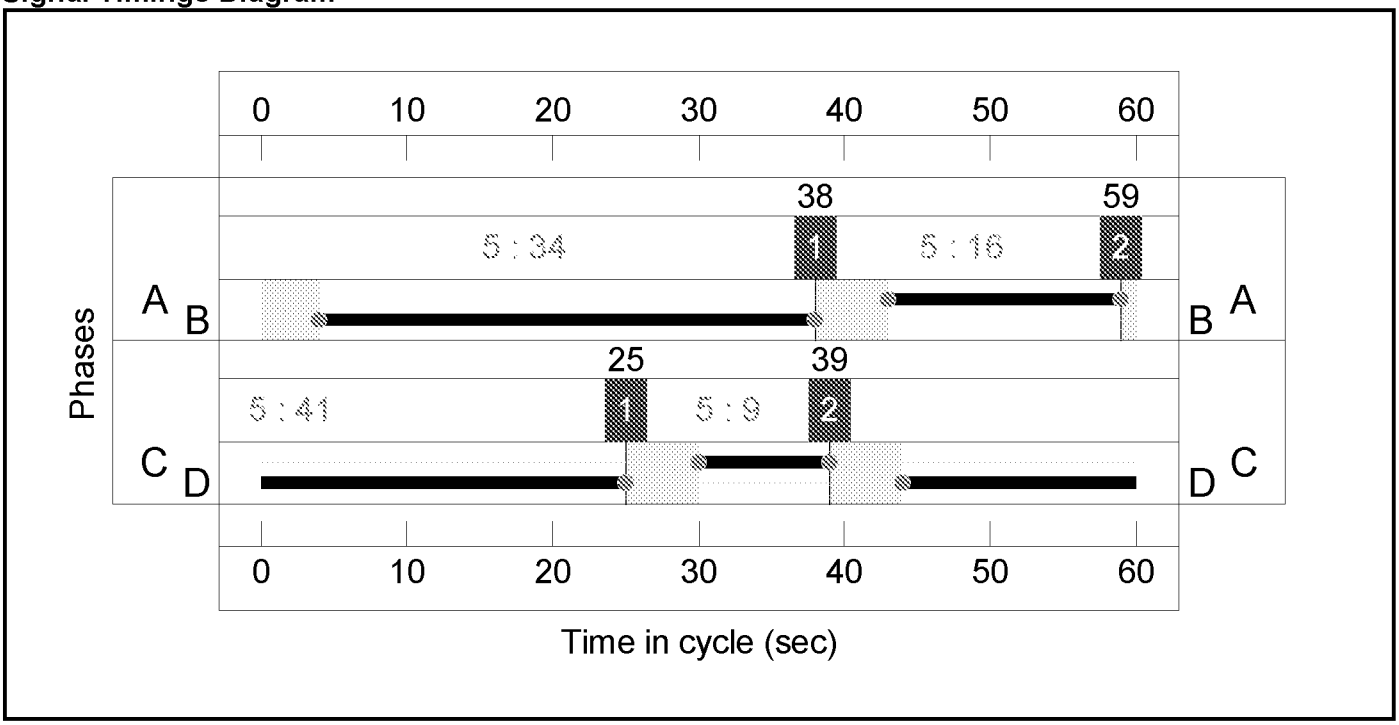
Stage	1	2
Duration	16	34
Change Point	38	59

Stage Stream: 2

Stage	1	2
Duration	9	41
Change Point	25	39

Full Input Data And Results

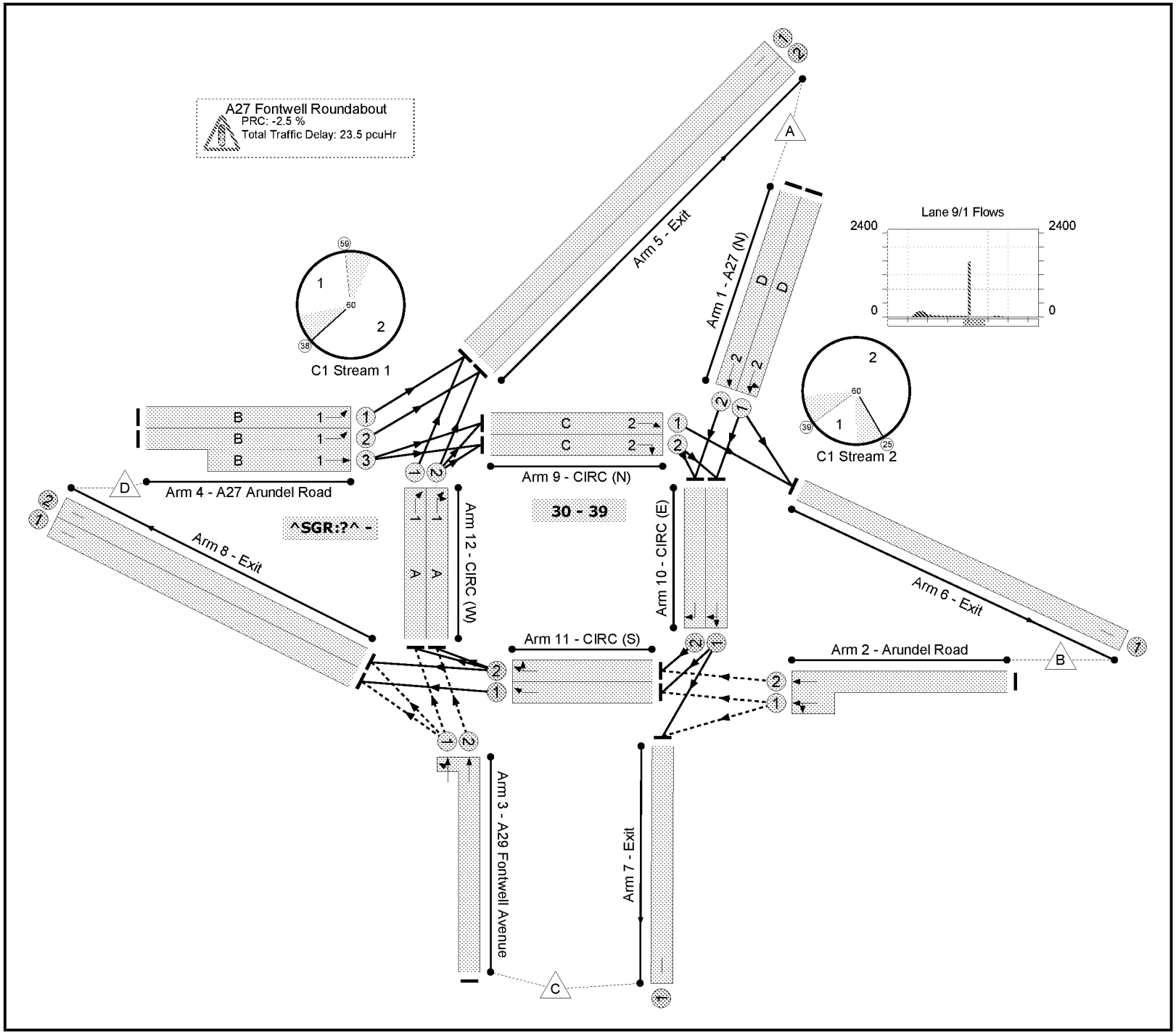
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed Signalised Layout	-	-	N/A	-	-		-	-	-	-	-	-	**92.3%**
A27 Fontwell Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	**92.3%**
1/1	A27 (N) Left Ahead	U	2	N/A	D		1	41	-	1039	2065	1446	71.9%
1/2	A27 (N) Ahead	U	2	N/A	D		1	41	-	1129	2205	1544	73.1%
2/2+2/1	Arundel Road Left Ahead	O	N/A	N/A	-		-	-	-	111	1847:1847	1254	8.8%
3/2+3/1	A29 Fontwell Avenue Left Ahead	O	N/A	N/A	-		-	-	-	864	1904:1818	936	92.3%
4/1	A27 Arundel Road Left	U	1	N/A	B		1	34	-	530	1990	1161	45.7%
4/2+4/3	A27 Arundel Road Left Ahead	U	1	N/A	B		1	34	-	877	2130:1928	1521	57.6%
5/1	Exit	U	N/A	N/A	-		-	-	-	826	Inf	Inf	0.0%
5/2	Exit	U	N/A	N/A	-		-	-	-	884	Inf	Inf	0.0%
6/1	Exit	U	N/A	N/A	-		-	-	-	31	Inf	Inf	0.0%
7/1	Exit	U	N/A	N/A	-		-	-	-	421	Inf	Inf	0.0%
8/1	Exit	U	N/A	N/A	-		-	-	-	1071	Inf	Inf	0.0%
8/2	Exit	U	N/A	N/A	-		-	-	-	1317	Inf	Inf	0.0%
9/1	CIRC (N) Ahead	U	2	N/A	C		1	9	-	31	2035	339	9.1%
9/2	CIRC (N) Right	U	2	N/A	C		1	9	-	264	1896	316	83.5%
10/1	CIRC (E) Ahead Right	U	N/A	N/A	-		-	-	-	1303	Inf	Inf	0.0%
10/2	CIRC (E) Right	U	N/A	N/A	-		-	-	-	1129	Inf	Inf	0.0%
11/1	CIRC (S) Ahead	U	N/A	N/A	-		-	-	-	938	Inf	Inf	0.0%

Full Input Data And Results

11/2	CIRC (S) Ahead Right	U	N/A	N/A	-		-	-	-	1184	Inf	Inf	0.0%
12/1	CIRC (W) Right	U	1	N/A	A		1	16	-	296	1991	564	52.5%
12/2	CIRC (W) Right Right2	U	1	N/A	A		1	16	-	302	1991	564	53.5%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Proposed Signalised Layout	**-**	**-**	**1950**	**0**	**0**	**11.0**	**12.5**	**0.0**	**23.5**	**-**	**-**	**-**	**-**
A27 Fontwell Roundabout	**-**	**-**	**1950**	**0**	**0**	**11.0**	**12.5**	**0.0**	**23.5**	**-**	**-**	**-**	**-**
1/1	1039	1039	-	-	-	1.6	1.3	-	2.8	9.8	10.4	1.3	11.7
1/2	1129	1129	-	-	-	1.7	1.4	-	3.1	9.8	11.3	1.4	12.6
2/2+2/1	111	111	222	0	0	0.0	0.0	-	0.0	1.6	0.0	0.0	0.0
3/2+3/1	864	864	1728	0	0	2.0	5.2	-	7.2	30.1	10.8	5.2	16.1
4/1	530	530	-	-	-	1.0	0.4	-	1.5	10.0	5.0	0.4	5.4
4/2+4/3	877	877	-	-	-	1.7	0.7	-	2.3	9.6	5.5	0.7	6.2
5/1	826	826	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	884	884	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	31	31	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	421	421	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	1071	1071	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	1317	1317	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	31	31	-	-	-	0.1	0.1	-	0.2	20.9	0.4	0.1	0.5
9/2	264	264	-	-	-	1.3	2.3	-	3.7	49.8	4.3	2.3	6.6
10/1	1303	1303	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	1129	1129	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	938	938	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	1184	1184	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	296	296	-	-	-	1.0	0.5	-	1.6	19.2	3.5	0.5	4.0
12/2	302	302	-	-	-	0.5	0.6	-	1.1	13.1	3.0	0.6	3.6

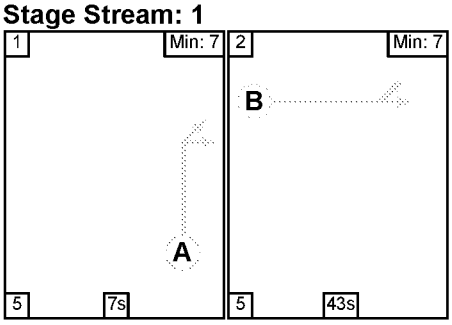
C1 Stream: 1 PRC for Signalled Lanes (%):	56.1	Total Delay for Signalled Lanes (pcuHr):	6.48	Cycle Time (s): 60
C1 Stream: 2 PRC for Signalled Lanes (%):	7.7	Total Delay for Signalled Lanes (pcuHr):	9.76	Cycle Time (s): 60
PRC Over All Lanes (%):	-2.5	Total Delay Over All Lanes(pcuHr):	23.51	

Full Input Data And Results

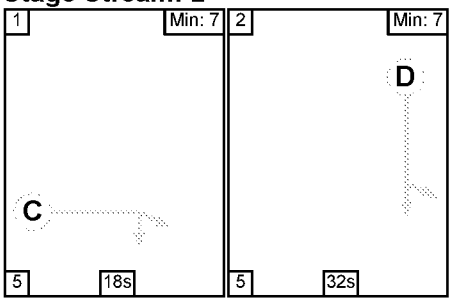
Scenario 2: '2031 PM Base' (FG2: '2031 PM Base', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

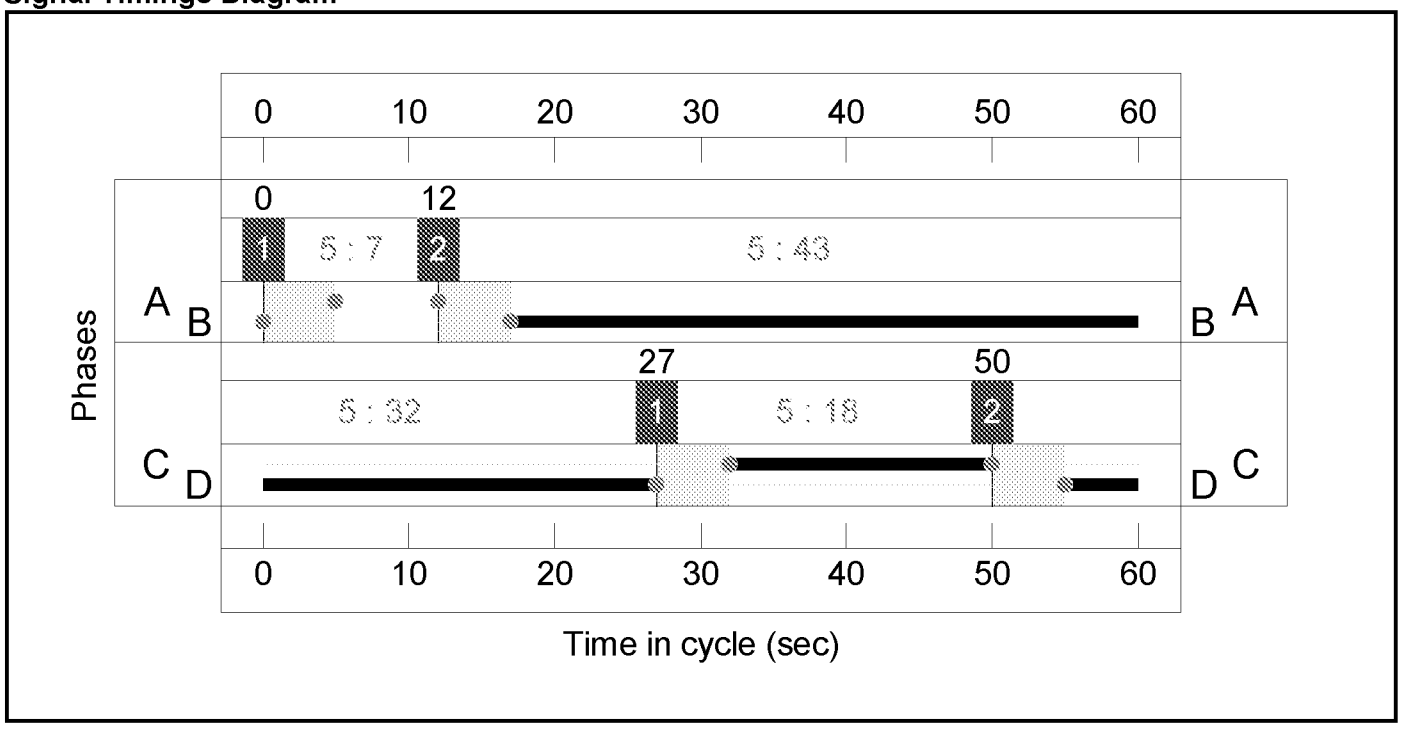
Stage Stream: 1

Stage	1	2
Duration	7	43
Change Point	0	12

Stage Stream: 2

Stage	1	2
Duration	18	32
Change Point	27	50

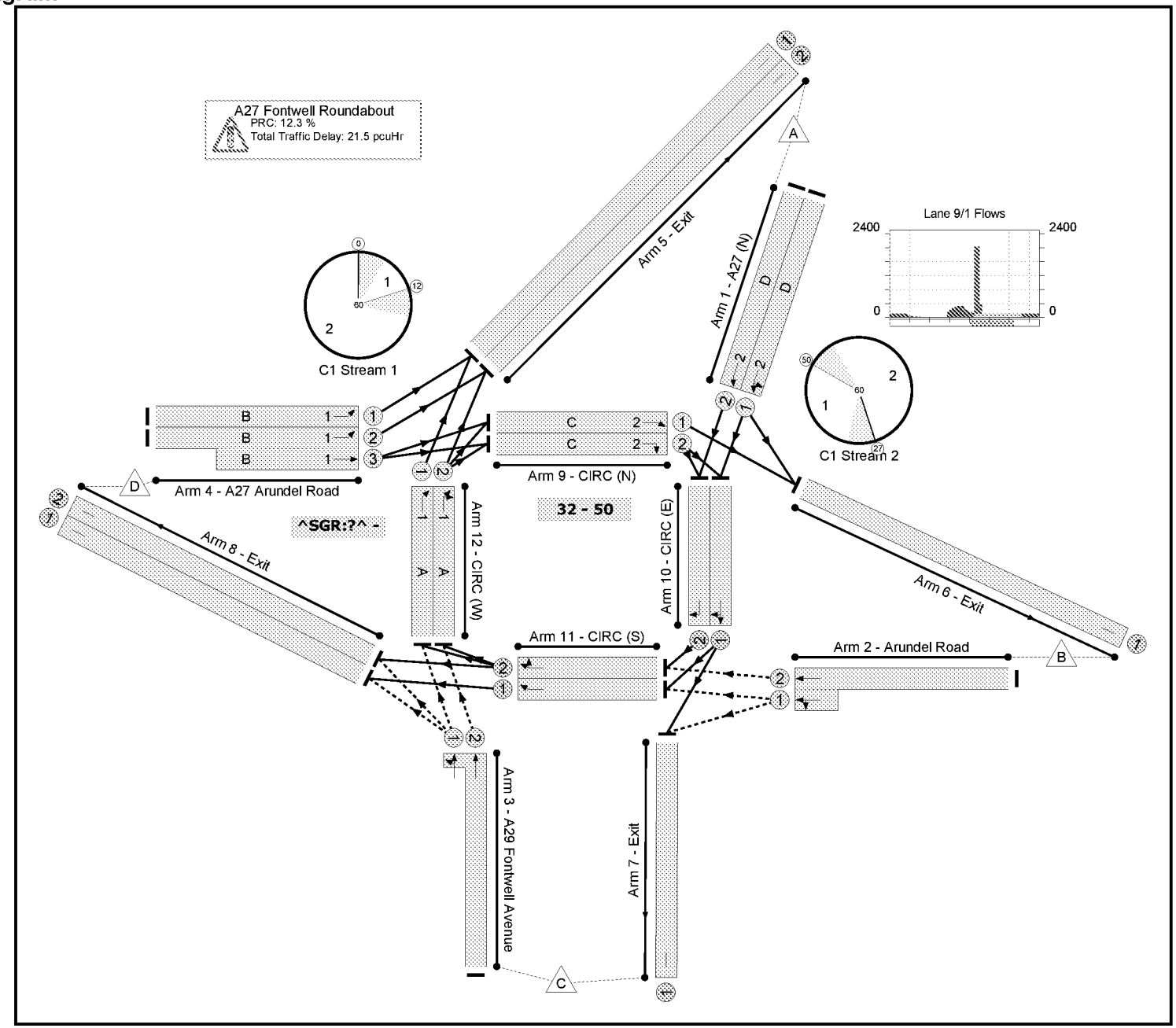
Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed Signalised Layout	-	-	N/A	-	-		-	-	-	-	-	-	**80.1%**
A27 Fontwell Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	**80.1%**
1/1	A27 (N) Left Ahead	U	2	N/A	D		1	32	-	881	2065	1136	77.6%
1/2	A27 (N) Ahead	U	2	N/A	D		1	32	-	953	2205	1213	78.6%
2/2+2/1	Arundel Road Left Ahead	O	N/A	N/A	-		-	-	-	92	1847:1829	1021	9.0%
3/2+3/1	A29 Fontwell Avenue Left Ahead	O	N/A	N/A	-		-	-	-	416	1904:1808	933	44.6%
4/1	A27 Arundel Road Left	U	1	N/A	B		1	43	-	975	1990	1459	66.8%
4/2+4/3	A27 Arundel Road Left Ahead	U	1	N/A	B		1	43	-	1483	2130:1928	1911	77.6%
5/1	Exit	U	N/A	N/A	-		-	-	-	1092	Inf	Inf	0.0%
5/2	Exit	U	N/A	N/A	-		-	-	-	1017	Inf	Inf	0.0%
6/1	Exit	U	N/A	N/A	-		-	-	-	101	Inf	Inf	0.0%
7/1	Exit	U	N/A	N/A	-		-	-	-	800	Inf	Inf	0.0%
8/1	Exit	U	N/A	N/A	-		-	-	-	708	Inf	Inf	0.0%
8/2	Exit	U	N/A	N/A	-		-	-	-	1082	Inf	Inf	0.0%
9/1	CIRC (N) Ahead	U	2	N/A	C		1	18	-	101	2035	644	15.7%
9/2	CIRC (N) Right	U	2	N/A	C		1	18	-	481	1896	600	80.1%
10/1	CIRC (E) Ahead Right	U	N/A	N/A	-		-	-	-	1362	Inf	Inf	0.0%
10/2	CIRC (E) Right	U	N/A	N/A	-		-	-	-	953	Inf	Inf	0.0%
11/1	CIRC (S) Ahead	U	N/A	N/A	-		-	-	-	617	Inf	Inf	0.0%

Full Input Data And Results

11/2	CIRC (S) Ahead Right	U	N/A	N/A	-		-	-	-	990	Inf	Inf	0.0%
12/1	CIRC (W) Right	U	1	N/A	A		1	7	-	117	1991	265	44.1%
12/2	CIRC (W) Right Right2	U	1	N/A	A		1	7	-	116	1991	265	43.7%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Proposed Signalised Layout	**-**	**-**	**1016**	**0**	**0**	**12.0**	**9.5**	**0.0**	**21.5**	**-**	**-**	**-**	**-**
A27 Fontwell Roundabout	**-**	**-**	**1016**	**0**	**0**	**12.0**	**9.5**	**0.0**	**21.5**	**-**	**-**	**-**	**-**
1/1	881	881	-	-	-	2.6	1.7	-	4.3	17.6	11.5	1.7	13.2
1/2	953	953	-	-	-	2.8	1.8	-	4.6	17.5	12.4	1.8	14.3
2/2+2/1	92	92	184	0	0	0.0	0.0	-	0.0	1.9	0.0	0.0	0.0
3/2+3/1	416	416	832	0	0	0.2	0.4	-	0.6	4.8	1.3	0.4	1.7
4/1	975	975	-	-	-	1.1	1.0	-	2.1	7.9	8.4	1.0	9.4
4/2+4/3	1483	1483	-	-	-	1.4	1.7	-	3.1	7.6	6.8	1.7	8.5
5/1	1092	1092	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	1017	1017	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	101	101	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	800	800	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	708	708	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	1082	1082	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	101	101	-	-	-	0.3	0.1	-	0.4	15.0	1.2	0.1	1.3
9/2	481	481	-	-	-	2.1	2.0	-	4.1	30.3	7.2	2.0	9.2
10/1	1362	1362	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	953	953	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	617	617	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	990	990	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	117	117	-	-	-	0.8	0.4	-	1.2	35.8	1.8	0.4	2.2
12/2	116	116	-	-	-	0.6	0.4	-	1.0	31.7	1.8	0.4	2.2

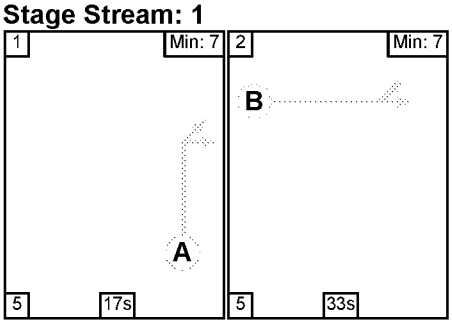
C1 Stream: 1 PRC for Signalled Lanes (%):	16.0	Total Delay for Signalled Lanes (pcuHr):	7.46	Cycle Time (s): 60
C1 Stream: 2 PRC for Signalled Lanes (%):	12.3	Total Delay for Signalled Lanes (pcuHr):	13.41	Cycle Time (s): 60
PRC Over All Lanes (%):	12.3	Total Delay Over All Lanes(pcuHr):	21.48	

Full Input Data And Results

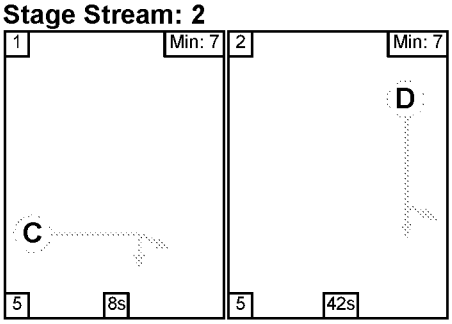
Scenario 3: '2031 AM Base + Dev' (FG3: '2031 AM Base + Dev', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

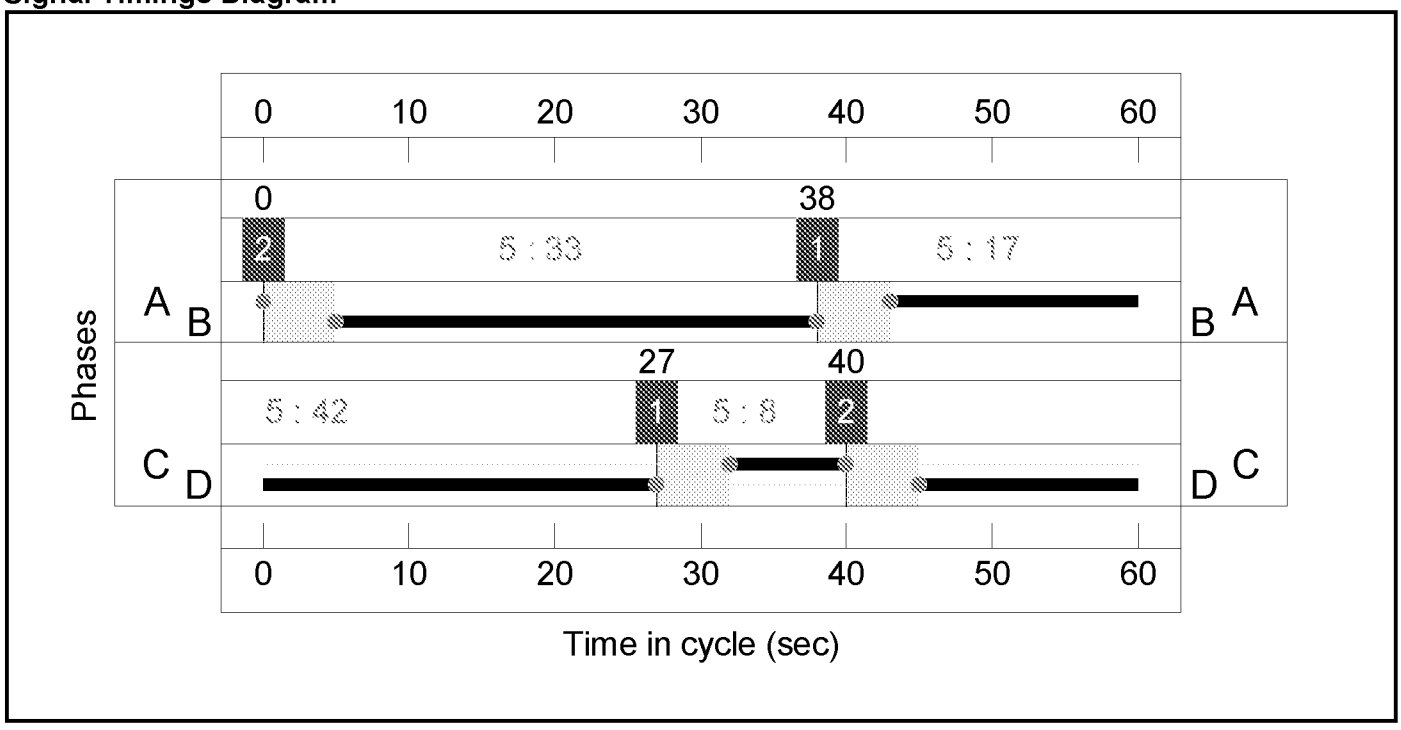
Stage Stream: 1

Stage	1	2
Duration	17	33
Change Point	38	0

Stage Stream: 2

Stage	1	2
Duration	8	42
Change Point	27	40

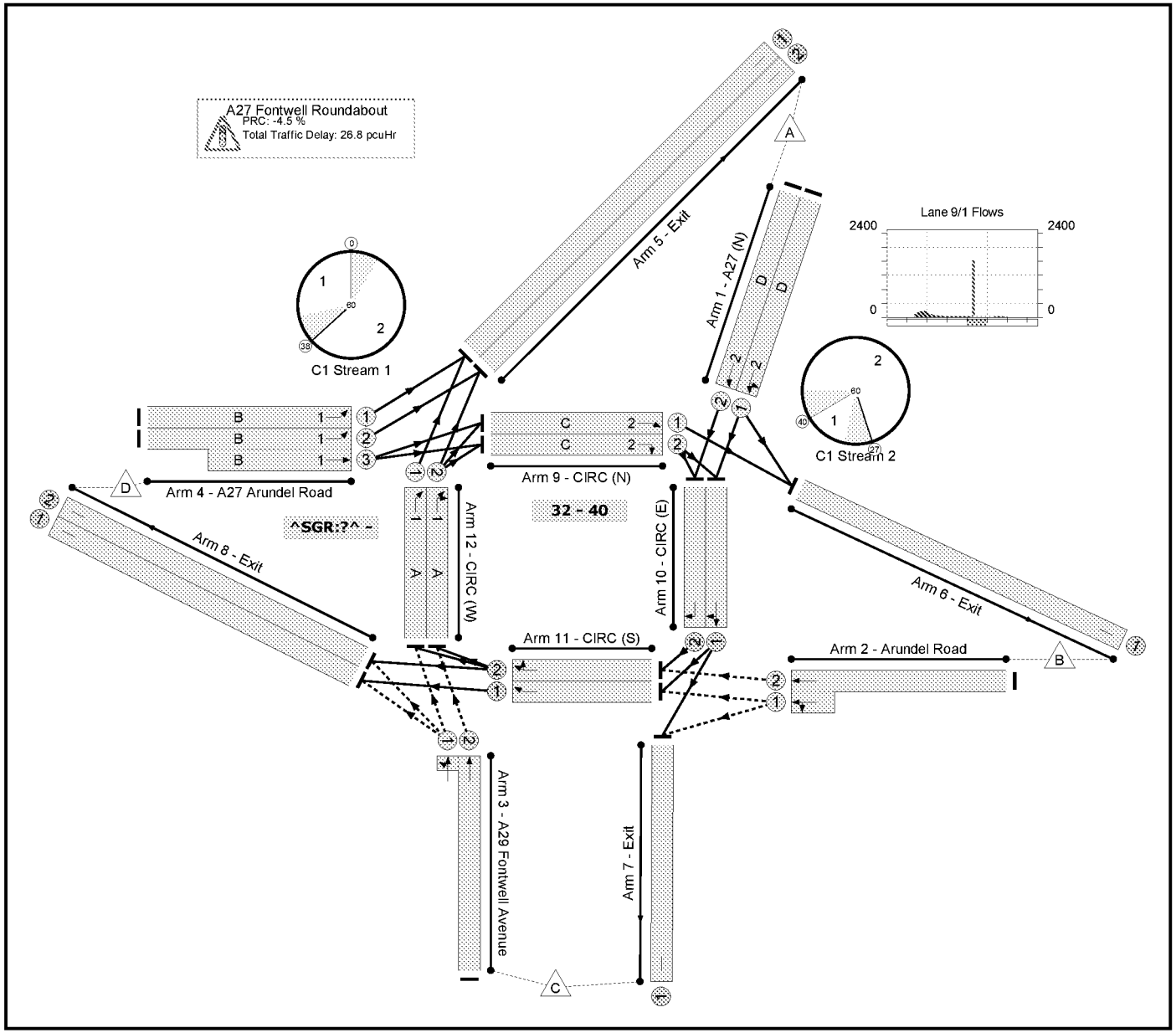
Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed Signalised Layout	-	-	N/A	-	-		-	-	-	-	-	-	**94.1%**
A27 Fontwell Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	**94.1%**
1/1	A27 (N) Left Ahead	U	2	N/A	D		1	42	-	1042	2065	1480	70.4%
1/2	A27 (N) Ahead	U	2	N/A	D		1	42	-	1132	2205	1580	71.6%
2/2+2/1	Arundel Road Left Ahead	O	N/A	N/A	-		-	-	-	111	1847:1847	1252	8.9%
3/2+3/1	A29 Fontwell Avenue Left Ahead	O	N/A	N/A	-		-	-	-	880	1904:1818	935	94.1%
4/1	A27 Arundel Road Left	U	1	N/A	B		1	33	-	530	1990	1128	47.0%
4/2+4/3	A27 Arundel Road Left Ahead	U	1	N/A	B		1	33	-	878	2130:1928	1488	59.0%
5/1	Exit	U	N/A	N/A	-		-	-	-	834	Inf	Inf	0.0%
5/2	Exit	U	N/A	N/A	-		-	-	-	890	Inf	Inf	0.0%
6/1	Exit	U	N/A	N/A	-		-	-	-	31	Inf	Inf	0.0%
7/1	Exit	U	N/A	N/A	-		-	-	-	423	Inf	Inf	0.0%
8/1	Exit	U	N/A	N/A	-		-	-	-	1069	Inf	Inf	0.0%
8/2	Exit	U	N/A	N/A	-		-	-	-	1321	Inf	Inf	0.0%
9/1	CIRC (N) Ahead	U	2	N/A	C		1	8	-	31	2035	305	10.2%
9/2	CIRC (N) Right	U	2	N/A	C		1	8	-	265	1896	284	93.2%
10/1	CIRC (E) Ahead Right	U	N/A	N/A	-		-	-	-	1307	Inf	Inf	0.0%
10/2	CIRC (E) Right	U	N/A	N/A	-		-	-	-	1132	Inf	Inf	0.0%
11/1	CIRC (S) Ahead	U	N/A	N/A	-		-	-	-	935	Inf	Inf	0.0%

Full Input Data And Results

11/2	CIRC (S) Ahead Right	U	N/A	N/A	-		-	-	-	1187	Inf	Inf	0.0%
12/1	CIRC (W) Right	U	1	N/A	A		1	17	-	304	1991	597	50.9%
12/2	CIRC (W) Right Right2	U	1	N/A	A		1	17	-	308	1991	597	51.6%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Proposed Signalised Layout	**-**	**-**	**1982**	**0**	**0**	**11.0**	**15.8**	**0.0**	**26.8**	**-**	**-**	**-**	**-**
A27 Fontwell Roundabout	**-**	**-**	**1982**	**0**	**0**	**11.0**	**15.8**	**0.0**	**26.8**	**-**	**-**	**-**	**-**
1/1	1042	1042	-	-	-	1.4	1.2	-	2.6	9.0	9.8	1.2	11.0
1/2	1132	1132	-	-	-	1.6	1.3	-	2.8	8.9	10.7	1.3	11.9
2/2+2/1	111	111	222	0	0	0.0	0.0	-	0.0	1.6	0.0	0.0	0.0
3/2+3/1	880	880	1760	0	0	2.0	6.4	-	8.5	34.7	11.3	6.4	17.7
4/1	530	530	-	-	-	1.1	0.4	-	1.6	10.7	5.2	0.4	5.6
4/2+4/3	878	878	-	-	-	1.8	0.7	-	2.5	10.3	5.7	0.7	6.4
5/1	834	834	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	890	890	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	31	31	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	428	428	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	1069	1069	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	1321	1321	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	31	31	-	-	-	0.1	0.1	-	0.2	22.0	0.4	0.1	0.5
9/2	265	265	-	-	-	1.4	4.6	-	6.0	81.4	4.3	4.6	9.0
10/1	1307	1307	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	1132	1132	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	935	935	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	1187	1187	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	304	304	-	-	-	1.0	0.5	-	1.5	18.2	3.4	0.5	3.9
12/2	308	308	-	-	-	0.5	0.5	-	1.0	12.0	2.5	0.5	3.1

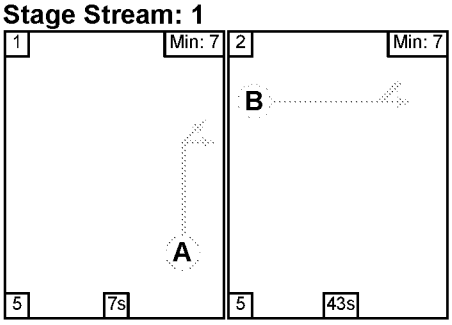
C1 Stream: 1 PRC for Signalled Lanes (%):	52.5	Total Delay for Signalled Lanes (pcuHr):	6.66	Cycle Time (s): 60
C1 Stream: 2 PRC for Signalled Lanes (%):	-3.5	Total Delay for Signalled Lanes (pcuHr):	11.58	Cycle Time (s): 60
PRC Over All Lanes (%):	-4.5	Total Delay Over All Lanes(pcuHr):	26.77	

Full Input Data And Results

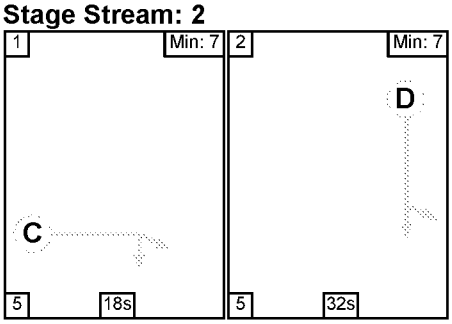
Scenario 4: '2031 PM Base + Dev' (FG4: '2031 PM Base + Dev', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

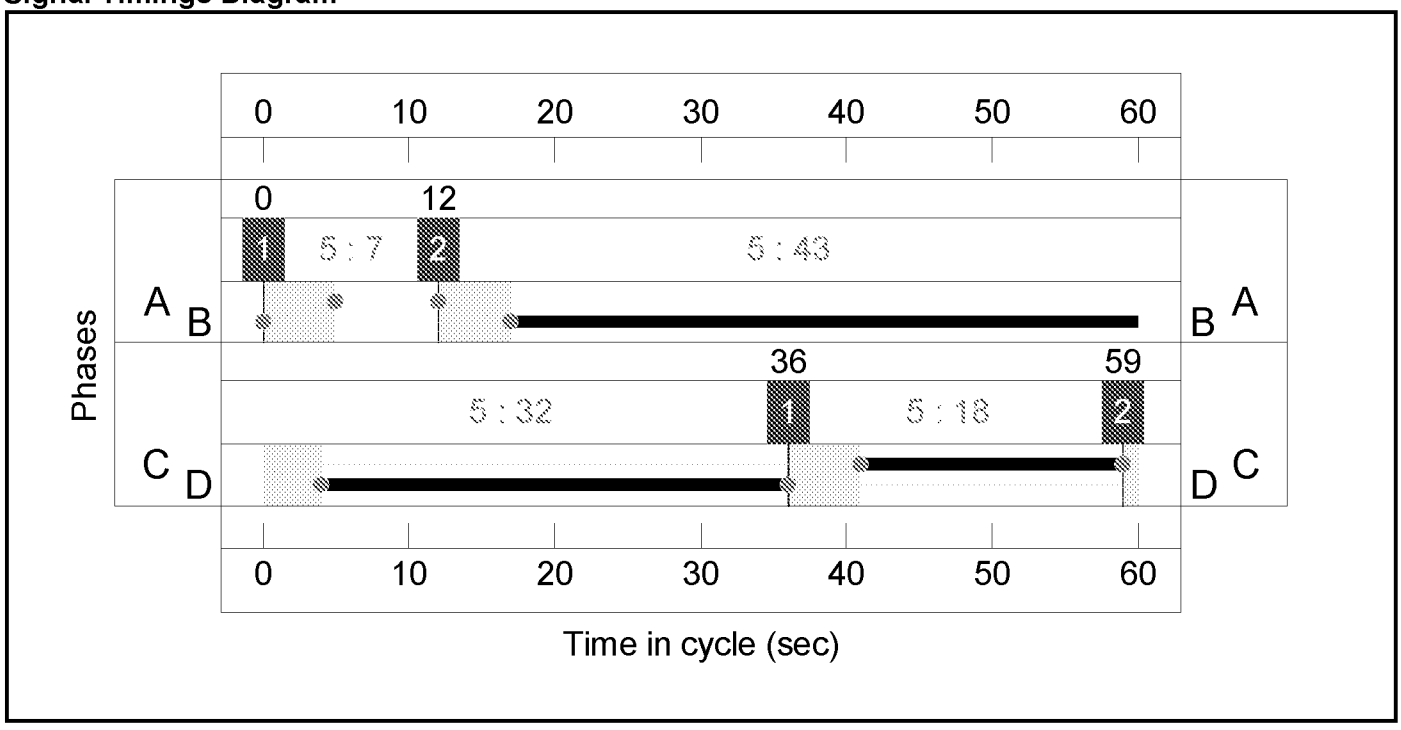
Stage Stream: 1

Stage	1	2
Duration	7	43
Change Point	0	12

Stage Stream: 2

Stage	1	2
Duration	18	32
Change Point	36	59

Signal Timings Diagram

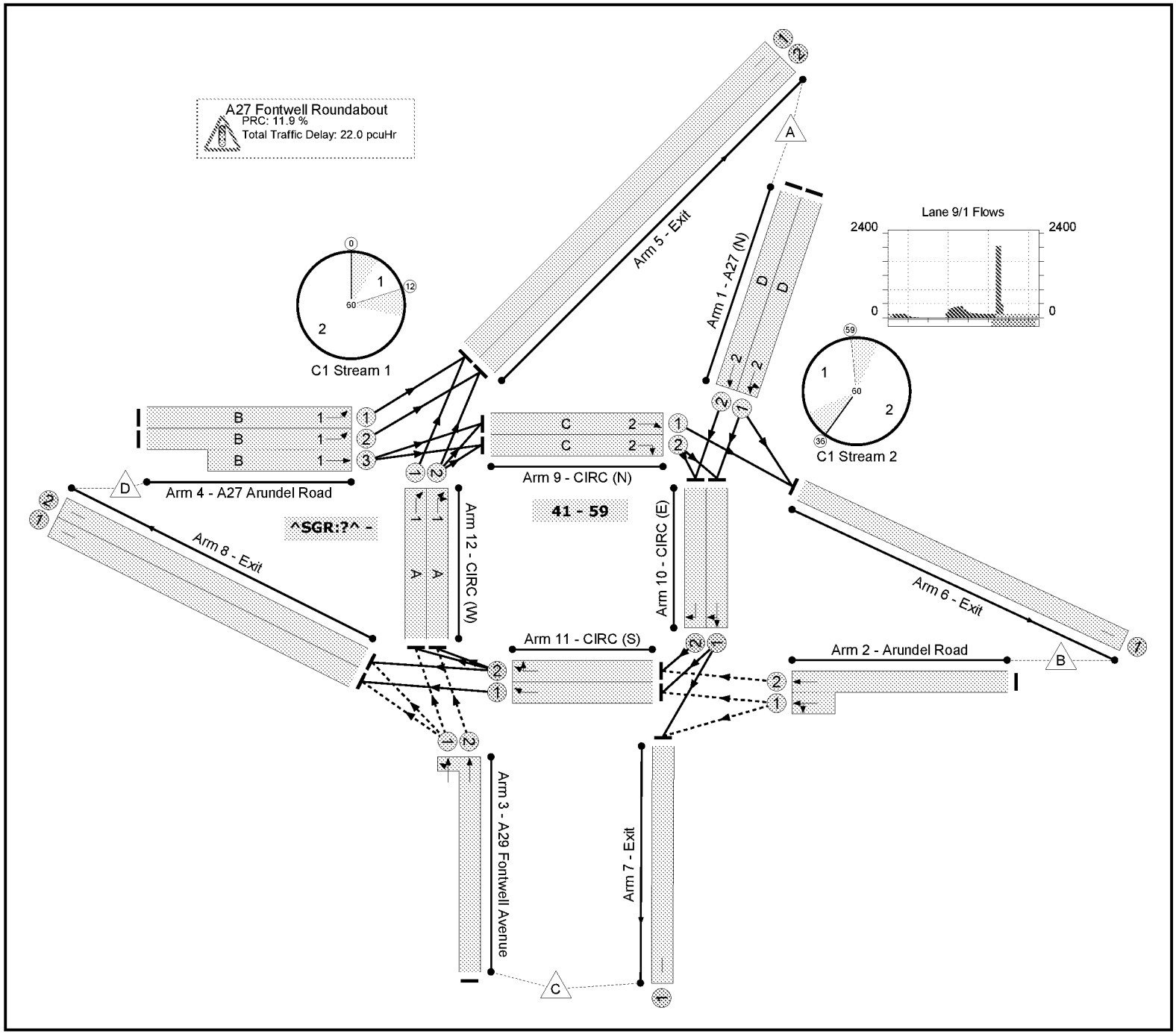


Full Input Data And Results

Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed Signalised Layout	-	-	N/A	-	-		-	-	-	-	-	-	**80.4%**
A27 Fontwell Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	**80.4%**
1/1	A27 (N) Left Ahead	U	2	N/A	D		1	32	-	891	2064	1135	78.5%
1/2	A27 (N) Ahead	U	2	N/A	D		1	32	-	965	2205	1213	79.6%
2/2+2/1	Arundel Road Left Ahead	O	N/A	N/A	-		-	-	-	92	1847:1829	1014	9.1%
3/2+3/1	A29 Fontwell Avenue Left Ahead	O	N/A	N/A	-		-	-	-	425	1904:1809	932	45.6%
4/1	A27 Arundel Road Left	U	1	N/A	B		1	43	-	974	1990	1459	66.7%
4/2+4/3	A27 Arundel Road Left Ahead	U	1	N/A	B		1	43	-	1484	2130:1928	1911	77.7%
5/1	Exit	U	N/A	N/A	-		-	-	-	1095	Inf	Inf	0.0%
5/2	Exit	U	N/A	N/A	-		-	-	-	1020	Inf	Inf	0.0%
6/1	Exit	U	N/A	N/A	-		-	-	-	108	Inf	Inf	0.0%
7/1	Exit	U	N/A	N/A	-		-	-	-	819	Inf	Inf	0.0%
8/1	Exit	U	N/A	N/A	-		-	-	-	697	Inf	Inf	0.0%
8/2	Exit	U	N/A	N/A	-		-	-	-	1094	Inf	Inf	0.0%
9/1	CIRC (N) Ahead	U	2	N/A	C		1	18	-	101	2035	644	15.7%
9/2	CIRC (N) Right	U	2	N/A	C		1	18	-	483	1896	600	80.4%
10/1	CIRC (E) Ahead Right	U	N/A	N/A	-		-	-	-	1369	Inf	Inf	0.0%
10/2	CIRC (E) Right	U	N/A	N/A	-		-	-	-	985	Inf	Inf	0.0%
11/1	CIRC (S) Ahead	U	N/A	N/A	-		-	-	-	605	Inf	Inf	0.0%

Full Input Data And Results

11/2	CIRC (S) Ahead Right	U	N/A	N/A	-		-	-	-	1002	Inf	Inf	0.0%
12/1	CIRC (W) Right	U	1	N/A	A		1	7	-	121	1991	265	45.6%
12/2	CIRC (W) Right Right2	U	1	N/A	A		1	7	-	120	1991	265	45.2%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Proposed Signalised Layout	**-**	**-**	**1034**	**0**	**0**	**12.2**	**9.8**	**0.0**	**22.0**	**-**	**-**	**-**	**-**
A27 Fontwell Roundabout	**-**	**-**	**1034**	**0**	**0**	**12.2**	**9.8**	**0.0**	**22.0**	**-**	**-**	**-**	**-**
1/1	891	891	-	-	-	2.6	1.8	-	4.4	18.0	11.6	1.8	13.4
1/2	965	965	-	-	-	2.9	1.9	-	4.8	18.0	12.9	1.9	14.8
2/2+2/1	92	92	184	0	0	0.0	0.0	-	0.0	2.0	0.0	0.0	0.0
3/2+3/1	425	425	850	0	0	0.2	0.4	-	0.6	4.9	1.4	0.4	1.9
4/1	974	974	-	-	-	1.1	1.0	-	2.1	7.9	8.4	1.0	9.4
4/2+4/3	1484	1484	-	-	-	1.4	1.7	-	3.1	7.6	6.8	1.7	8.5
5/1	1095	1095	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	1020	1020	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	108	108	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	819	819	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	897	897	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	1094	1094	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	101	101	-	-	-	0.3	0.1	-	0.4	15.0	1.2	0.1	1.3
9/2	483	483	-	-	-	2.1	2.0	-	4.1	30.6	7.4	2.0	9.4
10/1	1369	1369	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	965	965	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	605	605	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	1002	1002	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	121	121	-	-	-	0.8	0.4	-	1.2	36.2	1.8	0.4	2.3
12/2	120	120	-	-	-	0.7	0.4	-	1.1	32.0	1.8	0.4	2.2

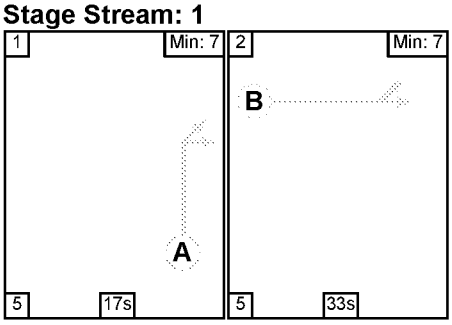
C1 Stream: 1 PRC for Signalled Lanes (%):	15.9	Total Delay for Signalled Lanes (pcuHr):	7.56	Cycle Time (s): 60
C1 Stream: 2 PRC for Signalled Lanes (%):	11.9	Total Delay for Signalled Lanes (pcuHr):	13.78	Cycle Time (s): 60
PRC Over All Lanes (%):	11.9	Total Delay Over All Lanes(pcuHr):	21.97	

Full Input Data And Results

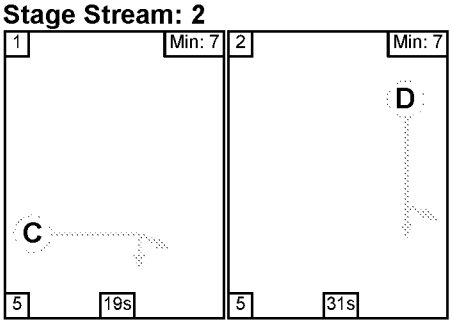
Scenario 5: '2031 AM Base + Dev + BEW' (FG5: '2031 AM Base + Dev + BEW', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

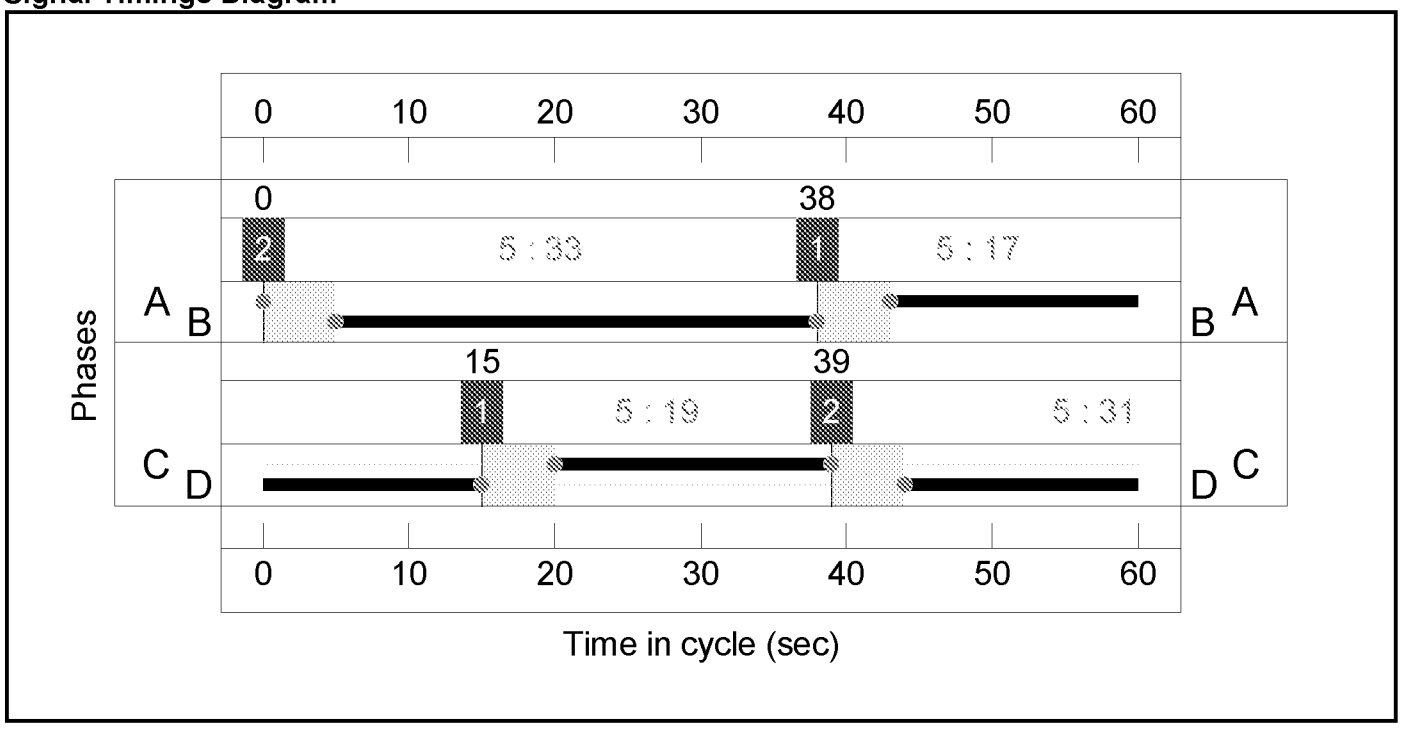
Stage Stream: 1

Stage	1	2
Duration	17	33
Change Point	38	0

Stage Stream: 2

Stage	1	2
Duration	19	31
Change Point	15	39

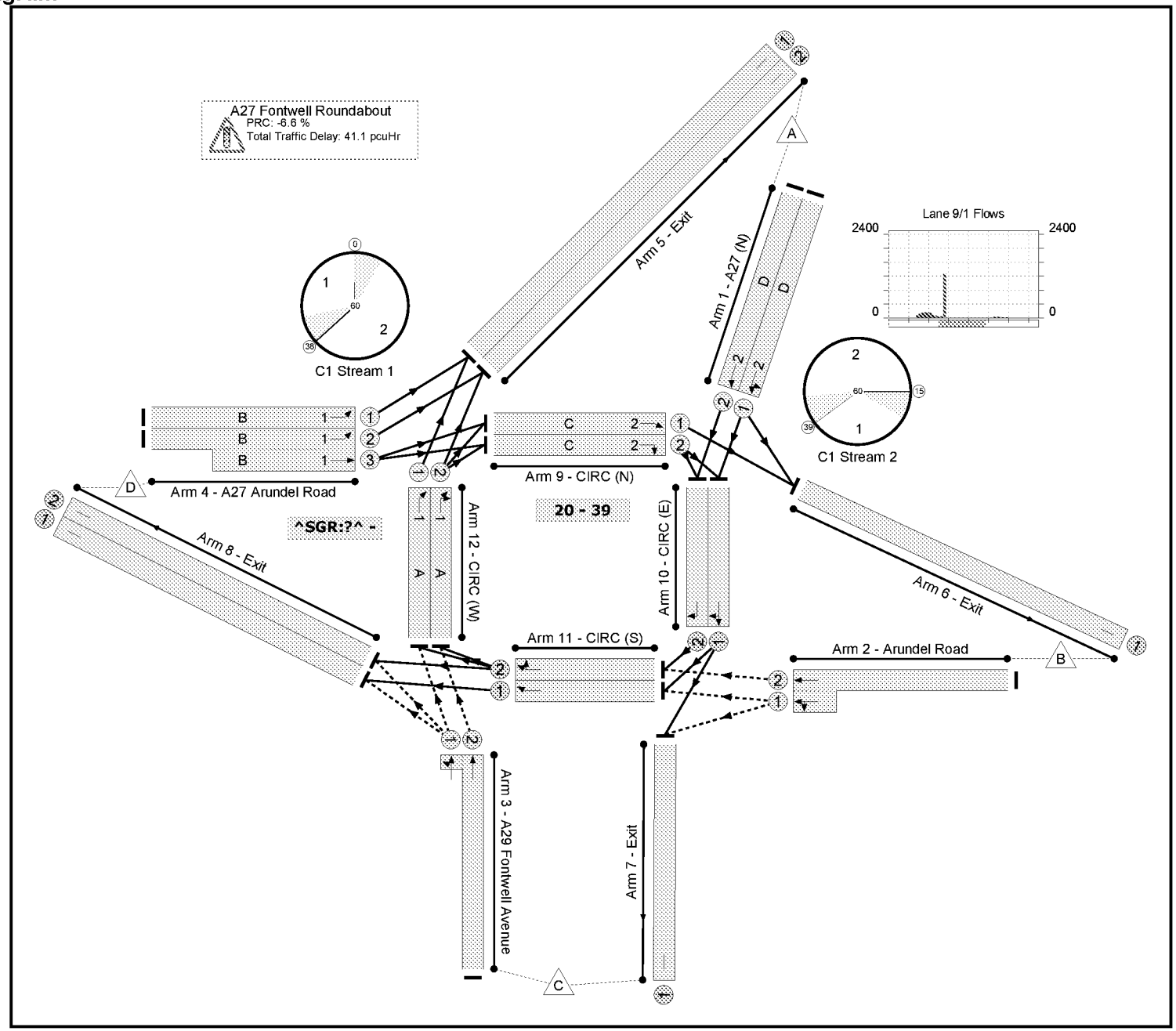
Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed Signalised Layout	-	-	N/A	-	-		-	-	-	-	-	-	**95.9%**
A27 Fontwell Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	**95.9%**
1/1	A27 (N) Left Ahead	U	2	N/A	D		1	31	-	1034	2065	1101	93.9%
1/2	A27 (N) Ahead	U	2	N/A	D		1	31	-	1121	2205	1176	95.3%
2/2+2/1	Arundel Road Left Ahead	O	N/A	N/A	-		-	-	-	129	1847:1847	1260	10.2%
3/2+3/1	A29 Fontwell Avenue Left Ahead	O	N/A	N/A	-		-	-	-	907	1904:1814	945	95.9%
4/1	A27 Arundel Road Left	U	1	N/A	B		1	33	-	509	1990	1128	45.1%
4/2+4/3	A27 Arundel Road Left Ahead	U	1	N/A	B		1	33	-	902	2130:1928	1540	58.6%
5/1	Exit	U	N/A	N/A	-		-	-	-	775	Inf	Inf	0.0%
5/2	Exit	U	N/A	N/A	-		-	-	-	918	Inf	Inf	0.0%
6/1	Exit	U	N/A	N/A	-		-	-	-	31	Inf	Inf	0.0%
7/1	Exit	U	N/A	N/A	-		-	-	-	479	Inf	Inf	0.0%
8/1	Exit	U	N/A	N/A	-		-	-	-	1074	Inf	Inf	0.0%
8/2	Exit	U	N/A	N/A	-		-	-	-	1333	Inf	Inf	0.0%
9/1	CIRC (N) Ahead	U	2	N/A	C		1	19	-	31	2035	678	4.6%
9/2	CIRC (N) Right	U	2	N/A	C		1	19	-	307	1896	632	48.6%
10/1	CIRC (E) Ahead Right	U	N/A	N/A	-		-	-	-	1341	Inf	Inf	0.0%
10/2	CIRC (E) Right	U	N/A	N/A	-		-	-	-	1121	Inf	Inf	0.0%
11/1	CIRC (S) Ahead	U	N/A	N/A	-		-	-	-	927	Inf	Inf	0.0%

Full Input Data And Results

11/2	CIRC (S) Ahead Right	U	N/A	N/A	-		-	-	-	1185	Inf	Inf	0.0%
12/1	CIRC (W) Right	U	1	N/A	A		1	17	-	266	1991	597	44.5%
12/2	CIRC (W) Right Right2	U	1	N/A	A		1	17	-	346	1991	597	57.9%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Proposed Signalised Layout	**-**	**-**	**2072**	**0**	**0**	**15.7**	**25.4**	**0.0**	**41.1**	**-**	**-**	**-**	**-**
A27 Fontwell Roundabout	**-**	**-**	**2072**	**0**	**0**	**15.7**	**25.4**	**0.0**	**41.1**	**-**	**-**	**-**	**-**
1/1	1034	1034	-	-	-	3.8	6.4	-	10.2	35.5	16.1	6.4	22.5
1/2	1121	1121	-	-	-	4.1	7.9	-	12.1	38.7	17.4	7.9	25.4
2/2+2/1	129	129	258	0	0	0.0	0.1	-	0.1	1.6	0.0	0.1	0.1
3/2+3/1	907	907	1814	0	0	2.9	8.2	-	11.1	44.1	12.8	8.2	21.1
4/1	509	509	-	-	-	1.1	0.4	-	1.5	10.5	4.8	0.4	5.2
4/2+4/3	902	902	-	-	-	1.8	0.7	-	2.5	10.2	5.5	0.7	6.2
5/1	775	775	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	910	910	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	31	31	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	479	479	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	1074	1074	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	1333	1333	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	31	31	-	-	-	0.1	0.0	-	0.1	9.6	0.3	0.0	0.4
9/2	307	307	-	-	-	0.8	0.5	-	1.2	14.6	4.0	0.5	4.8
10/1	1341	1341	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	1121	1121	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	927	927	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	1165	1165	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	266	266	-	-	-	0.7	0.4	-	1.1	15.0	2.8	0.4	3.2
12/2	346	346	-	-	-	0.5	0.7	-	1.2	12.1	4.2	0.7	4.8

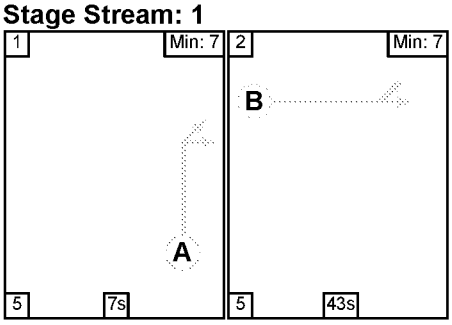
C1 Stream: 1 PRC for Signalled Lanes (%):	53.7	Total Delay for Signalled Lanes (pcuHr):	6.31	Cycle Time (s): 60
C1 Stream: 2 PRC for Signalled Lanes (%):	-5.9	Total Delay for Signalled Lanes (pcuHr):	23.58	Cycle Time (s): 60
PRC Over All Lanes (%):	-6.6	Total Delay Over All Lanes(pcuHr):	41.05	

Full Input Data And Results

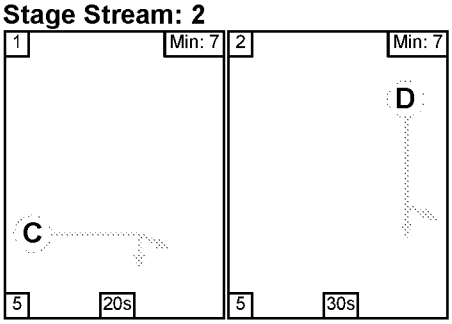
Scenario 6: '2031 PM Base + Dev + BEW' (FG6: '2031 PM Base + Dev + BEW', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

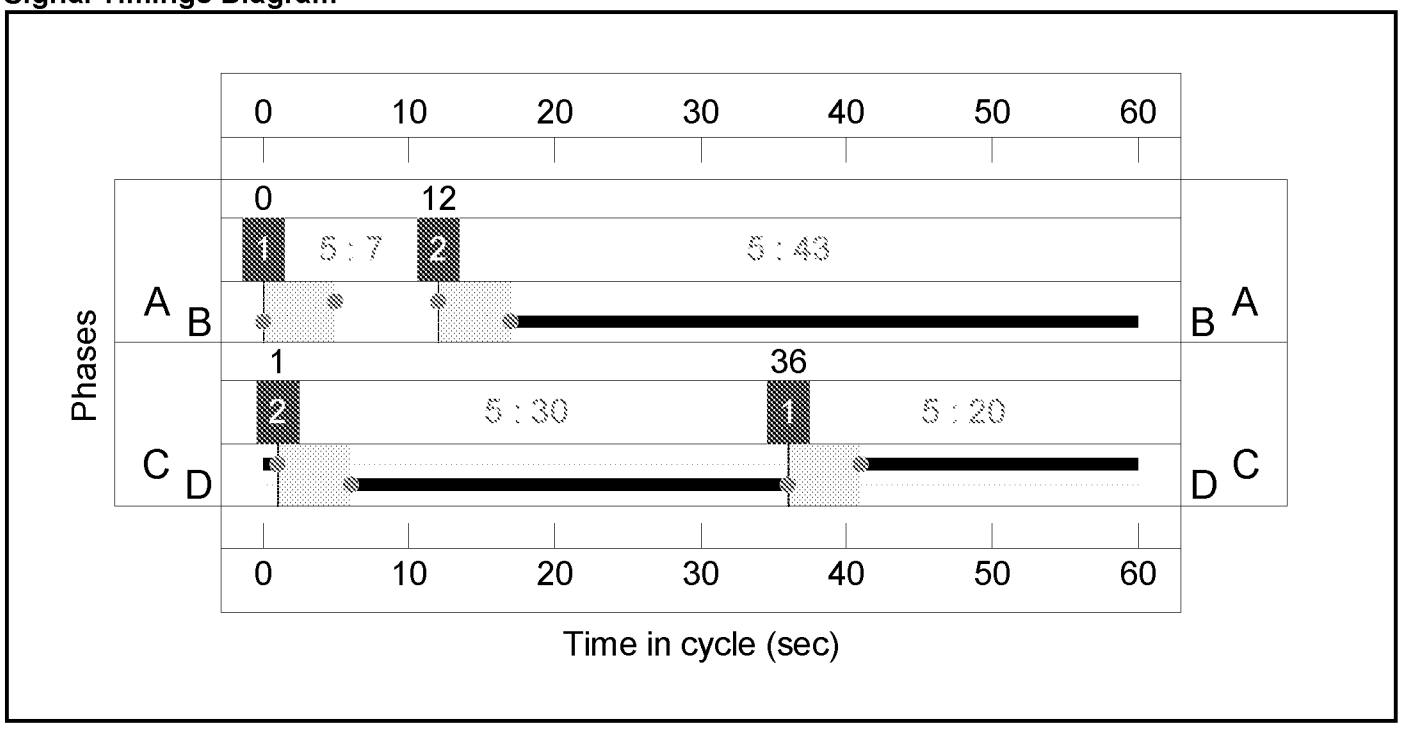
Stage Stream: 1

Stage	1	2
Duration	7	43
Change Point	0	12

Stage Stream: 2

Stage	1	2
Duration	20	30
Change Point	36	1

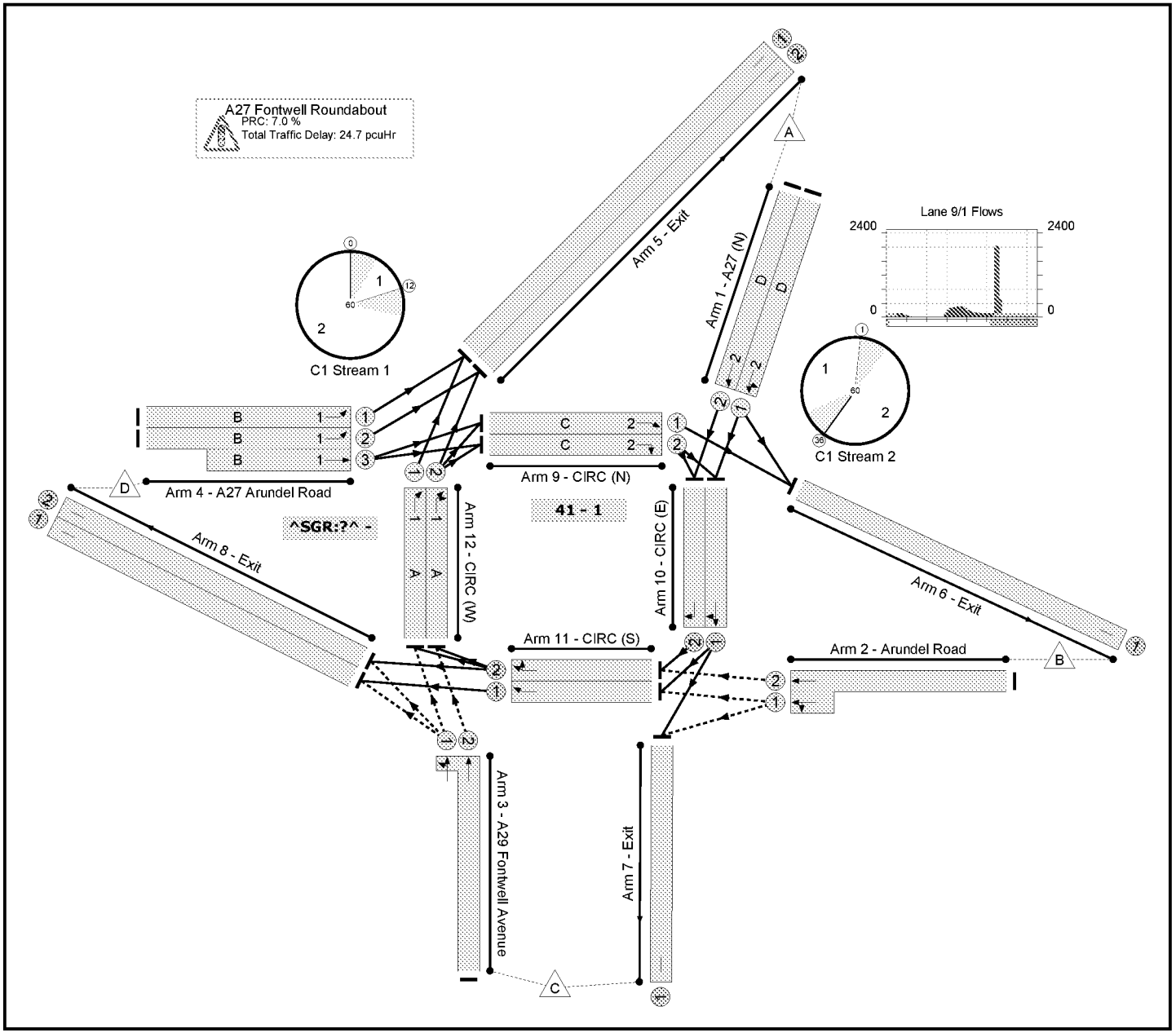
Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed Signalised Layout	-	-	N/A	-	-		-	-	-	-	-	-	**84.1%**
A27 Fontwell Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	**84.1%**
1/1	A27 (N) Left Ahead	U	2	N/A	D		1	30	-	875	2065	1067	82.0%
1/2	A27 (N) Ahead	U	2	N/A	D		1	30	-	945	2205	1139	82.9%
2/2+2/1	Arundel Road Left Ahead	O	N/A	N/A	-		-	-	-	75	1847:1847	1376	5.5%
3/2+3/1	A29 Fontwell Avenue Left Ahead	O	N/A	N/A	-		-	-	-	431	1904:1812	977	44.1%
4/1	A27 Arundel Road Left	U	1	N/A	B		1	43	-	980	1990	1459	67.2%
4/2+4/3	A27 Arundel Road Left Ahead	U	1	N/A	B		1	43	-	1553	2130:1928	1970	78.9%
5/1	Exit	U	N/A	N/A	-		-	-	-	1114	Inf	Inf	0.0%
5/2	Exit	U	N/A	N/A	-		-	-	-	1019	Inf	Inf	0.0%
6/1	Exit	U	N/A	N/A	-		-	-	-	109	Inf	Inf	0.0%
7/1	Exit	U	N/A	N/A	-		-	-	-	858	Inf	Inf	0.0%
8/1	Exit	U	N/A	N/A	-		-	-	-	697	Inf	Inf	0.0%
8/2	Exit	U	N/A	N/A	-		-	-	-	1064	Inf	Inf	0.0%
9/1	CIRC (N) Ahead	U	2	N/A	C		1	20	-	109	2035	712	15.3%
9/2	CIRC (N) Right	U	2	N/A	C		1	20	-	558	1896	664	84.1%
10/1	CIRC (E) Ahead Right	U	N/A	N/A	-		-	-	-	1433	Inf	Inf	0.0%
10/2	CIRC (E) Right	U	N/A	N/A	-		-	-	-	945	Inf	Inf	0.0%
11/1	CIRC (S) Ahead	U	N/A	N/A	-		-	-	-	615	Inf	Inf	0.0%

Full Input Data And Results

11/2	CIRC (S) Ahead Right	U	N/A	N/A	-		-	-	-	952	Inf	Inf	0.0%
12/1	CIRC (W) Right	U	1	N/A	A		1	7	-	134	1991	265	50.5%
12/2	CIRC (W) Right Right2	U	1	N/A	A		1	7	-	133	1991	265	50.1%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Proposed Signalised Layout	**-**	**-**	**1012**	**0**	**0**	**13.2**	**11.5**	**0.0**	**24.7**	**-**	**-**	**-**	**-**
A27 Fontwell Roundabout	**-**	**-**	**1012**	**0**	**0**	**13.2**	**11.5**	**0.0**	**24.7**	**-**	**-**	**-**	**-**
1/1	875	875	-	-	-	3.0	2.2	-	5.2	21.3	12.2	2.2	14.4
1/2	945	945	-	-	-	3.2	2.4	-	5.6	21.3	13.1	2.4	15.5
2/2+2/1	75	75	150	0	0	0.0	0.0	-	0.0	1.4	0.0	0.0	0.0
3/2+3/1	431	431	862	0	0	0.2	0.4	-	0.6	5.0	1.4	0.4	1.8
4/1	980	980	-	-	-	1.1	1.0	-	2.2	7.9	8.4	1.0	9.5
4/2+4/3	1553	1553	-	-	-	1.5	1.8	-	3.4	7.8	6.6	1.8	8.5
5/1	1114	1114	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	1019	1019	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	109	109	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	856	856	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	897	897	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	1064	1064	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	109	109	-	-	-	0.3	0.1	-	0.4	13.1	1.2	0.1	1.3
9/2	558	558	-	-	-	2.3	2.5	-	4.8	31.0	8.5	2.5	11.0
10/1	1433	1433	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	945	945	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	615	615	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	982	982	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	134	134	-	-	-	0.9	0.5	-	1.4	37.6	2.0	0.5	2.6
12/2	133	133	-	-	-	0.7	0.5	-	1.2	32.7	2.0	0.5	2.5

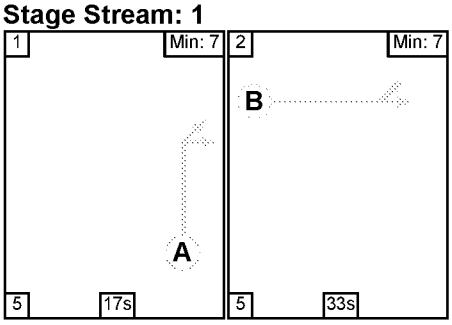
C1 Stream: 1 PRC for Signalled Lanes (%): 14.1 Total Delay for Signalled Lanes (pcuHr): 8.12 Cycle Time (s): 60
C1 Stream: 2 PRC for Signalled Lanes (%): 7.0 Total Delay for Signalled Lanes (pcuHr): 15.98 Cycle Time (s): 60
PRC Over All Lanes (%): 7.0 Total Delay Over All Lanes(pcuHr): 24.72

Full Input Data And Results

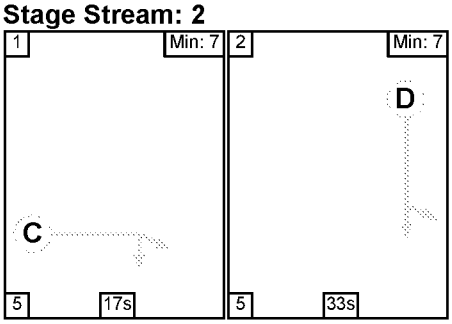
Scenario 7: '2038 AM Base + Dev + BEW' (FG7: '2038 AM Base + Dev + BEW', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

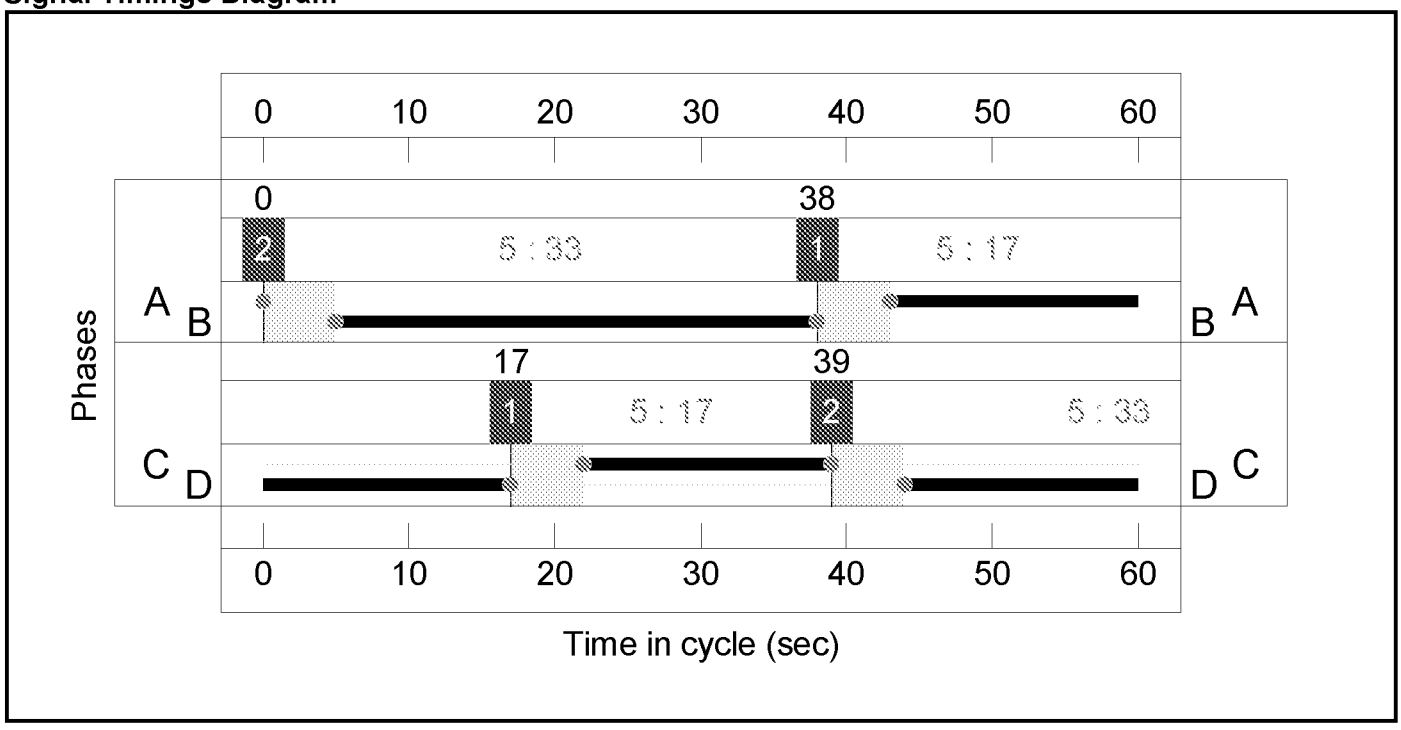
Stage Stream: 1

Stage	1	2
Duration	17	33
Change Point	38	0

Stage Stream: 2

Stage	1	2
Duration	17	33
Change Point	17	39

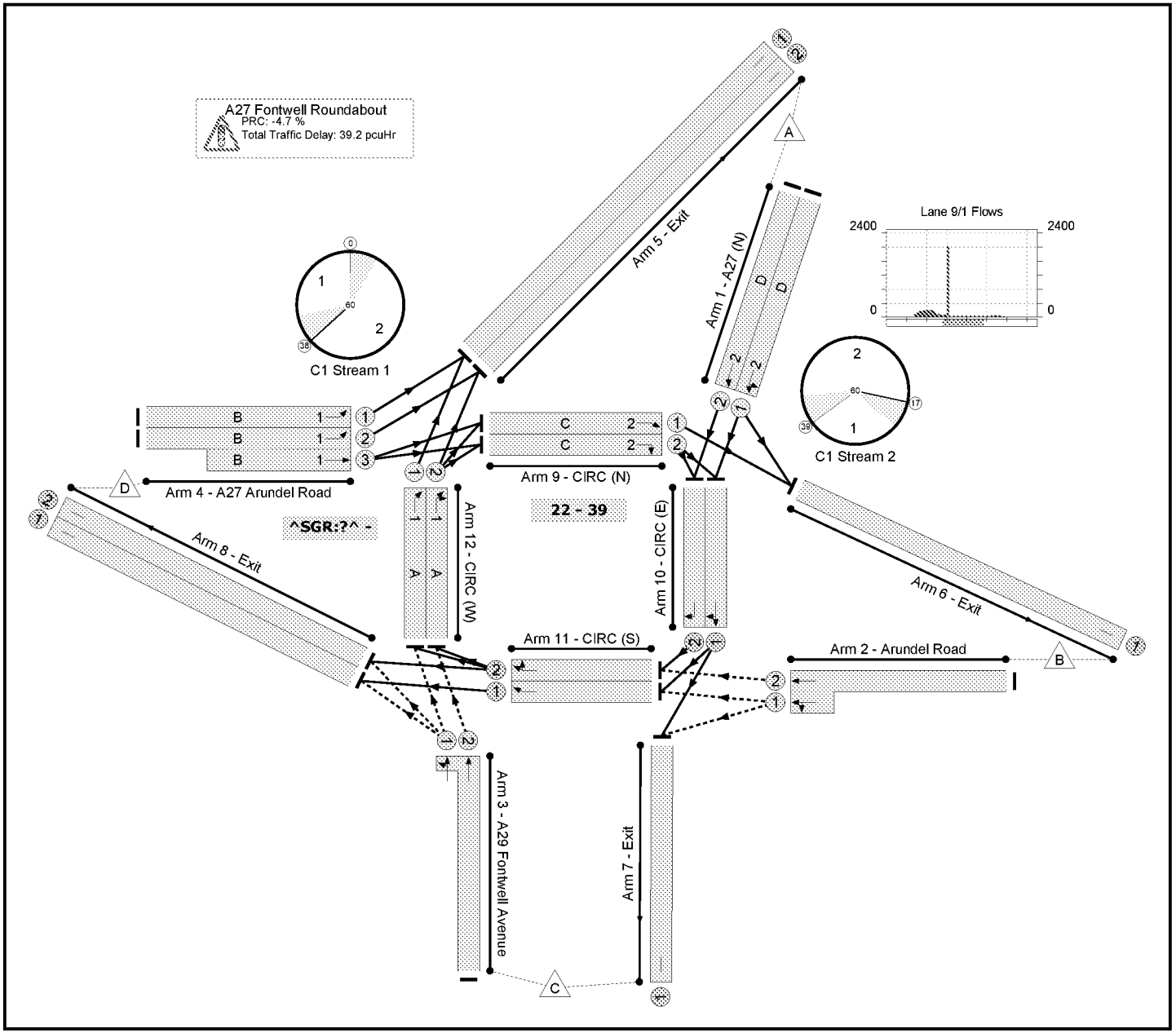
Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed Signalised Layout	-	-	N/A	-	-		-	-	-	-	-	-	**94.2%**
A27 Fontwell Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	**94.2%**
1/1	A27 (N) Left Ahead	U	2	N/A	D		1	33	-	1092	2065	1170	93.3%
1/2	A27 (N) Ahead	U	2	N/A	D		1	33	-	1171	2205	1249	93.7%
2/2+2/1	Arundel Road Left Ahead	O	N/A	N/A	-		-	-	-	142	1847:1847	1131	12.6%
3/2+3/1	A29 Fontwell Avenue Left Ahead	O	N/A	N/A	-		-	-	-	859	1904:1826	912	94.2%
4/1	A27 Arundel Road Left	U	1	N/A	B		1	33	-	535	1990	1128	47.4%
4/2+4/3	A27 Arundel Road Left Ahead	U	1	N/A	B		1	33	-	1028	2130:1928	1632	63.0%
5/1	Exit	U	N/A	N/A	-		-	-	-	887	Inf	Inf	0.0%
5/2	Exit	U	N/A	N/A	-		-	-	-	946	Inf	Inf	0.0%
6/1	Exit	U	N/A	N/A	-		-	-	-	48	Inf	Inf	0.0%
7/1	Exit	U	N/A	N/A	-		-	-	-	581	Inf	Inf	0.0%
8/1	Exit	U	N/A	N/A	-		-	-	-	1060	Inf	Inf	0.0%
8/2	Exit	U	N/A	N/A	-		-	-	-	1325	Inf	Inf	0.0%
9/1	CIRC (N) Ahead	U	2	N/A	C		1	17	-	47	2035	610	7.7%
9/2	CIRC (N) Right	U	2	N/A	C		1	17	-	396	1896	569	69.6%
10/1	CIRC (E) Ahead Right	U	N/A	N/A	-		-	-	-	1487	Inf	Inf	0.0%
10/2	CIRC (E) Right	U	N/A	N/A	-		-	-	-	1171	Inf	Inf	0.0%
11/1	CIRC (S) Ahead	U	N/A	N/A	-		-	-	-	971	Inf	Inf	0.0%

Full Input Data And Results

11/2	CIRC (S) Ahead Right	U	N/A	N/A	-		-	-	-	1248	Inf	Inf	0.0%
12/1	CIRC (W) Right	U	1	N/A	A		1	17	-	332	1991	597	55.6%
12/2	CIRC (W) Right Right2	U	1	N/A	A		1	17	-	361	1991	597	60.4%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Proposed Signalised Layout	**-**	**-**	**2002**	**0**	**0**	**16.3**	**22.9**	**0.0**	**39.2**	**-**	**-**	**-**	**-**
A27 Fontwell Roundabout	**-**	**-**	**2002**	**0**	**0**	**16.3**	**22.9**	**0.0**	**39.2**	**-**	**-**	**-**	**-**
1/1	1092	1092	-	-	-	3.6	6.0	-	9.7	31.9	16.7	6.0	22.7
1/2	1171	1171	-	-	-	3.9	6.4	-	10.3	31.7	17.9	6.4	24.3
2/2+2/1	142	142	284	0	0	0.0	0.1	-	0.1	1.8	0.0	0.1	0.1
3/2+3/1	859	859	1718	0	0	2.9	6.5	-	9.4	39.3	11.7	6.5	18.3
4/1	535	535	-	-	-	1.1	0.5	-	1.6	10.7	5.2	0.5	5.7
4/2+4/3	1028	1028	-	-	-	2.2	0.8	-	3.0	10.5	5.7	0.8	6.5
5/1	867	867	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	948	948	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	48	48	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	581	581	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	1060	1060	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	1325	1325	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	47	47	-	-	-	0.1	0.0	-	0.1	10.9	0.5	0.0	0.6
9/2	396	396	-	-	-	1.2	1.1	-	2.4	21.5	5.8	1.1	7.0
10/1	1487	1487	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	1171	1171	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	971	971	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	1248	1248	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	332	332	-	-	-	0.9	0.6	-	1.5	16.2	3.5	0.6	4.1
12/2	361	361	-	-	-	0.4	0.8	-	1.2	11.5	4.0	0.8	4.8

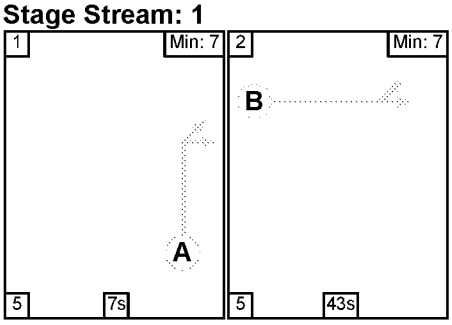
C1 Stream: 1 PRC for Signalled Lanes (%): 42.9 Total Delay for Signalled Lanes (pcuHr): 7.26 Cycle Time (s): 60
C1 Stream: 2 PRC for Signalled Lanes (%): -4.1 Total Delay for Signalled Lanes (pcuHr): 22.51 Cycle Time (s): 60
PRC Over All Lanes (%): -4.7 Total Delay Over All Lanes(pcuHr): 39.22

Full Input Data And Results

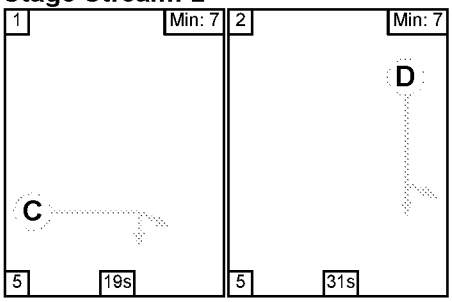
Scenario 8: '2038 PM Base + Dev + BEW' (FG8: '2038 PM Base + Dev + BEW', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

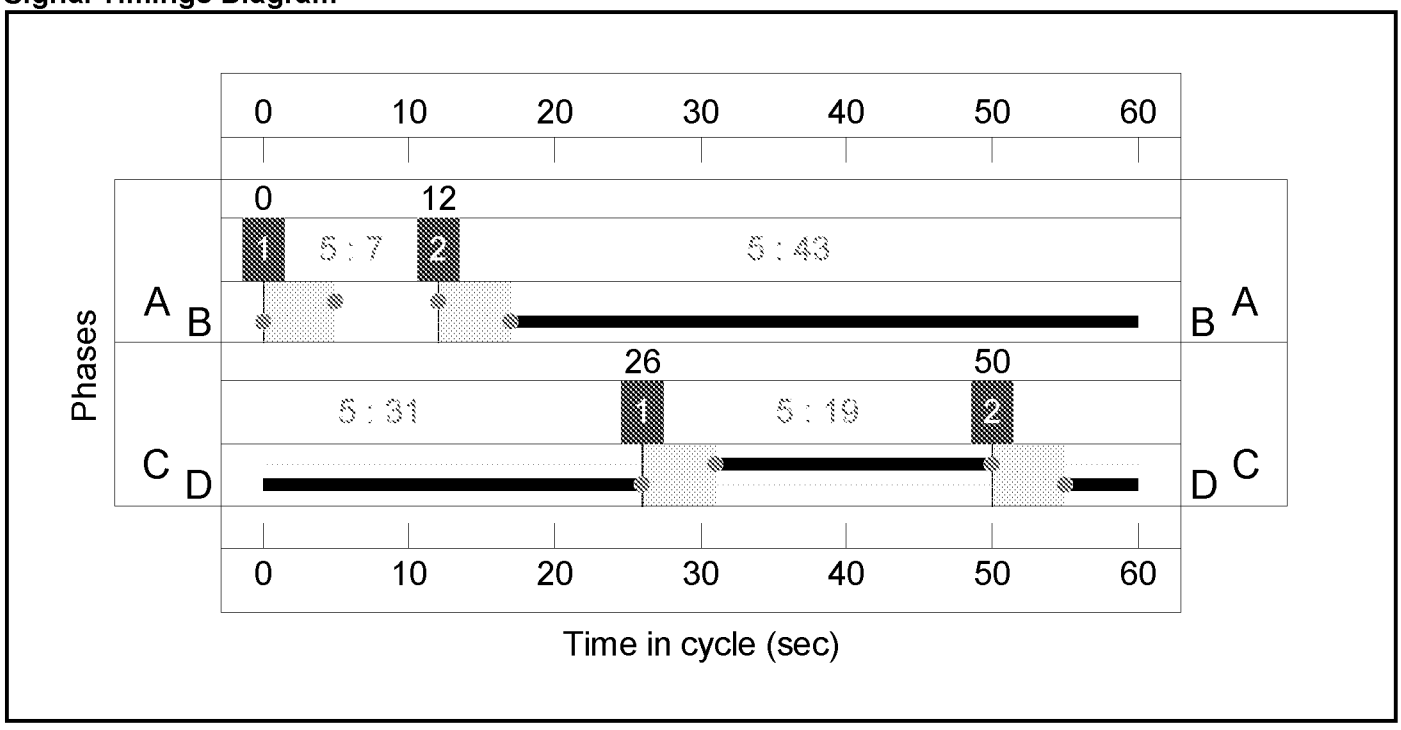
Stage Stream: 1

Stage	1	2
Duration	7	43
Change Point	0	12

Stage Stream: 2

Stage	1	2
Duration	19	31
Change Point	26	50

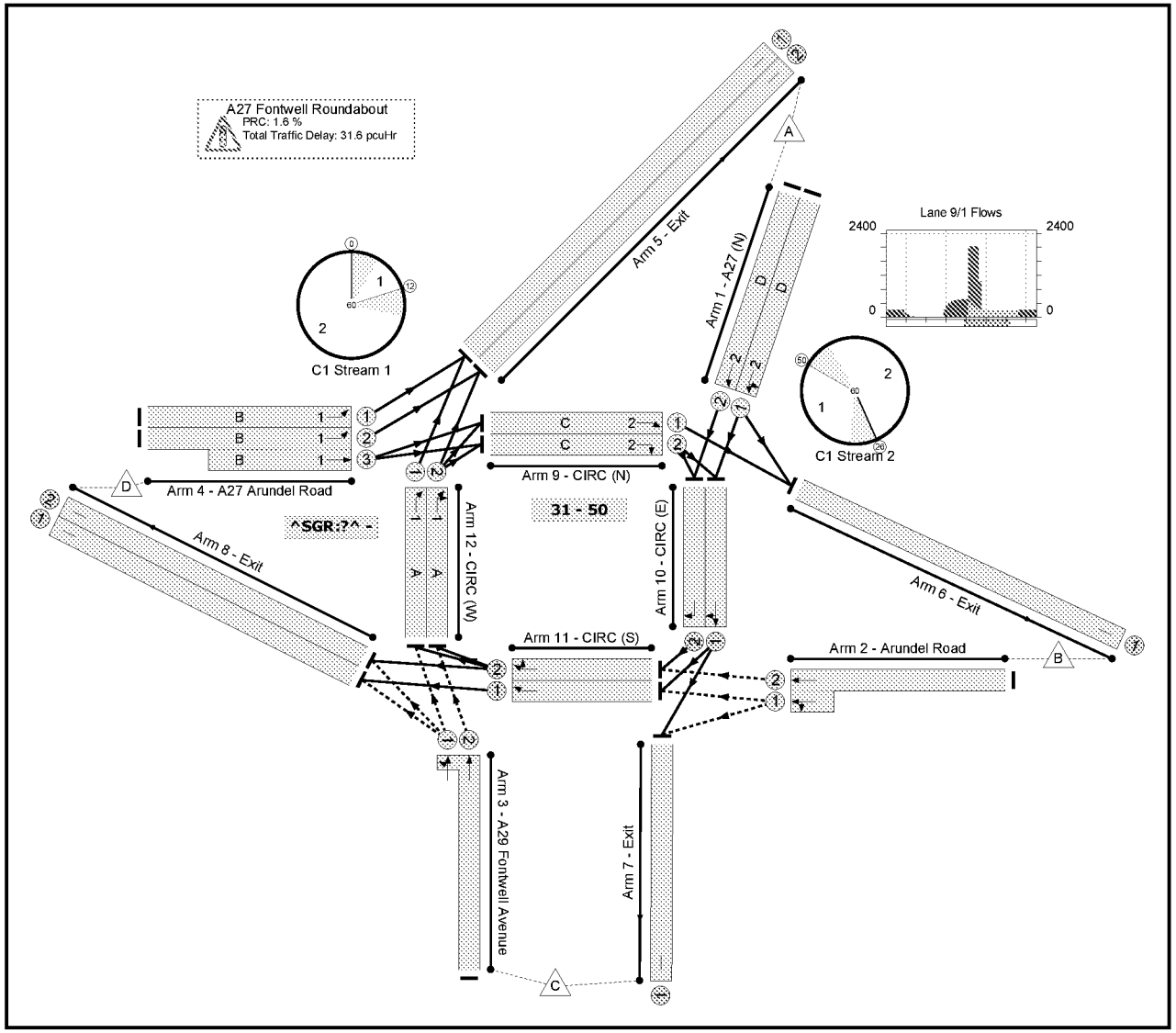
Signal Timings Diagram



Full Input Data And Results

Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed Signalised Layout	-	-	N/A	-	-		-	-	-	-	-	-	**88.6%**
A27 Fontwell Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	**88.6%**
1/1	A27 (N) Left Ahead	U	2	N/A	D		1	31	-	963	2065	1101	87.4%
1/2	A27 (N) Ahead	U	2	N/A	D		1	31	-	1038	2205	1176	88.3%
2/2+2/1	Arundel Road Left Ahead	O	N/A	N/A	-		-	-	-	91	1847:1847	1314	6.9%
3/2+3/1	A29 Fontwell Avenue Left Ahead	O	N/A	N/A	-		-	-	-	528	1904:1812	929	56.8%
4/1	A27 Arundel Road Left	U	1	N/A	B		1	43	-	1035	1990	1459	70.9%
4/2+4/3	A27 Arundel Road Left Ahead	U	1	N/A	B		1	43	-	1665	2130:1928	2024	82.3%
5/1	Exit	U	N/A	N/A	-		-	-	-	1199	Inf	Inf	0.0%
5/2	Exit	U	N/A	N/A	-		-	-	-	1063	Inf	Inf	0.0%
6/1	Exit	U	N/A	N/A	-		-	-	-	205	Inf	Inf	0.0%
7/1	Exit	U	N/A	N/A	-		-	-	-	899	Inf	Inf	0.0%
8/1	Exit	U	N/A	N/A	-		-	-	-	770	Inf	Inf	0.0%
8/2	Exit	U	N/A	N/A	-		-	-	-	1184	Inf	Inf	0.0%
9/1	CIRC (N) Ahead	U	2	N/A	C		1	19	-	205	2035	678	30.2%
9/2	CIRC (N) Right	U	2	N/A	C		1	19	-	560	1896	632	88.6%
10/1	CIRC (E) Ahead Right	U	N/A	N/A	-		-	-	-	1523	Inf	Inf	0.0%
10/2	CIRC (E) Right	U	N/A	N/A	-		-	-	-	1038	Inf	Inf	0.0%
11/1	CIRC (S) Ahead	U	N/A	N/A	-		-	-	-	670	Inf	Inf	0.0%

Full Input Data And Results

11/2	CIRC (S) Ahead Right	U	N/A	N/A	-		-	-	-	1083	Inf	Inf	0.0%
12/1	CIRC (W) Right	U	1	N/A	A		1	7	-	164	1991	265	61.8%
12/2	CIRC (W) Right Right2	U	1	N/A	A		1	7	-	163	1991	265	61.4%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Proposed Signalised Layout	**-**	**-**	**1238**	**0**	**0**	**15.1**	**16.4**	**0.0**	**31.6**	**-**	**-**	**-**	**-**
A27 Fontwell Roundabout	**-**	**-**	**1238**	**0**	**0**	**15.1**	**16.4**	**0.0**	**31.6**	**-**	**-**	**-**	**-**
1/1	963	963	-	-	-	3.3	3.3	-	6.6	24.7	13.9	3.3	17.2
1/2	1038	1038	-	-	-	3.6	3.6	-	7.1	24.7	15.0	3.6	18.6
2/2+2/1	91	91	182	0	0	0.0	0.0	-	0.0	1.5	0.0	0.0	0.0
3/2+3/1	528	528	1056	0	0	0.5	0.7	-	1.1	7.6	2.9	0.7	3.6
4/1	1035	1035	-	-	-	1.3	1.2	-	2.5	8.7	9.5	1.2	10.7
4/2+4/3	1665	1665	-	-	-	1.7	2.3	-	4.0	8.6	6.8	2.3	9.0
5/1	1199	1199	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	1063	1063	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	205	205	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	899	899	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	770	770	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	1184	1184	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	205	205	-	-	-	0.6	0.2	-	0.9	15.1	2.5	0.2	2.7
9/2	560	560	-	-	-	2.4	3.5	-	5.9	38.1	8.7	3.5	12.3
10/1	1523	1523	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	1038	1038	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	670	670	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	1083	1083	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	164	164	-	-	-	1.1	0.8	-	1.9	40.7	2.6	0.8	3.3
12/2	163	163	-	-	-	0.8	0.8	-	1.6	34.8	2.5	0.8	3.3

C1 Stream: 1 PRC for Signalled Lanes (%):	9.4	Total Delay for Signalled Lanes (pcuHr):	9.89	Cycle Time (s): 60
C1 Stream: 2 PRC for Signalled Lanes (%):	1.6	Total Delay for Signalled Lanes (pcuHr):	20.53	Cycle Time (s): 60
PRC Over All Lanes (%):	1.6	Total Delay Over All Lanes(pcuHr):	31.56	

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.0.1.1519
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Filename: 4-A27 Nyton Road 2016 including Dev.j10
Path: \\uksou1ser01\Projects\70013258 - Land at Westergate -Cala Homes\D Design and Analysis\Transport\2022 TA\01092023_Updated Files\Junction Models_Updated\Revised Geometry
Report generation date: 13/06/2024 09:38:06

»A27 Nyton Road - 2019 Base, AM
»A27 Nyton Road - 2019 Base, PM
»A27 Nyton Road - 2031 DM, AM
»A27 Nyton Road - 2031 DM, PM
»A27 Nyton Road - 2031 Base+Dev+BEW, AM
»A27 Nyton Road - 2031 Base+Dev+BEW, PM
»A27 Nyton Road - 2031 Base+Dev+BEW [D9], AM
»A27 Nyton Road - 2031 Base+Dev+BEW [D10], PM
»A27 Nyton Road - 2038 Base+Dev+BEW, AM
»A27 Nyton Road - 2038 Base+Dev+BEW, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
A27 Nyton Road - 2019 Base										
Stream B-AC	D1	0.2	0.82	0.14	A	D2	0.0	0.74	0.04	A
Stream C-B		0.8	16.42	0.43	C		2.6	26.90	0.72	D
A27 Nyton Road - 2031 DM										
Stream B-AC	D3	0.2	0.82	0.14	A	D4	0.1	0.79	0.08	A
Stream C-B		0.8	16.15	0.43	C		2.8	25.11	0.68	D
A27 Nyton Road - 2031 Base+Dev+BEW										
Stream B-AC	D7	0.2	0.84	0.16	A	D8	0.1	0.76	0.08	A
Stream C-B		0.9	19.53	0.47	C		3.5	37.33	0.79	E
A27 Nyton Road - 2031 Base+Dev+BEW [D9]										
Stream B-AC	D9	0.2	0.84	0.16	A					
Stream C-B		0.9	19.53	0.47	C					
A27 Nyton Road - 2031 Base+Dev+BEW [D10]										
Stream B-AC						D10	0.1	0.76	0.08	A
Stream C-B							2.9	32.15	0.76	D
A27 Nyton Road - 2038 Base+Dev+BEW										
Stream B-AC	D11	0.3	0.90	0.23	A	D12	0.1	0.79	0.11	A
Stream C-B		1.1	21.52	0.52	C		3.6	38.63	0.79	E

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

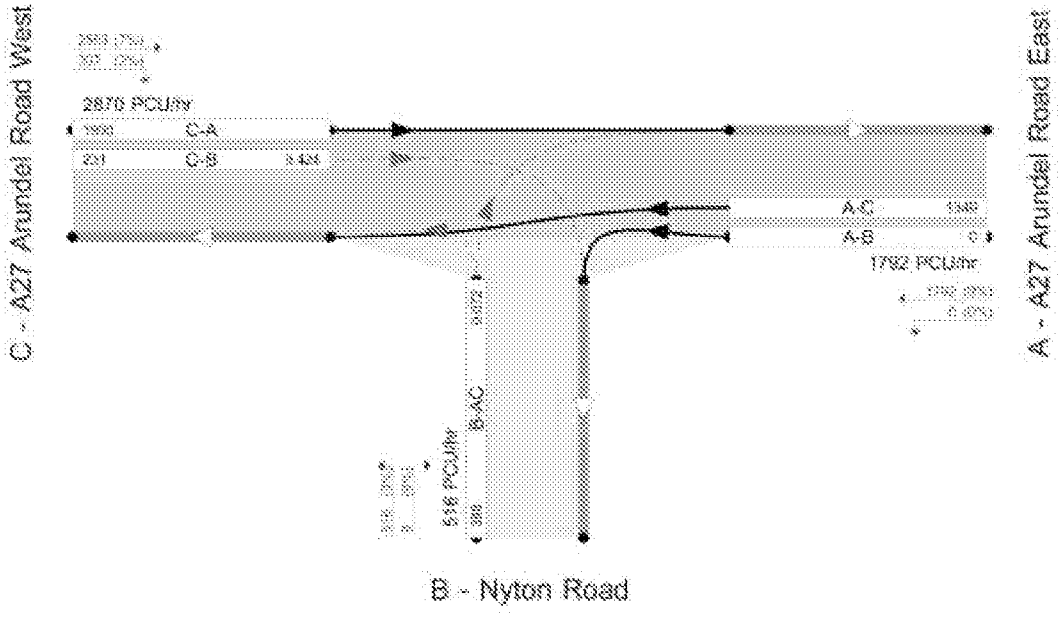
File summary

File Description

Title	A27 Nyton Road
Location	
Site number	
Date	23/03/2012
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Base	AM	AM Peak	ONE HOUR	07:15	09:45	15	✓
D2	2019 Base	PM	PM Peak	ONE HOUR	16:30	19:00	15	✓
D3	2031 DM	AM	AM Peak	ONE HOUR	07:15	09:45	15	✓
D4	2031 DM	PM	PM Peak	ONE HOUR	16:30	19:00	15	✓
D7	2031 Base+Dev+BEW	AM	AM Peak	ONE HOUR	07:15	09:45	15	✓
D8	2031 Base+Dev+BEW	PM	PM Peak	ONE HOUR	16:30	19:00	15	✓
D9	2031 Base+Dev+BEW [D5]	AM	AM Peak	ONE HOUR	07:15	09:45	15	✓
D10	2031 Base+Dev+BEW [D10]	PM	PM Peak	ONE HOUR	16:30	19:00	15	✓
D11	2038 Base+Dev+BEW	AM	AM Peak	ONE HOUR	07:15	09:45	15	✓
D12	2038 Base+Dev+BEW	PM	PM Peak	ONE HOUR	16:30	19:00	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	A27 Nyton Road	✓	100.000	100.000

A27 Nyton Road - 2019 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.75	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.75	A

Arms

Arms

Arm	Name	Description	Arm type
A	A27 Arundel Road East		Major
B	Nyton Road		Minor
C	A27 Arundel Road West		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - A27 Arundel Road West	16.73	✓	8.38	✓	4.07	200.0		-

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 (m)	Visibility to left (m)	Visibility to right (m)
B - Nyton Road	One lane	4.88	150	167

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	864	0.378	0.193	0.122	0.276
B-C	865	0.378	0.193	-	-
C-B	830	0.185	0.185	-	-

The slopes and intercepts shown above include Custom intercept adjustments only.

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.

Stream Intercept Adjustments

Stream intercept adjustment	Use adjustment	Reason	Direct intercept adjustment (PCU/hr)
B-AC	✓	(PICADY 9 CT19 Import)	4000
C-B	✓		-35

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2019 Base	AM	AM Peak	ONE HOUR	07:15	09:45	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	Average Demand (PCU/hr)	Scaling Factor (%)
A - A27 Arundel Road East		ONE HOUR	✓	2048	100.000
B - Nyton Road		ONE HOUR	✓	884	100.000
C - A27 Arundel Road West		ONE HOUR	✓	1642	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A27 Arundel Road East	B - Nyton Road	C - A27 Arundel Road West
From	A - A27 Arundel Road East	0	29	2011
	B - Nyton Road	0	0	884
	C - A27 Arundel Road West	1495	147	0

Proportions

		To		
		A - A27 Arundel Road East	B - Nyton Road	C - A27 Arundel Road West
From	A - A27 Arundel Road East	0.00	0.01	0.99
	B - Nyton Road	0.00	0.00	1.00
	C - A27 Arundel Road West	0.91	0.09	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A27 Arundel Road East	B - Nyton Road	C - A27 Arundel Road West
From	A - A27 Arundel Road East	0	7	6
	B - Nyton Road	0	0	3
	C - A27 Arundel Road West	9	11	0

Average PCU Per Veh

		To		
		A - A27 Arundel Road East	B - Nyton Road	C - A27 Arundel Road West
From	A - A27 Arundel Road East	1.000	1.070	1.060
	B - Nyton Road	1.000	1.000	1.030
	C - A27 Arundel Road West	1.090	1.110	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:15-07:30	A - A27 Arundel Road East	1536	1536
	B - Nyton Road	492	492
	C - A27 Arundel Road West	1236	1236
07:30-07:45	A - A27 Arundel Road East	1834	1834
	B - Nyton Road	588	588
	C - A27 Arundel Road West	1476	1476
07:45-08:00	A - A27 Arundel Road East	2246	2246
	B - Nyton Road	720	720
	C - A27 Arundel Road West	1808	1808
08:00-08:15	A - A27 Arundel Road East	2345	2345
	B - Nyton Road	720	720
	C - A27 Arundel Road West	1808	1808
08:15-08:30	A - A27 Arundel Road East	1834	1834
	B - Nyton Road	588	588
	C - A27 Arundel Road West	1476	1476
08:30-08:45	A - A27 Arundel Road East	1536	1536
	B - Nyton Road	492	492
	C - A27 Arundel Road West	1236	1236

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.14	8.82	0.2	A	609	365
C-A					1372	2058
C-B	0.43	18.42	0.8	C	135	202
A-B					27	40
A-C					1845	2768

Main Results for each time segment

07:15 - 07:30

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-AC	492	123	5371	0.092	492	0.0	0.1	8.788	A
C-A	1128	282			1128				
C-B	111	28	516	0.217	109	0.0	0.3	9.845	A
A-B	22	6			22				
A-C	1514	378			1514				

07:30 - 07:45

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-AC	588	147	5313	0.111	588	0.1	0.1	8.783	A
C-A	1344	336			1344				
C-B	132	33	455	0.290	132	0.3	0.4	12.333	B
A-B	26	7			26				
A-C	1808	452			1808				

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-AC	720	180	5235	0.138	720	0.1	0.2	0.820	A
C-A	1648	412			1648				
C-B	152	40	379	0.428	152	0.4	0.8	18.251	C
A-B	32	8			32				
A-C	2214	554			2214				

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-AC	720	180	5235	0.138	720	0.2	0.2	0.820	A
C-A	1648	412			1648				
C-B	152	40	379	0.428	152	0.8	0.8	18.424	C
A-B	32	8			32				
A-C	2214	554			2214				

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-AC	588	147	5313	0.111	588	0.2	0.1	0.788	A
C-A	1344	336			1344				
C-B	132	33	466	0.283	134	0.8	0.5	12.464	B
A-B	28	7			28				
A-C	1808	452			1808				

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-AC	492	123	5371	0.092	492	0.1	0.1	0.759	A
C-A	1128	281			1128				
C-B	111	28	510	0.217	111	0.5	0.3	10.031	B
A-B	22	5			22				
A-C	1514	378			1514				

A27 Nyton Road - 2019 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		2.29	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.29	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (mins)	Run automatically
D2	2019 Base	PM	PM Peak	ONE HOUR	16:30	19:00	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	Average Demand (PCU/hr)	Scaling Factor (%)
A - A27 Arundel Road East		ONE HOUR	✓	1483	100.000
B - Nyton Road		ONE HOUR	✓	189	100.000
C - A27 Arundel Road West		ONE HOUR	✓	2172	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A27 Arundel Road East	B - Nyton Road	C - A27 Arundel Road West
From	A - A27 Arundel Road East	0	34	1419
	B - Nyton Road	0	0	189
	C - A27 Arundel Road West	1844	328	0

Proportions

		To		
		A - A27 Arundel Road East	B - Nyton Road	C - A27 Arundel Road West
From	A - A27 Arundel Road East	0.00	0.02	0.98
	B - Nyton Road	0.00	0.00	1.00
	C - A27 Arundel Road West	0.85	0.15	0.00

Vehicle Mix

ARUN DISTRICT COUNCIL AL/11/24/OUT

Heavy Vehicle Percentages

		To		
		A - A27 Arundel Road East	B - Nyton Road	C - A27 Arundel Road West
From	A - A27 Arundel Road East	0	3	3
	B - Nyton Road	0	0	0
	C - A27 Arundel Road West	3	3	0

Average PCU Per Veh

		To		
		A - A27 Arundel Road East	B - Nyton Road	C - A27 Arundel Road West
From	A - A27 Arundel Road East	1.000	1.000	1.000
	B - Nyton Road	1.000	1.000	1.000
	C - A27 Arundel Road West	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:30-16:45	A - A27 Arundel Road East	1094	1094
	B - Nyton Road	138	138
	C - A27 Arundel Road West	1834	1834
16:45-17:00	A - A27 Arundel Road East	1306	1306
	B - Nyton Road	162	162
	C - A27 Arundel Road West	1951	1951
17:00-17:15	A - A27 Arundel Road East	1600	1600
	B - Nyton Road	198	198
	C - A27 Arundel Road West	2389	2389
17:15-17:30	A - A27 Arundel Road East	1600	1600
	B - Nyton Road	198	198
	C - A27 Arundel Road West	2389	2389
17:30-17:45	A - A27 Arundel Road East	1306	1306
	B - Nyton Road	162	162
	C - A27 Arundel Road West	1951	1951
17:45-18:00	A - A27 Arundel Road East	1094	1094
	B - Nyton Road	138	138
	C - A27 Arundel Road West	1834	1834

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.04	0.74	0.0	A	166	248
C-A					1682	2538
C-B	0.72	26.30	2.5	D	268	449
A-B					31	47
A-C					1302	1953

Main Results for each time segment

16:30 - 16:45

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-AC	135	34	5456	0.025	135	0.0	0.0	0.716	A
C-A	1388	347			1388				
C-B	245	61	592	0.414	245	0.0	0.7	10.621	B
A-B	28	6			28				
A-C	1068	267			1068				

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-AC	162	40	5416	0.030	162	0.0	0.0	0.725	A
C-A	1655	414			1655				
C-B	293	73	553	0.530	293	0.7	1.1	14.859	B
A-B	31	8			31				
A-C	1278	319			1278				

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-AC	198	50	5363	0.037	198	0.0	0.0	0.738	A
C-A	2030	508			2030				
C-B	359	90	456	0.720	359	1.1	2.4	24.772	C
A-B	37	9			37				
A-C	1562	391			1562				

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-AC	198	50	5363	0.037	198	0.0	0.0	0.738	A
C-A	2030	508			2030				
C-B	359	90	456	0.720	359	2.4	3.6	35.290	D
A-B	37	9			37				
A-C	1562	391			1562				

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-AC	162	40	5416	0.030	162	0.0	0.0	0.725	A
C-A	1658	414			1658				
C-B	293	73	553	0.530	293	2.6	3.2	14.858	B
A-B	31	8			31				
A-C	1278	319			1278				

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-AC	135	34	5456	0.025	135	0.0	0.0	0.716	A
C-A	1388	347			1388				
C-B	245	61	592	0.414	245	1.2	0.7	10.625	B
A-B	28	6			28				
A-C	1068	267			1068				

A27 Nyton Road - 2031 DM, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.72	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.72	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (mins)	Run automatically
D3	2031 DM	AM	AM Peak	ONE HOUR	07:15	08:45	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	Average Demand (PCU/hr)	Scaling Factor (%)
A - A27 Arundel Road East		ONE HOUR	✓	2149	100.000
B - Nyton Road		ONE HOUR	✓	883	100.000
C - A27 Arundel Road West		ONE HOUR	✓	1495	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A27 Arundel Road East	B - Nyton Road	C - A27 Arundel Road West
From	A - A27 Arundel Road East	0	0	2149
	B - Nyton Road	0	0	883
	C - A27 Arundel Road West	1346	149	0

Proportions

		To		
		A - A27 Arundel Road East	B - Nyton Road	C - A27 Arundel Road West
From	A - A27 Arundel Road East	0.00	0.00	1.00
	B - Nyton Road	0.00	0.00	1.00
	C - A27 Arundel Road West	0.91	0.09	0.00

Vehicle Mix

ARUN DISTRICT COUNCIL AL/11/24/OUT

Heavy Vehicle Percentages

		To		
		A - A27 Arundel Road East	B - Nyton Road	C - A27 Arundel Road West
From	A - A27 Arundel Road East	0	0	0
	B - Nyton Road	0	0	2
	C - A27 Arundel Road West	10	2	0

Average PCU Per Veh

		To		
		A - A27 Arundel Road East	B - Nyton Road	C - A27 Arundel Road West
From	A - A27 Arundel Road East	1.000	1.000	1.000
	B - Nyton Road	1.000	1.000	1.020
	C - A27 Arundel Road West	1.100	1.020	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:15-07:30	A - A27 Arundel Road East	1618	1618
	B - Nyton Road	497	497
	C - A27 Arundel Road West	1119	1119
07:30-07:45	A - A27 Arundel Road East	1932	1932
	B - Nyton Road	593	593
	C - A27 Arundel Road West	1336	1336
07:45-08:00	A - A27 Arundel Road East	2366	2366
	B - Nyton Road	727	727
	C - A27 Arundel Road West	1636	1636
08:00-08:15	A - A27 Arundel Road East	2366	2366
	B - Nyton Road	727	727
	C - A27 Arundel Road West	1636	1636
08:15-08:30	A - A27 Arundel Road East	1932	1932
	B - Nyton Road	593	593
	C - A27 Arundel Road West	1336	1336
08:30-08:45	A - A27 Arundel Road East	1618	1618
	B - Nyton Road	497	497
	C - A27 Arundel Road West	1119	1119

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.14	9.82	0.2	A	508	908
C-A					1235	1653
C-B	0.49	16.19	0.8	C	128	193
A-B					0	0
A-C					1972	2366

Main Results for each time segment

07:15 - 07:30

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-AC	497	124	5352	0.093	496	0.0	0.1	0.755	A
C-A	1013	253			1013				
C-B	135	28	495	0.213	134	0.0	0.3	9.371	A
A-B	0	0			0				
A-C	1618	404			1618				

07:30 - 07:45

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-AC	593	148	5292	0.112	593	0.1	0.1	0.780	A
C-A	1210	303			1210				
C-B	139	31	497	0.288	139	0.3	0.4	11.766	B
A-B	0	0			0				
A-C	1932	483			1932				

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-AC	727	182	5208	0.140	727	0.1	0.2	0.818	A
C-A	1482	370			1482				
C-B	154	39	356	0.433	153	0.4	0.8	17.919	C
A-B	0	0			0				
A-C	2366	592			2366				

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-AC	727	182	5208	0.140	727	0.2	0.2	0.818	A
C-A	1482	370			1482				
C-B	154	39	356	0.433	154	0.8	0.8	18.149	C
A-B	0	0			0				
A-C	2366	592			2366				

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-AC	593	148	5292	0.112	593	0.2	0.1	0.780	A
C-A	1210	303			1210				
C-B	128	31	497	0.258	127	0.8	0.4	11.911	B
A-B	0	0			0				
A-C	1932	483			1932				

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-AC	497	124	5352	0.093	497	0.1	0.1	0.758	A
C-A	1013	253			1013				
C-B	135	28	495	0.213	135	0.4	0.3	9.482	A
A-B	0	0			0				
A-C	1618	404			1618				

A27 Nyton Road - 2031 DM, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.57	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.57	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (mins)	Run automatically
D4	2031 DM	PM	PM Peak	ONE HOUR	16:30	18:00	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	Average Demand (PCU/hr)	Scaling Factor (%)
A - A27 Arundel Road East		ONE HOUR	✓	1575	100.000
B - Nyton Road		ONE HOUR	✓	304	100.000
C - A27 Arundel Road West		ONE HOUR	✓	2635	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A27 Arundel Road East	B - Nyton Road	C - A27 Arundel Road West
From	A - A27 Arundel Road East	0	0	1575
	B - Nyton Road	0	0	304
	C - A27 Arundel Road West	2354	281	0

Proportions

		To		
		A - A27 Arundel Road East	B - Nyton Road	C - A27 Arundel Road West
From	A - A27 Arundel Road East	0.00	0.00	1.00
	B - Nyton Road	0.00	0.00	1.00
	C - A27 Arundel Road West	0.89	0.11	0.00

Vehicle Mix

ARUN DISTRICT COUNCIL AL/11/24/OUT

Heavy Vehicle Percentages

		To		
		A - A27 Arundel Road East	B - Nyton Road	C - A27 Arundel Road West
From	A - A27 Arundel Road East	0	0	10
	B - Nyton Road	0	0	3
	C - A27 Arundel Road West	7	1	0

Average PCU Per Veh

		To		
		A - A27 Arundel Road East	B - Nyton Road	C - A27 Arundel Road West
From	A - A27 Arundel Road East	1.000	1.000	1.100
	B - Nyton Road	1.000	1.000	1.030
	C - A27 Arundel Road West	1.070	1.010	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:30-16:45	A - A27 Arundel Road East	1281	1281
	B - Nyton Road	274	274
	C - A27 Arundel Road West	1984	1984
16:45-17:00	A - A27 Arundel Road East	1506	1506
	B - Nyton Road	327	327
	C - A27 Arundel Road West	2369	2369
17:00-17:15	A - A27 Arundel Road East	1844	1844
	B - Nyton Road	401	401
	C - A27 Arundel Road West	2901	2901
17:15-17:30	A - A27 Arundel Road East	1844	1844
	B - Nyton Road	401	401
	C - A27 Arundel Road West	2901	2901
17:30-17:45	A - A27 Arundel Road East	1506	1506
	B - Nyton Road	327	327
	C - A27 Arundel Road West	2369	2369
17:45-18:00	A - A27 Arundel Road East	1281	1281
	B - Nyton Road	274	274
	C - A27 Arundel Road West	1984	1984

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.88	8.75	8.1	A	334	501
C-A					2168	3240
C-B	0.69	25.11	2.1	D	258	387
A-B					0	0
A-C					1537	2306

Main Results for each time segment

16:30 - 16:45

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-AC	274	69	5421	0.051	274	0.0	0.1	0.719	A
C-A	1772	443			1772				
C-B	212	53	561	0.377	209	0.0	0.6	10.258	B
A-B	0	0			0				
A-C	1281	315			1281				

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-AC	327	82	5374	0.061	327	0.1	0.1	0.734	A
C-A	2116	529			2116				
C-B	253	63	516	0.490	251	0.6	0.9	13.858	B
A-B	0	0			0				
A-C	1508	378			1508				

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-AC	401	100	5308	0.076	401	0.1	0.1	0.734	A
C-A	2592	648			2592				
C-B	309	77	453	0.683	305	0.9	2.0	23.899	C
A-B	0	0			0				
A-C	1844	461			1844				

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-AC	401	100	5308	0.076	401	0.1	0.1	0.734	A
C-A	2592	648			2592				
C-B	309	77	452	0.683	309	2.0	2.1	25.110	C
A-B	0	0			0				
A-C	1844	461			1844				

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-AC	327	82	5374	0.061	327	0.1	0.1	0.734	A
C-A	2116	529			2116				
C-B	253	63	516	0.490	257	2.1	1.9	14.370	B
A-B	0	0			0				
A-C	1508	378			1508				

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-AC	274	69	5421	0.051	274	0.1	0.1	0.719	A
C-A	1772	443			1772				
C-B	212	53	561	0.377	213	1.9	0.6	10.488	B
A-B	0	0			0				
A-C	1281	315			1281				

A27 Nyton Road - 2031 Base+Dev+BEW, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.52	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.52	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2031 Base+Dev+BEW	AM	AM Peak	ONE HOUR	07:15	09:45	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	Average Demand (PCU/hr)	Scaling Factor (%)
A - A27 Arundel Road East		ONE HOUR	✓	2149	100.000
B - Nyton Road		ONE HOUR	✓	772	100.000
C - A27 Arundel Road West		ONE HOUR	✓	1499	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A27 Arundel Road East	B - Nyton Road	C - A27 Arundel Road West
From	A - A27 Arundel Road East	0	0	2149
	B - Nyton Road	0	0	772
	C - A27 Arundel Road West	1346	153	0

Proportions

		To		
		A - A27 Arundel Road East	B - Nyton Road	C - A27 Arundel Road West
From	A - A27 Arundel Road East	0.00	0.00	1.00
	B - Nyton Road	0.00	0.00	1.00
	C - A27 Arundel Road West	0.90	0.10	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A27 Arundel Road East	B - Nyton Road	C - A27 Arundel Road West
From	A - A27 Arundel Road East	0	3	8
	B - Nyton Road	0	0	2
	C - A27 Arundel Road West	10	2	0

Average PCU Per Veh

		To		
		A - A27 Arundel Road East	B - Nyton Road	C - A27 Arundel Road West
From	A - A27 Arundel Road East	1.000	1.000	1.080
	B - Nyton Road	1.000	1.000	1.020
	C - A27 Arundel Road West	1.100	1.020	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
07:15-07:30	A - A27 Arundel Road East	1518	1518
	B - Nyton Road	531	531
	C - A27 Arundel Road West	1129	1129
07:30-07:45	A - A27 Arundel Road East	1932	1932
	B - Nyton Road	694	694
	C - A27 Arundel Road West	1348	1348
07:45-08:00	A - A27 Arundel Road East	2386	2386
	B - Nyton Road	853	853
	C - A27 Arundel Road West	1650	1650
08:00-08:15	A - A27 Arundel Road East	2386	2386
	B - Nyton Road	853	853
	C - A27 Arundel Road West	1650	1650
08:15-08:30	A - A27 Arundel Road East	1932	1932
	B - Nyton Road	694	694
	C - A27 Arundel Road West	1348	1348
08:30-08:45	A - A27 Arundel Road East	1518	1518
	B - Nyton Road	531	531
	C - A27 Arundel Road West	1129	1129

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.18	8.84	0.2	A	708	1063
C-A					1235	1853
C-B	0.47	19.53	0.9	C	140	211
A-B					0	0
A-C					1972	2958

Main Results for each time segment

07:15 - 07:30

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-AC	581	145	5282	0.109	581	0.0	0.1	6.758	A
C-A	1213	253			1213				
C-B	115	39	485	0.233	114	0.0	0.3	9.606	A
A-B	0	0			0				
A-C	1618	404			1618				

07:30 - 07:45

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-AC	694	174	5282	0.131	694	0.1	0.2	6.787	A
C-A	1210	303			1210				
C-B	138	34	437	0.316	137	0.3	0.5	12.216	B
A-B	0	0			0				
A-C	1932	483			1932				

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-AC	850	212	5208	0.163	850	0.2	0.2	6.841	A
C-A	1482	370			1482				
C-B	168	42	356	0.473	167	0.9	0.9	19.236	C
A-B	0	0			0				
A-C	2366	592			2366				

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-AC	850	212	5208	0.163	850	0.2	0.2	6.841	A
C-A	1482	370			1482				
C-B	168	42	356	0.473	168	0.9	0.9	19.526	C
A-B	0	0			0				
A-C	2366	592			2366				

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-AC	694	174	5282	0.131	694	0.2	0.2	6.880	A
C-A	1210	303			1210				
C-B	138	34	437	0.315	139	0.9	0.6	12.405	B
A-B	0	0			0				
A-C	1932	483			1932				

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-AC	581	145	5282	0.109	581	0.2	0.1	6.758	A
C-A	1213	253			1213				
C-B	115	39	485	0.233	116	0.5	0.3	9.699	A
A-B	0	0			0				
A-C	1618	404			1618				

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