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LAND ADJOINING ANSTY

TECHNICAL TRANSPORT NOTE #9 (WEST SUSSEX HIGHWAYS RESPONSE)

REPORT REF.
2207280-R23C

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1. Introduction

- 1.1. This Technical Transport Note (TTN) has been produced by Ardent Consulting Engineers (ACE) on behalf of Fairfax Acquisitions Limited, in response to consultation comments made by the West Sussex County Council (WSCC) Highways Development Management team on the proposed development at the Land Adjoining Ansty in Mid Sussex.
- 1.2. The Local Planning Authority (LPA) is Mid Sussex District Council (MSDC) and the Local Highways Authority is West Sussex County Council (WSCC), with National Highways (NH) retaining specific responsibility for the A23 corridor.
- 1.3. The location of the proposed development is shown on **Figure 1.1** below.



Figure 1.1: Site Location

- 1.4. A planning application for the development was submitted under MSDC planning reference DM/23/2866 on 6th November 2023 and validated on 21st November 2023. The WSCC Highways Development Management team provided a consultation response on the application that has formed the focus of further discussions and engagement between ACE and WSCC.
- 1.5. As noted in the WSCC consultation response, "*Pre application discussion took place between October 2022 and 2023*". These discussions were extensive and covered

aspects of the development including but not limited to: Streetscape design, active and public transport strategies and strategic modelling approach.

- 1.6. This Transport Technical Note (TTN) provides the clarification and additional information requested within the WSCC response and in accordance with the ongoing liaison between WSCC and ACE to date.
- 1.7. The structure of this TTN is to provide the comment made by the WSCC Highways team in the order in which they were made, and then to provide the ACE response immediately after.
- 1.8. A draft of this TTN was submitted to WSCC Highways and was discussed at a meeting on the 19th April 2024 where a number of matters were agreed, but additional actions were also requested and have been progressed in liaison with WSCC to date.
- 1.9. This note provides the information initially requested within the WSCC consultation response as well as the information requested during subsequent further discussions that took place in the intervening period. This note represents the current status of dialogue with WSCC and incorporates all requested actions to date.

2. WSCC Highways Development Team Comments

Comment #1 – Designers Responses

"The junctions have been designed in line with DMRB guidance, vehicle tracking for articulated HGV provided and stage 1 RSA undertaken. Visibility splays can be provided in line with a 60mph design speed as per DMRB standards.

The Designers Responses undertaken should be provided in word format to allow a WSCC response and agreed actions to be developed. It should be noted that the auditors recommendations should either be agreed with or disagreed with."

- 2.1. The Designer's Responses for all schemes proposed as part of the development have been provided separately to WSCC and agreed as necessary.

Comment #2 – Public Rights of Way (PRoW)

"All PRoW across the site would be upgraded to Bridleways. It is noted that WSCC PROW response raises concerns at what happens at the sites boundaries where the routes would become footpaths again and these concerns are echoed."

- 2.2. Although the PRoW strategy included within the development follows advice provided during pre-application discussions with the WSCC PRoW team, the proposed PRoW strategy for the development has now been updated to reflect the WSCC PRoW consultation response, with full details provided in **ACE Report 2207280-R22**.
- 2.3. The proposed PRoW strategy has been amended to refine the extent of bridleways that can be provided, and this strategy has been agreed with the WSCC PRoW team.
- 2.4. The updated strategy is shown on **ACE Drawing 2207280-014A**.

Comment #3 – Cycle Route to Haywards Heath

Consultation Response - *"Alongside the A272 only a 0.5m buffer strip is provided in line with LTN 1/20 this should be increased due to the existing/and or proposed speed limit, priority across side roads provided, considerations of levels (behind existing VRS).*

Consideration should be given to improving pedestrian and cycle priority over Copyhold Lane.

Information on remaining lane widths at the bend should be provided where tracking has been provided.

Considerations should be given to widen the shared use route between the new crossing and Haywards Heath. A 3m provision would for the most part have it's effective use (as per LTN 5.3) reduced by 0.5m to 0.75m due to the edge constraints and vertical features.

In the vicinity of the Martlot Manor Care home the effective width is only 1.75m and should be increased. It is assumed in this area, ped cycle priority is provided over the accesses but not text confirms this."

Meeting Comments

- WSCC requests expected cycle flows for the new cycle route.
- WSCC has some concerns over deliverability of cycle route in some isolated locations, particularly with regards to levels at pinch points.
- WSCC requested additional topographical surveys of key areas along the route to be provided, in order to overcome these concerns.
- WSCC recommended carriageway narrowing where pinch points may compromise the delivery of cycleways.

Further Discussions

- WSCC requested additional dimensions of the carriageway to be shown along the cycle route.
- WSCC requested confirmation of the status and retained width of the ghost right hand turn lane next to the Marlet Manor Care House in Haywards Heath.
- WSCC requested clarification on the status of the island opposite the Marlet Manor Care House.

2.5. Following feedback from WSCC during the meeting, the proposed cycle route to Haywards Heath has been designed in such a way that a 3m cycle path is provided alongside a 2.5m verge. In addition, more topographical surveys have been

conducted on sections of the A272 and B2272 to check for appropriate levels and gradients for the proposed cycle route and to investigate whether the apparent potential pinch points could be overcome, as shown on **ACE Drawing 2207280-SK05H**.

- 2.6. In the vicinity of the Martlet Manor Care home, improvements have been incorporated that will enable a 3m shared pedestrian / cycle facility to be provided. While there is there an electricity pole in this area, this would represent a single point where the effective width is narrowed below the full 3m shared facility. Options may exist for this to be re-located at the detailed design stage.
- 2.7. In addition to the above, the bus stop on the northern side of the B2272 Butler's Green Road in the vicinity of the care home is to be relocated onto the active carriageway, thereby enabling a continuation of the active travel route at its full width through removal of the layby.
- 2.8. The ghost island right hand turn lane next to the Martlet Manor Care Home would remain at 3m in width and the existing pedestrian refuge crossing point is retained, whilst the island adjacent to the bus stop has been relocated slightly to accommodate the relocation of the bus stop as detailed above.
- 2.9. During the April 2024 meeting, WSCC requested an indication of cycle flows along the proposed cycle route. Based on the multi-modal trip generation methodology which has been agreed for use within the Transport Assessment, the proposed development is expected to generate a total of 2,816 daily pedestrian and cycle trips. On the basis that the majority of these trips will be internal, the expectation is that the proposed cycle route would cater for approximately 422 two-way trips per day (15% of total pedestrian cycle trips).
- 2.10. Indicative street lighting is shown on **ACE Drawing 2207280-SK05H**, to demonstrate that year-round lighting can be provided, however this is subject to technical review, including but not limited to ecological constraints.
- 2.11. The final iteration of the proposed cycle route, incorporating the comments from WSCC outlined above, has been subject to a Stage 1 Road Safety Audit (RSA1), with the Designer's Response (DR) provided to WSCC separately to this note (**ACE Report Reference 2207280-R16**).
- 2.12. The cycle connection to Haywards Heath has been agreed with WSCC.

Comment #4 – Crossing A272

Consultation Response - *"Justification should be provided for the need for a signalised crossing including anticipated number of pedestrians that would cross to utilise the PROW.*

The following comments have been offered by the WSCC Signals Team on the crossing:

- *It is our preference that signalised crossings are installed a minimum of 20m from a roundabout, to prevent confusion for drivers that the roundabout is signalised.*
- *As above, the speed limit of the A272 should be 50mph or lower for a signalised crossing; ideally 40mph. Whilst the regulations have been altered, removing this requirement, as a team we feel this is the maximum speed that a signalised crossing should be installed, and whilst speeds will be significantly lower due to the roundabout, lowering the speed limit will keep the parameters of this site consistent across the country.*
- *The minimum width should be 2.4m; both crossing points are shown to be 2.0m.*
- *Along the A272, ongoing maintenance will be required to ensure vegetation does not impact visibility of the signals once installed.*
- *I assume there is a suitable power source nearby which can be utilised for the signal crossing?*
- *Street Lighting will be required, with the same potential challenge as highlighted above.*
- *If the footway on the northern side of the signalised crossing cannot meet the criteria for shared use (3.0m wide) then during detailed design there should be corduroy paving installed on both the east & west of the crossing, instructing cyclists to dismount / remount."*

Meeting Comments

- WSCC requested a ADPV² assessment be provided for the signalised crossing over the A272.
- WSCC suggested that any contribution towards a Traffic Regulation Order (TRO) to change the speed limit on the A272 could be done as a pre-commencement requirement.

2.13. Proposed crossings in the vicinity of the site have all been located 20m from the proposed junctions.

2.14. As per the TA for the development and as agreed during the meeting, the applicant is willing to work with WSCC to provide the funding required to WSCC to advertise the Traffic Regulation Order (TRO) required to promote a change in speed limit along the A272. It is expected that this would be managed by a pre-commencement condition or obligation.

2.15. An extract from Table 1 of the WSCC Speed Limit Policy document relating to 50mph and 40mph speed limits is shown in **Figure 2.1**.

Speed Limit	Typical functional use
40 mph speed limit	<ul style="list-style-type: none">• Through traffic routes (single or dual carriageway) in partially built-up areas with segregated VRU facilities and limited frontage accesses or junctions.• Lengths of A and B class rural roads identified as high risk (see para 2.8).• Rural C class and unclassified roads not within a village.
50mph	Generally, few VRUs present or segregated facilities provided: <ul style="list-style-type: none">• Rural A and B class single carriageways (not within a village).• Rural all-purpose dual carriageways with frequent junctions or development access or otherwise identified as high risk.

Figure 2.1: WSCC Speed Limit Policy Extract (Table 1)

2.16. As can be seen above, the A272 would currently meet the criteria for reduction to a 50mph speed limit, whilst with the development in place would meet the criteria for a 40mph speed limit (in accordance with WSCC preferred approach), but it should be noted that the inclusion of a signalised crossing facility was in response to pre-application feedback from WSCC Highways and has been included at their request.

2.17. The proposed crossing has been amended to be 2.4m in width as requested by WSCC, as shown on **ACE Drawing 2207280-SK05H**.

2.18. Vegetation will be trimmed as required, with any on-going maintenance falling under the responsibility of WSCC to manage as Highways Authority. This was agreed during the April 2024 meeting with WSCC.

2.19. Information on power sources and the lighting design for the scheme will be provided at detailed design stage. This was agreed during the April 2024 meeting with WSCC.

2.20. Corduroy paving has been added to either side of the crossing, as shown on **ACE Drawing 2207280-SK05H**.

2.21. As requested by WSCC during the meeting, an ADPV² assessment of the proposed crossing over the A272 has been conducted, with inputs from the agreed multi-modal trip generation methodology agreed with WSCC. It has been assumed that 30% of pedestrian and cycle trips during the AM peak will utilise the crossing to access Warden Park Academy. Similarly, it has been assumed that 10% of pedestrian and cycle trips during the PM peak will utilise the crossing, largely for that purpose.

2.22. The ADPV² assessment takes into account the local collision record within the vicinity of the proposed crossing, the difficulty of crossing (calculated through a comparison of the proposed crossing distance against a standard 7.3m road), the average peak hour pedestrian and cycle demand and the average two-way peak hour vehicular flow. The resulting value is then provided per 10⁸ which is used to determine the appropriate level of crossing.

2.23. The results of the assessment are shown in **Table 2.1** below.

Element	Value
Accidents (A)	0
Difficulty (D)	0.9
Pedestrians and Cyclists (P)	48
Vehicles (V)	1478
ADPV ² (Per 10 ⁸)	0.94723936

Table 2.1: ADVP² Assessment

2.24. Per the ADPV² guidance, a crossing with a value of greater than 0.7 per 10⁸ should be a signalised crossing, as proposed.

2.25. It should be note that for the purposes of the assessment, all pedestrians have been considered to have a weighted value of 1 despite the crossing being mainly utilised by students during the AM peak. The ADPV² guidance suggests people under 16 should have a weighted value of 4, and so the above assessment can be considered robust.

2.26. Based on the above assessment, the provision of a signalised crossing on the A272 is considered a suitable response to the number and make-up of users who are likely to use it.

2.27. The conclusions of the ADPV² assessment have been agreed with WSCC.

Comment #4 – B2272 into Haywards Heath

"The following comment have been offered by the WSCC Signals Team on the toucan crossing

- There are concerns with the location of this crossing, and the achievable forward visibility, especially during Spring/Summer, with the existing hedgerows/trees on both sides of the carriageway. This will need to be checked on street during this time of year to ensure compliance can be achieved.*
- The WSCC standard for Toucan crossings are 4.0m wide; currently it's shown as 2.0m.*
- Installation of ducting for loops may be challenging on the westbound approach, particularly between the crossing location and the entrance to The Old Cottage; the available highway boundary seems limited and will require checking to ensure safe maintenance can be undertaken.*
- The position of the crossing in relation to existing overhead power cables will need to be considered, to ensure minimum clearances can be achieved.*
- The existing street lighting will need to be checked, to ensure it is compliant for a controlled crossing."*

2.28. Vegetation will be trimmed to maintain forward visibility in coordination with the local highways authority. This was agreed during the April 2024 meeting with WSCC.

2.29. The proposed crossing is shown at 4.0m wide with dimension added to help to clarify this, as shown on **ACE Drawing 2207280-SK05H**.

2.30. Information on the ducting for loops, separation with overhead power cables and street lighting design will be provided at detailed design stage, which would be subject to the Technical Approval process, which would be agreed with WSCC. This would be involved when seeking Technical Approval with WSCC, which will include further stages under the Road Safety Audit (RSA) process. This approach was agreed during the April 2024 meeting with WSCC.

Comment #5 – Cycle routes to Burgess Hill

Consultation Response - *"The southwestern access would require cyclists to rejoin the carriageway in close proximity to the roundabout and continue on road along the B2036 towards the Brookleigh development and Burgess Hill. Given the flows and speeds of the road then the promotion of on road cycling would not be in keeping with the requirements of LTN 1/20."*

Meeting Comments

- The connection to Burgess Hill / the Northern Arc Development is a key concern of WSCC, with the development like to generate cycle trips to the south for employment purposes.
- WSCC stated that the on-carriageway cycling is not appropriate.
- WSCC suggested reviewing the Northern Arc improvements and providing a design that would provide a consistent provision with those works.
- WSCC stated that delivery of a connection between the development and Burgess Hill / the Northern Arc would result in no sustainability concerns.

Further Discussions

- WSCC requested further information on lane widths for the priority sections.
- WSCC had concerns about the buildability of the route.
- WSCC requested that forward visibility at the priority sections should be commensurate with 40mph requirements.
- WSCC requested that Northern Arc improvements be revisited to allow consistent route from Ansty site to the Northern Arc.
- ACE undertook additional review of proposed improvements and integration with Northern Arc proposals.
- During a meeting between ACE and WSCC held on the 13th February 2025, WSCC acknowledged that a cycle connection between the proposed development and Burgess Heath was not feasible due to width constraints on the B2036 Pains Flat.

2.31. As agreed with WSCC during a meeting held on the 13th February 2025, the proposed development no longer includes a cycle connection to Burgess Hill and instead provides a public transport connection to Burgess Hill at a minimum weekday peak hour frequency of hourly. Further details of the proposed public transport strategy are provided in the response to Comment #11 below.

Comment #6 – Cycle Routes to Cuckfield

"The cycle improvement plan shows a cycle route between the existing A272/B2036 Roundabout and Cuckfield, however no details are supplied of the provision, the suitability of on road cycling and how the route would link at either end with other proposed facilities."

2.32. The proposals include a cycle connection onto the western side of the B2036 to the north of the A272 / B2036 roundabout, and then onto the B2036 into Cuckfield, as shown on **ACE Drawing 2207280-SK05H**. It is not proposed to provide a cycle route along the B2036 heading north at this time as has been clarified on the updated strategy drawing.

2.33. **ACE Drawing 2207280-SK03F** and **ACE Drawing 2207280-SK04E** have been amended to accurately reflect the proposed cycle and pedestrian improvement strategy. This was agreed during the April 2024 meeting with WSCC.

Comment #7 – Link to country park

"The following comments have been offered by the WSCC Signals Team on the toucan crossing:

- It would be our recommendation that the speed limit is reduced to a maximum 50mph, and ideally 40 for this stretch of the A272.*
- Street lighting will be required; given the rural nature of this may be challenging, assuming a suitable power connection is available for both lighting and the crossing.*
- Currently there are a lot of overhanging trees, the canopy may need to be dramatically altered to ensure suitable visibility.*
- The WSCC standard for Toucan crossings are 4.0m (distance between the studs); currently it's shown as 2.0m, assuming the tactiles shown are intended to represent the standard 400x400mm."*

2.34. As above, the proposals rely on the introduction of a speed limit change along the A272, which would be in line with WSCC Speed Limit Policy. This will include the necessary funding for WSCC to publish and advertise the TRO.

2.35. Information on the street lighting design will be provided at detailed design stage. This was agreed during the April 2024 meeting with WSCC.

- 2.36. Vegetation can be trimmed to maintain visibility in coordination with the local highways authority. This was agreed during the April 2024 meeting with WSCC.
- 2.37. The proposed toucan crossing has been widened to 4.0m as requested, as shown on **ACE Drawing 2207280-010C**. This was agreed during the April 2024 meeting with WSCC.

Comment #8 – Cycle Gates

"The provision of 'cycle gates' would reduce the ability for alternative bicycles to utilise the accesses. LTN 1/20 states 5.1.4 "It is important that infrastructure can accommodate the full range of cycles to ensure routes are accessible to all cyclists."

- 2.38. The cycle gates have been replaced with a bollard, as recommended by LTN 1/20 paragraph 8.3.5. The revised crossing design is shown on **ACE Drawing 2207280-010C**, as agreed with WSCC.

Comment #9 – Cycle Provision on B2114

"No cycle provision at northern end on to B2114. With a speed limit of 50mph simply requiring cyclists to rejoin the carriageway would not accord with the guidance in LTN 1/20 Table 4.1 which indicates that the provision of only a fully kerbed cycle track would be an appropriate provision for most people".

- 2.39. Following feedback from WSCC during the April 2024 meeting, a suitable transition point has been provided between the B2114 Staplefield Road in the form of a cycle bellmouth, as shown on **ACE Drawing 2207280-015E**. This reflects the approach discussed with WSCC to date.
- 2.40. The proposed cycle access will be subject to an RSA1, with the subsequent Designer's Response provided to WSCC separately to this note.
- 2.41. As requested by WSCC, the initial stretch of the route from the B2114 into the parkland reserve is provided at 3m, tapering down to 2.5m within the site due to ecological and arboriculture constraints, which should still be suitable for the frequency of use. The extent of the cycle route to be provided at 3m is shown in **Figure 2.2** below.

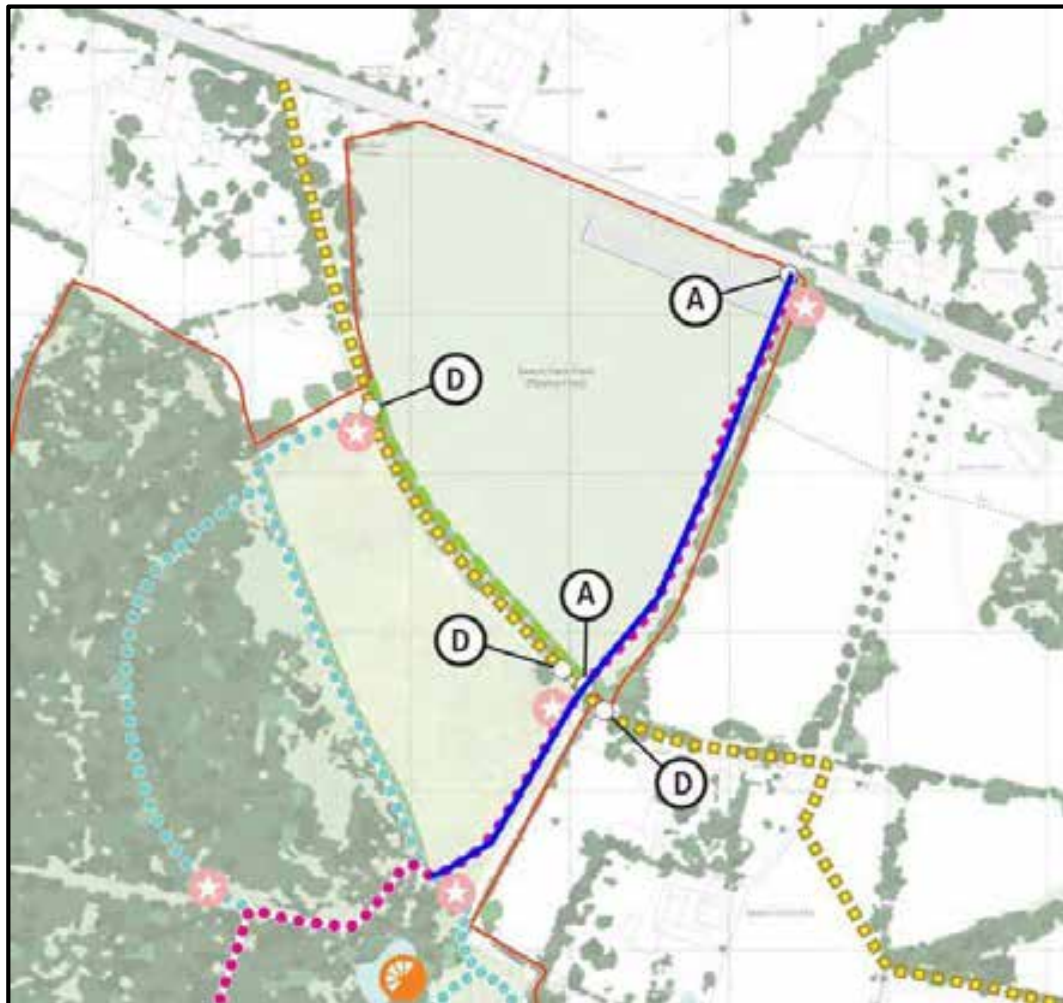


Figure 2.2: Extent of 3m cycleway into Beechy Bottom Parkland Reserve

Comment #10 – Cycle Connections A272 / Bolney Road / B2036

"Additional information should be provided including suitability of on road provision in accordance with LTN 1/20, confirming refuge island width, HGV tracking for all movements, consideration of returning movements."

2.42. **ACE Drawing 2207280-007D** provides details of the proposed improvements at the A272 / Bolney Road / B2036 mini-roundabout.

2.43. Details of the proposed improvements at the A272 / Bolney Road / B2036 mini-roundabout have been provided and agreed with WSCC.

Comment #11 – Public Transport

Consultation Response - *"Comments are being sought from the WSCC Public Transport Team on the options however it is considered that the applicant would need to firm up proposals prior to the application being determined so they can appropriately be secured."*

Meeting Comments

- WSCC requested additional details including proposed bus route and proposed bus timetable.

Further Discussions

- WSCC requested a timescale for support and confirmation of the sustainability of the proposed bus strategy.
- WSCC requested that mitigation at the A272 Tylers Green / Issac's Lane / B2272 Roundabout (the 'Tylers Green Roundabout') be provided as part of the public transport strategy to ensure the future bus service can be suitably delivered.
- WSCC requested that, in lieu of a cycle connection to Burgess Hill, that the proposed bus route be extended to Burgess Hill.
- WSCC requested that the proposed bus route provide a minimum service of a half-hourly connection to Haywards Heath and hourly connection to Burgess Hill during weekday peak periods.

2.44. The intention is to establish bus service options which are viable upon the completed build-out of the development, with an interim level of financial support which is capable of supporting their introduction during the 'uneconomical' period of running, when the costs of providing the service outweighs the patronage and revenue. The objective of supporting bus services early on within the build-out of the development is to make travel choices available for residents as early as possible.

2.45. The interest will be to match the level of service to the patronage being generated by the development, to ensure that the cost of any extensions or new services can be off-set, without requiring any form of 'in perpetuity' obligation which would not meet the planning obligations tests.

2.46. A bus report providing details of the proposed bus route and timetables was shared confidentially with WSCC.

2.47. A bus commercial sustainability assessment was also conducted based on the following assumptions:

- Buildout rate of 150 dwellings per year starting in 2026, for a construction period of 10 Years.
- Number of annual public transport trips is a product of the typical weekday number of public transport trips generated by the development, multiplied by 260 working days. As such the commercial sustainability calculations do not include a weekend service and should be considered robust in this regard.
- Fare prices of £3 per trip, increased in line with year-on-year inflation sourced from Statista / the ONS. Note: It is not clear what subsidy is provided / is to be provided in the future to bus operators to maintain the £3 fare cap. As such, revenue calculations should be considered robust.
- Bus costs for a 20-minute bus service between the development and Haywards Heath & Burgess Hill utilising figures within the previously produced bus report, increased by year-on-year inflation as with fares.

2.48. The assessment indicated that the proposed bus service would be expected to achieve commercial sustainability between year 5 and year 10 of construction, depending on bus uptake rates.

2.49. This review indicates that there is a path to commercial sustainability for the proposed bus service, utilising robust assumptions in a number of aspects. The exact subsidy required and details of awarding of the contract will be agreed following a resolution to grant permission but prior to signing the Section 106 Agreement.

2.50. As agreed with WSCC, the funding of the bus service is to be secured via a suitably worded condition or S106 obligation.

Comment #12 – Trip Generation

"Trip rates for the other uses are assumed to be taken from the MSSHM as per the TN within the appendix but should be confirmed."

2.51. It can be confirmed that trip rates for the other uses have been taken from the MSSHM, utilising the trip rates adopted for the Scenario 4 local plan modelling.

2.52. This was discussed in the April 2024 meeting and the approach was agreed as suitable and given this is a robust approach is now considered resolved.

Comment #13 – Trip Rate Reduction

Consultation Response - "Further info should be provided on the approach taken and the cumulative effect of the reduction e.g. the main impact of the 25% reduction is shorter trips and as such may be covered by the other reductions."

Meeting Comments

- WSCC requested that key destinations be provided for each distance band to demonstrate where cycle trips would be going.

2.53. As agreed in principle during pre-application discussions with WSCC, the trip rate reductions have been applied on a distance banding basis. The specific distance banding used is shown in **Table 2.2**.

Distance Band	Reduction
<1km	22%
1-3km	14%
3-5km	10%
5-10km	6%
10-50km	3%
50+km	0%

Table 2.2: Trip Rate Reductions by Distance Band

2.54. **Table 2.3** and **Table 2.4** show the proportion of unfactored trips in each band along with the reduction in trips during the AM and PM peak hours.

Unfactored trips	Distance banding	Final trips	Relative reduction in trips
45	>50Km	45	0
332	10-50Km	321	10
154	5-10Km	145	9
161	3-5Km	144	16
48	1-3Km	42	7
2	<1 Km	2	0
743	Total	700	42

Table 2.3: Two-Way Vehicular Trip Reductions (AM Peak Hour)

Unfactored trips	Distance banding	Final trips	Relative reduction in trips
22	>50Km	22	0
285	10-50Km	277	9
168	5-10Km	158	10
162	3-5Km	146	16
28	1-3Km	23	4
1	<1 Km	1	0
666	Total	627	39

Table 2.4: Two-Way Vehicular Trip Reductions (PM Peak Hour)

2.55. Taking the above, the distance banding results in an overall relative vehicular trip reduction of approximately 6% cumulatively across both peak hours (i.e. from 1409 to 1327).

Comment #14 – Monitoring Strategy and Alternative Scenario

"No monitoring strategy has been provided to detail the impact should the reductions not be met (and these are significantly in excess of those proposed within the travel plan).

No scenario has been provided to detail what the impacts of the trip rates not being met are and what additional mitigation would be required, given the current deficiencies in the strategies this should be provided."

2.56. The trip rate reductions utilised within the strategic modelling for the proposed development were provided by WSCC and break down as follows:

- 20% reduction for working at home, applied across the district on the basis of the high proportion of employment types suited to homeworking within Mid Sussex.
- Additional 5% reduction for sites with local retail and community facilities on or adjacent to the site.
- Additional 5% reduction for those sites within a significant quantum of local employment on or adjacent to the site.

2.57. It was agreed from the outset that the methodology would seek to encapsulate the 'decide and provide' approach which would focus on an outcome-led scenario. The risk with adopting alternative 'worst-case' assumptions would be that any additional

mitigation would simply replicate the 'predict and provide' approach to planning by obligating the applicant to consider further forms of (highway infrastructure) mitigation, when the focus should clearly be directed towards incentivising residents.

2.58. WSCC then clarified that the proposed development qualified for the first two reductions, with the total reduction therefore being 25%.

2.59. It is notable than the above reductions are tied to the delivery of specific cycle infrastructure along defined routes. However meeting the require modal split for cycle is likely to be more achievable as a result of the proposals put forward.

2.60. Likewise, it is noted that within the Scenario 5 report for the Regulation 19 process for the Draft Mid Sussex District Plan lists a number of other exogenous factors that could result in trip rate reductions for developments. These factors and their respective trip rate reductions are summarised as follows:

- Home Working = 5% reduction to Commuter Trips. 15% reduction to overall trips for "more significant sites".
- Internalization = 80% reduction on overall primary school trips. 5% reduction in retail and employment trips.
- Future Employment Distribution and Location = 1-2% reduction to "large and medium size Local Plan sites". Further 1% reduction to "Sites considered as an urban extension (non-rural)"
- Site Specific Developer Proposals = 2% reduction for individual cycle improvements, with up to 3% for multiple cycle corridor improvements.

2.61. As can be seen above, the majority of the allowance for the trip rate reductions assumed within the latest local plan modelling work is from other factors arising from a joined-up spatial strategy. The conclusion reached is that the provision of significant cycle infrastructure would further validate and add to the potential for vehicular trip rate reductions beyond those attributable to home working and internalisation of trips alone.

2.62. It is also notable that the proposed level of cycle provision proposed within the three Strategic Sites within the Regulation 19 version of the Draft Mid Sussex District Plan appear to be significantly less than the cycle provision within the proposed development at Ansty, with a lesser ability to demonstrate similar levels of cycle connectivity from the routes which they rely on.

- 2.63. The proposals have therefore followed the pre-application advice provided by WSCC, which is also the same methodology that was utilised and accepted within the Scenario 5 modelling work and is a robust approach in light of Scenario 6 modelling work. However, additional technical detail has been provided on the feasibility, and ability to deliver, the proposed cycle improvements.
- 2.64. Nonetheless, as suggested by WSCC during the April 2024 meeting, and as per more recent exchanges, the applicant is willing to accept a condition or obligation for providing a Trip Monitoring Strategy based on the principles outlined below and in **Table 2.5**, with full details of the strategy to be provided as part of the condition discharge / S106 process.
- 2.65. For the purposes of the Trip Monitoring Strategy, it is proposed that peak hour multi-modal surveys be undertaken at each of the accesses to the residential parcels within the site, or a combination thereof that picks up all trip-making characteristics of the development.
- 2.66. As the planning application is currently in outline and the final layout of the masterplan is subject to further detailed design through associated reserve matters applications, the locations of these surveys cannot be confirmed at this stage. The overall objective of these surveys will be to isolate the residential proposals and exclude all vehicular movements associated with other destinations. Thus, the methodology will reflect, for example, whether trips utilise links that cut through residential use to access the local centre or school within the development. Full details of the location of site surveys will be presented to the LHA in advance to allow agreement prior to survey commencement.
- 2.67. Surveys should be undertaken over the course of three days during a neutral weekday (i.e. Tuesday, Wednesday, and Thursday) outside of the school holiday period or shoulder weeks either side, and on a date not coinciding with unusual events (e.g. South of England Show) that would impact traffic flow. The survey should be carried out between the period of 07:00-10:00 in the AM peak and 16:00-19:00 in the PM peak.

2.68. It is proposed that four sets of traffic surveys be undertaken at the following intervals:

- A survey at the mid-point of occupation (i.e. 50% occupied)
- A subsequent survey at 75% occupation
- A survey undertaken after the development is completely occupied;
- A final survey 2 years after occupation.

2.69. In the first two stages, the results will be extrapolated to provide an indication as to whether the vehicle trip numbers are in accordance with the comparative baseline scenario(s), which will be drawn from a combination of development-specific forecasted development specific and established data sources for the local area (e.g. Census) and subsequently whether mitigation is required. As a 'live' document, the Travel Plan will consistently monitor the underlying baseline position to ensure that any exogenous factors can be taken into account.

2.70. The survey information following complete occupation of the development will allow a direct comparison to be made taking into account the agreed trips. Whilst this survey will only be used to record the trips directly associated with the proposed residential dwellings, the comparison within the monitoring strategy and subsequent update reports will need to account for the benefits of the development including the internalisation and active travel provision inherent to its makeup.

2.71. Commitment towards the setting up of a Travel Plan Working Group, or similar, to oversee the monitoring and evolving target setting can be secured via suitably worded obligations within the planning legal agreement.

2.72. **Table 2.5** below follows the example provided by the West of Chichester note, as requested by WSCC.

Stage of Development	Traffic Threshold Exceedance (indicative)	Fallback Mitigation Measure	Delivery Mechanism
50% Occupation	>5% but <10%	Additional £200 per dwelling travel voucher and personal travel planning	Delivered by the developer through the Travel Plan Process
	>10%	Off-site active travel enhancements to local cycle enhancements up to the value of £20,000	Delivered by the developer through S106 / S278 process
75% Occupation	>5% but <10%	Additional £200 per dwelling travel voucher and personal travel planning	Delivered by the developer through the Travel Plan Process
	>10%	Off-site active travel enhancements to local cycle enhancements up to the value of £20,000	Delivered by the developer through S106 / S278 process
Complete Development	>5% but <10%	Additional £200 per dwelling travel voucher and personal travel planning	Delivered by the developer through the Travel Plan Process
	>10% but <20%	Off-site active travel enhancements to local cycle enhancements up to the value of £20,000	Delivered by the developer through S106 / S278 process
	>20%	Provision of active and sustainable travel fund to WSCC up the value of £85,000	Delivered via the S106 Agreement
2 Years Post Completion	>5% but <10%	Additional £200 per dwelling travel voucher and personal travel planning	Delivered by the developer through the Travel Plan Process
	>10% but <20%	Off-site active travel enhancements to local cycle enhancements up to the value of £85,000	Delivered by the developer through S106 / S278 process
	>20%	Provision of active and sustainable travel fund to WSCC up to the value of £85,000	Delivered via the S106 Agreement
	Maximum Contribution Value:	£250,000	

Table 2.5: Indicative Trip Monitoring Strategy Thresholds and Mitigation

**To be specified during Condition Discharge / S106 Discussions*

2.73. The proposed Trip Monitoring Strategy is to be secured via a suitably worded condition or S106 obligation.

2.74. The above trip monitoring strategy has been agreed with WSCC.

Comment #15 – Sifting Criteria

"Junctions have been scoped out based on a percentage impact assessment, stating that flows with 10% would be within daily fluctuations. This approach is not acceptable and the scope of junctions should be revisited".

- 2.75. The sifting criteria was presented to WSCC during pre-application discussions, and concerns were not raised at that time.
- 2.76. The sifting criteria specifies that a threshold of 5% change in traffic was applied to be robust.
- 2.77. It further notes that 10% daily fluctuations can be considered typical for background traffic, however 10% was not used as a threshold for sifting but the more robust 5% figure was utilised instead.
- 2.78. Data from Automatic Traffic Counter (ATC) surveys conducted from Friday 29th September to Thursday 5th October on the A272 to the north of the site, A272 to the west of the site, B2036 Harvest Hill to the south of the site and B2036 to the north of the site towards Cuckfield have been analysed to determine the local daily fluctuation characteristics. The results are summarised in **Table 2.6**.

		AM (08:00 - 09:00)										
		Total Flows					Difference from Average					
Day	Location	Friday 29-Sep-23	Monday 2-Oct-23	Tuesday 3-Oct-23	Wednesday 4-Oct-23	Thursday 5-Oct-23	Weekday Average	Friday 29-Sep-23	Monday 2-Oct-23	Tuesday 3-Oct-23	Wednesday 4-Oct-23	Thursday 5-Oct-23
	B2036 (To Cuckfield)	547	559	593	575	495	554	1.2%	-0.9%	-7.1%	-3.8%	10.6%
	A272 (North)	915	976	941	1020	890	948	3.5%	-2.9%	0.8%	-7.5%	6.2%
	A272 (West)	1392	1476	1488	1528	1252	1427	2.5%	-3.4%	-4.3%	-7.1%	12.3%
	B2036 Harvest Hill	485	562	569	583	547	549	11.7%	-2.3%	-3.6%	-6.2%	0.4%
		PM (17:00 - 18:00)										
		Total Flows					Difference from Average					
Day	Location	Friday 29-Sep-23	Monday 2-Oct-23	Tuesday 3-Oct-23	Wednesday 4-Oct-23	Thursday 5-Oct-23	Weekday Average	Friday 29-Sep-23	Monday 2-Oct-23	Tuesday 3-Oct-23	Wednesday 4-Oct-23	Thursday 5-Oct-23
	B2036 (To Cuckfield)	367	368	394	447	403	396	7.3%	7.0%	0.5%	-12.9%	-1.8%
	A272 (North)	1080	982	1110	978	1003	1031	-4.8%	4.7%	-7.7%	5.1%	2.7%
	A272 (West)	1393	1312	1421	1260	1265	1330	-4.7%	1.4%	-6.8%	5.3%	-4.9%
	B2036 Harvest Hill	377	378	441	443	414	411	8.2%	7.9%	-7.4%	-7.9%	-0.8%

Table 2.6: Daily Traffic Fluctuations

(Fluctuations of 10% or greater highlighted in Orange, Fluctuations of 5-10% highlighted in yellow)

- 2.79. As can be seen above, all local roads surrounding the development experience some variability in traffic conditions. This in itself suggests that the road network is already resilient to this scale of change. While further changes in traffic resulting from the development would factually have an effect on the capacity of local roads, it is likely that the performance of the road network would not be significantly affected further

by increases up to 5% on any on average day of the week. As such, this is the proposed measure used to define the sifting criteria, namely the threshold at which there may be need to more explicitly consider the changes in traffic conditions through an assessment of a junction’s operational performance.

2.80. Notwithstanding the above, following feedback from WSCC additional junction capacity modelling has been conducted for key junctions between the site and Haywards Heath.

2.81. Specifically the following junctions have been considered in additional detail:

- Junction E – A272 / B2036 Roundabout
- Junction G – A272 / Tylers Green / Broad Street Roundabout
- Junction H – A272 / Tylers Green / Issac’s Lane Roundabout

2.82. The results of the junction capacity modelling are provided in the below tables, with the full outputs provided at **Appendix B**.

	AM Peak Hour			PM Peak Hour		
	Q (Veh)	Delay (s)	RFC	Q (Veh)	Delay (s)	RFC
2019 Baseline						
1 - B2036 (N)	0.2	3.04	0.14	0.1	3.12	0.13
2 - A272 (E)	1.0	3.96	0.49	0.6	3.10	0.37
3 - A272 (SW)	0.6	3.69	0.36	0.7	3.64	0.41
2039 Do Nothing						
1 - B2036 (N)	0.2	3.05	0.16	0.3	4.32	0.24
2 - A272 (E)	2.2	6.58	0.69	1.0	3.85	0.49
3 - A272 (SW)	0.5	3.76	0.34	1.6	5.95	0.61
2039 Do Something Isolated						
1 - B2036 (N)	0.2	2.99	0.17	0.4	4.39	0.29
2 - A272 (E)	2.3	6.73	0.70	1.0	3.89	0.50
3 - A272 (SW)	0.5	3.82	0.32	1.2	5.15	0.55

Table 2.7: ARCADY – Junction E – A272 / B2036 Roundabout

	AM Peak Hour			PM Peak Hour		
	Q (Veh)	Delay (s)	RFC	Q (Veh)	Delay (s)	RFC
2019 Baseline						
1 - B2184 Broad St (N)	0.4	4.00	0.31	0.7	4.63	0.43
2 - A272 Tylers Green (SE)	6.4	18.86	0.87	3.1	10.75	0.77
3 - A272 (SW)	0.9	5.68	0.47	0.6	3.83	0.36
2039 Do Nothing						
1 - B2184 Broad St (N)	1.5	8.09	0.60	0.7	4.65	0.41
2 - A272 Tylers Green (SE)	6.4	18.94	0.87	6.2	18.26	0.87
3 - A272 (SW)	2.7	11.43	0.73	0.6	3.89	0.39
2039 Do Something Isolated						
1 - B2184 Broad St (N)	1.4	8.17	0.58	0.7	4.82	0.42
2 - A272 Tylers Green (SE)	6.8	20.15	0.88	6.7	19.47	0.88
3 - A272 (SW)	3.7	14.95	0.80	0.7	4.09	0.42

Table 2.8: ARCADY – Junction G – A272 / Tylers Green / Broad Street Roundabout

	AM Peak Hour			PM Peak Hour		
	Q (Veh)	Delay (s)	RFC	Q (Veh)	Delay (s)	RFC
2019 Baseline						
1 - B2272 Butler's Green Road	1.0	3.96	0.50	1.7	5.40	0.62
2 - A272 Isaac's Lane (S)	2.2	6.30	0.69	0.8	3.62	0.46
3 - A272 Tylers Green (NW)	3.9	14.00	0.80	2.7	8.97	0.74
2039 Do Nothing						
1 - B2272 Butler's Green Road	1.9	5.61	0.66	74.8	121.10	1.07
2 - A272 Isaac's Lane (S)	6.0	14.71	0.86	0.9	4.25	0.47
3 - A272 Tylers Green (NW)	362.7	1031.38	1.51	3.4	10.76	0.78
2039 Do Something Isolated						
1 - B2272 Butler's Green Road	2.0	5.88	0.67	64.9	106.97	1.05
2 - A272 Isaac's Lane (S)	6.8	16.45	0.88	1.0	4.39	0.50
3 - A272 Tylers Green (NW)	383.2	1087.83	1.53	4.0	12.42	0.81

Table 2.9: ARCADY – Junction H – A272 / Tylers Green / Issac’s Lane Roundabout (Existing)

2.83. As can be seen above, the effect of the proposed development on the performance of each of the above junctions is forecast to be negligible.

2.84. Nonetheless and as agreed with WSCC a mitigation scheme has been developed to provide mitigation to this junction such that the future bus route associated with the proposed development will not be impeded by excessive queuing and delays at this junction.

2.85. A mitigation scheme comprising the widening of all three arms of the roundabout has been produced and is shown on **ACE Drawing 2207280-016A** which provides a better than nil-detriment improvement to the junction and has been agreed with WSCC. The ARCADY results for the mitigation scheme are shown in **Table 2.10** below with full results provided at **Appendix B**.

	AM			PM		
	Q (Veh)	Delay (s)	RFC	Q (Veh)	Delay (s)	RFC
	2039 Do Something (Including Mitigation)					
1 - B2272 Butler's Green Road	2.7	7.81	0.73	75.1	122.55	1.07
2 - A272 Isaac's Lane (S)	4.7	11.22	0.83	0.9	3.86	0.46
3 - A272 Tylers Green (NW)	1.2	8.73	0.56	0.4	3.97	0.3

Table 2.10: ARCADY – Junction H – A272 / Tylers Green / Issac’s Lane Roundabout (Mitigation)

2.86. The proposed mitigation scheme has been subject to an RSA1, with the Designer’s Response provided to and agreed with WSCC separately to this note.

2.87. The proposed mitigation scheme will be secured by a suitably worded condition or S106 obligation.

Comment #16 – Local Plan Mitigation

"Stating that junctions will be resolved by proposed local plan mitigation is also not acceptable, the addition of development traffic may bring forwards the requirements of mitigation or change the scheme being provided."

2.88. While work has been conducted on mitigating the effect of the development within the context of the draft Mid Sussex District Plan as part of the Regulation 18 process, the proposed development does not rely on local plan mitigation and can be delivered in isolation, as is required by the scope of the Outline Planning Application.

2.89. In the context of any Local Plan modelling, the mitigation schemes proposed by the applicant could be seen as a development-specific requirement, to be delivered by the applicant (e.g. under Section 278), or alternatively confer an equivalent financial contribution (as a proxy) towards any other more comprehensive schemes that may be considered to mitigate the cumulative impacts of the Local Plan, should this be identified by stakeholders.

Comment #17 – Traffic Flow Diagrams

Consultation Response - *"Apart from Table 7.1 no data has actually been provided on the impact on the local highway network, the applicant should provide RFCs and flow plots to identify where background traffic is rerouting (in particular causing reductions in flows)."*

Meeting Comments

- WSCC requested additional clarification on how existing background traffic was affected by the proposed development.
- WSCC requested a zonal review and the provision of difference plots to show how background traffic was affected by the proposed development.
- WSCC queried the traffic assignment at the A272 / B2036 Roundabout.

2.90. Appendix G of the submitted Transport Assessment includes a set of traffic flow diagrams that show the change in traffic as a result of the proposed development, including re-routing of traffic.

2.91. Load Difference Plots showing the resultant re-routing of traffic between the Do Something and Do Minimum scenarios in both the AM and PM peak are shown in **Figures 2.3 – 2.8** below. Please note that increases in traffic are shown in green, while decreases in traffic are shown in blue.



Figure 2.3: AM Peak - Load Difference Plot #1



Figure 2.4: AM Peak - Load Difference Plot #2



Figure 2.5: AM Peak - Load Difference Plot #3

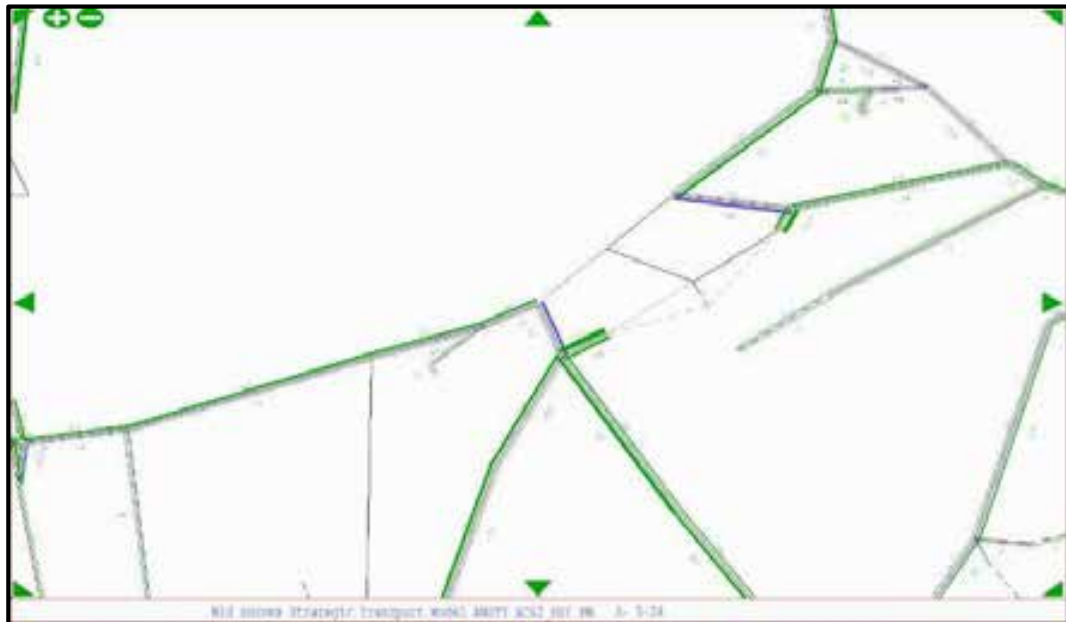


Figure 2.6: PM Peak - Load Difference Plot #1



Figure 2.7: PM Peak - Load Difference Plot #2



Figure 2.8: PM Peak - Load Difference Plot #3

2.92. In addition to the above difference plots, **Table 2.11** provides a comparison of the assigned trips at matrix level, as requested by WSCC during the April 2024 meeting.

Zone	Do Minimum		Do Something		Difference	
	AM	PM	AM	PM	AM	PM
1	71937.41	63497.70	72637.23	64124.31	699.82	626.61
2	31108.81	18881.92	31108.81	18881.92	0.00	0.00
3	60473.91	83319.90	60473.91	83319.90	0.00	0.00
4	20673.24	17053.28	20673.24	17053.28	0.00	0.00
5	15648.19	7637.00	15648.19	7637.00	0.00	0.00

Table 2.11: Assigned Trip Comparison (Matrix Level)

2.93. The above table demonstrates that the difference in trips between the 2039 Do Something and Do Minimum scenarios is equivalent to 700 trips in the AM peak and 627 trips in the PM peak, all of which are contained to the zone in which the development is located.

2.94. The change in trips corresponds to the exact number of trips generated by the proposed development in both the AM and PM peaks, with limited changes or interactions with other corridors that would otherwise suggest a re-assignment of traffic on competing routes.

2.95. Strategic model outputs for the A272 / B2036 roundabout have been checked and confirmed to be accurately reported. As advised to WSCC, concerns regarding the

assignment of trips should be raised with the designers and maintainers of the strategic traffic model.

- 2.96. Notwithstanding the above and to provide additional reassurance, further junction capacity testing of the A272 / B2036 roundabout has been conducted to determine the maximum number of trips that would result in the junction operating over its theoretical capacity (the 'Maximum Trips' scenario), and to determine the effect of imbalanced flows on this roundabout (the 'Imbalanced Flows' scenarios).
- 2.97. Testing of the Maximum Trips scenario indicates that for the junction to approach theoretical capacity, an additional 850 trips would need to be turning left from the B2036 to the A272 (East) and an additional 600 trips would need to be turning right from the A272 (East) to the B2036 in the Do Minimum and Do Something scenarios in both weekday peak hours, for a total of 1450 additional trips in each peak hour.
- 2.98. These additional trips equate to an 83% increase in total trips through the junction in the Do Something AM and 76% increase in the Do Something PM compared to the baseline MSSHM outputs. As such, confidence can be had in the future operation of the junction.
- 2.99. Testing of the Imbalanced Flows scenarios was conducted to determine the increase in trips on each arm needed for the arm to reach theoretical capacity, thereby allowing for consideration of how a different distribution of trips may affect the operation of the junction.
- 2.100. For the scenario favouring the A272 (East) arm, an additional 300 trips have been added to right turns from the A272 (East) to the B2036 and to left turn from the A272 (East) to the A272 (SouthWest) in both weekday peak hours, for a total of 600 additional trips in each peak hour. This represents a 57% increase in total trips through the junction in the Do Something AM and 32% increase in the Do Something PM compared to the baseline MSSHM outputs.
- 2.101. For the scenario favouring the A272 (East) arm, an additional 200 trips have been added to straight ahead movements turns from the A272 (SouthWest) to the B2036 and to right turns from the A272 (SouthWest) to the A272 (East), for a total of 600 additional trips in the AM peak. This represents a 23% increase in total trips through the junction in the Do Something AM.

- 2.102. An additional 350 trips have been added to straight ahead movements turns from the A272 (SouthWest) to the B2036 and to right turns from the A272 (SouthWest) to the A272 (East), for a total of 700 additional trips in the PM peak. This represents a 37% increase in total trips through the junction in the Do Something PM.
- 2.103. For the scenario favouring the B2036 arm, an additional 450 trips have been added to straight ahead movements turns from the B2036 to the A272 (SW) and to left turns from the B2036 to the A272 (East), for a total of 900 additional trips both weekday peak hours. This represents a 51% increase in total trips through the junction in the Do Something AM and a 47% increase in trips through the junction in the Do Something PM.
- 2.104. The above modelling shows that this junction is expected to operate within capacity in the future year with the proposed development in place based on the outputs from the MSSHM, and that the junction can operate within theoretical capacity in a variety of sensitivity test scenarios with substantially increased and alternate distributions of traffic flows. The ARCADY outputs for the above sensitivity testing is provided at **Appendix B**.

Comment #18 – B2036 London Road / Ardingly Road Mini-Roundabout

"Concerns are raised about the suitability of provision given that it only serves cyclists heading north. Realignment of access to Manor Drive to reduce width – tracking required.

- *I assume vehicle and pedestrian flows have been captured to establish zebra's are the most suitable option for these locations.*
- *The bus shelter will require relocation to outside of the zig-zags*
- *The minimum width for zebras should be 2.4m; these are shown as 2.0m"*

- 2.105. Swept path analysis of Manor Drive has been shown on **ACE Drawing 2207280-010C**.
- 2.106. Zebra crossings were selected based on Table 10-2 of LTN 1/20 which suggests that roads with a speed limit of 30mph and a maximum of 2 lanes to cross in one movement may be suitable for parallel crossings regardless of the total traffic on the road link.

2.107. The intention is to promote additional active travel trips at this location while also increasing vehicular capacity, which the proposed mitigation achieves.

2.108. The proposed zebra crossings have been widened to 2.4m and the existing bus shelter on the east side of London Road has been relocated outside of the crossing zig-zags, as shown on **ACE Drawing 2207280-010C**.

2.109. The above changes were agreed during the April 2024 meeting.

Comment #19 – Car Club

Consultation Response - *"Car club operators have been approached and indicate working with the applicant, the details for a minimum number of vehicles should be secured at outline stage rather than RM as suggested within the TA."*

Meeting Comments

- WSCC requested further information on potential car clubs, including a minimum number of vehicles to be utilised within the Section 106 agreement for the development.

2.110. The applicant is willing to accept that through the submission of the Full Implementation Travel Plan, which will need to be sanctioned by WSCC, that this matter will be revisited.

2.111. Nonetheless, following feedback from WSCC which requested a minimum number of car club vehicles to be specific, for use in the Section 106 agreement for the development, a more detailed proposal has been obtained in liaison with Enterprise Rent-a-Car which sets out a potential car club scheme for the development including a minimum of two car club vehicles and up to 4 car club vehicles.

2.112. While this proposal remains indicative, it could be used to guide the wording of a Section 106 agreement for the minimum provision of car clubs within the development. As a commercially-run scheme, it would of course be reviewed to ensure that it can provide a viable services which can be used by residents so, provided that is the case, the level of provision could flex as the users demand requires it.

2.113. The Enterprise Rent-a-Car proposal is provided at **Appendix C**.

2.114. This approach was agreed with WSCC, with the minimum time period for the provision of car club vehicles to be agreed prior to resolution to grant planning permission.

Comment #20 – Speed Limit Changes (B2036 Harvest Hill)

"B2036 Harvest Hill – Within the existing 30mph speed limit there is footway provision to the Cuckfield Road junction. This implies pedestrian activity which supports the need of the 30mph speed limit on that section. The documentation supplied does not demonstrate whether there will be a continuation of footway south to the new roundabout or indicate the potential for vulnerable road user activity in that section of road, and indeed beyond to where they indicatively show the 30mph speed limit could be extended to. There are no road traffic collisions recorded on that section in the last 5 years.

On this basis I would not support an extension of the 30mph speed limit and would suggest that if there is any need to reduce the speed limit from the current national speed limit, 40mph would be more appropriate."

2.115. **ACE Drawing 2207280-005E** shows a connection between the proposed southern access roundabout and the existing footway on the east side of the B2036 Harvest Hill into Ansty.

2.116. Nonetheless, the applicant is willing to support a change in speed limit as suggested by WSCC, through the funding of a Traffic Regulation Order (TRO) which would be taken forward by the Local Authority.

2.117. It should be noted that the proposed access roundabout is itself not dependant on a change in speed limit as sufficient visibility for a 60mph design speed can be achieved within the current roundabout design. This would remove any conditional requirement on achieving a TRO which is subject to a consultation process.

Comment #21 - Personal Injury Collisions

"No information has been provided on the accident history / records of the local highway network."

2.118. As per feedback received during the April 2024 meeting, collision data has been obtained for the highway network surrounding the proposal site and along the

primary cycle route into Haywards Heath from the Sussex Safer Roads Partnership (SSRP) for the most recent 5 year period available (2023-2018 inclusive), as shown in **Figure 2.9** below.



Figure 2.9: Local Collisions (Source: Crashmap.co.uk)

2.119. As can be seen above, no areas surrounding the site is characterised by any significant cluster of collisions (defined as one collision or more per year on average).

2.120. As such, there is little to suggest any pre-existing road safety deficiencies in the area that would either affect by the development, or warrant a specific development-related intervention.

2.121. **Table 2.12** provides a breakdown of the collisions shown in **Figure 2.9** above. Plans showing the precise locations of each collision are provided at **Appendix D**.

SSRP Reference	Date	Location	Severity
471805507	04/10/2018	B2272 Butler's Green Road	Slight
471806646	01/12/2018	B2272 / Bolnore Road / Paddockhall Road Double Mini-Roundabouts	Slight
471806898	12/12/2018	B2036 Harvest Hill / Cuckfield Road Priority Junction	Slight
471900578	31/01/2019	A272	Slight
471900770	08/02/2019	A272	Slight

471901634	26/03/2019	B2272 / Tylers Green / Issac's Lane Roundabout	Slight
471902679	24/05/2019	Ansty Mini-Roundabout	Slight
470871426	27/08/2019	Ansty Mini-Roundabout	Slight
470878889	15/09/2019	A272	Slight
470895812	21/10/2019	B2272 / Bolnore Road / Paddockhall Road Double Mini-Roundabouts	Slight
470898871	15/11/2019	B2272 / Bolnore Road / Paddockhall Road Double Mini-Roundabouts	Slight
19902758	26/11/2019	A272	Slight
20961027	30/06/2020	Tylers Green	Slight
211024830	27/01/2021	B2272	Slight
211052701	06/06/2021	A272	Serious
211054261	09/06/2021	A272	Serious
211096707	09/10/2021	A272 / B2036 Roundabout	Slight
221143325	14/02/2022	A272 / B2036 Roundabout	Slight
221210667	17/08/2022	B2272 / Tylers Green / Issac's Lane Roundabout	Slight
231267902	25/01/2023	B2272 Butler's Green Road	Slight
231314397	03/06/2023	Ansty Mini-Roundabout	Serious
231315092	05/06/2023	B2272 / Tylers Green / Issac's Lane Roundabout	Slight
231337159	30/07/2023	Tylers Green	Slight

Table 2.12: Local Collisions (Source: SSRP)

2.122. The above information was provided to WSCC during post-meeting discussions and agreed.

Comment #22 – Travel Plan

"A travel plan has been provided and sets a 5 year target of reducing single occupancy car travel by 5%. This figure is below the 10% figure included within the WSCC travel plan guidance for rural sites. One key measure that should be included is the provision of £150 travel plan vouchers for each dwelling."

- 2.123. The applicant will submit a revised Framework Travel Plan that will amend the target to a 10% reduction in single occupancy car trips over 5 years and include a commitment to £150 travel plan voucher for each dwelling, as requested.
- 2.124. Baseline surveys will be conducted to monitor compliance against these targets, which will also include existing areas of Ansty (or reference to historical Census data) to demonstrate that the physical interventions themselves made within the development will allow residents to live comparatively more sustainably than the rural location of the development otherwise could have allowed.
- 2.125. It will be the combined effects of the development's internal layout and structure as well as sustainable transport incentives which will act to achieving the type of mode shift that the Travel Plan envisages.

Comment #23 – Journey Times

- 2.126. During the April 2024 meeting, WSCC requested additional information to confirm that the route through the proposed development would be less attractive to drivers than travelling on the A272.
- 2.127. At the request of WSCC, a journey time comparison between the internal primary road and the equivalent route along the A272 / B2036 has been conducted based on a first principles approach.
- 2.128. The journey times are based on the following assumptions:
- Trips on the internal primary road travel at a speed of 20mph (the Design Speed of the internal road), ignoring junctions and all speed calming measures.
 - Trips on the A272 (North) travel at a speed of 49.5mph (the average two-way speed from the ATC on this stretch of the A272)
 - Trips on the A272 (East) travel at a speed of 44.2mph (the average two-way speed from the ATC on this stretch of the A272)
 - Trips on the B2036 Harvest Hill travel at a speed of 45.2mph (the average two-way speed from the ATC on the B2036)
 - Trips on the A272 / B2036 route experience delays at each junction encountered, based on the average two-way delay in both the AM and PM peak periods from junction capacity modelling in the 2039 Do Something Scenario.

2.129. As such the comparison shown in **Table 2.13** and **Table 2.14** below should be considered robust.

Road	Road Length (m)	Road Length (Miles)	Speed (mph)	Time (mins)
Internal Road	1,316	0.82	20	2.45
A272 (North)	322	0.2	49.5	0.24
A272 (West)	605	0.38	44.2	0.51
Junction Delay	-	-	-	0.36
A272 (Combined)	927	0.58	-	1.12

Table 2.13: Journey Time Comparison (North Roundabout to East Roundabout)

Road	Road Length (m)	Road Length (Miles)	Speed (mph)	Time (mins)
Internal Road	1,649	1.02	20	3.07
A272 (North)	322	0.2	49.5	0.24
A272 (West)	946	0.59	44.2	0.8
B2036 Harvest Hill	487.4	0.3	45.2	0.4
Junction Delay	-	-	-	1.26
A272 / B2036 (Combined)	1,756	0.79	-	2.7

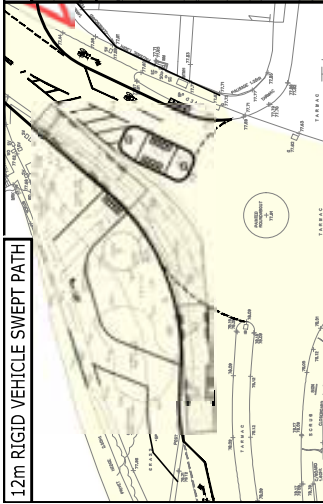
Table 2.14: Journey Time Comparison (North Roundabout to South Roundabout)

2.130. As can be seen above, the A272 / B2036 route remains the most attractive route for external drivers travelling pass the site.

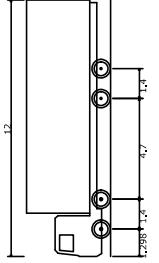
2.131. As such, the proposed development will not be expected to act as a preferential route that would otherwise be perceived as a 'rat-run'.

Drawings

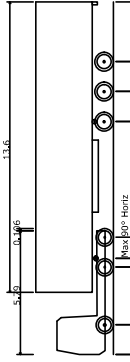
12m RIGID VEHICLE SWEEP PATH



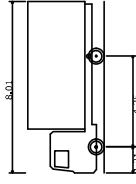
VEHICLE SPECIFICATIONS:



Rigid Truck
 Overall Length 12.000m
 Overall Width 2.500m
 Overall Body Height 3.928m
 Min Body Ground Clearance 0.412m
 Track Width 2.471m
 Lock to lock time 6.005s
 Kerb to Kerb Turning Radius 11.900m

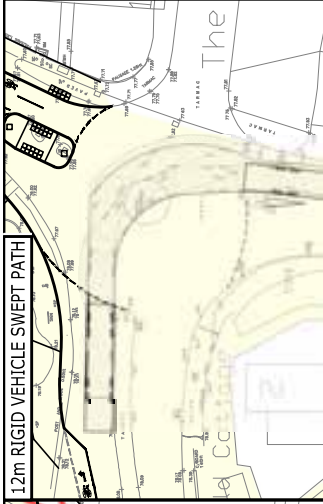


16.5m Articulated Vehicle
 Overall Length 16.500m
 Overall Width 2.500m
 Overall Body Height 3.632m
 Min Body Ground Clearance 0.396m
 Max Track Width 2.500m
 Lock to lock time 6.005s
 Kerb to Kerb Turning Radius 6.870m



7.5t Box Van
 Overall Length 8.01m
 Overall Width 2.156m
 Overall Body Height 2.351m
 Min Body Ground Clearance 0.264m
 Track Width 2.064m
 Lock to lock time 4.005s
 Kerb to Kerb Turning Radius 7.400m

12m RIGID VEHICLE SWEEP PATH



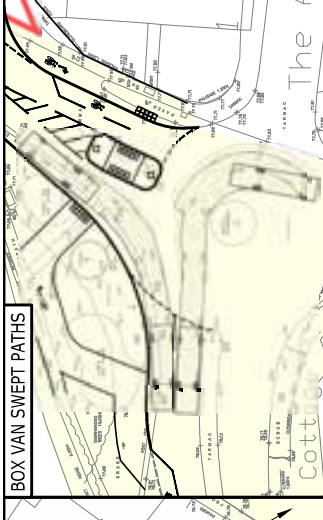
EXISTING REFUGE ISLAND WIDENED TO PROVIDE CONNECTION TO SHARED FOOT/CYCLEWAY

PROPOSED CORDUROY PAVING
 1.5m x 43m VISIBILITY SPLAY (SHOWN TO TANGENT)

DROPPED KERB FOR ACCESS TO SHARED FOOT/CYCLEWAY

Rigid Truck
 Overall Length 12.000m
 Overall Width 2.500m
 Overall Body Height 3.928m
 Min Body Ground Clearance 0.412m
 Track Width 2.471m
 Lock to lock time 6.005s
 Kerb to Kerb Turning Radius 11.900m

BOX VAN SWEEP PATHS



1.5m x 36m VISIBILITY SPLAY (MAX ACHIEVABLE)

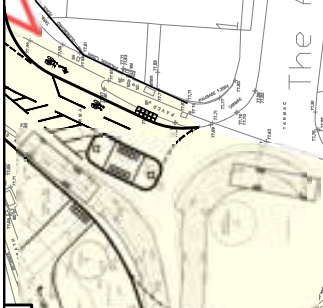
1.5m x 31m VISIBILITY SPLAY (MAX ACHIEVABLE)

EXISTING REFUGE ISLAND WIDENED TO PROVIDE CONNECTION TO SHARED FOOT/CYCLEWAY

PROPOSED CORDUROY PAVING
 1.5m x 43m VISIBILITY SPLAY (SHOWN TO TANGENT)

DROPPED KERB FOR ACCESS TO SHARED FOOT/CYCLEWAY

BOX VAN SWEEP PATHS



1.5m x 36m VISIBILITY SPLAY (MAX ACHIEVABLE)

1.5m x 31m VISIBILITY SPLAY (MAX ACHIEVABLE)

EXISTING REFUGE ISLAND WIDENED TO PROVIDE CONNECTION TO SHARED FOOT/CYCLEWAY

PROPOSED CORDUROY PAVING
 1.5m x 43m VISIBILITY SPLAY (SHOWN TO TANGENT)

DROPPED KERB FOR ACCESS TO SHARED FOOT/CYCLEWAY

BOX VAN SWEEP PATHS



1.5m x 36m VISIBILITY SPLAY (MAX ACHIEVABLE)

1.5m x 31m VISIBILITY SPLAY (MAX ACHIEVABLE)

EXISTING REFUGE ISLAND WIDENED TO PROVIDE CONNECTION TO SHARED FOOT/CYCLEWAY

PROPOSED CORDUROY PAVING
 1.5m x 43m VISIBILITY SPLAY (SHOWN TO TANGENT)

DROPPED KERB FOR ACCESS TO SHARED FOOT/CYCLEWAY

NOTES:

THE PEDESTRIAN/CYCLE ACCESS STRATEGY IS SUBJECT TO DISCUSSIONS WITH HIGHWAYS BUT INDICATIVE ROUTING/CROSSING LOCATIONS HAVE BEEN SHOWN SUBJECT TO REVIEW AGAINST LAND OWNERSHIP/CONSTRAINTS INFORMATION, ECOLOGY INFORMATION AND ARBOREAL SURVEY.

VISIBILITY SPLAYS SUBJECT TO SPEED LIMIT CHANGE AND DISCUSSIONS WITH HIGHWAYS.

SIGNAGE TO BE IN ACCORDANCE WITH TSRGD AND LTN/1 20 STANDARDS.

KEY:

INDICATIVE SITE BOUNDARY TO BE CONFIRMED

HIGHWAY BOUNDARY TRANSCRIBED FROM MID SUSSEX RECORDS

DRAFT

Rev	Description	Dim	Chk	Appr	Date
D	ADDITIONAL ARTICULATED VEHICLE TRACKS ADDED	BT	DH		19.08.23
C	ARTICULATED VEHICLE TRACKS ADDED	DH	DH		20.08.23
B	UPDATED FOLLOWING STAGE TRSA COMMENTS	DV	DH		17.02.23
A	UPDATED TO ALLOW FOR ENTRY WIDTH	DV	DH		20.08.23

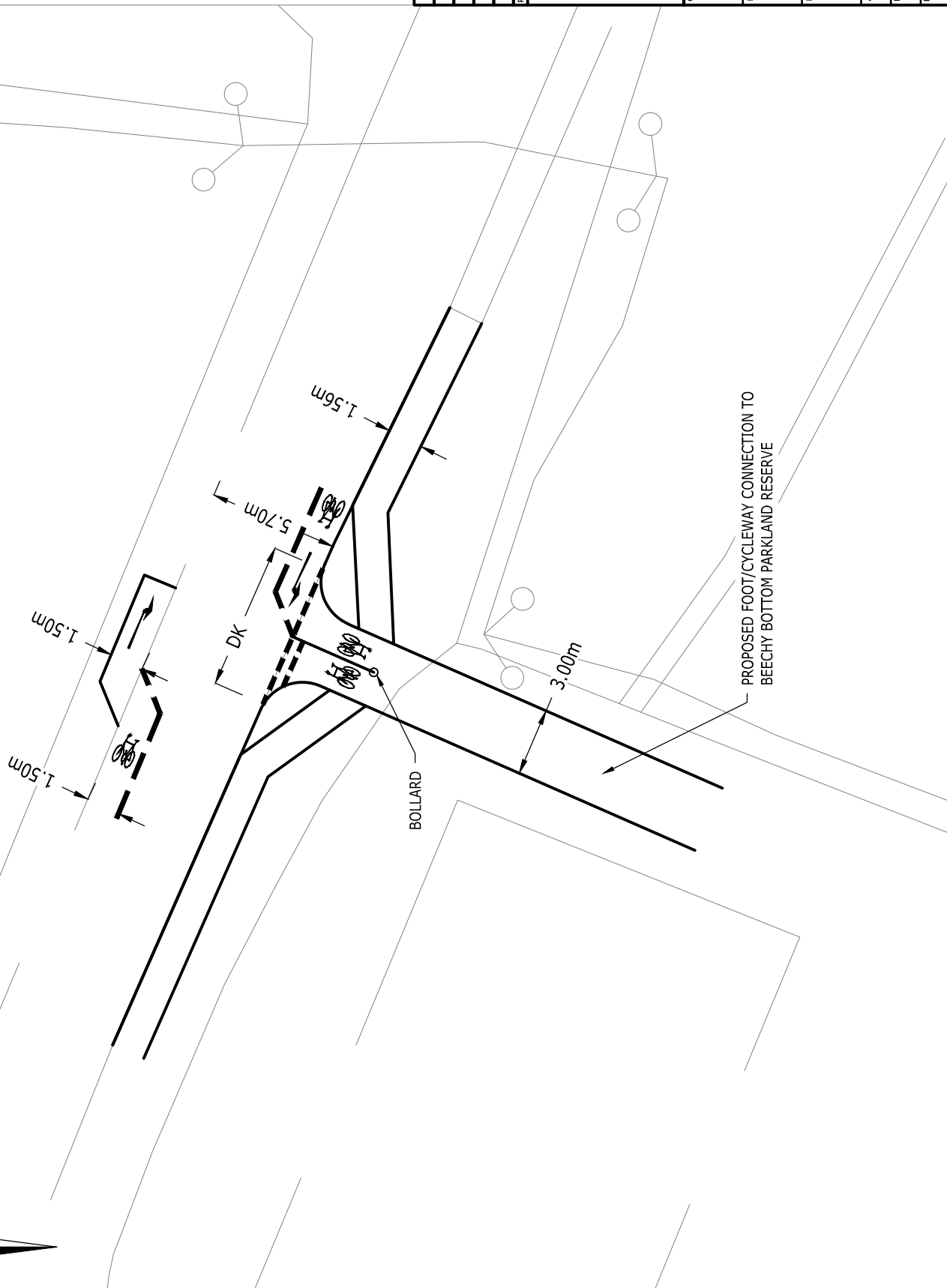
ARDENT CONSULTING ENGINEERS
 Third Floor
 The Hallmark Building
 10, Leasemall Street
 Lancing, West Sussex PO20 1JH
 EC3M 5JE
 Tel: 020 4689 4988
 Web: www.ardent-ec.co.uk
 E-mail: enquiries@ardent-ec.co.uk

Client: FAIRFAX ACQUISITIONS LTD
 Project Title: LAND AT ANTSY FARM, MID SUSSEX
 Drawing Title: PROPOSED CYCLE CONNECTIONS A272 / BOLNEY ROAD / B2036
 AS Scale: 1:500
 Date: 05.08.23
 Designed By: DV
 Drawn By: DV
 Checked By: DV
 Approved By: KM
 Drawing Number: 2207280-007
 Rev: D

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NOTES:
DRAWING IS SUBJECT TO TOPOGRAPHICAL SURVEY AND
HIGHWAY BOUNDARY CONFIRMATION



Rev	Description	Drn	Chk	App	Date
E	TO INCORPORATE FURTHER WSCC FEEDBACK	HP	JS	DH	24.07.2024
D	TO INCORPORATE WSCC FEEDBACK	SC	JS	DH	26.11.2024
C	CYCLEWAY LAYOUT AMENDED	HP	JS	DH	24.09.2024
B	TEXT REMOVED	BT	JS	DH	20.08.2024
A	ADDITION OF BOLLARDS NOTE	HP	JS	DH	17.07.2024

ARDENT CONSULTING ENGINEERS

Third Floor
The Hallmark Building
52-56 Leadenhall Street
London
EC3A 3SE

Tel: 020 7680 4088
Web: www.ardent-ce.co.uk
E-mail: enquiries@ardent-ce.co.uk

Client: **FAIRFAX ACQUISITIONS LTD**

Project Title:		LAND AT ANTSY FARM, MID SUSSEX	
Drawing Title:			
BEECHY BOTTOM PARKLAND RESERVE CYCLE ACCESS PLAN			
As Scale	Date	Designed by	BT
1:250	21.05.24	Checked by	JS
Drawn by	BT	Approved by	DH
Drawing Number	2207280-015		Rev
			E

NOTES:

ROUNDABOUT DESIGNED WITH REFERENCE TO CD116 AND SUBJECT TO STAGE 1 RSA, DETAIL DESIGN AND HIGHWAY AUTHORITY APPROVAL.

VISIBILITY SPLAYS SUBJECT TO VERTICAL CHECKS AND BASED ON POSTED SPEEDS OF 30mph & 40mph

KEY:

- HIGHWAY BOUNDARY TRANSCRIBED FROM WSSC RECORDS
- DEFLECTION
- EXISTING DEFLECTION
- 90m FORWARD VISIBILITY TO GIVE WAY LINE (30mph)
- 120m FORWARD VISIBILITY TO GIVE WAY LINE (40mph)
- PROPOSED KERB
- PROPOSED FOOT/CICLEWAY
- EXISTING ROAD MARKINGS
- PROPOSED ROAD MARKINGS



C	UNSATURATED FLOWING SPACE COMPONENTS (SA-2)	SA	SA	SA-2S	SA-2S
B	WHITE LINES APPROVED	SL	SL	SL-2S	SL-2S
A	ADDITION OF VEHICLE BACKING	DV	DS	DS-2S	DS-2S

ARMENT CONSULTING ENGINEERS

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City of London
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Web: www.arment-ce.co.uk
E-mail: enquiries@arment-ce.co.uk

FAIRFAX ACQUISITIONS LTD

Client:

Project Title:

LAND AT ANSTY FARM, MID SUSSEX

Drawing Title:

**PROPOSED MITIGATION WORKS
TYLERS GREEN ROUNDABOUT**

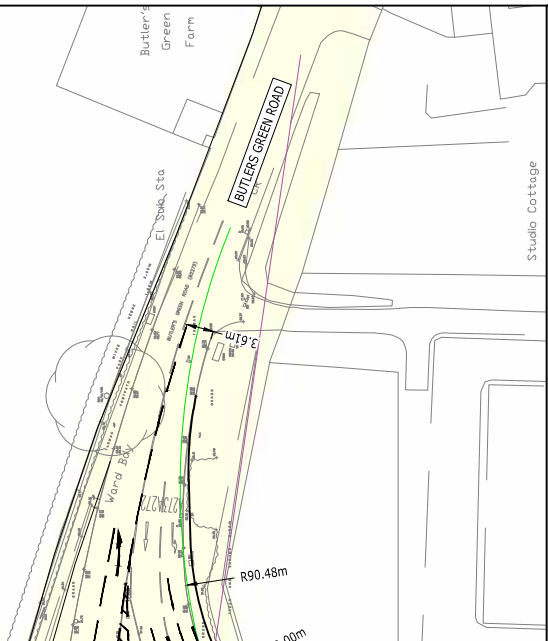
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1:500	25.11.24	DV
Drawn by	Checked by	Approved by
DV	DV	DH

Drawing Number: **2207280-016**

Rev: **C**

ARCADY GEOMETRY:

(ARM 1) B272 BUTLERS GREEN RD	(ARM 2) ISAACS LANE	(ARM 3) A272 TYLERS GREEN
APPROACH ROAD HALF WIDTH	6.80m	4.30m
ENTRY WIDTH	10.50m	9.00m
EFFECTIVE FLARE LENGTH	22.30m	4.10m
ENTRY RADIUS	40.00m	20.00m
INSCRIBED CIRCLE DIAMETER	50.00m	50.00m
CONFLICT ANGLE	37.80°	45.70°

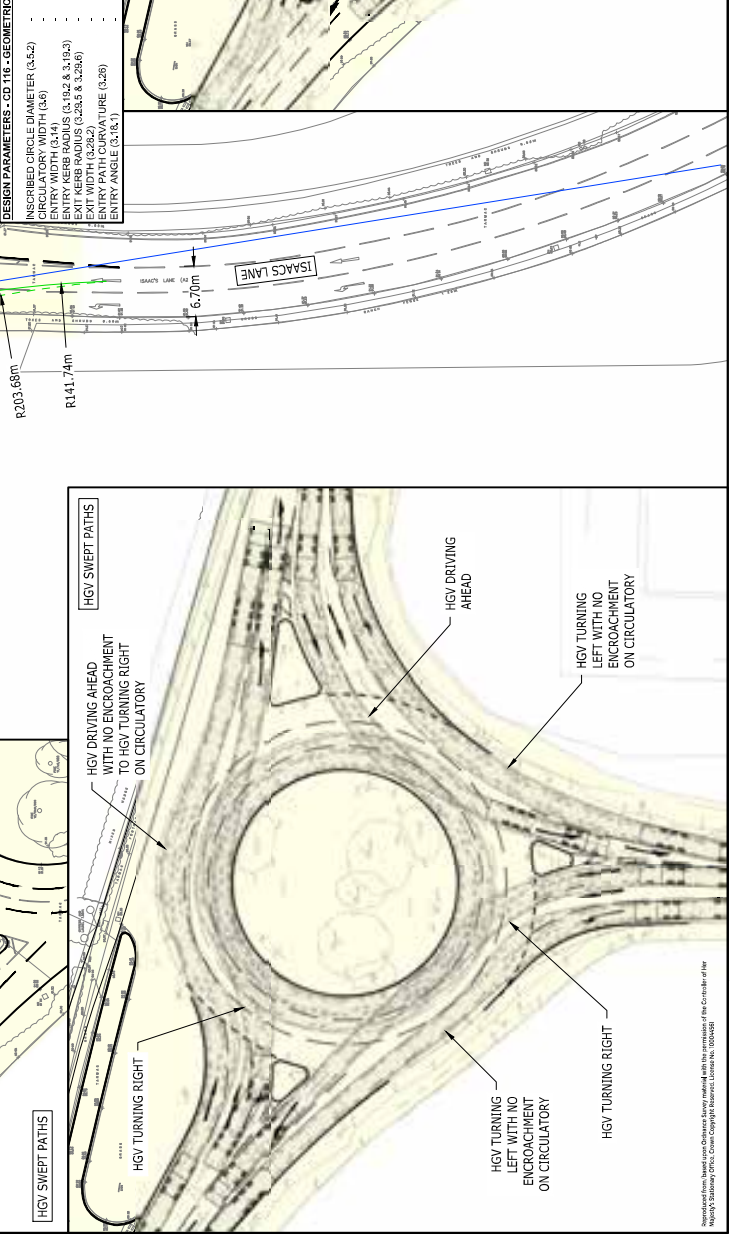
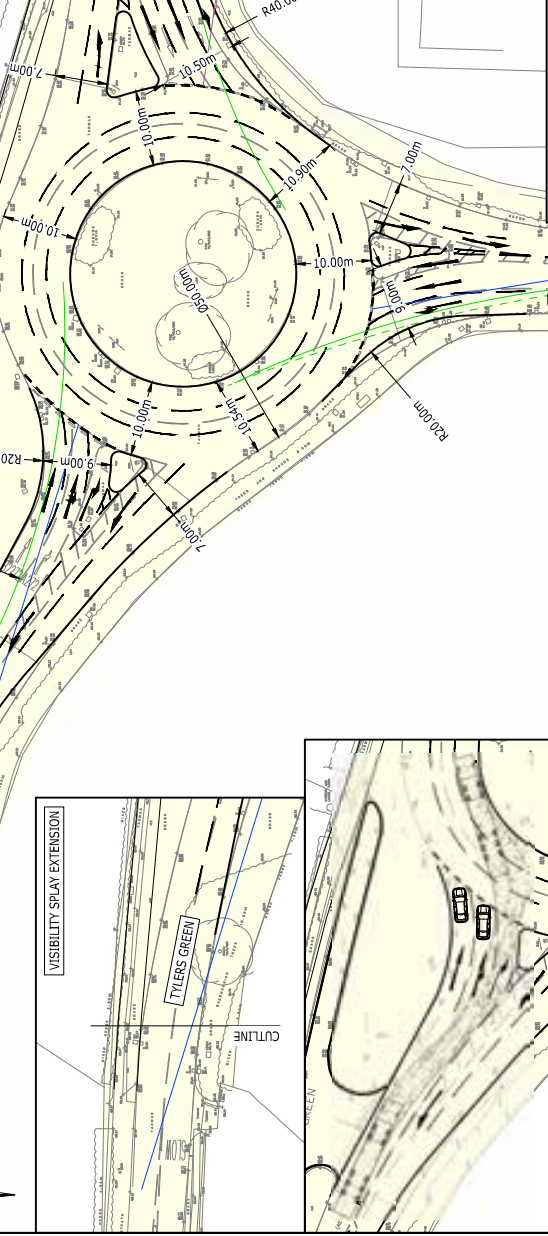
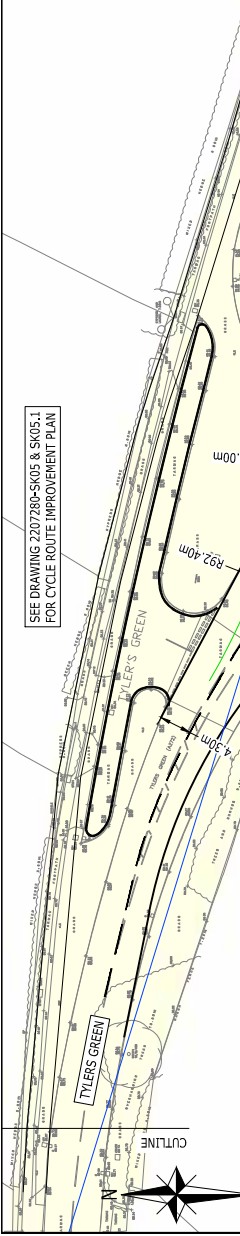
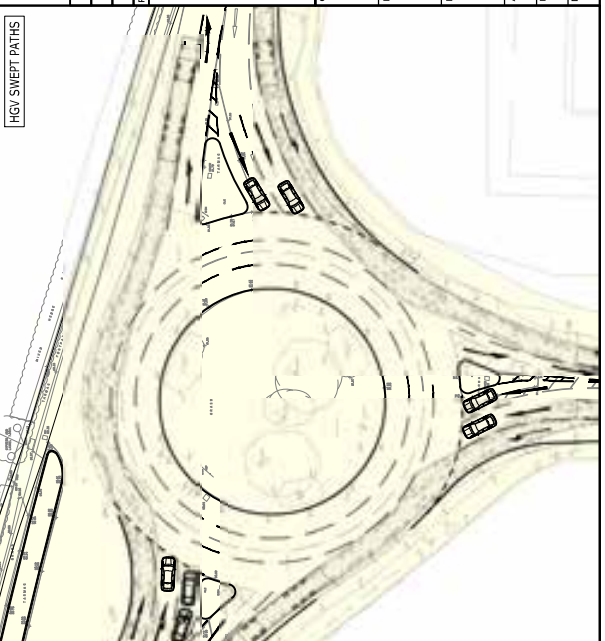


DESIGN PARAMETERS - CD 116 - GEOMETRIC DESIGN OF ROUNDABOUTS (DIMENSIONS ACHIEVED)

- For a normal roundabout should not exceed 100m (50m)
- Inscribed circle diameter (3.6)
- Circulatory width (3.6)
- Entry width (3.14) (3.0, 3.5, 3.15, 3.3)
- Exit kerb radius (3.23, 3.24, 3.25)
- Exit width (3.28, 3.29, 3.30)
- Entry path curve (3.28)
- Entry angle (3.1, 3.11, 3.12)

For a normal roundabout should not exceed 100m (50m)

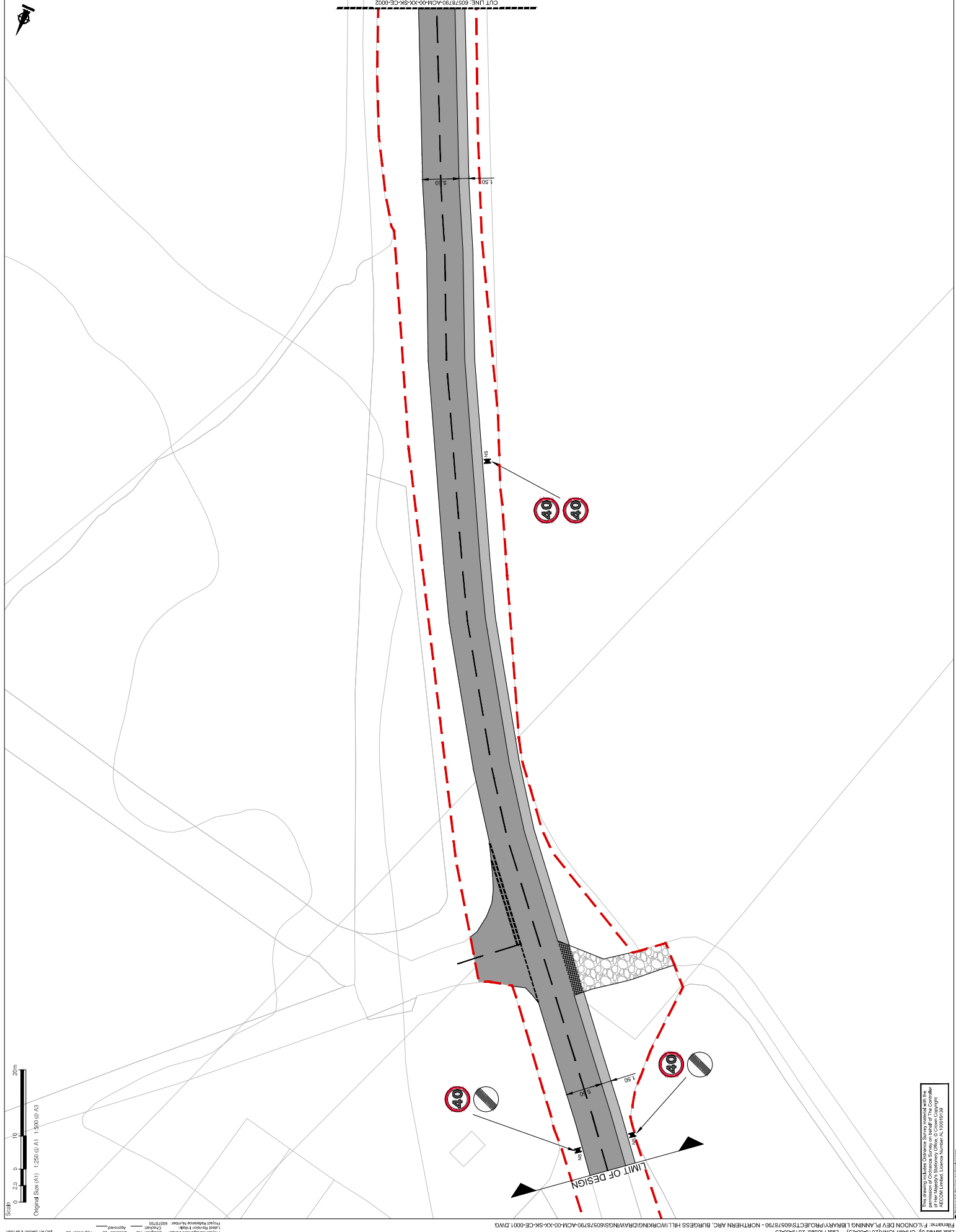
- Between 1.0 and 1.2 times the maximum entry width (Width varies between 10m - 10.00m)
- Lanes to be between 3m and 3.5m (All arms have 9m - 10.2m entry widths)
- Not greater than 100m, Not less than 20m (All arms have between 20m-100m)
- Between 7 metres and 7.5 metres and the exit should taper down to a minimum of 6 metres (All arms have 7m exit widths)
- Should not exceed 100m (All arms have $=100m$ apart from **Isaacs Lane** which as existing is 203m and reduced to 141m with proposed works)
- Between 20 degrees and 60 degrees (All arms have 20.00 degrees)



Appendices

Appendix A
Burgess Hill Northern Arc Footway Plan

Appendix G – B2036 Traffic Calming and Footway Improvements





Original Size (A1) 1:250 @ A1 1:500 @ A3

Printed/Manufactured By: []
Checked By: []
Approved By: []
Project Reference Number: 60278790

Issue/Revision: []

Project Reference Number: 60278790

Client Reference: []

Project Reference: []

Project Reference: []

Project Reference: []

Project Reference: []

Project Reference: []

Project Reference: []

Project Reference: []

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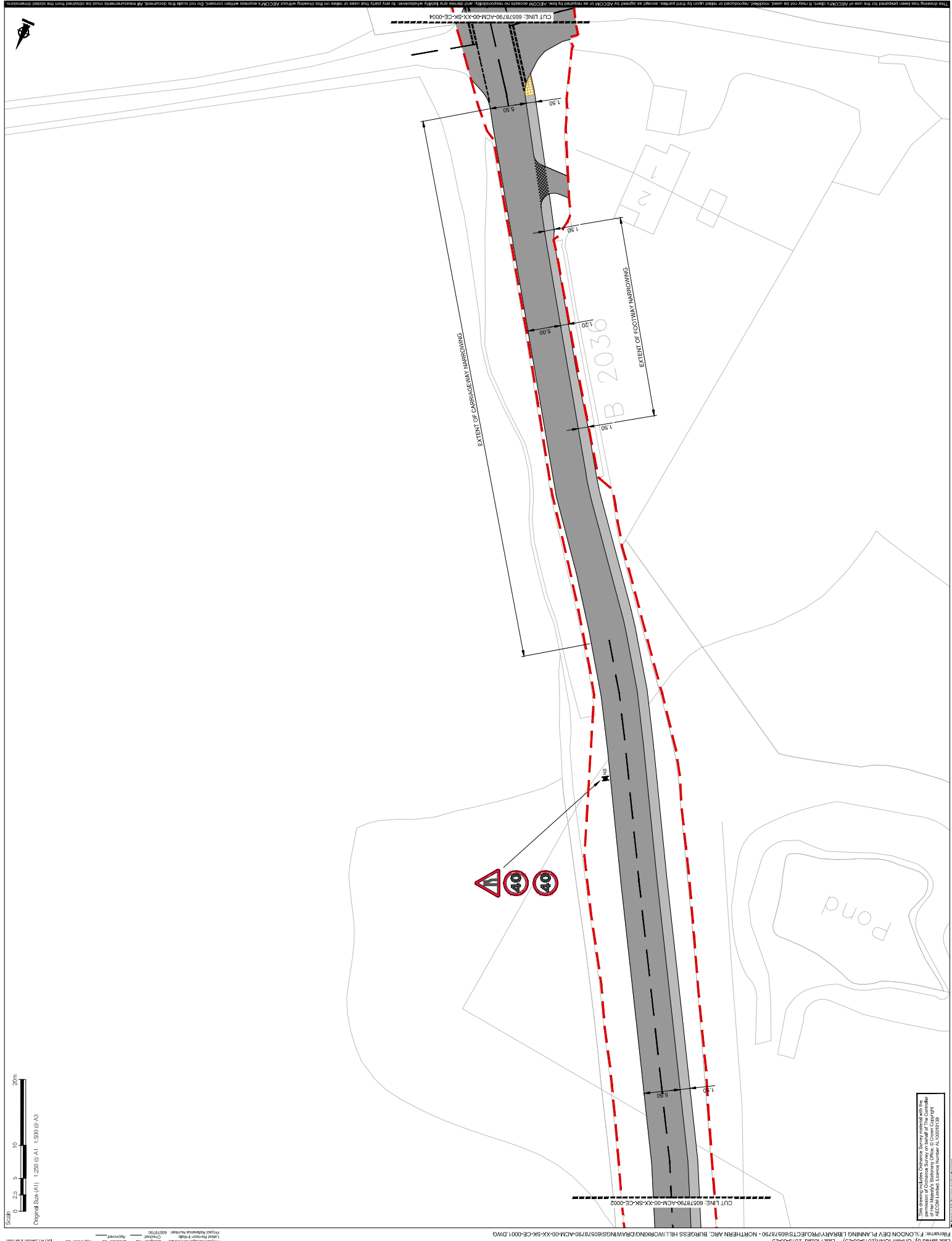
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2	ISSUED FOR PERMIT
3	ISSUED FOR PERMIT
4	ISSUED FOR PERMIT
5	ISSUED FOR PERMIT

SHEET TITLE
NORTHERN ARC BURGESS HILL
B2038 PROPOSED WALKING ROUTE
SHEET 3 OF 6

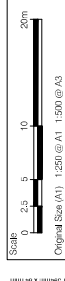
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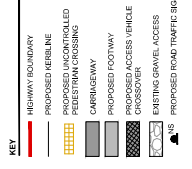
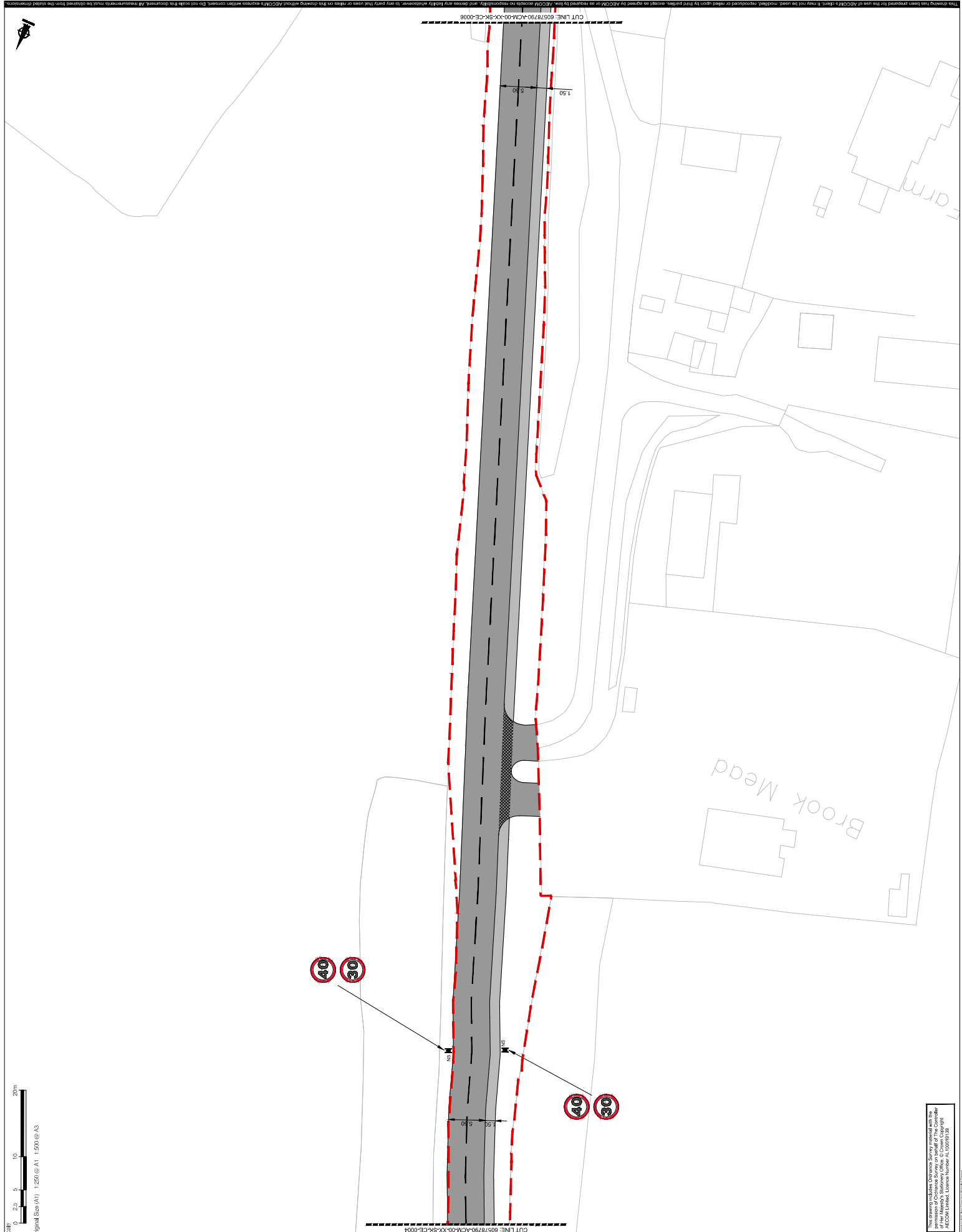
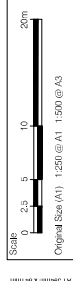
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NO.	DESCRIPTION

SHEET TITLE
NORTHERN ARC BURGESS HILL
82208 PROPOSED WALKING ROUTE
SHEET 4 OF 6
SHEET NUMBER
60578790-ACM-00-XX-SK-CE-0004-A
SCALE
1:250 @ A1





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REVISIONS

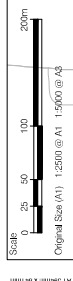
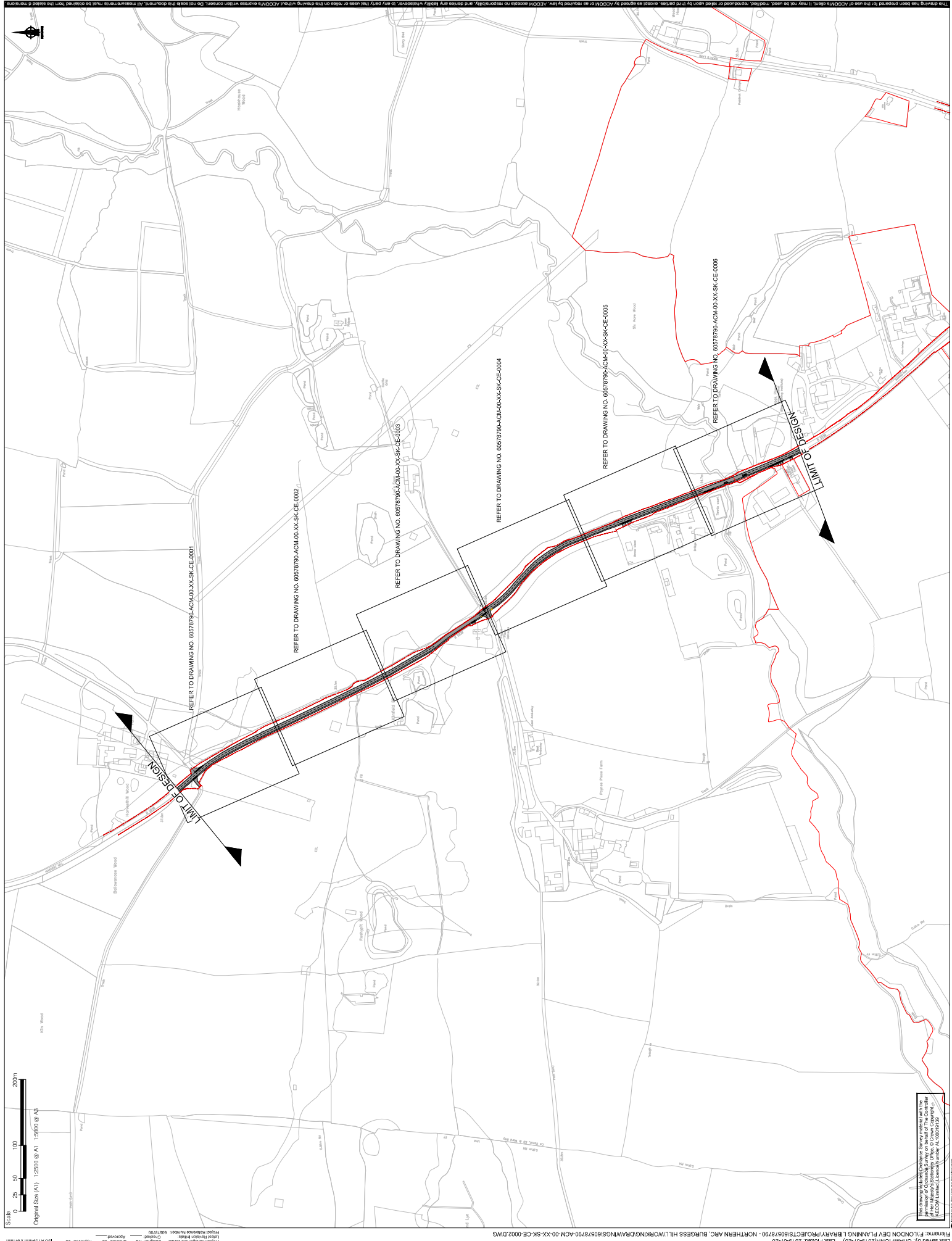
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80578790-NCM-00-XX-SK-CE-0005-A

SHEET NUMBER
60578790-NCM-00-XX-SK-CE-0005-A

SCALE
1:250 @ A1

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Appendix B
ACADY Outputs

Junctions 10
ARCADY 10 - Roundabout Module
Version: 10.0.4.1693 © Copyright TRL Software Limited, 2021
For sales and distribution information, program advice and maintenance, contact TRL Software: +44 (0)1344 379777 software@trl.co.uk trlsoftware.com
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: Jct E - A272.B2036 Roundabout.j10
Path: Y:\ARDENT PROJECTS\2207280 - Land at Ansty Farm, Mid Sussex\Transport\ARCADY
Report generation date: 03/07/2024 14:57:47

- »2019 Baseline, AM
- »2019 Baseline, PM
- »2039 Do Minimum, AM
- »2039 Do Minimum, PM
- »2039 Do Something, AM
- »2039 Do Something, PM

Summary of junction performance

	AM			PM		
	Q (Veh)	Delay (s)	RFC	Q (Veh)	Delay (s)	RFC
2019 Baseline						
1 - B2036 (N)	0.2	3.04	0.14	0.1	3.12	0.13
2 - A272 (E)	1.0	3.96	0.49	0.6	3.10	0.37
3 - A272 (SW)	0.6	3.69	0.36	0.7	3.64	0.41
2039 Do Minimum						
1 - B2036 (N)	0.2	3.05	0.16	0.3	4.32	0.24
2 - A272 (E)	2.2	6.58	0.69	1.0	3.85	0.49
3 - A272 (SW)	0.5	3.76	0.34	1.6	5.95	0.61
2039 Do Something						
1 - B2036 (N)	0.2	2.99	0.17	0.4	4.39	0.29
2 - A272 (E)	2.3	6.73	0.70	1.0	3.89	0.50
3 - A272 (SW)	0.5	3.82	0.32	1.2	5.15	0.55

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

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

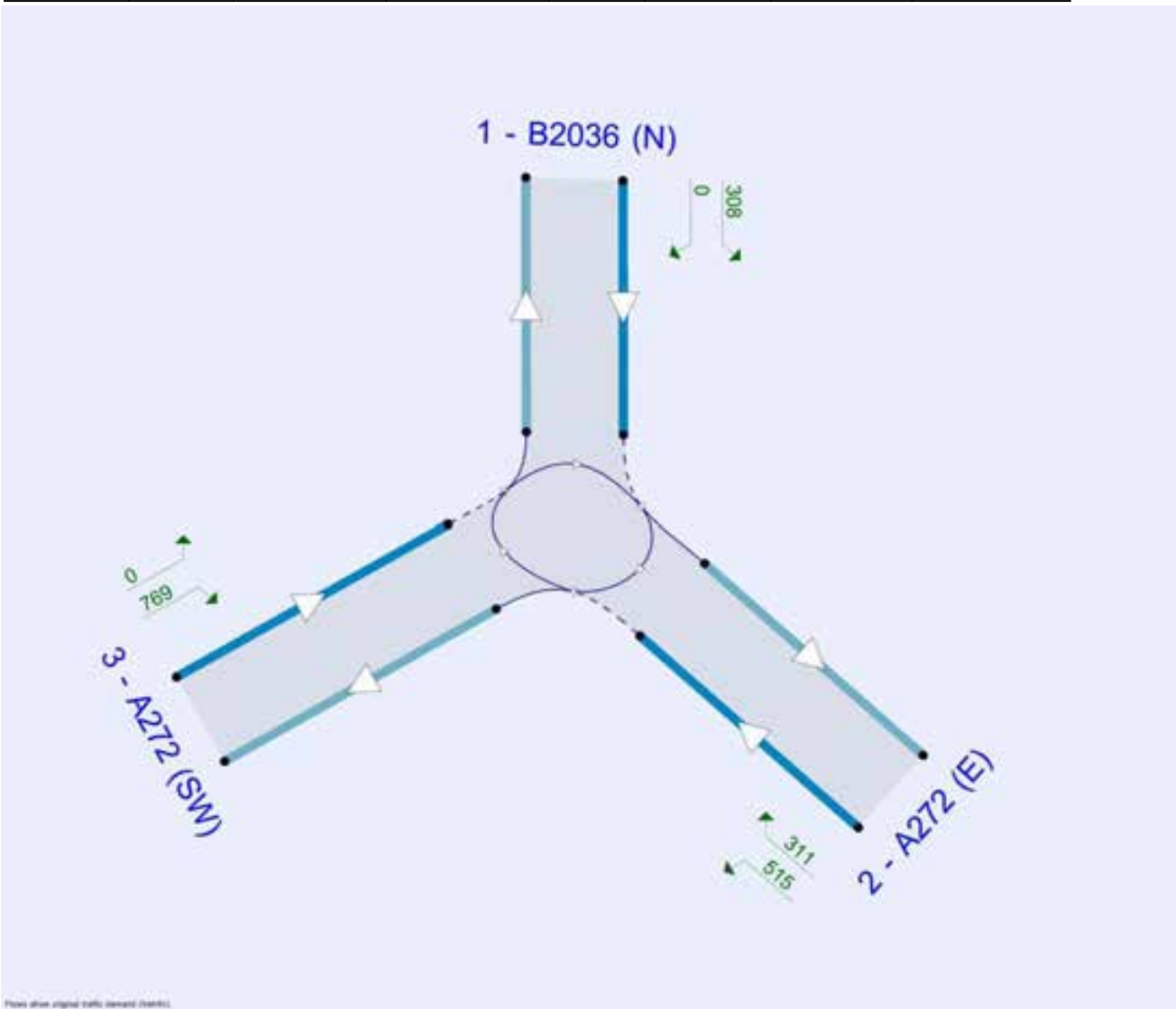
File summary

File Description

Title	A272 / B2036 Roundabout (J4)
Location	
Site number	
Date	29/04/2023
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Av. delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Hour	perHour



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Q Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Av. Delay threshold (s)	Q 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
D1	2019 Baseline	AM	ONE HOUR	07:45	09:15	15	✓
D2	2019 Baseline	PM	ONE HOUR	16:45	18:15	15	✓
D3	2039 Do Minimum	AM	ONE HOUR	07:45	09:15	15	✓
D4	2039 Do Minimum	PM	ONE HOUR	16:45	18:15	15	✓
D5	2039 Do Something	AM	ONE HOUR	07:45	09:15	15	✓
D6	2039 Do Something	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2019 Baseline, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B2036 (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A272 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A272 / B2036 Rbt	Standard Roundabout		1, 2, 3	3.76	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.76	A

Arms

Arms

Arm	Name	Description	No give-way line
1	B2036 (N)		
2	A272 (E)		
3	A272 (SW)		

Roundabout Geometry

Arm	V (m)	E (m)	I' (m)	R (m)	D (m)	PHI (deg)	Entry only	Exit only
1 - B2036 (N)	3.40	7.00	35.0	20.0	31.0	35.0		
2 - A272 (E)	3.30	7.30	37.0	40.0	31.0	43.0		
3 - A272 (SW)	3.70	7.30	22.0	50.0	31.0	45.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B2036 (N)	0.676	1819
2 - A272 (E)	0.683	1861
3 - A272 (SW)	0.669	1795

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 Baseline	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
1 - B2036 (N)		ONE HOUR	✓	171	100.000
2 - A272 (E)		ONE HOUR	✓	791	100.000
3 - A272 (SW)		ONE HOUR	✓	489	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
From	1 - B2036 (N)	0	171	0
	2 - A272 (E)	290	0	501
	3 - A272 (SW)	0	489	0

Vehicle Mix

HV %s

		To		
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
From	1 - B2036 (N)	0	5	0
	2 - A272 (E)	4	0	5
	3 - A272 (SW)	0	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B2036 (N)	0.14	3.04	0.2	A	157	235
2 - A272 (E)	0.49	3.96	1.0	A	726	1089
3 - A272 (SW)	0.36	3.69	0.6	A	449	673

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	129	32	367	1487	0.087	128	218	0.0	0.1	2.650	A
2 - A272 (E)	596	149	0	1779	0.335	594	495	0.0	0.5	3.032	A
3 - A272 (SW)	368	92	218	1581	0.233	367	376	0.0	0.3	2.963	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	154	38	439	1438	0.107	154	260	0.1	0.1	2.802	A
2 - A272 (E)	711	178	0	1779	0.400	710	593	0.5	0.7	3.368	A
3 - A272 (SW)	440	110	260	1552	0.283	439	450	0.3	0.4	3.235	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	188	47	538	1372	0.137	188	319	0.1	0.2	3.039	A
2 - A272 (E)	871	218	0	1779	0.490	870	726	0.7	1.0	3.956	A
3 - A272 (SW)	538	135	319	1513	0.356	538	551	0.4	0.5	3.690	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	188	47	538	1372	0.137	188	319	0.2	0.2	3.041	A
2 - A272 (E)	871	218	0	1779	0.490	871	727	1.0	1.0	3.965	A
3 - A272 (SW)	538	135	319	1513	0.356	538	552	0.5	0.6	3.694	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	154	38	440	1438	0.107	154	261	0.2	0.1	2.806	A
2 - A272 (E)	711	178	0	1779	0.400	712	594	1.0	0.7	3.381	A
3 - A272 (SW)	440	110	261	1551	0.283	440	451	0.6	0.4	3.243	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	129	32	369	1486	0.087	129	219	0.1	0.1	2.655	A
2 - A272 (E)	596	149	0	1779	0.335	596	497	0.7	0.5	3.045	A
3 - A272 (SW)	368	92	219	1580	0.233	369	378	0.4	0.3	2.971	A

2019 Baseline, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B2036 (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A272 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A272 / B2036 Rbt	Standard Roundabout		1, 2, 3	3.34	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.34	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	2019 Baseline	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
1 - B2036 (N)		ONE HOUR	✓	156	100.000
2 - A272 (E)		ONE HOUR	✓	619	100.000
3 - A272 (SW)		ONE HOUR	✓	621	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
From	1 - B2036 (N)	0	156	0
	2 - A272 (E)	142	0	477
	3 - A272 (SW)	0	621	0

Vehicle Mix

HV %s

		To		
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
From	1 - B2036 (N)	0	2	0
	2 - A272 (E)	1	0	1
	3 - A272 (SW)	0	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B2036 (N)	0.13	3.12	0.1	A	143	215
2 - A272 (E)	0.37	3.10	0.6	A	568	852
3 - A272 (SW)	0.41	3.64	0.7	A	570	855

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	117	29	466	1471	0.080	117	107	0.0	0.1	2.658	A
2 - A272 (E)	466	117	0	1843	0.253	465	583	0.0	0.3	2.610	A
3 - A272 (SW)	468	117	107	1706	0.274	466	358	0.0	0.4	2.898	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	140	35	558	1410	0.099	140	128	0.1	0.1	2.834	A
2 - A272 (E)	556	139	0	1843	0.302	556	698	0.3	0.4	2.798	A
3 - A272 (SW)	558	140	128	1692	0.330	558	429	0.4	0.5	3.171	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	172	43	683	1326	0.130	172	156	0.1	0.1	3.117	A
2 - A272 (E)	682	170	0	1843	0.370	681	855	0.4	0.6	3.097	A
3 - A272 (SW)	684	171	156	1673	0.409	683	525	0.5	0.7	3.632	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	172	43	684	1326	0.130	172	156	0.1	0.1	3.119	A
2 - A272 (E)	682	170	0	1843	0.370	682	855	0.6	0.6	3.099	A
3 - A272 (SW)	684	171	156	1673	0.409	684	525	0.7	0.7	3.638	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	140	35	559	1409	0.100	140	128	0.1	0.1	2.837	A
2 - A272 (E)	556	139	0	1843	0.302	557	699	0.6	0.4	2.800	A
3 - A272 (SW)	558	140	128	1692	0.330	559	429	0.7	0.5	3.181	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	117	29	468	1470	0.080	118	107	0.1	0.1	2.663	A
2 - A272 (E)	466	117	0	1843	0.253	466	586	0.4	0.3	2.615	A
3 - A272 (SW)	468	117	107	1706	0.274	468	359	0.5	0.4	2.908	A

2039 Do Minimum, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B2036 (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A272 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A272 / B2036 Rbt	Standard Roundabout		1, 2, 3	5.45	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.45	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	2039 Do Minimum	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
1 - B2036 (N)		ONE HOUR	✓	203	100.000
2 - A272 (E)		ONE HOUR	✓	1118	100.000
3 - A272 (SW)		ONE HOUR	✓	458	100.000

Origin-Destination Data

Demand (Veh/hr)

From	To		
	1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
1 - B2036 (N)	0	203	0
2 - A272 (E)	339	0	779
3 - A272 (SW)	0	458	0

Vehicle Mix

HV %s

From	To		
	1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
1 - B2036 (N)	0	4	0
2 - A272 (E)	4	0	5
3 - A272 (SW)	0	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B2036 (N)	0.16	3.05	0.2	A	186	279
2 - A272 (E)	0.69	6.58	2.2	A	1026	1539
3 - A272 (SW)	0.34	3.76	0.5	A	420	630

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	153	38	344	1514	0.101	152	254	0.0	0.1	2.643	A
2 - A272 (E)	842	210	0	1778	0.473	838	496	0.0	0.9	3.817	A
3 - A272 (SW)	345	86	254	1541	0.224	344	584	0.0	0.3	3.003	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	182	46	411	1468	0.124	182	304	0.1	0.1	2.799	A
2 - A272 (E)	1005	251	0	1778	0.565	1003	594	0.9	1.3	4.641	A
3 - A272 (SW)	412	103	304	1508	0.273	411	699	0.3	0.4	3.282	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	224	56	504	1405	0.159	223	372	0.1	0.2	3.045	A
2 - A272 (E)	1231	308	0	1778	0.692	1227	727	1.3	2.2	6.496	A
3 - A272 (SW)	504	126	372	1463	0.345	504	855	0.4	0.5	3.750	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	224	56	504	1405	0.159	224	373	0.2	0.2	3.046	A
2 - A272 (E)	1231	308	0	1778	0.692	1231	728	2.2	2.2	6.581	A
3 - A272 (SW)	504	126	373	1462	0.345	504	858	0.5	0.5	3.756	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	182	46	412	1468	0.124	183	306	0.2	0.1	2.803	A
2 - A272 (E)	1005	251	0	1778	0.565	1009	595	2.2	1.3	4.705	A
3 - A272 (SW)	412	103	306	1507	0.273	412	703	0.5	0.4	3.289	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	153	38	345	1513	0.101	153	256	0.1	0.1	2.646	A
2 - A272 (E)	842	210	0	1778	0.473	843	498	1.3	0.9	3.861	A
3 - A272 (SW)	345	86	256	1540	0.224	345	588	0.4	0.3	3.012	A

2039 Do Minimum, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B2036 (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A272 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A272 / B2036 Rbt	Standard Roundabout		1, 2, 3	4.85	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.85	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
D4	2039 Do Minimum	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
1 - B2036 (N)		ONE HOUR	✓	234	100.000
2 - A272 (E)		ONE HOUR	✓	818	100.000
3 - A272 (SW)		ONE HOUR	✓	868	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
From	1 - B2036 (N)	0	234	0
	2 - A272 (E)	291	0	527
	3 - A272 (SW)	0	868	0

Vehicle Mix

HV %s

		To		
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
From	1 - B2036 (N)	0	7	0
	2 - A272 (E)	2	0	1
	3 - A272 (SW)	0	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B2036 (N)	0.24	4.32	0.3	A	215	322
2 - A272 (E)	0.49	3.85	1.0	A	751	1126
3 - A272 (SW)	0.61	5.95	1.6	A	796	1195

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	176	44	651	1285	0.137	176	218	0.0	0.2	3.244	A
2 - A272 (E)	616	154	0	1836	0.335	614	826	0.0	0.5	2.940	A
3 - A272 (SW)	653	163	218	1630	0.401	651	395	0.0	0.7	3.668	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	210	53	779	1203	0.175	210	261	0.2	0.2	3.626	A
2 - A272 (E)	735	184	0	1836	0.400	735	989	0.5	0.7	3.266	A
3 - A272 (SW)	780	195	261	1601	0.487	779	473	0.7	0.9	4.376	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	258	64	953	1092	0.236	257	320	0.2	0.3	4.312	A
2 - A272 (E)	901	225	0	1836	0.490	899	1211	0.7	1.0	3.838	A
3 - A272 (SW)	956	239	320	1561	0.612	953	579	0.9	1.6	5.897	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	258	64	956	1090	0.236	258	320	0.3	0.3	4.323	A
2 - A272 (E)	901	225	0	1836	0.490	901	1213	1.0	1.0	3.847	A
3 - A272 (SW)	956	239	320	1561	0.612	956	580	1.6	1.6	5.946	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	210	53	783	1201	0.175	211	262	0.3	0.2	3.640	A
2 - A272 (E)	735	184	0	1836	0.400	737	993	1.0	0.7	3.276	A
3 - A272 (SW)	780	195	262	1600	0.488	783	475	1.6	1.0	4.416	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	176	44	655	1282	0.137	176	219	0.2	0.2	3.255	A
2 - A272 (E)	616	154	0	1836	0.335	616	831	0.7	0.5	2.954	A
3 - A272 (SW)	653	163	219	1629	0.401	655	397	1.0	0.7	3.699	A

2039 Do Something, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B2036 (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A272 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A272 / B2036 Rbt	Standard Roundabout		1, 2, 3	5.59	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.59	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
D5	2039 Do Something	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
1 - B2036 (N)		ONE HOUR	✓	220	100.000
2 - A272 (E)		ONE HOUR	✓	1130	100.000
3 - A272 (SW)		ONE HOUR	✓	406	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
From	1 - B2036 (N)	0	220	0
	2 - A272 (E)	440	0	690
	3 - A272 (SW)	0	406	0

Vehicle Mix

HV %s

		To		
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
From	1 - B2036 (N)	0	4	0
	2 - A272 (E)	4	0	5
	3 - A272 (SW)	0	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B2036 (N)	0.17	2.99	0.2	A	202	303
2 - A272 (E)	0.70	6.73	2.3	A	1037	1555
3 - A272 (SW)	0.32	3.82	0.5	A	373	559

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	166	41	305	1541	0.107	165	330	0.0	0.1	2.616	A
2 - A272 (E)	851	213	0	1779	0.478	847	470	0.0	0.9	3.848	A
3 - A272 (SW)	306	76	330	1491	0.205	305	517	0.0	0.3	3.031	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	198	49	365	1500	0.132	198	395	0.1	0.2	2.763	A
2 - A272 (E)	1016	254	0	1779	0.571	1014	562	0.9	1.3	4.696	A
3 - A272 (SW)	365	91	395	1448	0.252	365	619	0.3	0.3	3.323	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	242	61	446	1444	0.168	242	483	0.2	0.2	2.994	A
2 - A272 (E)	1244	311	0	1779	0.699	1240	689	1.3	2.3	6.634	A
3 - A272 (SW)	447	112	483	1390	0.322	446	757	0.3	0.5	3.815	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	242	61	447	1444	0.168	242	484	0.2	0.2	2.995	A
2 - A272 (E)	1244	311	0	1779	0.699	1244	689	2.3	2.3	6.726	A
3 - A272 (SW)	447	112	484	1389	0.322	447	760	0.5	0.5	3.821	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	198	49	366	1499	0.132	198	397	0.2	0.2	2.765	A
2 - A272 (E)	1016	254	0	1779	0.571	1020	563	2.3	1.3	4.765	A
3 - A272 (SW)	365	91	397	1447	0.252	366	623	0.5	0.3	3.333	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	166	41	306	1540	0.108	166	332	0.2	0.1	2.619	A
2 - A272 (E)	851	213	0	1779	0.478	852	472	1.3	0.9	3.891	A
3 - A272 (SW)	306	76	332	1490	0.205	306	521	0.3	0.3	3.043	A

2039 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B2036 (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A272 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A272 / B2036 Rbt	Standard Roundabout		1, 2, 3	4.47	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.47	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
D6	2039 Do Something	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
1 - B2036 (N)		ONE HOUR	✓	308	100.000
2 - A272 (E)		ONE HOUR	✓	826	100.000
3 - A272 (SW)		ONE HOUR	✓	769	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
From	1 - B2036 (N)	0	308	0
	2 - A272 (E)	311	0	515
	3 - A272 (SW)	0	769	0

Vehicle Mix

HV %s

		To		
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
From	1 - B2036 (N)	0	7	0
	2 - A272 (E)	2	0	1
	3 - A272 (SW)	0	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B2036 (N)	0.29	4.39	0.4	A	283	424
2 - A272 (E)	0.50	3.89	1.0	A	758	1137
3 - A272 (SW)	0.55	5.15	1.2	A	706	1058

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	232	58	577	1332	0.174	231	233	0.0	0.2	3.269	A
2 - A272 (E)	622	155	0	1836	0.339	620	808	0.0	0.5	2.955	A
3 - A272 (SW)	579	145	233	1620	0.357	577	386	0.0	0.6	3.444	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	277	69	690	1259	0.220	277	279	0.2	0.3	3.663	A
2 - A272 (E)	743	186	0	1836	0.404	742	967	0.5	0.7	3.289	A
3 - A272 (SW)	691	173	279	1589	0.435	690	463	0.6	0.8	4.005	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	339	85	845	1161	0.292	339	342	0.3	0.4	4.375	A
2 - A272 (E)	909	227	0	1836	0.495	908	1184	0.7	1.0	3.876	A
3 - A272 (SW)	847	212	342	1546	0.548	845	566	0.8	1.2	5.120	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	339	85	847	1160	0.292	339	342	0.4	0.4	4.386	A
2 - A272 (E)	909	227	0	1836	0.495	909	1186	1.0	1.0	3.885	A
3 - A272 (SW)	847	212	342	1546	0.548	847	567	1.2	1.2	5.146	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	277	69	693	1258	0.220	277	280	0.4	0.3	3.673	A
2 - A272 (E)	743	186	0	1836	0.404	744	970	1.0	0.7	3.301	A
3 - A272 (SW)	691	173	280	1588	0.435	693	464	1.2	0.8	4.030	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	232	58	580	1330	0.174	232	234	0.3	0.2	3.281	A
2 - A272 (E)	622	155	0	1836	0.339	623	812	0.7	0.5	2.968	A
3 - A272 (SW)	579	145	234	1619	0.358	580	388	0.8	0.6	3.468	A

Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.0.4.1693

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Filename: Jct E - A272.B2036 Roundabout (Sensitivity Testing).j10

Path: Y:\ARDENT PROJECTS\2207280 - Land at Ansty Farm, Mid Sussex\Transport\ARCADY

Report generation date: 24/01/2025 13:47:36

-
- »Baseline MSSHM - 2019 Baseline, AM
 - »Baseline MSSHM - 2019 Baseline, PM
 - »Baseline MSSHM - 2039 Do Minimum, AM
 - »Baseline MSSHM - 2039 Do Minimum, PM
 - »Baseline MSSHM - 2039 Do Something, AM
 - »Baseline MSSHM - 2039 Do Something, PM
 - »Maximum Trips Test - 2039 Do Something (Max Test), AM
 - »Maximum Trips Test - 2039 Do Something (Max Test), PM
 - »Imbalanced Flows Test (A272 E) - 2039 Do Something [IBF-A272E), AM
 - »Imbalanced Flows Test (A272 E) - 2039 Do Something [IBF-A272E), PM
 - »Imbalanced Flows Test (A272 SW) - 2039 Do Something [IBF-A272SW), AM
 - »Imbalanced Flows Test (A272 SW) - 2039 Do Something [IBF-A272SW), PM
 - »Imbalanced Flows Test (B2036) - 2039 Do Something (IBF-B2036), AM
 - »Imbalanced Flows Test (B2036) - 2039 Do Something (IBF-B2036), PM

Summary of junction performance

	AM			PM		
	Q (Veh)	Delay (s)	RFC	Q (Veh)	Delay (s)	RFC
Baseline MSSHM - 2019 Baseline						
1 - B2036 (N)	0.2	3.07	0.14	0.1	2.86	0.12
2 - A272 (E)	0.5	3.21	0.32	0.7	3.46	0.40
3 - A272 (SW)	1.0	4.26	0.51	0.6	3.28	0.38
Baseline MSSHM - 2039 Do Minimum						
1 - B2036 (N)	0.2	3.65	0.18	0.2	3.36	0.19
2 - A272 (E)	0.4	3.21	0.31	1.4	5.14	0.58
3 - A272 (SW)	2.4	7.14	0.71	1.0	4.13	0.51
Baseline MSSHM - 2039 Do Something						
1 - B2036 (N)	0.2	3.64	0.20	0.3	3.60	0.25
2 - A272 (E)	0.4	3.10	0.28	1.1	4.80	0.53
3 - A272 (SW)	2.6	7.62	0.72	1.1	4.18	0.51

	AM			PM		
	Q (Veh)	Delay (s)	RFC	Q (Veh)	Delay (s)	RFC
Maximum Trips Test - 2039 Do Something (Max Test)						
1 - B2036 (N)	9.8	31.89	0.92	8.5	25.53	0.91
2 - A272 (E)	2.0	6.56	0.67	12.1	30.90	0.94
3 - A272 (SW)	15.2	46.49	0.96	2.1	8.41	0.68

	AM			PM		
	Q (Veh)	Delay (s)	RFC	Q (Veh)	Delay (s)	RFC
Imbalanced Flows Test (A272 E) - 2039 Do Something [IBF-A272E]						
1 - B2036 (N)	0.2	3.63	0.20	0.3	3.60	0.25
2 - A272 (E)	13.3	32.98	0.95	12.6	31.98	0.94
3 - A272 (SW)	8.7	26.95	0.91	1.4	5.59	0.59

	AM			PM		
	Q (Veh)	Delay (s)	RFC	Q (Veh)	Delay (s)	RFC
Imbalanced Flows Test (A272 SW) - 2039 Do Something [IBF-A272SW]						
1 - B2036 (N)	0.3	4.25	0.22	0.4	4.76	0.31
2 - A272 (E)	0.4	3.10	0.28	1.1	4.80	0.53
3 - A272 (SW)	21.9	48.44	0.98	14.1	32.14	0.95

	AM			PM		
	Q (Veh)	Delay (s)	RFC	Q (Veh)	Delay (s)	RFC
Imbalanced Flows Test (B2036) - 2039 Do Something (IBF-B2036)						
1 - B2036 (N)	20.6	61.49	0.99	17.2	48.74	0.97
2 - A272 (E)	0.5	4.31	0.35	2.1	9.02	0.68
3 - A272 (SW)	2.6	7.62	0.72	1.1	4.18	0.51

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

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

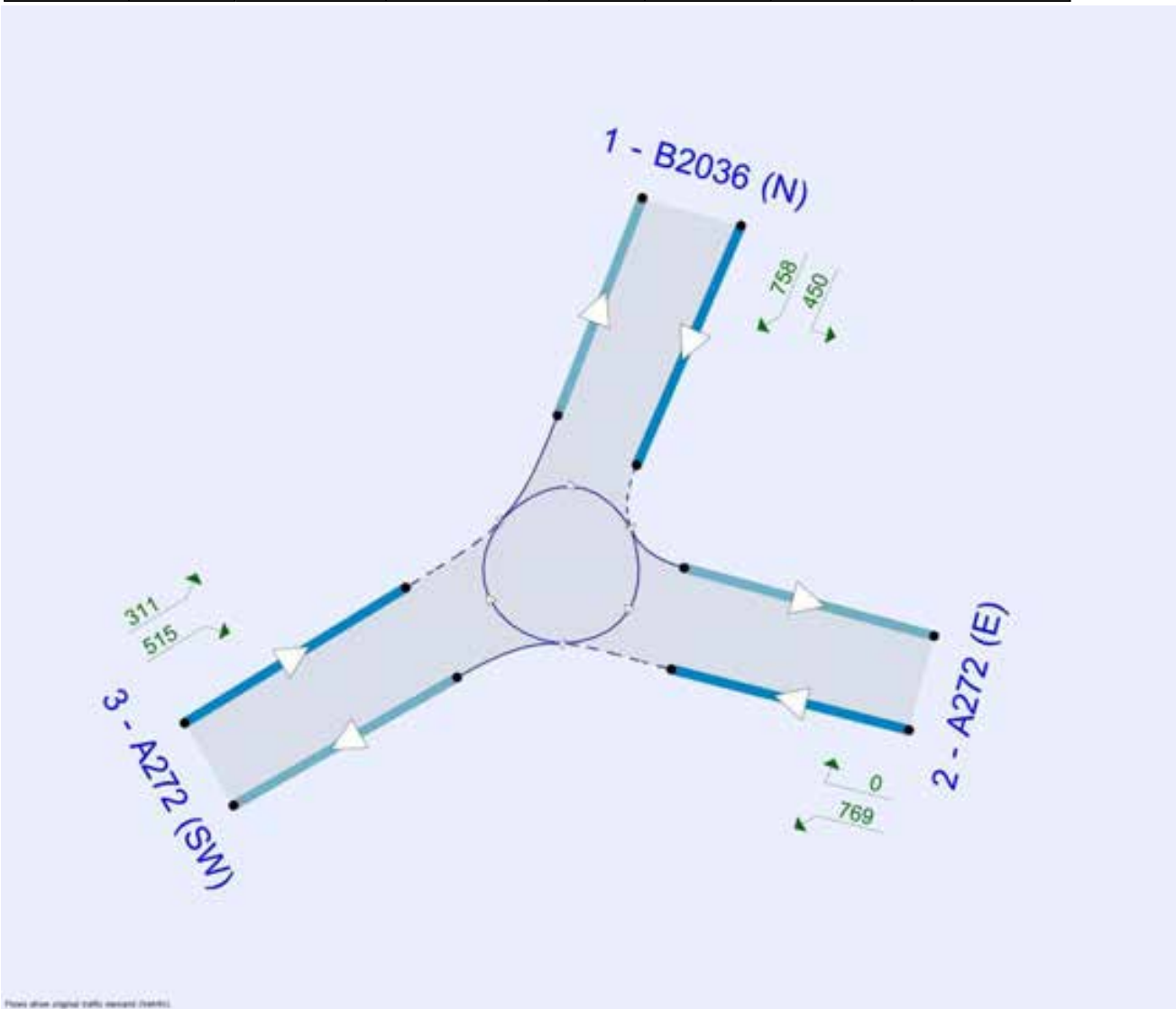
File summary

File Description

Title	A272 / B2036 Roundabout (J4)
Location	
Site number	
Date	29/04/2023
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Av. delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Hour	perHour



Please show original traffic demand (if any)

The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Q Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Av. Delay threshold (s)	Q 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
D1	2019 Baseline	AM	ONE HOUR	07:45	09:15	15	✓
D2	2019 Baseline	PM	ONE HOUR	16:45	18:15	15	✓
D3	2039 Do Minimum	AM	ONE HOUR	07:45	09:15	15	✓
D4	2039 Do Minimum	PM	ONE HOUR	16:45	18:15	15	✓
D5	2039 Do Something	AM	ONE HOUR	07:45	09:15	15	✓
D6	2039 Do Something	PM	ONE HOUR	16:45	18:15	15	✓
D7	2039 Do Something (Max Test)	AM	ONE HOUR	07:45	09:15	15	✓
D8	2039 Do Something (Max Test)	PM	ONE HOUR	16:45	18:15	15	✓
D9	2039 Do Something [IBF-A272E]	AM	ONE HOUR	07:45	09:15	15	✓
D10	2039 Do Something [IBF-A272E]	PM	ONE HOUR	16:45	18:15	15	✓
D11	2039 Do Something [IBF-A272SW]	AM	ONE HOUR	07:45	09:15	15	✓
D12	2039 Do Something [IBF-A272SW]	PM	ONE HOUR	16:45	18:15	15	✓
D13	2039 Do Something (IBF-B2036)	AM	ONE HOUR	07:45	09:15	15	✓
D14	2039 Do Something (IBF-B2036)	PM	ONE HOUR	16:45	18:15	15	✓

Baseline MSSHM - 2019 Baseline, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B2036 (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A272 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Baseline MSSHM	✓	✓	D1,D2,D3,D4,D5,D6	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A272 / B2036 Rbt	Standard Roundabout		1, 2, 3	3.77	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.77	A

Arms

Arms

Arm	Name	Description	No give-way line
1	B2036 (N)		
2	A272 (E)		
3	A272 (SW)		

Roundabout Geometry

Arm	V (m)	E (m)	Γ (m)	R (m)	D (m)	PHI (deg)	Entry only	Exit only
1 - B2036 (N)	3.40	7.00	35.0	20.0	31.0	35.0		
2 - A272 (E)	3.30	7.30	37.0	40.0	31.0	43.0		
3 - A272 (SW)	3.70	7.30	22.0	50.0	31.0	45.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B2036 (N)	0.676	1819
2 - A272 (E)	0.683	1861
3 - A272 (SW)	0.669	1795

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 Baseline	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
1 - B2036 (N)		ONE HOUR	✓	171	100.000
2 - A272 (E)		ONE HOUR	✓	489	100.000
3 - A272 (SW)		ONE HOUR	✓	791	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
From	1 - B2036 (N)	0	0	171
	2 - A272 (E)	0	0	489
	3 - A272 (SW)	290	501	0

Vehicle Mix

HV %s

	To			
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
From	1 - B2036 (N)	0	0	5
	2 - A272 (E)	0	0	4
	3 - A272 (SW)	4	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B2036 (N)	0.14	3.07	0.2	A	157	235
2 - A272 (E)	0.32	3.21	0.5	A	449	673
3 - A272 (SW)	0.51	4.26	1.0	A	726	1089

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	129	32	376	1478	0.087	128	218	0.0	0.1	2.667	A
2 - A272 (E)	368	92	128	1701	0.216	367	376	0.0	0.3	2.696	A
3 - A272 (SW)	596	149	0	1716	0.347	593	495	0.0	0.5	3.202	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	154	38	450	1428	0.108	154	260	0.1	0.1	2.824	A
2 - A272 (E)	440	110	154	1684	0.261	439	450	0.3	0.4	2.893	A
3 - A272 (SW)	711	178	0	1716	0.414	710	593	0.5	0.7	3.579	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	188	47	551	1360	0.138	188	319	0.1	0.2	3.071	A
2 - A272 (E)	538	135	188	1660	0.324	538	551	0.4	0.5	3.207	A
3 - A272 (SW)	871	218	0	1716	0.508	870	726	0.7	1.0	4.248	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	188	47	552	1359	0.139	188	319	0.2	0.2	3.073	A
2 - A272 (E)	538	135	188	1660	0.324	538	552	0.5	0.5	3.209	A
3 - A272 (SW)	871	218	0	1716	0.508	871	727	1.0	1.0	4.260	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	154	38	451	1427	0.108	154	261	0.2	0.1	2.826	A
2 - A272 (E)	440	110	154	1683	0.261	440	451	0.5	0.4	2.898	A
3 - A272 (SW)	711	178	0	1716	0.414	712	594	1.0	0.7	3.591	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	129	32	378	1477	0.087	129	219	0.1	0.1	2.672	A
2 - A272 (E)	368	92	129	1701	0.216	368	378	0.4	0.3	2.704	A
3 - A272 (SW)	596	149	0	1716	0.347	596	497	0.7	0.5	3.219	A

Baseline MSSHM - 2019 Baseline, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B2036 (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A272 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Baseline MSSHM	✓	✓	D1,D2,D3,D4,D5,D6	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A272 / B2036 Rbt	Standard Roundabout		1, 2, 3	3.31	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.31	A

Arms

Arms

Arm	Name	Description	No give-way line
1	B2036 (N)		
2	A272 (E)		
3	A272 (SW)		

Roundabout Geometry

Arm	V (m)	E (m)	Γ (m)	R (m)	D (m)	PHI (deg)	Entry only	Exit only
1 - B2036 (N)	3.40	7.00	35.0	20.0	31.0	35.0		
2 - A272 (E)	3.30	7.30	37.0	40.0	31.0	43.0		
3 - A272 (SW)	3.70	7.30	22.0	50.0	31.0	45.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B2036 (N)	0.676	1819
2 - A272 (E)	0.683	1861
3 - A272 (SW)	0.669	1795

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
D2	2019 Baseline	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
1 - B2036 (N)		ONE HOUR	✓	156	100.000
2 - A272 (E)		ONE HOUR	✓	621	100.000
3 - A272 (SW)		ONE HOUR	✓	619	100.000

Origin-Destination Data

Demand (Veh/hr)

	From	To		
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
	1 - B2036 (N)	0	0	156
	2 - A272 (E)	0	0	621
	3 - A272 (SW)	142	477	0

Vehicle Mix

HV %s

	From	To		
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
	1 - B2036 (N)	0	0	2
	2 - A272 (E)	0	0	1
	3 - A272 (SW)	1	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B2036 (N)	0.12	2.86	0.1	A	143	215
2 - A272 (E)	0.40	3.46	0.7	A	570	855
3 - A272 (SW)	0.38	3.28	0.6	A	568	852

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	117	29	358	1544	0.076	117	107	0.0	0.1	2.523	A
2 - A272 (E)	468	117	117	1762	0.265	466	358	0.0	0.4	2.776	A
3 - A272 (SW)	466	117	0	1778	0.262	465	583	0.0	0.4	2.740	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	140	35	429	1496	0.094	140	128	0.1	0.1	2.654	A
2 - A272 (E)	558	140	140	1746	0.320	558	429	0.4	0.5	3.030	A
3 - A272 (SW)	556	139	0	1778	0.313	556	698	0.4	0.5	2.947	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	172	43	525	1432	0.120	172	156	0.1	0.1	2.855	A
2 - A272 (E)	684	171	172	1724	0.397	683	525	0.5	0.7	3.456	A
3 - A272 (SW)	682	170	0	1778	0.383	681	855	0.5	0.6	3.281	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	172	43	525	1432	0.120	172	156	0.1	0.1	2.856	A
2 - A272 (E)	684	171	172	1724	0.397	684	525	0.7	0.7	3.459	A
3 - A272 (SW)	682	170	0	1778	0.383	682	855	0.6	0.6	3.283	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	140	35	429	1496	0.094	140	128	0.1	0.1	2.655	A
2 - A272 (E)	558	140	140	1746	0.320	559	429	0.7	0.5	3.034	A
3 - A272 (SW)	556	139	0	1778	0.313	557	699	0.6	0.5	2.950	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	117	29	359	1543	0.076	118	107	0.1	0.1	2.527	A
2 - A272 (E)	468	117	118	1762	0.265	468	359	0.5	0.4	2.783	A
3 - A272 (SW)	466	117	0	1778	0.262	466	585	0.5	0.4	2.748	A

Baseline MSSHM - 2039 Do Minimum, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B2036 (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A272 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Baseline MSSHM	✓	✓	D1,D2,D3,D4,D5,D6	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A272 / B2036 Rbt	Standard Roundabout		1, 2, 3	5.72	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.72	A

Arms

Arms

Arm	Name	Description	No give-way line
1	B2036 (N)		
2	A272 (E)		
3	A272 (SW)		

Roundabout Geometry

Arm	V (m)	E (m)	Γ (m)	R (m)	D (m)	PHI (deg)	Entry only	Exit only
1 - B2036 (N)	3.40	7.00	35.0	20.0	31.0	35.0		
2 - A272 (E)	3.30	7.30	37.0	40.0	31.0	43.0		
3 - A272 (SW)	3.70	7.30	22.0	50.0	31.0	45.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B2036 (N)	0.676	1819
2 - A272 (E)	0.683	1861
3 - A272 (SW)	0.669	1795

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
D3	2039 Do Minimum	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
1 - B2036 (N)		ONE HOUR	✓	203	100.000
2 - A272 (E)		ONE HOUR	✓	458	100.000
3 - A272 (SW)		ONE HOUR	✓	1118	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
From	1 - B2036 (N)	0	0	203
	2 - A272 (E)	0	0	458
	3 - A272 (SW)	339	779	0

Vehicle Mix

HV %s

	To			
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
From	1 - B2036 (N)	0	4	0
	2 - A272 (E)	4	0	5
	3 - A272 (SW)	0	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B2036 (N)	0.18	3.65	0.2	A	186	279
2 - A272 (E)	0.31	3.21	0.4	A	420	630
3 - A272 (SW)	0.71	7.14	2.4	A	1026	1539

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	153	38	584	1404	0.109	152	254	0.0	0.1	2.875	A
2 - A272 (E)	345	86	152	1673	0.206	344	584	0.0	0.3	2.708	A
3 - A272 (SW)	842	210	0	1735	0.485	838	496	0.0	0.9	3.997	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	182	46	699	1323	0.138	182	304	0.1	0.2	3.156	A
2 - A272 (E)	412	103	182	1654	0.249	411	699	0.3	0.3	2.897	A
3 - A272 (SW)	1005	251	0	1735	0.579	1003	594	0.9	1.4	4.909	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	224	56	855	1212	0.184	223	372	0.2	0.2	3.640	A
2 - A272 (E)	504	126	223	1627	0.310	504	855	0.3	0.4	3.202	A
3 - A272 (SW)	1231	308	0	1735	0.710	1227	727	1.4	2.4	7.028	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	224	56	858	1210	0.185	224	373	0.2	0.2	3.647	A
2 - A272 (E)	504	126	224	1627	0.310	504	858	0.4	0.4	3.205	A
3 - A272 (SW)	1231	308	0	1735	0.710	1231	728	2.4	2.4	7.137	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	182	46	703	1320	0.138	183	306	0.2	0.2	3.165	A
2 - A272 (E)	412	103	183	1654	0.249	412	703	0.4	0.3	2.900	A
3 - A272 (SW)	1005	251	0	1735	0.579	1009	595	2.4	1.4	4.987	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	153	38	588	1402	0.109	153	256	0.2	0.1	2.884	A
2 - A272 (E)	345	86	153	1673	0.206	345	588	0.3	0.3	2.711	A
3 - A272 (SW)	842	210	0	1735	0.485	843	498	1.4	1.0	4.046	A

Baseline MSSHM - 2039 Do Minimum, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B2036 (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A272 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Baseline MSSHM	✓	✓	D1,D2,D3,D4,D5,D6	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A272 / B2036 Rbt	Standard Roundabout		1, 2, 3	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
1	B2036 (N)		
2	A272 (E)		
3	A272 (SW)		

Roundabout Geometry

Arm	V (m)	E (m)	Γ (m)	R (m)	D (m)	PHI (deg)	Entry only	Exit only
1 - B2036 (N)	3.40	7.00	35.0	20.0	31.0	35.0		
2 - A272 (E)	3.30	7.30	37.0	40.0	31.0	43.0		
3 - A272 (SW)	3.70	7.30	22.0	50.0	31.0	45.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B2036 (N)	0.676	1819
2 - A272 (E)	0.683	1861
3 - A272 (SW)	0.669	1795

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
D4	2039 Do Minimum	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
1 - B2036 (N)		ONE HOUR	✓	234	100.000
2 - A272 (E)		ONE HOUR	✓	868	100.000
3 - A272 (SW)		ONE HOUR	✓	818	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
From	1 - B2036 (N)	0	0	234
	2 - A272 (E)	0	0	868
	3 - A272 (SW)	291	527	0

Vehicle Mix

HV %s

	To			
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
From	1 - B2036 (N)	0	0	7
	2 - A272 (E)	0	0	1
	3 - A272 (SW)	2	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B2036 (N)	0.19	3.36	0.2	A	215	322
2 - A272 (E)	0.58	5.14	1.4	A	796	1195
3 - A272 (SW)	0.51	4.13	1.0	A	751	1126

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	176	44	395	1448	0.122	176	218	0.0	0.1	2.828	A
2 - A272 (E)	653	163	176	1716	0.381	651	395	0.0	0.6	3.375	A
3 - A272 (SW)	616	154	0	1771	0.348	614	827	0.0	0.5	3.105	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	210	53	473	1398	0.150	210	261	0.1	0.2	3.030	A
2 - A272 (E)	780	195	210	1691	0.462	779	473	0.6	0.9	3.947	A
3 - A272 (SW)	735	184	0	1771	0.415	735	990	0.5	0.7	3.471	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	258	64	579	1330	0.194	257	320	0.2	0.2	3.355	A
2 - A272 (E)	956	239	257	1656	0.577	954	579	0.9	1.3	5.109	A
3 - A272 (SW)	901	225	0	1771	0.508	899	1211	0.7	1.0	4.123	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	258	64	580	1330	0.194	258	320	0.2	0.2	3.357	A
2 - A272 (E)	956	239	258	1656	0.577	956	580	1.3	1.4	5.138	A
3 - A272 (SW)	901	225	0	1771	0.508	901	1213	1.0	1.0	4.134	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	210	53	475	1397	0.151	211	262	0.2	0.2	3.034	A
2 - A272 (E)	780	195	211	1690	0.462	782	475	1.4	0.9	3.974	A
3 - A272 (SW)	735	184	0	1771	0.415	737	993	1.0	0.7	3.482	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	176	44	397	1446	0.122	176	219	0.2	0.1	2.834	A
2 - A272 (E)	653	163	176	1715	0.381	654	397	0.9	0.6	3.399	A
3 - A272 (SW)	616	154	0	1771	0.348	617	831	0.7	0.5	3.121	A

Baseline MSSHM - 2039 Do Something, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B2036 (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A272 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Baseline MSSHM	✓	✓	D1,D2,D3,D4,D5,D6	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A272 / B2036 Rbt	Standard Roundabout		1, 2, 3	6.07	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.07	A

Arms

Arms

Arm	Name	Description	No give-way line
1	B2036 (N)		
2	A272 (E)		
3	A272 (SW)		

Roundabout Geometry

Arm	V (m)	E (m)	Γ (m)	R (m)	D (m)	PHI (deg)	Entry only	Exit only
1 - B2036 (N)	3.40	7.00	35.0	20.0	31.0	35.0		
2 - A272 (E)	3.30	7.30	37.0	40.0	31.0	43.0		
3 - A272 (SW)	3.70	7.30	22.0	50.0	31.0	45.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B2036 (N)	0.676	1819
2 - A272 (E)	0.683	1861
3 - A272 (SW)	0.669	1795

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
D5	2039 Do Something	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
1 - B2036 (N)		ONE HOUR	✓	220	100.000
2 - A272 (E)		ONE HOUR	✓	406	100.000
3 - A272 (SW)		ONE HOUR	✓	1130	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
From	1 - B2036 (N)	0	0	220
	2 - A272 (E)	0	0	406
	3 - A272 (SW)	440	690	0

Vehicle Mix

HV %s

	To			
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
From	1 - B2036 (N)	0	0	4
	2 - A272 (E)	0	0	5
	3 - A272 (SW)	4	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B2036 (N)	0.20	3.64	0.2	A	202	303
2 - A272 (E)	0.28	3.10	0.4	A	373	559
3 - A272 (SW)	0.72	7.62	2.6	A	1037	1555

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	166	41	517	1396	0.119	165	330	0.0	0.1	2.922	A
2 - A272 (E)	306	76	165	1661	0.184	305	517	0.0	0.2	2.654	A
3 - A272 (SW)	851	213	0	1716	0.496	847	470	0.0	1.0	4.123	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	198	49	619	1326	0.149	198	395	0.1	0.2	3.189	A
2 - A272 (E)	365	91	198	1639	0.223	365	619	0.2	0.3	2.825	A
3 - A272 (SW)	1016	254	0	1716	0.592	1014	562	1.0	1.4	5.113	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	242	61	757	1232	0.197	242	483	0.2	0.2	3.634	A
2 - A272 (E)	447	112	242	1609	0.278	447	757	0.3	0.4	3.098	A
3 - A272 (SW)	1244	311	0	1716	0.725	1240	689	1.4	2.6	7.482	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	242	61	760	1231	0.197	242	484	0.2	0.2	3.641	A
2 - A272 (E)	447	112	242	1609	0.278	447	760	0.4	0.4	3.098	A
3 - A272 (SW)	1244	311	0	1716	0.725	1244	689	2.6	2.6	7.616	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	198	49	623	1324	0.149	198	397	0.2	0.2	3.198	A
2 - A272 (E)	365	91	198	1638	0.223	365	623	0.4	0.3	2.828	A
3 - A272 (SW)	1016	254	0	1716	0.592	1020	563	2.6	1.5	5.206	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	166	41	521	1394	0.119	166	332	0.2	0.1	2.931	A
2 - A272 (E)	306	76	166	1660	0.184	306	521	0.3	0.2	2.658	A
3 - A272 (SW)	851	213	0	1716	0.496	853	472	1.5	1.0	4.179	A

Baseline MSSHM - 2039 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B2036 (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A272 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Baseline MSSHM	✓	✓	D1,D2,D3,D4,D5,D6	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A272 / B2036 Rbt	Standard Roundabout		1, 2, 3	4.33	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.33	A

Arms

Arms

Arm	Name	Description	No give-way line
1	B2036 (N)		
2	A272 (E)		
3	A272 (SW)		

Roundabout Geometry

Arm	V (m)	E (m)	Γ (m)	R (m)	D (m)	PHI (deg)	Entry only	Exit only
1 - B2036 (N)	3.40	7.00	35.0	20.0	31.0	35.0		
2 - A272 (E)	3.30	7.30	37.0	40.0	31.0	43.0		
3 - A272 (SW)	3.70	7.30	22.0	50.0	31.0	45.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B2036 (N)	0.676	1819
2 - A272 (E)	0.683	1861
3 - A272 (SW)	0.669	1795

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
D6	2039 Do Something	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
1 - B2036 (N)		ONE HOUR	✓	308	100.000
2 - A272 (E)		ONE HOUR	✓	769	100.000
3 - A272 (SW)		ONE HOUR	✓	826	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
From	1 - B2036 (N)	0	0	308
	2 - A272 (E)	0	0	769
	3 - A272 (SW)	311	515	0

Vehicle Mix

HV %s

	To			
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
From	1 - B2036 (N)	0	0	7
	2 - A272 (E)	0	0	1
	3 - A272 (SW)	2	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B2036 (N)	0.25	3.60	0.3	A	283	424
2 - A272 (E)	0.53	4.80	1.1	A	706	1058
3 - A272 (SW)	0.51	4.18	1.1	A	758	1137

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	232	58	386	1453	0.160	231	233	0.0	0.2	2.944	A
2 - A272 (E)	579	145	231	1675	0.346	577	386	0.0	0.5	3.272	A
3 - A272 (SW)	622	155	0	1771	0.351	620	808	0.0	0.5	3.122	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	277	69	463	1405	0.197	277	279	0.2	0.2	3.191	A
2 - A272 (E)	691	173	277	1642	0.421	691	463	0.5	0.7	3.778	A
3 - A272 (SW)	743	186	0	1771	0.419	742	967	0.5	0.7	3.497	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	339	85	566	1339	0.253	339	342	0.2	0.3	3.600	A
2 - A272 (E)	847	212	339	1597	0.530	845	566	0.7	1.1	4.775	A
3 - A272 (SW)	909	227	0	1771	0.514	908	1184	0.7	1.0	4.167	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	339	85	567	1338	0.253	339	342	0.3	0.3	3.602	A
2 - A272 (E)	847	212	339	1597	0.530	847	567	1.1	1.1	4.796	A
3 - A272 (SW)	909	227	0	1771	0.514	909	1186	1.0	1.1	4.178	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	277	69	464	1404	0.197	277	280	0.3	0.2	3.197	A
2 - A272 (E)	691	173	277	1642	0.421	693	464	1.1	0.7	3.801	A
3 - A272 (SW)	743	186	0	1771	0.419	744	970	1.1	0.7	3.508	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	232	58	388	1452	0.160	232	234	0.2	0.2	2.950	A
2 - A272 (E)	579	145	232	1675	0.346	580	388	0.7	0.5	3.289	A
3 - A272 (SW)	622	155	0	1771	0.351	623	812	0.7	0.5	3.138	A

Maximum Trips Test - 2039 Do Something (Max Test), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B2036 (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A272 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Maximum Trips Test	✓	✓	D7,D8	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A272 / B2036 Rbt	Standard Roundabout		1, 2, 3	29.23	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	29.23	D

Arms

Arms

Arm	Name	Description	No give-way line
1	B2036 (N)		
2	A272 (E)		
3	A272 (SW)		

Roundabout Geometry

Arm	V (m)	E (m)	Γ (m)	R (m)	D (m)	PHI (deg)	Entry only	Exit only
1 - B2036 (N)	3.40	7.00	35.0	20.0	31.0	35.0		
2 - A272 (E)	3.30	7.30	37.0	40.0	31.0	43.0		
3 - A272 (SW)	3.70	7.30	22.0	50.0	31.0	45.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B2036 (N)	0.676	1819
2 - A272 (E)	0.683	1861
3 - A272 (SW)	0.669	1795

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
D7	2039 Do Something (Max Test)	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
1 - B2036 (N)		ONE HOUR	✓	1070	100.000
2 - A272 (E)		ONE HOUR	✓	1006	100.000
3 - A272 (SW)		ONE HOUR	✓	1130	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
From	1 - B2036 (N)	0	850	220
	2 - A272 (E)	600	0	406
	3 - A272 (SW)	440	690	0

Vehicle Mix

HV %s

		To		
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
From	1 - B2036 (N)	0	0	4
	2 - A272 (E)	0	0	5
	3 - A272 (SW)	4	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B2036 (N)	0.92	31.89	9.8	D	982	1473
2 - A272 (E)	0.67	6.56	2.0	A	923	1385
3 - A272 (SW)	0.96	46.49	15.2	E	1037	1555

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	806	201	516	1441	0.559	801	779	0.0	1.3	5.579	A
2 - A272 (E)	757	189	165	1710	0.443	754	1152	0.0	0.8	3.755	A
3 - A272 (SW)	851	213	450	1428	0.596	845	469	0.0	1.4	6.112	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	962	240	617	1370	0.702	958	932	1.3	2.3	8.653	A
2 - A272 (E)	904	226	197	1687	0.536	903	1378	0.8	1.1	4.582	A
3 - A272 (SW)	1016	254	539	1372	0.741	1011	561	1.4	2.7	9.831	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	1178	295	737	1286	0.916	1154	1128	2.3	8.2	24.023	C
2 - A272 (E)	1108	277	237	1659	0.668	1104	1654	1.1	2.0	6.452	A
3 - A272 (SW)	1244	311	659	1295	0.961	1206	683	2.7	12.2	31.961	D

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	1178	295	752	1274	0.924	1172	1140	8.2	9.8	31.891	D
2 - A272 (E)	1108	277	241	1656	0.669	1108	1683	2.0	2.0	6.556	A
3 - A272 (SW)	1244	311	661	1294	0.962	1232	688	12.2	15.2	46.492	E

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	962	240	650	1346	0.714	991	956	9.8	2.6	10.883	B
2 - A272 (E)	904	226	204	1682	0.538	908	1437	2.0	1.2	4.667	A
3 - A272 (SW)	1016	254	541	1370	0.742	1065	570	15.2	3.0	13.566	B

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	806	201	523	1436	0.561	811	786	2.6	1.3	5.808	A
2 - A272 (E)	757	189	167	1708	0.443	759	1167	1.2	0.8	3.797	A
3 - A272 (SW)	851	213	453	1427	0.596	857	473	3.0	1.5	6.383	A

Maximum Trips Test - 2039 Do Something (Max Test), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B2036 (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A272 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set (s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Maximum Trips Test	✓	✓	D7,D8	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A272 / B2036 Rbt	Standard Roundabout		1, 2, 3	23.48	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	23.48	C

Arms

Arms

Arm	Name	Description	No give-way line
1	B2036 (N)		
2	A272 (E)		
3	A272 (SW)		

Roundabout Geometry

Arm	V (m)	E (m)	Γ (m)	R (m)	D (m)	PHI (deg)	Entry only	Exit only
1 - B2036 (N)	3.40	7.00	35.0	20.0	31.0	35.0		
2 - A272 (E)	3.30	7.30	37.0	40.0	31.0	43.0		
3 - A272 (SW)	3.70	7.30	22.0	50.0	31.0	45.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B2036 (N)	0.676	1819
2 - A272 (E)	0.683	1861
3 - A272 (SW)	0.669	1795

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
D8	2039 Do Something (Max Test)	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
1 - B2036 (N)		ONE HOUR	✓	1158	100.000
2 - A272 (E)		ONE HOUR	✓	1369	100.000
3 - A272 (SW)		ONE HOUR	✓	826	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
From	1 - B2036 (N)	0	850	308
	2 - A272 (E)	600	0	769
	3 - A272 (SW)	311	515	0

Vehicle Mix

HV %s

		To		
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
From	1 - B2036 (N)	0	0	7
	2 - A272 (E)	0	0	1
	3 - A272 (SW)	2	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B2036 (N)	0.91	25.53	8.5	D	1063	1594
2 - A272 (E)	0.94	30.90	12.1	D	1256	1884
3 - A272 (SW)	0.68	8.41	2.1	A	758	1137

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	872	218	386	1527	0.571	867	682	0.0	1.3	5.410	A
2 - A272 (E)	1031	258	230	1683	0.612	1024	1022	0.0	1.6	5.415	A
3 - A272 (SW)	622	155	449	1474	0.422	619	806	0.0	0.7	4.193	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	1041	260	462	1476	0.705	1037	816	1.3	2.3	8.125	A
2 - A272 (E)	1231	308	276	1650	0.746	1226	1223	1.6	2.8	8.377	A
3 - A272 (SW)	743	186	537	1416	0.524	741	964	0.7	1.1	5.319	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	1275	319	565	1407	0.906	1254	988	2.3	7.7	21.014	C
2 - A272 (E)	1507	377	333	1608	0.937	1477	1485	2.8	10.4	23.389	C
3 - A272 (SW)	909	227	647	1344	0.677	906	1163	1.1	2.0	8.150	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	1275	319	567	1406	0.907	1272	1000	7.7	8.5	25.534	D
2 - A272 (E)	1507	377	338	1605	0.939	1500	1500	10.4	12.1	30.898	D
3 - A272 (SW)	909	227	658	1337	0.680	909	1181	2.0	2.1	8.410	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	1041	260	465	1474	0.706	1065	836	8.5	2.5	9.301	A
2 - A272 (E)	1231	308	283	1645	0.748	1267	1247	12.1	3.1	10.376	B
3 - A272 (SW)	743	186	555	1404	0.529	746	995	2.1	1.1	5.501	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	872	218	389	1525	0.572	876	689	2.5	1.4	5.586	A
2 - A272 (E)	1031	258	233	1681	0.613	1037	1032	3.1	1.6	5.633	A
3 - A272 (SW)	622	155	454	1471	0.423	623	815	1.1	0.7	4.255	A

Imbalanced Flows Test (A272 E) - 2039 Do Something [IBF-A272E), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B2036 (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A272 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A3	Imbalanced Flows Test (A272 E)	✓	✓	D9,D10	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A272 / B2036 Rbt	Standard Roundabout		1, 2, 3	28.14	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	28.14	D

Arms

Arms

Arm	Name	Description	No give-way line
1	B2036 (N)		
2	A272 (E)		
3	A272 (SW)		

Roundabout Geometry

Arm	V (m)	E (m)	Γ (m)	R (m)	D (m)	PHI (deg)	Entry only	Exit only
1 - B2036 (N)	3.40	7.00	35.0	20.0	31.0	35.0		
2 - A272 (E)	3.30	7.30	37.0	40.0	31.0	43.0		
3 - A272 (SW)	3.70	7.30	22.0	50.0	31.0	45.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B2036 (N)	0.676	1819
2 - A272 (E)	0.683	1861
3 - A272 (SW)	0.669	1795

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
D9	2039 Do Something (IBF-A272E)	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
1 - B2036 (N)		ONE HOUR	✓	220	100.000
2 - A272 (E)		ONE HOUR	✓	1406	100.000
3 - A272 (SW)		ONE HOUR	✓	1130	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
From	1 - B2036 (N)	0	0	220
	2 - A272 (E)	500	0	906
	3 - A272 (SW)	440	690	0

Vehicle Mix

HV %s

		To		
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
From	1 - B2036 (N)	0	0	4
	2 - A272 (E)	0	0	5
	3 - A272 (SW)	4	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B2036 (N)	0.20	3.63	0.2	A	202	303
2 - A272 (E)	0.95	32.98	13.3	D	1290	1935
3 - A272 (SW)	0.91	26.95	8.7	D	1037	1555

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	166	41	516	1397	0.119	165	703	0.0	0.1	2.921	A
2 - A272 (E)	1059	265	165	1689	0.627	1052	516	0.0	1.7	5.592	A
3 - A272 (SW)	851	213	374	1477	0.576	845	843	0.0	1.3	5.654	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	198	49	618	1327	0.149	198	841	0.1	0.2	3.186	A
2 - A272 (E)	1264	316	198	1667	0.758	1258	618	1.7	3.0	8.695	A
3 - A272 (SW)	1016	254	448	1430	0.710	1012	1009	1.3	2.4	8.523	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	242	61	747	1239	0.195	242	1015	0.2	0.2	3.609	A
2 - A272 (E)	1548	387	242	1636	0.946	1515	747	3.0	11.4	24.665	C
3 - A272 (SW)	1244	311	539	1372	0.907	1223	1218	2.4	7.7	21.642	C

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	242	61	757	1232	0.197	242	1031	0.2	0.2	3.635	A
2 - A272 (E)	1548	387	242	1636	0.946	1540	757	11.4	13.3	32.981	D
3 - A272 (SW)	1244	311	548	1366	0.911	1240	1235	7.7	8.7	26.949	D

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	198	49	635	1315	0.150	198	869	0.2	0.2	3.221	A
2 - A272 (E)	1264	316	198	1667	0.758	1304	635	13.3	3.3	10.947	B
3 - A272 (SW)	1016	254	464	1419	0.716	1040	1038	8.7	2.6	10.071	B

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	166	41	522	1392	0.119	166	712	0.2	0.1	2.937	A
2 - A272 (E)	1059	265	166	1689	0.627	1065	522	3.3	1.7	5.824	A
3 - A272 (SW)	851	213	379	1474	0.577	856	852	2.6	1.4	5.866	A

Imbalanced Flows Test (A272 E) - 2039 Do Something [IBF-A272E), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B2036 (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A272 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A3	Imbalanced Flows Test (A272 E)	✓	✓	D9,D10	100,000	100,000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A272 / B2036 Rbt	Standard Roundabout		1, 2, 3	19.63	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	19.63	C

Arms

Arms

Arm	Name	Description	No give-way line
1	B2036 (N)		
2	A272 (E)		
3	A272 (SW)		

Roundabout Geometry

Arm	V (m)	E (m)	Γ (m)	R (m)	D (m)	PHI (deg)	Entry only	Exit only
1 - B2036 (N)	3.40	7.00	35.0	20.0	31.0	35.0		
2 - A272 (E)	3.30	7.30	37.0	40.0	31.0	43.0		
3 - A272 (SW)	3.70	7.30	22.0	50.0	31.0	45.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B2036 (N)	0.676	1819
2 - A272 (E)	0.683	1861
3 - A272 (SW)	0.669	1795

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
D10	2039 Do Something [IBF-A272E]	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
1 - B2036 (N)		ONE HOUR	✓	308	100.000
2 - A272 (E)		ONE HOUR	✓	1369	100.000
3 - A272 (SW)		ONE HOUR	✓	826	100.000

Origin-Destination Data

Demand (Veh/hr)

	From	To		
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
	1 - B2036 (N)	0	0	308
	2 - A272 (E)	300	0	1069
	3 - A272 (SW)	311	515	0

Vehicle Mix

HV %s

	From	To		
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
	1 - B2036 (N)	0	0	7
	2 - A272 (E)	0	0	1
	3 - A272 (SW)	2	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B2036 (N)	0.25	3.60	0.3	A	283	424
2 - A272 (E)	0.94	31.98	12.6	D	1256	1884
3 - A272 (SW)	0.59	5.59	1.4	A	758	1137

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	232	58	386	1453	0.160	231	458	0.0	0.2	2.944	A
2 - A272 (E)	1031	258	231	1679	0.614	1024	386	0.0	1.6	5.449	A
3 - A272 (SW)	622	155	224	1623	0.383	619	1031	0.0	0.6	3.579	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	277	69	462	1405	0.197	277	548	0.2	0.2	3.190	A
2 - A272 (E)	1231	308	277	1646	0.748	1226	462	1.6	2.9	8.457	A
3 - A272 (SW)	743	186	269	1594	0.466	742	1234	0.6	0.9	4.218	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	339	85	566	1339	0.253	339	665	0.2	0.3	3.599	A
2 - A272 (E)	1507	377	339	1601	0.942	1475	566	2.9	10.8	24.191	C
3 - A272 (SW)	909	227	323	1557	0.584	907	1491	0.9	1.4	5.520	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	339	85	567	1338	0.253	339	671	0.3	0.3	3.602	A
2 - A272 (E)	1507	377	339	1601	0.942	1500	567	10.8	12.6	31.984	D
3 - A272 (SW)	909	227	329	1554	0.585	909	1511	1.4	1.4	5.585	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	277	69	464	1404	0.197	277	558	0.3	0.2	3.198	A
2 - A272 (E)	1231	308	277	1646	0.748	1269	464	12.6	3.1	10.445	B
3 - A272 (SW)	743	186	278	1587	0.468	745	1268	1.4	0.9	4.281	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	232	58	388	1452	0.160	232	462	0.2	0.2	2.950	A
2 - A272 (E)	1031	258	232	1678	0.614	1037	388	3.1	1.6	5.661	A
3 - A272 (SW)	622	155	227	1621	0.384	623	1041	0.9	0.6	3.609	A

Imbalanced Flows Test (A272 SW) - 2039 Do Something [IBF-A272SW), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B2036 (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A272 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A4	Imbalanced Flows Test (A272 SW)	✓	✓	D11,D12	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A272 / B2036 Rbt	Standard Roundabout		1, 2, 3	35.39	E

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	35.39	E

Arms

Arms

Arm	Name	Description	No give-way line
1	B2036 (N)		
2	A272 (E)		
3	A272 (SW)		

Roundabout Geometry

Arm	V (m)	E (m)	Γ (m)	R (m)	D (m)	PHI (deg)	Entry only	Exit only
1 - B2036 (N)	3.40	7.00	35.0	20.0	31.0	35.0		
2 - A272 (E)	3.30	7.30	37.0	40.0	31.0	43.0		
3 - A272 (SW)	3.70	7.30	22.0	50.0	31.0	45.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B2036 (N)	0.676	1819
2 - A272 (E)	0.683	1861
3 - A272 (SW)	0.669	1795

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
D11	2039 Do Something [IBF-A272SW]	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
1 - B2036 (N)		ONE HOUR	✓	220	100.000
2 - A272 (E)		ONE HOUR	✓	406	100.000
3 - A272 (SW)		ONE HOUR	✓	1530	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
From	1 - B2036 (N)	0	0	220
	2 - A272 (E)	0	0	406
	3 - A272 (SW)	640	890	0

Vehicle Mix

HV %s

		To		
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
From	1 - B2036 (N)	0	0	4
	2 - A272 (E)	0	0	5
	3 - A272 (SW)	4	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B2036 (N)	0.22	4.25	0.3	A	202	303
2 - A272 (E)	0.28	3.10	0.4	A	373	559
3 - A272 (SW)	0.98	48.44	21.9	E	1404	2106

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	166	41	665	1295	0.128	165	478	0.0	0.1	3.184	A
2 - A272 (E)	306	76	165	1661	0.184	305	665	0.0	0.2	2.653	A
3 - A272 (SW)	1152	288	0	1717	0.671	1144	470	0.0	2.0	6.201	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	198	49	796	1206	0.164	198	572	0.1	0.2	3.570	A
2 - A272 (E)	365	91	198	1639	0.223	365	796	0.2	0.3	2.825	A
3 - A272 (SW)	1375	344	0	1717	0.801	1368	562	2.0	3.8	10.117	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	242	61	950	1101	0.220	242	683	0.2	0.3	4.188	A
2 - A272 (E)	447	112	242	1609	0.278	447	950	0.3	0.4	3.098	A
3 - A272 (SW)	1685	421	0	1717	0.981	1633	689	3.8	16.8	31.583	D

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	242	61	968	1088	0.223	242	696	0.3	0.3	4.254	A
2 - A272 (E)	447	112	242	1609	0.278	447	968	0.4	0.4	3.098	A
3 - A272 (SW)	1685	421	0	1717	0.981	1664	689	16.8	21.9	48.440	E

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	198	49	841	1175	0.168	198	605	0.3	0.2	3.685	A
2 - A272 (E)	365	91	198	1638	0.223	365	841	0.4	0.3	2.830	A
3 - A272 (SW)	1375	344	0	1717	0.801	1446	563	21.9	4.3	16.345	C

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	166	41	675	1288	0.129	166	486	0.2	0.1	3.207	A
2 - A272 (E)	306	76	166	1660	0.184	306	675	0.3	0.2	2.660	A
3 - A272 (SW)	1152	288	0	1717	0.671	1161	472	4.3	2.1	6.574	A

Imbalanced Flows Test (A272 SW) - 2039 Do Something [IBF-A272SW), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B2036 (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A272 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A4	Imbalanced Flows Test (A272 SW)	✓	✓	D11,D12	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A272 / B2036 Rbt	Standard Roundabout		1, 2, 3	20.74	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	20.74	C

Arms

Arms

Arm	Name	Description	No give-way line
1	B2036 (N)		
2	A272 (E)		
3	A272 (SW)		

Roundabout Geometry

Arm	V (m)	E (m)	Γ (m)	R (m)	D (m)	PHI (deg)	Entry only	Exit only
1 - B2036 (N)	3.40	7.00	35.0	20.0	31.0	35.0		
2 - A272 (E)	3.30	7.30	37.0	40.0	31.0	43.0		
3 - A272 (SW)	3.70	7.30	22.0	50.0	31.0	45.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B2036 (N)	0.676	1819
2 - A272 (E)	0.683	1861
3 - A272 (SW)	0.669	1795

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
D12	2039 Do Something [IBF-A272SW]	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
1 - B2036 (N)		ONE HOUR	✓	308	100.000
2 - A272 (E)		ONE HOUR	✓	769	100.000
3 - A272 (SW)		ONE HOUR	✓	1526	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
	1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)	
From	1 - B2036 (N)	0	0	308
	2 - A272 (E)	0	0	769
	3 - A272 (SW)	661	865	0

Vehicle Mix

HV %s

	To			
	1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)	
From	1 - B2036 (N)	0	0	7
	2 - A272 (E)	0	0	1
	3 - A272 (SW)	2	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B2036 (N)	0.31	4.76	0.4	A	283	424
2 - A272 (E)	0.53	4.80	1.1	A	706	1058
3 - A272 (SW)	0.95	32.14	14.1	D	1400	2100

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	232	58	647	1287	0.180	231	494	0.0	0.2	3.405	A
2 - A272 (E)	579	145	231	1675	0.346	577	647	0.0	0.5	3.272	A
3 - A272 (SW)	1149	287	0	1770	0.649	1142	808	0.0	1.8	5.666	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	277	69	774	1206	0.230	277	592	0.2	0.3	3.873	A
2 - A272 (E)	691	173	277	1642	0.421	691	774	0.5	0.7	3.778	A
3 - A272 (SW)	1372	343	0	1770	0.775	1366	967	1.8	3.3	8.779	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	339	85	933	1105	0.307	339	713	0.3	0.4	4.695	A
2 - A272 (E)	847	212	339	1598	0.530	845	933	0.7	1.1	4.774	A
3 - A272 (SW)	1680	420	0	1770	0.949	1645	1184	3.3	12.0	24.027	C

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	339	85	948	1095	0.310	339	724	0.4	0.4	4.760	A
2 - A272 (E)	847	212	339	1597	0.530	847	948	1.1	1.1	4.796	A
3 - A272 (SW)	1680	420	0	1770	0.949	1672	1186	12.0	14.1	32.136	D

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	277	69	801	1189	0.233	277	612	0.4	0.3	3.953	A
2 - A272 (E)	691	173	277	1642	0.421	693	801	1.1	0.7	3.798	A
3 - A272 (SW)	1372	343	0	1770	0.775	1414	970	14.1	3.6	11.197	B

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	232	58	655	1282	0.181	232	501	0.3	0.2	3.429	A
2 - A272 (E)	579	145	232	1675	0.346	580	655	0.7	0.5	3.289	A
3 - A272 (SW)	1149	287	0	1770	0.649	1156	812	3.6	1.9	5.924	A

Imbalanced Flows Test (B2036) - 2039 Do Something (IBF-B2036), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B2036 (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A272 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A5	Imbalanced Flows Test (B2036)	✓	✓	D13,D14	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A272 / B2036 Rbt	Standard Roundabout		1, 2, 3	29.53	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	29.53	D

Arms

Arms

Arm	Name	Description	No give-way line
1	B2036 (N)		
2	A272 (E)		
3	A272 (SW)		

Roundabout Geometry

Arm	V (m)	E (m)	Γ (m)	R (m)	D (m)	PHI (deg)	Entry only	Exit only
1 - B2036 (N)	3.40	7.00	35.0	20.0	31.0	35.0		
2 - A272 (E)	3.30	7.30	37.0	40.0	31.0	43.0		
3 - A272 (SW)	3.70	7.30	22.0	50.0	31.0	45.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B2036 (N)	0.676	1819
2 - A272 (E)	0.683	1861
3 - A272 (SW)	0.669	1795

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
D13	2039 Do Something (IBF-B2036)	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
1 - B2036 (N)		ONE HOUR	✓	1120	100.000
2 - A272 (E)		ONE HOUR	✓	406	100.000
3 - A272 (SW)		ONE HOUR	✓	1130	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
From	1 - B2036 (N)	0	450	670
	2 - A272 (E)	0	0	406
	3 - A272 (SW)	440	690	0

Vehicle Mix

HV %s

		To		
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
From	1 - B2036 (N)	0	0	4
	2 - A272 (E)	0	0	5
	3 - A272 (SW)	4	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B2036 (N)	0.99	61.49	20.6	F	1028	1542
2 - A272 (E)	0.35	4.31	0.5	A	373	559
3 - A272 (SW)	0.72	7.62	2.6	A	1037	1555

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	843	211	517	1418	0.595	837	330	0.0	1.4	6.142	A
2 - A272 (E)	306	76	501	1433	0.213	305	854	0.0	0.3	3.186	A
3 - A272 (SW)	851	213	0	1716	0.496	847	806	0.0	1.0	4.123	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	1007	252	619	1347	0.747	1001	395	1.4	2.8	10.242	B
2 - A272 (E)	365	91	599	1367	0.267	365	1021	0.3	0.4	3.591	A
3 - A272 (SW)	1016	254	0	1716	0.592	1014	964	1.0	1.4	5.113	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	1233	308	757	1252	0.985	1184	483	2.8	15.2	38.211	E
2 - A272 (E)	447	112	708	1293	0.346	446	1233	0.4	0.5	4.248	A
3 - A272 (SW)	1244	311	0	1716	0.725	1240	1154	1.4	2.6	7.482	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	1233	308	760	1250	0.987	1212	484	15.2	20.6	61.495	F
2 - A272 (E)	447	112	725	1282	0.349	447	1246	0.5	0.5	4.311	A
3 - A272 (SW)	1244	311	0	1716	0.725	1244	1172	2.6	2.6	7.616	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	1007	252	623	1345	0.749	1077	397	20.6	3.1	16.758	C
2 - A272 (E)	365	91	644	1337	0.273	366	1056	0.5	0.4	3.709	A
3 - A272 (SW)	1016	254	0	1716	0.592	1020	1010	2.6	1.5	5.206	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	843	211	521	1415	0.596	850	332	3.1	1.5	6.434	A
2 - A272 (E)	306	76	508	1428	0.214	306	862	0.4	0.3	3.208	A
3 - A272 (SW)	851	213	0	1716	0.496	853	814	1.5	1.0	4.179	A

Imbalanced Flows Test (B2036) - 2039 Do Something (IBF-B2036), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B2036 (N) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A272 (E) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A5	Imbalanced Flows Test (B2036)	✓	✓	D13,D14	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A272 / B2036 Rbt	Standard Roundabout		1, 2, 3	25.03	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	25.03	D

Arms

Arms

Arm	Name	Description	No give-way line
1	B2036 (N)		
2	A272 (E)		
3	A272 (SW)		

Roundabout Geometry

Arm	V (m)	E (m)	Γ (m)	R (m)	D (m)	PHI (deg)	Entry only	Exit only
1 - B2036 (N)	3.40	7.00	35.0	20.0	31.0	35.0		
2 - A272 (E)	3.30	7.30	37.0	40.0	31.0	43.0		
3 - A272 (SW)	3.70	7.30	22.0	50.0	31.0	45.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B2036 (N)	0.676	1819
2 - A272 (E)	0.683	1861
3 - A272 (SW)	0.669	1795

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
D14	2039 Do Something (IBF-B2036)	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
1 - B2036 (N)		ONE HOUR	✓	1208	100.000
2 - A272 (E)		ONE HOUR	✓	769	100.000
3 - A272 (SW)		ONE HOUR	✓	826	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
From	1 - B2036 (N)	0	450	758
	2 - A272 (E)	0	0	769
	3 - A272 (SW)	311	515	0

Vehicle Mix

HV %s

		To		
		1 - B2036 (N)	2 - A272 (E)	3 - A272 (SW)
From	1 - B2036 (N)	0	0	7
	2 - A272 (E)	0	0	1
	3 - A272 (SW)	2	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B2036 (N)	0.97	48.74	17.2	E	1108	1663
2 - A272 (E)	0.68	9.02	2.1	A	706	1058
3 - A272 (SW)	0.51	4.18	1.1	A	758	1137

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	909	227	386	1490	0.611	903	233	0.0	1.5	6.078	A
2 - A272 (E)	579	145	567	1432	0.404	576	723	0.0	0.7	4.193	A
3 - A272 (SW)	622	155	0	1771	0.351	620	1143	0.0	0.5	3.122	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	1086	271	463	1440	0.754	1080	279	1.5	2.9	9.860	A
2 - A272 (E)	691	173	678	1352	0.511	690	865	0.7	1.0	5.425	A
3 - A272 (SW)	743	186	0	1771	0.419	742	1368	0.5	0.7	3.497	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	1330	333	566	1372	0.969	1288	342	2.9	13.6	32.683	D
2 - A272 (E)	847	212	808	1258	0.673	843	1046	1.0	2.0	8.595	A
3 - A272 (SW)	909	227	0	1771	0.514	908	1651	0.7	1.0	4.167	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	1330	333	567	1372	0.970	1316	342	13.6	17.2	48.737	E
2 - A272 (E)	847	212	825	1245	0.680	846	1057	2.0	2.1	9.016	A
3 - A272 (SW)	909	227	0	1771	0.514	909	1672	1.0	1.1	4.178	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	1086	271	464	1439	0.755	1142	280	17.2	3.2	14.226	B
2 - A272 (E)	691	173	716	1324	0.522	695	889	2.1	1.1	5.759	A
3 - A272 (SW)	743	186	0	1771	0.419	744	1412	1.1	0.7	3.508	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2036 (N)	909	227	388	1488	0.611	916	234	3.2	1.6	6.359	A
2 - A272 (E)	579	145	575	1427	0.406	581	729	1.1	0.7	4.265	A
3 - A272 (SW)	622	155	0	1771	0.351	623	1155	0.7	0.5	3.138	A

Junctions 10
ARCADY 10 - Roundabout Module
Version: 10.0.4.1693 © Copyright TRL Software Limited, 2021
For sales and distribution information, program advice and maintenance, contact TRL Software: +44 (0)1344 379777 software@trl.co.uk trlsoftware.com
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Filename: Jct G - A272.B2184 Roundabout.j10
Path: Y:\ARDENT PROJECTS\2207280 - Land at Ansty Farm, Mid Sussex\Transport\ARCADY
Report generation date: 03/07/2024 14:59:11

- »2019 Baseline, AM
- »2019 Baseline, PM
- »2039 Do Minimum, AM
- »2039 Do Minimum, PM
- »2039 Do Something, AM
- »2039 Do Something, PM

Summary of junction performance

	AM			PM		
	Q (Veh)	Delay (s)	RFC	Q (Veh)	Delay (s)	RFC
2019 Baseline						
1 - B2184 Broad St (N)	0.4	4.00	0.31	0.7	4.63	0.43
2 - A272 Tylers Green (SE)	6.4	18.86	0.87	3.1	10.75	0.77
3 - A272 (SW)	0.9	5.68	0.47	0.6	3.83	0.36
2039 Do Minimum						
1 - B2184 Broad St (N)	1.5	8.09	0.60	0.7	4.65	0.41
2 - A272 Tylers Green (SE)	6.4	18.94	0.87	6.2	18.26	0.87
3 - A272 (SW)	2.7	11.43	0.73	0.6	3.89	0.39
2039 Do Something						
1 - B2184 Broad St (N)	1.4	8.17	0.58	0.7	4.82	0.42
2 - A272 Tylers Green (SE)	6.8	20.15	0.88	6.7	19.47	0.88
3 - A272 (SW)	3.7	14.95	0.80	0.7	4.09	0.42

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

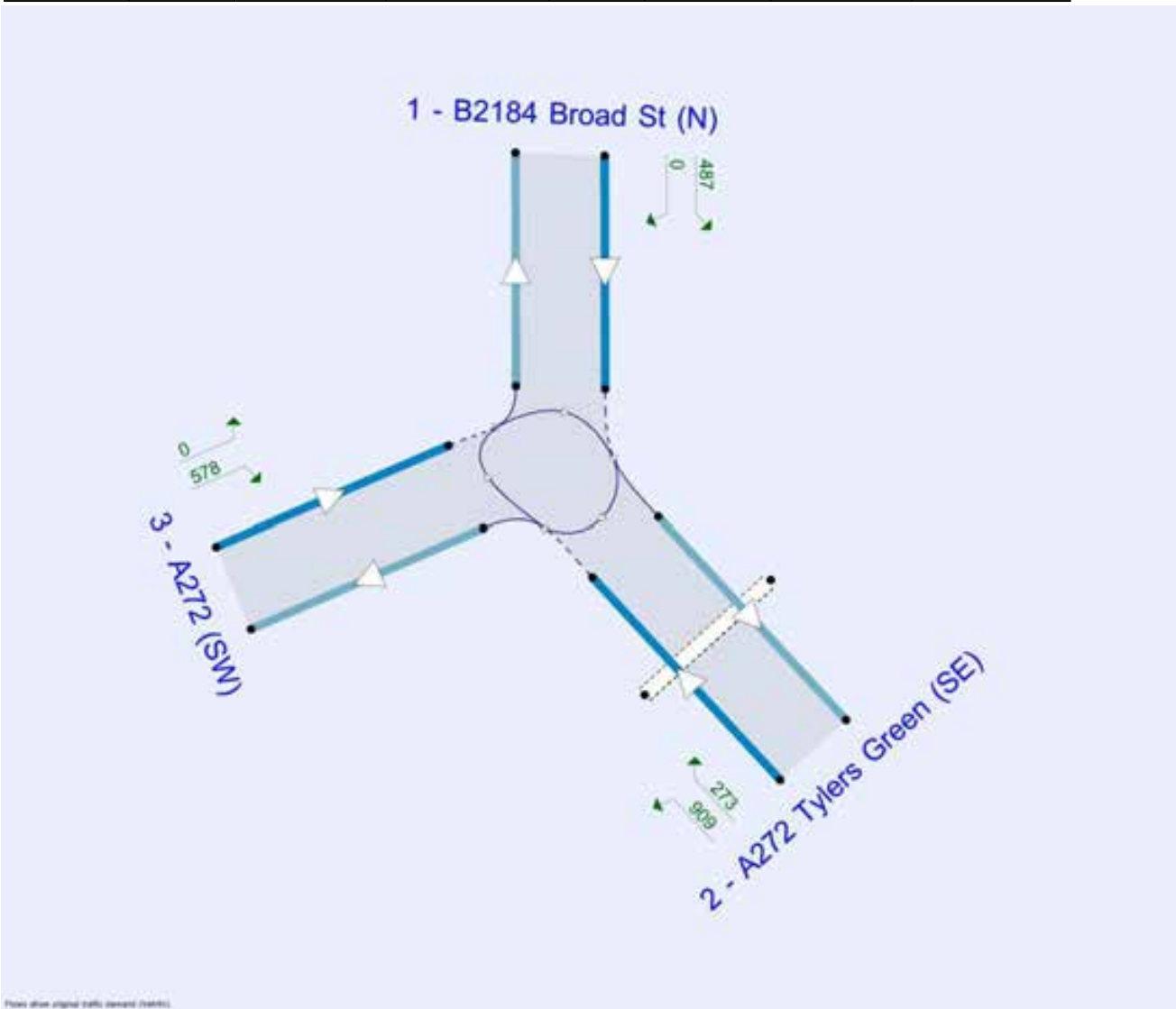
File summary

File Description

Title	A272 / B2184 Roundabout (J7)
Location	
Site number	
Date	02/05/2023
Version	
Status	
Identifier	
Client	
Jobnumber	
Enumerator	
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Av. delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Hour	perHour



Analysis Options

Vehicle length (m)	Calculate Q Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Av. Delay threshold (s)	Q 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
D1	2019 Baseline	AM	ONE HOUR	07:45	09:15	15	✓
D2	2019 Baseline	PM	ONE HOUR	16:45	18:15	15	✓
D3	2039 Do Minimum	AM	ONE HOUR	07:45	09:15	15	✓
D4	2039 Do Minimum	PM	ONE HOUR	16:45	18:15	15	✓
D5	2039 Do Something	AM	ONE HOUR	07:45	09:15	15	✓
D6	2039 Do Something	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2019 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	A272 / B2184 Rbt	Standard Roundabout		1, 2, 3	12.89	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	12.89	B

Arms

Arms

Arm	Name	Description	No give-way line
1	B2184 Broad St (N)		
2	A272 Tylers Green (SE)		
3	A272 (SW)		

Roundabout Geometry

Arm	V (m)	E (m)	I' (m)	R (m)	D (m)	PHI (deg)	Entry only	Exit only
1 - B2184 Broad St (N)	4.00	6.67	25.0	20.0	31.0	47.0		
2 - A272 Tylers Green (SE)	3.50	7.00	9.5	20.0	31.0	39.0		
3 - A272 (SW)	3.65	7.00	22.0	20.0	31.0	39.0		

Pelican/Puffin Crossings

Arm	Space between crossing and junc. entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
2 - A272 Tylers Green (SE)	6.00	3.00	2.00	3.00	6.00	8.00	30.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B2184 Broad St (N)	0.640	1708
2 - A272 Tylers Green (SE)	0.606	1499
3 - A272 (SW)	0.654	1733

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 Baseline	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
1 - B2184 Broad St (N)		ONE HOUR	✓	361	100.000
2 - A272 Tylers Green (SE)		ONE HOUR	✓	1155	100.000
3 - A272 (SW)		ONE HOUR	✓	501	100.000

Demand overview (Pedestrians)

Arm	Profile type	Av. Ped flow (Ped/hr)
1 - B2184 Broad St (N)		
2 - A272 Tylers Green (SE)	[ONEHOUR]	100.00
3 - A272 (SW)		

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - B2184 Broad St (N)	2 - A272 Tylers Green (SE)	3 - A272 (SW)
From	1 - B2184 Broad St (N)	0	361	0
	2 - A272 Tylers Green (SE)	666	0	489
	3 - A272 (SW)	0	501	0

Vehicle Mix

HV %s

		To		
		1 - B2184 Broad St (N)	2 - A272 Tylers Green (SE)	3 - A272 (SW)
From	1 - B2184 Broad St (N)	0	3	0
	2 - A272 Tylers Green (SE)	2	0	4
	3 - A272 (SW)	0	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B2184 Broad St (N)	0.31	4.00	0.4	A	331	497
2 - A272 Tylers Green (SE)	0.87	18.86	6.4	C	1060	1590
3 - A272 (SW)	0.47	5.68	0.9	A	460	690

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	272	68	376		1413	0.192	271	497	0.0	0.2	3.148	A
2 - A272 Tylers Green (SE)	870	217	0	75.29	1328	0.655	862	646	0.0	1.9	7.618	A
3 - A272 (SW)	377	94	497		1334	0.283	376	365	0.0	0.4	3.748	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	325	81	450		1365	0.238	324	596	0.2	0.3	3.460	A
2 - A272 Tylers Green (SE)	1038	260	0	89.90	1377	0.754	1034	774	1.9	2.9	10.347	B
3 - A272 (SW)	450	113	596		1271	0.354	450	438	0.4	0.5	4.379	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	397	99	550		1299	0.306	397	726	0.3	0.4	3.990	A
2 - A272 Tylers Green (SE)	1272	318	0	110.10	1457	0.873	1259	947	2.9	6.0	17.157	C
3 - A272 (SW)	552	138	726		1189	0.464	550	533	0.5	0.9	5.626	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	397	99	552		1298	0.306	397	732	0.4	0.4	3.996	A
2 - A272 Tylers Green (SE)	1272	318	0	110.10	1457	0.873	1270	949	6.0	6.4	18.865	C
3 - A272 (SW)	552	138	732		1185	0.466	552	538	0.9	0.9	5.684	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	325	81	452		1363	0.238	325	607	0.4	0.3	3.470	A
2 - A272 Tylers Green (SE)	1038	260	0	89.90	1457	0.712	1054	777	6.4	2.6	9.228	A
3 - A272 (SW)	450	113	607		1264	0.356	452	446	0.9	0.6	4.438	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	272	68	378		1412	0.193	272	503	0.3	0.2	3.161	A
2 - A272 Tylers Green (SE)	870	217	0	75.29	1376	0.632	873	650	2.6	1.8	7.196	A
3 - A272 (SW)	377	94	503		1330	0.284	378	370	0.6	0.4	3.783	A

2019 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	A272 / B2184 Rbt	Standard Roundabout		1, 2, 3	7.45	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.45	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	2019 Baseline	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
1 - B2184 Broad St (N)		ONE HOUR	✓	525	100.000
2 - A272 Tylers Green (SE)		ONE HOUR	✓	967	100.000
3 - A272 (SW)		ONE HOUR	✓	477	100.000

Demand overview (Pedestrians)

Arm	Profile type	Av. Ped flow (Ped/hr)
1 - B2184 Broad St (N)		
2 - A272 Tylers Green (SE)	[ONEHOUR]	100.00
3 - A272 (SW)		

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - B2184 Broad St (N)	2 - A272 Tylers Green (SE)	3 - A272 (SW)
From	1 - B2184 Broad St (N)	0	525	0
	2 - A272 Tylers Green (SE)	346	0	621
	3 - A272 (SW)	0	477	0

Vehicle Mix

HV %s

		To		
		1 - B2184 Broad St (N)	2 - A272 Tylers Green (SE)	3 - A272 (SW)
From	1 - B2184 Broad St (N)	0	1	0
	2 - A272 Tylers Green (SE)	2	0	1
	3 - A272 (SW)	0	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B2184 Broad St (N)	0.43	4.63	0.7	A	482	723
2 - A272 Tylers Green (SE)	0.77	10.75	3.1	B	887	1331
3 - A272 (SW)	0.36	3.83	0.6	A	438	657

Main Results for each time segment
16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	395	99	358		1462	0.270	394	259	0.0	0.4	3.366	A
2 - A272 Tylers Green (SE)	728	182	0	75.29	1334	0.546	723	752	0.0	1.2	5.849	A
3 - A272 (SW)	359	90	259		1545	0.233	358	464	0.0	0.3	3.031	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	472	118	428		1417	0.333	471	310	0.4	0.5	3.806	A
2 - A272 Tylers Green (SE)	869	217	0	89.90	1357	0.641	867	900	1.2	1.7	7.320	A
3 - A272 (SW)	429	107	310		1511	0.284	428	557	0.3	0.4	3.327	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	578	145	525		1355	0.427	577	379	0.5	0.7	4.621	A
2 - A272 Tylers Green (SE)	1065	266	0	110.10	1389	0.767	1059	1102	1.7	3.1	10.746	B
3 - A272 (SW)	525	131	379		1465	0.358	525	680	0.4	0.6	3.825	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	578	145	525		1355	0.427	578	381	0.7	0.7	4.634	A
2 - A272 Tylers Green (SE)	1065	266	0	110.10	1420	0.750	1065	1103	3.1	3.1	10.156	B
3 - A272 (SW)	525	131	381		1464	0.359	525	684	0.6	0.6	3.834	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	472	118	429		1416	0.333	473	313	0.7	0.5	3.819	A
2 - A272 Tylers Green (SE)	869	217	0	89.90	1396	0.623	875	902	3.1	1.7	6.978	A
3 - A272 (SW)	429	107	313		1509	0.284	429	562	0.6	0.4	3.336	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	395	99	359		1461	0.271	396	261	0.5	0.4	3.383	A
2 - A272 Tylers Green (SE)	728	182	0	75.29	1367	0.533	730	755	1.7	1.2	5.672	A
3 - A272 (SW)	359	90	261		1543	0.233	359	469	0.4	0.3	3.044	A

2039 Do Minimum, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A272 / B2184 Rbt	Standard Roundabout		1, 2, 3	14.06	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	14.06	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	2039 Do Minimum	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
1 - B2184 Broad St (N)		ONE HOUR	✓	594	100.000
2 - A272 Tylers Green (SE)		ONE HOUR	✓	1151	100.000
3 - A272 (SW)		ONE HOUR	✓	779	100.000

Demand overview (Pedestrians)

Arm	Profile type	Av. Ped flow (Ped/hr)
1 - B2184 Broad St (N)		
2 - A272 Tylers Green (SE)	[ONEHOUR]	100.00
3 - A272 (SW)		

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - B2184 Broad St (N)	2 - A272 Tylers Green (SE)	3 - A272 (SW)
From	1 - B2184 Broad St (N)	0	594	0
	2 - A272 Tylers Green (SE)	685	0	466
	3 - A272 (SW)	0	779	0

Vehicle Mix

HV %s

		To		
		1 - B2184 Broad St (N)	2 - A272 Tylers Green (SE)	3 - A272 (SW)
From	1 - B2184 Broad St (N)	0	3	0
	2 - A272 Tylers Green (SE)	2	0	5
	3 - A272 (SW)	0	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B2184 Broad St (N)	0.60	8.09	1.5	A	545	818
2 - A272 Tylers Green (SE)	0.87	18.94	6.4	C	1056	1584
3 - A272 (SW)	0.73	11.43	2.7	B	715	1072

Main Results for each time segment
07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	447	112	583		1277	0.350	445	511	0.0	0.5	4.313	A
2 - A272 Tylers Green (SE)	867	217	0	75.29	1323	0.655	859	1028	0.0	1.9	7.643	A
3 - A272 (SW)	586	147	511		1325	0.443	583	348	0.0	0.8	4.831	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	534	133	699		1202	0.444	533	613	0.5	0.8	5.371	A
2 - A272 Tylers Green (SE)	1035	259	0	89.90	1373	0.754	1030	1232	1.9	2.9	10.377	B
3 - A272 (SW)	700	175	613		1261	0.556	699	417	0.8	1.2	6.384	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	654	164	852		1102	0.594	651	747	0.8	1.4	7.945	A
2 - A272 Tylers Green (SE)	1267	317	0	110.10	1452	0.873	1255	1504	2.9	6.0	17.221	C
3 - A272 (SW)	858	214	747		1176	0.730	852	508	1.2	2.6	10.951	B

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	654	164	857		1099	0.595	654	753	1.4	1.5	8.092	A
2 - A272 Tylers Green (SE)	1267	317	0	110.10	1452	0.873	1266	1511	6.0	6.4	18.942	C
3 - A272 (SW)	858	214	753		1172	0.732	857	512	2.6	2.7	11.429	B

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	534	133	706		1198	0.446	537	625	1.5	0.8	5.469	A
2 - A272 Tylers Green (SE)	1035	259	0	89.90	1452	0.713	1050	1242	6.4	2.6	9.266	A
3 - A272 (SW)	700	175	625		1253	0.559	706	425	2.7	1.3	6.640	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	447	112	588		1274	0.351	448	518	0.8	0.5	4.364	A
2 - A272 Tylers Green (SE)	867	217	0	75.29	1372	0.632	870	1037	2.6	1.8	7.216	A
3 - A272 (SW)	586	147	518		1321	0.444	588	352	1.3	0.8	4.926	A

2039 Do Minimum, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A272 / B2184 Rbt	Standard Roundabout		1, 2, 3	11.74	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	11.74	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	2039 Do Minimum	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
1 - B2184 Broad St (N)		ONE HOUR	✓	495	100.000
2 - A272 Tylers Green (SE)		ONE HOUR	✓	1170	100.000
3 - A272 (SW)		ONE HOUR	✓	527	100.000

Demand overview (Pedestrians)

Arm	Profile type	Av. Ped flow (Ped/hr)
1 - B2184 Broad St (N)		
2 - A272 Tylers Green (SE)	[ONEHOUR]	100.00
3 - A272 (SW)		

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - B2184 Broad St (N)	2 - A272 Tylers Green (SE)	3 - A272 (SW)
From	1 - B2184 Broad St (N)	0	495	0
	2 - A272 Tylers Green (SE)	288	0	882
	3 - A272 (SW)	0	527	0

Vehicle Mix

HV %s

		To		
		1 - B2184 Broad St (N)	2 - A272 Tylers Green (SE)	3 - A272 (SW)
From	1 - B2184 Broad St (N)	0	1	0
	2 - A272 Tylers Green (SE)	2	0	1
	3 - A272 (SW)	0	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B2184 Broad St (N)	0.41	4.65	0.7	A	454	681
2 - A272 Tylers Green (SE)	0.87	18.26	6.2	C	1074	1610
3 - A272 (SW)	0.39	3.89	0.6	A	484	725

Main Results for each time segment
16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	373	93	395		1438	0.259	371	215	0.0	0.3	3.371	A
2 - A272 Tylers Green (SE)	881	220	0	75.29	1348	0.654	873	767	0.0	1.8	7.479	A
3 - A272 (SW)	397	99	215		1573	0.252	395	658	0.0	0.3	3.053	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	445	111	473		1388	0.321	445	258	0.3	0.5	3.813	A
2 - A272 Tylers Green (SE)	1052	263	0	89.90	1397	0.753	1047	918	1.8	2.9	10.171	B
3 - A272 (SW)	474	118	258		1545	0.307	473	790	0.3	0.4	3.356	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	545	136	580		1320	0.413	544	314	0.5	0.7	4.634	A
2 - A272 Tylers Green (SE)	1288	322	0	110.10	1480	0.870	1276	1124	2.9	5.9	16.685	C
3 - A272 (SW)	580	145	314		1508	0.385	580	962	0.4	0.6	3.871	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	545	136	580		1320	0.413	545	317	0.7	0.7	4.647	A
2 - A272 Tylers Green (SE)	1288	322	0	110.10	1480	0.870	1287	1125	5.9	6.2	18.265	C
3 - A272 (SW)	580	145	317		1506	0.385	580	970	0.6	0.6	3.887	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	445	111	474		1387	0.321	446	263	0.7	0.5	3.830	A
2 - A272 Tylers Green (SE)	1052	263	0	89.90	1480	0.710	1067	920	6.2	2.5	8.995	A
3 - A272 (SW)	474	118	263		1542	0.307	474	804	0.6	0.4	3.376	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	373	93	397		1437	0.259	373	218	0.5	0.4	3.388	A
2 - A272 Tylers Green (SE)	881	220	0	75.29	1396	0.631	884	770	2.5	1.7	7.072	A
3 - A272 (SW)	397	99	218		1572	0.252	397	666	0.4	0.3	3.065	A

2039 Do Something, 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	A272 / B2184 Rbt	Standard Roundabout		1, 2, 3	15.84	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	15.84	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	2039 Do Something	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
1 - B2184 Broad St (N)		ONE HOUR	✓	555	100.000
2 - A272 Tylers Green (SE)		ONE HOUR	✓	1162	100.000
3 - A272 (SW)		ONE HOUR	✓	845	100.000

Demand overview (Pedestrians)

Arm	Profile type	Av. Ped flow (Ped/hr)
1 - B2184 Broad St (N)		
2 - A272 Tylers Green (SE)	[ONEHOUR]	100.00
3 - A272 (SW)		

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - B2184 Broad St (N)	2 - A272 Tylers Green (SE)	3 - A272 (SW)
From	1 - B2184 Broad St (N)	0	555	0
	2 - A272 Tylers Green (SE)	689	0	473
	3 - A272 (SW)	0	845	0

Vehicle Mix

HV %s

		To		
From		1 - B2184 Broad St (N)	2 - A272 Tylers Green (SE)	3 - A272 (SW)
	1 - B2184 Broad St (N)	0	3	0
	2 - A272 Tylers Green (SE)	2	0	5
	3 - A272 (SW)	0	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B2184 Broad St (N)	0.58	8.17	1.4	A	509	764
2 - A272 Tylers Green (SE)	0.88	20.15	6.8	C	1066	1599
3 - A272 (SW)	0.80	14.95	3.7	B	775	1163

Main Results for each time segment
07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	418	104	632		1245	0.336	416	514	0.0	0.5	4.329	A
2 - A272 Tylers Green (SE)	875	219	0	75.29	1324	0.661	867	1048	0.0	1.9	7.761	A
3 - A272 (SW)	636	159	514		1323	0.481	632	353	0.0	0.9	5.184	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	499	125	757		1164	0.429	498	617	0.5	0.7	5.398	A
2 - A272 Tylers Green (SE)	1045	261	0	89.90	1376	0.759	1040	1255	1.9	3.0	10.585	B
3 - A272 (SW)	760	190	617		1258	0.604	757	423	0.9	1.5	7.152	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	611	153	922		1056	0.578	609	751	0.7	1.3	7.998	A
2 - A272 Tylers Green (SE)	1279	320	0	110.10	1452	0.881	1266	1531	3.0	6.4	18.094	C
3 - A272 (SW)	930	233	751		1173	0.793	922	515	1.5	3.6	13.887	B

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	611	153	930		1051	0.581	611	758	1.3	1.4	8.170	A
2 - A272 Tylers Green (SE)	1279	320	0	110.10	1452	0.881	1278	1541	6.4	6.8	20.148	C
3 - A272 (SW)	930	233	758		1169	0.796	930	520	3.6	3.7	14.949	B

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	499	125	768		1157	0.431	501	629	1.4	0.8	5.514	A
2 - A272 Tylers Green (SE)	1045	261	0	89.90	1452	0.719	1061	1270	6.8	2.7	9.578	A
3 - A272 (SW)	760	190	629		1250	0.608	768	432	3.7	1.6	7.597	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	418	104	639		1241	0.337	419	521	0.8	0.5	4.384	A
2 - A272 Tylers Green (SE)	875	219	0	75.29	1374	0.637	878	1058	2.7	1.8	7.307	A
3 - A272 (SW)	636	159	521		1319	0.482	639	358	1.6	0.9	5.308	A

2039 Do Something, 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	A272 / B2184 Rbt	Standard Roundabout		1, 2, 3	12.34	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	12.34	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
D6	2039 Do Something	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
1 - B2184 Broad St (N)		ONE HOUR	✓	487	100.000
2 - A272 Tylers Green (SE)		ONE HOUR	✓	1182	100.000
3 - A272 (SW)		ONE HOUR	✓	578	100.000

Demand overview (Pedestrians)

Arm	Profile type	Av. Ped flow (Ped/hr)
1 - B2184 Broad St (N)		
2 - A272 Tylers Green (SE)	[ONEHOUR]	100.00
3 - A272 (SW)		

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - B2184 Broad St (N)	2 - A272 Tylers Green (SE)	3 - A272 (SW)
From	1 - B2184 Broad St (N)	0	487	0
	2 - A272 Tylers Green (SE)	273	0	909
	3 - A272 (SW)	0	578	0

Vehicle Mix

HV %s

		To		
		1 - B2184 Broad St (N)	2 - A272 Tylers Green (SE)	3 - A272 (SW)
From	1 - B2184 Broad St (N)	0	1	0
	2 - A272 Tylers Green (SE)	2	0	1
	3 - A272 (SW)	0	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B2184 Broad St (N)	0.42	4.82	0.7	A	447	670
2 - A272 Tylers Green (SE)	0.88	19.47	6.7	C	1085	1627
3 - A272 (SW)	0.42	4.09	0.7	A	530	796

Main Results for each time segment
16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	367	92	434		1413	0.259	365	204	0.0	0.3	3.430	A
2 - A272 Tylers Green (SE)	890	222	0	75.29	1349	0.660	882	799	0.0	1.9	7.598	A
3 - A272 (SW)	435	109	204		1581	0.275	434	679	0.0	0.4	3.134	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	438	109	519		1359	0.322	437	244	0.3	0.5	3.906	A
2 - A272 Tylers Green (SE)	1063	266	0	89.90	1400	0.759	1058	956	1.9	3.0	10.383	B
3 - A272 (SW)	520	130	244		1554	0.334	519	814	0.4	0.5	3.476	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	536	134	636		1284	0.418	535	298	0.5	0.7	4.801	A
2 - A272 Tylers Green (SE)	1301	325	0	110.10	1481	0.879	1288	1171	3.0	6.3	17.564	C
3 - A272 (SW)	636	159	298		1519	0.419	636	991	0.5	0.7	4.070	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	536	134	636		1284	0.418	536	300	0.7	0.7	4.816	A
2 - A272 Tylers Green (SE)	1301	325	0	110.10	1481	0.879	1300	1173	6.3	6.7	19.467	C
3 - A272 (SW)	636	159	300		1517	0.419	636	1000	0.7	0.7	4.086	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	438	109	520		1358	0.322	439	249	0.7	0.5	3.920	A
2 - A272 Tylers Green (SE)	1063	266	0	89.90	1481	0.718	1079	959	6.7	2.6	9.300	A
3 - A272 (SW)	520	130	249		1551	0.335	520	830	0.7	0.5	3.495	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Ped demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2184 Broad St (N)	367	92	436		1412	0.260	367	206	0.5	0.4	3.446	A
2 - A272 Tylers Green (SE)	890	222	0	75.29	1399	0.636	893	803	2.6	1.8	7.168	A
3 - A272 (SW)	435	109	206		1579	0.276	436	687	0.5	0.4	3.151	A

Junctions 10
ARCADY 10 - Roundabout Module
Version: 10.0.4.1693 © Copyright TRL Software Limited, 2021
For sales and distribution information, program advice and maintenance, contact TRL Software: +44 (0)1344 379777 software@trl.co.uk trlsoftware.com
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Filename: Jct H - Tylers Green Roundabout.j10
Path: Y:\ARDENT PROJECTS\2207280 - Land at Ansty Farm, Mid Sussex\Transport\ARCADY
Report generation date: 03/07/2024 15:00:47

- »2019 Baseline, AM
- »2019 Baseline, PM
- »2039 Do Minimum, AM
- »2039 Do Minimum, PM
- »2039 Do Something, AM
- »2039 Do Something, PM

Summary of junction performance

	AM			PM		
	Q (Veh)	Delay (s)	RFC	Q (Veh)	Delay (s)	RFC
2019 Baseline						
1 - B2272 Butler's Green Road	1.0	3.96	0.50	1.7	5.40	0.62
2 - A272 Isaac's Lane (S)	2.2	6.30	0.69	0.8	3.62	0.46
3 - A272 Tylers Green (NW)	3.9	14.00	0.80	2.7	8.97	0.74
2039 Do Minimum						
1 - B2272 Butler's Green Road	1.9	5.61	0.66	74.8	121.10	1.07
2 - A272 Isaac's Lane (S)	6.0	14.71	0.86	0.9	4.25	0.47
3 - A272 Tylers Green (NW)	362.7	1031.38	1.51	3.4	10.76	0.78
2039 Do Something						
1 - B2272 Butler's Green Road	2.0	5.88	0.67	64.9	106.97	1.05
2 - A272 Isaac's Lane (S)	6.8	16.45	0.88	1.0	4.39	0.50
3 - A272 Tylers Green (NW)	383.2	1087.83	1.53	4.0	12.42	0.81

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

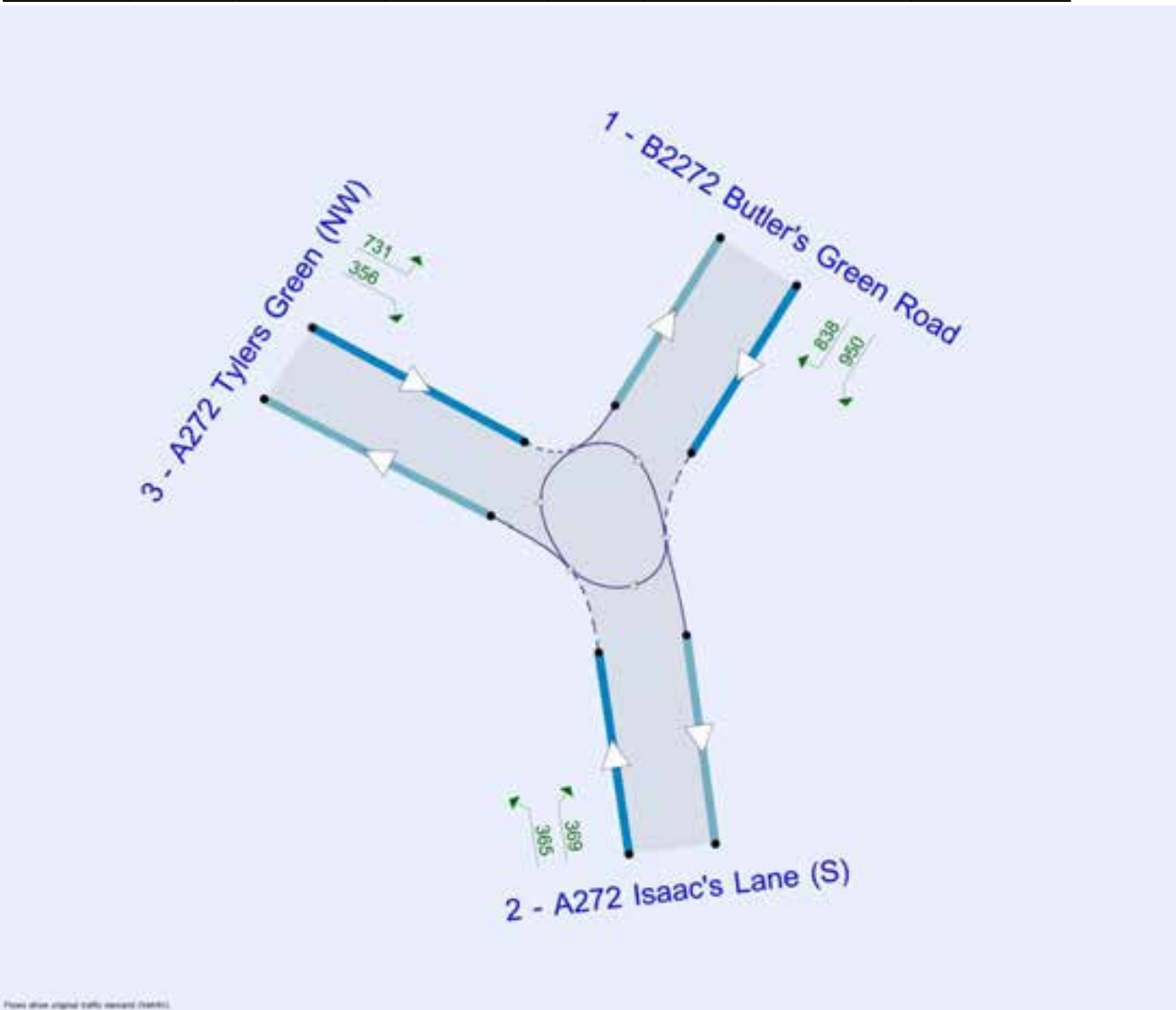
File summary

File Description

Title	A272 / B2272 Roundabout
Location	
Site number	
Date	06/12/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ARDENTCE\jsymington
Description	

Units

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



Analysis Options

Vehicle length (m)	Calculate Q Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Av. Delay threshold (s)	Q 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
D1	2019 Baseline	AM	ONE HOUR	07:45	09:15	15	✓
D2	2019 Baseline	PM	ONE HOUR	16:45	18:15	15	✓
D3	2039 Do Minimum	AM	ONE HOUR	07:45	09:15	15	✓
D4	2039 Do Minimum	PM	ONE HOUR	16:45	18:15	15	✓
D5	2039 Do Something	AM	ONE HOUR	07:45	09:15	15	✓
D6	2039 Do Something	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2019 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	Tylers Green Roundabout	Standard Roundabout		1, 2, 3	8.18	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	8.18	A

Arms

Arms

Arm	Name	Description	No give-way line
1	B2272 Butler's Green Road		
2	A272 Isaac's Lane (S)		
3	A272 Tylers Green (NW)		

Roundabout Geometry

Arm	V (m)	E (m)	I' (m)	R (m)	D (m)	PHI (deg)	Entry only	Exit only
1 - B2272 Butler's Green Road	4.00	8.00	24.9	31.0	50.0	12.0		
2 - A272 Isaac's Lane (S)	6.80	7.80	11.8	36.0	50.0	38.0		
3 - A272 Tylers Green (NW)	3.50	7.30	23.7	20.0	50.0	42.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B2272 Butler's Green Road	0.721	2173
2 - A272 Isaac's Lane (S)	0.718	2285
3 - A272 Tylers Green (NW)	0.605	1746

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 Baseline	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
1 - B2272 Butler's Green Road		ONE HOUR	✓	835	100.000
2 - A272 Isaac's Lane (S)		ONE HOUR	✓	1173	100.000
3 - A272 Tylers Green (NW)		ONE HOUR	✓	945	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - B2272 Butler's Green Road	2 - A272 Isaac's Lane (S)	3 - A272 Tylers Green (NW)
From	1 - B2272 Butler's Green Road	0	352	483
	2 - A272 Isaac's Lane (S)	567	0	606
	3 - A272 Tylers Green (NW)	543	402	0

Vehicle Mix

HV %s

		To		
		1 - B2272 Butler's Green Road	2 - A272 Isaac's Lane (S)	3 - A272 Tylers Green (NW)
From	1 - B2272 Butler's Green Road	0	0	1
	2 - A272 Isaac's Lane (S)	2	0	2
	3 - A272 Tylers Green (NW)	5	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B2272 Butler's Green Road	0.50	3.96	1.0	A	766	1149
2 - A272 Isaac's Lane (S)	0.69	6.30	2.2	A	1076	1615
3 - A272 Tylers Green (NW)	0.80	14.00	3.9	B	867	1301

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	629	157	301	1934	0.325	627	832	0.0	0.5	2.750	A
2 - A272 Isaac's Lane (S)	883	221	363	1983	0.445	880	565	0.0	0.8	3.255	A
3 - A272 Tylers Green (NW)	711	178	425	1412	0.504	707	817	0.0	1.0	5.078	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	751	188	360	1889	0.397	750	996	0.5	0.7	3.158	A
2 - A272 Isaac's Lane (S)	1055	264	434	1932	0.546	1053	676	0.8	1.2	4.088	A
3 - A272 Tylers Green (NW)	850	212	509	1363	0.623	847	978	1.0	1.6	6.941	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	919	230	439	1830	0.502	918	1215	0.7	1.0	3.941	A
2 - A272 Isaac's Lane (S)	1291	323	531	1863	0.693	1287	826	1.2	2.2	6.211	A
3 - A272 Tylers Green (NW)	1040	260	622	1297	0.802	1032	1196	1.6	3.8	13.180	B

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	919	230	442	1828	0.503	919	1222	1.0	1.0	3.963	A
2 - A272 Isaac's Lane (S)	1291	323	532	1862	0.694	1291	830	2.2	2.2	6.303	A
3 - A272 Tylers Green (NW)	1040	260	624	1295	0.803	1040	1199	3.8	3.9	14.005	B

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	751	188	365	1886	0.398	752	1005	1.0	0.7	3.178	A
2 - A272 Isaac's Lane (S)	1055	264	435	1931	0.546	1059	682	2.2	1.2	4.146	A
3 - A272 Tylers Green (NW)	850	212	512	1362	0.624	858	982	3.9	1.7	7.275	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	629	157	304	1932	0.325	629	838	0.7	0.5	2.764	A
2 - A272 Isaac's Lane (S)	883	221	364	1981	0.446	885	569	1.2	0.8	3.286	A
3 - A272 Tylers Green (NW)	711	178	428	1411	0.504	714	821	1.7	1.0	5.184	A

2019 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	Tylers Green Roundabout	Standard Roundabout		1, 2, 3	6.21	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.21	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	2019 Baseline	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
1 - B2272 Butler's Green Road		ONE HOUR	✓	1009	100.000
2 - A272 Isaac's Lane (S)		ONE HOUR	✓	761	100.000
3 - A272 Tylers Green (NW)		ONE HOUR	✓	1016	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - B2272 Butler's Green Road	2 - A272 Isaac's Lane (S)	3 - A272 Tylers Green (NW)
From	1 - B2272 Butler's Green Road	0	468	541
	2 - A272 Isaac's Lane (S)	317	0	444
	3 - A272 Tylers Green (NW)	535	481	0

Vehicle Mix

HV %s

		To		
		1 - B2272 Butler's Green Road	2 - A272 Isaac's Lane (S)	3 - A272 Tylers Green (NW)
From	1 - B2272 Butler's Green Road	0	0	1
	2 - A272 Isaac's Lane (S)	0	0	2
	3 - A272 Tylers Green (NW)	1	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B2272 Butler's Green Road	0.62	5.40	1.7	A	926	1389
2 - A272 Isaac's Lane (S)	0.46	3.62	0.8	A	698	1047
3 - A272 Tylers Green (NW)	0.74	8.97	2.7	A	932	1398

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	760	190	360	1901	0.400	757	639	0.0	0.7	3.142	A
2 - A272 Isaac's Lane (S)	573	143	406	1968	0.291	571	711	0.0	0.4	2.576	A
3 - A272 Tylers Green (NW)	765	191	238	1586	0.482	761	739	0.0	0.9	4.347	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	907	227	432	1849	0.491	906	765	0.7	1.0	3.812	A
2 - A272 Isaac's Lane (S)	684	171	486	1911	0.358	684	852	0.4	0.6	2.932	A
3 - A272 Tylers Green (NW)	913	228	285	1558	0.586	911	885	0.9	1.4	5.553	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	1111	278	527	1780	0.624	1108	935	1.0	1.6	5.340	A
2 - A272 Isaac's Lane (S)	838	209	594	1833	0.457	837	1041	0.6	0.8	3.611	A
3 - A272 Tylers Green (NW)	1119	280	349	1519	0.736	1113	1082	1.4	2.7	8.754	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	1111	278	530	1778	0.625	1111	938	1.6	1.7	5.396	A
2 - A272 Isaac's Lane (S)	838	209	596	1832	0.457	838	1045	0.8	0.8	3.620	A
3 - A272 Tylers Green (NW)	1119	280	349	1519	0.736	1118	1084	2.7	2.7	8.971	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	907	227	435	1847	0.491	910	769	1.7	1.0	3.853	A
2 - A272 Isaac's Lane (S)	684	171	488	1909	0.358	685	857	0.8	0.6	2.945	A
3 - A272 Tylers Green (NW)	913	228	285	1557	0.587	919	888	2.7	1.4	5.682	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	760	190	363	1899	0.400	761	643	1.0	0.7	3.169	A
2 - A272 Isaac's Lane (S)	573	143	408	1966	0.291	574	716	0.6	0.4	2.587	A
3 - A272 Tylers Green (NW)	765	191	239	1585	0.483	767	743	1.4	0.9	4.411	A

2039 Do Minimum, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Tylers Green Roundabout	Standard Roundabout		1, 2, 3	398.92	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	398.92	F

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	2039 Do Minimum	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
1 - B2272 Butler's Green Road		ONE HOUR	✓	1123	100.000
2 - A272 Isaac's Lane (S)		ONE HOUR	✓	1382	100.000
3 - A272 Tylers Green (NW)		ONE HOUR	✓	1500	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - B2272 Butler's Green Road	2 - A272 Isaac's Lane (S)	3 - A272 Tylers Green (NW)
From	1 - B2272 Butler's Green Road	0	526	597
	2 - A272 Isaac's Lane (S)	877	0	505
	3 - A272 Tylers Green (NW)	1051	449	0

Vehicle Mix

HV %s

		To		
		1 - B2272 Butler's Green Road	2 - A272 Isaac's Lane (S)	3 - A272 Tylers Green (NW)
From	1 - B2272 Butler's Green Road	0	3	2
	2 - A272 Isaac's Lane (S)	2	0	3
	3 - A272 Tylers Green (NW)	5	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B2272 Butler's Green Road	0.66	5.61	1.9	A	1030	1546
2 - A272 Isaac's Lane (S)	0.86	14.71	6.0	B	1268	1902
3 - A272 Tylers Green (NW)	1.51	1031.38	362.7	F	1376	2065

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	845	211	330	1877	0.451	842	1431	0.0	0.8	3.470	A
2 - A272 Isaac's Lane (S)	1040	260	448	1912	0.544	1036	725	0.0	1.2	4.086	A
3 - A272 Tylers Green (NW)	1129	282	657	1276	0.885	1104	826	0.0	6.4	18.754	C

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	1010	252	355	1858	0.543	1008	1618	0.8	1.2	4.227	A
2 - A272 Isaac's Lane (S)	1242	311	536	1849	0.672	1239	827	1.2	2.0	5.871	A
3 - A272 Tylers Green (NW)	1348	337	786	1200	1.124	1186	989	6.4	46.9	93.397	F

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	1236	309	329	1878	0.659	1234	1727	1.2	1.9	5.566	A
2 - A272 Isaac's Lane (S)	1522	380	656	1763	0.863	1507	907	2.0	5.7	13.340	B
3 - A272 Tylers Green (NW)	1652	413	956	1100	1.501	1100	1206	46.9	184.8	386.658	F

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	1236	309	328	1879	0.658	1236	1732	1.9	1.9	5.605	A
2 - A272 Isaac's Lane (S)	1522	380	657	1762	0.863	1520	907	5.7	6.0	14.712	B
3 - A272 Tylers Green (NW)	1652	413	965	1095	1.508	1095	1213	184.8	323.9	806.357	F

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	1010	252	357	1857	0.544	1012	1634	1.9	1.2	4.278	A
2 - A272 Isaac's Lane (S)	1242	311	538	1847	0.673	1258	831	6.0	2.1	6.261	A
3 - A272 Tylers Green (NW)	1348	337	798	1193	1.130	1193	998	323.9	362.7	1031.381	F

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	845	211	380	1840	0.459	847	1552	1.2	0.9	3.628	A
2 - A272 Isaac's Lane (S)	1040	260	450	1910	0.545	1044	777	2.1	1.2	4.172	A
3 - A272 Tylers Green (NW)	1129	282	663	1273	0.887	1269	832	362.7	327.7	979.176	F

2039 Do Minimum, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Tylers Green Roundabout	Standard Roundabout		1, 2, 3	65.57	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	65.57	F

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	2039 Do Minimum	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
1 - B2272 Butler's Green Road		ONE HOUR	✓	1800	100.000
2 - A272 Isaac's Lane (S)		ONE HOUR	✓	694	100.000
3 - A272 Tylers Green (NW)		ONE HOUR	✓	1044	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - B2272 Butler's Green Road	2 - A272 Isaac's Lane (S)	3 - A272 Tylers Green (NW)
From	1 - B2272 Butler's Green Road	0	928	872
	2 - A272 Isaac's Lane (S)	372	0	322
	3 - A272 Tylers Green (NW)	676	368	0

Vehicle Mix

HV %s

		To		
		1 - B2272 Butler's Green Road	2 - A272 Isaac's Lane (S)	3 - A272 Tylers Green (NW)
From	1 - B2272 Butler's Green Road	0	1	1
	2 - A272 Isaac's Lane (S)	0	0	3
	3 - A272 Tylers Green (NW)	1	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B2272 Butler's Green Road	1.07	121.10	74.8	F	1652	2478
2 - A272 Isaac's Lane (S)	0.47	4.25	0.9	A	637	955
3 - A272 Tylers Green (NW)	0.78	10.76	3.4	B	958	1437

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	1355	339	276	1953	0.694	1346	786	0.0	2.2	5.852	A
2 - A272 Isaac's Lane (S)	522	131	652	1787	0.292	521	970	0.0	0.4	2.838	A
3 - A272 Tylers Green (NW)	786	196	279	1561	0.504	782	894	0.0	1.0	4.599	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	1618	405	330	1914	0.846	1607	940	2.2	5.1	11.325	B
2 - A272 Isaac's Lane (S)	624	156	778	1697	0.368	623	1158	0.4	0.6	3.350	A
3 - A272 Tylers Green (NW)	939	235	334	1528	0.614	936	1068	1.0	1.6	6.059	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	1982	495	403	1861	1.065	1831	1149	5.1	42.7	56.355	F
2 - A272 Isaac's Lane (S)	764	191	887	1619	0.472	763	1347	0.6	0.9	4.196	A
3 - A272 Tylers Green (NW)	1149	287	409	1483	0.775	1143	1241	1.6	3.3	10.362	B

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	1982	495	405	1860	1.066	1854	1154	42.7	74.8	121.097	F
2 - A272 Isaac's Lane (S)	764	191	898	1612	0.474	764	1361	0.9	0.9	4.247	A
3 - A272 Tylers Green (NW)	1149	287	410	1483	0.775	1149	1253	3.3	3.4	10.757	B

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	1618	405	333	1911	0.847	1884	947	74.8	8.3	83.805	F
2 - A272 Isaac's Lane (S)	624	156	913	1601	0.390	625	1305	0.9	0.6	3.693	A
3 - A272 Tylers Green (NW)	939	235	335	1528	0.614	945	1203	3.4	1.6	6.257	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	1355	339	278	1951	0.695	1379	791	8.3	2.3	6.549	A
2 - A272 Isaac's Lane (S)	522	131	668	1776	0.294	523	989	0.6	0.4	2.875	A
3 - A272 Tylers Green (NW)	786	196	281	1560	0.504	788	911	1.6	1.0	4.679	A

2039 Do Something, 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	Tylers Green Roundabout	Standard Roundabout		1, 2, 3	418.99	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	418.99	F

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	2039 Do Something	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
1 - B2272 Butler's Green Road		ONE HOUR	✓	1143	100.000
2 - A272 Isaac's Lane (S)		ONE HOUR	✓	1406	100.000
3 - A272 Tylers Green (NW)		ONE HOUR	✓	1514	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - B2272 Butler's Green Road	2 - A272 Isaac's Lane (S)	3 - A272 Tylers Green (NW)
From	1 - B2272 Butler's Green Road	0	545	598
	2 - A272 Isaac's Lane (S)	888	0	518
	3 - A272 Tylers Green (NW)	1042	472	0

Vehicle Mix

HV %s

		To		
		1 - B2272 Butler's Green Road	2 - A272 Isaac's Lane (S)	3 - A272 Tylers Green (NW)
From	1 - B2272 Butler's Green Road	0	3	2
	2 - A272 Isaac's Lane (S)	2	0	3
	3 - A272 Tylers Green (NW)	5	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B2272 Butler's Green Road	0.67	5.88	2.0	A	1049	1573
2 - A272 Isaac's Lane (S)	0.88	16.45	6.8	C	1290	1935
3 - A272 Tylers Green (NW)	1.53	1087.83	383.2	F	1389	2084

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	861	215	347	1865	0.462	857	1431	0.0	0.9	3.562	A
2 - A272 Isaac's Lane (S)	1059	265	448	1911	0.554	1054	755	0.0	1.2	4.174	A
3 - A272 Tylers Green (NW)	1140	285	665	1271	0.897	1112	837	0.0	7.0	20.005	C

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	1028	257	369	1848	0.556	1026	1610	0.9	1.2	4.371	A
2 - A272 Isaac's Lane (S)	1264	316	537	1848	0.684	1260	858	1.2	2.1	6.085	A
3 - A272 Tylers Green (NW)	1361	340	796	1194	1.139	1183	1001	7.0	51.5	101.518	F

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	1258	315	341	1869	0.673	1255	1720	1.2	2.0	5.838	A
2 - A272 Isaac's Lane (S)	1548	387	657	1763	0.878	1531	940	2.1	6.4	14.594	B
3 - A272 Tylers Green (NW)	1667	417	967	1094	1.524	1094	1221	51.5	194.8	412.883	F

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	1258	315	339	1870	0.673	1258	1726	2.0	2.0	5.884	A
2 - A272 Isaac's Lane (S)	1548	387	658	1761	0.879	1546	939	6.4	6.8	16.454	C
3 - A272 Tylers Green (NW)	1667	417	977	1088	1.532	1088	1228	194.8	339.5	850.173	F

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	1028	257	370	1847	0.556	1031	1626	2.0	1.3	4.423	A
2 - A272 Isaac's Lane (S)	1264	316	539	1847	0.685	1282	861	6.8	2.2	6.577	A
3 - A272 Tylers Green (NW)	1361	340	810	1186	1.147	1186	1012	339.5	383.2	1087.832	F

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	861	215	394	1829	0.470	862	1541	1.3	0.9	3.729	A
2 - A272 Isaac's Lane (S)	1059	265	451	1910	0.554	1062	805	2.2	1.3	4.269	A
3 - A272 Tylers Green (NW)	1140	285	671	1268	0.899	1265	842	383.2	352.0	1046.487	F

2039 Do Something, 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	Tylers Green Roundabout	Standard Roundabout		1, 2, 3	57.58	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	57.58	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2039 Do Something	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
1 - B2272 Butler's Green Road		ONE HOUR	✓	1788	100.000
2 - A272 Isaac's Lane (S)		ONE HOUR	✓	734	100.000
3 - A272 Tylers Green (NW)		ONE HOUR	✓	1087	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - B2272 Butler's Green Road	2 - A272 Isaac's Lane (S)	3 - A272 Tylers Green (NW)
From	1 - B2272 Butler's Green Road	0	950	838
	2 - A272 Isaac's Lane (S)	369	0	365
	3 - A272 Tylers Green (NW)	731	356	0

Vehicle Mix

HV %s

		To		
		1 - B2272 Butler's Green Road	2 - A272 Isaac's Lane (S)	3 - A272 Tylers Green (NW)
From	1 - B2272 Butler's Green Road	0	1	1
	2 - A272 Isaac's Lane (S)	0	0	3
	3 - A272 Tylers Green (NW)	1	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B2272 Butler's Green Road	1.05	106.97	64.9	F	1641	2461
2 - A272 Isaac's Lane (S)	0.50	4.39	1.0	A	674	1010
3 - A272 Tylers Green (NW)	0.81	12.42	4.0	B	997	1496

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	1346	337	267	1959	0.687	1337	824	0.0	2.2	5.713	A
2 - A272 Isaac's Lane (S)	553	138	627	1804	0.306	551	977	0.0	0.4	2.870	A
3 - A272 Tylers Green (NW)	818	205	277	1562	0.524	814	901	0.0	1.1	4.783	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	1607	402	319	1921	0.837	1597	987	2.2	4.8	10.753	B
2 - A272 Isaac's Lane (S)	660	165	748	1717	0.384	659	1168	0.4	0.6	3.402	A
3 - A272 Tylers Green (NW)	977	244	331	1530	0.639	975	1076	1.1	1.7	6.453	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	1969	492	389	1871	1.052	1836	1205	4.8	38.0	51.424	F
2 - A272 Isaac's Lane (S)	808	202	860	1637	0.494	807	1364	0.6	1.0	4.329	A
3 - A272 Tylers Green (NW)	1197	299	406	1485	0.806	1188	1262	1.7	3.9	11.783	B

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	1969	492	392	1869	1.053	1861	1211	38.0	64.9	106.969	F
2 - A272 Isaac's Lane (S)	808	202	872	1629	0.496	808	1381	1.0	1.0	4.387	A
3 - A272 Tylers Green (NW)	1197	299	406	1485	0.806	1196	1274	3.9	4.0	12.417	B

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	1607	402	323	1919	0.838	1842	995	64.9	6.3	63.910	F
2 - A272 Isaac's Lane (S)	660	165	863	1635	0.404	661	1302	1.0	0.7	3.703	A
3 - A272 Tylers Green (NW)	977	244	332	1529	0.639	986	1192	4.0	1.8	6.731	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - B2272 Butler's Green Road	1346	337	269	1958	0.688	1362	830	6.3	2.2	6.206	A
2 - A272 Isaac's Lane (S)	553	138	639	1795	0.308	554	993	0.7	0.4	2.902	A
3 - A272 Tylers Green (NW)	818	205	278	1562	0.524	821	914	1.8	1.1	4.879	A

Junctions 10
ARCADY 10 - Roundabout Module
Version: 10.0.4.1693 © Copyright TRL Software Limited, 2021
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Filename: Jct H - Tylers Green Roundabout (Mitigation).j10
Path: Y:\ARDENT PROJECTS\2207280 - Land at Ansty Farm, Mid Sussex\Transport\ARCADY
Report generation date: 24/01/2025 13:45:12

»2039 Do Something, AM
 »2039 Do Something, PM

Summary of junction performance

	AM			PM		
	Q (Veh)	Delay (s)	RFC	Q (Veh)	Delay (s)	RFC
	2039 Do Something					
1 - B2272 Butler's Green Road	2.7	7.81	0.73	75.1	122.55	1.07
2 - A272 Isaac's Lane (S)	4.7	11.22	0.83	0.9	3.86	0.46
3 - A272 Tylers Green (NW)	1.2	8.73	0.56	0.4	3.97	0.30

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

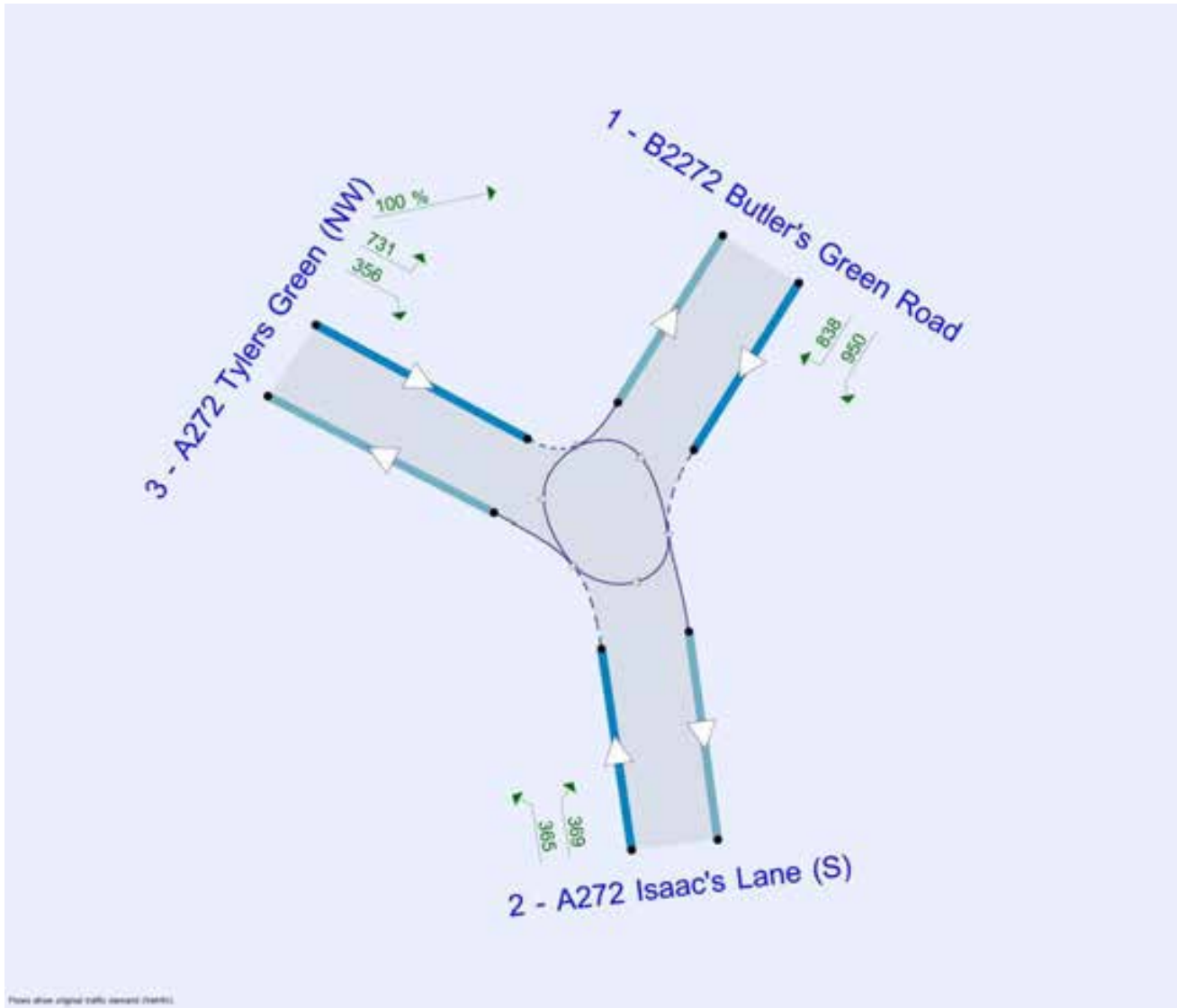
File summary

File Description

Title	A272 / B2272 Roundabout
Location	
Site number	
Date	06/12/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ARDENTCE\jsymington
Description	

Units

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



From above original traffic demand (Junctions)

The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Q Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Av. Delay threshold (s)	Q 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
D1	2039 Do Something	AM	ONE HOUR	07:45	09:15	15	✓
D2	2039 Do Something	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2039 Do Something, 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	Tylers Green Roundabout	Standard Roundabout		1, 2, 3	9.33	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	9.33	A

Arms

Arms

Arm	Name	Description	No give-way line
1	B2272 Butler's Green Road		
2	A272 Isaac's Lane (S)		
3	A272 Tylers Green (NW)		

Roundabout Geometry

Arm	V (m)	E (m)	I' (m)	R (m)	D (m)	PHI (deg)	Entry only	Exit only
1 - B2272 Butler's Green Road	3.61	10.50	22.3	40.0	50.0	37.8		
2 - A272 Isaac's Lane (S)	6.80	9.00	17.3	20.0	50.0	45.5		
3 - A272 Tylers Green (NW)	4.30	9.00	4.4	20.0	50.0	45.7		

Bypass

Arm	Arm has bypass	Bypass Util (%)
1 - B2272 Butler's Green Road		
2 - A272 Isaac's Lane (S)		
3 - A272 Tylers Green (NW)	✓	100

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B2272 Butler's Green Road	0.691	2138
2 - A272 Isaac's Lane (S)	0.725	2398
3 - A272 Tylers Green (NW)	0.563	1539

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	2039 Do Something	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
1 - B2272 Butler's Green Road		ONE HOUR	✓	1143	100.000
2 - A272 Isaac's Lane (S)		ONE HOUR	✓	1406	100.000
3 - A272 Tylers Green (NW)		ONE HOUR	✓	1514	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - B2272 Butler's Green Road	2 - A272 Isaac's Lane (S)	3 - A272 Tylers Green (NW)
From	1 - B2272 Butler's Green Road	0	545	598
	2 - A272 Isaac's Lane (S)	888	0	518
	3 - A272 Tylers Green (NW)	1042	472	0

Vehicle Mix

HV %s

		To		
		1 - B2272 Butler's Green Road	2 - A272 Isaac's Lane (S)	3 - A272 Tylers Green (NW)
From	1 - B2272 Butler's Green Road	0	3	2
	2 - A272 Isaac's Lane (S)	2	0	3
	3 - A272 Tylers Green (NW)	5	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B2272 Butler's Green Road	0.73	7.81	2.7	A	1049	1573
2 - A272 Isaac's Lane (S)	0.83	11.22	4.7	B	1290	1935
3 - A272 Tylers Green (NW)	0.56	8.73	1.2	A	1389	650

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)
1 - B2272 Butler's Green Road	861	861	215	0	784	353	1836	0.469	857	666	0.0	0.9	3.66
2 - A272 Isaac's Lane (S)	1059	1059	265	0	0	448	2018	0.525	1054	762	0.0	1.1	3.71
3 - A272 Tylers Green (NW)	1140	355	89	784	0	666	1102	0.322	353	837	0.0	0.5	4.79

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)
1 - B2272 Butler's Green Road	1028	1028	257	0	937	423	1787	0.575	1026	797	0.9	1.3	4.71
2 - A272 Isaac's Lane (S)	1264	1264	316	0	0	537	1954	0.647	1261	913	1.1	1.8	5.17
3 - A272 Tylers Green (NW)	1361	424	106	937	0	797	1031	0.412	423	1001	0.5	0.7	5.91

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)
1 - B2272 Butler's Green Road	1258	1258	315	0	1147	518	1720	0.732	1253	971	1.3	2.6	7.62
2 - A272 Isaac's Lane (S)	1548	1548	387	0	0	656	1868	0.829	1537	1115	1.8	4.5	10.5
3 - A272 Tylers Green (NW)	1667	520	130	1147	0	971	936	0.556	518	1222	0.7	1.2	8.56

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)
1 - B2272 Butler's Green Road	1258	1258	315	0	1147	520	1719	0.732	1258	977	2.6	2.7	7.81
2 - A272 Isaac's Lane (S)	1548	1548	387	0	0	658	1866	0.829	1547	1120	4.5	4.7	11.2
3 - A272 Tylers Green (NW)	1667	520	130	1147	0	977	932	0.558	520	1228	1.2	1.2	8.72

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)
1 - B2272 Butler's Green Road	1028	1028	257	0	937	426	1785	0.576	1033	805	2.7	1.4	4.82
2 - A272 Isaac's Lane (S)	1264	1264	316	0	0	540	1952	0.648	1275	919	4.7	1.9	5.40
3 - A272 Tylers Green (NW)	1361	424	106	937	0	805	1026	0.414	426	1010	1.2	0.7	6.02

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)
1 - B2272 Butler's Green Road	861	861	215	0	784	356	1834	0.469	862	670	1.4	0.9	3.71
2 - A272 Isaac's Lane (S)	1059	1059	265	0	0	451	2016	0.525	1062	768	1.9	1.1	3.78
3 - A272 Tylers Green (NW)	1140	355	89	784	0	670	1100	0.323	356	842	0.7	0.5	4.84

2039 Do Something, 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	Tylers Green Roundabout	Standard Roundabout		1, 2, 3	62.64	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	62.64	F

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	2039 Do Something	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Av. Demand (Veh/hr)	Scaling Factor (%)
1 - B2272 Butler's Green Road		ONE HOUR	✓	1788	100.000
2 - A272 Isaac's Lane (S)		ONE HOUR	✓	734	100.000
3 - A272 Tylers Green (NW)		ONE HOUR	✓	1087	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - B2272 Butler's Green Road	2 - A272 Isaac's Lane (S)	3 - A272 Tylers Green (NW)
From	1 - B2272 Butler's Green Road	0	950	838
	2 - A272 Isaac's Lane (S)	369	0	365
	3 - A272 Tylers Green (NW)	731	356	0

Vehicle Mix

HV %s

		To		
		1 - B2272 Butler's Green Road	2 - A272 Isaac's Lane (S)	3 - A272 Tylers Green (NW)
From	1 - B2272 Butler's Green Road	0	1	1
	2 - A272 Isaac's Lane (S)	0	0	3
	3 - A272 Tylers Green (NW)	1	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Q (Veh)	Max LOS	Av. Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - B2272 Butler's Green Road	1.07	122.55	75.1	F	1641	2461
2 - A272 Isaac's Lane (S)	0.46	3.86	0.9	A	674	1010
3 - A272 Tylers Green (NW)	0.30	3.97	0.4	A	997	490

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)
1 - B2272 Butler's Green Road	1346	1346	337	0	550	267	1932	0.697	1337	277	0.0	2.2	5.96
2 - A272 Isaac's Lane (S)	553	553	138	0	0	627	1910	0.289	551	977	0.0	0.4	2.64
3 - A272 Tylers Green (NW)	818	268	67	550	0	277	1370	0.196	267	901	0.0	0.2	3.26

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)
1 - B2272 Butler's Green Road	1607	1607	402	0	657	320	1896	0.848	1596	331	2.2	5.1	11.5
2 - A272 Isaac's Lane (S)	660	660	165	0	0	748	1823	0.362	659	1168	0.4	0.6	3.09
3 - A272 Tylers Green (NW)	977	320	80	657	0	331	1339	0.239	320	1076	0.2	0.3	3.53

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)
1 - B2272 Butler's Green Road	1969	1969	492	0	805	391	1846	1.066	1817	406	5.1	43.0	57.1
2 - A272 Isaac's Lane (S)	808	808	202	0	0	852	1748	0.462	807	1357	0.6	0.9	3.82
3 - A272 Tylers Green (NW)	1197	392	98	805	0	406	1298	0.302	391	1253	0.3	0.4	3.96

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)
1 - B2272 Butler's Green Road	1969	1969	492	0	805	392	1846	1.066	1840	406	43.0	75.1	122.2
2 - A272 Isaac's Lane (S)	808	808	202	0	0	863	1740	0.464	808	1370	0.9	0.9	3.8
3 - A272 Tylers Green (NW)	1197	392	98	805	0	406	1298	0.302	392	1264	0.4	0.4	3.9

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)
1 - B2272 Butler's Green Road	1607	1607	402	0	657	320	1895	0.848	1872	332	75.1	9.0	86.0
2 - A272 Isaac's Lane (S)	660	660	165	0	0	877	1729	0.382	661	1315	0.9	0.6	3.37
3 - A272 Tylers Green (NW)	977	320	80	657	0	332	1339	0.239	320	1206	0.4	0.3	3.53

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction demand (Veh/hr)	Junction Arrivals (Veh)	Bypass demand (Veh/hr)	Bypass exit flow (Veh/hr)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)
1 - B2272 Butler's Green Road	1346	1346	337	0	550	268	1932	0.697	1373	278	9.0	2.4	6.73
2 - A272 Isaac's Lane (S)	553	553	138	0	0	643	1898	0.291	553	998	0.6	0.4	2.68
3 - A272 Tylers Green (NW)	818	268	67	550	0	278	1369	0.196	268	919	0.3	0.2	3.27



Appendix C
Enterprise Rent-a-car Proposal



Car Club proposal for Ansty, West Sussex.

May 2024

ARDENT
CONSULTING ENGINEERS



Ansty Car Club - Introduction

Enterprise Car Club is an hourly, self-service car rental company, available to members 24/7/365. Vehicles can be picked up in and around a city or region and booked in advance or at the last minute. Located in over 220 UK cities and communities our 120,000+ members have access to over 2,000 cars and vans.

Enterprise Holdings is the parent company of Enterprise Car Club. A car club is a natural extension of the local car-rental service that Enterprise Rent-A-Car has pioneered in the UK over the last 25 years.

Enterprise Car Club will be able to provide new communities with a wider variety of vehicles backed by the Enterprise Rent-A-Car neighbourhood network and award-winning customer service.

Enterprise Car Club already hosts over 150 vehicles at developments across the UK. These range from City Centre residential developments in London and major regional cities (e.g., Manchester, Leeds, Bristol, Edinburgh, Glasgow, and Newcastle), to mixed use developments, business parks and non-city centre locations on the fringes of cities or outside major conurbations.

The mobility decisions and behaviour of residents of new developments/communities (business or private) are influenced by their mobility needs in and around their new location, but also across the region and country. A good range of mobility solutions in one and not the other, risks travel behaviours remaining focussed on vehicle ownership and far lower adoption of more sustainable and multi-modal options.

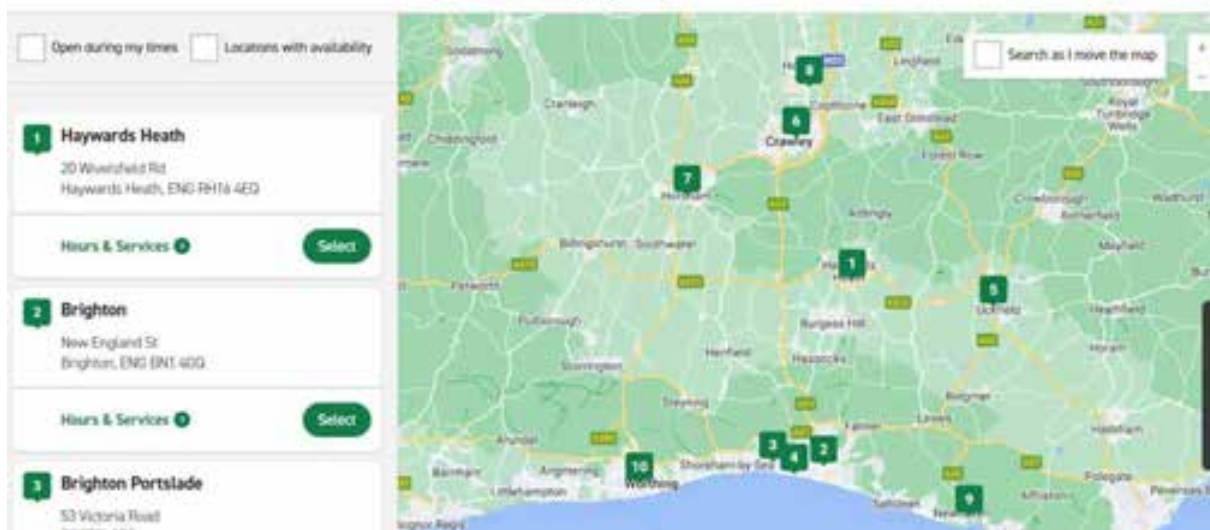
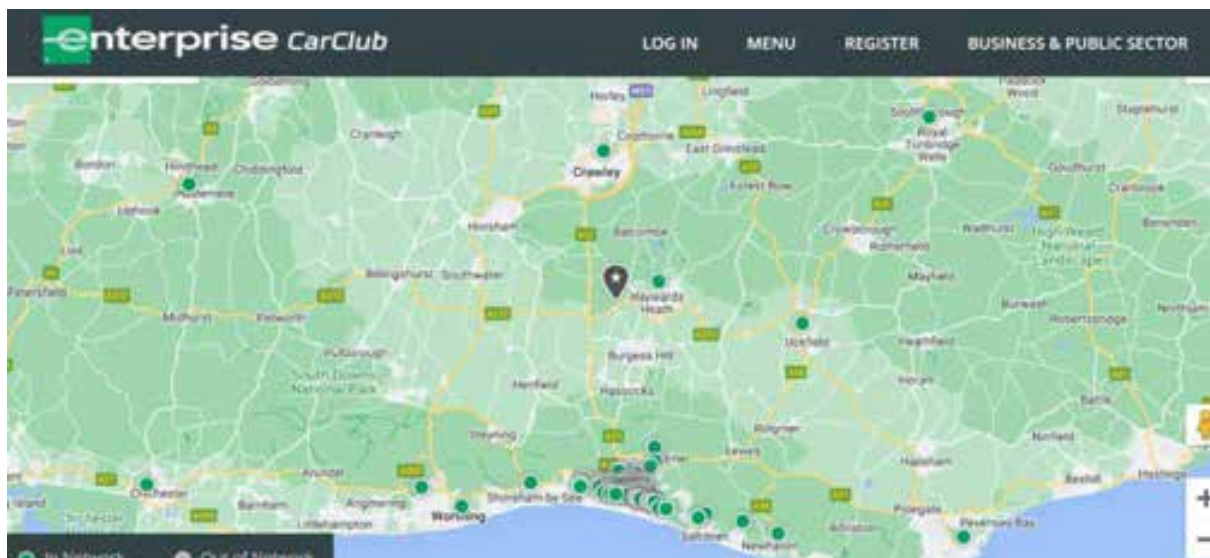
Enterprise has an already established and rapidly expanding national car club and car rental network providing shared mobility from Inverness to the Isle of Wight, Northern Ireland to East Anglia. Large urban centres are covered but towns and smaller communities are also now served by Enterprise Car Club and Enterprise Rent-A-Car. By the time this new development starts to be occupied mobility solutions from Enterprise will be available across the UK integrated physically and digitally alongside other sustainable modes such as public transport, active travel, and shared mobility options. Enterprise Car Club already has vehicles within 500 metres of 181 UK train station. These stations represent 34% of UK national rail journeys.

Enterprise Car Club is integrated with Enterprise Rent-A-Car as a brand, business, and proposition for residents of the development. This means that personal members of Enterprise Car Club will receive a discount with Enterprise Rent-A-Car and can access all its services in the immediate area around the development and across the UK. Together this integrated approach provides the most powerful alternative to car ownership for individuals and businesses.

Enterprise in the area around Ansty, West Sussex.

Please see first map for Enterprise Car Club’s current locations. Discussions are ongoing to expand this network further in partnerships with council’s, train operators and developers. This car club presence is supported by a strong branch presence (see second map) and Enterprise also has “[month or more](#)” and commercial vehicles options in the region via [Enterprise Flex-E-Rent](#).

Combined these options make Enterprise the best possible mobility partner for the Ansty community whether residents need a car for a few hours, days or months.



The National Car Club

Ansty residents will also have access via their Car Club membership to over 2,000 vehicles across the UK. The map below shows the current Enterprise Car Club network which is expanding rapidly.

Ansty residents who join Enterprise Car Club can use any of these vehicles and if bookings are cancelled more than 5 hours in advance there are no charges. Enterprise locates car club vehicles with public transport in mind enabling members to travel in combination with public transport and only driving for the smallest possible portion of the journey. One example of this is Enterprise Car Club's presence along the LNER network connecting York to Darlington, Durham, Newcastle, Berwick-upon-Tweed and Edinburgh to the north and Wakefield, Doncaster, Newark, Peterborough, and London Kings Cross to the south.



Car Club Proposal for Ansty, West Sussex.

Given the scale of the development (1450 units) and the long build process, we advise a demand led model, beginning with a set number and adding units based on build phases combined with demand:

- Minimum car club – Phase 1, 2 vehicles on a 2-year rolling contract.
- Vehicles provided – petrol/hybrid/EV – EV’s can be supplied provided correct charging infrastructure with minimum 7kw charging in place.
- Additional vehicles will be provided based upon demand and usage to grow the network across the overall site of 1450 units. Enterprise and the client will develop a utilisation model which will trigger additional vehicles in response to demand. This model will consider utilisation levels above 25% and the distribution of demand across the week and working week. Additional vehicles will then be provided at £12,000 ex VAT per year, this will include additional free memberships and driving credit for the wider site community. See table below for demand based additional vehicles.

Units Occupied above initial phase	Assumed real utilisation (hours)	Utilisation growth in hours per month	as a % - 25% triggers additional vehicle	744 Hours in month - hourly capacity	Number vehicles	Increase in vehicles	Total Vehicles	Additional vehicle support
200	400	75	27%	1488	2	1	3	£12,000
400	475	75	21%	2232	3	0	3	£0
600	550	75	25%	2232	3	1	4	£12,000
800	625	100	21%	2976	4	0	4	£0
1000	725	100	24%	2976	4	0	4	£0
1050	825	100	28%	2976	4	1	5	£12,000

- Total cost - £84,000 ex VAT. Includes initial payment of £48k for first Phase vehicles.
- Incentive for All site residents up to 1450 units – 2 year’s free membership of Enterprise Car Club and £50 driving credit.
- The offer will be provided to multiple residents at the same address and throughout the contracted period.
- All residents joining would also be able to get a discount with Enterprise Rent-A-Car. The combination of car club and car rental is very attractive to people as an alternative to car ownership. This would be promoted via a leaflet customised to the offer (see below example), via digital/social media marketing and events.
- Any Businesses located at the development site will be provided with free Enterprise Car Club membership for themselves and their employees.
- Attendance at sales and promotional events
- Dedicated 24/7 Clubhouse Team and 24/7/365 online reservation system available, by phone or on our app.
- Creation of reports and statistics for the developer and council.
- Zero vehicle maintenance and cleaning responsibilities.
- Dedicated personal development account manager.
- Car Club personal members will receive discount on rentals with Enterprise-Rent-A-Car. Details of nearest branch are below which offers a free “We’ll pick you up service”.
- Car Club members holding both a corporate and personal membership can link their accounts, so they can have a single sign on to the car club booking system.

One Enterprise and Future Mobility

Car Club usage can be supported and supplemented day traditional car rental (typically for longer journeys) via a local branch and the free “We’ll pick you up service” or a delivery service to the business park. One-way hires are available via the traditional Enterprise Rent-A-Car network.

Enterprise has developed “Enterprise Travel Direct” ETD to assist businesses wishing employees to have access to both car club and daily rental mobility options alongside the use of employee’s own cars for business mobility (grey fleet). ETD allows businesses to load the parameters of their travel policy/hierarchy into the system to manage and direct their employees to the travel option most suitable to their needs in terms of cost, carbon savings etc.

Enterprise is developing Mobility as a Service and Ridesharing services which can also assist business parks provide efficient mobility for residents.

Globally, Enterprise is at the forefront of new mobility solutions and over \$2 billion has been invested in a variety of businesses and technologies that will be critical in solving many of the current and future mobility challenges. Enterprise is seeking to bring innovative Mobility as a Service (MaaS) platforms to cities and large sites that will provide users with transport on demand across all modes. Employees could receive “Mobility Credits” from employers and the platform could be white labelled to the location or business.



Everything we do, we do with our Standard of Care. We promise to put you first, with exceptional customer service and vehicles that are maintained to our high-quality standards. We’re continuously innovating to help move the world forward—including new ways to go the extra mile for you, so your residents can get on the road with confidence, no matter where life takes them. To make this promise a reality, our service is guided by the following best practices.



No-Touch Transactions

We want your transactions to be as frictionless as possible. To make returning car offers to provide the most digital and the greatest convenience without leaving home.



Vehicle Maintenance & Safety

Following every reported issue the safety of our customers. We follow every manufacturer guidelines for inspections and all charges to help resolve any inquiries in real-time/uninterrupted.



Exceptional Customer Service

Great customer service starts with training. We have standards in place to ensure that every customer has the best service. The customer is our customer is what we stand for. A great look at mobility, customer experience and our commitment to always provide the best service possible.



Visual Inspection of Every Vehicle

As part of our standard of care, we provide members with a pre-book and pre-arrival visual inspection before each trip. This includes deep cleaning and maintenance of the vehicle condition while ready for use, offering the peace of mind to only use the best of the road ahead.



Member Compliance with Car Club Code

Car Club requires members to be continuously informed as they maintain our standard of service for our Car Club Code.



Enterprise 9 Seat Minibus

- Low Emission, Zero Emission
- Department for Transport Approved
- Compact and Easy to Drive
- Cruise Control
- 50% Fuel Economy
- Drive on Standard License (B2)
- Towed (limited to 42 mph)
- 700kg Weight
- Reverse Camera
- 80% Vehicle - Approved for Passenger Transportation
- Adjustable and Fully Flexible Seating Layout

Book & Unlock from the palm of your hand

Use our app to access cars and vans parked on streets, at train stations, car parks and Enterprise Rent-A-Car branches across the UK. Membership includes fuel, insurance and breakdown cover, meaning you only pay for a vehicle when you need it.



Your nearest car is:
Walshut Wood,
Bristol, BS16 1GJ



Rent by the hour from
£2.50/hr* & 21p/mile



Fuel, taxes and
servicing included



Access 1,400+
vehicles nationwide



24/7 access
year round



1. Join
Become a member
online or on the app



2. Reserve
Book in advance or on the
go, online or using the app



3. Unlock & Go
Access the vehicle via the app,
and retrieve the keys using
the PIN-PAD in the glovebox



4. Return
Once back at the original
parking bay, lock the
vehicle via the app

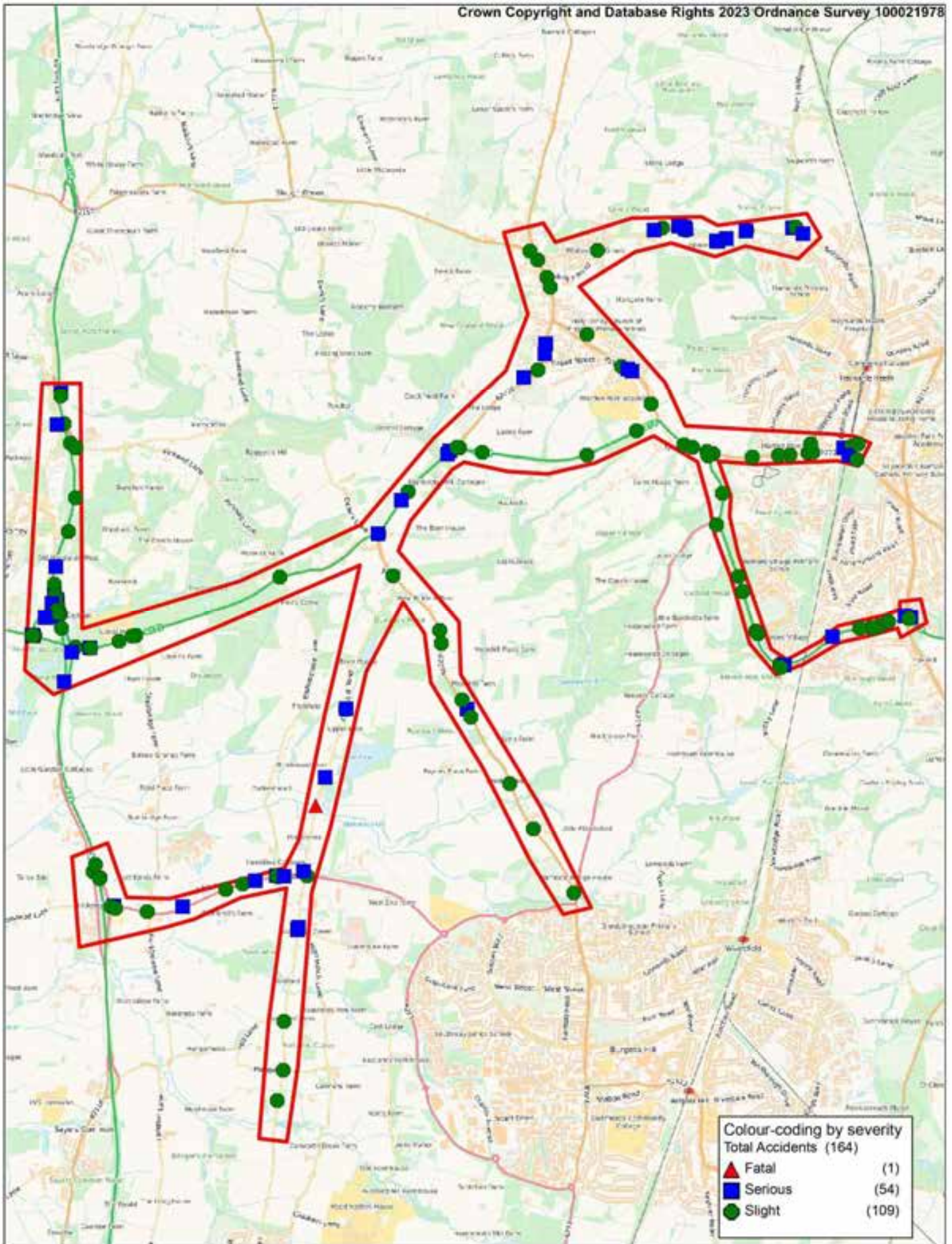


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Appendix D

Safe Sussex Road Partnership Collisions Plan



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