Proposed Residential-Led Mixed-Use Development

Land North West of Goring Station, Goring-by-Sea, West Sussex

Transport Assessment Addendum prepared on behalf of Persimmon Homes Thames Valley

February 2021

MILESTONE TRANSPORT PLANNING

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1. Introduction

Scope of Transport Assessment Addendum

1.1 This Transport Assessment Addendum (TAA) has been prepared by Milestone Transport Planning (MTP) on behalf of Persimmon Homes Thames Valley ('*the applicant*') in support of an outline planning application (Reference: AWDM/1264/20) for a mixed-use development comprising up to 475 dwellings along with associated access, internal roads and footpaths, car parking, public open space, landscaping, local centre (uses including A1, A2, A3, A4, A5, D1, D2, as proposed to be amended to use classes E, F and Sui Generis) with associated car parking, car parking for the adjacent railway station, undergrounding of overhead HV cables and other supporting infrastructure and utilities (Outline with all matters reserved) on land north west of Goring Station, Goring-by-Sea in West Sussex.

1.2 The above-mentioned planning application was submitted to the Local Planning Authority, Worthing Borough Council (WBC) on 10 August 2020. This planning application was supported by a Transport Assessment (TA) and Residential Travel Plan (RTP), prepared by MTP. To inform the scope of the TA, pre-application discussions were conducted with WSCC's Highways Officer on 2nd November 2018 and 6th December 2019, respectively with emphasis placed on the proposed access arrangements, trip generation and modelling.

1.3 Following submission of the planning application, the Local Highways Authority, West Sussex County Council (WSCC) provided a Consultation Response (dated 10th September 2020) that requested the applicant to provide additional information on the following: -

- Consideration of the residential-led mixed-use development proposals in context with the Department for Transport's (DfT's) '*Cycle Infrastructure Design Local Transport Note 1/20*' (LTN 1/20) and the Adur and Worthing Council's '*Local Cycling and Walking Infrastructure Plan*' (LCWIP).
- Provision of pedestrian and cycle links to the A259 Littlehampton Road and Public Right of Way (PRoW) network, located to the north.
- Provision of safe and convenient walking routes and enhancements to local bus stops including shelters, real-time information, and cycle parking facilities at Goring-by-Sea rail station.
- Confirmation of trip generation, distribution, and assignment.
- Demonstration that the proposed access (i.e. 3-arm roundabout junction) for the residential-led mixed-use development provides a safe and suitable arrangement in context with the proposed mitigation schemes for the 4-arm roundabout junction of the A259 Goring Street / A2032 / Titnore Lane (i.e. Goring Crossways) and 5-arm roundabout junction of the A259 Goring Street / Goring Way / Aldsworth Avenue / Ardingly Drive / Goring Way (Goring Way), the modification of the A259 Goring Street / The Strand give-way priority junction, and permanent closure of the A259 Goring Street and minor Goring Street give-way junction.
- Demonstration that the proposed mitigation for the Goring Crossways and Goring Way roundabout junctions would not cause '*severe*' delays and queuing back to the site's access and adjoining junctions during the weekday AM and PM peak hour periods through use of microsimulation modelling.
- Revision of Residential Travel Plan (RTP) to include commitment to monitor the document with the Trip Rate Information Computer System (TRICS) Standard Assessment Methodology (SAM), a

target to reduce the 12-hour weekday vehicle trip rate by 15% compared to the predicted trip rate / generation presented in the submitted Transport Assessment, a financial incentive to encourage future households to travel by sustainable modes; and provision of enforcement / remedial measures in the event that the 5-year target is not achieved.

1.4 For reference, a copy of WSCC's consultation response is attached at Appendix 1 of this report.

1.5 It is noteworthy that MTP have produced a separate TAA to address Highway England (HE), in their role as highway authority, traffic authority and street authority for the Strategic Road Network (SRN) request for additional information. More specifically, within an e-mail correspondence date 22nd December 2020, HE requested the applicant to provide additional information with regards to the baseline highway conditions, multi-modal trip generation, highway / transport impact assessment.

1.6 To ensure consistency, the highway impact assessment has been updated to reflect: -

- A total of 475 residential units.
- The suggested route assignment to regional destinations of Chichester (i.e. Titnore Lane and A27-West) and Horsham (Titnore Lane and A280-North).
- The 6 WBC Local Plan Sites, which benefit from having planning consent or are registered as '*live*' planning applications. The remaining 13 WBC Local Plan Sites and associated traffic movements have been removed from the assessment to minimise '*double-counting*'.
- The net traffic generation assessment for each WBC Local Plan Site, as opposed to being based on the predicted flows set out in WLPTS

1.7 The updated highway impact assessment includes the following junctions: -

- The A259 Goring Street / Site's Primary Access.
- The A259 Goring Street / The Strand Give-Way Junction.
- The A259 Goring Street / A2032 / Titnore Lane 4-Arm Roundabout Junction.
- The A259 Goring Street / Goring Way / Aldsworth Avenue / Ardingly Drive / Goring Way 5-Arm Roundabout Junction.
- A259 Littlehampton Road / Ferring Lane (Left-in / Left-out only Junction).
- A280 / A27 / Titnore Lane Dumbbell Roundabout Junction.

1.8 Consequently, the TAA prepared to address HE's request for additional information / comments should be read in conjunction with this report.

Report Structure

1.9 The remainder of the TAA is structured as follows: -

- Section 2 provides a response to WSCC's comments, which for clarity are reproduced in bold italics. Additional information / comments are provided where appropriate.
- Section 3 presents a summary of the main conclusions, clearly stating that the residential-led mixed-use development proposals would have an immaterial impact on the local highway and public transport networks, particularly to the conditions of amenity, capacity, and safety.

2. Response to WSCC Highways Comments

2.1 This section of the report provides additional information and comments in response to WSCC's initial concerns / request for additional information, which for clarity are reproduced in italics. Where appropriate, additional information / comment is provided.

Walking and Cycling

2.2 WSCC Highways stated *"since the production of the TA, LTN 1/20 has been produced. The application should consider the document and the proposed cycling improvements proposed by the development."* The applicant was further requested to *"consider the Worthing Local Cycling and Walking Infrastructure Plan (LCWIP) and identify how the development would support the plan."*

DfT Cycle Infrastructure Design (Local Transport Note 1/20)

2.3 The key principles for delivering a high-quality cycle infrastructure are set in the Department for Transport's (DfT's) '*Cycle Infrastructure Design Local Transport Note 1/20*' (LTN 1/20) that was adopted in July 2020. This guidance provides Local Highway Authorities (LHA) with a basis for setting out standards for the provision of cycle infrastructure based on 5 overarching design principles and 22 summary principles.

2.4 Chapter 1 of the LTN 1/20 publication sets out 5 core design principles, which represent the essential requirements to achieve a greater number of people to travel by cycle or on foot based on national best practice guidance. These are as follows: -

- Coherent – cycle networks should be planned and designed to allow people to reach their day-to-day destinations easily, along routes that connect, are simple to navigate and are of a consistently high quality.
- Direct – cycle routes should be at least as direct – and preferably more direct – than those available for private motor vehicles.
- Safe – not only must cycle infrastructure be safe, it should be perceived to be safe so that more people feel able to cycle.
- Comfortable – conditions for cycling require routes with good quality, well-maintained smooth surfaces, adequate width for the volume of users, minimal stopping and starting and avoiding steep gradients.
- Attractive – cycle infrastructure should help to deliver public spaces that are well designed and finished in attractive materials and be places that people want to spend time using.

2.5 The summary principles are as follows: -

- 1) Cycle infrastructure should be accessible to everyone from 8 to 80 and beyond: it should be planned and designed for everyone. The opportunity to cycle in our towns and cities should be universal.
- 2) Cycles must be treated as vehicles and not as pedestrians. On urban streets, cyclists must be physically separated from pedestrians and should not share space with pedestrians. Where cycle routes cross pavements, a physically segregated track should always be provided. At crossings and junctions, cyclists should not share the space used by pedestrians but should be provided with a separate parallel route.
- 3) Cyclists must be physically separated and protected from high volume motor traffic, both at junctions and on the stretches of road between them.
- 4) Side street routes, if closed to through traffic to avoid rat-running, can be an alternative to segregated facilities or closures on main roads-but only if they are truly direct.
- 5) Cycle infrastructure should be designed for significant numbers of cyclists, and for non-standard cycles. Our aim is that thousands of cyclists a day will use many of these schemes.
- 6) Consideration of the opportunities to improve provision for cycling will be expectation of any future local highway schemes funded by Government.
- 7) Largely cosmetic interventions which bring few or no benefits for cycling or walking will not be funded from any cycling or walking budget.
- 8) Cycle infrastructure must join together, or join other facilities together by taking a holistic, connected network approach which recognises the importance of nodes, links and areas that are good for cycling.
- 9) Cycle parking must be included in substantial schemes, particularly in city centres, trip generators and (securely) in areas with flats where people cannot store their bikes at home. Parking should be provided in sufficient amounts at the places where people actually want to go.
- 10) Schemes must be legible and understandable.
- 11) Schemes must be clearly and comprehensively signposted and labelled.
- 12) Major 'iconic' items, such as overbridges must form part of wider, properly thought-through schemes.
- 13) As important as building a route itself is maintaining it properly afterwards.
- 14) Surfaces must be hard, smooth, level, durable, permeable, and safe in all weathers.
- 15) Trials can help achieve change and ensure a permanent scheme is right first time. This will avoid spending time, money and effort modifying a scheme that does not perform as anticipated.
- 16) Access control measures, such as chicane barriers and dismount signs, should not be used.
- 17) The simplest, cheapest interventions can be the most effective.
- 18) Cycle routes must flow, feeling direct and logical.
- 19) Schemes must be easy and comfortable to ride.
- 20) All designers of cycle schemes must experience the roads as a cyclist.

- 21) Schemes must be consistent.
- 22) When to break these principles.

2.6 Section 4.4, more specifically Figure 4.1 summarises the traffic conditions when protected space for cycling (fully kerbed cycle tracks, stepped cycle tracks and light segregation), marked cycle lanes without physical features and cycling in mixed traffic are appropriate. The provision of fully kerbed cycle tracks is appropriate for sections of the local highway network that are subject to a 40-mph speed limit, and experience 6,000 + PCUs over a 24-hour period.

2.7 Section 5.5 (Table 5.2) recommends a desirable minimum width of 2.0-metres for fully kerbed segregated cycle tracks for peak hour one-way / two-way cycle flows less than 200.

2.8 The Core Design and some of the relevant Summary principles outlined in the DfT's LTN 1/20 publication have been considered by the applicant and are shown in an updated version of the proposed access strategy for the residential-led mixed-use development.

2.9 As shown on Drawing No. 18122/001 Rev C (attached), the design of the proposed access has been amended to include the provision of a two-way segregated cycleway measuring 4.0-metres in width along the eastern side of the A259 Goring Street that extends from the altered (i.e. '*left-in*' / '*left-out*') junction of the A259 Goring Street / The Strand to the relocated Toucan crossing facility. This would adjoin to a two-way segregated cycleway located along the southern side of the internal access road and diverted section of Minor Goring Street.

2.10 The provision of this new cycle infrastructure would provide a direct and continuous link for future households, visitors as well as members of wider local community to gain safe access to the mixed-use development, Goring rail station and wide range of other amenities available and accessible by cycle in Goring-by-Sea.

Worthing Local Cycling and Walking Infrastructure Plan

2.11 In line with the DfT's Cycling and Walking Investment Strategy (CWIS), the Adur and Worthing Council's *'Local Cycling and Walking Infrastructure Plan'* (LCWIP), prepared by Adur & Worthing Councils (A&WC), Sustrans and Transport Initiatives sets a strategy for making cycling and walking the natural choice for shorter journeys. The document supports the development of safe routes for cycling and walking and to increase the uptake of active travel modes within Adur District and Worthing Borough.

2.12 The vision of the LCWIP is *"to create a place where walking and cycling becomes the preferred way of moving around Adur and Worthing."* This is encapsulated within the broader vision of creating *"liveable neighbourhoods, commercial, leisure and retail spaces where people want to spend time and where people feel confident to cycle and walk, and parents feel it is safe for children to play without constant supervision."*

2.13 The ambition to encourage greater levels of '*active*' travel will be achieved through '*Better Safety*' (a safe and reliable way to travel for short journeys). '*Better Mobility*' (more people cycling and walking – easy, normal, and enjoyable), and '*Better Streets*' (Places that have cycling and walking at their heart).

2.14 The scope of the LCWIP is limited to utility trips to work, education and shopping of up to 5.0-kilometres. The approach taken by Sustrans involved conducting a review of all existing identified schemes and proposals in each of the towns in A&WC, followed by identification of gaps in the network with support from local stakeholders and surveying potential routes on foot and cycle. Transport Initiatives role involved analysing the results of consultations, revising the cycling, and walking network plans, and producing the final LCWIP document.

2.15 Within the LCWIP, the main existing cycle routes were identified as National Cycle Network (NCN) Route 2 along the seafront between West Worthing and Hove and the Downs Link (NCN Route 223) on the former railway line between Steyning and Shoreham. It was further noted that were some poorer quality routes in Worthing, which comprise narrow advisory cycle lane on busy streets such as the A259 Goring Road.

2.16 The LCWIP proposes a secondary cycle route (number 300) measuring approximately 2.9-kilometres in length that extends from West Durrington to the Seafront via a number of key local destinations including Northbrook College and St Oscar Romero High School. Most notably, the LCWIP identified the A2032 Goring Crossways crossing and highway widths as being important issues to address.

2.17 As outlined previously, the proposed access strategy incorporates the provision of a two-way segregated cycleways along the eastern side of the A259 Goring Street and either side of the internal access road (including the diverted section of Minor Goring Street). This together with the provision of a Toucan crossing facility along the A259 Goring Street would significantly contribute towards enhancing links to local educational facilities (i.e. St. Oscar Romero Catholic School, Ferring Church of England Primary School, Northbrook College) and major employment opportunities (Martlets Trading Estate) available in Goring-by-Sea, West Durrington and Worthing.

2.18 The delivery of new high-quality foot and cycleway infrastructure connecting the residential-led mixed-use development to the surrounding area would in conjunction with a package of '*softer*' measures set out in the Residential Travel Plan (RTP) encourage future households, visitors, and members of the wider community including those with disabilities / health conditions to adopt long-term sustainable travel patterns and behaviour in favour of the private car for various journey purposes.

Access

2.19 Regarding access, WSCC Highways stated that *"without considering the access in detail it is not possible to fully assess the interaction of the site access and adjoining roundabouts (considered in further detail below)."*

Sustainable Transport

Cycling

2.20 WSCC Highways stated *"the application proposes the upgrade of Footways ref 2121 and 2121_1. Footway 2121_1 would not appear appropriate for an upgrade to Bridleway (to allow cyclists to legally use it) due to the width and effective width between the site and Ferring Lane. As such the site poorly integrates to the existing network to the north and north-west. During pre-application discussions the potential for a bridleway link to he north west of the site across the Ferring Rife was discussed which would link into the existing uncontrolled crossing on the A259 and Bridleway re 2135 allowing access to towards Highdown Hill, sports pitches and the South Downs National Park. This however has not been included within the application."*

2.21 As shown on Drawing No. 18122/SK11 (attached), in accordance with WSCC Highways request, a pedestrian / cycle link that connects the north-west corner of the residential-led mixed-use development with the existing off-carriageway shared pedestrian / cycle link and existing bridleway (No. 2135) and sports pitches off the southern and northern sides of the A259 Littlehampton Road is proposed.

2.22 The presence of this new foot / cycleway link would provide future households and other end-users as well as members of the wider community with safe and convenient access and increase the likelihood of them adopting long-term sustainable travel patterns and behaviour for various journey purposes (especially leisure-related), thereby reducing the dependency on use of the private car.

Bus

2.23 Regarding bus, WSCC Highways stated *"the 700 service runs to the west, south and south east of the site along Ferring Lane, Goring Way and the A259 Goring Way. The 700 service provides a 10-minute headway between Littlehampton and Brighton inc Worthing town centre. No consideration has been provided to the routes to the stops or measures such as waiting facilities and real time information that would encourage future residents to utilise the services."*

2.24 It is noteworthy that the Coastliner 700 bus route, which is operated by Stagecoach South on a regular basis (i.e. every 10-minutes) between Brighton and Southsea via Worthing, Littlehampton, Wick, Bognor Regis, Chichester, Havant and Portsmouth is accessible from bus stops located along either side of Goring Way and Langbury Lane to the south and south-west of the residential-led mixed-use development.

2.25 Whilst these bus stops are beyond the recommended walk distance (i.e. 400-metres) as set out in The Chartered Institution of Highways & Transportation's (CIHT's) '*Buses in Urban Developments*' (January 2018) publication for single high-frequency routes (every 12 minutes or better), MTP have conducted a review of existing infrastructure to establish whether there is scope for providing enhancements. A summary of the bus stop audit is attached at Appendix 2 of this report.

2.26 When examining the other bus stops along Goring Way, Sea Lane, Ferring Street and Langbury Lane, it is evident there is limited scope to relocate bus cages, provide sheltered seating and *'real-time'* information, particularly for those located nearest to the site's south-western and north-western corners. However, there is scope to enhance the following bus stops as follows: -

- Goring Street – provide sheltered seating / *'real-time'* information.
- Ferring, War Memorial – install '*real time*' information.

2.27 To encourage future households and other end-users of the mixed-use development to travel by local bus services for various journey purposes, the applicant is committed to providing the enhancements identified above.

2.28 Pedestrian access to Goring rail station and the nearest bus stops located at Goring Street and Langbury Lane, which are served by the 700 Coastliner bus service would be enhanced through the proposed upgrade of PRoW 2121 and 21211 and through the proposed enhancements to Minor Goring Street (see Drawing No. 18122/001 Rev C (attached).

Trip Generation, Distribution and Assignment

2.29 In terms of trip generation, distribution, and assignment aspect of the TA, WSCC Highways acknowledged that *"whilst the parameters utilised in TRICS do not match the proposals with regards to the number of units, the outputs are acceptable for use. Clarification should be provided to the level of development tested within the modelling, presented with the text of the TA and included within Table 6.9 and Appendix 14. As the peak hour and daily flows for each land use do not sum correctly. The distribution of trips is based on 2011 census journey to work data and is acceptable. Confirmation should be provided as to the method of assignment."*

2.30 Prior to the submission of the TA in support of the planning application, the total number of residential units was reduced from 505 to 475-units (i.e. decrease of 30, under Use Class C3). However, as stated in paragraph 7.2 of the TA, for robustness, the junction capacity assessments were based on the mixed-use development comprising 505-units, and as such this represents a '*worst*' case scenario. This in part accounts for the reason for the daily flows for each land use do not sum correctly.

2.31 Table 2.1 presents the total number of vehicular movements, which are anticipated to occur over the course of a typical weekday including the AM and PM peak hour periods for each land use.

2.32 It is evident that the mixed-use development proposals would have the potential to generate in the order of 3,512 two-way vehicular movements over the course of a typical weekday including 357 and 395 during the AM (08:00 – 09:00) and PM (17:00 – 18:00) peak hour periods, respectively.

Table 2.1 Total Vehicular Movements

Land Use	AM Peak			PM Peak			Daily
	Arrivals	Departures	Total	Arrivals	Departures	Total	
Residential	58	233	291	186	111	297	2,634
Commercial Retail	27	22	49	42	39	81	817
Crèche	10	7	17	10	7	17	61
TOTAL	95	262	357	238	157	395	3,512

2.33 To inform the assignment of vehicular trips onto the local highway network, Google Maps software was used to calculate the shortest journey times between the site (origin) and various local and regional settlements (destinations).

2.34 It is noted that following the publication of HE's consultation response (dated 22nd December 2020), the applicant was requested to amend the assignment of vehicular trips generated by the residential-led mixed-use development to several regional destinations. Most notably, HE requested the applicant to amend the route assignment as follows: -

- Chichester – all vehicular trips via Titnore Lane / A27 (W); and
- Horsham – all vehicular trips via Titnore Lane / A280 (N).

2.35 An updated version of the Nomis Origin and Destination Assessment based on HE's suggested distribution for vehicular movements to / from key regional destinations of Chichester and Horsham is attached at Appendix 3 of this report.

Junction Modelling

2.36 In addressing WSCC's request for additional information MTP were asked to re-assess the level of background growth through potentially altering TEMPro Growth Factors (based on alternative assumptions) and removing Worthing Borough Council (WBC) Local Plan sites, which were previously identified in Appendix D of the Worthing Local Plan Transport Study (August 2018). The purpose of this exercise was to avoid '*double counting*'.

2.37 Following liaison with WSCC Highways Officer, the use of alternative assumptions to generate a TEMPro Growth rate lower than 1 was not deemed to be an acceptable approach, as there would be no apparent reason for jobs or the number of households to decline in comparison to the base year scenario (2020).

2.38 To minimise the potential for 'double counting' / over-estimating the impact of WBC Local Plan sites on the local highway network, the highway impact assessment comprised a 2020 Base + TEMPro (unadjusted) + WBC Local Plan sites benefitting from planning consent / registered as 'live' planning applications.

2.39 Following consultation with WBC's Planning Officer, it was noted that only 6 of the 19 WBC sites outlined in the Worthing Local Plan Transport Study (WLPTS) currently benefit from planning approval or have been submitted as 'live' planning applications. Thus, the remaining 13 sites and associated vehicular traffic movements have been removed from the highway impact assessment to avoid the occurrence of '*double counting*' as these sites together with the associated vehicular traffic movements would have been reflected in the TEMPro Growth Factors.

2.40 The removal of the 13 WBC Local Plan sites, which do not currently benefit from having planning consent or are 'live' planning applications equates to 1,292 and 1,162 two-way vehicular movements being removed from the local highway network during the weekday AM (08:00 – 09:00) and PM (17:00 – 18:00) peak hour periods, respectively. Table 2.2 presents a summary of the 6 sites included in the highway impact assessment.

Table 2.2 WBC Local Plan Sites Included within Highway Impact Assessment

WBC Sites	Planning Reference	Proposed Development
Union Place	AWDM/0461/20	Application under Regulation 3 for Outline planning permission (with all matters reserved except for access) for the construction of mixed-use development comprising residential units, commercial floor space, hotel, cinema and associated car parking, cycle parking, public realm, and landscaping. (REVISED PLANS).
Teville Gate	AWDM/0325/19	Redevelopment with a mixed use scheme comprising three blocks of 378 residential units, 83-bedroom hotel (3,684 sqm), a foodstore (Use Class A1) (1,852 sqm), a gym (Use Class D2) (1,426 sqm), in addition to retail, restaurant and cafe uses (Use Classes A1, A2, A3, A4 & A5) (999sqm) and associated infrastructure including 307 parking spaces, 352 cycle parking spaces, service areas, public realm with associated hard and soft landscaping and private amenity spaces. The application is accompanied by an Environmental Impact Assessment.
HMRC Offices, Barrington Road	AWDM/1979/19	Outline planning permission for the demolition and phased, comprehensive, residential-led redevelopment for a maximum of 287 dwellings (use class C3), of which up to 140 would be houses and up to 158 would be apartments/retirement apartments. Provision of a 68-bedroom care home (use class C2). Provision of car parking, landscaping, and associated works. All detailed matters reserved except for access points at the site boundaries.
Land South of Stoke Abbott Road	AWDM/0805/20	Demolition of Central Clinic (Use Class D1) and erection of an integrated Care Centre (Use Class D1) up to 4 storeys in height plus rooftop plant and a multi-storey car park (6 levels of parking).
West of Fulbeck Avenue	AWDM/0166/20	Application under Regulation 4 for full planning permission for the erection of 152 apartments including 30% affordable provision, consisting of 51 no. 1-bedroom apartments and 101 no. 2-bedroom apartments, with associated car and cycle parking, open space, landscaping, and new access at land to the west of Fulbeck Avenue.
North of West Durrington	AWDM/1882/16	Outline application for up to 240 dwellings with associated vehicular, pedestrian and cycle routes; parking; service infrastructure and sustainable drainage features; and strategic landscaping including noise bund / attenuation to the A27; all vehicular access to be via the strategic development to the south.

2.41 When reviewing the Transport Assessments (TAs), prepared in support of each of the 6 sites, in comparison with the information set out in Appendix D of the Worthing Local Plan Transport Study (WLPTS), it is eident from Table 5 that there are significant differences with regards to number of residential units / quantum of commercial floorspace and associated vehicular traffic movements, which are likely to be generated during the weekday AM (08:00 - 09:00) and PM (17:00 - 18:00) peak hour periods, respectively.

2.42 Table 5 presents the trip generation and net trip generation for each of the 6 WBC's Local Plan sites, which benefit from planning consent or are '*live*' planning applications. This information has been extracted directly from Appendix D (Site Information and Access Strategies) of the WLPTS. The updated net trip generation column presents the net impact assessment for each of the 6 WBC's Local Plan sites. This is based on information presented in the TAs, which were prepared in support of each of the submitted planning applications.

2.43 Of note, it is evident that the updated vehicular trip generation for 4 of the 6 emerging / consented schemes at Union Place, Teville Gate, and at HRMC Offices (Barrington Road) differs markedly from that initially predicted in the WLPTS. The reasons for these differences are detailed in-turn below.

- Union Place:
    - The promoted scheme comprises of a lower number of residential units, (i.e. 186 as opposed to 250) commercial floorspace (611 sq.m as opposed to 2,322 sq.m), and leisure uses (i.e. 90-bed hotel and extension to existing theatre).
    - As stated in paragraph 6.40 of the submitted TA, prepared by Vectos on behalf of LCR & WBC (March 2020), the residential element of the emerging scheme is the only use that has dedicated on-site parking, and this likely to generate new vehicular trips to / from the development. Vehicular movements associated with the other uses (hotel, cinema and commercial) are likely to already be on the network and are able to use the existing range of parking facilities within the vicinity of the application site.
    - As shown in Table 6.15, in comparison with the site's existing use as a car park, the emerging scheme would result in an additional 24 and 34 two-way vehicular movements during the weekday AM and PM peak hour periods, respectively.
    - In comparison with the anticipated trip generation set out in the WLPTS, this equates to 47 and 29 fewer two-way vehicular movements during the weekday AM (08:00 – 09:00) and PM (17:00 – 18:00) peak hour periods, respectively.
- Teville Gate:
    - The promoted scheme comprises a lower number of residential units, (i.e. 378 as opposed to 450), commercial retail floorspace (2,803 sq.m as opposed to 12,000 sq.m) and a 83-bed hotel and a gym.
    - As stated in Table 10.4 of the submitted TA, prepared by Curtins on behalf of Mosaic Global Investments Limited (December 2018), the emerging scheme is anticipated a total of 80 and 108 two-way vehicular movements during the weekday AM and PM peak hour periods, respectively.

- In comparison with the anticipated trip generation set out in the WLPTS, this equates to 57 and 14 fewer two-way vehicular movements during the weekday (AM (08:00 – 09:00) and PM (17:00 – 18:00) peak hour periods, respectively.
- The TA concluded that the commercial and leisure uses of the development would have limited impact during the weekday AM and PM peak hour periods. Further, the small number of trips associated with these uses would disperse across the local highway network.

- HRMC Offices:
  - The consented scheme comprises a lower number of residential units (i.e. 296 as opposed to 500), a 68 bed car home, and 160 sq.m of flexible A1 - A4. This is substantially less commercial office and industrial floorspace than was set out in the WLPTS.
  - As stated in Table 6.13 of the submitted TA, prepared by Caneparo Associates on behalf of Cannon Capital Developments (January 2020), the emerging scheme is anticipated to generate a total of 162 and 152 two-way vehicular movements during the weekday AM (08:00 – 09:00) and PM (17:00 – 18:00) peak hour periods, respectively.
  - In comparison with the site's extant commercial office use, the emerging scheme is anticipated to generate circa 236 and 228 fewer two-way vehicular movements during the weekday AM and PM peak hour periods, respectively. Of note, no net impact assessment was presented in the WLPTS for the HMRC Office site.
  - In light of the substantial net reduction resulting from the development proposals, this site has been removed from the highway impact assessment.
- Land South of Stoke Abbott Road:
  - Table 5.4 of the submitted TA, prepared by Hydrock Consultants Limited on behalf of Worthing Integrated Care Centre (May 2020) presented the net change in vehicular movements over the course of a typical weekday including the AM and PM peak hour periods, respectively. More specifically, it was estimated that the approved scheme would generate in the order of 150 and 130 two-way vehicular movements during the AM (08:00 – 09:00) and PM (17:00 – 18:00) peak hour periods, respectively.
  - Notwithstanding this, paragraph no.'s 5.4.1 to 5.4.3 of the TA stated that the approved development at Stoke Abbott Road comprised the consolidation of existing Primary Care (GP and Nursing Practice), Community Services, Dentistry, Mental Health Services, ancillary pharmacy, and office floorspace from elsewhere in Worthing town centre.
  - In this context the associated vehicular traffic movements would not constitute '*new trips*', as they would already be present on the local highway network. Consequently, to avoid '*double counting*', this site has been removed from the highway impact assessment.

2.44 As shown in Table 2.3, the trip generation for the remaining 2 sites (i.e. West of Fulbeck Avenue and North West Durrington) remains broadly similar to that presented in the WLPTS.

Table 2.3 Comparison of Anticipated Vehicular Trip Generation

WBC Sites	Trip Generation				Net Trip Generation				Updated Net Trip Generation			
	Am		Pm		Am		Pm		Am		Pm	
	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep
Union Place*	38	64	162	131	20	51	42	21	1	23	21	13
Teville Gate**	89	119	374	332	43	94	77	45	14	50	45	23
HMRC Offices, Barrington Road***	240	240	195	240	0	0	0	0	-328	92	59	-207
Land South of Stoke Abbott Road****	31	25	24	24	31	25	24	24	98	50	52	77
West of Fulbeck Avenue*****	5	16	13	8	5	16	13	8	8	33	31	14
North of West Durrington ******	32	96	80	49	32	96	80	49	36	87	91	55
TOTAL	435	560	848	784	131	282	236	147	-171	335	299	-25

*Extracted from TA prepared by Vectos on behalf of LCR & Worthing Borough Council (March 2020).

**Extracted from TA prepared by Curtins on behalf of Mosaic Global Investments Limited (December 2018).

***Extracted from TA prepared by Caneparo Associates on behalf of Cannon Capital Developments (January 2020).

****Extracted from TA prepared by Hydrock on behalf of Worthing Borough Council (May 2020).

*****Extracted from TA prepared by RGP on behalf of BoKlok (January 2020).

******Extracted from TA prepared by PFA Consulting on behalf of West Durrington Consortium (October 2016).

2.45 As shown in Table 2.4, when combining the anticipated net vehicular movements of each of the 6 WBC sites benefitting from planning consent / '*live*' planning applications (based on the information in Appendix D of the WLPTS), it is evident that this would generate in the order of 413 and 383 two-way vehicular movements during the weekday AM (08:00 – 09:00) and PM (17:00 – 18:00) peak hour periods, respectively.

2.46 However, based on the information presented in each of the submitted TAs, the 6 WBC Local Plan sites are anticipated to generate in the order of 164 and 274 two-way vehicular movements during the AM and PM peak hour periods, respectively. This equates to a cumulative decrease of circa 60% and 28%, equivalent to 249 and 109 fewer two-way vehicular movements during the weekday AM and PM peak hour periods, respectively.

2.47 The inclusion of vehicular traffic movements in association with the approved development on land south of Stoke Abbott Road, which as mentioned previously, comprised the consolidation of existing Primary Care (GP and Nursing Practice), Community Services, Dentistry, Mental Health Services, ancillary pharmacy, and office floorspace from elsewhere in Worthing town centre, represents a '*worst*' case scenario, as these vehicular trips would not constitute 'new' trips on the local highway network.

Table 2.4 Net Daily Difference in Vehicular Trip Generation of 6 WBC Sites (Combined)

Source	Am			Pm		
	Arr	Dep	Total	Arr	Dep	Total
WBC Local Transport Study	131	282	413	236	147	383
Submitted TAs	-171	335	164	299	-25	274
Net Difference	**-302**	**53**	**-249**	**63**	**-172**	**-109**

2.48 It is therefore concluded that the MTP's submitted TA over-estimated the vehicular traffic generating potential of WBC's Local Plan sites, which benefit from having planning consent or are registered as '*live*' planning applications. This is largely due to the reduced scale of development proposed at the Teville Gate and HMRC Office sites. Further, the approved development on land south of Stoke Abbott Road comprised the consolidation of existing healthcare services, the associated vehicular traffic movements of which were already present on the local highway network.

2.49 Consequently, for the purposes of presenting a more accurate assessment, the highway impact assessment has been amended to reflect the vehicular trip generation and route assignment, as set out in the TAs prepared in support of each planning application. The vehicular traffic movements and underlying assumptions regarding distribution onto the local highway network during the weekday AM (08:00 – 09:00) and PM (17:00 – 18:00) peak hour periods for each of the 6 WBC sites is attached at Appendix 4 of this report.

2.50 In addition, the updated highway impact assessment is based on the residential component of the mixed-use development being comprised of 475-units.

2.51 This section of the report presents the results of the updated highway impact assessment (modelling) on the operational performance of the following junctions during the AM and PM peak hour periods for the '*2024 Base + Development*' and '*2033 Base + Development*' scenarios. A copy of the junction capacity assessment outputs are provided at Appendix 5 of this report.

- The A259 Goring Street / Site's Primary Access.
- The A259 Goring Street / The Strand Give-Way Junction.

- The A259 Goring Street / A2032 / Titnore Lane 4-Arm Roundabout Junction.
- The A259 Goring Street / Goring Way / Aldsworth Avenue / Ardingly Drive / Goring Way 5-Arm Roundabout Junction.
- A259 Littlehampton Road / Ferring Lane (Left-in / Left-out only Junction).
- A280 / A27 / Titnore Lane Dumbbell Roundabout Junction.

The A259 Goring Street / Site's Primary Access

2.52 The future operation of the 3-arm roundabout junction of the A259 Goring Street and Site's Primary Access for the weekday AM and PM peak hour periods, under the '*2024 Base + Development*' and '*2033 Base + Development*' scenarios are summarised in Table 2.5.

2.53 The results of the junction capacity assessment reveals that all arms of the proposed roundabout junction would operate within capacity, under the '*2024 Base + Development*' and '*2033 Base + Development*' scenarios, during the weekday AM and PM peak hour periods, as indicated by the RFC values of less than 1.00.

Table 2.5 The A259 Goring Street / Site's Primary Access

Arm	AM Peak Hour (08:00 – 09:00)			PM Peak Hour (17:00 – 18:00)		
	RFC	Queue (Veh)	Delay (S)	RFC	Queue (Veh)	Delay (S)
2024 Base + Development						
A259 Goring Street (South)	0.86	5.6	15.14	0.89	7.6	19.85
Site Access Road	0.70	2.2	23.34	0.41	0.7	11.84
A259 Goring Street (North)	0.81	4.2	9.34	0.76	3.1	7.14
JUNCTION DELAY (S)*	13.15			13.17		
2033 Base + Development						
A259 Goring Street (South)	0.91	8.9	22.91	0.95	13.2	32.79
Site Access Road	0.78	3.2	35.07	0.46	0.8	14.14
A259 Goring Street (North)	0.86	5.8	12.45	0.80	3.9	8.65
JUNCTION DELAY (S)*	18.99			19.90		

*Demand-weighted averages

A259 Goring Street / The Strand

2.54 Modelling parameters for the design of the site's proposed access are included in the ARCADY Outputs, attached at Appendix 5 of this report. As shown in Table 2.6, the modified A259 Goring Street / The Strand priority give-way junction (i.e. prohibition of right-turn movements), would operate within capacity with minimal queue lengths and delays on the minor arm (The Strand) during the '*2024 Base + Development*' and '*2033 Base + Development*' future year scenarios.

2.55 As mentioned previously, this represents a '*worst*' case scenario as the highway impact assessment takes no account of the potential for motorised users to divert and use other parts of the local highway network in gaining access to various destinations during the weekday AM (08:00 – 09:00) and PM (17:00 – 18:00) peak periods.

Table 2.6 The Strand / A259 Goring Street (Left-In - Left-Out-Only)

Arm	AM Peak Hour (08:00 – 09:00)			PM Peak Hour (17:00 – 18:00)		
	RFC	Queue (Veh)	Delay (S)	RFC	Queue (Veh)	Delay (S)
2024 Base						
The Strand (Stream B-AC)	0.77	3.1	31.22	0.33	0.5	11.53
A259 Goring Street (Steam C-AB)	0.00	0.0	0.00	0.0	0.0	0.00
JUNCTION DELAY (S)*	3.63			0.57		
2024 Base + Development						
The Strand (Stream B-AC)	0.80	3.6	36.36	0.37	0.6	13.36
A259 Goring Street (Steam C-AB)	0.00	0.0	0.00	0.0	0.0	0.00
JUNCTION DELAY (S)*	3.93			0.62		
2033 Base						
The Strand (Stream B-AC)	0.85	4.8	46.30	0.36	0.6	12.68
A259 Goring Street (Steam C-AB)	0.0	0.0	0.00	0.0	0.0	0.00
JUNCTION DELAY (S)*	5.38			0.62		
2033 Base + Development						
The Strand (Stream B-AC)	0.88	5.9	56.98	0.41	0.7	14.93
A259 Goring Street (Steam C-AB)	0.0	0.0	0.00	0.0	0.0	0.00
JUNCTION DELAY (S)*	6.19			0.69		

A259 / A2032 / Titnore Lane (Goring Crossroads)

2.56 Table 2.7 reveals that under the '*2024 Base*' and '*2033 Base*' year scenarios, all arms of the roundabout junction operate close to or over capacity during the weekday AM (08:00 – 09:00) and PM (17:00 – 18:00) peak hour periods, as reflected in the RFC values exceeding the 0.85 threshold, in-turn leading to excessive queue lengths and delays.

2.57 It is therefore evident that the committed development set out in the Worthing Local Plan Transport Study (WLPTS) and level of growth predicted by TEMPro for the Worthing Local Authority Area cannot be adequately accommodated within the current junction arrangement and calibration.

2.58 The level of vehicular traffic generated by the development proposals (i.e. circa 357 and 395 two-way movements) during the AM and PM peak hour periods would not represent a '*severe*' worsening of the future operating conditions of the 4-arm roundabout junction.

2.59 In comparison with the modelling presented in Section 7 of the submitted TA, the results of the updated assessment demonstrate significantly lower RFC values and associated queues / delays on all arms of the roundabout junction.

2.60 However, it should be noted that the impact on the future operation of the roundabout junction is potentially overstated, as once an RFC value exceeds 1 (i.e. the point at which an arm is considered to have reached its theoretical capacity), queuing increases exponentially, as further traffic is added.

Table 2.7 A259 / A2032 / Titnore Lane

Arm	AM Peak Hour (08:00 – 09:00)			PM Peak Hour (17:00 – 18:00)		
	RFC	Queue (Veh)	Delay (S)	RFC	Queue (Veh)	Delay (S)
2024 Base						
A2700 Titnore Lane	1.45	85.8	1117.14	1.67	138.4	1105.32
A2032 Littlehampton Road	1.25	131.6	536.57	1.19	116.4	384.91
A259 Goring Street	1.21	152.3	427.97	0.93	10.8	38.31
A259 Littlehampton Road	1.28	234.1	593.81	1.05	55.8	103.84
JUNCTION DELAY (S)*	574.53			285.44		
2024 Base + Development						
A2700 Titnore Lane	1.54	113.2	1534.58	1.88	207.0	1596.26
A2032 Littlehampton Road	1.28	155.9	621.29	1.27	178.0	582.77
A259 Goring Street	1.34	294.8	785.75	1.00	25.8	77.24
A259 Littlehampton Road	1.31	265.8	678.07	1.09	83.7	150.73
JUNCTION DELAY (S)*	772.43			433.59		
2033 Base						
A2700 Titnore Lane	1.53	112.0	1517.08	1.39	111.7	903.31
A2032 Littlehampton Road	1.33	192.9	759.10	1.27	174.7	573.25
A259 Goring Street	1.29	232.0	630.97	1.38	298.5	898.99
A259 Littlehampton Road	1.36	334.6	844.27	1.20	175.7	404.64
JUNCTION DELAY (S)*	810.63			647.85		
2033 Base + Development						
A2700 Titnore Lane	1.64	142.2	1907.56	1.54	177.8	1463.90
A2032 Littlehampton Road	1.36	219.5	870.95	1.35	250.7	807.80
A259 Goring Street	1.42	384.5	1055.21	1.44	376.2	1131.43
A259 Littlehampton Road	1.39	365.0	946.47	1.23	207.8	474.36
JUNCTION DELAY (S)*	1045.16			870.91		

2.61 To provide a further assessment on the impact of the residential-led mixed-use development proposal on the future operation ('*2033 Base*') of the A259 Goring Street / A2032 / Titnore Lane 4-Arm Roundabout Junction (i.e. Goring Crossways), Table 7.6 presents a net impact assessment of the junction in comparison with the '*2033 Base*' during the weekday AM (08:00 – 09:00) and PM (17:00 – 18:00) peak hour periods.

2.62 Table 2.8 indicates that the development proposals would result in a 4.9% and 5.1% increase in vehicular traffic movements during the weekday AM (08:00 – 09:00) and PM (17:00 – 18:00) peak hour periods, respectively.

2.63 The largest increase in vehicular movements resulting from the development proposals would be on the southern (A259 Goring Street) and northern (A2700 Titnore Lane) arms of the roundabout junction during both the AM and PM peak hour periods. Notwithstanding this, the potential impact on the remaining arms of the junction is forecast to be low (i.e. less than 6.3%).

Table 2.8 Net Impact of Development Proposals on A259 Goring Street / A2032 / Titnore Lane 4-Arm Roundabout Junction

Time Period	Arm	2033 Base* Traffic Flows	Proposed Development Traffic Flows	2033 Net Increase
AM Peak Hour	A2700 Titnore Lane	368	22	6.0%
	A2032 Littlehampton Road	1,060	31	2.9%
	A259 Goring Street	1,504	167	11.1%
	A259 Littlehampton Road	1,706	7	0.4%
	ALL ARMS	**4,638**	**227**	**4.9%**
PM Peak Hour	A2700 Titnore Lane	547	57	10.4%
	A2032 Littlehampton Road	1,240	78	6.3%
	A259 Goring Street	1,455	101	6.9%
	A259 Littlehampton Road	1,698	17	1.0%
	ALL ARMS	**4,940**	**253**	**5.1%**

*Includes Committed Development

2.64 When assessing the impact of the development proposals on the anticipated junction delays, it is clear that the difference between the '*2033 Base*' and '*2033 Base + Development*' scenarios, during the weekday AM and PM peak hour periods, equates to 206 and 185 seconds, equivalent to 3.4 and 3.1-minutes.

2.65 Notwithstanding, the minimal impact of the development proposals on the future operation of the 4-arm roundabout junction, the next section of the report presents a mitigation scheme and associated analysis that would enhance the future operation.

A259 Goring Street / A259 Goring Way / Aldsworth Avenue / Ardingly Drive

2.66 Table 2.9 reveals that with the exception of Ardingly Avenue, all of the remaining arms of the roundabout junction operate over capacity during the weekday AM (08:00 – 09:00) and PM (17:00 – 18:00) peak hour periods. Most notably, the northern (A259 Goring Street (North)) and eastern arms (A259 Goring Street (East)) of the roundabout junction are forecast to generate excessive queue lengths and delays during both the '*2024 Base*' and '*2033 Base*' scenarios, irrespective of the potential impact of the residential-led mixed-use development proposals.

2.67 It is evident that the committed development set out in the Worthing Local Plan Transport Study (WLPTS) and level of growth predicted by TEMPro for the Worthing Local Authority Area cannot be adequately accommodated within the current junction arrangement and calibration.

Table 2.9 A259 / Aldsworth Avenue / Ardingly Drive

Arm	AM Peak Hour (08:00 – 09:00)			PM Peak Hour (17:00 – 18:00)		
	RFC	Queue (Veh)	Delay (S)	RFC	Queue (Veh)	Delay (S)
	2024 Base					
A259 (North)	1.14	100.5	264.17	1.01	28.9	77.02
Ardingly Drive	0.81	3.2	106.33	0.89	4.6	132.70
A259 Goring Street (East)	1.13	60.0	260.26	1.17	75.5	305.38
Aldsworth Avenue	1.01	12.5	159.19	1.00	11.5	147.55
Goring Way (West)	1.04	22.5	135.08	1.03	18.2	145.03
JUNCTION DELAY (S)*	225.03			164.48		
	2024 Base + Development					
A259 (North)	1.22	155.3	446.13	1.06	50.1	119.84
Ardingly Drive	0.81	3.3	107.29	0.90	5.0	144.38
A259 Goring Street (East)	1.16	72.7	325.12	1.26	126.0	540.06
Aldsworth Avenue	1.01	12.3	157.26	1.0	11.6	148.82
Goring Way (West)	1.05	25.0	147.99	1.05	21.7	167.76
JUNCTION DELAY (S)*	326.57			261.40		

2033 Base						
A259 (North)	1.22	151.4	437.06	1.08	62.4	144.58
Ardingly Drive	0.86	4.2	130.46	0.98	7.2	191.39
A259 Goring Street (East)	1.21	89.7	424.92	1.24	112.8	497.71
Aldsworth Avenue	1.07	18.8	218.66	1.06	17.5	204.34
Goring Way (West)	1.11	39.0	221.90	1.10	30.7	228.57
JUNCTION DELAY (S)*	364.99			270.23		
2033 Base + Development						
A259 (North)	1.30	230.8	641.45	1.12	90.4	217.17
Ardingly Drive	0.86	4.2	130.88	0.97	7.4	196.41
A259 Goring Street (East)	1.24	105.8	498.38	1.34	178.6	752.44
Aldsworth Avenue	1.06	18.5	215.44	1.05	17.4	203.96
Goring Way (West)	1.12	42.1	245.85	1.12	35.3	274.01
JUNCTION DELAY (S)*	481.52			389.65		

2.68 In comparison with the modelling presented in Section 7 of the submitted TA, the results of the updated assessment demonstrate significantly lower RFC values and associated queues / delays on all arms of the roundabout junction during the weekday AM peak hour period.

2.69 Table 2.10 presents a net impact assessment of the junction in comparison with the '*2033 Base*' during the weekday AM (08:00 – 09:00) and PM (17:00 – 18:00) peak hour periods. It is clear that the residential-led mixed-use development proposals would result in a 3.9% and 4.5% increase in vehicular traffic movements during the weekday AM (08:00 – 09:00) and PM (17:00 – 18:00) peak hour periods, respectively.

Table 2.10 Net Impact of Development Proposals on A259 / Aldsworth Avenue / Ardingly Drive 5-Arm Roundabout Junction

Time Period	Arm	2033 Base* Traffic Flows	Proposed Development Traffic Flows	2033 Net Increase
AM Peak Hour	A259 (North)	1382	91	6.6%
	Ardingly Drive	116	0	0.0%
	A259 Goring Street (East)	827	31	3.7%
	Aldsworth Avenue	284	0	0.0%
	Goring Way (West)	569	2	0.4%
	ALL ARMS	**3178**	**124**	**3.9%**
PM Peak Hour	A259 (North)	1282	55	4.3%
	Ardingly Drive	133	0	0.0%
	A259 Goring Street (East)	907	78	8.6%
	Aldsworth Avenue	283	0	0.0%
	Goring Way (West)	439	5	1.1%
	ALL ARMS	**3044**	**138**	**4.5%**

*Includes Committed Development

2.70 The largest increase in vehicular movements resulting from the development proposals would be on the northern (A259 Goring Street (North)) and eastern (A259 Goring Street (East)) arms of the roundabout junction during both the weekday AM and PM peak hour periods. Notwithstanding this, the potential impact on the remaining arms of the junction is forecast to be very low (i.e. less than 2.0%).

2.71 When assessing the impact of the development proposals on the anticipated junction delays, it is clear that the difference between the '*2033 Base*' and '*2033 Base + Development*' scenarios, during the weekday AM and PM peak hour periods, equates to 117 seconds, equivalent to circa 2 minutes.

A259 Littlehampton Road / Ferring Lane (Left-in / Left-out only Junction)

2.72 Table 2.11 demonstrates that the A259 Littlehampton Road / Ferring Lane (*'left-in' / 'left-out'*) junction would continue to operate well within its theoretical capacity in the '*2024 Base + Development*' and '*2033 Base + Development*' scenarios with there being a minimal impact on RFC values, queue lengths and delays on the minor arm (Ferring Lane). Consequently, the residential-led mixed-use development proposals would have a negligible impact on the free flow of traffic along Ferring Lane.

Table 2.11 A259 Littlehampton Road / Ferring Lane (Left-in / Left-out only Junction)

Arm	AM Peak Hour (08:00 – 09:00)			PM Peak Hour (17:00 – 18:00)		
	RFC	Queue (Veh)	Delay (S)	RFC	Queue (Veh)	Delay (S)
2024 Base						
Ferring Lane (Stream B-AC)	0.06	0.1	8.91	0.09	0.1	10.30
A259 Littlehampton Road (Steam C-AB)	0.00	0.0	0.00	0.00	0.0	0.00
JUNCTION DELAY (S)*	0.07			0.11		
2024 Base + Development						
Ferring Lane (Stream B-AC)	0.06	0.1	9.03	0.09	0.1	10.40
A259 Littlehampton Road (Steam C-AB)	0.00	0.0	0.00	0.00	0.0	0.00
JUNCTION DELAY (S)*	0.07			0.11		
2033 Base						
Ferring Lane (Stream B-AC)	0.06	0.1	9.45	0.11	0.1	11.15
A259 Littlehampton Road (Steam C-AB)	0.00	0.0	0.00	0.0	0.0	0.00
JUNCTION DELAY (S)*	0.07			0.12		
2033 Base + Development						
Ferring Lane (Stream B-AC)	0.06	0.1	9.58	0.11	0.1	11.26
A259 Littlehampton Road (Steam C-AB)	0.00	0.0	0.00	0.0	0.0	0.00
JUNCTION DELAY (S)*	0.07			0.12		

A280 / A27 / Titnore Lane Dumbbell Roundabout Junction

2.73 As shown in Table 2.12, with the exception of the A280 (Angmering Bypass – south-western arm) of the A280 / A27 / Titnore Lane Dumbbell roundabout junction, all of the remaining arms operate within capacity during the future '*2024 Base + Development*' and '*2033 Base +Development*' scenarios, as reflected by the low RFC values and minimal queue lengths.

2.74 The assessment demonstrates that the south-western arm (A280) would operate over capacity in both the '*2024 Base*' and '*2033 Base*' scenarios with a maximum RFC value of 1.17 in the weekday AM peak hour period, generating a maximum queue length of 99 vehicles.

Table 2.12 A280 / A27 / Titnore Lane Dumbbell Roundabout Junction

Arm	AM Peak Hour (08:00 – 09:00)			PM Peak Hour (17:00 – 18:00)		
	RFC	Queue (Veh)	Delay (S)	RFC	Queue (Veh)	Delay (S)
2024 Base						
A280 North	0.74	2.8	7.88	0.83	4.8	11.39
A27 Off-Slip	0.51	1.0	9.38	0.56	1.2	11.18
Titnore Lane	0.53	1.1	5.85	0.66	1.9	9.41
A280 South West	0.53	1.1	5.86	0.64	1.7	8.83
JUNCTION DELAY (S)*	41.95			10.41		
2024 Base + Development						
A280 North	0.75	3.0	8.22	0.86	6.0	13.88
A27 Off-Slip	0.52	1.1	9.68	0.59	1.4	12.68
Titnore Lane	0.58	1.4	6.55	0.69	2.2	10.44
A280 South West	1.08	54.1	150.54	0.65	1.8	9.35
JUNCTION DELAY (S)*	53.23			12.06		
2033 Base						
A280 North	0.78	3.5	9.46	0.89	7.3	16.59
A27 Off-Slip	0.57	1.3	11.38	0.64	1.7	14.94
Titnore Lane	0.58	1.4	6.73	0.73	2.6	12.34
A280 South West	1.13	81.3	213.89	0.69	2.2	10.64

JUNCTION DELAY (S)*	75.41			14.25		
2033 Base + Development						
A280 North	0.78	3.8	9.93	0.92	9.9	21.93
A27 Off-Slip	0.58	1.4	11.78	0.68	2.1	17.65
Titnore Lane	0.63	1.7	7.69	0.76	3.1	14.11
A280 South West	1.17	98.9	263.11	0.70	2.3	11.39
JUNCTION DELAY (S)*	89.92			17.58		

A280 / A27 / Titnore Lane Roundabout Junction – Mitigation

2.75 As part of the approved outline planning application with some matters reserved for the development of up to 525 residential units, under Use Class C3), 3 ha (gross) of employment land, under Class B1), public open space, play areas, access, associated infrastructure, and landscaping (Reference: A/40/18/OUT) on land north of Water Lane in Angmering, an improvement scheme was proposed for the south-western arm (A280) for the A280 / A27 / Titnore Lane dumbbell roundabout junction. The improvement scheme comprised the utilisation of the existing carriageway to create a two-lane entry.

2.76 As shown in Table 2.13, the proposed mitigation would substantially enhance the future operation of the roundabout junction during the weekday AM peak hour periods. Most notably, the RFC values, queue lengths and delays would be substantially less on the south-western arm (A280) junction during all of the future year scenarios.

2.77 When comparing the potential impact in terms of junction delay between the '*2033 Base*' and '*2033 Base + Development*' scenarios, it is clear that the development proposals would have an immaterial impact, equating to circa 2.0 seconds during the weekday AM (08:00 – 09:00) and PM (17:00 – 18:00) peak hour periods.

Table 2.13 A280 / A27 / Titnore Lane Dumbbell Roundabout Junction – Proposed Mitigation

Arm	AM Peak Hour (08:00 – 09:00)			PM Peak Hour (17:00 – 18:00)		
	RFC	Queue (Veh)	Delay (S)	RFC	Queue (Veh)	Delay (S)
2024 Base						
A280 North	0.72	2.5	7.11	0.81	4.1	9.53
A27 Off-Slip	0.51	1.0	9.58	0.56	1.2	11.19
Titnore Lane	0.53	1.1	5.86	0.66	1.9	9.41
A280 South West	0.82	4.4	13.86	0.50	1.0	5.04

JUNCTION DELAY (S)	9.34			8.77		
2024 Base + Development						
A280 North	0.87	6.2	14.22	0.82	4.5	10.43
A27 Off-Slip	0.63	1.7	14.99	0.58	1.4	12.10
Titnore Lane	0.71	2.3	11.12	0.68	2.1	10.06
A280 South West	0.51	1.0	5.31	0.51	1.0	5.17
JUNCTION DELAY (S)	11.86			9.47		
2033 Base						
A280 North	0.77	3.2	8.61	0.86	5.8	13.01
A27 Off-Slip	0.59	1.4	12.11	0.64	1.7	14.98
Titnore Lane	0.58	1.4	6.73	0.73	2.6	12.36
A280 South West	0.89	7.1	21.81	0.54	1.2	5.61
JUNCTION DELAY (S)	12.91			11.57		
2033 Base + Development						
A280 North	0.78	3.5	9.11	0.89	7.5	16.28
A27 Off-Slip	0.60	1.5	12.76	0.68	2.1	17.75
Titnore Lane	0.63	1.7	7.69	0.76	3.1	14.16
A280 South West	0.91	9.0	27.96	0.55	1.2	5.85
JUNCTION DELAY (S)	15.18			13.88		

A280 - A27 - Arundel Road

2.78 As shown in Table 2.14, the results of the assessment demonstrate that the roundabout junction would operate well within capacity (i.e. RFC values less than 1), under the '*2024 Base + Development*' and '*2033 Base + Development*' scenarios during the weekday AM (08:00 – 09:00) and PM (17:00 – 18:00) peak hour periods, respectively.

2.79 Whilst the RFC value for the northern arm (A280 Long Furlong) of the roundabout junction increases progressively between both the '*2024 Base*' – '*2024 Base + Development*', and '*2033 Base*' – *2033 Base + Development*', the RFC values are below 1, and equate to an increased queue length of 3 vehicles in the weekday PM (17:00 – 18:00) peak hour period.

Table 2.14 A280 - A27 - Arundel Road

Arm	AM Peak Hour (08:00 – 09:00)			PM Peak Hour (17:00 – 18:00)		
	RFC	Queue (Veh)	Delay (S)	RFC	Queue (Veh)	Delay (S)
2024 Base						
A280 Long Furlong	0.66	1.9	8.22	0.84	4.9	14.35
A280 South	0.61	1.5	4.83	0.44	0.8	3.46
A27 Off-Slip	0.78	3.5	16.70	0.42	0.7	5.38
Arundel Road	0.14	0.2	9.76	0.08	0.1	5.32
JUNCTION DELAY (S)*	9.27			9.06		
2024 Base + Development						
A280 Long Furlong	0.67	2.0	8.31	0.87	6.1	17.54
A280 South	0.63	1.7	5.12	0.46	0.8	3.55
A27 Off-Slip	0.78	3.5	16.63	0.43	0.8	5.47
Arundel Road	0.15	0.2	10.12	0.09	0.1	5.47
JUNCTION DELAY (S)*	9.29			10.66		
2033 Base						
A280 Long Furlong	0.72	2.5	10.09	0.90	8.0	22.53
A280 South	0.64	1.8	5.32	0.47	0.9	3.63
A27 Off-Slip	0.86	5.7	26.42	0.45	0.8	5.85
Arundel Road	0.17	0.2	11.71	0.09	0.1	5.66
JUNCTION DELAY (S)*	12.78			13.14		
2033 Base + Development						
A280 Long Furlong	0.72	2.5	10.21	0.93	11.0	30.12
A280 South	0.66	2.0	5.67	0.48	0.9	3.73
A27 Off-Slip	0.86	5.7	26.50	0.47	0.9	5.96
Arundel Road	0.18	0.2	12.20	0.10	0.1	5.82
JUNCTION DELAY (S)*	12.79			16.87		

2.80 As shown in Table 2.15, the introduction of mitigation at the A280 / A27 / Titnore Lane roundabout junction would ensure the RFC values on all arms would be well below 1, leading to minimal queuing and delays.

Table 2.15 A280 - A27 - Arundel Road - Mitigation

Arm	AM Peak Hour (08:00 – 09:00)			PM Peak Hour (17:00 – 18:00)		
	RFC	Queue (Veh)	Delay (S)	RFC	Queue (Veh)	Delay (S)
2024 Base						
A280 Long Furlong	0.51	1.0	4.39	0.65	1.9	5.29
A280 South	0.61	1.5	4.83	0.44	0.8	3.46
A27 Off Slip	0.78	3.5	16.70	0.42	0.7	5.38
Arundel Road	0.14	0.2	9.76	0.08	0.1	5.32
JUNCTION DELAY (S)	8.09			4.73		
2024 Base + Development						
A280 Long Furlong	0.51	1.0	4.41	0.68	2.1	5.69
A280 South	0.63	1.7	5.12	0.46	0.8	3.55
A27 Off Slip	0.78	3.5	16.63	0.43	0.8	5.47
Arundel Road	0.15	0.2	10.12	0.09	0.1	5.47
JUNCTION DELAY (S)	8.09			4.98		
2033 Base						
A280 Long Furlong	0.55	1.2	4.91	0.70	2.3	6.20
A280 South	0.64	1.8	5.32	0.47	0.9	3.63
A27 Off Slip	0.86	5.7	26.42	0.45	0.8	5.85
Arundel Road	0.17	0.2	11.71	0.09	0.1	5.66
JUNCTION DELAY (S)	11.19			5.32		
2033 Base + Development						
A280 Long Furlong	0.56	1.2	4.92	0.72	2.6	6.76
A280 South	0.66	2.0	5.67	0.48	0.9	3.73
A27 Off Slip	0.86	5.7	26.50	0.47	0.9	5.96

Arundel Road	0.18	0.2	12.20	0.10	0.1	5.82
JUNCTION DELAY (S)	11.16			5.64		

Mitigation

2.81 Whilst it has been demonstrated that the impacts of the residential-led mixed-use development on the future operational performance of the A259 Goring Street / A2032 / Titnore Lane (i.e. Goring Crossways) and A259 Goring Street / Goring Way / Aldsworth Avenue / Ardingly Drive / Goring Way roundabout junctions is relatively small, in comparison with that resulting from the Worthing Local Plan sites and level of background growth predicted by TEMPro for the Worthing Local Authority Area, an improvement scheme for both roundabout junctions is proposed.

2.82 The geometric design of the proposed mitigation schemes for the A259 Goring Street / A2032 / Titnore Lane (i.e. Goring Crossways) and A259 Goring Street / Goring Way / Aldsworth Avenue / Ardingly Drive / Goring Way roundabout junctions are shown on Drawing No.'s 18122-002 Rev B and 18122-003 Rev B, attached.

A259 / A2032 / Titnore Lane (Goring Crossroads)

2.83 As shown on Drawing No. 18122/002 Rev B (attached), the proposed mitigation includes the extension of two entry lanes from the north (Titnore Lane), and the provision of three lane entries on the eastern (A259 Littlehampton Road) and southern arms (A259 Goring Street), with the southern section of the circulatory to be widened to accommodate three lanes. A vehicle restraint system would be installed adjacent to the south-east corner of the roundabout junction to prevent errant vehicles from encroaching the footway.

2.84 As shown in Table 2.16, all arms of the A259 Goring Street / A2032 / Titnore Lane (i.e. Goring Crossways) roundabout junction would continue to operate over capacity during the weekday AM (08:00 -09:00) and PM (17:00 – 18:00) peak hour periods, respectively, as indicated in the RFC values being over 1. However, the length of delays in terms of individual arms would be substantially less than that likely to be experienced in the '2033 Base + Development' (non-mitigation) scenarios.

Table 2.16 A259 / A2032 / Titnore Lane

Arm	AM Peak Hour (08:00 – 09:00)			PM Peak Hour (17:00 – 18:00)		
	RFC	Queue (Veh)	Delay (S)	RFC	Queue (Veh)	Delay (S)
2024 Base						
A2700 Titnore Lane	1.33	59.6	721.37	1.36	75.9	457.35
A2032 Littlehampton Road	1.18	94.9	359.43	1.13	83.9	238.53
A259 Goring Street	1.09	75.9	158.13	0.84	5.0	17.12
A259 Littlehampton Road	1.17	140.6	318.29	0.94	12.0	26.24
JUNCTION DELAY (S)*	309.03			133.78		
2024 Base + Development						
A2700 Titnore Lane	1.42	81.7	1015.56	1.63	123.7	754.19
A2032 Littlehampton Road	1.21	111.3	429.73	1.20	129.2	409.41
A259 Goring Street	1.21	165.5	4111.37	0.90	8.1	25.95
A259 Littlehampton Road	1.20	163.0	392.20	0.98	20.2	42.65
JUNCTION DELAY (S)*	458.41			228.96		
2033 Base						
A2700 Titnore Lane	1.41	82.3	1022.87	1.27	72.8	520.25
A2032 Littlehampton Road	1.26	143.9	551.61	1.20	127.6	403.41
A259 Goring Street	1.16	126.3	300.72	1.24	172.7	479.59
A259 Littlehampton Road	1.25	212.2	502.70	1.10	97.4	168.72
JUNCTION DELAY (S)*	491.19			358.14		
2033 Base + Development						
A2700 Titnore Lane	1.50	108.0	1355.86	1.42	125.2	898.52
A2032 Littlehampton Road	1.29	167.7	629.85	1.28	194.2	601.06
A259 Goring Street	1.27	240.2	584.62	1.29	240.2	631.60
A259 Littlehampton Road	1.27	245.6	583.02	1.13	118.7	225.89
JUNCTION DELAY (S)*	657.50			520.83		

2.85 When examining the impact of the proposed mitigation on the future ('*2033 Base + Development*' scenario) operational performance of the A259 Goring Street / A2032 / Titnore Lane (i.e. Goring Crossways) junction in the context of delays, it is evident from Table 2.17 that there would be a substantial reduction on all arms during the weekday AM (08:00 – 09:00) and PM (17:00 – 18:00) peak hour periods, respectively.

2.86 The largest reduction in delays (i.e. 45% and 44%) would occur on the southern arm (A259 Goring Street) of the junction during the AM and PM peak hour periods, respectively. In addition, the A259 Littlehampton Road arm would experience a 52% reduction during the PM peak hour period.

Table 2.17 A259 / A2032 / Titnore Lane – Net Impact (Delays)

Time Period	Arm	2033 Base Delays	2033 Base + Dev Delays (No-Mitigation)*	2033 Base + Dev Delays (Mitigation)*	Net Improvement	
					2033 Base	2033 Base + Dev (No Mitigation)
AM Peak Hour	A2700 Titnore Lane	1517.08	1907.56	1355.86	-161.22 (10.6%)	-551.7 (28.9%)
	A2032 Littlehampton Road	759.1	870.95	629.85	-129.25 (17.0%)	-241.1 (27.7%)
	A259 Goring Street	630.97	1055.21	584.62	-46.35 (7.3%)	-470.59 (44.6%)
	A259 Littlehampton Road	844.27	946.47	583.02	-261.25 (30.9%)	-363.45 (38.4%)
	ALL ARMS**	**810.63**	**1045.16**	**657.5**	**-153.13 (218.9%)**	**-387.66 (37.1%)**
PM Peak Hour	A2700 Titnore Lane	903.31	1463.9	898.52	-4.79 (0.5%)	-565.38 (38.6%)
	A2032 Littlehampton Road	573.25	807.8	601.06	+27.81 (+4.9%)	-206.74 (25.6%)
	A259 Goring Street	898.99	1131.43	631.6	-267.39 (29.7%)	-499.83 (44.2%)
	A259 Littlehampton Road	404.64	474.36	225.89	-178.75 (44.2%)	-248.47 (52.4%)
	ALL ARMS**	**647.85**	**870.91**	**520.83**	**-127.02 (19.6%)**	**-350.08 (40.2%)**

*Includes Committed Development

**Demand-weighted averages

2.87 When comparing the results of the '*2033 Base*' scenario with the '*2033 Base + Development*' (Mitigation) scenario, it is evident that there would be a substantial reduction (i.e. 19% and 21%) in delay on all arms during the weekday AM (08:00 – 09:00) and PM (17:00 – 18:00) peak hour period. The largest reduction in delays would occur on the western arm (A259 Littlehampton Road) during both periods.

2.88 Notwithstanding this, it is clear that the proposed improvement scheme, which is primarily designed to mitigate the potential impact of the residential-led mixed-use development proposal on the local highway network during the weekday AM and PM peak hour periods would have the benefit of substantially reducing the length of delays, which could potentially be experienced at the roundabout junction during the '2033 Base' scenario.

2.89 In comparison with the results of the '2033 Base + Development' (non-mitigation) scenario, it is evident that the reduction in anticipated delays on all arms of the junction, resulting from the proposed mitigation would enhance the operational performance to a level significantly below that projected to occur in the '2024 Base + Development' scenario, during the weekday AM (08:00 – 09:00) and PM (17:00 – 18:00) peak hour periods.

2.90 Consequently, in addition to mitigating the impact of the residential-led mixed-use development proposal on the future operation of the A259 Goring Street / A2032 / Titnore Lane (i.e. Goring Crossways) junction, the improvement scheme would partially alleviate the impact of other committed developments set out in the Worthing Local Plan Transport Study and the level of background traffic growth, as predicted by TEMPro in the '*2033 Base + Development*' future year scenario.

A259 Goring Street / A259 Goring Way / Aldsworth Avenue / Ardingly Drive

2.91 As shown on Drawing No. 18122/003 Rev B (attached), the proposed mitigation for the A259 Goring Street / Goring Way / Aldsworth Avenue / Ardingly Drive / Goring Way roundabout junction includes the widening of all the entry arms and extending the effective flare length of the northern arm (A259 Goring Street) through the provision of retaining wall and vehicle restraint structure / fence, off the eastern side.

2.92 The results of the proposed mitigation scheme on the operational performance of the A259 Goring Street / A2032 / Titnore Lane (i.e. Goring Crossways) junction is presented in Table 2.18.

2.93 As shown in Table 2.18, with the exception of the Aldsworth Avenue arm, all arms of the A259 Goring Street / A259 Goring Way / Aldsworth Avenue and Ardingly Drive junction would continue to operate near or over capacity, as indicated by RFC values over 1, resulting in queuing vehicles and associated delays during the weekday AM (08:00 – 09:00) and PM (17:00 – 18:00) peak hour periods, under the '*2024 Base + Development*' and '*2033 Base + Development*' future year scenarios.

2.94 However, when assessing the impact in the context of delays on all arms, it is clear that the difference between the '*2033 Base*' and '*2033 Base + Development*' future year scenario, is very minimal and only equates to 56.2 and 92.6 seconds during the weekday AM and PM peak hour periods, respectively.

Table 2.18 A259 / Aldsworth Avenue / Ardingly Drive

Arm	AM Peak Hour (08:00 – 09:00)			PM Peak Hour (17:00 – 18:00)		
	RFC	Queue (Veh)	Delay (S)	RFC	Queue (Veh)	Delay (S)
2024 Base						
A259 (North)	0.92	9.9	26.67	0.82	4.3	11.93
Ardingly Drive	0.92	5.0	161.05	0.83	3.7	105.65
A259 Goring Street (East)	1.17	70.8	302.08	1.17	78.7	307.97
Aldsworth Avenue	0.69	2.1	26.63	0.66	1.9	24.14
Goring Way (West)	0.90	7.3	47.73	0.90	6.9	59.02
JUNCTION DELAY (S)*	107.71			112.80		
2024 Base + Development						
A259 (North)	0.99	22.5	54.02	0.85	5.5	14.81
Ardingly Drive	1.04	8.1	249.33	0.89	4.8	135.48
A259 Goring Street (East)	1.21	87.6	403.00	1.28	127.5	545.32
Aldsworth Avenue	0.69	2.1	26.66	0.67	1.9	24.26
Goring Way (West)	0.91	7.6	49.66	0.92	7.8	65.52
JUNCTION DELAY (S)*	149.27			193.38		
2033 Base						
A259 (North)	0.99	22.2	53.80	0.87	6.4	16.96
Ardingly Drive	1.12	10.9	310.23	1.00	8.0	203.52
A259 Goring Street (East)	1.26	105.8	507.47	1.27	117.5	511.90
Aldsworth Avenue	0.73	2.5	30.54	0.71	2.3	27.10
Goring Way (West)	0.96	12.3	74.47	0.96	11.4	89.50
JUNCTION DELAY (S)*	183.95			184.84		
2033 Base + Development						
A259 (North)	1.05	53.8	109.10	0.91	8.8	22.85
Ardingly Drive	1.20	13.7	407.81	1.08	10.8	267.91

A259 Goring Street (East)	1.29	131.5	615.36	1.37	187.8	777.46
Aldsworth Avenue	0.73	2.5	30.26	0.71	2.3	27.58
Goring Way (West)	0.97	13.2	79.33	0.98	12.9	99.54
JUNCTION DELAY (S)*	240.43			278.92		

2.95 When comparing the results of the '*2033 Base*' scenario with the '*2033 Base + Development*' (Mitigation) scenario, it is evident that there would be a significant reduction (i.e. 124 seconds) in delay on all arms during the weekday AM (08:00 – 09:00) and a slight increase (i.e. 8.7 seconds) delay on all arms during the weekday PM (17:00 – 18:00) peak hour period. The largest reduction in delays would occur on the Aldsworth Avenue arm of the roundabout junction during the AM peak hour period.

2.96 It is clear that the proposed improvement scheme, which is primarily designed to mitigate the potential impact of the residential-led mixed-use development proposal on the local highway network during the weekday AM and PM peak hour periods would have the benefit of substantially reducing the length of delays, which could potentially be experienced at the roundabout junction during the '*2033 Base*' scenario.

2.97 In addition to mitigating the impact of the residential-led mixed-use development proposal on the future operation of the A259 / Aldsworth Avenue / Ardingly Drive junction, the improvement scheme would alleviate the impact of other committed developments set out in the Worthing Local Plan Transport Study and the level of background traffic growth (as predicted by TEMPro) in the '*2033 Base +Development*' future year scenario.

2.98 Of significance, the proposed mitigation scheme would substantially reduce extensive queuing back of vehicles on the northern arm (A259 Goring Street) to the site's proposed access during the weekday AM and PM peak hour periods. Most notably, a maximum queue of 54 vehicles, equivalent to 297.0-metres during the weekday AM peak hour period is anticipated to occur.

Table 2.19 A259 / Aldsworth Avenue / Ardingly Drive – Net Impact (Delays)

Time Period	Arm	2033 Base Delays	2033 Base + Dev Delays (No-Mitigation) *	2033 Base + Dev Delays (Mitigation)*	Net Improvement	
					2033 Base	2033 Base + Dev (No Mitigation)
AM Peak Hour	A259 (North)	437.06	641.45	109.1	-327.96 (75.0%)	-532.35 (83.0%)
	Ardingly Drive	130.46	130.88	407.81	277.35 (212.6%)	276.93 (211.6%)
	A259 Goring Street (East)	424.92	498.38	615.36	190.44 (44.8%)	116.98 (23.5%)
	Aldsworth Avenue	218.66	215.44	30.26	-188.4 (86.2%)	-185.18 (86.0%)
	Goring Way (West)	221.9	245.85	79.33	-142.57 (64.2%)	-166.52 (67.7%)
	ALL ARMS**	**364.99**	**481.52**	**240.43**	**-124.56 (34.1%)**	**-241.09 (50.1%)**
PM Peak Hour	A259 (North)	144.58	217.17	22.85	-121.73 (84.2%)	-194.32 (89.5%)
	Ardingly Drive	191.39	196.41	267.91	76.52 (40.0%)	71.5% (36.4%)
	A259 Goring Street (East)	497.71	752.44	777.46	275.75 (+56.2%)	25.02 (3.3%)
	Aldsworth Avenue	204.34	203.96	27.58	-176.76 (86.5%)	-176.38 (86.5%)
	Goring Way (West)	228.57	274.01	99.54	-129.03 (56.5%)	-174.47 (63.7%)
	ALL ARMS**	**270.23**	**389.65**	**278.92**	8.69 (3.2%)	**-110.73 (28.4%)**

*Includes Committed Development

**Demand-weighted averages

VISSIM Modelling

2.99 To overcome WSCC Highways Officer's concern in relation to the proposed site access and interaction with the modified junction of the A259 Goring Street / The Strand and adjoining Goring Crossroads (to the north) and Goring Way (to the south) roundabout junctions, under the '2033 Base + Development' scenario during the weekday AM and PM peak hour periods, MTP instructed European Transportation Consultancy (ETC) to set-up a VISSIM model to demonstrate inter-connectivity.

2.100 VISSIM is a microscopic, time step, and behavior based traffic simulation computer program that comprises of 3 different parts:

- Traffic flow model – generates an online visualisation of traffic operations.
- Traffic control (signal light) model – generates the indications (i.e. green, red, amber) which is 'exported' to the traffic flow model.
- Data analysis package – creates output files containing statistical data such as travel times and queue lengths.

2.101 The results of the VISSIM modelling reveal….[Insert Additional Text]

Table 2.20 [Insert]

2.102 [Insert VISSIM Data / Results]

Travel Plan

2.103 WSCC Highways stated *"amendments are required to the travel plan to accord with the WSCC Development Travel Plan Policy and a copy of the documents will be provided to the applicant, specifically the Travel Plan must:*

- *Be monitored in accordance with the TRICS UK Standard Assessment Methodology (SAM).*
- *Include a target to reduce the 12-hour weekday vehicle trip rate by 15% compared to the predicted trip rate from the Transport Assessment.*
- *Include a financial incentive to encourage residents to use sustainable mode. We would expect this to take the form of a £150 voucher for each household upon occupation.*
- *Include provision for enforcement / remedial measures should the five-year target not be met. We would expect this to take the form of a second £150 voucher issue pe r unit."*

2.104 An updated version of the Residential Travel Plan (RTP) that incorporates the above-mentioned points is attached at Appendix 6 of this report.

Parking

2.105 WSCC Highways stated *"vehicle and cycle parking would be considered further at reserve matters. The TA indicates that the residential element of the development would require approximately 663 parking spaces. It should be noted that the table provided within the TA and subsequent calculation does not include the suggested 0.2 visitor spaces per unit."*

2.106 Further, *"a car park of 73 spaces is proposed to serve as parking for the railway station. A parking survey has been undertaken to assess the current demand. The parking stress survey indicates that the average parking stress on Goring Street (in the vicinity of the station) is a maximum of 64% (37 of the 58 spaces utilised) and the wider area parking stress is a maximum of 33%. Consideration should be provided to providing increased cycle parking facilities at the station."*

2.107 Following submission of the TA, the proposed access strategy including the design of the new Goring-by-Sea rail station car park was amended to include a total of 75 standard sized car parking spaces, motorcycle parking and a dedicated safe and secure cycle parking facility. Vehicular access to the station car park facility would be via the proposed access and diverted section of Minor Goring Street. The internal access of the car park would be configured as a one-way entry and exit.

2.108 To prevent the manifestation of on-street parking along the diverted section of Minor Goring Street, a Traffic Regulation Order (TRO) would be required to cover the installation of double yellow lines along both sides of the carriageway. This TRO would be funded by the applicant.

3. Summary & Conclusions

3.1 This TAA has been prepared by MTP on behalf of the applicant to satisfy WSCC Highways request for additional information in support of the outline planning application (Reference: AWDM/1264/20) for a mixed-use development comprising up to 475 dwellings along with associated access, internal roads and footpaths, car parking, public open space, landscaping, local centre (uses including A1, A2, A3, A4, A5, D1, D2, as proposed to be amended to use classes E, F and Sui Generis) with associated car parking, car parking for the adjacent railway station, undergrounding of overhead HV cables and other supporting infrastructure and utilities (Outline with all matters reserved) on land north west of Goring Station, Goring-by-Sea in West Sussex.

3.2 In summary, the TAA demonstrates: -

- The design of the proposed access has been amended to include the provision of segregated two-way cycleways and footways along the eastern side of the A259 Goring Street, southern side of the internal access road, western and eastern (in-part) sides of the diverted Minor Goring Street, which connect with existing pedestrian and cycle infrastructure. In addition, the masterplan will incorporate the provision of a dedicated foot / cycleway in the site's north-west corner, across Ferring Rife and to the uncontrolled crossing on the A259 Littlehampton Road and PRoW network leading to Highdown Hill and the South Downs National Park. The provision of this new infrastructure will provide future households, other end-users, and the wider community with safe and convenient access to local public transport services and range of amenities available and accessible on-foot and by cycle in Goring-by-Sea and Worthing.
- Existing bus stops located along Goring Way, Goring Street and Ferring Lane, which are served by the 700 Coastliner bus service will be upgraded to include sheltered seating and '*real-time*' information. These measures will enhance the waiting environment for patrons and increase the likelihood for future households and other end-users of the residential-led mixed-use development to travel by local bus services to local and regional destinations in favour of the private car.
- The highway impact assessment, as set out in Section 7 of the submitted TA was based on a total of 505 residential units. However, to ensure consistency with the TAA note, prepared by MTP to address HE's consultation response, an updated highway impact assessment has been undertaken based on the residential aspect of the mixed-use development being comprised of 475-units. Overall, the residential-led mixed-use development would have the potential to generate in the order of 3,512 two-way vehicular movements over the course of a typical weekday including 357 and 395 during the AM (08:00 – 09:00) and PM (17:00 – 18:00) peak hour periods, respectively.
- The highway impact assessment has been updated to exclude WBC Local Plan sites, which do not currently benefit from having planning consent or are registered as '*live*' planning applications to avoid *'double counting'*. Following consultation with WBC's Planning Officer, it was noted that only 6 of the 19 WBC sites outlined in the Worthing Local Plan Transport Study (WLPTS) currently benefit from planning approval or have been submitted as 'live' planning applications. The removal of the 13 WBC Local Plan sites, which do not currently benefit from having planning consent or are 'live' planning applications equates to 1,292 and 1,162 two-way vehicular movements being removed from the local highway network during the weekday AM (08:00 – 09:00) and PM (17:00 – 18:00) peak hour periods, respectively.

- The submitted TA over-estimated the vehicular traffic generating potential of the 6 WBC's Local Plan sites, which benefit from having planning consent or are registered as *'live'* planning applications. This is largely due to the reduced scale of development proposed at the Teville Gate and HMRC Office sites. Further, the approved development on land south of Stoke Abbott Road comprised the consolidation of existing healthcare services, the associated vehicular traffic movements of which were already present on the local highway network.
- Based on the information presented in each of the submitted TAs, the 6 WBC Local Plan sites are anticipated to generate in the order of 164 and 274 two-way vehicular movements during the AM and PM peak hour periods, respectively. This equates to a cumulative decrease of circa 60% and 28%, equivalent to 249 and 109 fewer two-way vehicular movements during the weekday AM and PM peak hour periods, respectively.
- The proposed mitigation for the for the 5-arm roundabout junction of the A259 Goring Street / Goring Way / Aldsworth Avenue / Ardingly Drive / Goring Way, which involves extending the effective flare length of the northern arm (A259 Goring Street) and provision of retaining wall and vehicle restraint structure / fence, off the eastern side.
- The results of the updated modelling demonstrate that the enhanced mitigation scheme for the 5-arm roundabout junction of the A259 Goring Street / Goring Way / Aldsworth Avenue / Ardingly Drive / Goring Way would not result in the manifestation of extensive queuing back to the site's proposed access and adjoining junctions during the weekday AM and PM peak hour periods.
- The results of the VISSIM modelling reveal…[ADD]
- The RTP has been updated to accord with the key aspects of WSCC's '*Development Travel Plan Policy*' document and incorporates:
    - A commitment to conduct monitoring in line with the TRICS SAM methodology;
    - A target to reduce the 12-hour weekday vehicle trip rate by 15% compared to the predicted trip rate from the submitted TA.
    - A financial incentive in the form of a £150 voucher to encourage future households (limited to first owners / occupiers) to travel by sustainable modes for various journey purposes.
    - A commitment to implement enforcement / remedial measures in the event that the 5-year target has not been achieved.

3.3 In the context of the guidelines within paragraph 109 of the NPPF it is considered that there are no residual cumulative impacts in terms of highway safety or the operational capacity of the surrounding transport network and therefore planning permission should not be withheld on transport planning and highway grounds.

Appendix 1

WEST SUSSEX COUNTY COUNCIL CONSULTATION

TO:	Adur & Worthing Councils FAO: Gary Peck
FROM:	Stephen Gee WSCC - Highways Authority
DATE:	10 September 2020
LOCATION:	Land North West Of Goring Railway Station Goring Street Worthing West Sussex
SUBJECT:	AWDM/1264/20 Mixed use development comprising up to 475 dwellings along with associated access, internal roads and footpaths, car parking, public open space, landscaping, local centre (uses including A1, A2, A3, A4, A5, D1, D2, as proposed to be amended to use classes E, F and Sui Generis) with associated car parking, car parking for the adjacent railway station, undergrounding of overhead HV cables and other supporting infrastructure and utilities (Outline with all matters reserved).
DATE OF SITE VISIT:	-
RECOMMENDATION:	Objection / More Information
S106 CONTRIBUTION TOTAL:	-

The application is for a mixed-use development of up to 475 dwellings, a local centre and car parking for the adjacent railway station at Land to the North West of Goring Station. All matters including access are reserved.
The site has been subject to pre application advice between November 2018 and August 2020. At the time of submission of the planning application, the suitability of the access and off-site mitigation had not been agreed.

Policy
The site is not an allocated development site in the WBC Core Strategy 2011 or in the Worthing Borough Draft Local Plan 2018.

The Worthing Draft Local Plan 2018 was supported by a transport assessment. The site was included as a sensitivity test alongside a site at the Ferring Gap, together the two sites were tested with a total of 699 dwellings between them. (354 at Goring/Ferring Gap and 345 at Chatsmore Farm).
The study identified that the Goring Crossroads would be significantly over capacity in a future year scenario with severe delays on the Titnore Lane, A259 Littlehampton Road (west) and Goring Street. A mitigation scheme at the Goring Crossroads that provides additional capacity for the junction by widening the approach lanes from Littlehampton Road and Goring Street from 2 to 3 lanes and the approach from Titnore Lane from 1 lane to 2 lanes. The southern side of the roundabout will also be widened from 2 to 3 lanes and both a with and without development scenario was tested. The study identifies that this is a broad level of design rather than a final design.

Walking and cycling policy
Since the production of the TA, LTN 1/20 has been produced. The application should consider the document and the proposed cycling improvements proposed by the development.

The application should also consider the Worthing Local Cycling and Walking Infrastructure Plan (LCWIP) and identify how the development would support the plan.

Access

The site currently benefits from a field gate onto the A259 Goring Street.

Whilst access is not for consideration, the transport assessment and masterplan show a three arm roundabout being provided on the A259. The existing A259 Goring Street junction with Goring Street (leading to the station) would be closed and diverted though the development to a three-arm roundabout within the site. The access proposals also include the modification of the A259 /Strand junction to remove the right-hand turn and the relocation of the pedestrian crossing.
A Stage 1 Road Safety Audit have been carried out on the site access and mitigation measures and all of the auditor's comments are accepted and will be incorporated/considered in detail at a detailed design stage.
A raised table also appears to have been incorporated at the access to Salisbury House and as such consultation should be undertaken with local stakeholders in line with WSCC guidance.
https://www.westsussex.gov.uk/media/9306/developers_guidance_note.pdf

Without considering the access in detail it is not possible to fully assess the interaction of the site access and adjoining roundabouts (considered in further detail below).

Plan ref 18122/SK04 also shows a 5.5m access road onto Ferring Lane at the location of the existing no 34 Ferring Lane, no further detail has been provided within the application on to the level of development provided by this access or any information supplied as to any planning applications to Arun District Council.
A stage 1 RSA has not been carried out on this access.
Following discussion with the applicants transport consultant it has been confirmed that the drawing does not form part of the application.

Sustainable Transport

Walking

Revised pedestrian facilities would be provided in the vicinity of the site access and proposed mitigation at the Goring Crossroads and the A259/Goring Street / Aldsworth Avenue.

Cycling

The application proposes the upgrade of Footways ref 2121 and 2121 1.
Footway 2121 1 would not appear appropriate for an upgrade to Bridleway (to allow cyclists to legally use it) due to the width and effective width between the site and Ferring Lane. As such the site poorly integrates to the existing network to the north and north-west.
During pre-application discussions the potential for a bridleway link to the north west of the site across the Ferring Rife was discussed which would link into the existing uncontrolled crossing on the A259 and Bridleway ref 2135 allowing access to towards Highdown Hill, sports pitches and the South Downs National Park. This however has not been included within the application.

Bus

The 700 service runs to the west, south and south east of the site along Ferring Lane, Goring Way and the A259 Goring Way. The 700 service provides a 10-minute headway between Littlehampton and Brighton inc Worthing town centre.
No consideration has been provided to the routes to the stops or measures such as waiting facilities and real time information that would encourage future residents to utilise the services.

Train
The site is in close proximity to Goring Station. The station benefits from 3 services per hour in each direction providing connections to locations such as Worthing, Brighton, London Victoria, Littlehampton, Chichester and Southampton. The masterplan provided shows linkages from the site to the station.

Trip Generation, Distribution and Assignment
Whilst the parameters utilised in TRICS do not match the proposals with regard to the number of units, the outputs are acceptable for use.

The development would generate the following trips:

Trips	AM Peak			PM Peak			Daily
	Arrivals	Departures	Two - way total	Arrivals	Departures	Two - way total	
Residential	58	233	344	186	111	297	2,634
Commercial	27	22	49	42	39	81	817
Creche	10	7	17	10	7	17	61
Total*	126	388	513	338	217	555	4931

* Clarification should be provided to the level of development tested within the modelling, presented with the text of the TA and included within table 6.9 and Appendix 14. As the peak hour and daily flows for each land use do not sum correctly.

The distribution of trips is based on 2011 census journey to work data and is acceptable. Confirmation should be provided as to the method of assignment.

Junction Modelling
A base year modelling of 2018 has been provided. The junction modelling has been calibrated using observed queue length surveys.
The modelling indicates that the following junctions operate over capacity in the base year:

- Goring Crossroads;
- A259 Goring Street/ The Strand; and
- A259/ Aldsworth Avenue / Ardingly Drive / Goring Way

And the following currently operate within capacity

- A259 / Ferring Lane;
- A280 /A27 / Titnore Lane; and
- A280 / A27 / Arundel Road.

Future Year scenarios of 2024 and 2033 have been provided.
A wide range of committed development have been included within the assessment both within Worthing and to the West in Angmering in Arun district which had not been included as sites in the Local Plan transport study. The Worthing developments include sites put forward within the draft local plan and the Ferring Gap which is not promoted in the draft local plan.
The application of TEMPRO growth factors also provides a robust assessment.

Site Access

Modelling parameters should be provided for the site access roundabout.

2024. The modelling provided shows the site access is at capacity at the year of occupation with the largest queues of 29 vehicles queuing on the northbound approach to the junction. Average vehicle delays for both northbound and vehicles existing the development would be 68 and 86 seconds in the AM peak.

2031. The queues and delays on the northbound approach to the site access would increase to 55 vehicles and 114 seconds and delays from exiting the development to 2 minutes in the AM peak.

A259/ The Strand

The modelling presented shows the junction would operate within capacity within the 2024 scenario and approaching capacity in the 2033 scenario with delays of 68 seconds in the AM peak. However, the modelling assess the junction in isolation and does not consider the impact of queues associated with the site access and A259/Ardingly Drive/Aldsworth Way/Goring Way roundabout. As detailed below the queue from the A259/Ardingly Drive/Aldsworth Way/Goring Way roundabout would extend through the site access and this junction making the capacity assessment provided unrealistic.

The assignment also indicates that flows would likely reassign to other routes onto the A259 (Limbrick Lane, The Avenue and The Boulevard) which would add to vehicle flows on A259 approach to the Goring Crossroads which is shown to be over capacity.

Goring Crossroads

The modelling presented shows the junction is over capacity in the base year and in the future year scenarios all arms would experience severe delays and operate with a 'F' level of service.

In the 2024 AM base RFCs would be in excess of 1.22 with queues on all arms above 100 vehicles (103 on Titnore Lane to 260 on A259 Littlehampton Road) with delays between 5 minutes and 23 minutes.

In the 2033 AM base all RFC would be in excess of 1.30 with queues on all arms above 130 vehicles (130 on Titnore Lane and 361 on A259 Littlehampton Road) with delays between 11 minutes and 29 minutes.

The 'with development' scenario would significantly increase vehicle queues and delays and result in a severe impact.

In the 2024 AM peak RFCs would be in excess of 1.33 with queues increasing by approximately 30 vehicles on Titnore Lane, A2032 Littlehampton Road and A259 Littlehampton Road and by 155 vehicles on A259 Goring Street, with delays increasing by 5 minutes on Titnore Lane and A29 Goring Street.

In the 2033 AM peak RFCs would be in excess of 1.41 on all arms with queues increasing by approximately 33 vehicles on Titnore Lane, A2032 Littlehampton Road and A259 Littlehampton Road and by 166 vehicles on A259 Goring Street, with delays increasing by 7 minutes on Titnore Lane and A29 Goring Street.

PM peak queues and delays would also increase in both with development scenarios.

As such the application has proposed a mitigation scheme considered in further detail below.

A259 / Ardingly Drive / Aldsworth Way / Goring Way

The modelling presented shows the junction is operating at capacity in the base year and in the future year scenarios all arms would experience severe delays and operate with a 'F' level of service. The 'with development' scenario would significantly increase vehicle queues and delays and result in a severe impact.

In the 2024 AM peak base scenario the maximum queues would be 123 vehicles on the A259 North and 72 vehicles on A259 Goring Street East and associated delays of 6 minutes on each arm and 10 minutes on Aldsworth Avenue.
In the 2033 AM peak base the maximum queues would be 182 vehicles on the A259 North and 106 vehicles on A259 Goring Street East and associated delays of 9 minutes on each arm and 14 minutes on Aldsworth Avenue.

The 'with development' scenario would significantly increase vehicle queues and delays and result in a severe impact.

In the 2024 AM peak the development would increase queues on the A259 North by 66 vehicles to 189 and increase delays by 3 minutes. In the PM peak queues on the A259 Goring Street east would increase by 56 vehicles (87 to 143) and delays increase by 4 minutes.

In the 2033 AM peak the development would increase queues on the A259 North by 84 vehicles to 267 and increase delays by 3 minutes. In the PM peak queues on the A259 Goring Street east would increase by 67 vehicles (130 to 1197) and delays increase by 5 minutes.

As such the application has proposed a mitigation scheme considered in further detail below.

A280 / Titnore Lane / A27
The modelling presented highlights the junction currently operates satisfactorily, however in a future year scenario, the A280 approach would start to experience an increase in queues and delays which the proposed development would exacerbate.
An improvement scheme at the junction has been secured via Land North of Water Lane Arun ref: A/40/18 which has been modelled and details with the improvements the junction would operate within capacity.

A280/A27 / Long Furlong
The modelling presented shows the junction currently operates within capacity. Whilst the junction would be approaching capacity on the A280 Long Furlong arm in a 2031 scenario, the development would add 1.5 vehicles to the queue (8.3 increasing to 9.7) and increase delays by 3 seconds per vehicle, as such the development would not result in a severe impact on the junction.

A259/ Ferring Lane
The modelling presented shows the junction would operate within capacity in all the modelled scenarios.

Mitigation
Goring Crossroads
A mitigation scheme is shown on 8122-002 Rev A the proposed mitigation includes the extension of two entry lanes from the north (Titnore Lane), and the provision of three lane entries on the eastern (A259 Littlehampton Road) and southern arms (A259 Goring Street), with the southern section of the circulatory to be widened to accommodate three lanes. A vehicle restraint system would be installed adjacent to the south-east corner of the roundabout junction to prevent errant vehicles from encroaching the footway.

The scheme closely resembles the mitigation proposed within the Worthing Local Plan transport study.

It is noted that the site access is approx. 230m south of the junction.

In the 2024 AM peak scenario the modelling presented shows all arms of the junction are significantly over capacity in the AM peak. The A259 Goring Street approach queue would increase from 131 vehicles to 180 vehicles and delays from 5 minutes to 7mins 30 seconds. The queues (1080m) would significantly affect the operation of the site access proposals and would reach all the way to the A259 / Goring Way / Aldsworth Avenue junction affecting the mitigation proposals identified at that junction.

In a 2033 scenario the above figures would be an increase in queues from 131 to 259 vehicles (786m to 1554m) and delays from 5 minutes to 10 minutes 20 seconds.

Within the TA the applicant presents that the developments impacts would be mitigated by comparing the with and without development scenario. The delays on all arms (when considered in isolation) in a 2033 scenario show a minimum delay of 10 minutes on each arm and a maximum of 25 minutes in the AM peak.

A259 / Ardingly Drive / Aldsworth Way / Goring Way

A mitigation scheme has been proposed as per drawing ref 18122/003 Rev A. The scheme includes minor widening of all the approaches to the junction.

The modelling presented shows the four main arms operating over capacity in the 2024 scenario with maximum AM peak queues of 87 vehicles on the A259 North and delays approaching 5 minutes on Aldsworth Avenue.
The development would add an additional 52 vehicles onto the A259 Arm and increase delays by 2 minutes 40 seconds. The vehicle queue would block back through the site access and onto the Goring Crossroads.

In a 2033 scenario queues on the A259 North Arm would increase from 134 vehicles to 201 vehicles again causing queuing back through the site access and onto the Goring Crossroads. Significant queues and delays would also be experienced on other arms of the junction.

Modelling Conclusion

From the above it can be seen that any access between the Goring Crossroads and the A259 / Goring Way / Aldsworth Avenue would operate in a severely congested network even with the proposed mitigation.
The extensive queuing back is not demonstrated within the isolated site access modelling and as such an objection to the development is raised.
Possible options to address the concerns over the modelling provided are:

- Provide mitigation that accommodates development trips and would not cause severe delays and queuing back through any site access and adjoining junctions;
- Reducing level of development presented in the assessment;
- Considering level of background growth between TEMPRO and developments; and
- Microsim modelling could provide a potential solution to demonstrate the inter connectivity of the junctions;
- Provision of a significantly enhanced sustainable transport package to reduce vehicle trips.

Personal Injury Accidents

A total of 34 Personal Injury Accidents were recorded within the study area in a five year period, of which 8 were classified as serious and 26 slight. The draft local plan transport study identifies the Goring Crossroads as an area of concern and recommends several measures. The A259/ Goring Way/ Aldsworth Avenue is also identified with clearer signage and road marking suggested. The mitigation measures identified would appear to incorporate the recommendations.

Travel Plan

Amendments are required to the travel plan to accord with the WSCC Development Travel Plan Policy and a copy of the documents will be provided to the applicant, specifically the Travel Plan must:

Be monitored in accordance with the TRICS UK Standard Assessment Methodology (SAM)

- Include a target to reduce the 12-hour weekday vehicle trip rate by 15% compared to the predicted trip rate from the Transport Assessment
- Include a financial incentive to encourage residents to use sustainable mode. We would expect this to take the form of a £150 voucher for each household upon occupation.
- Include provision for enforcement/remedial measures should the five year target not be met. We would expect this to take the form of a second £150 voucher issue per unit.

Parking

Vehicle and Cycle parking would be considered further at reserve matters. The TA indicates that the residential element of the development would require approximately 663 parking spaces. It should be noted that the table provided within the TA and subsequent calculation does not include the suggested 0.2 visitor spaces per unit.

A car park of 73 spaces is proposed to serve as parking for the railway station. A parking survey has been undertaken to assess the current demand. The parking stress survey indicates that the average parking stress on Goring Street (in the vicinity of the station) is a maximum of 64% (37 of the 58 spaces utilised) and the wider area parking stress is a maximum of 33%.

Consideration should be provided to providing increased cycle parking facilitates at the station.

Servicing

The site would be serviceable from both access points and the looped arrangement and secondary streets with turning heads would appear appropriate.

Conclusion

An objection to the development is raised:

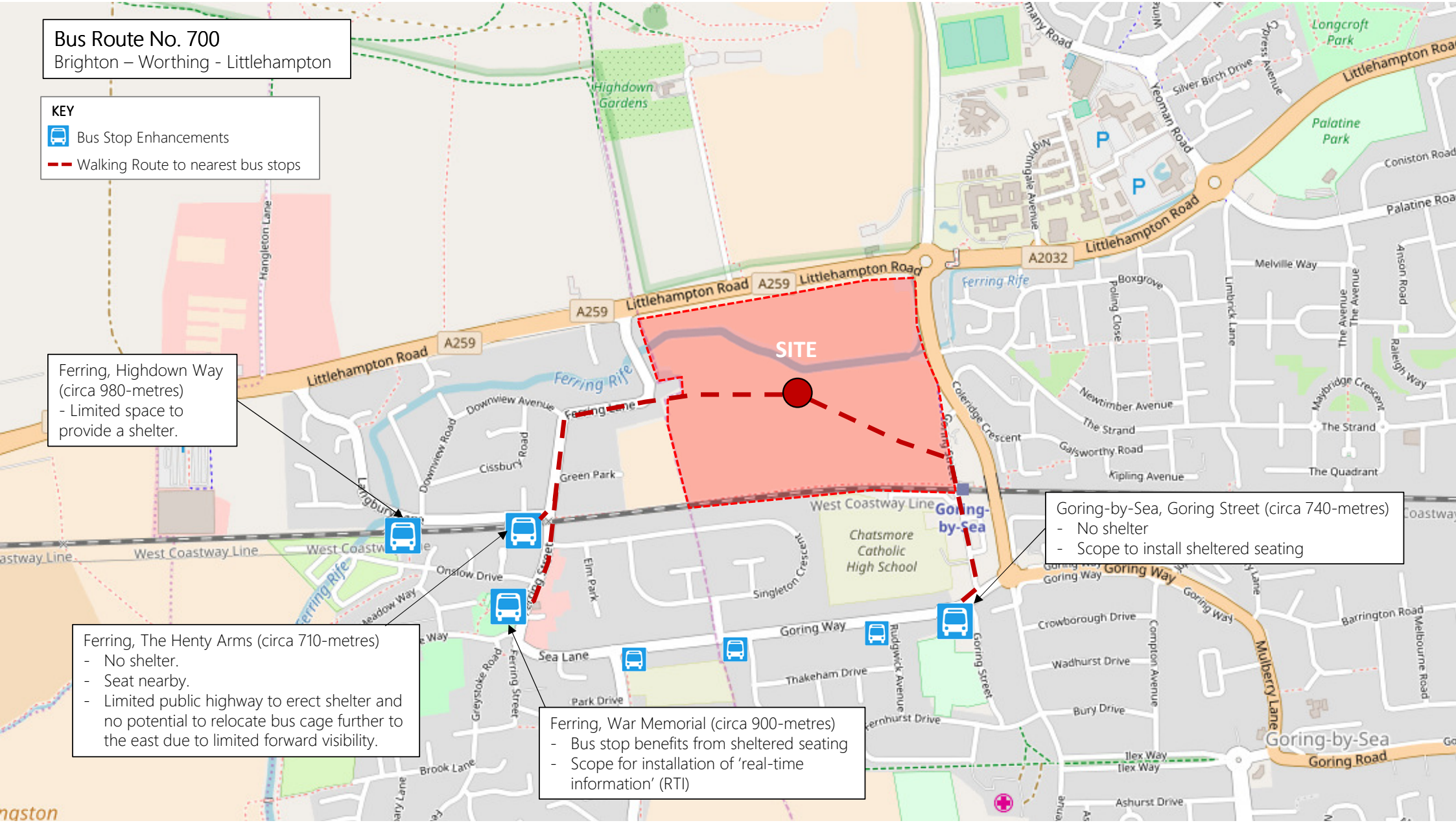
- Due to the junction modelling being undertaken in isolation it has not been demonstrated that an safe and suitable access could be provided to accommodate the level of development. As such the formation and use of an additional access to the public highway at this point would add to the hazards of highway users to an unacceptable degree and interrupt the free flow of traffic.
- Due to the lack of pedestrian and cycle linkages to the North and cycle linkages to the north west of the site, the proposal would not achieve safe and convenient access by a choice of means of travel nor encourage and enable and increase in environmentally sustainable means of travel such as walking and cycling and thereby minimise the impact of car journeys.
- Insufficient information has been provided to assess the impacts of the offsite mitigation and as such it has not been demonstrated that the development would not result in a severe impact on the local highway network

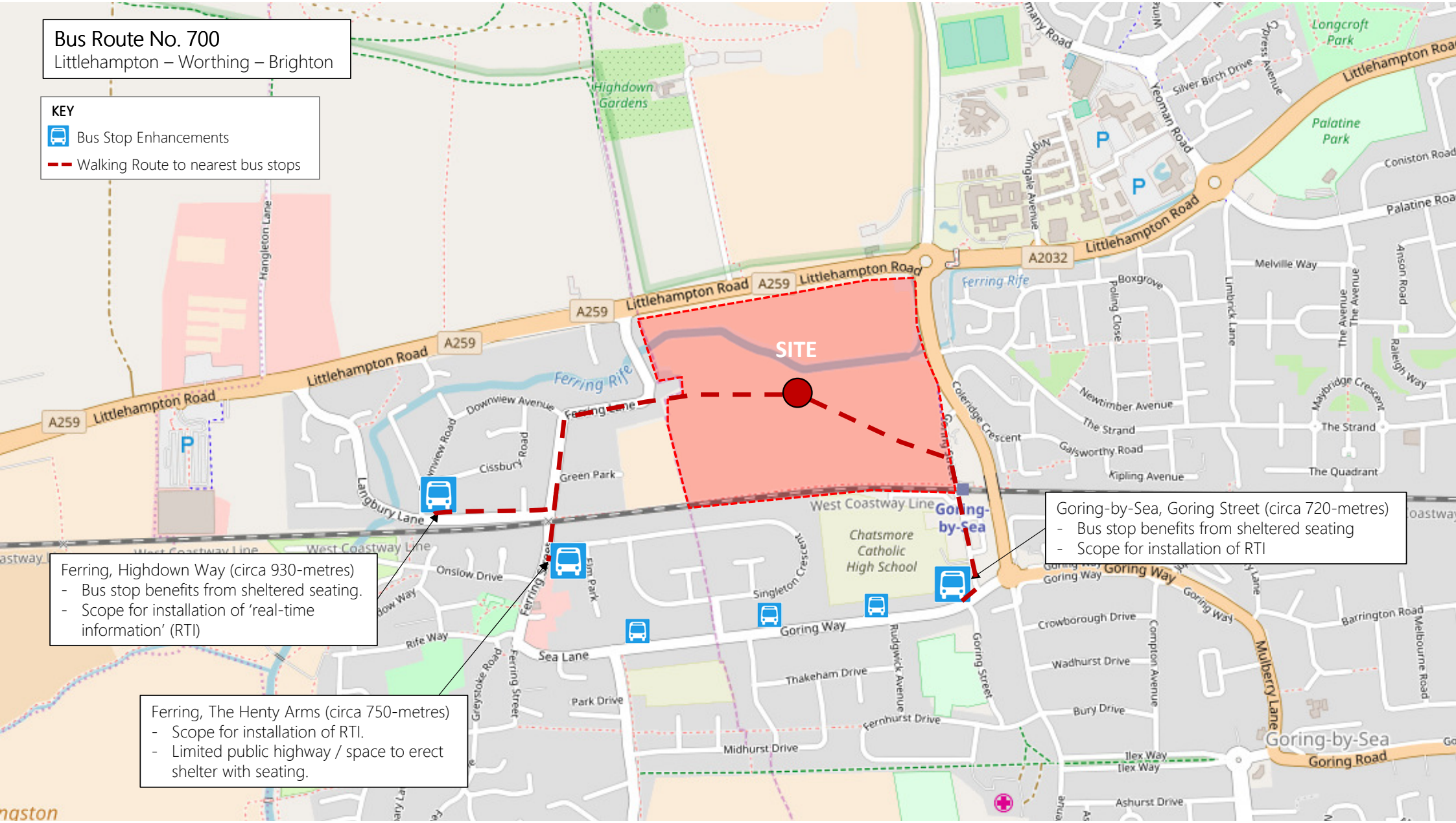
Further Information that is required to be submitted:

- Consideration of LTN 1/20 and Worthing LCWIP;
- Provision of further pedestrian and cycle links to the A259 north of the site; as discussed during pre-app discussions;
- Provision of routes to public transport stops and improvements to the stops themselves including shelters, real time information and cycle parking;
- Confirmation of trip assignment methodology;
- Site access modelling parameters;
- Confirmation of trip generation / what has been modelled;
- Confirmation if reassigned The Strand flows have been added to the A259 Goring Crossroad assessments;
- Further modelling/mitigation of Goring Crossroads / Site Access/ A259 The Strand and A259/Goring Way / Aldsworth Avenue including consideration to the need for Microsimulation modelling;
- Revised Travel Plan; and
- Consideration of further cycle parking in the vicinity of the station.

Stephen Gee
West Sussex County Council – Planning Services

Appendix 2


Bus Route No. 700
Brighton – Worthing - Littlehampton
KEY
Bus Stop Enhancements
Walking Route to nearest bus stops
SITE
Ferring, Highdown Way (circa 980-metres)
- Limited space to provide a shelter.
Ferring, The Henty Arms (circa 710-metres)
- No shelter.
- Seat nearby.
- Limited public highway to erect shelter and no potential to relocate bus cage further to the east due to limited forward visibility.
Ferring, War Memorial (circa 900-metres)
- Bus stop benefits from sheltered seating
- Scope for installation of 'real-time information' (RTI)
Goring-by-Sea, Goring Street (circa 740-metres)
- No shelter
- Scope to install sheltered seating
Littlehampton Road
A259
A2032
West Coastway Line
Goring-by-Sea
Goring Way
Goring Road
Highdown Gardens
Longcroft Park
Palatine Park
Ferring Rife
Chatsmore Catholic High School
Hangleton Lane
Downview Road
Downview Avenue
Cissbury Road
Green Park
Onslow Drive
Meadow Way
Elm Park
Singleton Crescent
Sea Lane
Park Drive
Thakeham Drive
Rudgwick Avenue
Greystoke Road
Ferring Street
Goring Street
Brook Lane
Coleridge Crescent
Newtimber Avenue
The Strand
Galsworthy Road
Kipling Avenue
The Quadrant
Melville Way
Boxgrove
Poling Close
Limbrick Lane
The Avenue
Anson Road
Raleigh Way
Maybridge Crescent
Coniston Road
Palatine Road
Yeoman Road
Silver Birch Drive
Nightingale Avenue
Crowborough Drive
Wadhurst Drive
Bury Drive
Compton Avenue
Barrington Road
Melbourne Road
Mulberry Lane
Ilex Way
Ashurst Drive


Bus Route No. 700
Littlehampton – Worthing – Brighton
KEY
Bus Stop Enhancements
Walking Route to nearest bus stops
SITE
Littlehampton Road
A259
A2032
Ferring Rife
Highdown Gardens
Longcroft Park
Palatine Park
West Coastway Line
Goring-by-Sea
Chatsmore Catholic High School
Goring Way
Sea Lane
Goring Road
Ferring, Highdown Way (circa 930-metres)
- Bus stop benefits from sheltered seating.
- Scope for installation of 'real-time information' (RTI)
Ferring, The Henty Arms (circa 750-metres)
- Scope for installation of RTI.
- Limited public highway / space to erect shelter with seating.
Goring-by-Sea, Goring Street (circa 720-metres)
- Bus stop benefits from sheltered seating
- Scope for installation of RTI

Appendix 3

Proposed Residential-Led Mixed-Use Development,

Land North West of Goring Station, Goring-by-Sea, West Sussex

Residential Travel Plan prepared on behalf of Persimmon Homes Thames Valley

February 2021

MILESTONE TRANSPORT PLANNING

Land North West of Goring Station, Goring-by-Sea, West Sussex

Project No: MTP Ref: 18-122

Document Reference No:

Document Title: Residential Travel Plan

Date: February 2021

Client Name: Persimmon Homes Thames Valley

Project Manager: Tony Wares

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Document history and status

Revision	Date	Description	Prepared By	Checked By	Authorised By
-	19/12/2019	Residential Travel Plan (1st Draft)	O. Hennessy	T. Wares	T. Wares
-	24/06/2020	Residential Travel Plan (2nd Draft)	O. Hennessy	T. Wares	T. Wares
-	07/08/2020	Residential Travel Plan (Final)	O. Hennessy	T. Wares	T. Wares
A	05/02/2021	Residential Travel Plan (Final)	O. Hennessy	T. Wares	T. Wares

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Appendix 1 Architects' Site Layout Plan

1. Introduction

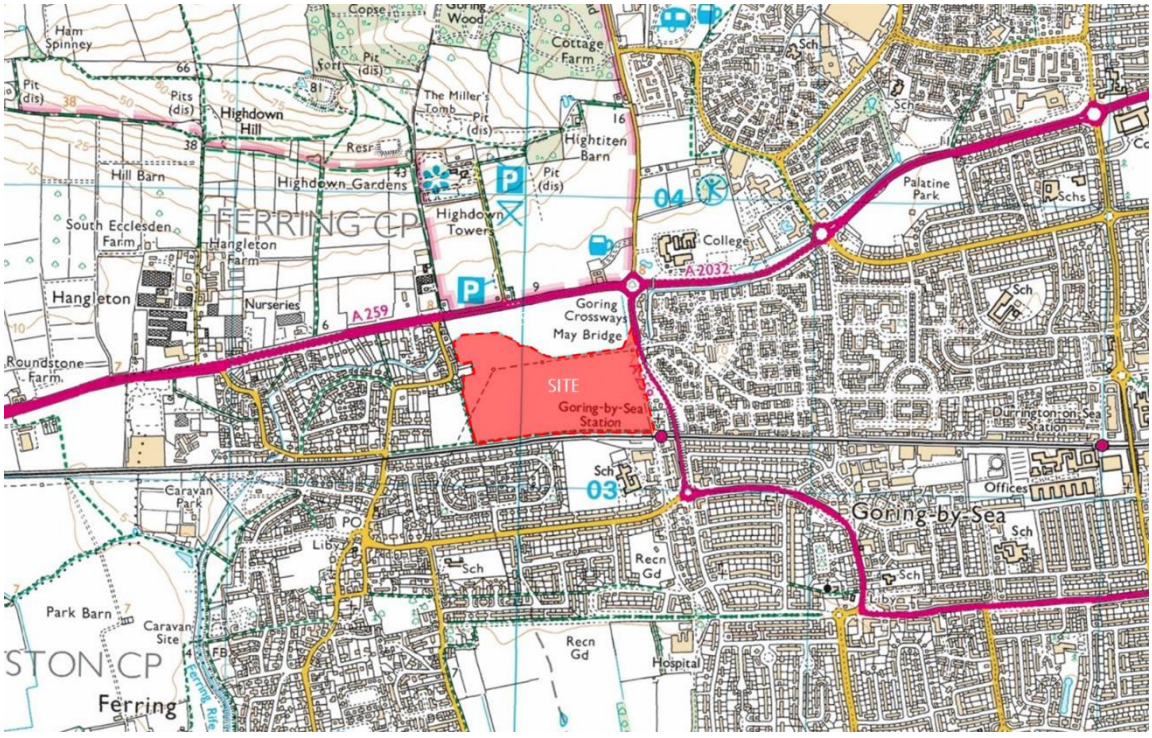
Scope of Residential Travel Plan

1.1 This Residential Travel Plan (RTP) has been prepared by Milestone Transport Planning (MTP) on behalf of Persimmon Homes Thames Valley (*'the applicant'*) in support of an outline planning application (Reference: AWDM/1264/20) with all matters of detail reserved for a mixed use development comprising up to 475 dwellings (Use Class C3) along with associated access, internal roads and footpaths, car parking, public open space, landscaping, local centre (uses including A1, A2, A3, A4, A5, D1, D2) with associated car parking, car parking for the adjacent rail station, undergrounding of overhead HV cables and other supporting infrastructure and utilities on land North West of Goring Station, Goring-by-Sea in West Sussex.

1.2 The application site is a rectilinear shaped parcel of land circa 19.96 ha in size and comprises of flat arable fields, bordered by semi-improved grasslands, Ferring Rife River (flows east to west) and a line of pylons running just south of the Rife. It lies entirely within the confines of the Local Planning Authority, Worthing Borough Council (WBC).

1.3 The site is located to the south and west of the A259 Littlehampton Road and Goring Street, north of the West Coastway rail line, north-west of Goring rail station, and east of Ferring Lane and a public right of way (Footpath No. 2121_1), approximately 1.5-kilometres west of Goring district centre. The site in context with the local area and highway network is shown in Figure 1.

Figure 1 Site Location Plan



1.4 As defined in the Department for Transport's (DfT's) 'Good Practice Guidelines: Delivery Travel Plans through the Planning Process' document (April 2009), a Travel Plan is defined as *"a long-term management strategy for an occupier or site that seeks to deliver sustainable transport objectives through positive action and is articulated in a document that is regularly reviewed. It involves the development of agreed explicit outcomes linked to an appropriate package of measures aimed at encouraging more sustainable travel, with an emphasis on reducing single occupancy car use."*

1.5 The purpose of this RTP is to provide a long-term strategy aimed at encouraging future end-users (i.e. households and visitors) to reduce their dependency on travelling by single occupancy vehicles (SOVs) in favour of the more sustainable modes such as car sharing, public transport, walking and cycling. To accomplish this aim, the document sets out measures and initiatives, appropriate to future households, thereby ensuring a targeted approach is applied. The RTP should be read in conjunction with the Transport Assessment (TA) that has been prepared by MTP to accompany the full planning application.

1.6 Since details of future households are not yet known, it is not possible to derive site specific targets. In this regard, provisional trip rate targets, based on the multi-modal trip generation of the proposed residential-led mixed-use development have been used. The main target of the RTP would aim to achieve a 12-hour weekday vehicle trip rate that is 15% lower than that predicted for the proposed residential-led mixed-use development, as set out in the Transport Assessment (TA) and Transport Assessment Addendum (TAA) note, under a scenario in which the RTP were not implemented.

1.7 Consequently, this document therefore represents an initial strategy through which sustainable travel patterns and behaviour can be promoted amongst future end-users (i.e. households and visitors) of the proposed residential-led mixed-use development. It is designed to be a flexible document, which will evolve over time, thereby ensuring that it remains relevant to all future households.

Policy Background

1.8 In preparing this RTP, reference is made to the National Planning Policy Framework (July 2018), Worthing new Local Plan, Worthing Core Strategy (2011), Adur Local Plan (2017), West Sussex Local Transport Plan 2011 – 2026, West Sussex Walking and Cycling Strategy 2016 – 2026, and West Sussex County Council's (WSCC's) '*Development Travel Plan Policy*'.

National Planning Policy Framework (NPPF)

1.9 The Ministry of Housing Communities & Local Government published the revised National Planning Policy Framework (NPPF) in February 2019. Promoting sustainable transport is a key thread of the NPPF and paragraph 102 highlights the importance of considering transport issues from the earliest stages of development proposals to ensure that:

- Potential impacts on transport networks can be assessed;
- Opportunities from existing and proposed transport infrastructure, changing transport technology and usage are realised;
- Opportunities to promote walking, cycling and public transport use are identified and pursued;
- Environmental impacts of traffic and transport infrastructure are identified, assessed and considered – identifying opportunities for avoiding and mitigating any adverse effects and for net environmental gains; and

- Patterns of movement, streets, parking and other transport considerations are integral to the design of schemes and contribute to making high quality places.

1.10 Paragraph 103 goes on to state that: "*The planning system should actively manage patterns of growth…Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes…*"

1.11 Paragraph 108 requires specific allocations for development to ensure that:

- Appropriate opportunities to promote sustainable transport modes have been taken up;
- Safe and suitable access to the site can be achieved for all users; and
- Any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.

1.12 Paragraph 110 requires that application for development should:

- First, give priority to pedestrian and cycle movements, both within the scheme and with neighbouring areas;
- Second, so far as is possible, facilitate access to high quality public transport, maximising catchment areas to services and implementing appropriate facilities to encourage use;
- Address the need of people with disabilities and reduced mobility;
- Create places that are safe, secure and attractive which minimise conflicts between pedestrians, cyclists and vehicles;
- Allow for the efficient delivery of goods and access by service and emergency vehicles; and
- Be designed to enable charging of plug-in and other ultra-low emission vehicles.

Worthing Local Plan Transport Study (2018)

1.13 WSP published the Worthing local plan transport assessment in August 2018, to support the development of the new Worthing Local Plan, highlighting key policies for new development proposals:

- *'Promotion and delivery of sustainable transport measures provides a means to manage the level of vehicular trip generation from new developments'. P.80*
- *'Travel plan measures could be secured as planning obligations in Section 106 agreements and the delivery of such measures would be subject to the relevant local planning enforcement policies and procedures that apply'. P. 85*

The Worthing Core Strategy (2011)

1.14 Worthing District council published the Core Strategy to help guide planning and development in the Borough up until 2026. Policy 19 (Sustainable Travel) highlights the Council's approach to '*ensuring the travelling environment for residents is safe, accessible and sustainable. This will be achieved by*:

- *Supporting continued improvements to public transport services;*

- *Improving walking and cycling networks to create sustainable links between the town centre and the suburbs;*
- *Producing a car parking strategy for the town centre which will provide a balance between parking demand and overall provision, which will maintain the economic viability of the town centre, whilst promoting it as an area which is safe and accessible for pedestrians and cyclists;*

1.15 *The demands that users have for local public transport services and the impacts that car users have on the surrounding road network will be assessed for all new development. Developer contributions will be sought to implement and necessary measures to reduce local road congestion.*

1.16 *Major new development will require the provision of a Transport Assessment, which will specify how it will affect the surrounding transport environment and how it can mitigate against any adverse effects. Where appropriate, new development will require the provision of a Travel Plan and / or Transport Assessment, which will need to demonstrate that infrastructure is needed to promote the priorities set out in the Local Transport Plan and the Statement of Common Ground'.*

West Sussex Transport Plan (2011-2026)

1.17 West Sussex Council published its third Transport Plan in February 2011, lasting until 2026. The document focuses on a number of key Long-Term Strategies, including:

- *'To reduce unnecessary trips by motorised vehicles and encourage use of more sustainable modes of transport. This will be achieved by continuing to secure travel plans for new residential and employment developments and encouraging members of the community to work with existing groups to instil positive changes in travel behaviour and nurture a culture which embraces sustainable travel'; P. 11*
- *'To reduce the need to travel at all by encouraging the provision of local services. This will be achieved by requiring that transport assessments assess accessibility to key services and have clear links with travel plans and encouraging home working and the promotion of home delivery services through workplace and residential travel plans'; P. 12*

West Sussex Walking and Cycling Strategy (2016-2026)

1.18 The West Sussex County Council's Walking and Cycling Strategy (2016-2026) outlines the design and safety principles for walking and cycling that the County Council will follow, and developers will be expected to follow, when implementing infrastructure schemes:

- *'All new (development) and improvement / maintenance schemes will consider, and wherever possible prioritise, the needs of cyclists and walkers'. P.17*
- *'In partnership with the Local Planning Authorities we will continue to secure and agree Travel Plans for appropriate new employment and residential development sites'. P.22*
- *'We will make the full list of potential schemes, and those additional schemes that may be added over time, available on the WSCC website with the expectation that, where and when possible schemes, irrespective of their position on the list, are promoted via other agreed works or development'. P.28*

Report Structure

1.19 The remainder of this RTP is structured as follows: -

- Section 2 details the main aims and objectives of the RTP;
- Section 3 assesses the site's accessibility credentials in regards to existing public transport infrastructure / services and the pedestrian and cycling network;
- Section 4 provides an overview of the proposed development including access, parking, delivery and servicing arrangements;
- Section 5 proposes a structure for managing the RTP including a description of the responsibilities of the appointed Travel Plan Co-ordinator;
- Section 6 sets out a range of measures aimed at encouraging future households to adopt sustainable travel patterns and behaviour, primarily for their journeys to and from various workplace destinations; and
- Section 7 sets out provisional mode share targets, which seek to achieve a progressive decrease in private car use and a corresponding increase in those travelling by sustainable means.

2. Aims & Objectives

Aims

2.1 The primary aim of the RTP is to achieve a reduction in the dependency of future households to travel by private car for essential and non-essential journeys to / from the proposed residential-led mixed-use development. This will reduce the impact of such travel on the local environment as a whole by:

- Encouraging safe and viable alternatives to the private car for various journey purposes, thereby generating a lower number of vehicular movements;
- Achieving a reduction in overall private vehicle mileage, thereby leading to a corresponding reduction in environmental pollution;
- Improving safety for vulnerable road users such as pedestrians and cyclists; and
- Raising awareness of environmental issues, especially those which impact on personal health and involve transport.

Objectives

2.2 The aims of the RTP are supported by objectives that are in accordance with national, regional, and local planning policies. The key objectives are:

- To minimise trips to and from the residential-led nixed-use development, particularly single occupancy vehicles trips in the weekday AM and PM peak hour periods; and
- To promote the use of all alternative modes of travel to the private car including walking, cycling, public transport and car sharing.

3. Site Description and Accessibility Credentials

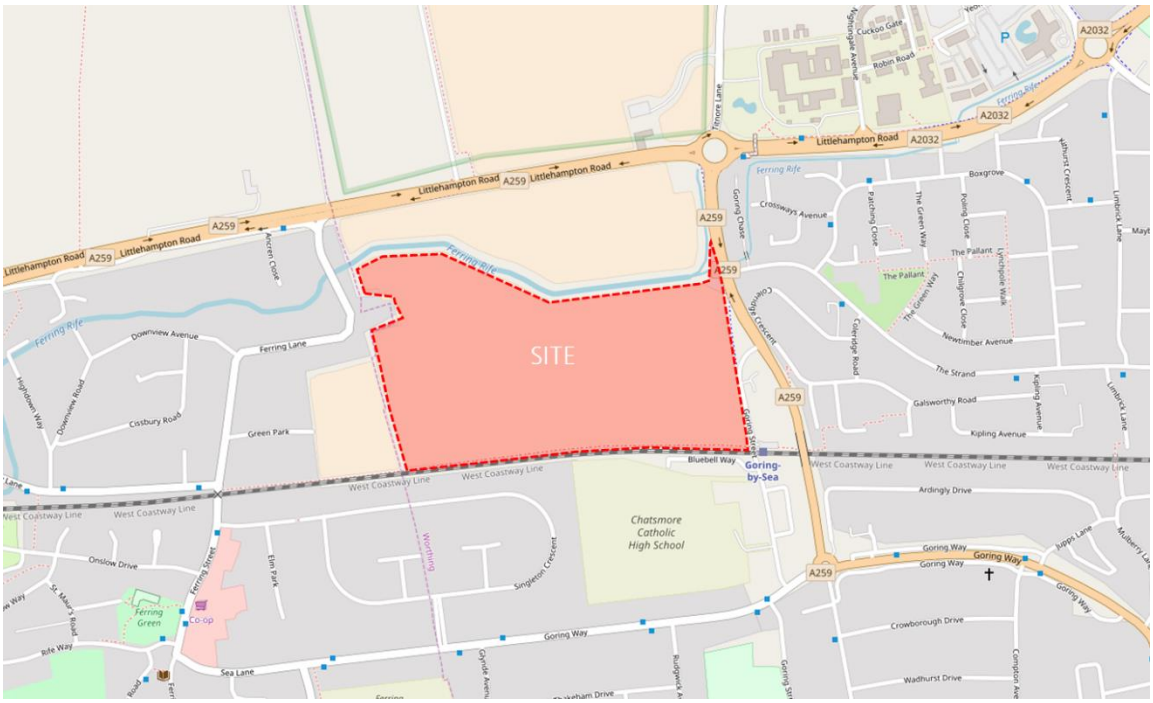
3.1 To gain an understanding of the potential for future households and other end-users of the residential-led mixed-use development to adopt long-term sustainable travel patterns and behaviour for various journey purposes, this section of the RTP evaluates the existing provision of transport infrastructure and services within the vicinity of the site.

Site Description and Context

3.2 The site encompasses a parcel of land with an area of 19.96 hectares, off the western side of the A259 Goring Street. The land is comprised of arable land and Ferring Rife, running from the west to the east of the site. Access to the site is currently taken from a field gate off the western side of the A259 Goring Street.

3.3 The site boundaries are formed by Ferring Rife to the north, the A259 Goring Street to the east, a railway line to the south and residential dwellings to the west. In a wider context, the site is located on the outskirts of Goring-By-Sea town and circa 5-kilometres west of Worthing. A plan showing the location of the site in context with the local area and highway network is shown in Figure 2.

Figure 2 Site Location Plan



Local Highway Network

3.4 The A259 Goring Street is a single carriageway two-way road that runs in a north to south alignment and is subject to a 40mph speed limit. It operates as a 'Secondary / Residential Distributor Road' and provides access to / from the strategic road network and the centre and residential areas of Goring-by-Sea.

3.5 In the vicinity of the existing site access, the A259 junctions with The Strand via an all movement priority T-junction with right turn lane. The Strand is a single carriageway two-way road that runs in a west to east alignment and is subject to a 30mph speed restriction. The Strand has raised tables along its extent acting as traffic calming measures. The Strand provides access to the nearest bus stops to the site.

3.6 Approximately 100m south of the existing site access, the A259 Goring Street junctions with Goring Street via an all movement priority T-junction with right turn lane. Goring Street is a single carriageway two-way road that runs in a north to south alignment and is subject to a 30mph speed limit. It operates as a '*Minor Road*', providing access to a number of residential dwellings in addition to Goring-by-Sea rail station and car park, which currently provides circa 11 spaces. It is noted that Goring Street is not subject to on-street parking restrictions and therefore there is often on-street parking along the east kerb line most likely associated with the station.

3.7 To the north the A259 Goring Street junctions with the A2032 / A259 Littlehampton Road / Titnore Lane via a 4-arm roundabout. Titnore Lane continues north to join with the A27 via a single carriageway two-way road. The A2032 is in the form of a separated dual carriageway and heads east towards residential suburbs of Worthing. The A259 continues west in the form of a separated single carriageway for approximately 650m and then increases to a dual carriageway. The A259 Littlehampton Road is subject to a 50mph speed limit and continues towards Littlehampton and Chichester.

3.8 The A259 Goring Street continues south over the railway line and junctions with Aldsworth Avenue via a 4-arm roundabout whereby the A259 continues west to Ferring and east to Goring Town Centre and Worthing.

Accessibility by Non-Car Modes

3.9 The planning process at national and local level seeks to ensure that development proposals are located in areas where the need to travel will be minimised and opportunities for encouraging sustainable travel behaviour and patterns can be maximised. Consequently, this section of report assesses the existing provision of transport infrastructure and services by mode within the vicinity of the site.

Walk and Cycle Accessibility

3.10 Walking and cycling play a vital role in healthy and active lifestyles and if convenient and safe links are available there is significant opportunity to reduce the need for short journeys to be undertaken by private car, thus reducing the level of traffic on the surrounding highway network.

3.11 Pedestrian access to the site is via the provision of 2.8-metres wide, lit footways on either side of the A259 Goring Street. A toucan crossing is present south of the site's access, providing a safe crossing on the A259 Goring Street. Additionally, a shared foot / cycleway circa 25-metres south of the site (see figure 3), provides access to Goring Street, where the presence of dropped kerbs and tactile paving allows access to Goring-By-Sea rail station in a safe and convenient manner.

3.12 To the north of the site, the footways along the A259 Goring Street connect to the southern footway of the A2032 Littlehampton Road via tactile paving. The dual carriageway is served by a footbridge, which provides access to local bus stops, Northbrook College (eastbound / westbound) and Northbrook Metropolitan College.

3.13 To the south-east, the footways along the A259 Goring Street adjoin to the wider pedestrian network via dropped kerbs, tactile paving and a toucan crossing situated at the 4-arm roundabout junction with Goring Way, Aldsworth Avenue, and the A259 Goring Way.

3.14 Footways along the A259 Goring Way / Mulberry Lane / Goring Road provide a direct, safe, and convenient walking route to Goring-By-Sea town centre via dropped kerbs and tactile paving. The town centre is served by a range of local amenities.

Figure 3 View of Shared Footway / Cycleway along the A259 Goring Street

3.15 As previously mentioned, cycle infrastructure is present along both sides of the A259 Goring Street in the form of a shared footway / cycleway. The dedicated cycleway / footway along the western side of the A259 Goring Street extends to the A259 Littlehampton Road, providing a safe and accessible route to the town of Ferring.

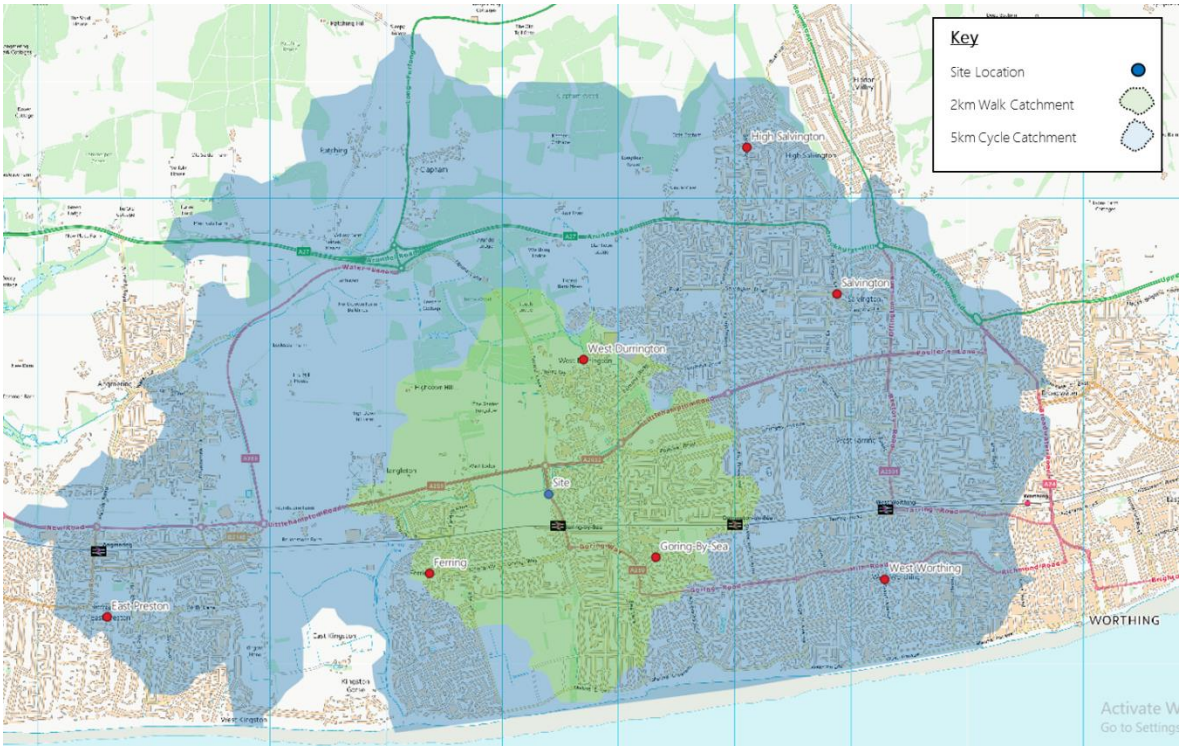
3.16 The site is also within close proximity of the South Coast Cycle Route, as recognised by West Sussex County Council. The cycle route can be accessed from the A259 Littlehampton Road, approximately 1.7-kilometres west of the site. The route is situated along shared footways / cycleways and quiet roads, providing a safe route to the towns of Angmering and Littlehampton.

3.17 Within various national, regional, and local planning policy and best practice guidance documents, the '*active*' modes of walking and cycling are recognised as having the potential to replace short journeys undertaken by private car.

3.18 The Chartered Institute of Highways and Transportation's (CIHT's) publication '*Providing for Journeys on Foot*' (2000), states the average length of a walk journey is 1.0 kilometre. It further suggests a preferred maximum walking distance of 2.0 kilometres for commuting / school journeys and 1.2 kilometres for other journey destinations. Other national planning guidance / best practice publications have previously recommended a maximum distance of 5.0 kilometres for reasonably fit individuals to cycle to / from workplace destinations.

3.19 As shown in Figure 4, a significant proportion of Goring including the town centre, rail station and the residential areas of Ferring and West Durrington are accessible on-foot, within the preferred maximum distance of 2.0-kilometres. In addition, the neighbouring town / village centres of Salvington, High Salvington, West Worthing and East Preston are accessible by cycle.

Figure 4 Walk and Cycle Catchment Plan



Public Transport Accessibility

Bus Services

3.20 The nearest bus stops are located on either side of The Strand (opp. Boxgrove Parade for north-westbound and adj. Boxgrove Parade for south-eastbound), circa 250-metres and 350-metres south-east of the site for the opposite and adjacent stops, respectively. Both stops are served by signage and timetable information, whilst the adjacent stop provides a shelter.

3.21 Additional bus stops are located on either side of the A2032 Littlehampton Road (i.e. Stop A for eastbound services and Stop B for westbound services), approximately 300-metres and 400-metres north-east of the site for Stops B and A, respectively. Both Stop A and B provide a flagpole and timetable information, whilst stop B also provides a shelter.

3.22 A further two bus stops are located along Langbury Lane to the west of the site, which are served by two additional services. The bus stops are currently located a 1.3-kilometre walk from the site, however with the provision of a pedestrian access to the west of the site this distance would be dramatically reduced for households.

3.23 As shown in Table 3.1, these stops are served by 4 bus routes which operate on a frequent basis throughout a typical week and weekend, providing access to a multitude of local and regional destinations including local town centres of Goring, Littlehampton, and Worthing.

Table 3.1 Summary of Bus Services Available from the A2032 Littlehampton Road / The Strand

Nearest Bus Stops	Route No.	Frequency (per hour)				Route
		Monday - Saturday		Sunday		
		Day	Eves	Day	Eves	
Boxgrove Parade (opp. / adj.)	10	3	-	-	-	Worthing – Durrington
Northbrook College (A / B)	9	1	-	-	-	Arundel – Shoreham
Henty Arms	8	2	-	-	-	Worthing – Goring – South Ferring
Henty Arms	700 Coastliner	6	3	3	2	Wick – Littlehampton – Worthing - Shoreham - Brighton

3.24 In addition, it is noteworthy that the Coastliner 700 bus route, which is operated by Stagecoach South on a regular basis (i.e. every 10-minutes) between Brighton and Southsea via Worthing, Littlehampton, Wick, Bognor Regis, Chichester, Havant and Portsmouth is accessible from bus stops located along either side of Goring Way and Langbury Lane to the south and south-west of the residential-led mixed-use development.

Mainline Rail Services

3.25 Goring-by-Sea is situated off the eastern side of Goring Street, approximately 300-metres south of the site. The station is managed by Southern and provides frequent, direct rail services to a host of local and regional destinations including London Victoria, Brighton, Southampton Central and Worthing. Table 3.2 provides a summary of rail services accessible from Goring-by-Sea rail station including typical daytime frequency and journey times to key local and regional destinations.

Table 3.2 Summary of Rail Services Available at Goring-by-Sea Rail Station

Destination	Service Frequency	Journey Time
London Victoria	2 per hour	1 hour 32 minutes – 1 hour 52 minutes
Worthing	4 - 5 per hour	7-9 minutes
Brighton	3 – 4 per hour	33-38 minutes
Southampton Central	1 per hour	1 hour 17 minutes
Littlehampton	3 per hour	14-17 minutes
Gatwick Airport	2 per hour	1 hour 5 minutes
Clapham Junction	2 per hour	1 hour 24 minutes – 1 hour 34 minutes

3.26 At present the station comprises a central footbridge, whilst step free access is available to platforms 1 and 2 via the level crossing on Goring Street.

3.27 The station contains a coffee kiosk, ticket machines, toilets, and a waiting room on platform 1. In addition, a total of 23 cycle parking spaces are available from platforms 1 and 2, accessible via Goring Street.

Accessibility to Local Amenities

3.28 As identified in Table 3.3, the site benefits from being accessible on-foot and by cycle to a broad range of amenities, which are likely to cater for the convenience, education, healthcare, retail, and leisure needs of future households.

Table 3.3 Summary of Local Amenities Accessible On-Foot and By Cycle

Type of Amenity	Destination	Distance	Walk Journey Time	Cycle Journey Time
Convenience	Tesco Express	600-metres	8-minutes	2-minutes
	Tesco Extra	1.8-kilometres	23-minutes	6-minutes
	Royal Mail	1.1-kilometre	14-minutes	3-minutes
Education	Ferring Funtime Pre-school within Ferring C of E Primary School	1.5-kilometres	18-minutes	5-minutes
	Goring Church of England Primary School	1.3-kilometres	16-minutes	4-minutes
	Chatsmore Catholic High School	450-metres	6-minutes	2-minutes
	Northbrook College	500-metres	7-minutes	3-minutes
Faith	English Martyrs Catholic Church	750-metres	9-minutes	3-minutes
	Goring-by-Sea Methodist Church	900-metres	11-minutes	3-minutes
Healthcare	Rowlands Pharmacy	550-metres	7-minutes	2-minutes
	The Barn Surgery	1.7-kilometres	18-minutes	5-minutes
	Goring Hall Hospital	1.0-kilometres	13-minutes	4-minutes
	Ferring Dental Practice	1.3-kilometres	16-minutes	6-minutes
Leisure and Fitness	David Lloyd Worthing	1.1-kilometres	13-minutes	3-minutes
	Goring Cricket & Football Club	650-metres	8-minutes	2-minutes
	Fernhurst Recreation Ground	1.1-kilometres	13-minutes	3-minutes
	Highdown Gardens	1.3-kilometres	17-minutes	8-minutes

Employment	Brookside Industrial Estate	5.2-kilometres	-	16-minutes
	Woods Way Mulberry Lane Trading Estate	1.3-kilometres	16-minutes	4-minutes
Retail	Rustington Retail Park	4.7-kilometres	-	15-minutes
	Worthing Town Centre	5.0-kilometres	-	15-minutes

Summary

3.29 It is evident that the site is well connected to the local highway network with good sustainable access to Goring-by-Sea and the wider areas with a comprehensive range of local and accessible services and local sustainable transport with a good level of service.

3.30 The accessibility of the site by alternative mode to the private car is evidenced by the 2011 National Census Travel to Work Data (detailed further in Section 5) which demonstrates up to 25% of the working age population travel to work by sustainable modes.

3.31 The location of the site therefore reflects the requirements of the NPPF and local policy in ensuring the patterns of growth make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are sustainable. The site provides a realistic choice in travel mode to cater for a number of day to day journeys which would act to reduce occupant's reliance on the private car.

4. Proposed Development

Overview

4.1 The residential-led mixed use development proposals comprise the erection of up to 475 dwellings (Use Class C3) along with associated access, internal roads and footpaths, car parking, public open space, landscaping, local centre (uses including A1, A2, A3, A4, A5, D1, D2) with associated car parking, car parking for the adjacent rail station, undergrounding of overhead HV cables and other supporting infrastructure and utilities.

4.2 A proposed Masterplan Layout Plan (Drawing No. CMP-02 Rev P6), prepared by Thrive Architects is attached at Appendix 1 of this report.

4.3 Since all matters of detail will be reserved, the schedule of accommodation set out in Table 4.1 below is only indicative. Approximately 143 (30%) of the proposed residential units would be comprised of affordable housing, of which 70% (100 units) would be affordable rent and 30% (43 units) as shared ownership. The remaining 332 (70%) of the proposed units would be private open market. Regarding the mix of development, a total of 91 units (19%) would be comprised of one-bed; 172 units (36%) of two-beds; 152 units (32%) of three-beds and 60 units (13%) of four-beds.

Table 4.1 Schedule of Accommodation

Tenure	Housing Type	No. of Units
Private Open Market (POM)	1 Bedroom Unit	34
	2 Bedroom Unit	132
	3 Bedroom Unit	116
	4 Bedroom Unit	50
Affordable Rent	1 Bedroom Unit	45
	2 Bedroom Unit	25
	3 Bedroom Unit	25
	4 Bedroom Unit	5
Shared Ownership	1 Bedroom Unit	12
	2 Bedroom Unit	15
	3 Bedroom Unit	11
	4 Bedroom Unit	5
TOTAL		475

4.4 The commercial aspect of the residential-led development proposals would comprise a convenience foodstore (Use Class A1) with a Gross Floor Area (GFA) of 353 sq.m and a crèche (Use Class D1) with a GFA of 279 sq.m catering for up to 78 children and 39 staff over separate shifts.

4.5 It is anticipated that the convenience foodstore would serve the adjoining residential development and surrounding local community with the hours of operation between 06:00 and 23:00, Monday to Sunday. As shown in Table 4.2, the proposed crèche would operate 3 sessions throughout a typical weekday.

Table 4.2 Proposed Operation of Crèche

Session	Time	No. of Children	No. of Staff
AM Session	08:00 – 13:00	26	4
PM Session	13:00 – 18:00	26	4
Full-Day Session	08:00 – 18:00	26	4

Proposed Access Arrangements

4.6 Vehicular, pedestrian and cycle access to all parts of the proposed residential-led mixed-use development would be achieved via the creation of a 3-arm roundabout junction located approximately 230-metres south and 430-metres north of the A259 Goring Street / A2032 / Titnore Lane (i.e. Goring Crossways); and A259 Goring Street / Goring Way / Aldsworth Avenue / Ardingly Drive / Goring Way 5-arm roundabout junctions, respectively.

4.7 As shown on Drawing No. 18122/001 Rev C (attached) the northern and southern arms of the proposed 3-arm roundabout junction would comprise two-lane approaches with a carriageway width of 3.2-metres.

4.8 The A259 Goring Street / The Strand priority give-way junction would be converted to accommodate '*left-in*' and '*left-out*' manoeuvres-only. Under this arrangement, motorised users intending to undertake right-turn movements into and out of The Strand would be required to divert to the north and south and undertake '*U-turn*' manoeuvres via the A259 Littlehampton Road - Goring Street / A2032 / Titnore Lane and A259 Goring Street / Goring Way / Aldsworth Avenue / Ardingly Drive / Goring Way roundabout junctions or choose alternative routes.

4.9 In addition, the proposed access arrangement would involve the permanent closure of the A259 Goring Street / Minor Goring Street priority give-way junction and the creation of an internal link road circa 70-metres to the south-west. This internal link would operate as a secondary access and enable future households / end-users as well as other motorised users to gain access to Goring rail station including the new car park facility (i.e. 75 spaces), Station House, Church of Jesus Christ, several residential blocks (Hereford, Salisbury and Winchester) situated at the northern end of Minor Goring Street.

4.10 The closed section of carriageway would be reinstated as a shared foot / cycleway, which would connect a relocated toucan crossing and a segregated two-way cycleway and footway measuring 4.0-metres and 2.0-metres in width, respectively along the eastern side of the A259 Goring Street.

4.11 This new infrastructure would extend from the modified junction of the A259 Goring Street / The Strand to provide a safe and direct walk and cycle route connecting the predominately residential area off the eastern side of the A259 Goring Street to Goring-by-Sea rail station. It would also cater for the main pedestrian desire line (south-west to north-east) of future end-users travelling to / from Northbrook College, located north-east of the site.

4.12 A segregated cycleway and footway would be provided along the southern side of the internal access road as well as the western and eastern sides (in-part) of Minor Goring Street. This would adjoin to an uncontrolled pedestrian crossing and provide future households and other end-users with a safe and direct cycle link to enhanced cycle parking facilities and Goring rail station.

4.13 The existing section of shared foot / cycleway off the western side of the A259 Goring Street, north of the proposed access would remain unaltered, as the residential-led mixed-use development is unlikely to generate a material increase in pedestrian and cycle movements.

Internal Access

4.14 Details of the internal access and layout will be determined as part of a future Reserved Matters planning application. However, the design will be developed in accordance with the DfT's MfS1 publication and WSCC's '*Local Design Guide – Supplementary Guidance for Residential Development Proposals*' (January 2008), most notably: -

- Primary Access – minimum carriageway width of 6.75-metres flanked by 3.0-metre wide shared foot / cycleways along both sides.
- Primary Street – minimum 5.5-metre wide carriageway with 2.0-metre wide footways on the primary routes through the development.
- Secondary Street – minimum of 5.0-metre shared surfaces with service margins designed to enable access for refuse vehicles; and
- Private Driveways – narrower shared surface areas where refuse vehicles do not need to enter.

Pedestrian and Cycle Access

4.15 The existing public rights of way that runs east-west along the south boundary of the site and north-south between the site will be retained.

4.16 An additional pedestrian access point will be provided to the north-west of the development. The existing public right of way (path number 2121_1) connecting to Ferring Lane, will be upgraded to facilitate increased pedestrian movements to access the bus stops located along the A259.

Proposed Parking Arrangements

Car

4.17 Car parking standards applicable to all aspects of the mixed-use development proposals are set out in WSCC's 'Guidance on Parking at New Developments' (August 2019). Parking standards for new residential developments are split into 5 Parking Behaviour Zones. The site is located within Zone 4 and the relevant parking standards have been reproduced below in Table 4.3.

Table 4.3 WSCC Residential Parking Demand - Zone 4

Number of bedrooms	Number of habitable rooms	Spaces per dwelling
1	1 to 3	0.9
2	4	1.1
3	5 to 6	1.7
4+	7 or more	2.2

4.18 When applying these standards to the proposed residential development, a total of 663 parking spaces would be required to satisfy potential demand. However, it is noted that details on car parking provision will be determined as part of a RM planning application.

Cycle

4.19 Cycle parking standards relevant to the residential aspect of the mixed-use development proposals are set out in Table 1 of WSCC '*Guidance on Parking at New Developments (August 2019).* Table 4.4 reproduces the minimum cycle parking standards for residential uses.

Table 4.4 Residential Minimum Cycle Parking Provision Standards

Type of Housing	Dwelling Size	Cycle Provision (per unit)
Houses	Up to 4 rooms (1 & 2 bed)	1 space
	5+ rooms (3+ bed)	2 spaces
Flats	Up to 3 rooms (1 & 2 bed)	0.5 space (if communal storage otherwise 1 space)
	4+ rooms (3+ bed)	1 space

4.20 Cycle parking standards for commercial retail (Use Class A1) is to be provided at a rate of 1 space per 100 sq.m for staff and 1 space per 100 sq.m for customers. The guidance specifies a site specific assessment for nurseries (Use Class D1), based on travel plan and needs.

4.21 When applying these standards to this use, a total of 8 cycle spaces including 4 for staff and 4 for customers would need to be provided to ensure compliance.

4.22 As with car parking, details on the number and type of cycle parking for both the residential and commercial uses in context with the adopted standards will be considered in greater detail, as part of a RM planning application.

5. Management

Travel Plan Co-ordinator

5.1 The applicant will be responsible for appointing a Travel Plan Coordinator (TPC) to delivery the RTP over a 5-year period after initial occupation (i.e. within the first 3-months) and once the vehicle trip rate target has been achieved, prior to the role being transferred to a Residents Association.

5.2 The TPC will be responsible for the implementation, communication, monitoring and management of the overall aims and objectives defined in the RTP, including:

- Overseeing the development and implementation of the sustainable transport strategy;
- Raising awareness of the RTP by designing and implementing effective marketing campaigns to promote sustainable transport patterns and behaviour;
- Acting as the point of liaison for future households / end-users of the mixed-use development as well as other external organisations (i.e. WSCC's Travel Plan Officer, Rights of Way Officer and Public Transport Operators etc);
- Coordinating the on-going monitoring process of the RTP in accordance with the Trip Rate Information Computer System (TRICS) UK Standard Assessment Methodology (aka TRICS SAM), to assess the performance of the RTP in achieving set targets on a regular basis.
- Promoting the RTP through the provision of effective communication at all levels.

5.3 The TPC will be appointed prior to occupation of the first residential unit. The contact details of the appointed TPC and any successors will be issued to WSCC's Travel Plan Officer.

Residents Association

5.4 The TPC will set up a Residents Association once the residential-led mixed-use development is fully occupied to continue the long-term promotion of sustainable travel patterns and behaviour. The Residents Association will transition into this role after the fifth-year anniversary of implementation and subject to the set trip rate target being satisfactorily achieved.

Communication

5.5 The success of the RTP will rely on the support of future households, and the TPC will need to ensure that the principles and initiatives within the document are fully understood. The TPC will act as the first point of contact for any travel planning related issues or queries.

5.6 All future households / end-users will be made aware of the RTP, its key aims / objectives and package of '*hard*' infrastructural and '*soft*' information-led measures aimed at encouraging the use of sustainable modes in favour of the private car, prior to relocating to the residential-led mixed-use development through the preparation of a Travel Information Pack.

5.7 Promotional material will also be used periodically to highlight the RTP initiatives. The promotional material including sales literature will include advice on the appropriate channels for raising specific transport-related matters, encouraging households to contact the nominated TPC who in turn will liaise with the appropriate authorities.

5.8 If appropriate, the TPC will notify future households / end-users with information / updates on changes to local highway and transport networks / services, which may affect journeys to / from the mixed-use development. The TPC will also liaise with the Residents Association to maintain a two-way communication flow regarding travel to and from the mixed-use development.

Monitoring

5.9 The RTP is a strategy that will evolve over time. Although the objectives of the document are to '*educate*' future households and end-users and to facilitate travel by sustainable modes will not change, it may be possible over time to define or re-define specific targets. The RTP will therefore be the subject of a regular monitoring and review process to ascertain success or otherwise and to identify the potential for improvements to the travel initiatives being offered.

5.10 A programme of monitoring and review will be in place to gather data on the travel patterns / behaviour of households / end-users. This information will be used to evaluate the performance of the RTP over a 5-year period following initial occupation, particularly in terms of establishing whether the 15% vehicle trip rate target has been successfully achieved. The appointed TPC will be responsible for implementing the monitoring and review strategy.

Formal Methodology

5.11 In accordance with WSCC's '*Development Travel Plan Policy*' the monitoring and review strategy will comprise a combination of formal and informal survey methodologies to identify the modal split, travel choice / behaviour and the actual degree of mode shift achieved.

5.12 The formal methodology for monitoring the RTP will require the applicant to commission an accredited data collection company to conduct 3 (multi-modal TRICS Standard Assessment Methodology (SAM) surveys at the residential-led mixed-use development over a 5-year period. The first survey will be conducted at a point in time when 50% occupation has been achieved. This process will then be repeated on a biennial basis (i.e. once every two years) at Years 3 and 5.

5.13 Data from each survey will need to be verified by managers, prior to being incorporated into the national TRICS database. The cost of each survey will be borne by the applicant.

5.14 Following completion of each TRICS SAM survey a monitoring report will be prepared to summarise the results in context with the 15% trip rate reduction target. The monitoring report together with an audit fee of £500 per survey will be issued to WSCC's Travel Plan Officer, to enable them to assess the performance of the RTP.

Informal Methodology

5.15 In addition to the formal TRICS monitoring, an informal online questionnaire will be issued to all households / end-users of the residential-led mixed-use development to gather insight into the reasons influencing travel choice / behaviour for various journey purposes. More specifically, the questionnaire will cover a range of topics and aim to gather both quantitative and qualitative data on the following aspects: -

- The average number of trips by each travel mode per day;
- The reasons influencing households / end-users to travel by private car to / from workplace destinations;
- The barriers / reasons preventing households / end-users to travel to / from workplace destinations by sustainable means;
- The uptake of free travel vouchers to the first owners / occupiers of each residential unit;
- The levels of uptake / interest in WSCC's car sharing scheme;
- The use of on-site cycle parking facilities including new infrastructure at Goring-by-Sea rail station;
- The use of car parking spaces in the proposed Goring-by-Sea rail station car park, as well as establish whether there are any problems with overspill / displaced parking on the surrounding local highway network; and
- Comments / feedback from future households / end-users and local public transport operators (e.g. Stagecoach / Southern Rail).

5.16 The re-issue of the informal questionnaire to all households / end-users will offer the opportunity to gather new information about wider attitudes to travel. Analysis of the travel questionnaire results will also yield up to date information for comparison with data derived at the introduction of the RTP. The questionnaire will be re-issued on the third and fifth anniversary of the first survey.

5.17 The results of the informal monitoring will be used by the TPC to monitor the success of individual Travel Plan measures, assess the reasons for travel choice, identify improvements or new incentives and measure achievements against set targets. The data will be stored by the TPC to enable comparisons and long-term trends between various measures to be determined over a period of time.

Biennial Monitoring Report

5.18 The results of the formal and informal methodologies will be presented in a biennial monitoring report, which will be prepared and submitted to WSCC's Travel Plan Officer within 3-months of the TRICS SAM and household / end-user questionnaires being undertaken. The appointed TPC will be responsible for ensuring that the biennial progress reports are submitted to WSCC's Travel Plan Officer over the 5-year monitoring period.

5.19 The biennial monitoring report will incorporate the following:

- Details of any changes within the residential-led mixed-use development over the time period that could affect travel patterns;
- An outline of the monitoring processes undertaken, as well as analysis of the results from data collection exercises in terms of performance against targets / milestones set within preceding period; and
- Details of new RTP related activities / measures for the proceeding 2-year period.

5.20 In line with WSCC's '*Development Travel Plan Policy*' the biennial monitoring report will be structured as follows: -

- Executive Summary;
- Development Overview;
- Summary of Agreed Travel Plan;
- Targets;
- Implementation Timetable;
- Monitoring Timetable;
- TRICS Validation Report;
- Analysis of Monitoring Results;
- Issues, Constraints and Reasons for Progress;
- Corrective Measures; and
- Conclusions.

Administration

5.21 Specifically, in relation to the operation of the RTP, the TPC will be required to maintain:

- Details of travel patterns: This information will be derived from the travel questionnaire and will be retained for input to the review process;
- Monitoring Records: Feedback from the monitoring procedures will be maintained for input to the review process; and
- Review Reports: Copies of historic review reports will be retained for reference purposes and for analysis of the longer-term effectiveness of the Plan.

Funding

5.22 The applicant will provide the appointed TPC with an annual budget to deliver all of the '*hard*' infrastructural and '*soft*' information-led measures including the on-going monitoring and review of the RTP for a minimum period of 5-years, and subject to the set vehicle trip rate target being successfully achieved.

5.23 In addition, the TPC will liaise with WSCC to ensure sufficient financial support is available for the on-going promotion and support of the TPC role.

Securing

5.24 In terms of planning obligations, it is intended that the RTP will be secured by way of a planning condition.

6. Travel Measures and Initiatives

6.1 This section outlines the range of '*hard*' physical and '*soft*' information-led management measures / initiatives, which will be implemented by the TPC over the 5-year period to facilitate a change in travel behaviour and patterns amongst future households and end-users.

6.2 As far as is possible, the travel initiatives outlined are designed to be suitable for review and monitoring. However, this list is not exhaustive and the TPC will be free to investigate other potential initiatives.

6.3 Whilst some of the travel initiatives may be implemented from the commencement of occupation of the development, others will need to be determined once a review of the initial travel survey has been completed.

Sales and Marketing

6.4 Past Travel Planning research has demonstrated that modal shift away from use of the private car to more sustainable forms is more effective when targeting regular journeys, which are short in length. Furthermore, it is recognised by both Transport Planning practitioners and academics that the lifetime event of home relocation, which is of relevance to new households, represents a change in the situational context, providing a '*window of opportunity*' for enabling previous habitual travel behaviour (i.e. private car use) to be reconsidered.

6.5 When this is combined with the provision of information on sustainable alternatives (e.g. public transport timetables and walking / cycling maps), it is likely that new households will be more preconceived to changing their travel behaviour towards the use of sustainable modes such as public transport, walking and cycling.

6.6 Consequently, the applicant will work closely with the Sales and Marketing Team of PHTV to ensure that they are aware of the aims / objectives of the RTP in terms of encouraging sustainable means of travel and reduce dependency on use of the private car for various journey purposes.

6.7 In this regards, potential purchasers, will be provided with information about the benefits of the RTP and the site's accessibility by sustainable modes of transport prior to relocating to the development and travel behaviour becoming habitual. The Sales and Marketing team will be trained to be able to advise on sustainable travel and have an information pack to distribute to potential purchasers.

Travel Information Pack (Welcome Pack)

6.8 An introductory Travel Information Pack will be provided to all households and end-occupiers of the commercial aspect of the mixed-use development to raise awareness of the RTP and associated measures. The Travel Information Pack will include:

- An outline of the main aims / objectives and the role of individuals in achieving the aspirations of the RTP;
- Details of the financial, environmental and personal health benefits associated with the '*active*' travel modes of walking and cycling;
- Local walking and cycling route maps including information on dedicated cycle parking facilities;

- Information on WSCC's free adult cycle training courses and the online cycle journey planner (https://cyclejourneyplanner.westsussex.gov.uk/)
- Public transport fares, service timetables, and maps showing the location of the nearest bus stops along the A259 Littlehampton Road, The Strand, Goring Way and Langbury Lane, and Goring-by-Sea rail station.
- A map showing the range of local facilities / services in Goring-by-Sea and Worthing which are available and accessible on-foot and by cycle including major employment areas, health care services (hospitals, doctor's surgeries, and dentists), leisure facilities / services etc.
- Details of financial incentives aimed at encouraging sustainable travel (i.e. £150 travel voucher, discounted travel cards and offers at local cycle retailers);
- Simple cost-benefit analysis of public transport versus the use of the private car, as appropriate; and
- Contact details of the appointed TPC.

6.9 The information will be prepared immediately prior to initial occupation of the residential and commercial aspects of the mixed-use development. It will be updated on a biennial basis as part of the review process.

Personal Sustainable Travel Planning

6.10 The TPC will be offered the opportunity to discuss their individual travel needs with the TPC through organising Personal Travel Planning meetings. The purpose of the meeting will be to raise awareness of the various travel options available to households as well as gain an understanding of the main aims and objectives of the RTP.

Sustainable Travel Voucher

6.11 To incentivise future households to travel by sustainable means of travel, the applicant will as part of the TIP issue Sustainable Travel Vouchers to the first homeowners / occupiers of each residential unit. The Sustainable Travel Voucher will be to the value of £150, which can be exchanged for the following: -

- A season ticket for the local bus service;
- A rail season ticket or network card;
- A contribution towards the purchase of a new bicycle and / or equipment; and
- Cycle training up to 4 members of the household.

On-Site Infrastructure

6.12 As part of the development proposals, a number of internal and external segregated foot / cycleways will be provided to connect to the wider pedestrian / cycle network.

6.13 In accordance with national, regional, and local planning policy, all residential units will be provided with secure and sheltered cycle storage facilities capable of accommodating cycles of various size and type. The provision of secure storage will increase the likelihood of new households owning and using their cycles. Further information on cycle routes and storage facilities at other local destinations including Goring-by-Sea rail station will be contained within the TIPs.

6.14 In addition, all residential units will be provided with broadband service capability, to enable future households to work from home, and hence reduce the need to travel for various journey purposes including commuting over the course of a typical weekday. The provision of broadband services will also enable future households to purchase goods and services online and for these delivered to be individual properties, further minimising the number of private car journeys.

Walking and Cycling

6.15 In addition to the provision of new infrastructure such as segregated cycleways and footways within the vicinity of the mixed-use development and information on safe walking / cycling routes, the TPC will create a Bicycle User Group (BUG) comprised of households and other end-users interested in promoting cycling as a mode of travel.

6.16 The TPC and BUG will be responsible for negotiating discounts with local cycle retailers on behalf of new households regarding the purchase of cycles and associated equipment. The BUG will meet regularly to discuss issues related to cycling to / from the mixed-use development and surrounding area. Households will be encouraged to manage the meetings themselves and to provide feedback / comments to the TPC and WSCC's Travel Plan Officer.

6.17 The BUG would also provide information regarding the Government backed '*Cycle-to-Work*' scheme, which allows employees to purchase a cycle tax-free via their employer. There are a number of benefits associated with this scheme, which include: -

- Reduced cost of purchasing a cycle to an employee, equivalent to saving on Income Tax and National Insurance.
- An employer would save National Insurance contributions since the scheme is based on a salary sacrifice and would redeem the VAT on the purchase; and
- The information provided by BUG would provide households with the necessary information to encourage their employer to implement a 'Cycle-to-Work' scheme.

6.18 The TPC will promote walk and cycle campaigns in conjunction with national travel awareness events including '*Walk to School Week*', '*National Bike Week*', '*Cycle to Work Day*', and '*European Mobility Week*'.

Public Transport

6.19 To promote the use of existing public transport services, the TPC would liaise with local bus operators (Stagecoach and Compass Bus) to negotiate free '*bus taster*' tickets for each first owner / occupier of each household. Up-to-date and relevant timetable / route map information would also be sought from the operator for inclusion within the TIP.

6.20 The provision of these financial initiatives would help influence new households to reconsider their travel patterns and behaviour, in favour of using existing public transport services, thereby reducing dependency on the private car for various journey purposes.

6.21 It is noteworthy that the 2011 Census identifies that approximately 5% of households within the Worthing 006 Middle Layer Super Output Area (MSOA) currently travel by public transport as part of their regular journeys to various workplace destinations. When this is considered in conjunction with the financial

incentive and free bus '*taster*' tickets, there is significant potential for encouraging new households to travel by bus as part or for all of their journey to work.

6.22 Details of local public transport services will be included within the Travel Information Pack and on notice boards. This will include the location of bus stops, operator websites and the ticket types and discounts available.

6.23 The availability, location and routes of the local public transport services will be included in the TIPs in order to promote the use of sustainable alternatives to access key local and regional destinations by rail and bus services.

Car Sharing

6.24 Car sharing involved two or more people travelling together for all or part of a journey. It represents a relatively convenient, flexible, and cost-effective mode of travel if car sharers live and work in similar locations.

6.25 Liftshare is the UK's largest car share database with over 600,000 registered members. Liftshare operates over 1200 car share schemes around the UK. Typically, around 45% of registered members regularly car share, often as part of their journey to and from work.

6.26 The Liftshare website provides a '*savings calculator*' to enable members to work out the cost savings of car sharing as part of a regular journey. It is noteworthy that for journeys comprised of 5-miles, an individual can potentially save in the order of £334 per annum if travelling within a standard sized vehicle (i.e. between 1.4 and 2.0 litres).

6.27 It is anticipated that a car share scheme could deliver a reduction in private car use in the region of 1% - 3%. To encourage future households to car share with other individuals undertaking similar journeys, details of WSCC's Carshare scheme (https://liftshare.com/uk/community/westsussexcarshare) and Liftshare's national car share database including information on how to register for free and identify suitable journey matches will be promoted within the TIPS.

Homeworking

6.28 All residential units within the proposed development will be provided with the necessary telecommunication facilities that will enable households to connect to broadband through the various internet providers. This will in turn, provide households with the possibility of working from home in addition to gaining access to online shopping, banking and websites administered by public transport operators, the Local Authority, local taxi companies and local cycle shops etc.

7. Targets

7.1 To determine the effectiveness of the Travel Plan strategy in accomplishing the set aims and objectives, targets based on the DfT's '*Specific, Measurable, Achievable, Realistic and Time-bound*' (SMART) criteria are detailed in this section of the document.

7.2 It is generally considered that the predominant indicator of a successful Travel Plan is the change in the modal share of trips to and from a development, in which a greater proportion of journeys are made by sustainable means as opposed to by private car, particularly as single occupancy car drivers.

7.3 Since the travel patterns and behaviour of future households of the mixed-use development have not yet been established, the multi-modal trip rates and corresponding generation over the course of a typical 12-hour weekday, as presented in Section 6 of the Transport Assessment (TA) prepared by MTP in support of the planning application has been used to provide to derive the main target of the RTP.

7.4 As identified in Table 6.4 of the TA, the mixed-use development is anticipated to generate in the order of 2,634 two-way vehicular movements over the course of a typical weekday including 291 and 297 two-way movements during the AM (08:00 – 09:00) and PM (17:00 – 18:00) peak hour periods, respectively.

Trip Rate Target

7.5 In line with WSCC's Development Travel Plan Policy, the main target of the RTP will seek to achieve a 12-hour weekday vehicle trip rate / generation that is 15% lower than that predicted for the mixed-use development, as set out in the TA. Consequently, the trip target aims to reduce the number of two-way vehicular movements by 395 (i.e. 2,634 to 2,239) after the fifth-year of the RTP being actively implemented.

8. Action Plan

8.1 The primary aim of the RTP is to increase awareness of sustainable travel options and to encourage their use, with the objective of reducing demand for private car-based travel. Progress of the RTP will be assessed in the context of specific targets.

8.2 In order to achieve the aims and objectives of the RTP, a framework of targets and milestones for implementation is required, against which the success of the Travel Plan can be judged. The targets and milestones defined herein are designed to be transparent, realistic, and justified in the context of current national and regional guidance.

8.3 The implementation of the RTP will be structured in the form of an Action Plan that will define targets and milestones for the first 5 years of implementation. The Action Plan will be reviewed by the TPC prior to the annual review to check performance and identify the need for any corrective actions that may need to be put in place for the following period. Details of the Action Plan for the proposed development are outlined in Table 8.1.

Table 8.1 Action Plan

Action	Responsibility	Timescale
Provide infrastructure (i.e. cabling) for '*broadband*' connections and secure cycle parking facilities for each dwelling.	Applicant	During construction phase of development
Appoint organisation to perform the role of the TPC.	Applicant	Prior to the occupation of the development
Implement Travel Plan process.	TPC	Prior to 1st occupation
Produce TIPs.	Applicant and TPC	Prior to occupation of the development.
Issue TIPs including Sustainable Travel Vouchers to all new households, prior to them relocating to TBC.	TPC	Prior to the occupation of the development.
Liaise with local cycle retailers to obtain discounts on behalf of new households for the purchase of cycles and accessories.	TPC	Prior to the occupation of the development.
Liaise with local bus operators to obtain '*bus taster*' tickets on behalf of new households.	TPC	Prior to the occupation of the development.
Conduct TRICS SAM and household questionnaires.	TPC	Within 3 months of 50% occupation
Set up a BUG	TPC	Within 6 months of 50% occupation
Submit results of the initial surveys to WSCC's Travel Plan Advisor	TPC	Within 3 months of issuing the questionnaire to households
Repeat TRICS SAM and household questionnaires.	TPC	Years 3 and 5 years after the initial survey
Submit a Review Report to WSCC's Travel Plan Advisor	TPC	Within 3 months of re-issuing the travel surveys

Remedial Measures

8.4 In the event that the 12-hour weekday vehicle trip rate target has not been achieved after 5-years of implementation, the TPC will meet with WSCC's Travel Plan Officer to discuss a number of remedial measures, which can be introduced to further reduce the number of vehicular movements to / from the mixed-use development. The remedial measures are not exhaustive but may include: -

- Re-distribution of Sustainable Travel Vouchers to each household;
- Cycle training;
- Additional promotion of walking and cycling campaigns such as 'Walk-to-School' and 'National Bike Week' and car sharing; and
- Extending Personalised Travel Planning service to all households.

Appendix 1

A1

SuDS
SuDS
SuDS
PLAY AREA
200m WALKING DISTANCE
Car Park Entrance
Cycle, Motorcycle Stores.
Station Green
Ground Floor Mixed Uses/Retail, Commercial, Nursery Creche.
GORING TRAIN STATION
N
0 50m 100m
(1:1250)

NOTES

 DO NOT scale from this drawing.
Contractors, Sub-contractors and suppliers are to check all relevant dimensions and levels of the site and building before commencing any shop drawings or building work. Any discrepancies should be recorded to the Architect.
Where applicable this drawing is to be read in conjunction with the Consultants' drawings.

REV	DESCRIPTION	DATE	AUTHOR	CHK'D
P1	Preliminary Issue	12/06/19	PM/SWD	MB
P2	Amendments to Layout	19/06/20	MB/aa	MB
P3	Amendments to Layout	26/06/20	MB/aa	MB
P4	Amendments to Layout	29/06/20	MB/aa	MB
P5	Amendments to Layout and Redline Boundary	10/07/20	MB/aa	MB
P6	Amendments Boundaries	15/07/20	MB/aa	MB

KEY

- Site Boundary (19.96 Ha)
- Land in Applicant's Control (11.17 Ha)
- Proposed Development Parcels
- Indicative Development Units
- Mixed Use Development Blocks
- Key Space
- Shared Surface
- Courtyard
- Mews Lane
- Parkland
- Open Space
- Sustainable Drainage Strategy (SuDS)
- Existing Vegetation
- Proposed Vegetation
- Proposed Planting to Northern Boundary
- Potential New Pedestrian Route
- Principal Vehicular Access Point
- Principal Vehicular Route
- Potential Location of Play Area
- 200m Walking Distance from Goring Station
- Existing High Voltage Cable
- Pylon Grounded
- Potential Secondary Access
- Proposed Car Park Entrance

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PROJECT
Goring Station
Goring-on-Sea
For: Persimmon Thames Valley

DRAWING
Concept Masterplan - 02

SCALE	DATE	AUTHOR	CHK'D
1:1250 @ A1	12/06/19	PM/SWD	PM

JOB NO.	DRAWING NO.	REV
PERS190227	CMP-02	P6

WU03EW - Location of usual residence and place of work by method of travel to work (MSOA level)

population	All usual residents aged 16 and over in employment the week before the census
units	Persons
date	2011
method of travel to work	Driving a car or van

place of work		Worthing 006	%	Route Assignment
Arun	001	11	0.6%	Titnore Lane / A27 (W)
	002	23	1.3%	Titnore Lane / A280 (N)
	003	9	0.5%	Titnore Lane / A27 (W)
	004	30	1.7%	A259 (N) / A259 (W) / Roundstone
	005	25	1.4%	A259 (N) / A259 (W) / Roundstone [50%] Titnore Lane / A280 (W) [50%]
	006	16	0.9%	Titnore Lane / A27 (W) [50%] A259 (N) / A259 (W) / Roundstone [50%]
	007	24	1.3%	A259 (N) / A259 (W) / Roundstone
	008	30	1.7%	A259 (S) / Goring Way (W)
	009	15	0.8%	A259 (N) / A259 (W) / Roundstone
	010	11	0.6%	A259 (N) / A259 (W) / Roundstone or B2140
	011	27	1.5%	A259 (N) / A259 (W) / Roundstone
	012	2	0.1%	Titnore Lane / A27 (W) [50%] A259 (N) / A259 (W) / Roundstone [50%]
	014	1	0.1%	Titnore Lane / A27 (W) [50%] A259 (N) / A259 (W) / Roundstone [50%]
	015	4	0.2%	Titnore Lane / A27 (W) [50%] A259 (N) / A259 (W) / Roundstone [50%]
	016	1	0.1%	Titnore Lane / A27 (W) [50%] A259 (N) / A259 (W) / Roundstone [50%]
	017	5	0.3%	Titnore Lane / A27 (W) [50%] A259 (N) / A259 (W) / Roundstone [50%]
Worthing	001	42	2.3%	A259 (N) / A2032 (E)
	002	24	1.3%	A259 (N) / A2032 (E)
	003	76	4.2%	A259 (N) / A2032 (E) [50%] A259 (N) / The Strand [50%]
	004	35	1.9%	A259 (N) / A2032 (E)
	005	88	4.9%	A259 (N) / A2032 (E)
	006	53	2.9%	A259 (N) / A2032 (E) [50%] A259 (N) / Titnore Lane [50%]
	007	46	2.6%	A259 (N) / A2032 (E)
	008	33	1.8%	A259 (N) / A2032 (E) [50%] A259 (S) / A259 (E) [50%]
	009	61	3.4%	A259 (N) / A2032 (E) [50%] A259 (S) / A259 (E) [50%]
	010	46	2.6%	A259 (S) / A259 (E)
	011	288	16.0%	A259 (S) / A259 (E)
	012	35	1.9%	A259 (S) / A259 (E)
	013	88	4.9%	A259 (S) / A259 (E)
South East	Adur	119	6.6%	A259 (N) / A2032 (E)
	Ashford	1	0.1%	Titnore Lane / A280 (N)
	Basingstoke and Deane	2	0.1%	Titnore Lane / A27 (W)
	Bracknell Forest	1	0.1%	Titnore Lane / A27 (W)
	Brighton and Hove	94	5.2%	A259 (N) / A2032 (E) [50%] A259 (S) / A259 (E) [50%]
	Canterbury	1	0.1%	Titnore Lane / A280 (N)
	Chichester	42	2.3%	Titnore Lane / A27 (W)
	Crawley	70	3.9%	Titnore Lane / A280 (N) [50%] A259 (N) / A2032 (E) [50%]
	East Hampshire	1	0.1%	Titnore Lane / A27 (W)
	Eastbourne	1	0.1%	A259 (N) / A2032 (E)
	Eastleigh	1	0.1%	Titnore Lane / A27 (W)
	Elmbridge	1	0.1%	Titnore Lane / A280 (N)
	Fareham	2	0.1%	Titnore Lane / A27 (W)
	Gosport	3	0.2%	Titnore Lane / A27 (W)
	Guildford	7	0.4%	Titnore Lane / A280 (N)
	Hart	1	0.1%	Titnore Lane / A27 (W)
	Havant	3	0.2%	Titnore Lane / A27 (W)
	Horsham	133	7.4%	Titnore Lane / A280 (N)
	Lewes	24	1.3%	A259 (N) / A2032 (E)
	Maidstone	1	0.1%	Titnore Lane / A280 (N)
	Mid Sussex	34	1.9%	Titnore Lane / A280 (N) [50%] A259 (N) / A2032 (E) [50%]
	Mole Valley	8	0.4%	Titnore Lane / A280 (N)
	New Forest	1	0.1%	Titnore Lane / A27 (W)
	Oxford	1	0.1%	Titnore Lane / A280 (N) [50%] Titnore Lane / A27 [50%]
	Portsmouth	5	0.3%	Titnore Lane / A27 (W)
	Reigate and Banstead	12	0.7%	Titnore Lane / A280 (N)
	Runnymede	2	0.1%	Titnore Lane / A280 (N) [50%] Titnore Lane / A27 [50%]
	Rushmoor	1	0.1%	Titnore Lane / A27 (W)
	Sevenoaks	4	0.2%	Titnore Lane / A280 (N) [50%] A259 (N) / A2032 (E) [50%]
	South Bucks	1	0.1%	Titnore Lane / A280 (N) [50%] Titnore Lane / A27 [50%]
	Tandridge	2	0.1%	Titnore Lane / A280 (N) [50%] A259 (N) / A2032 (E) [50%]
	Tonbridge and Malling	1	0.1%	Titnore Lane / A280 (N) [50%] A259 (N) / A2032 (E) [50%]
	Waverley	6	0.3%	Titnore Lane / A280 (N) [50%] A259 (N) / A2032 (E) [50%]
	Winchester	3	0.2%	Titnore Lane / A27 (W)
	Woking	2	0.1%	Titnore Lane / A280 (N) [50%] Titnore Lane / A27 [50%]
East		14	0.8%	Titnore Lane / A280 (N)
East Midlands		4	0.2%	Titnore Lane / A280 (N) [50%] Titnore Lane / A27 [50%]
London		29	1.6%	Titnore Lane / A280 (N)
North East		1	0.1%	Titnore Lane / A280 (N) [50%] Titnore Lane / A27 [50%]
North West		3	0.2%	Titnore Lane / A280 (N) [50%] Titnore Lane / A27 [50%]
South West		4	0.2%	Titnore Lane / A27 (W)
West Midlands		2	0.1%	Titnore Lane / A280 (N) [50%] Titnore Lane / A27 [50%]
Total		1,797	100.0%	

Titnore Lane / A27 (W)	113	6%	
Titnore Lane / A280 (N)	297	16%	
Titnore Lane / A280 (W)	13	1%	
Roundstone	134	7%	
Goring Way (W)	30	2%	
A259 (E)	551	31%	
A2032 (E)	596	33%	
The Strand	38	2%	
Titnore Lane only	26.5	1%	
	1797	100%	

475 units

AM	Arrivals	0.129	61
	Departures	0.570	271
	Two-Way	0.699	332
PM	Arrivals	0.368	175
	Departures	0.170	81
	Two-Way	0.538	256

		AM			PM		
		Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way
Titnore Lane / A27 (W)	6%	4	17	21	11	5	16
Titnore Lane / A280 (N)	16%	10	45	55	29	13	42
Titnore Lane / A280 (W)	1%	0	2	2	1	1	2
Roundstone / B2140	7%	5	20	25	13	6	19
Goring Way (W)	2%	1	5	6	3	1	4
A259 (E)	31%	19	83	102	54	25	78
A2032 (E)	33%	20	90	110	58	27	85
The Strand	2%	1	6	7	4	2	5
Titnore Lane only	1%	1	4	5	3	1	4
	100%	61	271	332	175	81	256

Appendix 4

Union Place

Land Use	Promoted*	Consented**
Residential	250	186 resi
Retail	2322 sqm	611 sqm of commercial floorspace
Leisure	6,000 sqm	90-bed hotel and extension to existing theatre
*WBC Local Transport Study (WSP, August 2018)		
**Consented Development Planning Reference: AWDM/0441/20		

Trip Generation

Promoted Vehicular Trips			
AM		PM	
Arrivals	Departures	Arrivals	Departures
38 (20)	64 (51)	162 (42)	131 (21)
Note: all trips (new trips)			

Consented Residential Vehicular Trips			
AM Peak		PM Peak	
Arrivals	Departures	Arrivals	Departures
11	28	29	20
Paragraph 6.40 of TA "the residential element of the proposals is the only use that has dedicated parking provision and is anticipated to be the only use that is likely to generate new trips to the site. Vehicle movements associated with the other uses (hotel, cinema and commercial) are likely to already be on the network and are able to use the existing range of parking facilities within the vicinity of the site."			

Net Change in Residential Vehicular Trips			
AM Peak		PM Peak	
Arrivals	Departures	Arrivals	Departures
1	23	21	13
Table 6.15 of the TA presents the net change in vehicle trips (existing High Street Car Park compared to Proposed Residential Use).			

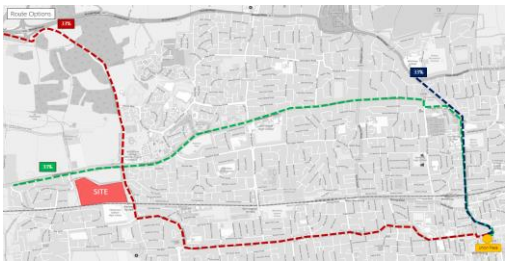
Trip Distribution

WU03EW - Location of usual residence and place of work by method of travel to work (MSOA level)
ONS Crown Copyright Reserved [from Nomis on 10 January 2019]

population	All usual residents aged 16 and over in employment the week before the census
units	Persons
date	2011
method of travel to work	Driving a car or van

place of work	usual residence		Route	AM Peak		PM Peak	
	E02006691 : Worthing 011			Arrivals	Departures	Arrivals	Departures
E02006625 - Worthing 001	36	1.7%	not via assessed site network	0	0	1	0
E02006626 - Worthing 003	14	0.7%	not via assessed site network	0	0	0	1
E02006627 - Worthing 004	49	2.4%	not via assessed site network	0	1	0	0
E02006628 - Worthing 005	31	1.4%	not via assessed site network	0	0	0	0
E02006629 - Worthing 006	105	5.0%	not via assessed site network	0	1	1	1
E02006630 - Worthing 007	48	2.3%	not via assessed site network	0	1	1	0
E02006631 - Worthing 008	57	2.7%	not via assessed site network	0	1	1	0
E02006632 - Worthing 009	30	1.4%	not via assessed site network	0	1	0	0
E02006633 - Worthing 010	60	2.7%	not via assessed site network	0	1	1	1
E02006634 - Worthing 011	193	9.0%	not via assessed site network	1	3	3	2
E02006635 - Worthing 012	34	1.6%	not via assessed site network	0	0	0	0
E02006636 - Worthing 013	67	3.2%	not via assessed site network	0	1	1	1
Adur	382	11.1%	not via assessed site network	1	3	3	2
Arun	179	12.0%	33% A259 (E) / A259 (N) / Tinsore Lane N / A27 (W) 39% A2032 / A259 (W)		3	1	2
Basingstoke and Deane	5	0.2%	not via assessed site network	0	0	0	0
Bracknell Forest	3	0.1%	not via assessed site network	0	0	0	0
Brighton and Hove	169	11.3%	not via assessed site network	1	3	1	2
Chichester	53	2.1%	not via assessed site network	0	1	1	0
Chiltern	3	0.1%	not via assessed site network	0	0	0	0
Crawley	58	3.8%	not via assessed site network	0	1	1	1
Eastbourne	3	0.1%	not via assessed site network	0	0	0	0
Eastleigh	3	0.1%	not via assessed site network	0	0	0	0
Elmbridge	4	0.1%	not via assessed site network	0	0	0	0
Epsom and Ewell	3	0.1%	not via assessed site network	0	0	0	0
Fareham	7	0.2%	not via assessed site network	0	0	0	0
Gosport	3	0.1%	not via assessed site network	0	0	0	0
Guildford	18	0.5%	not via assessed site network	0	0	0	0
Havant	4	0.1%	not via assessed site network	0	0	0	0
Horsham	366	9.7%	not via assessed site network	0	3	3	2
Lewes	50	1.1%	not via assessed site network	0	0	0	0
Mid Sussex	45	1.0%	not via assessed site network	0	1	1	1
Milton Keynes	5	0.1%	not via assessed site network	0	0	0	0
Mole Valley	7	0.1%	not via assessed site network	0	0	0	0
Portsmouth	5	0.1%	not via assessed site network	0	0	0	0
Reading	5	0.1%	not via assessed site network	0	0	0	0
Reigate and Banstead	31	0.6%	not via assessed site network	0	0	0	0
Runnymede	4	0.1%	not via assessed site network	0	0	0	0
Tewkesbury	6	0.1%	not via assessed site network	0	0	0	0
South Ruislip	5	0.1%	not via assessed site network	0	0	0	0
Tandridge	9	0.5%	not via assessed site network	0	0	0	0
Test Valley	8	0.2%	not via assessed site network	0	0	0	0
Tewkesbury and Malvern	5	0.1%	not via assessed site network	0	0	0	0
Tewkesbury Wolfs	5	0.2%	not via assessed site network	0	0	0	0
Wealden	5	0.1%	not via assessed site network	0	0	0	0
Westmin	11	0.5%	not via assessed site network	0	0	1	0
Winchester	5	0.2%	not via assessed site network	0	0	0	0
Windsor and Maidenhead	7	0.2%	not via assessed site network	0	0	0	0
Wokingham	4	0.1%	not via assessed site network	0	0	0	0
	1,490	100.0%		3	23	21	13

Route	AM Peak		PM Peak	
	Arrivals	Departures	Arrivals	Departures
33% A259 (E) / A259 (N) / Tinsore Lane N / A27 (W)	0	3	1	2
39% A2032 / A259 (W)	0	1	1	1



Teville Gate

Land Use	Promoted*	Consented**
Residential	450	378 units
Office	2,780 sqm	
Retail	12,000 sqm	989 sqm of flexible retail units and discount food store (1,814 sqm)
Leisure	11,000 sqm	83-bed hotel and a gym
*WBC Local Transport Study (WSP, August 2018)		
**Consented Development Planning Reference: AWDM/0325/19		

Trip Generation

Promoted Vehicular Trips			
AM		PM	
Arrivals	Departures	Arrivals	Departures
89 (43)	119 (64)	374 (77)	332 (45)
Note: all trips (new trips)			

Consented Total Residential Vehicular Trips			
AM Peak		PM Peak	
Arrivals	Departures	Arrivals	Departures
14	50	45	23

Consented Discount Food Store Vehicular Trips (20% New)			
AM Peak		PM Peak	
Arrivals	Departures	Arrivals	Departures
6	5	12	13

Paragraph 5.3.3 of TA "It is expected that all trips associated with the non-food retail units are ancillary to the proposed development and will be linked/pass-by trips.

Consented Total Gym Vehicular Trips			
AM Peak		PM Peak	
Arrivals	Departures	Arrivals	Departures
1	1	8	3

Consented Total Hotel Vehicular Trips			
AM Peak		PM Peak	
Arrivals	Departures	Arrivals	Departures
1	2	3	1

Consented Total Vehicular Trips			
AM Peak		PM Peak	
Arrivals	Departures	Arrivals	Departures
22	58	68	40

Trip Distribution

WU03EW - Location of usual residence and place of work by method of travel to work (MSOA level)

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population	All usual residents aged 16 and over in employment the week before the census
units	Persons
date	2011
method of travel to work	Driving a car or van

	usual residence		Route	Residential			
				AM Peak		PM Peak	
place of work	E02006630 : Worthing 010			Arrivals	Departures	Arrivals	Departures
E02006621 : Worthing 001	23	1.5%	not via assessed site network	0	1	1	0
E02006622 : Worthing 002	11	0.7%	not via assessed site network	0	0	0	0
E02006623 : Worthing 003	52	3.5%	not via assessed site network	0	2	2	1
E02006624 : Worthing 004	29	1.9%	not via assessed site network	0	1	1	1
E02006625 : Worthing 005	76	5.0%	not via assessed site network	1	3	2	1
E02006626 : Worthing 006	39	2.6%	not via assessed site network	0	1	1	1
E02006627 : Worthing 007	58	3.8%	not via assessed site network	1	2	2	1
E02006628 : Worthing 008	31	2.1%	not via assessed site network	0	1	1	0
E02006629 : Worthing 009	53	3.5%	not via assessed site network	0	2	2	1
E02006630 : Worthing 010	52	3.5%	not via assessed site network	0	2	2	1
E02006631 : Worthing 011	181	12.0%	not via assessed site network	2	6	5	3
E02006632 : Worthing 012	24	1.6%	not via assessed site network	0	1	1	0
E02006633 : Worthing 013	56	3.7%	not via assessed site network	1	2	2	1
Adur	144	9.6%	not via assessed site network	1	5	4	2
Arun	147	9.8%	50% A2032 / A259 (W)	1	5	4	2
Basingstoke and Deane	2	0.1%	not via assessed site network	0	0	0	0
Brighton and Hove	174	11.5%	not via assessed site network	2	6	5	3
Chichester	59	3.9%	not via assessed site network	1	2	2	1
Crawley	53	3.6%	not via assessed site network	1	2	2	1
Dover	1	0.1%	not via assessed site network	0	0	0	0
East Hampshire	1	0.1%	not via assessed site network	0	0	0	0
Eastbourne	1	0.1%	not via assessed site network	0	0	0	0
Eastleigh	1	0.1%	not via assessed site network	0	0	0	0
Elmbridge	3	0.2%	not via assessed site network	0	0	0	0
Epsom and Ewell	2	0.1%	not via assessed site network	0	0	0	0
Fareham	1	0.1%	not via assessed site network	0	0	0	0
Gravesham	1	0.1%	not via assessed site network	0	0	0	0
Guildford	8	0.5%	not via assessed site network	0	0	0	0
Hart	1	0.1%	not via assessed site network	0	0	0	0
Hastings	1	0.1%	not via assessed site network	0	0	0	0
Horsham	102	6.8%	not via assessed site network	1	3	3	2
Lewes	29	1.9%	not via assessed site network	0	1	1	0
Maidstone	1	0.1%	not via assessed site network	0	0	0	0
Mid Sussex	34	2.3%	not via assessed site network	0	1	1	0
Milton Keynes	1	0.1%	not via assessed site network	0	0	0	0
Mole Valley	10	0.7%	not via assessed site network	0	0	0	0
New Forest	2	0.1%	not via assessed site network	0	0	0	0
Oxford	6	0.0%	not via assessed site network	0	0	0	0
Portsmouth	6	0.4%	not via assessed site network	0	0	0	0
Reigate and Banstead	7	0.5%	not via assessed site network	0	0	0	0
Rother	2	0.1%	not via assessed site network	0	0	0	0
Rushmoor	1	0.1%	not via assessed site network	0	0	0	0
Sevenoaks	3	0.2%	not via assessed site network	0	0	0	0
Southampton	3	0.2%	not via assessed site network	0	0	0	0
Spelthorne	1	0.1%	not via assessed site network	0	0	0	0
Surrey Heath	1	0.1%	not via assessed site network	0	0	0	0
Tandridge	1	0.1%	not via assessed site network	0	0	0	0
Waverley	4	0.2%	not via assessed site network	0	0	0	0
Wealden	5	0.3%	not via assessed site network	0	0	0	0
Winchester	2	0.1%	not via assessed site network	0	0	0	0
Windsor and Maidenhead	1	0.1%	not via assessed site network	0	0	0	0
Wycombe	5	0.2%	not via assessed site network	0	0	0	0
	1,507	100.0%		14	50	45	23

The commercial and leisure uses have not been distributed onto the network as these will have limited impact within the AM and PM peak hour periods and the small number of trips will disperse across the local highway network and highly unlikley to utilise the assessed network.

	Residential			
	AM Peak		PM Peak	
Route	Arrivals	Departures	Arrivals	Departures
50% A2032 / A259 (W)	1	3	2	1

HMRC Offices, Barrington Road

Land Use	Promoted	Consented
Residential	500	296 units
Office	9,300 sqm	-
Industrial	9,300 sqm	-
Commercial		68 bed car home and 160 sqm of flexible A1 - A4
*WBC Local Transport Study (WSP, August 2018)		
**Consented Development Planning Reference: AWDM/1979/19		

Trip Generation

Promoted Vehicular Trips			
AM		PM	
Arrivals	Departures	Arrivals	Departures
240	270	195	240

Consented Total Residential Vehicular Trips Option A			
AM Peak		PM Peak	
Arrivals	Departures	Arrivals	Departures
28	124	101	42
Paragraph 6.13 "the peak hour vehicle trip generation associated with the flexible retail space has not been considered any further in this report".			
Paragraph 6.48 only assesses the potential traffic effect of residential development			

Consented Care Home Vehicular Trips			
AM Peak		PM Peak	
Arrivals	Departures	Arrivals	Departures
6	4	3	6

Trip Distribution

WU03EW - Location of usual residence and place of work by method of travel to work (MSOA level)

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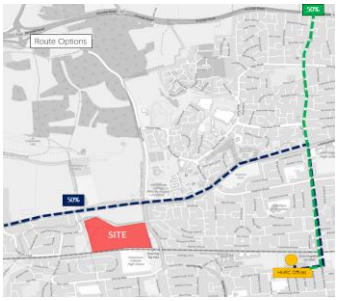
population	All usual residents aged 16 and over in employment the week before the census
units	Persons
date	2011
method of travel to work	Driving a car or van

place of work	usual residence		Route	AM Peak		PM Peak	
	E02006633 : Worthing 013			Arrivals	Departures	Arrivals	Departures
E02006621 : Worthing 001	18	1.0%	not via assessed site network	0	1	1	0
E02006622 : Worthing 002	14	0.8%	not via assessed site network	0	1	1	0
E02006623 : Worthing 003	69	4.0%	not via assessed site network	1	5	4	2
E02006624 : Worthing 004	38	2.2%	not via assessed site network	1	3	2	1
E02006625 : Worthing 005	84	4.8%	not via assessed site network	1	6	5	2
E02006626 : Worthing 006	62	3.6%	not via assessed site network	1	4	4	2
E02006627 : Worthing 007	62	3.6%	not via assessed site network	1	4	4	2
E02006628 : Worthing 008	48	2.8%	not via assessed site network	1	3	3	1
E02006629 : Worthing 009	32	1.8%	not via assessed site network	1	2	2	1
E02006630 : Worthing 010	63	3.6%	not via assessed site network	1	5	4	2
E02006631 : Worthing 011	277	16.0%	not via assessed site network	4	20	16	7
E02006632 : Worthing 012	37	2.1%	not via assessed site network	1	3	2	1
E02006633 : Worthing 013	163	9.4%	not via assessed site network	3	12	9	4
Adur	97	5.6%	not via assessed site network	2	7	6	2
Arun	238	13.7%	50% A2032 / A259 (W)	4	17	14	6
Ashford	1	0.1%	not via assessed site network	0	0	0	0
Basingstoke and Deane	3	0.2%	not via assessed site network	0	0	0	0
Bracknell Forest	1	0.1%	not via assessed site network	0	0	0	0
Brighton and Hove	92	5.3%	not via assessed site network	1	7	5	2
Chichester	51	2.9%	not via assessed site network	1	4	3	1
Crawley	58	3.3%	not via assessed site network	1	4	3	1
East Hampshire	2	0.1%	not via assessed site network	0	0	0	0
Eastbourne	3	0.2%	not via assessed site network	0	0	0	0
Eastleigh	3	0.2%	not via assessed site network	0	0	0	0
Elmbridge	6	0.3%	not via assessed site network	0	0	0	0
Epsom and Ewell	1	0.1%	not via assessed site network	0	0	0	0
Fareham	2	0.1%	not via assessed site network	0	0	0	0
Guildford	6	0.3%	not via assessed site network	0	0	0	0
Hastings	1	0.1%	not via assessed site network	0	0	0	0
Havant	3	0.2%	not via assessed site network	0	0	0	0
Horsham	93	5.5%	not via assessed site network	2	7	6	2
Lewes	26	1.5%	not via assessed site network	0	2	2	1
Maidstone	1	0.1%	not via assessed site network	0	0	0	0
Medway	2	0.1%	not via assessed site network	0	0	0	0
Mid Sussex	33	1.9%	not via assessed site network	1	2	2	1
Mole Valley	4	0.2%	not via assessed site network	0	0	0	0
Portsmouth	3	0.2%	not via assessed site network	0	0	0	0
Reigate and Banstead	7	0.4%	not via assessed site network	0	1	0	0
Runnymede	1	0.1%	not via assessed site network	0	0	0	0
Rushmoor	2	0.1%	not via assessed site network	0	0	0	0
Sevenoaks	1	0.1%	not via assessed site network	0	0	0	0
Slough	1	0.1%	not via assessed site network	0	0	0	0
Southampton	3	0.2%	not via assessed site network	0	0	0	0
Tandridge	6	0.3%	not via assessed site network	0	0	0	0
Test Valley	1	0.1%	not via assessed site network	0	0	0	0
Tonbridge and Malling	2	0.1%	not via assessed site network	0	0	0	0
Waverley	2	0.1%	not via assessed site network	0	0	0	0
Wealden	4	0.2%	not via assessed site network	0	0	0	0
West Berkshire	1	0.1%	not via assessed site network	0	0	0	0
Winchester	1	0.1%	not via assessed site network	0	0	0	0
Windsor and Maidenhead	1	0.1%	not via assessed site network	0	0	0	0
Wokingham	1	0.1%	not via assessed site network	0	0	0	0
	1,733	100.0%		28	124	101	42

Route	AM Peak		PM Peak	
	Arrivals	Departures	Arrivals	Departures
50% A2032 / A259 (W)	2	9	7	3



Land West of Fulbeck Avenue

Type	Promoted	Consented
Residential	40	152
*WBC Local Transport Study (WSP, August 2018)		
**Consented Development Planning Reference: AWDM/0166/20		

Trip Generation

Promoted Vehicular Trips			
AM		PM	
Arrivals	Departures	Arrivals	Departures
5	16	13	8

Consented Residential Vehicular Trips			
AM Peak		PM Peak	
Arrivals	Departures	Arrivals	Departures
8	33	31	14

Trip Distribution

WU03EW - Location of usual residence and place of work by method of travel to work (MSOA level)
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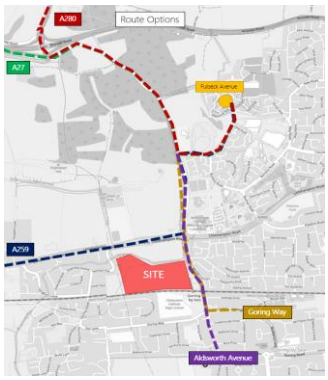
population	All usual residents aged 16 and over in employment the week before the census
units	Persons
date	2011
method of travel to work	Driving a car or van

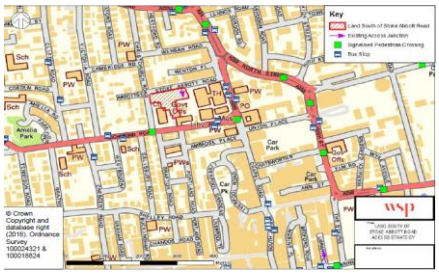
place of work	usual residence		Route	AM Peak		PM Peak	
	E02006626 : Worthing 006			Arrivals	Departures	Arrivals	Departures
E02006621 : Worthing 001	42	2.4%	not via assessed site network	0	1	1	0
E02006622 : Worthing 002	24	1.4%	not via assessed site network	0	0	0	0
E02006623 : Worthing 003	76	4.4%	not via assessed site network	0	1	1	1
E02006624 : Worthing 004	35	2.0%	not via assessed site network	0	1	1	0
E02006625 : Worthing 005	88	5.1%	not via assessed site network	0	2	2	1
E02006626 : Worthing 006	53	3.0%	25% Titnore Ln (S) / Goring Street (S) / The Strand	0	1	1	0
E02006627 : Worthing 007	46	2.6%	not via assessed site network	0	1	1	0
E02006628 : Worthing 008	33	1.9%	not via assessed site network	0	1	1	0
E02006629 : Worthing 009	61	3.5%	not via assessed site network	0	1	1	0
E02006630 : Worthing 010	46	2.6%	not via assessed site network	0	1	1	0
E02006631 : Worthing 011	288	16.6%	not via assessed site network	1	5	3	2
E02006632 : Worthing 012	35	2.0%	not via assessed site network	0	1	1	0
E02006633 : Worthing 013	88	5.1%	100% Titnore Ln (S) / A259 (S) 75% A259 (E) 25% Aldsworth Avenue (S)	0	2	2	1
Adur	119	6.8%	not via assessed site network	1	2	2	1
Arun	234	13.4%	50% Titnore Ln (S) / A259 (W) 50% Titnore Ln (N) / A27 (W)	1	4	4	2
Ashford	1	0.1%	100% Titnore Ln (N) / A280 (N)	0	0	0	0
Basingstoke and Deane	2	0.1%	100% Titnore Ln (N) / A27 (W)	0	0	0	0
Bracknell Forest	1	0.1%	100% Titnore Ln (N) / A280 (N)	0	0	0	0
Brighton and Hove	94	5.4%	not via assessed site network	0	2	2	1
Canterbury	1	0.1%	100% Titnore Ln (N) / A280 (N)	0	0	0	0
Chichester	42	2.4%	50% Titnore Ln (S) / A259 (W)	0	1	1	0
Crawley	70	4.0%	100% Titnore Ln (N) / A280 (N)	0	1	1	1
East Hampshire	1	0.1%	100% Titnore Ln (N) / A27 (W)	0	0	0	0
Eastbourne	1	0.1%	not via assessed site network	0	0	0	0
Eastleigh	1	0.1%	100% Titnore Ln (N) / A27 (W)	0	0	0	0
Elmbridge	1	0.1%	100% Titnore Ln (N) / A280 (N)	0	0	0	0
Fareham	2	0.1%	100% Titnore Ln (N) / A27 (W)	0	0	0	0
Gosport	3	0.2%	100% Titnore Ln (N) / A27 (W)	0	0	0	0
Guildford	7	0.4%	100% Titnore Ln (N) / A280 (N)	0	0	0	0
Hart	1	0.1%	100% Titnore Ln (N) / A27 (W)	0	0	0	0
Havant	3	0.2%	100% Titnore Ln (N) / A27 (W)	0	0	0	0
Horsham	133	7.6%	100% Titnore Ln (N) / A280 (N)	1	3	2	1
Lewes	24	1.4%	not via assessed site network	0	0	0	0
Maidstone	1	0.1%	100% Titnore Ln (N) / A280 (N)	0	0	0	0
Mid Sussex	34	2.0%	100% Titnore Ln (N) / A280 (N)	0	1	1	0
Mole Valley	8	0.5%	100% Titnore Ln (N) / A280 (N)	0	0	0	0
New Forest	1	0.1%	100% Titnore Ln (N) / A27 (W)	0	0	0	0
Oxford	1	0.1%	100% Titnore Ln (N) / A280 (N)	0	0	0	0
Portsmouth	5	0.3%	100% Titnore Ln (N) / A27 (W)	0	0	0	0
Reigate and Banstead	12	0.7%	100% Titnore Ln (N) / A280 (N)	0	0	0	0
Runnymede	2	0.1%	100% Titnore Ln (N) / A280 (N)	0	0	0	0
Rushmoor	1	0.1%	100% Titnore Ln (N) / A27 (W)	0	0	0	0
Sevenoaks	4	0.2%	not via assessed site network	0	0	0	0
South Bucks	1	0.1%	not via assessed site network	0	0	0	0
Tandridge	2	0.1%	not via assessed site network	0	0	0	0
Tonbridge and Malling	1	0.1%	not via assessed site network	0	0	0	0
Waverley	6	0.3%	not via assessed site network	0	0	0	0
Winchester	3	0.2%	not via assessed site network	0	0	0	0
Woking	2	0.1%	not via assessed site network	0	0	0	0
	1,740	100.0%		8	33	31	14

Route	AM Peak		PM Peak	
	Arrivals	Departures	Arrivals	Departures
25% Titnore Ln (S) / Goring Street (S) / The Strand	0	0	0	0
75% Titnore Ln (S) / A259 (S) / A259 (E)	0	2	2	1
25% Titnore Ln (S) / A259 (S) / Aldsworth Avenue	0	1	1	0
50% Titnore Ln (S) / A259 (W)	1	3	3	1
50% Titnore Ln (N) / A27 (W)	1	2	2	1
100% Titnore Ln (N) / A27 (W)	0	0	0	0
100% Titnore Ln (N) / A280 (N)	1	5	4	2



Stoke Abbott Road

Type	Promoted	Consented
Residential	64	-
GP Surgery	720 sqm	Integrated care centre 6,239 sqm
*WBC Local Transport Study (WSP, August 2018)		
**Consented Development Planning Reference: AWDM/0805/20		



Trip Generation

Promoted Vehicular Trips			
AM		PM	
Arrivals	Departures	Arrivals	Departures
31	25	24	24

Consented Development Vehicular Trips			
AM Peak		PM Peak	
Arrivals	Departures	Arrivals	Departures
101	51	60	88

Land North of West Durrington

Type	Promoted	Consented
Residential	240	240
*WBC Local Transport Study (WSP, August 2018)		
**Consented Development Planning Reference: AWDM/0166/20		

Trip Generation

Promoted Vehicular Trips			
AM		PM	
Arrivals	Departures	Arrivals	Departures
32	96	80	49

Consented Residential Vehicular Trips			
AM Peak		PM Peak	
Arrivals	Departures	Arrivals	Departures
36	87	91	55

Trip Distribution

WU03EW - Location of usual residence and place of work by method of travel to work (MSOA level)
ONS Crown Copyright Reserved [from Nomis on 10 January 2019]

population	All usual residents aged 16 and over in employment the week before the census
units	Persons
date	2011
method of travel to work	Driving a car or van

place of work	usual residence: E02006626 : Worthing 006		Route	AM Peak		PM Peak	
				Arrivals	Departures	Arrivals	Departures
E02006621 : Worthing 001	42	2.4%	not via assessed site network	1	2	2	1
E02006622 : Worthing 002	24	1.4%	not via assessed site network	0	1	1	0
E02006623 : Worthing 003	76	4.4%	not via assessed site network	2	4	4	2
E02006624 : Worthing 004	35	2.0%	not via assessed site network	1	2	2	1
E02006625 : Worthing 005	88	5.1%	not via assessed site network	2	4	5	3
E02006626 : Worthing 006	53	3.0%	not via assessed site network	1	3	3	2
E02006627 : Worthing 007	46	2.6%	not via assessed site network	1	2	2	1
E02006628 : Worthing 008	33	1.9%	not via assessed site network	1	2	2	1
E02006629 : Worthing 009	61	3.5%	not via assessed site network	1	3	3	2
E02006630 : Worthing 010	46	2.6%	not via assessed site network	1	2	2	1
E02006631 : Worthing 011	288	16.6%	not via assessed site network	6	14	15	9
E02006632 : Worthing 012	35	2.0%	not via assessed site network	1	2	2	1
E02006633 : Worthing 013	88	5.1%	50% Titnore Ln (S) / A259 (S) / Goring Way (E)	2	4	5	3
Adur	119	6.8%	not via assessed site network	2	6	6	4
Arun	234	13.4%	50% Titnore Ln (S) / A259 (W) 50% Titnore Ln (N) / A27 (W)	5	12	12	7
Ashford	1	0.1%	100% Titnore Ln (N) / A280 (N)	0	0	0	0
Basingstoke and Deane	2	0.1%	100% Titnore Ln (N) / A27 (W)	0	0	0	0
Bracknell Forest	1	0.1%	not via assessed site network	0	0	0	0
Brighton and Hove	94	5.4%	not via assessed site network	2	5	5	3
Canterbury	1	0.1%	100% Titnore Ln (N) / A280 (N)	0	0	0	0
Chichester	42	2.4%	100% Titnore Ln (N) / A27 (W)	1	2	2	1
Crawley	70	4.0%	100% Titnore Ln (N) / A280 (N)	1	4	4	2
East Hampshire	1	0.1%	100% Titnore Ln (N) / A27 (W)	0	0	0	0
Eastbourne	1	0.1%	not via assessed site network	0	0	0	0
Eastleigh	1	0.1%	100% Titnore Ln (N) / A27 (W)	0	0	0	0
Elmbridge	1	0.1%	100% Titnore Ln (N) / A280 (N)	0	0	0	0
Fareham	2	0.1%	100% Titnore Ln (N) / A27 (W)	0	0	0	0
Gosport	3	0.2%	100% Titnore Ln (N) / A27 (W)	0	0	0	0
Guildford	7	0.4%	100% Titnore Ln (N) / A280 (N)	0	0	0	0
Hart	1	0.1%	100% Titnore Ln (N) / A27 (W)	0	0	0	0
Havant	3	0.2%	100% Titnore Ln (N) / A27 (W)	0	0	0	0
Horsham	133	7.6%	100% Titnore Ln (N) / A280 (N)	3	7	7	4
Lewes	24	1.4%	not via assessed site network	0	1	1	0
Maidstone	1	0.1%	100% Titnore Ln (N) / A280 (N)	0	0	0	0
Mid Sussex	34	2.0%	100% Titnore Ln (N) / A280 (N)	1	2	2	1
Mole Valley	8	0.5%	100% Titnore Ln (N) / A280 (N)	0	0	0	0
New Forest	1	0.1%	100% Titnore Ln (N) / A27 (W)	0	0	0	0
Oxford	1	0.1%	100% Titnore Ln (N) / A280 (N)	0	0	0	0
Portsmouth	5	0.3%	100% Titnore Ln (N) / A27 (W)	0	0	0	0
Reigate and Banstead	12	0.7%	100% Titnore Ln (N) / A280 (N)	0	1	1	0
Runnymede	2	0.1%	100% Titnore Ln (N) / A280 (N)	0	0	0	0
Rushmoor	1	0.1%	100% Titnore Ln (N) / A27 (W)	0	0	0	0
Sevenoaks	4	0.2%	not via assessed site network	0	0	0	0
South Bucks	1	0.1%	not via assessed site network	0	0	0	0
Tandridge	2	0.1%	not via assessed site network	0	0	0	0
Tonbridge and Malling	1	0.1%	not via assessed site network	0	0	0	0
Waverley	6	0.3%	not via assessed site network	0	0	0	0
Winchester	5	0.2%	not via assessed site network	0	0	0	0
Woking	2	0.1%	not via assessed site network	0	0	0	0
	1,740	100.0%		36	87	91	55

Route	AM Peak		PM Peak	
	Arrivals	Departures	Arrivals	Departures
50% Titnore Ln (S) / A259 (S) / Goring Way (E)	1	2	3	2
50% Titnore Ln (S) / A259 (W)	3	6	6	4
100% Titnore Ln (N) / A27 (W)	1	2	2	1
100% Titnore Ln (N) / A280 (N)	5	14	14	7

Development	Promoted Vehicular Trips				Consented Vehicular Trips				Net Impact			
	AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
Union Place	38 (20)	64 (51)	162 (42)	131 (21)	11	28	29	20	-9	-36	-120	-111
Teville Gate	89 (43)	119 (94)	374 (77)	332 (45)	22	58	68	40	-67	-43	-259	-242
HMRC Offices	240	270	195	240	34	128	104	48	-206	-142	-91	-192
Fulbeck Avenue	5	16	13	8	8	33	31	14	3	17	18	6
Stoke Abbot Road	0	0	0	0	101	51	60	88	101	51	60	88
West Durrington	32	96	80	49	36	87	91	55	4	-9	11	6
TOTAL	**394**	**565**	**824**	**760**	**296**	**416**	**403**	**322**	**-98**	**-149**	**-421**	**-438**

Appendix 5

Junctions 9

ARCADY 9 - Roundabout Module

Filename: 18122 - Site Access Roundabout.j9
Path: P:\18 Jobs\122 Land at Chatsmore Farm - Goring, West Sussex\Technical Assessments\ARCADY\18122 - Site Access Roundabout
Report generation date: 27/01/2021 16:20:07

»2024 Base + Dev, AM
»2024 Base + Dev, PM
»2033 Base + Dev, AM
»2033 Base + Dev, PM

Summary of junction performance

	AM							PM						
	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
2024 Base + Dev														
1 - A259 Goring Street (South)	5.6	15.14	0.86	C	13.15	B	4 % [2 - Site Access Road]	7.6	19.85	0.89	C	13.17	B	6 % [1 - A259 Goring Street (South)]
2 - Site Access Road	2.2	23.34	0.70	C				0.7	11.84	0.41	B			
3 - A259 Goring Street (North)	4.2	9.34	0.81	A				3.1	7.14	0.76	A			
2033 Base + Dev														
1 - A259 Goring Street (South)	8.9	22.91	0.91	C	18.99	C	0 % [2 - Site Access Road]	13.2	32.79	0.95	D	19.90	C	0 % [1 - A259 Goring Street (South)]
2 - Site Access Road	3.2	35.07	0.78	E				0.8	14.14	0.46	B			
3 - A259 Goring Street (North)	5.8	12.45	0.86	B				3.9	8.65	0.80	A			

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	11/09/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	mtp\MTPGeneral
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2024 Base + Dev	AM	ONE HOUR	07:45	09:15	15	✓
D6	2024 Base + Dev	PM	ONE HOUR	16:30	18:00	15	✓
D9	2033 Base + Dev	AM	ONE HOUR	07:45	09:15	15	✓
D10	2033 Base + Dev	PM	ONE HOUR	16:30	18:00	15	✓

Analysis Set Details

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

2024 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	13.15	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	4	2 - Site Access Road

Arms

Arms

Arm	Name	Description
1	A259 Goring Street (South)	
2	Site Access Road	
3	A259 Goring Street (North)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A259 Goring Street (South)	3.80	7.45	17.8	20.0	40.0	20.0	
2 - Site Access Road	3.25	4.50	17.4	20.0	40.0	20.0	
3 - A259 Goring Street (North)	5.50	7.40	13.5	20.0	40.0	20.0	

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)
1 - A259 Goring Street (South)	9.00	3.00	3.00	1.00	6.00	10.00	7.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A259 Goring Street (South)	0.689	1882
2 - Site Access Road	0.580	1338
3 - A259 Goring Street (North)	0.739	2135

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	2024 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A259 Goring Street (South)		ONE HOUR	✓	1268	100.000
2 - Site Access Road		ONE HOUR	✓	318	100.000
3 - A259 Goring Street (North)		ONE HOUR	✓	1490	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
1 - A259 Goring Street (South)	[ONEHOUR]	89.00
2 - Site Access Road		
3 - A259 Goring Street (North)		

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - A259 Goring Street (South)	2 - Site Access Road	3 - A259 Goring Street (North)
From	1 - A259 Goring Street (South)	0	46	1222
	2 - Site Access Road	93	0	225
	3 - A259 Goring Street (North)	1300	116	74

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A259 Goring Street (South)	2 - Site Access Road	3 - A259 Goring Street (North)
From	1 - A259 Goring Street (South)	0	0	1
	2 - Site Access Road	0	0	0
	3 - A259 Goring Street (North)	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A259 Goring Street (South)	0.86	15.14	5.6	C	1164	1745
2 - Site Access Road	0.70	23.34	2.2	C	292	438
3 - A259 Goring Street (North)	0.81	9.34	4.2	A	1367	2051

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 Goring Street (South)	955	239	142	67.00	1611	0.593	949	1044	0.0	1.4	5.395	A
2 - Site Access Road	239	60	970		770	0.311	238	121	0.0	0.4	6.745	A
3 - A259 Goring Street (North)	1122	280	69		2048	0.548	1117	1138	0.0	1.2	3.846	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 Goring Street (South)	1140	285	170	80.01	1639	0.696	1137	1250	1.4	2.2	7.123	A
2 - Site Access Road	286	71	1162		657	0.435	285	145	0.4	0.8	9.628	A
3 - A259 Goring Street (North)	1339	335	83		2038	0.657	1337	1363	1.2	1.9	5.113	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 Goring Street (South)	1396	349	208	97.99	1630	0.856	1383	1525	2.2	5.4	13.915	B
2 - Site Access Road	350	88	1414		509	0.687	345	177	0.8	2.0	21.255	C
3 - A259 Goring Street (North)	1641	410	101		2025	0.810	1632	1658	1.9	4.1	8.959	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 Goring Street (South)	1396	349	209	97.99	1630	0.856	1395	1533	5.4	5.6	15.135	C
2 - Site Access Road	350	88	1426		503	0.697	350	178	2.0	2.2	23.337	C
3 - A259 Goring Street (North)	1641	410	102		2024	0.810	1640	1673	4.1	4.2	9.345	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 Goring Street (South)	1140	285	172	80.01	1671	0.682	1154	1262	5.6	2.2	7.139	A
2 - Site Access Road	286	71	1179		647	0.442	291	147	2.2	0.8	10.262	B
3 - A259 Goring Street (North)	1339	335	85		2036	0.658	1348	1385	4.2	2.0	5.298	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 Goring Street (South)	955	239	143	67.00	1668	0.572	958	1052	2.2	1.4	5.098	A
2 - Site Access Road	239	60	979		764	0.313	241	122	0.8	0.5	6.896	A
3 - A259 Goring Street (North)	1122	280	70		2047	0.548	1125	1149	2.0	1.2	3.915	A

2024 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	13.17	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	6	1 - A259 Goring Street (South)

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	2024 Base + Dev	PM	ONE HOUR	16:30	18:00	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A259 Goring Street (South)		ONE HOUR	✓	1323	100.000
2 - Site Access Road		ONE HOUR	✓	191	100.000
3 - A259 Goring Street (North)		ONE HOUR	✓	1439	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
1 - A259 Goring Street (South)	[ONEHOUR]	89.00
2 - Site Access Road		
3 - A259 Goring Street (North)		

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - A259 Goring Street (South)	2 - Site Access Road	3 - A259 Goring Street (North)
From	1 - A259 Goring Street (South)	0	91	1232
	2 - Site Access Road	58	0	133
	3 - A259 Goring Street (North)	1203	189	47

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A259 Goring Street (South)	2 - Site Access Road	3 - A259 Goring Street (North)
From	1 - A259 Goring Street (South)	0	0	1
	2 - Site Access Road	0	0	0
	3 - A259 Goring Street (North)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A259 Goring Street (South)	0.89	19.85	7.6	C	1214	1821
2 - Site Access Road	0.41	11.84	0.7	B	175	263
3 - A259 Goring Street (North)	0.76	7.14	3.1	A	1320	1981

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 Goring Street (South)	996	249	177	67.00	1596	0.624	989	946	0.0	1.6	5.880	A
2 - Site Access Road	144	36	957		777	0.185	143	210	0.0	0.2	5.666	A
3 - A259 Goring Street (North)	1083	271	43		2103	0.515	1079	1056	0.0	1.1	3.502	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 Goring Street (South)	1189	297	212	80.01	1633	0.729	1185	1132	1.6	2.6	7.980	A
2 - Site Access Road	172	43	1146		666	0.258	171	251	0.2	0.3	7.265	A
3 - A259 Goring Street (North)	1294	323	52		2097	0.617	1291	1265	1.1	1.6	4.460	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 Goring Street (South)	1457	364	259	97.99	1631	0.893	1439	1383	2.6	7.1	17.307	C
2 - Site Access Road	210	53	1391		523	0.402	209	306	0.3	0.7	11.427	B
3 - A259 Goring Street (North)	1584	396	63		2088	0.759	1579	1537	1.6	3.0	6.983	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 Goring Street (South)	1457	364	260	97.99	1631	0.893	1455	1388	7.1	7.6	19.855	C
2 - Site Access Road	210	53	1406		514	0.409	210	308	0.7	0.7	11.842	B
3 - A259 Goring Street (North)	1584	396	64		2088	0.759	1584	1553	3.0	3.1	7.140	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 Goring Street (South)	1189	297	213	80.01	1671	0.712	1210	1139	7.6	2.5	8.120	A
2 - Site Access Road	172	43	1169		653	0.263	173	254	0.7	0.4	7.518	A
3 - A259 Goring Street (North)	1294	323	53		2096	0.617	1299	1289	3.1	1.6	4.552	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 Goring Street (South)	996	249	178	67.00	1661	0.600	1000	951	2.5	1.5	5.481	A
2 - Site Access Road	144	36	967		771	0.186	144	211	0.4	0.2	5.747	A
3 - A259 Goring Street (North)	1083	271	44		2103	0.515	1086	1067	1.6	1.1	3.549	A

2033 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	18.99	C

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	0	2 - Site Access Road

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	2033 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A259 Goring Street (South)		ONE HOUR	✓	1347	100.000
2 - Site Access Road		ONE HOUR	✓	321	100.000
3 - A259 Goring Street (North)		ONE HOUR	✓	1579	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
1 - A259 Goring Street (South)	[ONEHOUR]	89.00
2 - Site Access Road		
3 - A259 Goring Street (North)		

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - A259 Goring Street (South)	2 - Site Access Road	3 - A259 Goring Street (North)
From	1 - A259 Goring Street (South)	0	47	1300
	2 - Site Access Road	93	0	228
	3 - A259 Goring Street (North)	1382	120	77

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A259 Goring Street (South)	2 - Site Access Road	3 - A259 Goring Street (North)
From	1 - A259 Goring Street (South)	0	0	1
	2 - Site Access Road	0	0	0
	3 - A259 Goring Street (North)	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A259 Goring Street (South)	0.91	22.91	8.9	C	1236	1854
2 - Site Access Road	0.78	35.07	3.2	E	295	442
3 - A259 Goring Street (North)	0.86	12.45	5.8	B	1449	2173

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 Goring Street (South)	1014	254	148	67.00	1614	0.628	1007	1105	0.0	1.7	5.877	A
2 - Site Access Road	242	60	1030		734	0.329	240	125	0.0	0.5	7.249	A
3 - A259 Goring Street (North)	1189	297	69		2048	0.580	1183	1200	0.0	1.4	4.139	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 Goring Street (South)	1211	303	177	80.01	1655	0.732	1207	1322	1.7	2.6	7.961	A
2 - Site Access Road	289	72	1234		615	0.469	287	150	0.5	0.9	10.924	B
3 - A259 Goring Street (North)	1419	355	83		2038	0.697	1416	1438	1.4	2.2	5.754	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 Goring Street (South)	1483	371	215	97.99	1630	0.910	1461	1610	2.6	8.1	19.196	C
2 - Site Access Road	353	88	1494		463	0.764	346	182	0.9	2.8	29.004	D
3 - A259 Goring Street (North)	1739	435	100		2026	0.858	1725	1740	2.2	5.6	11.506	B

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 Goring Street (South)	1483	371	217	97.99	1630	0.910	1480	1623	8.1	8.9	22.914	C
2 - Site Access Road	353	88	1513		452	0.783	352	184	2.8	3.2	35.073	E
3 - A259 Goring Street (North)	1739	435	102		2024	0.859	1738	1763	5.6	5.8	12.448	B

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 Goring Street (South)	1211	303	179	80.01	1671	0.725	1236	1341	8.9	2.7	8.713	A
2 - Site Access Road	289	72	1262		598	0.482	298	152	3.2	1.0	12.321	B
3 - A259 Goring Street (North)	1419	355	86		2036	0.697	1433	1474	5.8	2.4	6.107	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 Goring Street (South)	1014	254	149	67.00	1683	0.602	1019	1114	2.7	1.5	5.454	A
2 - Site Access Road	242	60	1041		728	0.332	243	126	1.0	0.5	7.459	A
3 - A259 Goring Street (North)	1189	297	71		2047	0.581	1193	1214	2.4	1.4	4.232	A

2033 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3	19.90	C

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	0	1 - A259 Goring Street (South)

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	2033 Base + Dev	PM	ONE HOUR	16:30	18:00	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A259 Goring Street (South)		ONE HOUR	✓	1400	100.000
2 - Site Access Road		ONE HOUR	✓	193	100.000
3 - A259 Goring Street (North)		ONE HOUR	✓	1519	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
1 - A259 Goring Street (South)	[ONEHOUR]	89.00
2 - Site Access Road		
3 - A259 Goring Street (North)		

Origin-Destination Data

Demand (Veh/hr)

		To		
		1 - A259 Goring Street (South)	2 - Site Access Road	3 - A259 Goring Street (North)
From	1 - A259 Goring Street (South)	0	91	1309
	2 - Site Access Road	58	0	135
	3 - A259 Goring Street (North)	1280	191	48

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A259 Goring Street (South)	2 - Site Access Road	3 - A259 Goring Street (North)
From	1 - A259 Goring Street (South)	0	0	1
	2 - Site Access Road	0	0	0
	3 - A259 Goring Street (North)	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A259 Goring Street (South)	0.95	32.79	13.2	D	1285	1927
2 - Site Access Road	0.46	14.14	0.8	B	177	266
3 - A259 Goring Street (North)	0.80	8.65	3.9	A	1394	2091

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 Goring Street (South)	1054	263	179	67.00	1601	0.658	1046	1003	0.0	1.9	6.407	A
2 - Site Access Road	145	36	1014		743	0.195	144	211	0.0	0.2	5.998	A
3 - A259 Goring Street (North)	1144	286	43		2103	0.544	1139	1115	0.0	1.2	3.716	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 Goring Street (South)	1259	315	214	80.01	1653	0.761	1254	1200	1.9	3.1	8.903	A
2 - Site Access Road	174	43	1215		626	0.277	173	253	0.2	0.4	7.940	A
3 - A259 Goring Street (North)	1366	341	52		2097	0.651	1363	1336	1.2	1.8	4.889	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 Goring Street (South)	1541	385	262	97.99	1631	0.945	1509	1466	3.1	11.3	24.648	C
2 - Site Access Road	212	53	1463		481	0.442	211	307	0.4	0.8	13.265	B
3 - A259 Goring Street (North)	1672	418	63		2088	0.801	1664	1611	1.8	3.8	8.339	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 Goring Street (South)	1541	385	263	97.99	1631	0.945	1534	1473	11.3	13.2	32.787	D
2 - Site Access Road	212	53	1487		467	0.455	212	310	0.8	0.8	14.136	B
3 - A259 Goring Street (North)	1672	418	64		2088	0.801	1672	1636	3.8	3.9	8.652	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 Goring Street (South)	1259	315	216	80.01	1671	0.753	1299	1210	13.2	3.2	10.621	B
2 - Site Access Road	174	43	1258		601	0.289	175	257	0.8	0.4	8.482	A
3 - A259 Goring Street (North)	1366	341	53		2096	0.651	1374	1380	3.9	1.9	5.037	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 Goring Street (South)	1054	263	180	67.00	1682	0.627	1060	1010	3.2	1.7	5.844	A
2 - Site Access Road	145	36	1027		736	0.197	146	213	0.4	0.2	6.109	A
3 - A259 Goring Street (North)	1144	286	44		2103	0.544	1146	1129	1.9	1.2	3.774	A

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.1.7462

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Filename: 18122 - A259-The Strand(LeftOnly).j9
Path: P:\18 Jobs\122 Land at Chatsmore Farm - Goring, West Sussex\Technical Assessments\PICADY\18122 - A259 - The Strand Junction
Report generation date: 27/01/2021 15:41:09

»2024 Base, AM
»2024 Base, PM
»2024 Base + Dev, AM
»2024 Base + Dev, PM
»2033 Base , AM
»2033 Base, PM
»2033 Base + Dev, AM
»2033 Base + Dev, PM

Summary of junction performance

	AM							PM						
	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
2024 Base														
Stream B-AC	3.1	31.22	0.77	D	3.63	A	2 % [Stream B-AC]	0.5	11.53	0.33	B	0.57	A	46 % [Stream B-AC]
Stream C-B	0.0	0.00	0.00	A				0.0	0.00	0.00	A			
2024 Base + Dev														
Stream B-AC	3.6	36.36	0.80	E	3.93	A	-1 % [Stream B-AC]	0.6	13.36	0.37	B	0.62	A	34 % [Stream B-AC]
Stream C-B	0.0	0.00	0.00	A				0.0	0.00	0.00	A			
2033 Base														
Stream B-AC	4.8	46.30	0.85	E	5.38	A	-4 % [Stream B-AC]	0.6	12.68	0.36	B	0.62	A	38 % [Stream B-AC]
Stream C-B	0.0	0.00	0.00	A				0.0	0.00	0.00	A			
2033 Base + Dev														
Stream B-AC	5.9	56.98	0.88	F	6.19	A	-6 % [Stream B-AC]	0.7	14.93	0.41	B	0.69	A	26 % [Stream B-AC]
Stream C-B	0.0	0.00	0.00	A				0.0	0.00	0.00	A			

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	18122 - A259 / The Strand
Location	
Site number	18-122
Date	17/01/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	Milestone4-PC\Milestone4 - Newer
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2024 Base	AM	ONE HOUR	07:45	09:15	15	✓
D4	2024 Base	PM	ONE HOUR	16:45	18:15	15	✓
D5	2024 Base + Dev	AM	ONE HOUR	07:45	09:15	15	✓
D6	2024 Base + Dev	PM	ONE HOUR	16:45	18:15	15	✓
D7	2033 Base	AM	ONE HOUR	07:45	09:15	15	✓
D8	2033 Base	PM	ONE HOUR	16:45	18:15	15	✓
D9	2033 Base + Dev	AM	ONE HOUR	07:45	09:15	15	✓
D10	2033 Base + Dev	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

2024 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		3.63	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	2	Stream B-AC

Arms

Arms

Arm	Name	Description	Arm type
A	A259 (North)		Major
B	The Strand		Minor
C	A259 (South)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - A259 (South)	11.80			250.0		-

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - The Strand	One lane	5.00	40	40

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	612	0.083	0.211	0.133	0.301
B-C	779	0.089	0.226	-	-
C-B	719	0.208	0.208	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2024 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
A - A259 (North)		ONE HOUR	✓	1216	100.000
B - The Strand		ONE HOUR	✓	339	100.000
C - A259 (South)		ONE HOUR	✓	1351	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - A259 (North)	B - The Strand	C - A259 (South)
From	A - A259 (North)	0	130	1086
	B - The Strand	0	0	339
	C - A259 (South)	1351	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A259 (North)	B - The Strand	C - A259 (South)
From	A - A259 (North)	0	0	2
	B - The Strand	0	0	1
	C - A259 (South)	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.77	31.22	3.1	D	311	467
C-A					1240	1860
C-B	0.00	0.00	0.0	A	0	0
A-B					119	179
A-C					997	1495

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	255	64	576	0.443	252	0.0	0.8	11.000	B
C-A	1017	254			1017				
C-B	0	0	525	0.000	0	0.0	0.0	0.000	A
A-B	98	24			98				
A-C	818	204			818				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	305	76	539	0.566	303	0.8	1.3	15.146	C
C-A	1215	304			1215				
C-B	0	0	487	0.000	0	0.0	0.0	0.000	A
A-B	117	29			117				
A-C	976	244			976				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	373	93	486	0.768	367	1.3	2.9	28.615	D
C-A	1487	372			1487				
C-B	0	0	435	0.000	0	0.0	0.0	0.000	A
A-B	143	36			143				
A-C	1196	299			1196				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	373	93	486	0.768	373	2.9	3.1	31.216	D
C-A	1487	372			1487				
C-B	0	0	435	0.000	0	0.0	0.0	0.000	A
A-B	143	36			143				
A-C	1196	299			1196				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	305	76	539	0.566	312	3.1	1.4	16.319	C
C-A	1215	304			1215				
C-B	0	0	487	0.000	0	0.0	0.0	0.000	A
A-B	117	29			117				
A-C	976	244			976				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	255	64	576	0.443	257	1.4	0.8	11.362	B
C-A	1017	254			1017				
C-B	0	0	525	0.000	0	0.0	0.0	0.000	A
A-B	98	24			98				
A-C	818	204			818				

2024 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.57	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	46	Stream B-AC

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	2024 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
A - A259 (North)		ONE HOUR	✓	1397	100.000
B - The Strand		ONE HOUR	✓	139	100.000
C - A259 (South)		ONE HOUR	✓	1309	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - A259 (North)	B - The Strand	C - A259 (South)
From	A - A259 (North)	0	253	1144
	B - The Strand	0	0	139
	C - A259 (South)	1309	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A259 (North)	B - The Strand	C - A259 (South)
From	A - A259 (North)	0	0	0
	B - The Strand	0	0	1
	C - A259 (South)	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.33	11.53	0.5	B	128	191
C-A					1201	1802
C-B	0.00	0.00	0.0	A	0	0
A-B					232	348
A-C					1050	1575

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	105	26	562	0.186	104	0.0	0.2	7.842	A
C-A	985	246			985				
C-B	0	0	500	0.000	0	0.0	0.0	0.000	A
A-B	190	48			190				
A-C	861	215			861				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	125	31	521	0.240	125	0.2	0.3	9.064	A
C-A	1177	294			1177				
C-B	0	0	457	0.000	0	0.0	0.0	0.000	A
A-B	227	57			227				
A-C	1028	257			1028				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	153	38	465	0.329	152	0.3	0.5	11.478	B
C-A	1441	360			1441				
C-B	0	0	398	0.000	0	0.0	0.0	0.000	A
A-B	279	70			279				
A-C	1260	315			1260				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	153	38	465	0.329	153	0.5	0.5	11.526	B
C-A	1441	360			1441				
C-B	0	0	398	0.000	0	0.0	0.0	0.000	A
A-B	279	70			279				
A-C	1260	315			1260				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	125	31	521	0.240	126	0.5	0.3	9.109	A
C-A	1177	294			1177				
C-B	0	0	457	0.000	0	0.0	0.0	0.000	A
A-B	227	57			227				
A-C	1028	257			1028				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	105	26	562	0.186	105	0.3	0.2	7.883	A
C-A	985	246			985				
C-B	0	0	500	0.000	0	0.0	0.0	0.000	A
A-B	190	48			190				
A-C	861	215			861				

2024 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		3.93	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-1	Stream B-AC

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	2024 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
A - A259 (North)		ONE HOUR	✓	1276	100.000
B - The Strand		ONE HOUR	✓	341	100.000
C - A259 (South)		ONE HOUR	✓	1525	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - A259 (North)	B - The Strand	C - A259 (South)
From	A - A259 (North)	0	130	1146
	B - The Strand	0	0	341
	C - A259 (South)	1525	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A259 (North)	B - The Strand	C - A259 (South)
From	A - A259 (North)	0	0	2
	B - The Strand	0	0	1
	C - A259 (South)	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.80	36.36	3.6	E	313	469
C-A					1399	2099
C-B	0.00	0.00	0.0	A	0	0
A-B					119	179
A-C					1052	1577

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	257	64	566	0.454	253	0.0	0.8	11.404	B
C-A	1148	287			1148				
C-B	0	0	515	0.000	0	0.0	0.0	0.000	A
A-B	98	24			98				
A-C	863	216			863				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	307	77	526	0.583	304	0.8	1.3	16.073	C
C-A	1371	343			1371				
C-B	0	0	476	0.000	0	0.0	0.0	0.000	A
A-B	117	29			117				
A-C	1030	258			1030				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	375	94	471	0.797	367	1.3	3.3	32.450	D
C-A	1679	420			1679				
C-B	0	0	421	0.000	0	0.0	0.0	0.000	A
A-B	143	36			143				
A-C	1262	315			1262				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	375	94	471	0.797	374	3.3	3.6	36.365	E
C-A	1679	420			1679				
C-B	0	0	421	0.000	0	0.0	0.0	0.000	A
A-B	143	36			143				
A-C	1262	315			1262				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	307	77	526	0.583	315	3.6	1.5	17.678	C
C-A	1371	343			1371				
C-B	0	0	476	0.000	0	0.0	0.0	0.000	A
A-B	117	29			117				
A-C	1030	258			1030				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	257	64	566	0.454	259	1.5	0.8	11.820	B
C-A	1148	287			1148				
C-B	0	0	515	0.000	0	0.0	0.0	0.000	A
A-B	98	24			98				
A-C	863	216			863				

2024 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.62	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	34	Stream B-AC

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	2024 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
A - A259 (North)		ONE HOUR	✓	1549	100.000
B - The Strand		ONE HOUR	✓	144	100.000
C - A259 (South)		ONE HOUR	✓	1413	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - A259 (North)	B - The Strand	C - A259 (South)
From	A - A259 (North)	0	253	1296
	B - The Strand	0	0	144
	C - A259 (South)	1413	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A259 (North)	B - The Strand	C - A259 (South)
From	A - A259 (North)	0	0	0
	B - The Strand	0	0	1
	C - A259 (South)	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.37	13.36	0.6	B	132	198
C-A					1297	1945
C-B	0.00	0.00	0.0	A	0	0
A-B					232	348
A-C					1189	1784

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	108	27	537	0.202	107	0.0	0.3	8.371	A
C-A	1064	266			1064				
C-B	0	0	476	0.000	0	0.0	0.0	0.000	A
A-B	190	48			190				
A-C	976	244			976				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	129	32	491	0.264	129	0.3	0.4	9.937	A
C-A	1270	318			1270				
C-B	0	0	429	0.000	0	0.0	0.0	0.000	A
A-B	227	57			227				
A-C	1165	291			1165				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	159	40	428	0.371	158	0.4	0.6	13.274	B
C-A	1556	389			1556				
C-B	0	0	364	0.000	0	0.0	0.0	0.000	A
A-B	279	70			279				
A-C	1427	357			1427				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	159	40	428	0.371	159	0.6	0.6	13.362	B
C-A	1556	389			1556				
C-B	0	0	364	0.000	0	0.0	0.0	0.000	A
A-B	279	70			279				
A-C	1427	357			1427				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	129	32	491	0.264	130	0.6	0.4	10.006	B
C-A	1270	318			1270				
C-B	0	0	429	0.000	0	0.0	0.0	0.000	A
A-B	227	57			227				
A-C	1165	291			1165				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	108	27	537	0.202	109	0.4	0.3	8.425	A
C-A	1064	266			1064				
C-B	0	0	476	0.000	0	0.0	0.0	0.000	A
A-B	190	48			190				
A-C	976	244			976				

2033 Base , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		5.38	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-4	Stream B-AC

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	2033 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
A - A259 (North)		ONE HOUR	✓	1292	100.000
B - The Strand		ONE HOUR	✓	360	100.000
C - A259 (South)		ONE HOUR	✓	1436	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - A259 (North)	B - The Strand	C - A259 (South)
From	A - A259 (North)	0	138	1154
	B - The Strand	0	0	360
	C - A259 (South)	1436	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A259 (North)	B - The Strand	C - A259 (South)
From	A - A259 (North)	0	0	2
	B - The Strand	0	0	1
	C - A259 (South)	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.85	46.30	4.8	E	330	496
C-A					1318	1977
C-B	0.00	0.00	0.0	A	0	0
A-B					127	190
A-C					1059	1588

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	271	68	564	0.480	267	0.0	0.9	12.002	B
C-A	1081	270			1081				
C-B	0	0	513	0.000	0	0.0	0.0	0.000	A
A-B	104	26			104				
A-C	869	217			869				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	324	81	524	0.618	321	0.9	1.5	17.517	C
C-A	1291	323			1291				
C-B	0	0	473	0.000	0	0.0	0.0	0.000	A
A-B	124	31			124				
A-C	1037	259			1037				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	396	99	468	0.846	385	1.5	4.3	39.017	E
C-A	1581	395			1581				
C-B	0	0	417	0.000	0	0.0	0.0	0.000	A
A-B	152	38			152				
A-C	1271	318			1271				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	396	99	468	0.846	395	4.3	4.8	46.303	E
C-A	1581	395			1581				
C-B	0	0	417	0.000	0	0.0	0.0	0.000	A
A-B	152	38			152				
A-C	1271	318			1271				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	324	81	524	0.618	336	4.8	1.7	20.250	C
C-A	1291	323			1291				
C-B	0	0	473	0.000	0	0.0	0.0	0.000	A
A-B	124	31			124				
A-C	1037	259			1037				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	271	68	564	0.480	274	1.7	0.9	12.530	B
C-A	1081	270			1081				
C-B	0	0	513	0.000	0	0.0	0.0	0.000	A
A-B	104	26			104				
A-C	869	217			869				

2033 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.62	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	38	Stream B-AC

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	2033 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
A - A259 (North)		ONE HOUR	✓	1487	100.000
B - The Strand		ONE HOUR	✓	147	100.000
C - A259 (South)		ONE HOUR	✓	1389	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - A259 (North)	B - The Strand	C - A259 (South)
From	A - A259 (North)	0	270	1217
	B - The Strand	0	0	147
	C - A259 (South)	1389	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A259 (North)	B - The Strand	C - A259 (South)
From	A - A259 (North)	0	0	0
	B - The Strand	0	0	1
	C - A259 (South)	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.36	12.68	0.6	B	135	202
C-A					1275	1912
C-B	0.00	0.00	0.0	A	0	0
A-B					248	372
A-C					1117	1675

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	111	28	549	0.202	110	0.0	0.2	8.183	A
C-A	1046	261			1046				
C-B	0	0	486	0.000	0	0.0	0.0	0.000	A
A-B	203	51			203				
A-C	916	229			916				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	132	33	505	0.261	132	0.2	0.3	9.622	A
C-A	1249	312			1249				
C-B	0	0	440	0.000	0	0.0	0.0	0.000	A
A-B	243	61			243				
A-C	1094	274			1094				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	162	40	446	0.363	161	0.3	0.6	12.608	B
C-A	1529	382			1529				
C-B	0	0	378	0.000	0	0.0	0.0	0.000	A
A-B	297	74			297				
A-C	1340	335			1340				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	162	40	446	0.363	162	0.6	0.6	12.680	B
C-A	1529	382			1529				
C-B	0	0	378	0.000	0	0.0	0.0	0.000	A
A-B	297	74			297				
A-C	1340	335			1340				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	132	33	505	0.261	133	0.6	0.4	9.687	A
C-A	1249	312			1249				
C-B	0	0	440	0.000	0	0.0	0.0	0.000	A
A-B	243	61			243				
A-C	1094	274			1094				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	111	28	549	0.202	111	0.4	0.3	8.236	A
C-A	1046	261			1046				
C-B	0	0	486	0.000	0	0.0	0.0	0.000	A
A-B	203	51			203				
A-C	916	229			916				

2033 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		6.19	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-6	Stream B-AC

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	2033 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
A - A259 (North)		ONE HOUR	✓	1352	100.000
B - The Strand		ONE HOUR	✓	362	100.000
C - A259 (South)		ONE HOUR	✓	1610	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - A259 (North)	B - The Strand	C - A259 (South)
From	A - A259 (North)	0	138	1214
	B - The Strand	0	0	362
	C - A259 (South)	1610	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A259 (North)	B - The Strand	C - A259 (South)
From	A - A259 (North)	0	0	2
	B - The Strand	0	0	1
	C - A259 (South)	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.88	56.98	5.9	F	332	498
C-A					1477	2216
C-B	0.00	0.00	0.0	A	0	0
A-B					127	190
A-C					1114	1671

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	273	68	554	0.492	269	0.0	0.9	12.469	B
C-A	1212	303			1212				
C-B	0	0	503	0.000	0	0.0	0.0	0.000	A
A-B	104	26			104				
A-C	914	228			914				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	325	81	512	0.636	323	0.9	1.7	18.748	C
C-A	1447	362			1447				
C-B	0	0	461	0.000	0	0.0	0.0	0.000	A
A-B	124	31			124				
A-C	1091	273			1091				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	399	100	453	0.879	385	1.7	5.1	45.436	E
C-A	1773	443			1773				
C-B	0	0	403	0.000	0	0.0	0.0	0.000	A
A-B	152	38			152				
A-C	1337	334			1337				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	399	100	453	0.879	396	5.1	5.9	56.982	F
C-A	1773	443			1773				
C-B	0	0	403	0.000	0	0.0	0.0	0.000	A
A-B	152	38			152				
A-C	1337	334			1337				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	325	81	512	0.636	341	5.9	1.8	22.872	C
C-A	1447	362			1447				
C-B	0	0	461	0.000	0	0.0	0.0	0.000	A
A-B	124	31			124				
A-C	1091	273			1091				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	273	68	554	0.492	276	1.8	1.0	13.105	B
C-A	1212	303			1212				
C-B	0	0	503	0.000	0	0.0	0.0	0.000	A
A-B	104	26			104				
A-C	914	228			914				

2033 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.69	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	26	Stream B-AC

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	2033 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
A - A259 (North)		ONE HOUR	✓	1639	100.000
B - The Strand		ONE HOUR	✓	152	100.000
C - A259 (South)		ONE HOUR	✓	1493	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - A259 (North)	B - The Strand	C - A259 (South)
From	A - A259 (North)	0	270	1369
	B - The Strand	0	0	152
	C - A259 (South)	1493	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A259 (North)	B - The Strand	C - A259 (South)
From	A - A259 (North)	0	0	0
	B - The Strand	0	0	1
	C - A259 (South)	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.41	14.93	0.7	B	139	209
C-A					1370	2055
C-B	0.00	0.00	0.0	A	0	0
A-B					248	372
A-C					1256	1884

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	114	29	523	0.219	113	0.0	0.3	8.762	A
C-A	1124	281			1124				
C-B	0	0	462	0.000	0	0.0	0.0	0.000	A
A-B	203	51			203				
A-C	1031	258			1031				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	137	34	475	0.288	136	0.3	0.4	10.612	B
C-A	1342	336			1342				
C-B	0	0	412	0.000	0	0.0	0.0	0.000	A
A-B	243	61			243				
A-C	1231	308			1231				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	167	42	408	0.410	166	0.4	0.7	14.804	B
C-A	1644	411			1644				
C-B	0	0	343	0.000	0	0.0	0.0	0.000	A
A-B	297	74			297				
A-C	1507	377			1507				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	167	42	408	0.410	167	0.7	0.7	14.935	B
C-A	1644	411			1644				
C-B	0	0	343	0.000	0	0.0	0.0	0.000	A
A-B	297	74			297				
A-C	1507	377			1507				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	137	34	475	0.288	138	0.7	0.4	10.710	B
C-A	1342	336			1342				
C-B	0	0	412	0.000	0	0.0	0.0	0.000	A
A-B	243	61			243				
A-C	1231	308			1231				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	114	29	523	0.219	115	0.4	0.3	8.832	A
C-A	1124	281			1124				
C-B	0	0	462	0.000	0	0.0	0.0	0.000	A
A-B	203	51			203				
A-C	1031	258			1031				

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.1.7462

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Filename: 18122 - A259-A2032-A2700(Base-AM-Queues Calibrated).j9
Path: P:\18 Jobs\122 Land at Chatsmore Farm - Goring, West Sussex\Technical Assessments\ARCADY\18122 - A259 - A2032 - A2700 Roundabout
Report generation date: 27/01/2021 15:57:11

»2018 Base, AM
»2024 Base , AM
»2024 Base + Dev, AM
»2033 Base, AM
»2033 Base + Dev, AM

Summary of junction performance

	AM						
	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
2018 Base							
1 - A2700 Titnore Lane	33.1	413.82	1.21	F	152.74	F	-22 % [1 - A2700 Titnore Lane]
2 - A2032 Littlehampton Road	53.8	185.85	1.10	F			
3 - A259 - Goring Street	16.1	49.23	0.97	E			
4 - A259 Littlehampton Road	75.7	156.95	1.09	F			
2024 Base							
1 - A2700 Titnore Lane	85.8	1174.13	1.45	F	574.53	F	-34 % [1 - A2700 Titnore Lane]
2 - A2032 Littlehampton Road	131.6	536.57	1.25	F			
3 - A259 - Goring Street	152.3	427.97	1.21	F			
4 - A259 Littlehampton Road	234.1	593.81	1.28	F			
2024 Base + Dev							
1 - A2700 Titnore Lane	113.2	1534.58	1.54	F	772.43	F	-38 % [1 - A2700 Titnore Lane]
2 - A2032 Littlehampton Road	155.9	621.29	1.28	F			
3 - A259 - Goring Street	294.8	785.75	1.34	F			
4 - A259 Littlehampton Road	265.8	678.07	1.31	F			
2033 Base							
1 - A2700 Titnore Lane	112.0	1517.08	1.53	F	810.63	F	-38 % [1 - A2700 Titnore Lane]
2 - A2032 Littlehampton Road	192.9	759.10	1.33	F			
3 - A259 - Goring Street	232.0	630.97	1.29	F			
4 - A259 Littlehampton Road	334.6	844.27	1.36	F			
2033 Base + Dev							
1 - A2700 Titnore Lane	142.2	1907.56	1.64	F	1045.16	F	-41 % [1 - A2700 Titnore Lane]
2 - A2032 Littlehampton Road	219.5	870.95	1.36	F			
3 - A259 - Goring Street	384.5	1055.21	1.42	F			
4 - A259 Littlehampton Road	365.0	946.47	1.39	F			

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	18122 - A259 / A2032 / A2700
Location	
Site number	18-122
Date	18/01/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	18-122
Enumerator	Milestone4-PC\Milestone4 - Newer
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2018 Base	AM	ONE HOUR	07:45	09:15	15	✓
D3	2024 Base	AM	ONE HOUR	07:45	09:15	15	✓
D5	2024 Base + Dev	AM	ONE HOUR	07:45	09:15	15	✓
D7	2033 Base	AM	ONE HOUR	07:45	09:15	15	✓
D9	2033 Base + Dev	AM	ONE HOUR	07:45	09:15	15	✓

Analysis Set Details

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

2018 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Goring Crossways	Standard Roundabout		1, 2, 3, 4	152.74	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-22	1 - A2700 Titnore Lane

Arms

Arms

Arm	Name	Description
1	A2700 Titnore Lane	
2	A2032 Littlehampton Road	
3	A259 - Goring Street	
4	A259 Littlehampton Road	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A2700 Titnore Lane	3.80	6.00	3.0	18.0	60.0	19.0	
2 - A2032 Littlehampton Road	7.40	7.60	14.8	24.0	60.0	19.0	
3 - A259 - Goring Street	6.20	6.70	0.5	34.0	60.0	17.6	
4 - A259 Littlehampton Road	7.30	7.90	2.5	24.0	60.0	17.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A2700 Titnore Lane	0.513	1395
2 - A2032 Littlehampton Road	0.692	2407
3 - A259 - Goring Street	0.632	2036
4 - A259 Littlehampton Road	0.699	2438

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

Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
1 - A2700 Titnore Lane	Percentage		59.40
2 - A2032 Littlehampton Road	Percentage		51.10
3 - A259 - Goring Street	Percentage		84.60
4 - A259 Littlehampton Road	Percentage		77.75

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	2018 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A2700 Titnore Lane		ONE HOUR	✓	299	100.000
2 - A2032 Littlehampton Road		ONE HOUR	✓	895	100.000
3 - A259 - Goring Street		ONE HOUR	✓	1125	100.000
4 - A259 Littlehampton Road		ONE HOUR	✓	1407	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	56	216	27
	2 - A2032 Littlehampton Road	87	0	168	640
	3 - A259 - Goring Street	297	371	0	457
	4 - A259 Littlehampton Road	60	727	610	10

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	5	4	7
	2 - A2032 Littlehampton Road	6	0	1	3
	3 - A259 - Goring Street	1	1	0	2
	4 - A259 Littlehampton Road	5	2	1	60

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A2700 Titnore Lane	1.21	413.82	33.1	F	274	412
2 - A2032 Littlehampton Road	1.10	185.85	53.8	F	821	1232
3 - A259 - Goring Street	0.97	49.23	16.1	E	1032	1548
4 - A259 Littlehampton Road	1.09	156.95	75.7	F	1291	1937

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	225	56	1283	412	0.546	221	331	0.0	1.1	18.363	C
2 - A2032 Littlehampton Road	674	168	642	969	0.696	665	862	0.0	2.2	11.549	B
3 - A259 - Goring Street	847	212	568	1386	0.611	841	740	0.0	1.5	6.526	A
4 - A259 Littlehampton Road	1059	265	564	1552	0.683	1051	844	0.0	2.1	7.076	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	269	67	1531	339	0.793	261	396	1.1	3.1	42.465	E
2 - A2032 Littlehampton Road	805	201	764	926	0.869	791	1028	2.2	5.5	24.610	C
3 - A259 - Goring Street	1011	253	675	1327	0.762	1005	880	1.5	3.0	10.975	B
4 - A259 Littlehampton Road	1265	316	674	1492	0.848	1253	1007	2.1	5.0	14.386	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	329	82	1739	277	1.188	268	463	3.1	18.3	172.644	F
2 - A2032 Littlehampton Road	985	246	836	900	1.094	883	1171	5.5	31.1	88.794	F
3 - A259 - Goring Street	1239	310	752	1285	0.964	1201	968	3.0	12.6	33.090	D
4 - A259 Littlehampton Road	1549	387	799	1425	1.087	1403	1154	5.0	41.6	70.667	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	329	82	1756	272	1.210	270	470	18.3	33.1	364.873	F
2 - A2032 Littlehampton Road	985	246	842	898	1.097	894	1184	31.1	53.8	182.163	F
3 - A259 - Goring Street	1239	310	761	1280	0.968	1224	976	12.6	16.1	49.232	E
4 - A259 Littlehampton Road	1549	387	814	1417	1.094	1413	1171	41.6	75.7	156.954	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	269	67	1739	277	0.970	269	427	33.1	33.1	413.822	F
2 - A2032 Littlehampton Road	805	201	858	893	0.901	877	1150	53.8	35.8	185.845	F
3 - A259 - Goring Street	1011	253	747	1288	0.785	1060	988	16.1	3.9	18.669	C
4 - A259 Littlehampton Road	1265	316	715	1470	0.860	1451	1092	75.7	29.2	133.098	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	225	56	1399	378	0.596	350	354	33.1	1.9	168.019	F
2 - A2032 Littlehampton Road	674	168	799	913	0.738	804	951	35.8	3.1	57.784	F
3 - A259 - Goring Street	847	212	693	1317	0.643	855	910	3.9	1.8	7.924	A
4 - A259 Littlehampton Road	1059	265	586	1539	0.688	1167	962	29.2	2.3	12.758	B

2024 Base , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Goring Crossways	Standard Roundabout		1, 2, 3, 4	574.53	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-34	1 - A2700 Titnore Lane

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2024 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A2700 Titnore Lane		ONE HOUR	✓	347	100.000
2 - A2032 Littlehampton Road		ONE HOUR	✓	996	100.000
3 - A259 - Goring Street		ONE HOUR	✓	1414	100.000
4 - A259 Littlehampton Road		ONE HOUR	✓	1606	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	62	245	40
	2 - A2032 Littlehampton Road	99	0	182	715
	3 - A259 - Goring Street	360	426	90	538
	4 - A259 Littlehampton Road	75	827	692	12

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	5	4	6
	2 - A2032 Littlehampton Road	5	0	1	3
	3 - A259 - Goring Street	1	1	0	2
	4 - A259 Littlehampton Road	4	2	1	58

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A2700 Titnore Lane	1.45	1174.13	85.8	F	318	478
2 - A2032 Littlehampton Road	1.25	536.57	131.6	F	914	1371
3 - A259 - Goring Street	1.21	427.97	152.3	F	1298	1946
4 - A259 Littlehampton Road	1.28	593.81	234.1	F	1474	2211

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	261	65	1519	343	0.762	250	396	0.0	2.7	35.735	E
2 - A2032 Littlehampton Road	750	187	795	916	0.818	734	975	0.0	4.0	18.385	C
3 - A259 - Goring Street	1065	266	637	1350	0.789	1050	891	0.0	3.5	11.551	B
4 - A259 Littlehampton Road	1209	302	724	1467	0.824	1192	964	0.0	4.3	12.414	B

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	312	78	1744	276	1.130	264	460	2.7	14.7	147.806	F
2 - A2032 Littlehampton Road	895	224	891	882	1.015	844	1117	4.0	16.9	58.492	F
3 - A259 - Goring Street	1271	318	730	1299	0.979	1227	1005	3.5	14.6	36.851	E
4 - A259 Littlehampton Road	1444	361	844	1402	1.030	1360	1113	4.3	25.2	50.217	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	382	96	1783	265	1.444	264	477	14.7	44.3	427.954	F
2 - A2032 Littlehampton Road	1097	274	903	878	1.249	876	1144	16.9	72.1	194.668	F
3 - A259 - Goring Street	1557	389	756	1284	1.212	1280	1022	14.6	83.8	147.857	F
4 - A259 Littlehampton Road	1768	442	880	1382	1.279	1381	1156	25.2	122.1	199.808	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	382	96	1785	264	1.447	264	478	44.3	73.9	825.819	F
2 - A2032 Littlehampton Road	1097	274	904	878	1.249	878	1145	72.1	126.9	416.280	F
3 - A259 - Goring Street	1557	389	758	1283	1.213	1283	1023	83.8	152.3	337.354	F
4 - A259 Littlehampton Road	1768	442	882	1381	1.280	1381	1159	122.1	218.9	449.341	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	312	78	1784	264	1.180	264	477	73.9	85.8	1105.393	F
2 - A2032 Littlehampton Road	895	224	904	878	1.020	876	1144	126.9	131.6	536.567	F
3 - A259 - Goring Street	1271	318	757	1284	0.990	1276	1024	152.3	151.0	427.974	F
4 - A259 Littlehampton Road	1444	361	878	1384	1.044	1383	1155	218.9	234.1	593.807	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	261	65	1779	266	0.983	262	476	85.8	85.5	1174.131	F
2 - A2032 Littlehampton Road	750	187	901	879	0.853	873	1141	131.6	101.0	480.729	F
3 - A259 - Goring Street	1065	266	754	1286	0.828	1277	1020	151.0	97.8	351.652	F
4 - A259 Littlehampton Road	1209	302	878	1383	0.874	1378	1153	234.1	192.0	557.216	F

2024 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Goring Crossways	Standard Roundabout		1, 2, 3, 4	772.43	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-38	1 - A2700 Titnore Lane

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2024 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A2700 Titnore Lane		ONE HOUR	✓	369	100.000
2 - A2032 Littlehampton Road		ONE HOUR	✓	1027	100.000
3 - A259 - Goring Street		ONE HOUR	✓	1581	100.000
4 - A259 Littlehampton Road		ONE HOUR	✓	1613	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	62	267	40
	2 - A2032 Littlehampton Road	99	0	213	715
	3 - A259 - Goring Street	423	512	90	556
	4 - A259 Littlehampton Road	75	827	699	12

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	5	4	6
	2 - A2032 Littlehampton Road	5	0	1	3
	3 - A259 - Goring Street	1	1	0	2
	4 - A259 Littlehampton Road	4	2	1	58

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A2700 Titnore Lane	1.54	1534.58	113.2	F	339	508
2 - A2032 Littlehampton Road	1.28	621.29	155.9	F	942	1414
3 - A259 - Goring Street	1.34	785.75	294.8	F	1451	2176
4 - A259 Littlehampton Road	1.31	678.07	265.8	F	1480	2220

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	278	69	1581	325	0.855	261	440	0.0	4.1	48.603	E
2 - A2032 Littlehampton Road	773	193	809	912	0.848	754	1033	0.0	4.8	20.853	C
3 - A259 - Goring Street	1190	298	635	1351	0.881	1165	929	0.0	6.3	17.508	C
4 - A259 Littlehampton Road	1214	304	828	1411	0.861	1192	972	0.0	5.5	15.254	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	332	83	1764	270	1.227	264	489	4.1	21.0	201.200	F
2 - A2032 Littlehampton Road	923	231	882	886	1.042	858	1146	4.8	21.2	68.898	F
3 - A259 - Goring Street	1421	355	718	1306	1.089	1286	1021	6.3	40.0	76.271	F
4 - A259 Littlehampton Road	1450	363	917	1363	1.064	1336	1088	5.5	33.9	64.377	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	406	102	1787	263	1.542	263	494	21.0	56.9	556.504	F
2 - A2032 Littlehampton Road	1131	283	891	883	1.281	881	1159	21.2	83.6	224.873	F
3 - A259 - Goring Street	1741	435	737	1295	1.344	1294	1035	40.0	151.6	273.408	F
4 - A259 Littlehampton Road	1776	444	924	1359	1.307	1358	1107	33.9	138.5	235.725	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	406	102	1788	263	1.544	263	495	56.9	92.7	1041.845	F
2 - A2032 Littlehampton Road	1131	283	891	883	1.281	883	1160	83.6	145.6	475.035	F
3 - A259 - Goring Street	1741	435	738	1295	1.345	1295	1036	151.6	263.1	581.436	F
4 - A259 Littlehampton Road	1776	444	924	1359	1.307	1358	1108	138.5	242.9	510.184	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	332	83	1788	263	1.260	263	495	92.7	109.8	1400.092	F
2 - A2032 Littlehampton Road	923	231	891	883	1.046	882	1160	145.6	155.9	621.287	F
3 - A259 - Goring Street	1421	355	738	1295	1.098	1295	1036	263.1	294.8	779.383	F
4 - A259 Littlehampton Road	1450	363	924	1359	1.067	1358	1108	242.9	265.8	678.073	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	278	69	1784	265	1.050	264	493	109.8	113.2	1534.584	F
2 - A2032 Littlehampton Road	773	193	890	883	0.875	878	1157	155.9	129.8	586.553	F
3 - A259 - Goring Street	1190	298	734	1297	0.918	1292	1034	294.8	269.2	785.750	F
4 - A259 Littlehampton Road	1214	304	922	1360	0.893	1354	1104	265.8	230.8	660.210	F

2033 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Goring Crossways	Standard Roundabout		1, 2, 3, 4	810.63	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-38	1 - A2700 Titnore Lane

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2033 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A2700 Titnore Lane		ONE HOUR	✓	368	100.000
2 - A2032 Littlehampton Road		ONE HOUR	✓	1060	100.000
3 - A259 - Goring Street		ONE HOUR	✓	1504	100.000
4 - A259 Littlehampton Road		ONE HOUR	✓	1706	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	66	260	42
	2 - A2032 Littlehampton Road	106	0	194	760
	3 - A259 - Goring Street	383	454	96	571
	4 - A259 Littlehampton Road	79	879	735	13

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	5	4	6
	2 - A2032 Littlehampton Road	6	0	1	3
	3 - A259 - Goring Street	1	1	0	2
	4 - A259 Littlehampton Road	4	2	1	54

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A2700 Titnore Lane	1.53	1517.08	112.0	F	338	507
2 - A2032 Littlehampton Road	1.33	759.10	192.9	F	973	1459
3 - A259 - Goring Street	1.29	630.97	232.0	F	1380	2070
4 - A259 Littlehampton Road	1.36	844.27	334.6	F	1565	2348

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	277	69	1606	317	0.873	259	419	0.0	4.5	52.178	F
2 - A2032 Littlehampton Road	798	200	835	901	0.885	774	1030	0.0	6.1	24.818	C
3 - A259 - Goring Street	1132	283	671	1331	0.851	1112	937	0.0	5.1	15.279	C
4 - A259 Littlehampton Road	1284	321	767	1443	0.890	1257	1016	0.0	6.8	17.424	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	331	83	1770	269	1.231	263	470	4.5	21.5	207.215	F
2 - A2032 Littlehampton Road	953	238	898	879	1.084	862	1134	6.1	28.9	87.589	F
3 - A259 - Goring Street	1352	338	744	1291	1.048	1259	1015	5.1	28.3	59.509	F
4 - A259 Littlehampton Road	1534	383	867	1389	1.104	1373	1136	6.8	47.0	81.362	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	405	101	1785	264	1.534	264	478	21.5	56.9	557.914	F
2 - A2032 Littlehampton Road	1167	292	903	878	1.330	877	1145	28.9	101.5	277.750	F
3 - A259 - Goring Street	1656	414	757	1284	1.290	1283	1023	28.3	121.7	218.402	F
4 - A259 Littlehampton Road	1878	470	883	1380	1.361	1380	1156	47.0	171.6	291.549	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	405	101	1785	264	1.535	264	478	56.9	92.2	1035.575	F
2 - A2032 Littlehampton Road	1167	292	904	877	1.330	877	1146	101.5	174.0	572.476	F
3 - A259 - Goring Street	1656	414	757	1284	1.290	1283	1023	121.7	214.8	477.251	F
4 - A259 Littlehampton Road	1878	470	884	1380	1.361	1380	1157	171.6	296.2	614.641	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	331	83	1785	264	1.253	264	478	92.2	108.9	1387.178	F
2 - A2032 Littlehampton Road	953	238	904	877	1.086	877	1146	174.0	192.9	759.095	F
3 - A259 - Goring Street	1352	338	757	1284	1.053	1283	1023	214.8	232.0	630.972	F
4 - A259 Littlehampton Road	1534	383	884	1380	1.111	1380	1157	296.2	334.6	826.305	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	277	69	1782	265	1.045	265	477	108.9	112.0	1517.076	F
2 - A2032 Littlehampton Road	798	200	903	878	0.909	873	1144	192.9	174.2	757.195	F
3 - A259 - Goring Street	1132	283	754	1285	0.881	1280	1022	232.0	195.2	601.197	F
4 - A259 Littlehampton Road	1284	321	881	1382	0.930	1377	1153	334.6	311.3	844.274	F

2033 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Goring Crossways	Standard Roundabout		1, 2, 3, 4	1045.16	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-41	1 - A2700 Titnore Lane

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2033 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A2700 Titnore Lane		ONE HOUR	✓	390	100.000
2 - A2032 Littlehampton Road		ONE HOUR	✓	1091	100.000
3 - A259 - Goring Street		ONE HOUR	✓	1671	100.000
4 - A259 Littlehampton Road		ONE HOUR	✓	1713	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	66	282	42
	2 - A2032 Littlehampton Road	106	0	225	760
	3 - A259 - Goring Street	446	540	96	589
	4 - A259 Littlehampton Road	79	879	742	13

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	5	4	6
	2 - A2032 Littlehampton Road	6	0	1	3
	3 - A259 - Goring Street	0	1	0	2
	4 - A259 Littlehampton Road	4	2	1	54

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A2700 Titnore Lane	1.64	1907.56	142.2	F	358	537
2 - A2032 Littlehampton Road	1.36	870.95	219.5	F	1001	1502
3 - A259 - Goring Street	1.42	1055.21	384.5	F	1533	2300
4 - A259 Littlehampton Road	1.39	946.47	365.0	F	1572	2358

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	294	73	1659	302	0.973	265	460	0.0	7.2	73.266	F
2 - A2032 Littlehampton Road	821	205	842	899	0.913	792	1081	0.0	7.4	28.425	D
3 - A259 - Goring Street	1258	315	667	1337	0.941	1217	968	0.0	10.2	24.841	C
4 - A259 Littlehampton Road	1290	322	865	1392	0.926	1253	1019	0.0	9.0	22.100	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	351	88	1781	266	1.320	263	492	7.2	29.2	278.084	F
2 - A2032 Littlehampton Road	981	245	888	883	1.110	871	1156	7.4	34.9	101.774	F
3 - A259 - Goring Street	1502	376	730	1302	1.153	1294	1029	10.2	62.2	111.110	F
4 - A259 Littlehampton Road	1540	385	923	1361	1.131	1350	1101	9.0	56.4	97.819	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	429	107	1790	263	1.635	262	495	29.2	71.0	708.431	F
2 - A2032 Littlehampton Road	1201	300	892	882	1.362	881	1161	34.9	114.9	315.293	F
3 - A259 - Goring Street	1840	460	738	1298	1.418	1297	1035	62.2	197.7	366.575	F
4 - A259 Littlehampton Road	1886	472	926	1360	1.387	1359	1110	56.4	188.2	329.974	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	429	107	1791	263	1.635	263	495	71.0	112.7	1277.137	F
2 - A2032 Littlehampton Road	1201	300	892	882	1.362	882	1161	114.9	194.7	638.841	F
3 - A259 - Goring Street	1840	460	739	1298	1.418	1297	1035	197.7	333.3	741.152	F
4 - A259 Littlehampton Road	1886	472	926	1359	1.387	1359	1110	188.2	319.8	677.007	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	351	88	1791	263	1.335	263	495	112.7	134.7	1709.685	F
2 - A2032 Littlehampton Road	981	245	892	882	1.112	882	1161	194.7	219.5	851.496	F
3 - A259 - Goring Street	1502	376	739	1298	1.158	1298	1035	333.3	384.5	999.649	F
4 - A259 Littlehampton Road	1540	385	926	1359	1.133	1359	1110	319.8	365.0	910.383	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	294	73	1787	264	1.114	263	494	134.7	142.2	1907.564	F
2 - A2032 Littlehampton Road	821	205	891	882	0.931	878	1159	219.5	205.3	870.949	F
3 - A259 - Goring Street	1258	315	736	1299	0.968	1296	1034	384.5	375.1	1055.212	F
4 - A259 Littlehampton Road	1290	322	924	1360	0.948	1357	1107	365.0	348.2	946.467	F

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.1.7462

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

Filename: 18122 - A259-A2032-A2700(Base-PM-Queues Calibrated).j9
Path: P:\18 Jobs\122 Land at Chatsmore Farm - Goring, West Sussex\Technical Assessments\ARCADY\18122 - A259 - A2032 - A2700 Roundabout
Report generation date: 27/01/2021 15:58:40

»2018 Base, PM
»2024 Base , PM
»2024 Base + Dev, PM
»2033 Base, PM
»2033 Base + Dev, PM

Summary of junction performance

	PM						
	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
2018 Base							
1 - A2700 Titnore Lane	25.0	166.00	1.08	F	79.35	F	-11 % [1 - A2700 Titnore Lane]
2 - A2032 Littlehampton Road	30.1	91.73	1.02	F			
3 - A259 - Goring Street	20.5	65.14	0.99	F			
4 - A259 Littlehampton Road	22.6	52.88	0.99	F			
2024 Base							
1 - A2700 Titnore Lane	138.4	1105.32	1.67	F	285.44	F	-24 % [1 - A2700 Titnore Lane]
2 - A2032 Littlehampton Road	116.4	384.91	1.19	F			
3 - A259 - Goring Street	10.8	38.31	0.93	E			
4 - A259 Littlehampton Road	55.8	103.84	1.05	F			
2024 Base + Dev							
1 - A2700 Titnore Lane	207.0	1596.26	1.88	F	433.59	F	-29 % [1 - A2700 Titnore Lane]
2 - A2032 Littlehampton Road	178.0	582.77	1.27	F			
3 - A259 - Goring Street	25.8	77.24	1.00	F			
4 - A259 Littlehampton Road	83.7	150.73	1.09	F			
2033 Base							
1 - A2700 Titnore Lane	111.7	903.31	1.39	F	647.85	F	-30 % [3 - A259 - Goring Street]
2 - A2032 Littlehampton Road	174.7	573.25	1.27	F			
3 - A259 - Goring Street	298.5	898.99	1.38	F			
4 - A259 Littlehampton Road	175.7	404.64	1.20	F			
2033 Base + Dev							
1 - A2700 Titnore Lane	177.8	1463.90	1.54	F	870.91	F	-34 % [3 - A259 - Goring Street]
2 - A2032 Littlehampton Road	250.7	807.80	1.35	F			
3 - A259 - Goring Street	376.2	1131.43	1.44	F			
4 - A259 Littlehampton Road	201.8	474.36	1.23	F			

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	18122 - A259 / A2032 / A2700
Location	
Site number	18-122
Date	18/01/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	18-122
Enumerator	Milestone4-PC\Milestone4 - Newer
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2018 Base	PM	ONE HOUR	16:45	18:15	15	✓
D4	2024 Base	PM	ONE HOUR	16:45	18:15	15	✓
D6	2024 Base + Dev	PM	ONE HOUR	16:45	18:15	15	✓
D8	2033 Base	PM	ONE HOUR	16:45	18:15	15	✓
D10	2033 Base + Dev	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

2018 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Goring Crossways	Standard Roundabout		1, 2, 3, 4	79.35	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-11	1 - A2700 Titnore Lane

Arms

Arms

Arm	Name	Description
1	A2700 Titnore Lane	
2	A2032 Littlehampton Road	
3	A259 - Goring Street	
4	A259 Littlehampton Road	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A2700 Titnore Lane	3.80	6.00	3.0	18.0	60.0	19.0	
2 - A2032 Littlehampton Road	7.40	7.60	14.8	24.0	60.0	19.0	
3 - A259 - Goring Street	6.20	6.70	0.5	34.0	60.0	17.6	
4 - A259 Littlehampton Road	7.30	7.90	2.5	24.0	60.0	17.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A2700 Titnore Lane	0.513	1395
2 - A2032 Littlehampton Road	0.692	2407
3 - A259 - Goring Street	0.632	2036
4 - A259 Littlehampton Road	0.699	2438

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

Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
1 - A2700 Titnore Lane	Percentage		91.65
2 - A2032 Littlehampton Road	Percentage		65.05
3 - A259 - Goring Street	Percentage		79.75
4 - A259 Littlehampton Road	Percentage		82.75

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	2018 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A2700 Titnore Lane		ONE HOUR	✓	462	100.000
2 - A2032 Littlehampton Road		ONE HOUR	✓	1036	100.000
3 - A259 - Goring Street		ONE HOUR	✓	1043	100.000
4 - A259 Littlehampton Road		ONE HOUR	✓	1424	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	89	325	48
	2 - A2032 Littlehampton Road	75	11	245	705
	3 - A259 - Goring Street	341	228	0	474
	4 - A259 Littlehampton Road	98	770	553	3

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	2	0	0
	2 - A2032 Littlehampton Road	0	0	0	1
	3 - A259 - Goring Street	1	1	0	1
	4 - A259 Littlehampton Road	3	1	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A2700 Titnore Lane	1.08	166.00	25.0	F	424	636
2 - A2032 Littlehampton Road	1.02	91.73	30.1	F	951	1426
3 - A259 - Goring Street	0.99	65.14	20.5	F	957	1436
4 - A259 Littlehampton Road	0.99	52.88	22.6	F	1307	1960

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	348	87	1171	720	0.483	344	384	0.0	0.9	9.492	A
2 - A2032 Littlehampton Road	780	195	694	1243	0.627	773	821	0.0	1.6	7.562	A
3 - A259 - Goring Street	785	196	628	1291	0.608	779	839	0.0	1.5	6.950	A
4 - A259 Littlehampton Road	1072	268	489	1713	0.626	1065	918	0.0	1.6	5.509	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	415	104	1400	612	0.679	411	459	0.9	2.0	17.563	C
2 - A2032 Littlehampton Road	931	233	829	1182	0.788	924	981	1.6	3.5	13.562	B
3 - A259 - Goring Street	938	234	751	1230	0.763	932	1002	1.5	3.0	11.838	B
4 - A259 Littlehampton Road	1280	320	585	1657	0.772	1274	1098	1.6	3.3	9.228	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	509	127	1663	487	1.045	460	543	2.0	14.1	82.709	F
2 - A2032 Littlehampton Road	1141	285	963	1122	1.017	1077	1160	3.5	19.4	50.480	F
3 - A259 - Goring Street	1148	287	873	1168	0.983	1102	1167	3.0	14.5	39.778	E
4 - A259 Littlehampton Road	1568	392	691	1596	0.982	1515	1285	3.3	16.4	32.648	D

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	509	127	1694	472	1.077	465	553	14.1	25.0	165.997	F
2 - A2032 Littlehampton Road	1141	285	978	1115	1.023	1098	1182	19.4	30.1	91.733	F
3 - A259 - Goring Street	1148	287	890	1160	0.990	1125	1186	14.5	20.5	65.143	F
4 - A259 Littlehampton Road	1568	392	705	1588	0.987	1543	1310	16.4	22.6	52.879	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	415	104	1492	568	0.731	502	496	25.0	3.2	79.503	F
2 - A2032 Littlehampton Road	931	233	935	1135	0.821	1031	1060	30.1	5.3	47.806	E
3 - A259 - Goring Street	938	234	842	1184	0.792	1003	1123	20.5	4.2	25.442	D
4 - A259 Littlehampton Road	1280	320	633	1630	0.785	1355	1212	22.6	3.9	16.343	C

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	348	87	1189	711	0.489	357	392	3.2	1.0	10.390	B
2 - A2032 Littlehampton Road	780	195	710	1236	0.631	794	835	5.3	1.8	8.399	A
3 - A259 - Goring Street	785	196	646	1283	0.612	795	858	4.2	1.6	7.540	A
4 - A259 Littlehampton Road	1072	268	500	1706	0.628	1081	941	3.9	1.7	5.829	A

2024 Base , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Goring Crossways	Standard Roundabout		1, 2, 3, 4	285.44	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-24	1 - A2700 Titnore Lane

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2024 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A2700 Titnore Lane		ONE HOUR	✓	514	100.000
2 - A2032 Littlehampton Road		ONE HOUR	✓	1166	100.000
3 - A259 - Goring Street		ONE HOUR	✓	986	100.000
4 - A259 Littlehampton Road		ONE HOUR	✓	1598	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	97	358	59
	2 - A2032 Littlehampton Road	86	12	266	802
	3 - A259 - Goring Street	28	257	139	562
	4 - A259 Littlehampton Road	124	858	613	3

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	2	0	0
	2 - A2032 Littlehampton Road	0	0	0	1
	3 - A259 - Goring Street	19	1	1	1
	4 - A259 Littlehampton Road	3	1	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A2700 Titnore Lane	1.67	1105.32	138.4	F	472	707
2 - A2032 Littlehampton Road	1.19	384.91	116.4	F	1070	1605
3 - A259 - Goring Street	0.93	38.31	10.8	E	905	1357
4 - A259 Littlehampton Road	1.05	103.84	55.8	F	1466	2200

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	387	97	1407	610	0.634	380	178	0.0	1.7	15.241	C
2 - A2032 Littlehampton Road	878	219	873	1164	0.754	866	914	0.0	2.9	11.661	B
3 - A259 - Goring Street	742	186	714	1242	0.598	736	1025	0.0	1.5	7.048	A
4 - A259 Littlehampton Road	1203	301	390	1775	0.678	1195	1061	0.0	2.1	6.126	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	462	116	1680	482	0.959	435	211	1.7	8.3	58.755	F
2 - A2032 Littlehampton Road	1048	262	1027	1095	0.957	1015	1088	2.9	11.2	35.334	E
3 - A259 - Goring Street	886	222	836	1181	0.751	881	1206	1.5	2.9	11.779	B
4 - A259 Littlehampton Road	1437	359	464	1731	0.830	1427	1253	2.1	4.5	11.466	B

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	566	141	1955	352	1.607	351	237	8.3	62.1	386.328	F
2 - A2032 Littlehampton Road	1284	321	1068	1077	1.192	1071	1237	11.2	64.3	138.185	F
3 - A259 - Goring Street	1086	271	870	1164	0.933	1060	1269	2.9	9.3	29.297	D
4 - A259 Littlehampton Road	1759	440	546	1683	1.045	1646	1384	4.5	33.0	51.129	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	566	141	1983	339	1.671	339	239	62.1	118.9	906.068	F
2 - A2032 Littlehampton Road	1284	321	1070	1076	1.193	1075	1252	64.3	116.4	310.294	F
3 - A259 - Goring Street	1086	271	872	1163	0.934	1079	1273	9.3	10.8	38.315	E
4 - A259 Littlehampton Road	1759	440	555	1678	1.049	1668	1397	33.0	55.8	103.841	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	462	116	1887	384	1.203	384	232	118.9	138.4	1105.319	F
2 - A2032 Littlehampton Road	1048	262	1071	1076	0.974	1067	1200	116.4	111.8	384.905	F
3 - A259 - Goring Street	886	222	870	1164	0.762	916	1267	10.8	3.4	16.058	C
4 - A259 Littlehampton Road	1437	359	484	1720	0.835	1635	1303	55.8	6.1	60.375	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	387	97	1436	597	0.648	593	195	138.4	87.0	686.767	F
2 - A2032 Littlehampton Road	878	219	1056	1083	0.811	1073	972	111.8	63.1	295.224	F
3 - A259 - Goring Street	742	186	899	1150	0.646	748	1231	3.4	1.9	9.103	A
4 - A259 Littlehampton Road	1203	301	412	1762	0.683	1219	1235	6.1	2.2	6.813	A

2024 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Goring Crossways	Standard Roundabout		1, 2, 3, 4	433.59	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-29	1 - A2700 Titnore Lane

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2024 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A2700 Titnore Lane		ONE HOUR	✓	571	100.000
2 - A2032 Littlehampton Road		ONE HOUR	✓	1244	100.000
3 - A259 - Goring Street		ONE HOUR	✓	1087	100.000
4 - A259 Littlehampton Road		ONE HOUR	✓	1615	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	97	415	59
	2 - A2032 Littlehampton Road	86	12	344	802
	3 - A259 - Goring Street	66	309	139	573
	4 - A259 Littlehampton Road	124	858	630	3

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	2	0	0
	2 - A2032 Littlehampton Road	0	0	0	1
	3 - A259 - Goring Street	7	1	1	1
	4 - A259 Littlehampton Road	3	1	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A2700 Titnore Lane	1.88	1596.26	207.0	F	524	786
2 - A2032 Littlehampton Road	1.27	582.77	178.0	F	1142	1712
3 - A259 - Goring Street	1.00	77.24	25.8	F	997	1496
4 - A259 Littlehampton Road	1.09	150.73	83.7	F	1482	2223

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	430	107	1457	587	0.732	420	205	0.0	2.5	20.477	C
2 - A2032 Littlehampton Road	937	234	925	1142	0.820	920	952	0.0	4.2	15.271	C
3 - A259 - Goring Street	818	205	711	1245	0.657	811	1134	0.0	1.9	8.157	A
4 - A259 Littlehampton Road	1216	304	456	1737	0.700	1207	1066	0.0	2.3	6.685	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	513	128	1737	455	1.129	440	242	2.5	20.9	121.226	F
2 - A2032 Littlehampton Road	1118	280	1053	1084	1.031	1048	1124	4.2	21.8	57.290	F
3 - A259 - Goring Street	977	244	806	1197	0.816	968	1294	1.9	4.1	15.149	C
4 - A259 Littlehampton Road	1452	363	540	1687	0.860	1439	1234	2.3	5.6	13.793	B

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	629	157	1972	344	1.828	344	268	20.9	92.1	617.825	F
2 - A2032 Littlehampton Road	1370	342	1064	1079	1.269	1077	1252	21.8	94.9	204.507	F
3 - A259 - Goring Street	1197	299	818	1192	1.004	1141	1324	4.1	18.1	46.521	E
4 - A259 Littlehampton Road	1778	445	624	1638	1.085	1616	1334	5.6	46.1	67.492	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	629	157	1994	334	1.883	334	270	92.1	165.9	1404.939	F
2 - A2032 Littlehampton Road	1370	342	1064	1079	1.269	1079	1263	94.9	167.6	444.685	F
3 - A259 - Goring Street	1197	299	818	1191	1.004	1166	1325	18.1	25.8	77.242	F
4 - A259 Littlehampton Road	1778	445	636	1631	1.090	1628	1348	46.1	83.7	150.732	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	513	128	1962	349	1.472	349	265	165.9	207.0	1596.258	F
2 - A2032 Littlehampton Road	1118	280	1068	1077	1.038	1077	1243	167.6	178.0	582.768	F
3 - A259 - Goring Street	977	244	818	1191	0.820	1060	1327	25.8	5.2	36.827	E
4 - A259 Littlehampton Road	1452	363	586	1661	0.874	1641	1292	83.7	36.4	134.148	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	430	107	1600	520	0.827	517	228	207.0	185.2	1365.518	F
2 - A2032 Littlehampton Road	937	234	1065	1079	0.868	1073	1052	178.0	143.9	540.694	F
3 - A259 - Goring Street	818	205	832	1184	0.691	830	1306	5.2	2.3	10.454	B
4 - A259 Littlehampton Road	1216	304	477	1724	0.705	1352	1185	36.4	2.5	13.733	B

2033 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Goring Crossways	Standard Roundabout		1, 2, 3, 4	647.85	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-30	3 - A259 - Goring Street

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	2033 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A2700 Titnore Lane		ONE HOUR	✓	547	100.000
2 - A2032 Littlehampton Road		ONE HOUR	✓	1240	100.000
3 - A259 - Goring Street		ONE HOUR	✓	1455	100.000
4 - A259 Littlehampton Road		ONE HOUR	✓	1698	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	104	381	62
	2 - A2032 Littlehampton Road	92	13	283	852
	3 - A259 - Goring Street	438	274	148	595
	4 - A259 Littlehampton Road	131	912	652	3

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	2	0	0
	2 - A2032 Littlehampton Road	0	0	0	1
	3 - A259 - Goring Street	1	1	0	1
	4 - A259 Littlehampton Road	2	1	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A2700 Titnore Lane	1.39	903.31	111.7	F	502	753
2 - A2032 Littlehampton Road	1.27	573.25	174.7	F	1138	1707
3 - A259 - Goring Street	1.38	898.99	298.5	F	1335	2003
4 - A259 Littlehampton Road	1.20	404.64	175.7	F	1558	2337

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	412	103	1485	574	0.717	402	487	0.0	2.3	20.022	C
2 - A2032 Littlehampton Road	934	233	922	1143	0.817	917	966	0.0	4.1	15.023	C
3 - A259 - Goring Street	1095	274	756	1228	0.892	1069	1083	0.0	6.7	20.036	C
4 - A259 Littlehampton Road	1278	320	709	1593	0.802	1263	1115	0.0	3.8	10.468	B

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	492	123	1711	468	1.051	444	541	2.3	14.4	88.573	F
2 - A2032 Littlehampton Road	1115	279	1047	1087	1.025	1048	1107	4.1	20.7	55.250	F
3 - A259 - Goring Street	1308	327	862	1175	1.113	1160	1233	6.7	43.6	89.927	F
4 - A259 Littlehampton Road	1526	382	775	1555	0.981	1477	1248	3.8	16.2	33.705	D

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	602	151	1778	436	1.381	435	550	14.4	56.3	310.546	F
2 - A2032 Littlehampton Road	1365	341	1068	1078	1.267	1076	1145	20.7	93.1	200.150	F
3 - A259 - Goring Street	1602	400	882	1165	1.375	1164	1261	43.6	153.0	311.214	F
4 - A259 Littlehampton Road	1870	467	779	1553	1.204	1549	1267	16.2	96.4	139.148	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	602	151	1781	435	1.386	434	550	56.3	98.3	651.568	F
2 - A2032 Littlehampton Road	1365	341	1069	1077	1.267	1077	1147	93.1	165.2	438.217	F
3 - A259 - Goring Street	1602	400	883	1164	1.376	1164	1263	153.0	262.5	647.649	F
4 - A259 Littlehampton Road	1870	467	779	1553	1.204	1552	1268	96.4	175.7	320.892	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	492	123	1774	438	1.122	438	549	98.3	111.7	874.826	F
2 - A2032 Littlehampton Road	1115	279	1069	1077	1.035	1077	1143	165.2	174.7	573.253	F
3 - A259 - Goring Street	1308	327	883	1164	1.124	1164	1262	262.5	298.5	871.346	F
4 - A259 Littlehampton Road	1526	382	779	1553	0.983	1544	1268	175.7	171.3	404.636	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	412	103	1774	438	0.940	434	549	111.7	106.1	903.310	F
2 - A2032 Littlehampton Road	934	233	1066	1079	0.865	1073	1142	174.7	140.0	528.705	F
3 - A259 - Goring Street	1095	274	880	1166	0.939	1162	1259	298.5	281.8	898.992	F
4 - A259 Littlehampton Road	1278	320	778	1554	0.823	1545	1264	171.3	104.8	322.839	F

2033 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Goring Crossways	Standard Roundabout		1, 2, 3, 4	870.91	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-34	3 - A259 - Goring Street

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	2033 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A2700 Titnore Lane		ONE HOUR	✓	604	100.000
2 - A2032 Littlehampton Road		ONE HOUR	✓	1318	100.000
3 - A259 - Goring Street		ONE HOUR	✓	1556	100.000
4 - A259 Littlehampton Road		ONE HOUR	✓	1715	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	104	438	62
	2 - A2032 Littlehampton Road	92	13	361	852
	3 - A259 - Goring Street	476	326	148	606
	4 - A259 Littlehampton Road	131	912	669	3

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	2	0	0
	2 - A2032 Littlehampton Road	0	0	0	1
	3 - A259 - Goring Street	1	1	0	1
	4 - A259 Littlehampton Road	2	1	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A2700 Titnore Lane	1.54	1463.90	177.8	F	554	831
2 - A2032 Littlehampton Road	1.35	807.80	250.7	F	1209	1814
3 - A259 - Goring Street	1.44	1131.43	376.2	F	1428	2142
4 - A259 Littlehampton Road	1.23	474.36	201.8	F	1574	2361

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	455	114	1529	553	0.822	439	510	0.0	3.8	28.594	D
2 - A2032 Littlehampton Road	992	248	970	1122	0.884	967	999	0.0	6.3	20.753	C
3 - A259 - Goring Street	1171	293	750	1231	0.951	1128	1188	0.0	10.9	27.998	D
4 - A259 Littlehampton Road	1291	323	766	1561	0.827	1273	1112	0.0	4.4	11.893	B

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	543	136	1737	456	1.191	447	551	3.8	27.9	149.763	F
2 - A2032 Littlehampton Road	1185	296	1061	1081	1.096	1064	1122	6.3	36.4	85.023	F
3 - A259 - Goring Street	1399	350	821	1195	1.170	1189	1305	10.9	63.4	123.421	F
4 - A259 Littlehampton Road	1542	385	810	1535	1.005	1477	1199	4.4	20.7	40.738	E

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	665	166	1787	432	1.539	432	556	27.9	86.3	491.829	F
2 - A2032 Littlehampton Road	1451	363	1070	1077	1.347	1076	1148	36.4	130.1	286.670	F
3 - A259 - Goring Street	1713	428	829	1192	1.438	1191	1318	63.4	193.9	395.066	F
4 - A259 Littlehampton Road	1888	472	813	1533	1.232	1530	1207	20.7	110.1	161.651	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	665	166	1789	431	1.543	431	557	86.3	144.8	975.989	F
2 - A2032 Littlehampton Road	1451	363	1071	1077	1.347	1077	1150	130.1	223.7	597.237	F
3 - A259 - Goring Street	1713	428	829	1192	1.438	1191	1319	193.9	324.3	787.595	F
4 - A259 Littlehampton Road	1888	472	813	1533	1.232	1533	1207	110.1	199.0	368.082	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	543	136	1787	432	1.257	432	557	144.8	172.6	1331.842	F
2 - A2032 Littlehampton Road	1185	296	1071	1077	1.100	1077	1149	223.7	250.7	798.084	F
3 - A259 - Goring Street	1399	350	829	1191	1.174	1191	1318	324.3	376.2	1062.348	F
4 - A259 Littlehampton Road	1542	385	813	1533	1.006	1531	1207	199.0	201.8	474.364	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	455	114	1783	434	1.048	434	555	172.6	177.8	1463.899	F
2 - A2032 Littlehampton Road	992	248	1070	1077	0.921	1073	1146	250.7	230.6	807.802	F
3 - A259 - Goring Street	1171	293	826	1193	0.982	1190	1317	376.2	371.6	1131.427	F
4 - A259 Littlehampton Road	1291	323	812	1534	0.842	1526	1204	201.8	143.0	407.306	F

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.1.7462

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

Filename: 18122 - A259-A2032-A2700 (Mitigation AM-Queues Calibrated).j9
Path: P:\18 Jobs\122 Land at Chatsmore Farm - Goring, West Sussex\Technical Assessments\ARCADY\18122 - A259 - A2032 - A2700 Roundabout
Report generation date: 27/01/2021 16:00:01

»2018 Base, AM
»2024 Base , AM
»2024 Base + Dev, AM
»2033 Base, AM
»2033 Base + Dev, AM

Summary of junction performance

	AM						
	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
2018 Base							
1 - A2700 Titnore Lane	16.1	171.84	1.05	F	63.04	F	-13 % [1 - A2700 Titnore Lane]
2 - A2032 Littlehampton Road	31.1	108.58	1.03	F			
3 - A259 - Goring Street	6.1	18.48	0.87	C			
4 - A259 Littlehampton Road	18.8	45.58	0.97	E			
2024 Base							
1 - A2700 Titnore Lane	59.6	721.37	1.33	F	309.03	F	-27 % [1 - A2700 Titnore Lane]
2 - A2032 Littlehampton Road	94.9	359.43	1.18	F			
3 - A259 - Goring Street	75.9	158.13	1.09	F			
4 - A259 Littlehampton Road	140.6	318.29	1.17	F			
2024 Base + Dev							
1 - A2700 Titnore Lane	81.7	1015.56	1.42	F	458.41	F	-30 % [1 - A2700 Titnore Lane]
2 - A2032 Littlehampton Road	111.3	429.73	1.21	F			
3 - A259 - Goring Street	165.5	411.37	1.21	F			
4 - A259 Littlehampton Road	163.0	392.20	1.20	F			
2033 Base							
1 - A2700 Titnore Lane	82.3	1022.87	1.41	F	491.19	F	-31 % [1 - A2700 Titnore Lane]
2 - A2032 Littlehampton Road	143.9	551.61	1.26	F			
3 - A259 - Goring Street	126.3	300.72	1.16	F			
4 - A259 Littlehampton Road	212.2	502.70	1.25	F			
2033 Base + Dev							
1 - A2700 Titnore Lane	108.0	1355.86	1.50	F	657.50	F	-34 % [1 - A2700 Titnore Lane]
2 - A2032 Littlehampton Road	167.7	629.85	1.29	F			
3 - A259 - Goring Street	240.2	584.62	1.27	F			
4 - A259 Littlehampton Road	245.6	583.02	1.27	F			

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	18122 - A259 / A2032 / A2700
Location	
Site number	18-122
Date	18/01/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	18-122
Enumerator	Milestone4-PC\Milestone4 - Newer
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2018 Base	AM	ONE HOUR	07:45	09:15	15	✓
D3	2024 Base	AM	ONE HOUR	07:45	09:15	15	✓
D5	2024 Base + Dev	AM	ONE HOUR	07:45	09:15	15	✓
D7	2033 Base	AM	ONE HOUR	07:45	09:15	15	✓
D9	2033 Base + Dev	AM	ONE HOUR	07:45	09:15	15	✓

Analysis Set Details

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

2018 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Goring Crossways	Standard Roundabout		1, 2, 3, 4	63.04	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-13	1 - A2700 Titnore Lane

Arms

Arms

Arm	Name	Description
1	A2700 Titnore Lane	
2	A2032 Littlehampton Road	
3	A259 - Goring Street	
4	A259 Littlehampton Road	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A2700 Titnore Lane	3.80	6.00	10.0	18.0	60.0	19.0	
2 - A2032 Littlehampton Road	7.40	8.50	10.0	24.0	60.0	19.0	
3 - A259 - Goring Street	6.20	7.50	8.0	34.0	60.0	17.6	
4 - A259 Littlehampton Road	7.30	10.00	7.0	24.0	60.0	17.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A2700 Titnore Lane	0.547	1593
2 - A2032 Littlehampton Road	0.726	2604
3 - A259 - Goring Street	0.673	2273
4 - A259 Littlehampton Road	0.747	2715

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

Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
1 - A2700 Titnore Lane	Percentage		59.40
2 - A2032 Littlehampton Road	Percentage		51.10
3 - A259 - Goring Street	Percentage		84.60
4 - A259 Littlehampton Road	Percentage		77.75

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	2018 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A2700 Titnore Lane		ONE HOUR	✓	299	100.000
2 - A2032 Littlehampton Road		ONE HOUR	✓	895	100.000
3 - A259 - Goring Street		ONE HOUR	✓	1125	100.000
4 - A259 Littlehampton Road		ONE HOUR	✓	1407	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	56	216	27
	2 - A2032 Littlehampton Road	87	0	168	640
	3 - A259 - Goring Street	297	371	0	457
	4 - A259 Littlehampton Road	60	727	610	10

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	5	4	7
	2 - A2032 Littlehampton Road	6	0	1	3
	3 - A259 - Goring Street	1	1	0	2
	4 - A259 Littlehampton Road	5	2	1	60

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A2700 Titnore Lane	1.05	171.84	16.1	F	274	412
2 - A2032 Littlehampton Road	1.03	108.58	31.1	F	821	1232
3 - A259 - Goring Street	0.87	18.48	6.1	C	1032	1548
4 - A259 Littlehampton Road	0.97	45.58	18.8	E	1291	1937

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	225	56	1286	499	0.451	222	332	0.0	0.8	12.862	B
2 - A2032 Littlehampton Road	674	168	644	1055	0.639	667	863	0.0	1.7	9.131	A
3 - A259 - Goring Street	847	212	569	1563	0.542	842	742	0.0	1.2	4.964	A
4 - A259 Littlehampton Road	1059	265	565	1741	0.608	1053	847	0.0	1.5	5.187	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	269	67	1538	419	0.642	265	397	0.8	1.7	22.909	C
2 - A2032 Littlehampton Road	805	201	770	1008	0.798	797	1033	1.7	3.6	16.472	C
3 - A259 - Goring Street	1011	253	680	1498	0.675	1008	887	1.2	2.0	7.294	A
4 - A259 Littlehampton Road	1265	316	676	1677	0.754	1259	1012	1.5	3.0	8.496	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	329	82	1843	323	1.021	297	477	1.7	9.7	93.373	F
2 - A2032 Littlehampton Road	985	246	904	959	1.028	922	1236	3.6	19.5	58.715	F
3 - A259 - Goring Street	1239	310	786	1436	0.863	1225	1039	2.0	5.6	16.056	C
4 - A259 Littlehampton Road	1549	387	817	1596	0.971	1503	1194	3.0	14.5	29.799	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	329	82	1874	312	1.054	303	483	9.7	16.1	171.841	F
2 - A2032 Littlehampton Road	985	246	922	952	1.035	939	1256	19.5	31.1	108.579	F
3 - A259 - Goring Street	1239	310	801	1427	0.868	1237	1060	5.6	6.1	18.481	C
4 - A259 Littlehampton Road	1549	387	826	1591	0.974	1532	1212	14.5	18.8	45.578	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	269	67	1609	397	0.678	324	416	16.1	2.4	69.377	F
2 - A2032 Littlehampton Road	805	201	848	979	0.822	907	1085	31.1	5.6	63.758	F
3 - A259 - Goring Street	1011	253	775	1443	0.701	1026	979	6.1	2.4	8.919	A
4 - A259 Littlehampton Road	1265	316	697	1665	0.760	1327	1104	18.8	3.3	12.525	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	225	56	1302	494	0.456	231	337	2.4	0.9	14.011	B
2 - A2032 Littlehampton Road	674	168	658	1050	0.642	689	875	5.6	1.8	10.364	B
3 - A259 - Goring Street	847	212	588	1552	0.546	852	759	2.4	1.2	5.176	A
4 - A259 Littlehampton Road	1059	265	573	1737	0.610	1066	867	3.3	1.6	5.423	A

2024 Base , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Goring Crossways	Standard Roundabout		1, 2, 3, 4	309.03	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-27	1 - A2700 Titnore Lane

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2024 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A2700 Titnore Lane		ONE HOUR	✓	347	100.000
2 - A2032 Littlehampton Road		ONE HOUR	✓	996	100.000
3 - A259 - Goring Street		ONE HOUR	✓	1414	100.000
4 - A259 Littlehampton Road		ONE HOUR	✓	1606	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	62	245	40
	2 - A2032 Littlehampton Road	99	0	182	715
	3 - A259 - Goring Street	360	426	90	538
	4 - A259 Littlehampton Road	75	827	692	12

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	5	4	6
	2 - A2032 Littlehampton Road	5	0	1	3
	3 - A259 - Goring Street	1	1	0	2
	4 - A259 Littlehampton Road	4	2	1	58

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A2700 Titnore Lane	1.33	721.37	59.6	F	318	478
2 - A2032 Littlehampton Road	1.18	359.43	94.9	F	914	1371
3 - A259 - Goring Street	1.09	158.13	75.9	F	1298	1946
4 - A259 Littlehampton Road	1.17	318.29	140.6	F	1474	2211

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	261	65	1528	423	0.618	255	398	0.0	1.5	20.800	C
2 - A2032 Littlehampton Road	750	187	802	998	0.752	738	981	0.0	2.8	13.360	B
3 - A259 - Goring Street	1065	266	642	1522	0.699	1055	899	0.0	2.3	7.574	A
4 - A259 Littlehampton Road	1209	302	727	1649	0.733	1198	970	0.0	2.7	7.817	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	312	78	1811	333	0.937	293	472	1.5	6.4	69.177	F
2 - A2032 Littlehampton Road	895	224	942	946	0.947	868	1162	2.8	9.8	36.945	E
3 - A259 - Goring Street	1271	318	753	1457	0.872	1256	1057	2.3	6.0	16.811	C
4 - A259 Littlehampton Road	1444	361	865	1570	0.920	1419	1145	2.7	8.8	21.115	C

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	382	96	1948	290	1.318	286	521	6.4	30.3	256.960	F
2 - A2032 Littlehampton Road	1097	274	984	931	1.178	924	1250	9.8	52.9	134.906	F
3 - A259 - Goring Street	1557	389	800	1430	1.089	1410	1109	6.0	42.8	73.004	F
4 - A259 Littlehampton Road	1768	442	965	1512	1.170	1504	1244	8.8	75.0	109.470	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	382	96	1955	288	1.329	287	525	30.3	54.0	547.614	F
2 - A2032 Littlehampton Road	1097	274	986	930	1.179	929	1256	52.9	94.9	295.292	F
3 - A259 - Goring Street	1557	389	803	1428	1.090	1424	1112	42.8	75.9	158.130	F
4 - A259 Littlehampton Road	1768	442	975	1507	1.174	1506	1253	75.0	140.6	263.599	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	312	78	1946	290	1.074	290	521	54.0	59.6	721.369	F
2 - A2032 Littlehampton Road	895	224	985	930	0.963	920	1250	94.9	88.6	359.429	F
3 - A259 - Goring Street	1271	318	797	1432	0.888	1413	1109	75.9	40.5	150.580	F
4 - A259 Littlehampton Road	1444	361	967	1511	0.955	1500	1243	140.6	126.4	318.292	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	261	65	1939	292	0.894	287	473	59.6	53.1	706.896	F
2 - A2032 Littlehampton Road	750	187	1001	924	0.811	914	1225	88.6	47.6	270.497	F
3 - A259 - Goring Street	1065	266	792	1434	0.742	1214	1124	40.5	3.1	28.192	D
4 - A259 Littlehampton Road	1209	302	843	1582	0.764	1570	1163	126.4	36.3	189.323	F

2024 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Goring Crossways	Standard Roundabout		1, 2, 3, 4	458.41	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-30	1 - A2700 Titnore Lane

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2024 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A2700 Titnore Lane		ONE HOUR	✓	369	100.000
2 - A2032 Littlehampton Road		ONE HOUR	✓	1027	100.000
3 - A259 - Goring Street		ONE HOUR	✓	1581	100.000
4 - A259 Littlehampton Road		ONE HOUR	✓	1613	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	62	267	40
	2 - A2032 Littlehampton Road	99	0	213	715
	3 - A259 - Goring Street	423	512	90	556
	4 - A259 Littlehampton Road	75	827	699	12

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	5	4	6
	2 - A2032 Littlehampton Road	5	0	1	3
	3 - A259 - Goring Street	1	1	0	2
	4 - A259 Littlehampton Road	4	2	1	58

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A2700 Titnore Lane	1.42	1015.56	81.7	F	339	508
2 - A2032 Littlehampton Road	1.21	429.73	111.3	F	942	1414
3 - A259 - Goring Street	1.21	411.37	165.5	F	1451	2176
4 - A259 Littlehampton Road	1.20	392.20	163.0	F	1480	2220

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	278	69	1594	402	0.691	270	444	0.0	2.0	25.843	D
2 - A2032 Littlehampton Road	773	193	821	991	0.780	760	1043	0.0	3.3	14.836	B
3 - A259 - Goring Street	1190	298	641	1523	0.781	1177	941	0.0	3.4	10.026	B
4 - A259 Littlehampton Road	1214	304	836	1586	0.765	1202	981	0.0	3.1	9.087	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	332	83	1869	315	1.053	295	520	2.0	11.3	107.590	F
2 - A2032 Littlehampton Road	923	231	945	945	0.976	886	1218	3.3	12.6	44.362	E
3 - A259 - Goring Street	1421	355	745	1462	0.972	1378	1086	3.4	14.3	32.379	D
4 - A259 Littlehampton Road	1450	363	979	1504	0.964	1409	1144	3.1	13.3	29.778	D

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	406	102	1953	288	1.409	287	543	11.3	41.2	353.985	F
2 - A2032 Littlehampton Road	1131	283	970	936	1.208	932	1270	12.6	62.3	156.866	F
3 - A259 - Goring Street	1741	435	781	1441	1.208	1437	1122	14.3	90.2	139.670	F
4 - A259 Littlehampton Road	1776	444	1021	1480	1.200	1475	1196	13.3	88.6	133.070	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	406	102	1957	287	1.416	287	544	41.2	71.1	721.040	F
2 - A2032 Littlehampton Road	1131	283	972	936	1.209	935	1272	62.3	111.3	342.606	F
3 - A259 - Goring Street	1741	435	783	1440	1.209	1439	1124	90.2	165.5	325.287	F
4 - A259 Littlehampton Road	1776	444	1023	1479	1.201	1478	1199	88.6	163.0	311.977	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	332	83	1950	289	1.146	289	542	71.1	81.7	967.575	F
2 - A2032 Littlehampton Road	923	231	971	936	0.986	928	1268	111.3	110.1	429.733	F
3 - A259 - Goring Street	1421	355	778	1443	0.985	1434	1121	165.5	162.2	411.371	F
4 - A259 Littlehampton Road	1450	363	1019	1481	0.979	1472	1193	163.0	157.6	392.204	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	278	69	1949	290	0.959	286	542	81.7	79.6	1015.560	F
2 - A2032 Littlehampton Road	773	193	968	937	0.825	929	1267	110.1	71.3	353.137	F
3 - A259 - Goring Street	1190	298	778	1443	0.825	1434	1119	162.2	101.3	331.845	F
4 - A259 Littlehampton Road	1214	304	1019	1481	0.820	1472	1193	157.6	93.3	308.059	F

2033 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Goring Crossways	Standard Roundabout		1, 2, 3, 4	491.19	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-31	1 - A2700 Titnore Lane

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2033 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A2700 Titnore Lane		ONE HOUR	✓	368	100.000
2 - A2032 Littlehampton Road		ONE HOUR	✓	1060	100.000
3 - A259 - Goring Street		ONE HOUR	✓	1504	100.000
4 - A259 Littlehampton Road		ONE HOUR	✓	1706	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	66	260	42
	2 - A2032 Littlehampton Road	106	0	194	760
	3 - A259 - Goring Street	383	454	96	571
	4 - A259 Littlehampton Road	79	879	735	13

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	5	4	6
	2 - A2032 Littlehampton Road	6	0	1	3
	3 - A259 - Goring Street	1	1	0	2
	4 - A259 Littlehampton Road	4	2	1	54

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A2700 Titnore Lane	1.41	1022.87	82.3	F	338	507
2 - A2032 Littlehampton Road	1.26	551.61	143.9	F	973	1459
3 - A259 - Goring Street	1.16	300.72	126.3	F	1380	2070
4 - A259 Littlehampton Road	1.25	502.70	212.2	F	1565	2348

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	277	69	1621	393	0.704	268	422	0.0	2.1	27.247	D
2 - A2032 Littlehampton Road	798	200	849	980	0.815	782	1041	0.0	4.0	17.075	C
3 - A259 - Goring Street	1132	283	679	1500	0.755	1120	951	0.0	3.0	9.219	A
4 - A259 Littlehampton Road	1284	321	773	1622	0.792	1270	1027	0.0	3.6	9.849	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	331	83	1890	308	1.074	290	495	2.1	12.3	116.392	F
2 - A2032 Littlehampton Road	953	238	969	935	1.019	897	1211	4.0	18.0	57.641	F
3 - A259 - Goring Street	1352	338	777	1443	0.937	1323	1089	3.0	10.1	25.530	D
4 - A259 Littlehampton Road	1534	383	911	1543	0.994	1475	1190	3.6	18.3	36.652	E

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	405	101	1954	288	1.406	287	524	12.3	41.9	364.725	F
2 - A2032 Littlehampton Road	1167	292	985	929	1.256	927	1255	18.0	78.0	197.457	F
3 - A259 - Goring Street	1656	414	802	1429	1.159	1420	1111	10.1	69.0	110.008	F
4 - A259 Littlehampton Road	1878	470	974	1507	1.247	1504	1248	18.3	111.9	163.791	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	405	101	1956	287	1.410	287	526	41.9	71.4	729.574	F
2 - A2032 Littlehampton Road	1167	292	986	929	1.256	929	1257	78.0	137.6	425.455	F
3 - A259 - Goring Street	1656	414	803	1428	1.160	1427	1112	69.0	126.3	252.963	F
4 - A259 Littlehampton Road	1878	470	978	1504	1.249	1504	1252	111.9	205.5	384.599	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	331	83	1955	288	1.150	287	523	71.4	82.3	979.384	F
2 - A2032 Littlehampton Road	953	238	987	929	1.026	928	1256	137.6	143.9	551.614	F
3 - A259 - Goring Street	1352	338	802	1428	0.947	1417	1112	126.3	110.1	300.722	F
4 - A259 Littlehampton Road	1534	383	972	1508	1.017	1507	1247	205.5	212.2	502.701	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	277	69	1950	289	0.957	286	523	82.3	80.1	1022.871	F
2 - A2032 Littlehampton Road	798	200	983	930	0.858	924	1252	143.9	112.4	500.186	F
3 - A259 - Goring Street	1132	283	799	1430	0.792	1417	1108	110.1	38.9	191.912	F
4 - A259 Littlehampton Road	1284	321	972	1508	0.852	1501	1245	212.2	158.1	444.632	F

2033 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Goring Crossways	Standard Roundabout		1, 2, 3, 4	657.50	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-34	1 - A2700 Titnore Lane

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2033 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A2700 Titnore Lane		ONE HOUR	✓	390	100.000
2 - A2032 Littlehampton Road		ONE HOUR	✓	1091	100.000
3 - A259 - Goring Street		ONE HOUR	✓	1671	100.000
4 - A259 Littlehampton Road		ONE HOUR	✓	1713	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	66	282	42
	2 - A2032 Littlehampton Road	106	0	225	760
	3 - A259 - Goring Street	446	540	96	589
	4 - A259 Littlehampton Road	79	879	742	13

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	5	4	6
	2 - A2032 Littlehampton Road	6	0	1	3
	3 - A259 - Goring Street	0	1	0	2
	4 - A259 Littlehampton Road	4	2	1	54

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A2700 Titnore Lane	1.50	1355.86	108.0	F	358	537
2 - A2032 Littlehampton Road	1.29	629.85	167.7	F	1001	1502
3 - A259 - Goring Street	1.27	584.62	240.2	F	1533	2300
4 - A259 Littlehampton Road	1.27	583.02	245.6	F	1572	2358

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	294	73	1685	373	0.787	281	467	0.0	3.1	35.592	E
2 - A2032 Littlehampton Road	821	205	866	974	0.843	803	1101	0.0	4.7	19.322	C
3 - A259 - Goring Street	1258	315	677	1506	0.836	1239	991	0.0	4.7	12.753	B
4 - A259 Littlehampton Road	1290	322	881	1563	0.825	1272	1036	0.0	4.4	11.767	B

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	351	88	1921	298	1.175	289	533	3.1	18.5	162.420	F
2 - A2032 Littlehampton Road	981	245	960	939	1.044	910	1250	4.7	22.3	67.403	F
3 - A259 - Goring Street	1502	376	765	1454	1.033	1414	1106	4.7	26.7	50.788	F
4 - A259 Littlehampton Road	1540	385	1004	1492	1.032	1450	1175	4.4	26.8	49.512	E

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	429	107	1959	287	1.498	286	544	18.5	54.4	481.324	F
2 - A2032 Littlehampton Road	1201	300	972	935	1.285	933	1273	22.3	89.3	225.777	F
3 - A259 - Goring Street	1840	460	783	1444	1.274	1442	1122	26.7	126.1	198.137	F
4 - A259 Littlehampton Road	1886	472	1024	1480	1.274	1478	1200	26.8	128.8	196.745	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	429	107	1960	286	1.501	286	544	54.4	90.2	927.845	F
2 - A2032 Littlehampton Road	1201	300	973	935	1.285	934	1274	89.3	156.1	479.964	F
3 - A259 - Goring Street	1840	460	784	1443	1.275	1443	1123	126.1	225.3	443.317	F
4 - A259 Littlehampton Road	1886	472	1025	1480	1.275	1479	1201	128.8	230.4	441.785	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	351	88	1960	286	1.225	286	544	90.2	106.4	1251.137	F
2 - A2032 Littlehampton Road	981	245	973	935	1.049	934	1274	156.1	167.7	629.847	F
3 - A259 - Goring Street	1502	376	783	1443	1.041	1443	1123	225.3	240.2	584.617	F
4 - A259 Littlehampton Road	1540	385	1025	1480	1.041	1479	1201	230.4	245.6	583.022	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	294	73	1955	288	1.020	287	543	106.4	108.0	1355.859	F
2 - A2032 Littlehampton Road	821	205	971	935	0.878	929	1271	167.7	140.7	597.924	F
3 - A259 - Goring Street	1258	315	780	1445	0.870	1439	1121	240.2	194.9	544.595	F
4 - A259 Littlehampton Road	1290	322	1022	1481	0.871	1475	1197	245.6	199.2	543.190	F

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.1.7462

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

Filename: 18122 - A259-A2032-A2700 (Mitigation-PM-Queues Calibrated).j9
Path: P:\18 Jobs\122 Land at Chatsmore Farm - Goring, West Sussex\Technical Assessments\ARCADY\18122 - A259 - A2032 - A2700 Roundabout
Report generation date: 27/01/2021 16:01:01

»2018 Base, PM
»2024 Base , PM
»2024 Base + Dev, PM
»2033 Base, PM
»2033 Base + Dev, PM

Summary of junction performance

	PM						
	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
2018 Base							
1 - A2700 Titnore Lane	5.5	41.59	0.87	E	27.76	D	-2 % [1 - A2700 Titnore Lane]
2 - A2032 Littlehampton Road	12.7	42.61	0.95	E			
3 - A259 - Goring Street	6.7	22.25	0.88	C			
4 - A259 Littlehampton Road	6.9	16.58	0.88	C			
2024 Base							
1 - A2700 Titnore Lane	75.9	457.35	1.36	F	133.78	F	-16 % [1 - A2700 Titnore Lane]
2 - A2032 Littlehampton Road	83.9	238.53	1.13	F			
3 - A259 - Goring Street	5.0	17.12	0.84	C			
4 - A259 Littlehampton Road	12.0	26.24	0.94	D			
2024 Base + Dev							
1 - A2700 Titnore Lane	123.7	754.19	1.63	F	228.96	F	-21 % [1 - A2700 Titnore Lane]
2 - A2032 Littlehampton Road	129.2	409.41	1.20	F			
3 - A259 - Goring Street	8.1	25.95	0.90	D			
4 - A259 Littlehampton Road	20.2	42.65	0.98	E			
2033 Base							
1 - A2700 Titnore Lane	72.8	520.25	1.27	F	358.14	F	-23 % [3 - A259 - Goring Street]
2 - A2032 Littlehampton Road	127.6	403.41	1.20	F			
3 - A259 - Goring Street	172.7	479.59	1.24	F			
4 - A259 Littlehampton Road	97.4	168.72	1.10	F			
2033 Base + Dev							
1 - A2700 Titnore Lane	125.2	898.52	1.42	F	520.83	F	-26 % [3 - A259 - Goring Street]
2 - A2032 Littlehampton Road	194.2	601.06	1.28	F			
3 - A259 - Goring Street	240.2	631.60	1.29	F			
4 - A259 Littlehampton Road	118.7	225.89	1.13	F			

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	18122 - A259 / A2032 / A2700
Location	
Site number	18-122
Date	18/01/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	18-122
Enumerator	Milestone4-PC\Milestone4 - Newer
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2018 Base	PM	ONE HOUR	16:45	18:15	15	✓
D4	2024 Base	PM	ONE HOUR	16:45	18:15	15	✓
D6	2024 Base + Dev	PM	ONE HOUR	16:45	18:15	15	✓
D8	2033 Base	PM	ONE HOUR	16:45	18:15	15	✓
D10	2033 Base + Dev	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

2018 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Goring Crossways	Standard Roundabout		1, 2, 3, 4	27.76	D

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-2	1 - A2700 Titnore Lane

Arms

Arms

Arm	Name	Description
1	A2700 Titnore Lane	
2	A2032 Littlehampton Road	
3	A259 - Goring Street	
4	A259 Littlehampton Road	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A2700 Titnore Lane	3.80	6.00	10.0	18.0	60.0	19.0	
2 - A2032 Littlehampton Road	7.40	8.50	10.0	24.0	60.0	19.0	
3 - A259 - Goring Street	6.20	7.50	8.0	34.0	60.0	17.6	
4 - A259 Littlehampton Road	7.30	10.00	7.0	24.0	60.0	17.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A2700 Titnore Lane	0.547	1593
2 - A2032 Littlehampton Road	0.726	2604
3 - A259 - Goring Street	0.673	2273
4 - A259 Littlehampton Road	0.747	2715

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

Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
1 - A2700 Titnore Lane	Percentage		91.65
2 - A2032 Littlehampton Road	Percentage		65.05
3 - A259 - Goring Street	Percentage		79.75
4 - A259 Littlehampton Road	Percentage		82.75

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	2018 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A2700 Titnore Lane		ONE HOUR	✓	462	100.000
2 - A2032 Littlehampton Road		ONE HOUR	✓	1036	100.000
3 - A259 - Goring Street		ONE HOUR	✓	1043	100.000
4 - A259 Littlehampton Road		ONE HOUR	✓	1424	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	89	325	48
	2 - A2032 Littlehampton Road	75	11	245	705
	3 - A259 - Goring Street	341	228	0	474
	4 - A259 Littlehampton Road	98	770	553	3

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	2	0	0
	2 - A2032 Littlehampton Road	0	0	0	1
	3 - A259 - Goring Street	1	1	0	1
	4 - A259 Littlehampton Road	3	1	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A2700 Titnore Lane	0.87	41.59	5.5	E	424	636
2 - A2032 Littlehampton Road	0.95	42.61	12.7	E	951	1426
3 - A259 - Goring Street	0.88	22.25	6.7	C	957	1436
4 - A259 Littlehampton Road	0.88	16.58	6.9	C	1307	1960

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	348	87	1172	863	0.403	345	385	0.0	0.7	6.918	A
2 - A2032 Littlehampton Road	780	195	695	1354	0.576	775	822	0.0	1.3	6.153	A
3 - A259 - Goring Street	785	196	630	1457	0.539	781	840	0.0	1.2	5.284	A
4 - A259 Littlehampton Road	1072	268	490	1920	0.558	1067	920	0.0	1.3	4.199	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	415	104	1403	747	0.556	413	460	0.7	1.2	10.716	B
2 - A2032 Littlehampton Road	931	233	832	1290	0.722	927	984	1.3	2.5	9.782	A
3 - A259 - Goring Street	938	234	753	1391	0.674	934	1005	1.2	2.0	7.819	A
4 - A259 Littlehampton Road	1280	320	587	1860	0.688	1277	1101	1.3	2.2	6.131	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	509	127	1703	595	0.855	495	557	1.2	4.7	32.311	D
2 - A2032 Littlehampton Road	1141	285	1005	1208	0.944	1110	1193	2.5	10.3	29.975	D
3 - A259 - Goring Street	1148	287	902	1311	0.876	1132	1213	2.0	6.0	18.632	C
4 - A259 Littlehampton Road	1568	392	710	1784	0.879	1551	1324	2.2	6.4	14.490	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	509	127	1721	587	0.867	505	564	4.7	5.5	41.587	E
2 - A2032 Littlehampton Road	1141	285	1020	1201	0.949	1131	1207	10.3	12.7	42.612	E
3 - A259 - Goring Street	1148	287	919	1302	0.882	1146	1231	6.0	6.7	22.246	C
4 - A259 Littlehampton Road	1568	392	719	1779	0.882	1566	1346	6.4	6.9	16.584	C

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	415	104	1428	734	0.566	432	472	5.5	1.3	12.538	B
2 - A2032 Littlehampton Road	931	233	856	1279	0.728	971	1005	12.7	2.8	13.093	B
3 - A259 - Goring Street	938	234	789	1372	0.683	956	1038	6.7	2.2	9.000	A
4 - A259 Littlehampton Road	1280	320	602	1851	0.692	1299	1143	6.9	2.3	6.726	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	348	87	1183	858	0.406	350	389	1.3	0.7	7.133	A
2 - A2032 Littlehampton Road	780	195	703	1351	0.577	786	830	2.8	1.4	6.433	A
3 - A259 - Goring Street	785	196	638	1453	0.541	789	850	2.2	1.2	5.461	A
4 - A259 Littlehampton Road	1072	268	496	1916	0.560	1076	932	2.3	1.3	4.307	A

2024 Base , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Goring Crossways	Standard Roundabout		1, 2, 3, 4	133.78	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-16	1 - A2700 Titnore Lane

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2024 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A2700 Titnore Lane		ONE HOUR	✓	514	100.000
2 - A2032 Littlehampton Road		ONE HOUR	✓	1166	100.000
3 - A259 - Goring Street		ONE HOUR	✓	986	100.000
4 - A259 Littlehampton Road		ONE HOUR	✓	1598	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	97	358	59
	2 - A2032 Littlehampton Road	86	12	266	802
	3 - A259 - Goring Street	28	257	139	562
	4 - A259 Littlehampton Road	124	858	613	3

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	2	0	0
	2 - A2032 Littlehampton Road	0	0	0	1
	3 - A259 - Goring Street	19	1	1	1
	4 - A259 Littlehampton Road	3	1	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A2700 Titnore Lane	1.36	457.35	75.9	F	472	707
2 - A2032 Littlehampton Road	1.13	238.53	83.9	F	1070	1605
3 - A259 - Goring Street	0.84	17.12	5.0	C	905	1357
4 - A259 Littlehampton Road	0.94	26.24	12.0	D	1466	2200

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	387	97	1409	746	0.519	383	178	0.0	1.1	9.805	A
2 - A2032 Littlehampton Road	878	219	876	1271	0.691	869	916	0.0	2.2	8.780	A
3 - A259 - Goring Street	742	186	717	1403	0.529	738	1028	0.0	1.1	5.375	A
4 - A259 Littlehampton Road	1203	301	390	1986	0.606	1197	1065	0.0	1.5	4.528	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	462	116	1686	607	0.761	455	212	1.1	2.9	22.654	C
2 - A2032 Littlehampton Road	1048	262	1045	1192	0.880	1032	1095	2.2	6.1	20.793	C
3 - A259 - Goring Street	886	222	852	1332	0.666	883	1226	1.1	1.9	7.968	A
4 - A259 Littlehampton Road	1437	359	466	1939	0.741	1432	1268	1.5	2.8	7.030	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	566	141	2038	430	1.316	424	248	2.9	38.4	195.841	F
2 - A2032 Littlehampton Road	1284	321	1162	1137	1.129	1124	1300	6.1	46.2	95.642	F
3 - A259 - Goring Street	1086	271	919	1296	0.838	1075	1366	1.9	4.7	15.569	C
4 - A259 Littlehampton Road	1759	440	557	1882	0.935	1729	1437	2.8	10.5	20.291	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	566	141	2064	416	1.359	416	250	38.4	75.9	457.345	F
2 - A2032 Littlehampton Road	1284	321	1166	1135	1.131	1133	1314	46.2	83.9	215.310	F
3 - A259 - Goring Street	1086	271	925	1292	0.840	1085	1374	4.7	5.0	17.115	C
4 - A259 Littlehampton Road	1759	440	562	1879	0.936	1753	1448	10.5	12.0	26.244	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	462	116	1730	584	0.791	577	223	75.9	47.2	374.232	F
2 - A2032 Littlehampton Road	1048	262	1162	1137	0.922	1123	1145	83.9	65.1	238.531	F
3 - A259 - Goring Street	886	222	936	1287	0.689	897	1349	5.0	2.3	9.480	A
4 - A259 Littlehampton Road	1437	359	480	1930	0.744	1473	1353	12.0	3.0	8.461	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	387	97	1426	737	0.525	571	198	47.2	1.2	58.927	F
2 - A2032 Littlehampton Road	878	219	1035	1197	0.734	1125	963	65.1	3.2	93.514	F
3 - A259 - Goring Street	742	186	937	1286	0.577	746	1224	2.3	1.4	6.703	A
4 - A259 Littlehampton Road	1203	301	415	1971	0.610	1209	1267	3.0	1.6	4.758	A

2024 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Goring Crossways	Standard Roundabout		1, 2, 3, 4	228.96	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-21	1 - A2700 Titnore Lane

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2024 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A2700 Titnore Lane		ONE HOUR	✓	571	100.000
2 - A2032 Littlehampton Road		ONE HOUR	✓	1244	100.000
3 - A259 - Goring Street		ONE HOUR	✓	1087	100.000
4 - A259 Littlehampton Road		ONE HOUR	✓	1615	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	97	415	59
	2 - A2032 Littlehampton Road	86	12	344	802
	3 - A259 - Goring Street	66	309	139	573
	4 - A259 Littlehampton Road	124	858	630	3

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	2	0	0
	2 - A2032 Littlehampton Road	0	0	0	1
	3 - A259 - Goring Street	7	1	1	1
	4 - A259 Littlehampton Road	3	1	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A2700 Titnore Lane	1.63	754.19	123.7	F	524	786
2 - A2032 Littlehampton Road	1.20	409.41	129.2	F	1142	1712
3 - A259 - Goring Street	0.90	25.95	8.1	D	997	1496
4 - A259 Littlehampton Road	0.98	42.65	20.2	E	1482	2223

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	430	107	1460	720	0.597	424	206	0.0	1.4	11.934	B
2 - A2032 Littlehampton Road	937	234	930	1246	0.751	925	955	0.0	2.9	10.851	B
3 - A259 - Goring Street	818	205	715	1406	0.582	813	1140	0.0	1.4	6.012	A
4 - A259 Littlehampton Road	1216	304	457	1945	0.625	1209	1071	0.0	1.6	4.849	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	513	128	1746	577	0.890	496	245	1.4	5.7	38.529	E
2 - A2032 Littlehampton Road	1118	280	1103	1165	0.960	1083	1139	2.9	11.7	34.375	D
3 - A259 - Goring Street	977	244	837	1341	0.729	972	1348	1.4	2.6	9.635	A
4 - A259 Littlehampton Road	1452	363	545	1891	0.768	1446	1265	1.6	3.2	7.980	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	629	157	2092	403	1.561	401	283	5.7	62.7	330.580	F
2 - A2032 Littlehampton Road	1370	342	1161	1138	1.204	1133	1332	11.7	70.9	141.963	F
3 - A259 - Goring Street	1197	299	864	1327	0.902	1178	1429	2.6	7.4	21.760	C
4 - A259 Littlehampton Road	1778	445	646	1828	0.973	1728	1396	3.2	15.6	27.877	D

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	629	157	2128	385	1.634	385	286	62.7	123.7	754.193	F
2 - A2032 Littlehampton Road	1370	342	1162	1137	1.204	1137	1351	70.9	129.2	324.145	F
3 - A259 - Goring Street	1197	299	865	1326	0.902	1194	1433	7.4	8.1	25.948	D
4 - A259 Littlehampton Road	1778	445	654	1823	0.976	1760	1405	15.6	20.2	42.648	E

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	513	128	1824	537	0.955	533	256	123.7	118.8	728.866	F
2 - A2032 Littlehampton Road	1118	280	1165	1136	0.985	1136	1192	129.2	124.8	409.406	F
3 - A259 - Goring Street	977	244	880	1319	0.741	998	1422	8.1	3.0	11.873	B
4 - A259 Littlehampton Road	1452	363	561	1881	0.772	1519	1316	20.2	3.5	11.700	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	430	107	1479	711	0.605	705	222	118.8	50.0	434.127	F
2 - A2032 Littlehampton Road	937	234	1170	1134	0.826	1125	1015	124.8	77.8	325.694	F
3 - A259 - Goring Street	818	205	889	1314	0.623	824	1406	3.0	1.7	7.419	A
4 - A259 Littlehampton Road	1216	304	478	1933	0.629	1223	1234	3.5	1.7	5.125	A

2033 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Goring Crossways	Standard Roundabout		1, 2, 3, 4	358.14	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-23	3 - A259 - Goring Street

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	2033 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A2700 Titnore Lane		ONE HOUR	✓	547	100.000
2 - A2032 Littlehampton Road		ONE HOUR	✓	1240	100.000
3 - A259 - Goring Street		ONE HOUR	✓	1455	100.000
4 - A259 Littlehampton Road		ONE HOUR	✓	1698	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	104	381	62
	2 - A2032 Littlehampton Road	92	13	283	852
	3 - A259 - Goring Street	438	274	148	595
	4 - A259 Littlehampton Road	131	912	652	3

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	2	0	0
	2 - A2032 Littlehampton Road	0	0	0	1
	3 - A259 - Goring Street	1	1	0	1
	4 - A259 Littlehampton Road	2	1	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A2700 Titnore Lane	1.27	520.25	72.8	F	502	753
2 - A2032 Littlehampton Road	1.20	403.41	127.6	F	1138	1707
3 - A259 - Goring Street	1.24	479.59	172.7	F	1335	2003
4 - A259 Littlehampton Road	1.10	168.72	97.4	F	1558	2337

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	412	103	1494	704	0.585	406	492	0.0	1.4	11.896	B
2 - A2032 Littlehampton Road	934	233	928	1247	0.749	922	972	0.0	2.8	10.740	B
3 - A259 - Goring Street	1095	274	760	1389	0.789	1081	1091	0.0	3.5	11.245	B
4 - A259 Littlehampton Road	1278	320	717	1788	0.715	1269	1124	0.0	2.4	6.808	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	492	123	1767	566	0.868	477	574	1.4	5.0	35.745	E
2 - A2032 Littlehampton Road	1115	279	1096	1168	0.954	1082	1149	2.8	11.1	33.080	D
3 - A259 - Goring Street	1308	327	891	1318	0.992	1255	1286	3.5	16.8	39.757	E
4 - A259 Littlehampton Road	1526	382	833	1716	0.889	1509	1313	2.4	6.9	16.100	C

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	602	151	1939	480	1.254	474	603	5.0	37.0	178.975	F
2 - A2032 Littlehampton Road	1365	341	1164	1136	1.201	1131	1249	11.1	69.7	139.389	F
3 - A259 - Goring Street	1602	400	930	1298	1.234	1295	1366	16.8	93.6	162.434	F
4 - A259 Littlehampton Road	1870	467	861	1699	1.100	1681	1363	6.9	54.0	74.698	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	602	151	1953	473	1.272	473	605	37.0	69.4	418.165	F
2 - A2032 Littlehampton Road	1365	341	1169	1134	1.204	1134	1257	69.7	127.6	320.485	F
3 - A259 - Goring Street	1602	400	931	1297	1.235	1296	1371	93.6	170.0	371.577	F
4 - A259 Littlehampton Road	1870	467	862	1698	1.101	1696	1366	54.0	97.4	167.564	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	492	123	1940	480	1.025	478	604	69.4	72.8	520.252	F
2 - A2032 Littlehampton Road	1115	279	1168	1135	0.982	1126	1250	127.6	124.8	403.414	F
3 - A259 - Goring Street	1308	327	926	1300	1.006	1297	1367	170.0	172.7	479.590	F
4 - A259 Littlehampton Road	1526	382	862	1698	0.899	1681	1361	97.4	58.8	168.719	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	412	103	1770	565	0.728	558	587	72.8	36.4	356.102	F
2 - A2032 Littlehampton Road	934	233	1161	1138	0.821	1129	1166	124.8	76.0	321.759	F
3 - A259 - Goring Street	1095	274	937	1294	0.847	1286	1353	172.7	124.9	417.088	F
4 - A259 Littlehampton Road	1278	320	856	1702	0.751	1500	1367	58.8	3.2	38.840	E

2033 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Goring Crossways	Standard Roundabout		1, 2, 3, 4	520.83	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-26	3 - A259 - Goring Street

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	2033 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A2700 Titnore Lane		ONE HOUR	✓	604	100.000
2 - A2032 Littlehampton Road		ONE HOUR	✓	1318	100.000
3 - A259 - Goring Street		ONE HOUR	✓	1556	100.000
4 - A259 Littlehampton Road		ONE HOUR	✓	1715	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	104	438	62
	2 - A2032 Littlehampton Road	92	13	361	852
	3 - A259 - Goring Street	476	326	148	606
	4 - A259 Littlehampton Road	131	912	669	3

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A2700 Titnore Lane	2 - A2032 Littlehampton Road	3 - A259 - Goring Street	4 - A259 Littlehampton Road
From	1 - A2700 Titnore Lane	0	2	0	0
	2 - A2032 Littlehampton Road	0	0	0	1
	3 - A259 - Goring Street	1	1	0	1
	4 - A259 Littlehampton Road	2	1	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A2700 Titnore Lane	1.42	898.52	125.2	F	554	831
2 - A2032 Littlehampton Road	1.28	601.06	194.2	F	1209	1814
3 - A259 - Goring Street	1.29	631.60	240.2	F	1428	2142
4 - A259 Littlehampton Road	1.13	225.89	118.7	F	1574	2361

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	455	114	1543	679	0.669	447	518	0.0	1.9	15.039	C
2 - A2032 Littlehampton Road	992	248	981	1223	0.812	976	1009	0.0	4.0	13.844	B
3 - A259 - Goring Street	1171	293	757	1390	0.843	1152	1201	0.0	4.8	14.143	B
4 - A259 Littlehampton Road	1291	323	781	1748	0.738	1280	1128	0.0	2.7	7.522	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	543	136	1810	545	0.996	506	592	1.9	11.1	64.498	F
2 - A2032 Littlehampton Road	1185	296	1138	1149	1.031	1111	1178	4.0	22.4	55.128	F
3 - A259 - Goring Street	1399	350	861	1334	1.048	1302	1388	4.8	29.0	58.310	F
4 - A259 Littlehampton Road	1542	385	883	1685	0.915	1518	1280	2.7	8.5	19.352	C

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	665	166	1951	474	1.402	473	612	11.1	59.3	285.893	F
2 - A2032 Littlehampton Road	1451	363	1169	1135	1.279	1133	1255	22.4	102.0	206.764	F
3 - A259 - Goring Street	1713	428	874	1328	1.290	1326	1428	29.0	125.8	217.699	F
4 - A259 Littlehampton Road	1888	472	900	1675	1.127	1663	1300	8.5	64.9	88.723	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	665	166	1961	469	1.417	469	613	59.3	108.2	651.535	F
2 - A2032 Littlehampton Road	1451	363	1170	1134	1.280	1134	1260	102.0	181.3	455.917	F
3 - A259 - Goring Street	1713	428	874	1327	1.291	1327	1430	125.8	222.2	477.119	F
4 - A259 Littlehampton Road	1888	472	901	1675	1.128	1673	1301	64.9	118.7	203.868	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	543	136	1949	475	1.143	475	612	108.2	125.2	881.890	F
2 - A2032 Littlehampton Road	1185	296	1170	1134	1.045	1133	1254	181.3	194.2	601.064	F
3 - A259 - Goring Street	1399	350	875	1327	1.054	1327	1429	222.2	240.2	631.597	F
4 - A259 Littlehampton Road	1542	385	900	1675	0.921	1661	1301	118.7	89.0	225.894	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A2700 Titnore Lane	455	114	1920	490	0.928	486	608	125.2	117.4	898.521	F
2 - A2032 Littlehampton Road	992	248	1167	1136	0.874	1130	1239	194.2	159.8	564.527	F
3 - A259 - Goring Street	1171	293	873	1328	0.882	1323	1424	240.2	202.5	602.877	F
4 - A259 Littlehampton Road	1291	323	897	1677	0.770	1630	1298	89.0	4.2	99.484	F

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.1.7462

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

Filename: 18122 - A259-Aldsworth Avenue (AM Calibration - Mitigation Dec 2020).j9
Path: P:\18 Jobs\122 Land at Chatsmore Farm - Goring, West Sussex\Technical Assessments\ARCADY\18122 - A259 - Aldsworth Avenue Roundabout
Report generation date: 27/01/2021 16:27:08

»2018 Base, AM
»2024 Base, AM
»2024 Base + Dev, AM
»2033 Base, AM
»2033 Base + Dev, AM

Summary of junction performance

	AM						
	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
	2018 Base						
1 - A259 North	4.3	12.47	0.82	B	43.48	E	-12 % [2 - Ardingly Drive]
2 - Ardingly Drive	1.8	64.17	0.67	F			
3 - A259 Goring Way East	24.0	110.05	1.02	F			
4 - Aldsworth Avenue	1.5	21.21	0.61	C			
5 - Goring Way West	3.9	27.33	0.81	D			
	2024 Base						
1 - A259 North	9.9	26.67	0.92	D	107.71	F	-20 % [2 - Ardingly Drive]
2 - Ardingly Drive	5.0	161.05	0.92	F			
3 - A259 Goring Way East	70.8	302.08	1.17	F			
4 - Aldsworth Avenue	2.1	26.63	0.69	D			
5 - Goring Way West	7.3	47.73	0.90	E			
	2024 Base + Dev						
1 - A259 North	22.5	54.02	0.99	F	149.27	F	-23 % [2 - Ardingly Drive]
2 - Ardingly Drive	8.1	249.33	1.04	F			
3 - A259 Goring Way East	87.6	403.00	1.21	F			
4 - Aldsworth Avenue	2.1	26.66	0.69	D			
5 - Goring Way West	7.6	49.66	0.91	E			
	2033 Base						
1 - A259 North	22.2	53.80	0.99	F	183.95	F	-25 % [2 - Ardingly Drive]
2 - Ardingly Drive	10.9	310.23	1.12	F			
3 - A259 Goring Way East	105.8	507.47	1.26	F			
4 - Aldsworth Avenue	2.5	30.54	0.73	D			
5 - Goring Way West	12.3	74.47	0.96	F			
	2033 Base + Dev						
1 - A259 North	53.8	109.10	1.05	F	240.43	F	-28 % [2 - Ardingly Drive]
2 - Ardingly Drive	13.7	407.81	1.20	F			
3 - A259 Goring Way East	131.5	615.36	1.29	F			
4 - Aldsworth Avenue	2.5	30.26	0.73	D			
5 - Goring Way West	13.2	79.33	0.97	F			

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	18122 - A259 / Aldsworth Avenue
Location	
Site number	18-122
Date	18/01/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	18-122
Enumerator	Milestone4-PC\Milestone4 - Newer
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2018 Base	AM	ONE HOUR	07:45	09:15	15	✓
D3	2024 Base	AM	ONE HOUR	07:45	09:15	15	✓
D5	2024 Base + Dev	AM	ONE HOUR	07:45	09:15	15	✓
D7	2033 Base	AM	ONE HOUR	07:45	09:15	15	✓
D9	2033 Base + Dev	AM	ONE HOUR	07:45	09:15	15	✓

Analysis Set Details

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

2018 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A259 North - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	43.48	E

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-12	2 - Ardingly Drive

Arms

Arms

Arm	Name	Description
1	A259 North	
2	Ardingly Drive	
3	A259 Goring Way East	
4	Aldsworth Avenue	
5	Goring Way West	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A259 North	3.66	7.86	43.0	30.0	41.0	36.0	
2 - Ardingly Drive	4.40	5.00	2.5	10.3	41.0	44.0	
3 - A259 Goring Way East	4.34	8.52	10.0	10.0	41.0	26.0	
4 - Aldsworth Avenue	6.71	8.50	10.0	14.6	41.0	20.0	
5 - Goring Way West	3.62	8.50	20.0	38.5	41.0	26.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A259 North	0.712	2069
2 - Ardingly Drive	0.531	1300
3 - A259 Goring Way East	0.647	1792
4 - Aldsworth Avenue	0.787	2418
5 - Goring Way West	0.710	1999

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

Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
1 - A259 North	Percentage		85.50
2 - Ardingly Drive	Percentage		36.00
3 - A259 Goring Way East	Percentage		56.25
4 - Aldsworth Avenue	Percentage		29.50
5 - Goring Way West	Percentage		50.80

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	2018 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A259 North		ONE HOUR	✓	1164	100.000
2 - Ardingly Drive		ONE HOUR	✓	100	100.000
3 - A259 Goring Way East		ONE HOUR	✓	701	100.000
4 - Aldsworth Avenue		ONE HOUR	✓	242	100.000
5 - Goring Way West		ONE HOUR	✓	486	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	698	149	317
	2 - Ardingly Drive	39	0	34	15	12
	3 - A259 Goring Way East	614	0	2	8	77
	4 - Aldsworth Avenue	177	0	31	1	33
	5 - Goring Way West	270	0	184	26	6

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	2	2	1
	2 - Ardingly Drive	0	0	0	0	0
	3 - A259 Goring Way East	2	0	0	0	13
	4 - Aldsworth Avenue	2	0	0	0	0
	5 - Goring Way West	0	0	5	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A259 North	0.82	12.47	4.3	B	1068	1602
2 - Ardingly Drive	0.67	64.17	1.8	F	92	138
3 - A259 Goring Way East	1.02	110.05	24.0	F	643	965
4 - Aldsworth Avenue	0.61	21.21	1.5	C	222	333
5 - Goring Way West	0.81	27.33	3.9	D	446	669

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	876	219	186	1623	0.540	872	818	0.0	1.2	4.761	A
2 - Ardingly Drive	75	19	1058	261	0.288	74	0	0.0	0.4	19.040	C
3 - A259 Goring Way East	528	132	422	826	0.639	521	709	0.0	1.7	11.559	B
4 - Aldsworth Avenue	182	46	794	517	0.353	180	149	0.0	0.5	10.626	B
5 - Goring Way West	366	91	642	764	0.479	362	332	0.0	0.9	8.893	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1046	262	224	1600	0.654	1044	980	1.2	1.9	6.439	A
2 - Ardingly Drive	90	22	1267	220	0.408	89	0	0.4	0.7	27.134	D
3 - A259 Goring Way East	630	158	506	796	0.792	623	850	1.7	3.4	20.040	C
4 - Aldsworth Avenue	218	54	951	480	0.453	216	178	0.5	0.8	13.596	B
5 - Goring Way West	437	109	769	718	0.609	435	398	0.9	1.5	12.595	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1282	320	271	1570	0.816	1272	1159	1.9	4.2	11.734	B
2 - Ardingly Drive	110	28	1544	166	0.662	106	0	0.7	1.7	56.344	F
3 - A259 Goring Way East	772	193	615	757	1.020	722	1034	3.4	16.0	63.615	F
4 - Aldsworth Avenue	266	67	1121	440	0.605	264	216	0.8	1.5	20.094	C
5 - Goring Way West	535	134	903	670	0.799	527	481	1.5	3.5	23.983	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1282	320	275	1568	0.817	1281	1182	4.2	4.3	12.465	B
2 - Ardingly Drive	110	28	1555	164	0.671	109	0	1.7	1.8	64.172	F
3 - A259 Goring Way East	772	193	621	755	1.022	740	1044	16.0	24.0	110.046	F
4 - Aldsworth Avenue	266	67	1142	435	0.612	266	218	1.5	1.5	21.210	C
5 - Goring Way West	535	134	922	663	0.807	534	486	3.5	3.9	27.335	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1046	262	229	1597	0.655	1056	1065	4.3	1.9	6.769	A
2 - Ardingly Drive	90	22	1285	217	0.414	94	0	1.8	0.7	30.256	D
3 - A259 Goring Way East	630	158	515	793	0.795	708	864	24.0	4.5	57.130	F
4 - Aldsworth Avenue	218	54	1041	459	0.474	220	182	1.5	0.9	15.217	C
5 - Goring Way West	437	109	849	689	0.634	445	412	3.9	1.8	15.213	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	876	219	190	1621	0.541	879	841	1.9	1.2	4.875	A
2 - Ardingly Drive	75	19	1069	259	0.291	77	0	0.7	0.4	19.857	C
3 - A259 Goring Way East	528	132	428	824	0.640	539	718	4.5	1.8	13.048	B
4 - Aldsworth Avenue	182	46	815	512	0.356	184	151	0.9	0.6	11.019	B
5 - Goring Way West	366	91	662	757	0.484	369	337	1.8	1.0	9.374	A

2024 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A259 North - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	107.71	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-20	2 - Ardingly Drive

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	2024 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A259 North		ONE HOUR	✓	1300	100.000
2 - Ardingly Drive		ONE HOUR	✓	109	100.000
3 - A259 Goring Way East		ONE HOUR	✓	779	100.000
4 - Aldsworth Avenue		ONE HOUR	✓	267	100.000
5 - Goring Way West		ONE HOUR	✓	535	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	781	167	352
	2 - Ardingly Drive	43	0	37	16	13
	3 - A259 Goring Way East	684	0	2	9	84
	4 - Aldsworth Avenue	196	0	34	1	36
	5 - Goring Way West	300	0	200	28	7

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	2	2	1
	2 - Ardingly Drive	0	0	0	0	0
	3 - A259 Goring Way East	2	0	0	0	13
	4 - Aldsworth Avenue	2	0	0	0	0
	5 - Goring Way West	0	0	6	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A259 North	0.92	26.67	9.9	D	1193	1789
2 - Ardingly Drive	0.92	161.05	5.0	F	100	150
3 - A259 Goring Way East	1.17	302.08	70.8	F	715	1072
4 - Aldsworth Avenue	0.69	26.63	2.1	D	245	368
5 - Goring Way West	0.90	47.73	7.3	E	491	736

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	979	245	202	1612	0.607	973	907	0.0	1.5	5.577	A
2 - Ardingly Drive	82	21	1175	238	0.345	80	0	0.0	0.5	22.494	C
3 - A259 Goring Way East	586	147	468	810	0.724	577	787	0.0	2.5	14.871	B
4 - Aldsworth Avenue	201	50	880	497	0.405	198	165	0.0	0.7	11.959	B
5 - Goring Way West	403	101	711	736	0.547	398	367	0.0	1.2	10.503	B

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1169	292	242	1587	0.736	1164	1081	1.5	2.7	8.414	A
2 - Ardingly Drive	98	24	1406	193	0.508	96	0	0.5	1.0	36.541	E
3 - A259 Goring Way East	700	175	560	777	0.902	684	942	2.5	6.7	33.690	D
4 - Aldsworth Avenue	240	60	1046	458	0.524	238	197	0.7	1.1	16.293	C
5 - Goring Way West	481	120	846	688	0.699	477	439	1.2	2.2	16.740	C

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1431	358	292	1556	0.920	1407	1217	2.7	8.8	21.299	C
2 - Ardingly Drive	120	30	1698	136	0.884	109	0	1.0	3.6	109.079	F
3 - A259 Goring Way East	858	214	672	737	1.164	728	1135	6.7	39.1	128.576	F
4 - Aldsworth Avenue	294	73	1164	430	0.683	290	236	1.1	2.0	25.035	D
5 - Goring Way West	589	147	935	656	0.898	573	519	2.2	6.3	37.504	E

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1431	358	297	1553	0.922	1427	1230	8.8	9.9	26.666	D
2 - Ardingly Drive	120	30	1724	131	0.918	114	0	3.6	5.0	161.054	F
3 - A259 Goring Way East	858	214	685	732	1.171	731	1154	39.1	70.8	279.223	F
4 - Aldsworth Avenue	294	73	1175	428	0.687	294	240	2.0	2.1	26.632	D
5 - Goring Way West	589	147	943	653	0.902	585	526	6.3	7.3	47.731	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1169	292	253	1581	0.739	1197	1167	9.9	2.9	10.014	B
2 - Ardingly Drive	98	24	1450	184	0.531	113	0	5.0	1.3	58.004	F
3 - A259 Goring Way East	700	175	586	768	0.912	757	977	70.8	56.6	302.083	F
4 - Aldsworth Avenue	240	60	1137	437	0.550	243	206	2.1	1.3	18.937	C
5 - Goring Way West	481	120	922	661	0.728	499	458	7.3	2.9	24.147	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	979	245	208	1609	0.608	984	1108	2.9	1.6	5.814	A
2 - Ardingly Drive	82	21	1192	235	0.349	85	0	1.3	0.6	24.407	C
3 - A259 Goring Way East	586	147	476	807	0.727	793	800	56.6	4.9	147.880	F
4 - Aldsworth Avenue	201	50	1100	445	0.452	203	170	1.3	0.8	14.969	B
5 - Goring Way West	403	101	908	666	0.605	408	395	2.9	1.6	14.234	B

2024 Base + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A259 North - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	149.27	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-23	2 - Ardingly Drive

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	2024 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A259 North		ONE HOUR	✓	1391	100.000
2 - Ardingly Drive		ONE HOUR	✓	109	100.000
3 - A259 Goring Way East		ONE HOUR	✓	810	100.000
4 - Aldsworth Avenue		ONE HOUR	✓	267	100.000
5 - Goring Way West		ONE HOUR	✓	537	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	867	167	357
	2 - Ardingly Drive	43	0	37	16	13
	3 - A259 Goring Way East	715	0	2	9	84
	4 - Aldsworth Avenue	196	0	34	1	36
	5 - Goring Way West	302	0	200	28	7

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	2	2	1
	2 - Ardingly Drive	0	0	0	0	0
	3 - A259 Goring Way East	2	0	0	0	13
	4 - Aldsworth Avenue	2	0	0	0	0
	5 - Goring Way West	0	0	6	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A259 North	0.99	54.02	22.5	F	1276	1915
2 - Ardingly Drive	1.04	249.33	8.1	F	100	150
3 - A259 Goring Way East	1.21	403.00	87.6	F	743	1115
4 - Aldsworth Avenue	0.69	26.66	2.1	D	245	368
5 - Goring Way West	0.91	49.66	7.6	E	493	739

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1047	262	202	1612	0.650	1040	930	0.0	1.8	6.216	A
2 - Ardingly Drive	82	21	1242	225	0.365	80	0	0.0	0.6	24.450	C
3 - A259 Goring Way East	610	152	471	809	0.754	598	851	0.0	2.8	16.327	C
4 - Aldsworth Avenue	201	50	905	491	0.409	198	165	0.0	0.7	12.199	B
5 - Goring Way West	404	101	733	729	0.555	399	370	0.0	1.2	10.787	B

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1250	313	242	1587	0.788	1244	1104	1.8	3.5	10.282	B
2 - Ardingly Drive	98	24	1486	177	0.552	96	0	0.6	1.1	42.905	E
3 - A259 Goring Way East	728	182	564	776	0.939	705	1018	2.8	8.7	41.037	E
4 - Aldsworth Avenue	240	60	1072	452	0.531	238	197	0.7	1.1	16.724	C
5 - Goring Way West	483	121	868	680	0.710	478	442	1.2	2.3	17.471	C

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1532	383	291	1556	0.984	1479	1225	3.5	16.6	33.967	D
2 - Ardingly Drive	120	30	1770	122	0.986	104	0	1.1	5.0	147.860	F
3 - A259 Goring Way East	892	223	665	740	1.206	734	1210	8.7	48.1	154.078	F
4 - Aldsworth Avenue	294	73	1167	430	0.684	290	232	1.1	2.0	25.156	D
5 - Goring Way West	591	148	942	653	0.905	574	515	2.3	6.5	38.954	E

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1532	383	297	1553	0.986	1508	1236	16.6	22.5	54.016	F
2 - Ardingly Drive	120	30	1805	115	1.044	108	0	5.0	8.1	249.333	F
3 - A259 Goring Way East	892	223	679	735	1.214	734	1234	48.1	87.6	340.603	F
4 - Aldsworth Avenue	294	73	1176	428	0.687	294	237	2.0	2.1	26.656	D
5 - Goring Way West	591	148	946	652	0.907	587	523	6.5	7.6	49.664	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1250	313	253	1580	0.791	1324	1171	22.5	4.0	17.653	C
2 - Ardingly Drive	98	24	1577	160	0.614	123	0	8.1	1.9	117.884	F
3 - A259 Goring Way East	728	182	613	758	0.960	750	1087	87.6	82.2	402.999	F
4 - Aldsworth Avenue	240	60	1151	433	0.554	243	212	2.1	1.3	19.237	C
5 - Goring Way West	483	121	922	661	0.731	501	472	7.6	2.9	24.756	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1047	262	208	1609	0.651	1056	1116	4.0	1.9	6.611	A
2 - Ardingly Drive	82	21	1264	221	0.372	87	0	1.9	0.6	27.887	D
3 - A259 Goring Way East	610	152	483	805	0.758	795	868	82.2	35.9	270.709	F
4 - Aldsworth Avenue	201	50	1107	443	0.454	203	171	1.3	0.9	15.084	C
5 - Goring Way West	404	101	914	664	0.609	410	397	2.9	1.6	14.448	B

2033 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A259 North - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	183.95	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-25	2 - Ardingly Drive

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	2033 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A259 North		ONE HOUR	✓	1382	100.000
2 - Ardingly Drive		ONE HOUR	✓	116	100.000
3 - A259 Goring Way East		ONE HOUR	✓	827	100.000
4 - Aldsworth Avenue		ONE HOUR	✓	284	100.000
5 - Goring Way West		ONE HOUR	✓	569	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	830	177	375
	2 - Ardingly Drive	46	0	39	17	14
	3 - A259 Goring Way East	727	0	2	9	89
	4 - Aldsworth Avenue	209	0	36	1	38
	5 - Goring Way West	319	0	213	30	7

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	2	2	1
	2 - Ardingly Drive	0	0	0	0	0
	3 - A259 Goring Way East	2	0	0	0	13
	4 - Aldsworth Avenue	1	0	0	0	0
	5 - Goring Way West	0	0	6	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A259 North	0.99	53.80	22.2	F	1268	1902
2 - Ardingly Drive	1.12	310.23	10.9	F	106	160
3 - A259 Goring Way East	1.26	507.47	105.8	F	759	1138
4 - Aldsworth Avenue	0.73	30.54	2.5	D	261	391
5 - Goring Way West	0.96	74.47	12.3	F	522	783

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1040	260	215	1605	0.648	1033	962	0.0	1.8	6.225	A
2 - Ardingly Drive	87	22	1248	224	0.390	85	0	0.0	0.6	25.476	D
3 - A259 Goring Way East	623	156	497	799	0.779	610	835	0.0	3.2	17.940	C
4 - Aldsworth Avenue	214	53	933	488	0.438	211	174	0.0	0.8	12.854	B
5 - Goring Way West	428	107	754	722	0.593	423	390	0.0	1.4	11.824	B

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1242	311	257	1578	0.787	1236	1136	1.8	3.5	10.302	B
2 - Ardingly Drive	104	26	1492	176	0.592	102	0	0.6	1.3	46.632	E
3 - A259 Goring Way East	743	186	595	765	0.972	711	999	3.2	11.2	49.879	E
4 - Aldsworth Avenue	255	64	1098	449	0.569	253	208	0.8	1.3	18.203	C
5 - Goring Way West	512	128	887	674	0.759	506	464	1.4	2.9	20.649	C

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1522	380	305	1548	0.983	1470	1242	3.5	16.4	33.827	D
2 - Ardingly Drive	128	32	1775	121	1.058	107	0	1.3	6.4	173.700	F
3 - A259 Goring Way East	911	228	699	727	1.252	724	1184	11.2	57.9	185.942	F
4 - Aldsworth Avenue	313	78	1178	430	0.727	308	245	1.3	2.4	28.416	D
5 - Goring Way West	626	157	948	653	0.960	600	538	2.9	9.6	51.549	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1522	380	313	1543	0.986	1498	1253	16.4	22.2	53.802	F
2 - Ardingly Drive	128	32	1811	114	1.123	109	0	6.4	10.9	310.232	F
3 - A259 Goring Way East	911	228	712	723	1.260	722	1208	57.9	105.0	412.256	F
4 - Aldsworth Avenue	313	78	1185	429	0.729	312	249	2.4	2.5	30.541	D
5 - Goring Way West	626	157	950	652	0.961	616	547	9.6	12.3	74.466	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1242	311	275	1567	0.793	1315	1202	22.2	4.1	17.915	C
2 - Ardingly Drive	104	26	1590	157	0.664	137	0	10.9	2.7	179.999	F
3 - A259 Goring Way East	743	186	653	744	0.999	740	1075	105.0	105.8	507.469	F
4 - Aldsworth Avenue	255	64	1167	433	0.590	259	226	2.5	1.5	21.221	C
5 - Goring Way West	512	128	932	658	0.777	545	494	12.3	3.9	37.669	E

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1040	260	222	1600	0.650	1049	1133	4.1	1.9	6.634	A
2 - Ardingly Drive	87	22	1271	219	0.398	95	0	2.7	0.7	30.665	D
3 - A259 Goring Way East	623	156	512	794	0.784	787	855	105.8	64.7	391.907	F
4 - Aldsworth Avenue	214	53	1118	444	0.482	216	181	1.5	1.0	15.944	C
5 - Goring Way West	428	107	919	663	0.646	436	415	3.9	1.9	16.427	C

2033 Base + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A259 North - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	240.43	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-28	2 - Ardingly Drive

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	2033 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A259 North		ONE HOUR	✓	1473	100.000
2 - Ardingly Drive		ONE HOUR	✓	116	100.000
3 - A259 Goring Way East		ONE HOUR	✓	858	100.000
4 - Aldsworth Avenue		ONE HOUR	✓	284	100.000
5 - Goring Way West		ONE HOUR	✓	571	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	916	177	380
	2 - Ardingly Drive	46	0	39	17	14
	3 - A259 Goring Way East	758	0	2	9	89
	4 - Aldsworth Avenue	209	0	36	1	38
	5 - Goring Way West	321	0	213	30	7

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	2	2	1
	2 - Ardingly Drive	0	0	0	0	0
	3 - A259 Goring Way East	2	0	0	0	13
	4 - Aldsworth Avenue	1	0	0	0	0
	5 - Goring Way West	0	0	6	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A259 North	1.05	109.10	53.8	F	1352	2027
2 - Ardingly Drive	1.20	407.81	13.7	F	106	160
3 - A259 Goring Way East	1.29	615.36	131.5	F	787	1181
4 - Aldsworth Avenue	0.73	30.26	2.5	D	261	391
5 - Goring Way West	0.97	79.33	13.2	F	524	786

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1109	277	215	1604	0.691	1100	984	0.0	2.2	7.023	A
2 - Ardingly Drive	87	22	1315	211	0.414	85	0	0.0	0.7	27.976	D
3 - A259 Goring Way East	646	161	500	799	0.809	631	899	0.0	3.8	19.988	C
4 - Aldsworth Avenue	214	53	957	482	0.443	211	174	0.0	0.8	13.119	B
5 - Goring Way West	430	107	775	714	0.602	424	393	0.0	1.5	12.177	B

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1324	331	257	1578	0.839	1314	1153	2.2	4.8	13.119	B
2 - Ardingly Drive	104	26	1570	161	0.648	101	0	0.7	1.6	56.678	F
3 - A259 Goring Way East	771	193	597	764	1.010	726	1074	3.8	15.0	61.481	F
4 - Aldsworth Avenue	255	64	1116	445	0.574	253	208	0.8	1.3	18.593	C
5 - Goring Way West	513	128	903	669	0.768	507	467	1.5	3.0	21.490	C

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1622	405	305	1548	1.048	1513	1252	4.8	31.9	54.219	F
2 - Ardingly Drive	128	32	1818	112	1.136	103	0	1.6	7.8	213.581	F
3 - A259 Goring Way East	945	236	681	734	1.287	732	1240	15.0	68.2	217.902	F
4 - Aldsworth Avenue	313	78	1175	431	0.726	308	237	1.3	2.4	28.331	D
5 - Goring Way West	629	157	956	650	0.968	600	527	3.0	10.1	53.957	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1622	405	312	1543	1.051	1534	1263	31.9	53.8	109.103	F
2 - Ardingly Drive	128	32	1846	107	1.195	104	0	7.8	13.7	407.812	F
3 - A259 Goring Way East	945	236	690	731	1.293	730	1260	68.2	121.8	476.946	F
4 - Aldsworth Avenue	313	78	1180	430	0.727	312	241	2.4	2.5	30.263	D
5 - Goring Way West	629	157	959	649	0.969	616	533	10.1	13.2	79.332	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1324	331	277	1566	0.846	1511	1193	53.8	7.1	71.178	F
2 - Ardingly Drive	104	26	1788	118	0.880	114	0	13.7	11.2	386.241	F
3 - A259 Goring Way East	771	193	684	733	1.052	732	1218	121.8	131.5	615.357	F
4 - Aldsworth Avenue	255	64	1180	430	0.594	259	236	2.5	1.5	21.568	C
5 - Goring Way West	513	128	918	663	0.774	551	521	13.2	3.9	38.718	E

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1109	277	222	1600	0.693	1128	1144	7.1	2.3	7.919	A
2 - Ardingly Drive	87	22	1350	204	0.428	129	0	11.2	0.8	70.747	F
3 - A259 Goring Way East	646	161	541	784	0.824	778	937	131.5	98.5	533.069	F
4 - Aldsworth Avenue	214	53	1133	441	0.485	216	186	1.5	1.0	16.196	C
5 - Goring Way West	430	107	928	660	0.652	437	422	3.9	2.0	16.719	C

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.1.7462

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

Filename: 18122 - A259-Aldsworth Avenue (PM Calibration - Mitigation Dec 2020).j9
Path: P:\18 Jobs\122 Land at Chatsmore Farm - Goring, West Sussex\Technical Assessments\ARCADY\18122 - A259 - Aldsworth Avenue Roundabout
Report generation date: 27/01/2021 16:28:14

»2018 Base, PM
»2024 Base, PM
»2024 Base + Dev, PM
»2033 Base, PM
»2033 Base + Dev , PM

Summary of junction performance

	PM						
	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
	2018 Base						
1 - A259 North	2.8	8.35	0.74	A	42.17	E	-10 % [3 - A259 Goring Way East]
2 - Ardingly Drive	1.7	53.05	0.65	F			
3 - A259 Goring Way East	23.5	100.28	1.02	F			
4 - Aldsworth Avenue	1.4	19.12	0.58	C			
5 - Goring Way West	3.6	33.66	0.80	D			
	2024 Base						
1 - A259 North	4.3	11.93	0.82	B	112.80	F	-20 % [3 - A259 Goring Way East]
2 - Ardingly Drive	3.7	105.65	0.83	F			
3 - A259 Goring Way East	78.7	307.97	1.17	F			
4 - Aldsworth Avenue	1.9	24.14	0.66	C			
5 - Goring Way West	6.9	59.02	0.90	F			
	2024 Base + Dev						
1 - A259 North	5.5	14.81	0.85	B	193.38	F	-26 % [3 - A259 Goring Way East]
2 - Ardingly Drive	4.8	135.48	0.89	F			
3 - A259 Goring Way East	127.5	545.32	1.28	F			
4 - Aldsworth Avenue	1.9	24.26	0.67	C			
5 - Goring Way West	7.8	65.52	0.92	F			
	2033 Base						
1 - A259 North	6.4	16.96	0.87	C	184.84	F	-25 % [3 - A259 Goring Way East]
2 - Ardingly Drive	8.0	203.52	1.00	F			
3 - A259 Goring Way East	117.5	511.90	1.27	F			
4 - Aldsworth Avenue	2.3	27.57	0.71	D			
5 - Goring Way West	11.4	89.50	0.96	F			
	2033 Base + Dev						
1 - A259 North	8.8	22.85	0.91	C	278.92	F	-30 % [3 - A259 Goring Way East]
2 - Ardingly Drive	10.8	267.91	1.08	F			
3 - A259 Goring Way East	187.8	777.46	1.37	F			
4 - Aldsworth Avenue	2.3	27.58	0.71	D			
5 - Goring Way West	12.9	99.54	0.98	F			

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	18122 - A259 / Aldsworth Avenue
Location	
Site number	18-122
Date	18/01/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	18-122
Enumerator	Milestone4-PC\Milestone4 - Newer
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2018 Base	PM	ONE HOUR	16:45	18:15	15	✓
D4	2024 Base	PM	ONE HOUR	16:45	18:15	15	✓
D6	2024 Base + Dev	PM	ONE HOUR	16:45	18:15	15	✓
D8	2033 Base	PM	ONE HOUR	16:45	18:15	15	✓
D10	2033 Base + Dev	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

2018 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A259 North - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	42.17	E

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-10	3 - A259 Goring Way East

Arms

Arms

Arm	Name	Description
1	A259 North	
2	Ardingly Drive	
3	A259 Goring Way East	
4	Aldsworth Avenue	
5	Goring Way West	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A259 North	3.66	7.86	43.0	30.0	41.0	36.0	
2 - Ardingly Drive	4.40	5.00	2.5	10.3	41.0	44.0	
3 - A259 Goring Way East	4.34	8.52	10.0	10.0	41.0	26.0	
4 - Aldsworth Avenue	6.71	8.50	10.0	14.6	41.0	20.0	
5 - Goring Way West	3.62	8.50	20.0	38.5	41.0	26.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A259 North	0.712	2069
2 - Ardingly Drive	0.531	1300
3 - A259 Goring Way East	0.647	1792
4 - Aldsworth Avenue	0.787	2417
5 - Goring Way West	0.710	1999

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

Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
1 - A259 North	Percentage		85.50
2 - Ardingly Drive	Percentage		34.80
3 - A259 Goring Way East	Percentage		59.15
4 - Aldsworth Avenue	Percentage		32.00
5 - Goring Way West	Percentage		41.00

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	2018 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A259 North		ONE HOUR	✓	1095	100.000
2 - Ardingly Drive		ONE HOUR	✓	112	100.000
3 - A259 Goring Way East		ONE HOUR	✓	758	100.000
4 - Aldsworth Avenue		ONE HOUR	✓	239	100.000
5 - Goring Way West		ONE HOUR	✓	373	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	668	105	322
	2 - Ardingly Drive	58	0	26	5	23
	3 - A259 Goring Way East	655	0	0	7	96
	4 - Aldsworth Avenue	171	0	29	1	38
	5 - Goring Way West	219	0	138	13	3

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	0	2	0
	2 - Ardingly Drive	0	0	0	0	0
	3 - A259 Goring Way East	1	0	0	0	6
	4 - Aldsworth Avenue	2	0	0	0	0
	5 - Goring Way West	1	0	7	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A259 North	0.74	8.35	2.8	A	1005	1507
2 - Ardingly Drive	0.65	53.05	1.7	F	103	154
3 - A259 Goring Way East	1.02	100.28	23.5	F	696	1043
4 - Aldsworth Avenue	0.58	19.12	1.4	C	219	329
5 - Goring Way West	0.80	33.66	3.6	D	342	513

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	824	206	137	1678	0.491	821	820	0.0	1.0	4.181	A
2 - Ardingly Drive	84	21	957	274	0.308	83	0	0.0	0.4	18.685	C
3 - A259 Goring Way East	571	143	396	893	0.639	564	644	0.0	1.7	10.732	B
4 - Aldsworth Avenue	180	45	862	546	0.329	178	98	0.0	0.5	9.724	A
5 - Goring Way West	281	70	680	599	0.469	277	360	0.0	0.9	11.082	B

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	984	246	164	1660	0.593	982	983	1.0	1.4	5.297	A
2 - Ardingly Drive	101	25	1147	238	0.423	100	0	0.4	0.7	25.763	D
3 - A259 Goring Way East	681	170	475	863	0.790	675	772	1.7	3.4	18.439	C
4 - Aldsworth Avenue	215	54	1032	504	0.427	214	117	0.5	0.7	12.378	B
5 - Goring Way West	335	84	814	561	0.598	333	431	0.9	1.4	15.661	C

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1206	301	199	1638	0.736	1201	1163	1.4	2.7	8.140	A
2 - Ardingly Drive	123	31	1400	191	0.646	120	0	0.7	1.6	48.264	E
3 - A259 Goring Way East	835	209	579	824	1.013	785	941	3.4	15.9	58.781	F
4 - Aldsworth Avenue	263	66	1220	456	0.576	261	143	0.7	1.3	18.186	C
5 - Goring Way West	411	103	959	519	0.791	403	522	1.4	3.3	29.277	D

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1206	301	202	1636	0.737	1205	1187	2.7	2.8	8.350	A
2 - Ardingly Drive	123	31	1407	190	0.651	123	0	1.6	1.7	53.047	F
3 - A259 Goring Way East	835	209	583	822	1.015	804	947	15.9	23.5	100.276	F
4 - Aldsworth Avenue	263	66	1243	451	0.584	263	144	1.3	1.4	19.122	C
5 - Goring Way West	411	103	980	514	0.800	409	527	3.3	3.6	33.655	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	984	246	169	1657	0.594	989	1066	2.8	1.5	5.430	A
2 - Ardingly Drive	101	25	1158	236	0.427	104	0	1.7	0.8	28.044	D
3 - A259 Goring Way East	681	170	482	860	0.792	758	781	23.5	4.4	48.128	E
4 - Aldsworth Avenue	215	54	1120	481	0.446	217	119	1.4	0.8	13.722	B
5 - Goring Way West	335	84	892	539	0.623	343	446	3.6	1.7	19.041	C

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	824	206	140	1676	0.492	826	843	1.5	1.0	4.249	A
2 - Ardingly Drive	84	21	966	272	0.310	86	0	0.8	0.5	19.448	C
3 - A259 Goring Way East	571	143	401	891	0.640	581	651	4.4	1.8	11.954	B
4 - Aldsworth Avenue	180	45	883	541	0.333	181	99	0.8	0.5	10.038	B
5 - Goring Way West	281	70	699	594	0.473	284	365	1.7	0.9	11.749	B

2024 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A259 North - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	112.80	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-20	3 - A259 Goring Way East

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	2024 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A259 North		ONE HOUR	✓	1205	100.000
2 - Ardingly Drive		ONE HOUR	✓	124	100.000
3 - A259 Goring Way East		ONE HOUR	✓	854	100.000
4 - Aldsworth Avenue		ONE HOUR	✓	266	100.000
5 - Goring Way West		ONE HOUR	✓	413	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	737	115	353
	2 - Ardingly Drive	66	0	28	5	25
	3 - A259 Goring Way East	742	0	0	8	104
	4 - Aldsworth Avenue	193	0	31	1	41
	5 - Goring Way West	246	0	150	14	3

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	0	2	0
	2 - Ardingly Drive	0	0	0	0	0
	3 - A259 Goring Way East	1	0	0	0	7
	4 - Aldsworth Avenue	2	0	0	0	0
	5 - Goring Way West	1	0	7	7	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A259 North	0.82	11.93	4.3	B	1106	1659
2 - Ardingly Drive	0.83	105.65	3.7	F	114	171
3 - A259 Goring Way East	1.17	307.97	78.7	F	784	1175
4 - Aldsworth Avenue	0.66	24.14	1.9	C	244	366
5 - Goring Way West	0.90	59.02	6.9	F	379	568

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	907	227	148	1671	0.543	902	924	0.0	1.2	4.658	A
2 - Ardingly Drive	93	23	1050	256	0.364	91	0	0.0	0.6	21.526	C
3 - A259 Goring Way East	643	161	434	878	0.733	633	707	0.0	2.6	14.162	B
4 - Aldsworth Avenue	200	50	960	521	0.384	198	107	0.0	0.6	11.044	B
5 - Goring Way West	311	78	765	575	0.541	306	393	0.0	1.1	13.193	B

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1083	271	177	1652	0.656	1080	1101	1.2	1.9	6.267	A
2 - Ardingly Drive	111	28	1258	218	0.512	110	0	0.6	1.0	32.847	D
3 - A259 Goring Way East	768	192	521	845	0.909	750	847	2.6	7.1	32.739	D
4 - Aldsworth Avenue	239	60	1142	476	0.503	238	128	0.6	1.0	14.932	B
5 - Goring Way West	371	93	911	534	0.696	367	469	1.1	2.1	21.144	C

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1327	332	213	1629	0.814	1318	1231	1.9	4.1	11.244	B
2 - Ardingly Drive	137	34	1530	167	0.819	128	0	1.0	3.0	81.134	F
3 - A259 Goring Way East	940	235	630	803	1.170	795	1028	7.1	43.4	128.856	F
4 - Aldsworth Avenue	293	73	1271	444	0.660	290	154	1.0	1.8	22.875	C
5 - Goring Way West	455	114	1004	507	0.897	440	557	2.1	5.9	45.734	E

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1327	332	217	1626	0.816	1326	1246	4.1	4.3	11.934	B
2 - Ardingly Drive	137	34	1543	164	0.831	134	0	3.0	3.7	105.647	F
3 - A259 Goring Way East	940	235	638	800	1.175	799	1039	43.4	78.7	282.742	F
4 - Aldsworth Avenue	293	73	1282	441	0.664	293	156	1.8	1.9	24.138	C
5 - Goring Way West	455	114	1013	504	0.902	450	561	5.9	6.9	59.017	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1083	271	186	1646	0.658	1093	1191	4.3	2.0	6.605	A
2 - Ardingly Drive	111	28	1278	214	0.522	121	0	3.7	1.2	42.313	E
3 - A259 Goring Way East	768	192	535	839	0.915	829	864	78.7	63.5	307.970	F
4 - Aldsworth Avenue	239	60	1233	453	0.528	242	131	1.9	1.2	17.312	C
5 - Goring Way West	371	93	990	511	0.726	387	486	6.9	2.9	31.926	D

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	907	227	152	1668	0.544	910	1134	2.0	1.2	4.768	A
2 - Ardingly Drive	93	23	1062	254	0.367	96	0	1.2	0.6	23.038	C
3 - A259 Goring Way East	643	161	441	875	0.735	861	717	63.5	8.9	157.662	F
4 - Aldsworth Avenue	200	50	1192	463	0.433	202	110	1.2	0.8	13.874	B
5 - Goring Way West	311	78	970	517	0.602	316	424	2.9	1.6	18.397	C

2024 Base + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A259 North - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	193.38	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-26	3 - A259 Goring Way East

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	2024 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A259 North		ONE HOUR	✓	1260	100.000
2 - Ardingly Drive		ONE HOUR	✓	124	100.000
3 - A259 Goring Way East		ONE HOUR	✓	932	100.000
4 - Aldsworth Avenue		ONE HOUR	✓	266	100.000
5 - Goring Way West		ONE HOUR	✓	418	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	789	115	356
	2 - Ardingly Drive	66	0	28	5	25
	3 - A259 Goring Way East	820	0	0	8	104
	4 - Aldsworth Avenue	193	0	31	1	41
	5 - Goring Way West	251	0	150	14	3

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	0	2	0
	2 - Ardingly Drive	0	0	0	0	0
	3 - A259 Goring Way East	1	0	0	0	7
	4 - Aldsworth Avenue	2	0	0	0	0
	5 - Goring Way West	1	0	7	7	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A259 North	0.85	14.81	5.5	B	1156	1734
2 - Ardingly Drive	0.89	135.48	4.8	F	114	171
3 - A259 Goring Way East	1.28	545.32	127.5	F	855	1283
4 - Aldsworth Avenue	0.67	24.26	1.9	C	244	366
5 - Goring Way West	0.92	65.52	7.8	F	384	575

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	949	237	148	1671	0.568	943	983	0.0	1.3	4.913	A
2 - Ardingly Drive	93	23	1091	249	0.375	91	0	0.0	0.6	22.515	C
3 - A259 Goring Way East	702	175	436	877	0.800	687	745	0.0	3.6	17.796	C
4 - Aldsworth Avenue	200	50	1017	507	0.395	198	107	0.0	0.6	11.539	B
5 - Goring Way West	315	79	820	559	0.562	310	394	0.0	1.2	14.151	B

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1133	283	177	1652	0.686	1129	1155	1.3	2.1	6.841	A
2 - Ardingly Drive	111	28	1306	209	0.534	110	0	0.6	1.1	35.629	E
3 - A259 Goring Way East	838	209	523	845	0.992	797	893	3.6	13.7	52.710	F
4 - Aldsworth Avenue	239	60	1193	463	0.516	238	128	0.6	1.0	15.848	C
5 - Goring Way West	376	94	961	519	0.723	371	469	1.2	2.4	23.541	C

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1387	347	212	1630	0.851	1375	1248	2.1	5.2	13.520	B
2 - Ardingly Drive	137	34	1587	156	0.874	126	0	1.1	3.7	97.349	F
3 - A259 Goring Way East	1026	257	631	804	1.277	801	1082	13.7	70.0	200.733	F
4 - Aldsworth Avenue	293	73	1278	442	0.663	290	153	1.0	1.8	23.158	C
5 - Goring Way West	460	115	1017	503	0.914	444	551	2.4	6.5	50.015	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1387	347	217	1627	0.853	1386	1260	5.2	5.5	14.809	B
2 - Ardingly Drive	137	34	1603	153	0.891	132	0	3.7	4.8	135.475	F
3 - A259 Goring Way East	1026	257	640	800	1.282	800	1095	70.0	126.6	444.702	F
4 - Aldsworth Avenue	293	73	1285	440	0.665	293	155	1.8	1.9	24.261	C
5 - Goring Way West	460	115	1022	502	0.917	455	556	6.5	7.8	65.516	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1133	283	187	1646	0.688	1146	1213	5.5	2.3	7.370	A
2 - Ardingly Drive	111	28	1332	204	0.547	125	0	4.8	1.3	51.759	F
3 - A259 Goring Way East	838	209	542	837	1.001	834	915	126.6	127.5	545.324	F
4 - Aldsworth Avenue	239	60	1245	450	0.532	242	131	1.9	1.2	17.558	C
5 - Goring Way West	376	94	1005	507	0.741	394	482	7.8	3.2	35.669	E

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	949	237	152	1668	0.569	952	1153	2.3	1.3	5.057	A
2 - Ardingly Drive	93	23	1105	246	0.379	96	0	1.3	0.6	24.396	C
3 - A259 Goring Way East	702	175	444	874	0.803	868	757	127.5	86.1	444.560	F
4 - Aldsworth Avenue	200	50	1202	460	0.435	202	110	1.2	0.8	13.998	B
5 - Goring Way West	315	79	985	513	0.614	321	419	3.2	1.7	19.311	C

2033 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A259 North - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	184.84	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-25	3 - A259 Goring Way East

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	2033 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A259 North		ONE HOUR	✓	1282	100.000
2 - Ardingly Drive		ONE HOUR	✓	133	100.000
3 - A259 Goring Way East		ONE HOUR	✓	907	100.000
4 - Aldsworth Avenue		ONE HOUR	✓	283	100.000
5 - Goring Way West		ONE HOUR	✓	439	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	784	122	376
	2 - Ardingly Drive	70	0	30	6	27
	3 - A259 Goring Way East	788	0	0	8	111
	4 - Aldsworth Avenue	205	0	33	1	44
	5 - Goring Way West	262	0	159	15	3

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	0	2	0
	2 - Ardingly Drive	0	0	0	0	0
	3 - A259 Goring Way East	1	0	0	0	6
	4 - Aldsworth Avenue	1	0	0	0	0
	5 - Goring Way West	1	0	8	7	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A259 North	0.87	16.96	6.4	C	1176	1765
2 - Ardingly Drive	1.00	203.52	8.0	F	122	183
3 - A259 Goring Way East	1.27	511.90	117.5	F	832	1248
4 - Aldsworth Avenue	0.71	27.57	2.3	D	260	390
5 - Goring Way West	0.96	89.50	11.4	F	403	604

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	965	241	156	1665	0.580	960	979	0.0	1.4	5.069	A
2 - Ardingly Drive	100	25	1116	244	0.411	97	0	0.0	0.7	24.191	C
3 - A259 Goring Way East	683	171	462	868	0.787	669	751	0.0	3.4	17.130	C
4 - Aldsworth Avenue	213	53	1018	511	0.417	210	113	0.0	0.7	11.877	B
5 - Goring Way West	331	83	810	561	0.590	325	418	0.0	1.4	14.953	B

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1152	288	187	1645	0.701	1149	1154	1.4	2.3	7.204	A
2 - Ardingly Drive	120	30	1336	203	0.590	117	0	0.7	1.3	40.807	E
3 - A259 Goring Way East	815	204	554	833	0.978	780	899	3.4	12.2	48.922	E
4 - Aldsworth Avenue	254	64	1198	465	0.547	253	136	0.7	1.2	16.776	C
5 - Goring Way West	395	99	953	520	0.758	389	498	1.4	2.8	26.273	D

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1412	353	222	1622	0.870	1397	1251	2.3	5.9	15.085	C
2 - Ardingly Drive	146	37	1619	150	0.977	130	0	1.3	5.4	129.192	F
3 - A259 Goring Way East	999	250	663	792	1.261	789	1086	12.2	64.7	188.550	F
4 - Aldsworth Avenue	312	78	1289	442	0.704	308	163	1.2	2.2	25.895	D
5 - Goring Way West	483	121	1013	503	0.961	460	584	2.8	8.7	61.717	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1412	353	228	1618	0.872	1410	1263	5.9	6.4	16.962	C
2 - Ardingly Drive	146	37	1638	146	1.001	136	0	5.4	8.0	203.525	F
3 - A259 Goring Way East	999	250	674	788	1.267	787	1100	64.7	117.5	420.013	F
4 - Aldsworth Avenue	312	78	1297	441	0.707	311	165	2.2	2.3	27.570	D
5 - Goring Way West	483	121	1019	502	0.963	473	589	8.7	11.4	89.502	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1152	288	202	1635	0.705	1168	1224	6.4	2.5	7.953	A
2 - Ardingly Drive	120	30	1370	196	0.609	144	0	8.0	1.8	85.489	F
3 - A259 Goring Way East	815	204	584	822	0.992	815	930	117.5	117.5	511.898	F
4 - Aldsworth Avenue	254	64	1259	450	0.565	258	140	2.3	1.4	19.120	C
5 - Goring Way West	395	99	1002	506	0.780	424	515	11.4	4.1	51.269	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	965	241	163	1661	0.581	969	1158	2.5	1.4	5.238	A
2 - Ardingly Drive	100	25	1132	241	0.416	104	0	1.8	0.7	27.118	D
3 - A259 Goring Way East	683	171	472	864	0.790	857	764	117.5	74.0	403.778	F
4 - Aldsworth Avenue	213	53	1212	461	0.462	215	117	1.4	0.9	14.718	B
5 - Goring Way West	331	83	981	512	0.645	339	446	4.1	1.9	21.724	C

2033 Base + Dev , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A259 North - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	278.92	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-30	3 - A259 Goring Way East

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	2033 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A259 North		ONE HOUR	✓	1337	100.000
2 - Ardingly Drive		ONE HOUR	✓	133	100.000
3 - A259 Goring Way East		ONE HOUR	✓	985	100.000
4 - Aldsworth Avenue		ONE HOUR	✓	283	100.000
5 - Goring Way West		ONE HOUR	✓	444	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	836	122	379
	2 - Ardingly Drive	70	0	30	6	27
	3 - A259 Goring Way East	866	0	0	8	111
	4 - Aldsworth Avenue	205	0	33	1	44
	5 - Goring Way West	267	0	159	15	3

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	0	2	0
	2 - Ardingly Drive	0	0	0	0	0
	3 - A259 Goring Way East	1	0	0	0	6
	4 - Aldsworth Avenue	1	0	0	0	0
	5 - Goring Way West	1	0	8	7	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A259 North	0.91	22.85	8.8	C	1227	1840
2 - Ardingly Drive	1.08	267.91	10.8	F	122	183
3 - A259 Goring Way East	1.37	777.46	187.8	F	904	1356
4 - Aldsworth Avenue	0.71	27.58	2.3	D	260	390
5 - Goring Way West	0.98	99.54	12.9	F	407	611

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1007	252	156	1665	0.605	1001	1035	0.0	1.5	5.371	A
2 - Ardingly Drive	100	25	1157	236	0.424	97	0	0.0	0.7	25.432	D
3 - A259 Goring Way East	742	185	464	868	0.855	722	790	0.0	4.9	22.342	C
4 - Aldsworth Avenue	213	53	1073	497	0.429	210	113	0.0	0.7	12.430	B
5 - Goring Way West	334	84	863	546	0.612	328	420	0.0	1.5	16.135	C

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1202	300	187	1645	0.731	1197	1193	1.5	2.6	7.962	A
2 - Ardingly Drive	120	30	1384	194	0.617	117	0	0.7	1.4	45.002	E
3 - A259 Goring Way East	885	221	556	833	1.063	810	945	4.9	23.8	79.123	F
4 - Aldsworth Avenue	254	64	1231	457	0.557	253	135	0.7	1.2	17.433	C
5 - Goring Way West	399	100	987	511	0.782	393	496	1.5	3.1	28.943	D

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1472	368	221	1623	0.907	1451	1263	2.6	7.9	18.947	C
2 - Ardingly Drive	146	37	1672	140	1.045	125	0	1.4	6.7	157.455	F
3 - A259 Goring Way East	1085	271	661	793	1.367	792	1137	23.8	96.9	285.251	F
4 - Aldsworth Avenue	312	78	1292	442	0.705	308	161	1.2	2.2	26.034	D
5 - Goring Way West	489	122	1022	501	0.976	463	577	3.1	9.7	67.195	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1472	368	227	1619	0.909	1469	1274	7.9	8.8	22.848	C
2 - Ardingly Drive	146	37	1696	136	1.080	130	0	6.7	10.8	267.908	F
3 - A259 Goring Way East	1085	271	671	789	1.374	789	1154	96.9	170.7	609.545	F
4 - Aldsworth Avenue	312	78	1297	441	0.707	311	163	2.2	2.3	27.580	D
5 - Goring Way West	489	122	1025	500	0.978	476	583	9.7	12.9	99.538	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1202	300	203	1634	0.735	1226	1246	8.8	2.9	9.289	A
2 - Ardingly Drive	120	30	1429	185	0.645	154	0	10.8	2.3	134.898	F
3 - A259 Goring Way East	885	221	597	817	1.083	817	986	170.7	187.8	777.456	F
4 - Aldsworth Avenue	254	64	1273	446	0.570	258	141	2.3	1.4	19.458	C
5 - Goring Way West	399	100	1017	502	0.795	432	514	12.9	4.6	60.673	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1007	252	163	1660	0.606	1012	1174	2.9	1.6	5.597	A
2 - Ardingly Drive	100	25	1175	233	0.430	106	0	2.3	0.8	29.563	D
3 - A259 Goring Way East	742	185	476	863	0.859	859	805	187.8	158.6	726.709	F
4 - Aldsworth Avenue	213	53	1218	460	0.463	215	116	1.4	0.9	14.810	B
5 - Goring Way West	334	84	992	509	0.656	345	441	4.6	2.0	23.050	C

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.1.7462

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Filename: 18122 - A259-Aldsworth Avenue (PM Calibration).j9
Path: P:\18 Jobs\122 Land at Chatsmore Farm - Goring, West Sussex\Technical Assessments\ARCADY\18122 - A259 - Aldsworth Avenue Roundabout
Report generation date: 27/01/2021 16:25:11

»2018 Base, PM
»2024 Base, PM
»2024 Base + Dev, PM
»2033 Base, PM
»2033 Base + Dev , PM

Summary of junction performance

	PM						
	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
	2018 Base						
1 - A259 North	9.1	28.89	0.91	D	61.54	F	-14 % [2 - Ardingly Drive]
2 - Ardingly Drive	2.2	70.80	0.72	F			
3 - A259 Goring Way East	23.1	98.46	1.01	F			
4 - Aldsworth Avenue	5.2	76.63	0.88	F			
5 - Goring Way West	7.3	68.50	0.91	F			
	2024 Base						
1 - A259 North	28.9	77.02	1.01	F	164.48	F	-22 % [2 - Ardingly Drive]
2 - Ardingly Drive	4.6	132.70	0.89	F			
3 - A259 Goring Way East	75.5	305.38	1.17	F			
4 - Aldsworth Avenue	11.5	147.55	1.00	F			
5 - Goring Way West	18.2	145.03	1.03	F			
	2024 Base + Dev						
1 - A259 North	50.1	119.84	1.06	F	261.40	F	-25 % [3 - A259 Goring Way East]
2 - Ardingly Drive	5.0	144.38	0.90	F			
3 - A259 Goring Way East	126.0	540.06	1.26	F			
4 - Aldsworth Avenue	11.6	148.82	1.00	F			
5 - Goring Way West	21.7	167.76	1.05	F			
	2033 Base						
1 - A259 North	62.4	144.58	1.08	F	270.23	F	-27 % [2 - Ardingly Drive]
2 - Ardingly Drive	7.2	191.39	0.98	F			
3 - A259 Goring Way East	112.8	497.71	1.24	F			
4 - Aldsworth Avenue	17.5	204.34	1.06	F			
5 - Goring Way West	30.7	228.57	1.10	F			
	2033 Base + Dev						
1 - A259 North	90.4	217.17	1.12	F	389.65	F	-30 % [3 - A259 Goring Way East]
2 - Ardingly Drive	7.4	196.41	0.98	F			
3 - A259 Goring Way East	178.6	752.44	1.34	F			
4 - Aldsworth Avenue	17.4	203.96	1.05	F			
5 - Goring Way West	35.3	274.01	1.12	F			

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	18122 - A259 / Aldsworth Avenue
Location	
Site number	18-122
Date	18/01/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	18-122
Enumerator	Milestone4-PC\Milestone4 - Newer
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2018 Base	PM	ONE HOUR	16:45	18:15	15	✓
D4	2024 Base	PM	ONE HOUR	16:45	18:15	15	✓
D6	2024 Base + Dev	PM	ONE HOUR	16:45	18:15	15	✓
D8	2033 Base	PM	ONE HOUR	16:45	18:15	15	✓
D10	2033 Base + Dev	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

2018 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	61.54	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-14	2 - Ardingly Drive

Arms

Arms

Arm	Name	Description
1	A259 North	
2	Ardingly Drive	
3	A259 Goring Way East	
4	Aldsworth Avenue	
5	Goring Way West	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A259 North	3.69	7.17	9.4	44.6	41.0	23.0	
2 - Ardingly Drive	4.40	4.46	1.1	10.3	41.0	44.0	
3 - A259 Goring Way East	4.34	6.95	9.4	21.5	41.0	19.0	
4 - Aldsworth Avenue	4.84	6.86	6.8	22.3	41.0	33.0	
5 - Goring Way West	3.62	6.96	17.9	38.5	41.0	26.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A259 North	0.651	1682
2 - Ardingly Drive	0.516	1221
3 - A259 Goring Way East	0.673	1807
4 - Aldsworth Avenue	0.652	1771
5 - Goring Way West	0.670	1795

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

Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
1 - A259 North	Percentage		85.50
2 - Ardingly Drive	Percentage		34.80
3 - A259 Goring Way East	Percentage		59.15
4 - Aldsworth Avenue	Percentage		32.00
5 - Goring Way West	Percentage		41.00

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	2018 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A259 North		ONE HOUR	✓	1095	100.000
2 - Ardingly Drive		ONE HOUR	✓	112	100.000
3 - A259 Goring Way East		ONE HOUR	✓	758	100.000
4 - Aldsworth Avenue		ONE HOUR	✓	239	100.000
5 - Goring Way West		ONE HOUR	✓	373	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	668	105	322
	2 - Ardingly Drive	58	0	26	5	23
	3 - A259 Goring Way East	655	0	0	7	96
	4 - Aldsworth Avenue	171	0	29	1	38
	5 - Goring Way West	219	0	138	13	3

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	0	2	0
	2 - Ardingly Drive	0	0	0	0	0
	3 - A259 Goring Way East	1	0	0	0	6
	4 - Aldsworth Avenue	2	0	0	0	0
	5 - Goring Way West	1	0	7	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A259 North	0.91	28.89	9.1	D	1005	1507
2 - Ardingly Drive	0.72	70.80	2.2	F	103	154
3 - A259 Goring Way East	1.01	98.46	23.1	F	696	1043
4 - Aldsworth Avenue	0.88	76.63	5.2	F	219	329
5 - Goring Way West	0.91	68.50	7.3	F	342	513

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	824	206	136	1355	0.608	818	818	0.0	1.5	6.631	A
2 - Ardingly Drive	84	21	955	252	0.335	82	0	0.0	0.5	21.007	C
3 - A259 Goring Way East	571	143	395	896	0.637	564	642	0.0	1.7	10.636	B
4 - Aldsworth Avenue	180	45	861	380	0.474	176	98	0.0	0.9	17.424	C
5 - Goring Way West	281	70	678	529	0.530	276	359	0.0	1.1	14.004	B

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	984	246	164	1339	0.735	980	981	1.5	2.7	9.889	A
2 - Ardingly Drive	101	25	1143	218	0.463	99	0	0.5	0.8	30.074	D
3 - A259 Goring Way East	681	170	474	865	0.788	675	769	1.7	3.4	18.269	C
4 - Aldsworth Avenue	215	54	1031	345	0.624	212	117	0.9	1.5	26.647	D
5 - Goring Way West	335	84	813	493	0.680	332	430	1.1	2.0	21.797	C

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1206	301	195	1321	0.913	1184	1153	2.7	8.0	23.327	C
2 - Ardingly Drive	123	31	1379	175	0.705	119	0	0.8	2.0	59.612	F
3 - A259 Goring Way East	835	209	571	827	1.010	786	927	3.4	15.5	57.583	F
4 - Aldsworth Avenue	263	66	1216	306	0.860	252	141	1.5	4.2	58.027	F
5 - Goring Way West	411	103	953	456	0.901	395	515	2.0	5.8	50.075	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1206	301	200	1318	0.915	1201	1182	8.0	9.1	28.892	D
2 - Ardingly Drive	123	31	1401	171	0.721	122	0	2.0	2.2	70.802	F
3 - A259 Goring Way East	835	209	581	823	1.014	804	943	15.5	23.1	98.457	F
4 - Aldsworth Avenue	263	66	1242	301	0.875	259	143	4.2	5.2	76.634	F
5 - Goring Way West	411	103	976	449	0.914	405	525	5.8	7.3	68.502	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	984	246	174	1333	0.739	1009	1078	9.1	2.9	11.877	B
2 - Ardingly Drive	101	25	1183	210	0.479	106	0	2.2	1.0	35.812	E
3 - A259 Goring Way East	681	170	491	858	0.794	756	798	23.1	4.4	47.846	E
4 - Aldsworth Avenue	215	54	1125	325	0.661	227	122	5.2	2.1	40.149	E
5 - Goring Way West	335	84	899	470	0.713	353	453	7.3	2.7	34.384	D

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	824	206	142	1352	0.610	830	847	2.9	1.6	6.963	A
2 - Ardingly Drive	84	21	971	249	0.339	86	0	1.0	0.5	22.350	C
3 - A259 Goring Way East	571	143	403	893	0.639	581	655	4.4	1.8	11.905	B
4 - Aldsworth Avenue	180	45	884	375	0.480	185	100	2.1	1.0	19.350	C
5 - Goring Way West	281	70	702	523	0.537	287	367	2.7	1.2	15.614	C

2024 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	164.48	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-22	2 - Ardingly Drive

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	2024 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A259 North		ONE HOUR	✓	1205	100.000
2 - Ardingly Drive		ONE HOUR	✓	124	100.000
3 - A259 Goring Way East		ONE HOUR	✓	854	100.000
4 - Aldsworth Avenue		ONE HOUR	✓	266	100.000
5 - Goring Way West		ONE HOUR	✓	413	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	737	115	353
	2 - Ardingly Drive	66	0	28	5	25
	3 - A259 Goring Way East	742	0	0	8	104
	4 - Aldsworth Avenue	193	0	31	1	41
	5 - Goring Way West	246	0	150	14	3

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	0	2	0
	2 - Ardingly Drive	0	0	0	0	0
	3 - A259 Goring Way East	1	0	0	0	7
	4 - Aldsworth Avenue	2	0	0	0	0
	5 - Goring Way West	1	0	7	7	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A259 North	1.01	77.02	28.9	F	1106	1659
2 - Ardingly Drive	0.89	132.70	4.6	F	114	171
3 - A259 Goring Way East	1.17	305.38	75.5	F	784	1175
4 - Aldsworth Avenue	1.00	147.55	11.5	F	244	366
5 - Goring Way West	1.03	145.03	18.2	F	379	568

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	907	227	147	1349	0.672	899	922	0.0	2.0	7.868	A
2 - Ardingly Drive	93	23	1046	235	0.397	91	0	0.0	0.6	24.511	C
3 - A259 Goring Way East	643	161	433	880	0.730	633	704	0.0	2.6	14.025	B
4 - Aldsworth Avenue	200	50	959	359	0.557	195	106	0.0	1.2	21.417	C
5 - Goring Way West	311	78	763	507	0.613	305	391	0.0	1.5	17.342	C

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1083	271	175	1332	0.813	1075	1096	2.0	4.0	13.572	B
2 - Ardingly Drive	111	28	1251	198	0.562	109	0	0.6	1.2	39.464	E
3 - A259 Goring Way East	768	192	518	847	0.907	750	842	2.6	7.0	32.338	D
4 - Aldsworth Avenue	239	60	1141	322	0.744	234	127	1.2	2.5	38.879	E
5 - Goring Way West	371	93	907	468	0.793	364	467	1.5	3.3	32.500	D

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1327	332	202	1317	1.008	1264	1211	4.0	19.6	44.732	E
2 - Ardingly Drive	137	34	1467	159	0.857	127	0	1.2	3.5	93.645	F
3 - A259 Goring Way East	940	235	608	811	1.159	802	986	7.0	41.5	123.508	F
4 - Aldsworth Avenue	293	73	1262	296	0.988	270	149	2.5	8.1	94.877	F
5 - Goring Way West	455	114	993	445	1.021	419	538	3.3	12.1	86.434	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1327	332	208	1313	1.010	1290	1228	19.6	28.9	77.016	F
2 - Ardingly Drive	137	34	1497	154	0.888	132	0	3.5	4.6	132.701	F
3 - A259 Goring Way East	940	235	622	806	1.167	804	1007	41.5	75.5	271.105	F
4 - Aldsworth Avenue	293	73	1275	294	0.997	279	152	8.1	11.5	147.549	F
5 - Goring Way West	455	114	1005	442	1.029	430	549	12.1	18.2	145.031	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1083	271	200	1318	0.822	1178	1213	28.9	5.2	35.831	E
2 - Ardingly Drive	111	28	1378	175	0.636	122	0	4.6	2.0	75.101	F
3 - A259 Goring Way East	768	192	570	826	0.929	815	930	75.5	63.6	305.378	F
4 - Aldsworth Avenue	239	60	1245	300	0.798	265	140	11.5	5.1	108.948	F
5 - Goring Way West	371	93	997	444	0.836	416	513	18.2	7.1	114.090	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	907	227	159	1342	0.676	919	1151	5.2	2.1	8.752	A
2 - Ardingly Drive	93	23	1078	229	0.407	99	0	2.0	0.7	28.456	D
3 - A259 Goring Way East	643	161	448	874	0.735	861	729	63.6	9.1	158.561	F
4 - Aldsworth Avenue	200	50	1197	310	0.647	213	112	5.1	2.0	40.692	E
5 - Goring Way West	311	78	980	449	0.693	329	429	7.1	2.5	33.694	D

2024 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	261.40	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-25	3 - A259 Goring Way East

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	2024 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A259 North		ONE HOUR	✓	1260	100.000
2 - Ardingly Drive		ONE HOUR	✓	124	100.000
3 - A259 Goring Way East		ONE HOUR	✓	932	100.000
4 - Aldsworth Avenue		ONE HOUR	✓	266	100.000
5 - Goring Way West		ONE HOUR	✓	418	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	789	115	356
	2 - Ardingly Drive	66	0	28	5	25
	3 - A259 Goring Way East	820	0	0	8	104
	4 - Aldsworth Avenue	193	0	31	1	41
	5 - Goring Way West	251	0	150	14	3

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	0	2	0
	2 - Ardingly Drive	0	0	0	0	0
	3 - A259 Goring Way East	1	0	0	0	7
	4 - Aldsworth Avenue	2	0	0	0	0
	5 - Goring Way West	1	0	7	7	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A259 North	1.06	119.84	50.1	F	1156	1734
2 - Ardingly Drive	0.90	144.38	5.0	F	114	171
3 - A259 Goring Way East	1.26	540.06	126.0	F	855	1283
4 - Aldsworth Avenue	1.00	148.82	11.6	F	244	366
5 - Goring Way West	1.05	167.76	21.7	F	384	575

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	949	237	147	1349	0.703	939	980	0.0	2.3	8.600	A
2 - Ardingly Drive	93	23	1086	228	0.409	91	0	0.0	0.7	25.728	D
3 - A259 Goring Way East	702	175	435	880	0.797	687	742	0.0	3.6	17.584	C
4 - Aldsworth Avenue	200	50	1016	347	0.576	195	106	0.0	1.3	22.938	C
5 - Goring Way West	315	79	818	492	0.639	308	393	0.0	1.7	18.904	C

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1133	283	175	1333	0.850	1122	1150	2.3	5.1	16.225	C
2 - Ardingly Drive	111	28	1296	190	0.586	109	0	0.7	1.3	43.071	E
3 - A259 Goring Way East	838	209	519	847	0.990	798	886	3.6	13.5	51.827	F
4 - Aldsworth Avenue	239	60	1191	311	0.769	233	127	1.3	2.8	43.116	E
5 - Goring Way West	376	94	958	455	0.826	367	467	1.7	3.9	37.566	E

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1387	347	200	1318	1.053	1288	1231	5.1	30.0	60.591	F
2 - Ardingly Drive	137	34	1488	155	0.878	127	0	1.3	3.8	101.125	F
3 - A259 Goring Way East	1026	257	597	816	1.258	813	1017	13.5	66.8	190.410	F
4 - Aldsworth Avenue	293	73	1266	296	0.991	271	145	2.8	8.3	97.838	F
5 - Goring Way West	460	115	1012	440	1.045	420	525	3.9	14.0	97.646	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1387	347	205	1315	1.055	1307	1245	30.0	50.1	119.840	F
2 - Ardingly Drive	137	34	1512	151	0.904	132	0	3.8	5.0	144.382	F
3 - A259 Goring Way East	1026	257	609	811	1.265	811	1035	66.8	120.6	423.609	F
4 - Aldsworth Avenue	293	73	1273	294	0.996	280	147	8.3	11.6	148.817	F
5 - Goring Way West	460	115	1020	438	1.050	430	532	14.0	21.7	167.759	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1133	283	202	1317	0.860	1293	1228	50.1	10.0	90.448	F
2 - Ardingly Drive	111	28	1495	154	0.724	119	0	5.0	3.2	110.750	F
3 - A259 Goring Way East	838	209	594	817	1.025	816	1020	120.6	126.0	540.057	F
4 - Aldsworth Avenue	239	60	1265	296	0.808	263	145	11.6	5.5	114.554	F
5 - Goring Way West	376	94	1004	443	0.849	426	524	21.7	9.1	142.212	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	949	237	162	1340	0.708	978	1174	10.0	2.5	10.713	B
2 - Ardingly Drive	93	23	1140	218	0.428	103	0	3.2	0.8	33.438	D
3 - A259 Goring Way East	702	175	460	870	0.807	863	783	126.0	85.7	442.811	F
4 - Aldsworth Avenue	200	50	1210	307	0.653	214	113	5.5	2.1	42.950	E
5 - Goring Way West	315	79	995	445	0.707	340	429	9.1	2.7	40.311	E

2033 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	270.23	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-27	2 - Ardingly Drive

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	2033 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A259 North		ONE HOUR	✓	1282	100.000
2 - Ardingly Drive		ONE HOUR	✓	133	100.000
3 - A259 Goring Way East		ONE HOUR	✓	907	100.000
4 - Aldsworth Avenue		ONE HOUR	✓	283	100.000
5 - Goring Way West		ONE HOUR	✓	439	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	784	122	376
	2 - Ardingly Drive	70	0	30	6	27
	3 - A259 Goring Way East	788	0	0	8	111
	4 - Aldsworth Avenue	205	0	33	1	44
	5 - Goring Way West	262	0	159	15	3

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	0	2	0
	2 - Ardingly Drive	0	0	0	0	0
	3 - A259 Goring Way East	1	0	0	0	6
	4 - Aldsworth Avenue	1	0	0	0	0
	5 - Goring Way West	1	0	8	7	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A259 North	1.08	144.58	62.4	F	1176	1765
2 - Ardingly Drive	0.98	191.39	7.2	F	122	183
3 - A259 Goring Way East	1.24	497.71	112.8	F	832	1248
4 - Aldsworth Avenue	1.06	204.34	17.5	F	260	390
5 - Goring Way West	1.10	228.57	30.7	F	403	604

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	965	241	155	1344	0.718	955	976	0.0	2.5	9.056	A
2 - Ardingly Drive	100	25	1110	224	0.448	97	0	0.0	0.8	27.857	D
3 - A259 Goring Way East	683	171	460	870	0.784	670	747	0.0	3.3	16.950	C
4 - Aldsworth Avenue	213	53	1017	350	0.609	207	113	0.0	1.5	24.360	C
5 - Goring Way West	331	83	808	494	0.669	323	416	0.0	1.9	20.281	C

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1152	288	184	1326	0.869	1139	1147	2.5	5.8	18.047	C
2 - Ardingly Drive	120	30	1323	185	0.647	116	0	0.8	1.6	50.139	F
3 - A259 Goring Way East	815	204	549	835	0.976	781	890	3.3	12.0	48.160	E
4 - Aldsworth Avenue	254	64	1195	313	0.814	247	135	1.5	3.4	49.434	E
5 - Goring Way West	395	99	948	456	0.865	383	494	1.9	4.8	43.520	E

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1412	353	206	1313	1.075	1291	1225	5.8	36.0	69.819	F
2 - Ardingly Drive	146	37	1497	154	0.954	132	0	1.6	5.1	124.956	F
3 - A259 Goring Way East	999	250	622	807	1.238	803	1007	12.0	60.9	176.629	F
4 - Aldsworth Avenue	312	78	1274	296	1.052	280	151	3.4	11.4	121.928	F
5 - Goring Way West	483	121	1003	442	1.095	428	550	4.8	18.6	120.109	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1412	353	210	1311	1.077	1306	1237	36.0	62.4	144.576	F
2 - Ardingly Drive	146	37	1516	150	0.976	138	0	5.1	7.2	191.388	F
3 - A259 Goring Way East	999	250	633	802	1.245	802	1021	60.9	110.1	392.469	F
4 - Aldsworth Avenue	312	78	1281	295	1.057	287	153	11.4	17.5	204.340	F
5 - Goring Way West	483	121	1012	439	1.100	435	557	18.6	30.7	222.597	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1152	288	206	1313	0.877	1293	1228	62.4	27.3	128.120	F
2 - Ardingly Drive	120	30	1499	153	0.781	130	0	7.2	4.6	160.596	F
3 - A259 Goring Way East	815	204	621	807	1.010	805	1007	110.1	112.8	497.708	F
4 - Aldsworth Avenue	254	64	1274	296	0.859	284	152	17.5	10.0	189.522	F
5 - Goring Way West	395	99	1008	440	0.896	427	551	30.7	22.8	228.566	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	965	241	193	1321	0.731	1063	1208	27.3	2.9	19.332	C
2 - Ardingly Drive	100	25	1256	197	0.509	114	0	4.6	1.1	49.167	E
3 - A259 Goring Way East	683	171	519	847	0.806	840	851	112.8	73.6	401.007	F
4 - Aldsworth Avenue	213	53	1230	305	0.698	242	128	10.0	2.7	69.714	F
5 - Goring Way West	331	83	994	444	0.744	407	478	22.8	3.7	110.709	F

2033 Base + Dev , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	389.65	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-30	3 - A259 Goring Way East

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	2033 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A259 North		ONE HOUR	✓	1337	100.000
2 - Ardingly Drive		ONE HOUR	✓	133	100.000
3 - A259 Goring Way East		ONE HOUR	✓	985	100.000
4 - Aldsworth Avenue		ONE HOUR	✓	283	100.000
5 - Goring Way West		ONE HOUR	✓	444	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	836	122	379
	2 - Ardingly Drive	70	0	30	6	27
	3 - A259 Goring Way East	866	0	0	8	111
	4 - Aldsworth Avenue	205	0	33	1	44
	5 - Goring Way West	267	0	159	15	3

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	0	2	0
	2 - Ardingly Drive	0	0	0	0	0
	3 - A259 Goring Way East	1	0	0	0	6
	4 - Aldsworth Avenue	1	0	0	0	0
	5 - Goring Way West	1	0	8	7	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A259 North	1.12	217.17	90.4	F	1227	1840
2 - Ardingly Drive	0.98	196.41	7.4	F	122	183
3 - A259 Goring Way East	1.34	752.44	178.6	F	904	1356
4 - Aldsworth Avenue	1.05	203.96	17.4	F	260	390
5 - Goring Way West	1.12	274.01	35.3	F	407	611

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1007	252	155	1344	0.749	995	1032	0.0	2.9	10.019	B
2 - Ardingly Drive	100	25	1150	216	0.463	97	0	0.0	0.8	29.398	D
3 - A259 Goring Way East	742	185	462	870	0.852	722	785	0.0	4.9	22.049	C
4 - Aldsworth Avenue	213	53	1071	339	0.629	207	113	0.0	1.6	26.234	D
5 - Goring Way West	334	84	860	480	0.697	326	417	0.0	2.1	22.313	C

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1202	300	183	1327	0.906	1183	1185	2.9	7.6	22.431	C
2 - Ardingly Drive	120	30	1366	177	0.675	116	0	0.8	1.8	55.375	F
3 - A259 Goring Way East	885	221	549	836	1.060	812	932	4.9	23.2	77.409	F
4 - Aldsworth Avenue	254	64	1228	306	0.832	246	134	1.6	3.7	53.553	F
5 - Goring Way West	399	100	983	447	0.893	385	491	2.1	5.5	49.666	E

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1472	368	204	1315	1.119	1302	1242	7.6	50.2	90.893	F
2 - Ardingly Drive	146	37	1505	152	0.964	132	0	1.8	5.3	130.797	F
3 - A259 Goring Way East	1085	271	609	812	1.335	811	1029	23.2	91.6	265.855	F
4 - Aldsworth Avenue	312	78	1273	296	1.051	280	147	3.7	11.5	124.176	F
5 - Goring Way West	489	122	1019	437	1.118	426	534	5.5	21.1	134.438	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1472	368	207	1313	1.121	1311	1253	50.2	90.4	200.873	F
2 - Ardingly Drive	146	37	1518	150	0.978	138	0	5.3	7.4	196.407	F
3 - A259 Goring Way East	1085	271	617	809	1.340	809	1039	91.6	160.5	567.390	F
4 - Aldsworth Avenue	312	78	1278	296	1.054	288	148	11.5	17.4	203.964	F
5 - Goring Way West	489	122	1027	435	1.123	432	539	21.1	35.3	253.067	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1202	300	203	1315	0.914	1301	1244	90.4	65.7	217.169	F
2 - Ardingly Drive	120	30	1504	152	0.786	130	0	7.4	4.8	165.840	F
3 - A259 Goring Way East	885	221	606	813	1.089	813	1028	160.5	178.6	752.437	F
4 - Aldsworth Avenue	254	64	1273	296	0.858	285	147	17.4	9.8	188.265	F
5 - Goring Way West	399	100	1024	436	0.915	424	534	35.3	29.0	274.009	F

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1007	252	201	1316	0.765	1254	1215	65.7	3.9	90.153	F
2 - Ardingly Drive	100	25	1455	161	0.622	112	0	4.8	1.9	81.906	F
3 - A259 Goring Way East	742	185	575	826	0.898	821	992	178.6	158.7	739.808	F
4 - Aldsworth Avenue	213	53	1254	300	0.709	241	142	9.8	2.9	73.039	F
5 - Goring Way West	334	84	984	447	0.748	431	511	29.0	4.7	152.460	F

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.1.7462

For sales and distribution information, program advice and maintenance, contact TRL:
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Filename: 18122 - A259-Aldsworth Avenue (AM Calibration).j9
Path: P:\18 Jobs\122 Land at Chatsmore Farm - Goring, West Sussex\Technical Assessments\ARCADY\18122 - A259 - Aldsworth Avenue Roundabout
Report generation date: 27/01/2021 16:21:52

»2018 Base, AM
»2024 Base, AM
»2024 Base + Dev, AM
»2033 Base, AM
»2033 Base + Dev, AM

Summary of junction performance

	AM						
	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
	2018 Base						
1 - A259 North	31.3	85.19	1.02	F	85.13	F	-17 % [2 - Ardingly Drive]
2 - Ardingly Drive	2.2	77.46	0.72	F			
3 - A259 Goring Way East	22.2	102.61	1.02	F			
4 - Aldsworth Avenue	6.1	89.62	0.90	F			
5 - Goring Way West	8.2	58.83	0.92	F			
	2024 Base						
1 - A259 North	100.5	264.17	1.14	F	225.03	F	-25 % [2 - Ardingly Drive]
2 - Ardingly Drive	3.2	106.33	0.81	F			
3 - A259 Goring Way East	60.0	260.26	1.13	F			
4 - Aldsworth Avenue	12.5	159.19	1.01	F			
5 - Goring Way West	22.5	135.08	1.04	F			
	2024 Base + Dev						
1 - A259 North	155.3	446.13	1.22	F	326.57	F	-28 % [2 - Ardingly Drive]
2 - Ardingly Drive	3.3	107.29	0.81	F			
3 - A259 Goring Way East	72.7	325.12	1.16	F			
4 - Aldsworth Avenue	12.3	157.26	1.01	F			
5 - Goring Way West	25.0	147.99	1.05	F			
	2033 Base						
1 - A259 North	151.4	437.06	1.22	F	364.99	F	-29 % [2 - Ardingly Drive]
2 - Ardingly Drive	4.2	130.46	0.86	F			
3 - A259 Goring Way East	89.7	424.92	1.21	F			
4 - Aldsworth Avenue	18.8	218.66	1.07	F			
5 - Goring Way West	39.0	221.90	1.11	F			
	2033 Base + Dev						
1 - A259 North	230.8	641.45	1.30	F	481.52	F	-32 % [2 - Ardingly Drive]
2 - Ardingly Drive	4.2	130.88	0.86	F			
3 - A259 Goring Way East	105.8	498.38	1.24	F			
4 - Aldsworth Avenue	18.5	215.44	1.06	F			
5 - Goring Way West	42.1	245.85	1.12	F			

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	18122 - A259 / Aldsworth Avenue
Location	
Site number	18-122
Date	18/01/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	18-122
Enumerator	Milestone4-PC\Milestone4 - Newer
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2018 Base	AM	ONE HOUR	07:45	09:15	15	✓
D3	2024 Base	AM	ONE HOUR	07:45	09:15	15	✓
D5	2024 Base + Dev	AM	ONE HOUR	07:45	09:15	15	✓
D7	2033 Base	AM	ONE HOUR	07:45	09:15	15	✓
D9	2033 Base + Dev	AM	ONE HOUR	07:45	09:15	15	✓

Analysis Set Details

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

2018 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	85.13	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-17	2 - Ardingly Drive

Arms

Arms

Arm	Name	Description
1	A259 North	
2	Ardingly Drive	
3	A259 Goring Way East	
4	Aldsworth Avenue	
5	Goring Way West	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A259 North	3.69	7.17	9.4	44.6	41.0	23.0	
2 - Ardingly Drive	4.40	4.46	1.1	10.3	41.0	44.0	
3 - A259 Goring Way East	4.34	6.95	9.4	21.5	41.0	19.0	
4 - Aldsworth Avenue	4.84	6.86	6.8	22.3	41.0	33.0	
5 - Goring Way West	3.62	6.96	17.9	38.5	41.0	26.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A259 North	0.651	1682
2 - Ardingly Drive	0.516	1221
3 - A259 Goring Way East	0.673	1806
4 - Aldsworth Avenue	0.652	1771
5 - Goring Way West	0.670	1795

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

Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
1 - A259 North	Percentage		85.50
2 - Ardingly Drive	Percentage		36.00
3 - A259 Goring Way East	Percentage		56.25
4 - Aldsworth Avenue	Percentage		29.50
5 - Goring Way West	Percentage		50.80

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	2018 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A259 North		ONE HOUR	✓	1164	100.000
2 - Ardingly Drive		ONE HOUR	✓	100	100.000
3 - A259 Goring Way East		ONE HOUR	✓	701	100.000
4 - Aldsworth Avenue		ONE HOUR	✓	242	100.000
5 - Goring Way West		ONE HOUR	✓	486	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	698	149	317
	2 - Ardingly Drive	39	0	34	15	12
	3 - A259 Goring Way East	614	0	2	8	77
	4 - Aldsworth Avenue	177	0	31	1	33
	5 - Goring Way West	270	0	184	26	6

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	2	2	1
	2 - Ardingly Drive	0	0	0	0	0
	3 - A259 Goring Way East	2	0	0	0	13
	4 - Aldsworth Avenue	2	0	0	0	0
	5 - Goring Way West	0	0	5	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A259 North	1.02	85.19	31.3	F	1068	1602
2 - Ardingly Drive	0.72	77.46	2.2	F	92	138
3 - A259 Goring Way East	1.02	102.61	22.2	F	643	965
4 - Aldsworth Avenue	0.90	89.62	6.1	F	222	333
5 - Goring Way West	0.92	58.83	8.2	F	446	669

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	876	219	186	1308	0.670	868	816	0.0	2.0	8.061	A
2 - Ardingly Drive	75	19	1054	240	0.314	74	0	0.0	0.4	21.450	C
3 - A259 Goring Way East	528	132	421	828	0.637	521	707	0.0	1.7	11.482	B
4 - Aldsworth Avenue	182	46	793	361	0.505	178	148	0.0	1.0	19.338	C
5 - Goring Way West	366	91	640	676	0.541	361	331	0.0	1.1	11.288	B

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1046	262	223	1286	0.813	1038	978	2.0	4.0	14.042	B
2 - Ardingly Drive	90	22	1261	200	0.448	89	0	0.4	0.8	31.796	D
3 - A259 Goring Way East	630	158	504	797	0.790	623	846	1.7	3.4	19.899	C
4 - Aldsworth Avenue	218	54	949	331	0.658	214	177	1.0	1.8	30.107	D
5 - Goring Way West	437	109	767	633	0.690	433	396	1.1	2.1	17.685	C

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1282	320	266	1262	1.016	1215	1150	4.0	20.6	48.075	E
2 - Ardingly Drive	110	28	1481	159	0.693	106	0	0.8	1.9	63.307	F
3 - A259 Goring Way East	772	193	591	765	1.009	726	995	3.4	14.9	60.205	F
4 - Aldsworth Avenue	266	67	1109	300	0.889	254	208	1.8	4.9	65.684	F
5 - Goring Way West	535	134	899	588	0.910	517	464	2.1	6.6	42.740	E

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1282	320	272	1258	1.018	1239	1178	20.6	31.3	85.191	F
2 - Ardingly Drive	110	28	1511	153	0.719	109	0	1.9	2.2	77.456	F
3 - A259 Goring Way East	772	193	604	760	1.015	742	1016	14.9	22.2	102.611	F
4 - Aldsworth Avenue	266	67	1133	295	0.904	261	213	4.9	6.1	89.624	F
5 - Goring Way West	535	134	921	581	0.921	529	474	6.6	8.2	58.830	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1046	262	236	1279	0.818	1151	1073	31.3	5.1	40.475	E
2 - Ardingly Drive	90	22	1387	177	0.509	94	0	2.2	1.1	45.544	E
3 - A259 Goring Way East	630	158	554	779	0.809	699	927	22.2	5.0	57.603	F
4 - Aldsworth Avenue	218	54	1058	309	0.703	231	195	6.1	2.7	51.293	F
5 - Goring Way West	437	109	851	605	0.723	458	439	8.2	2.8	27.434	D

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	876	219	192	1304	0.672	888	848	5.1	2.1	8.901	A
2 - Ardingly Drive	75	19	1080	235	0.321	78	0	1.1	0.5	23.286	C
3 - A259 Goring Way East	528	132	432	824	0.641	541	726	5.0	1.8	13.233	B
4 - Aldsworth Avenue	182	46	821	356	0.512	188	152	2.7	1.1	22.279	C
5 - Goring Way West	366	91	668	666	0.549	372	341	2.8	1.3	12.481	B

2024 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	225.03	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-25	2 - Ardingly Drive

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	2024 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A259 North		ONE HOUR	✓	1300	100.000
2 - Ardingly Drive		ONE HOUR	✓	109	100.000
3 - A259 Goring Way East		ONE HOUR	✓	779	100.000
4 - Aldsworth Avenue		ONE HOUR	✓	267	100.000
5 - Goring Way West		ONE HOUR	✓	535	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	781	167	352
	2 - Ardingly Drive	43	0	37	16	13
	3 - A259 Goring Way East	684	0	2	9	84
	4 - Aldsworth Avenue	196	0	34	1	36
	5 - Goring Way West	300	0	200	28	7

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	2	2	1
	2 - Ardingly Drive	0	0	0	0	0
	3 - A259 Goring Way East	2	0	0	0	13
	4 - Aldsworth Avenue	2	0	0	0	0
	5 - Goring Way West	0	0	6	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A259 North	1.14	264.17	100.5	F	1193	1789
2 - Ardingly Drive	0.81	106.33	3.2	F	100	150
3 - A259 Goring Way East	1.13	260.26	60.0	F	715	1072
4 - Aldsworth Avenue	1.01	159.19	12.5	F	245	368
5 - Goring Way West	1.04	135.08	22.5	F	491	736

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	979	245	201	1298	0.754	967	904	0.0	2.9	10.561	B
2 - Ardingly Drive	82	21	1168	218	0.377	80	0	0.0	0.6	25.689	D
3 - A259 Goring Way East	586	147	465	812	0.723	577	783	0.0	2.5	14.761	B
4 - Aldsworth Avenue	201	50	878	344	0.584	196	164	0.0	1.3	23.466	C
5 - Goring Way West	403	101	709	651	0.619	397	365	0.0	1.6	13.857	B

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1169	292	240	1275	0.916	1147	1076	2.9	8.2	24.761	C
2 - Ardingly Drive	98	24	1388	176	0.556	96	0	0.6	1.1	43.614	E
3 - A259 Goring Way East	700	175	553	779	0.899	684	930	2.5	6.5	33.157	D
4 - Aldsworth Avenue	240	60	1042	313	0.768	234	195	1.3	2.8	42.923	E
5 - Goring Way West	481	120	843	605	0.795	474	434	1.6	3.4	25.962	D

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1431	358	277	1254	1.141	1244	1205	8.2	55.1	102.599	F
2 - Ardingly Drive	120	30	1521	151	0.796	114	0	1.1	2.7	85.259	F
3 - A259 Goring Way East	858	214	608	759	1.131	747	1026	6.5	34.1	113.454	F
4 - Aldsworth Avenue	294	73	1141	293	1.002	270	215	2.8	8.7	101.589	F
5 - Goring Way West	589	147	937	573	1.027	545	475	3.4	14.4	76.791	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1431	358	283	1251	1.144	1249	1226	55.1	100.5	231.704	F
2 - Ardingly Drive	120	30	1532	149	0.808	118	0	2.7	3.2	106.326	F
3 - A259 Goring Way East	858	214	614	756	1.134	754	1036	34.1	60.0	236.185	F
4 - Aldsworth Avenue	294	73	1152	291	1.009	279	217	8.7	12.5	159.194	F
5 - Goring Way West	589	147	952	568	1.037	557	479	14.4	22.5	135.082	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1169	292	275	1255	0.931	1243	1198	100.5	82.0	264.168	F
2 - Ardingly Drive	98	24	1518	151	0.648	102	0	3.2	2.1	78.534	F
3 - A259 Goring Way East	700	175	600	762	0.920	749	1020	60.0	47.8	260.260	F
4 - Aldsworth Avenue	240	60	1137	294	0.816	266	213	12.5	6.0	126.239	F
5 - Goring Way West	481	120	930	576	0.836	543	473	22.5	7.0	100.930	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	979	245	215	1290	0.759	1274	1085	82.0	8.1	132.602	F
2 - Ardingly Drive	82	21	1490	157	0.523	86	0	2.1	1.2	52.676	F
3 - A259 Goring Way East	586	147	594	764	0.768	748	982	47.8	7.3	140.531	F
4 - Aldsworth Avenue	201	50	1134	295	0.682	215	208	6.0	2.4	50.579	F
5 - Goring Way West	403	101	879	593	0.679	422	470	7.0	2.3	23.006	C

2024 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	326.57	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-28	2 - Ardingly Drive

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	2024 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A259 North		ONE HOUR	✓	1391	100.000
2 - Ardingly Drive		ONE HOUR	✓	109	100.000
3 - A259 Goring Way East		ONE HOUR	✓	810	100.000
4 - Aldsworth Avenue		ONE HOUR	✓	267	100.000
5 - Goring Way West		ONE HOUR	✓	537	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	867	167	357
	2 - Ardingly Drive	43	0	37	16	13
	3 - A259 Goring Way East	715	0	2	9	84
	4 - Aldsworth Avenue	196	0	34	1	36
	5 - Goring Way West	302	0	200	28	7

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	2	2	1
	2 - Ardingly Drive	0	0	0	0	0
	3 - A259 Goring Way East	2	0	0	0	13
	4 - Aldsworth Avenue	2	0	0	0	0
	5 - Goring Way West	0	0	6	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A259 North	1.22	446.13	155.3	F	1276	1915
2 - Ardingly Drive	0.81	107.29	3.3	F	100	150
3 - A259 Goring Way East	1.16	325.12	72.7	F	743	1115
4 - Aldsworth Avenue	1.01	157.26	12.3	F	245	368
5 - Goring Way West	1.05	147.99	25.0	F	493	739

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1047	262	201	1298	0.807	1032	927	0.0	3.9	12.878	B
2 - Ardingly Drive	82	21	1233	206	0.399	80	0	0.0	0.6	28.058	D
3 - A259 Goring Way East	610	152	468	811	0.752	599	845	0.0	2.8	16.179	C
4 - Aldsworth Avenue	201	50	903	340	0.592	196	164	0.0	1.4	24.176	C
5 - Goring Way West	404	101	730	643	0.629	398	368	0.0	1.6	14.322	B

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1250	313	240	1275	0.981	1207	1100	3.9	14.8	38.237	E
2 - Ardingly Drive	98	24	1447	165	0.594	95	0	0.6	1.3	49.880	E
3 - A259 Goring Way East	728	182	549	781	0.933	706	993	2.8	8.3	39.603	E
4 - Aldsworth Avenue	240	60	1063	309	0.778	234	192	1.4	2.9	44.786	E
5 - Goring Way West	483	121	865	598	0.808	475	432	1.6	3.6	27.568	D

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1532	383	275	1255	1.220	1251	1220	14.8	84.8	152.958	F
2 - Ardingly Drive	120	30	1526	150	0.802	114	0	1.3	2.8	88.445	F
3 - A259 Goring Way East	892	223	583	768	1.161	760	1057	8.3	41.2	132.051	F
4 - Aldsworth Avenue	294	73	1139	294	1.000	271	205	2.9	8.7	102.011	F
5 - Goring Way West	591	148	952	568	1.041	543	457	3.6	15.7	82.358	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1532	383	281	1252	1.223	1251	1239	84.8	154.9	350.938	F
2 - Ardingly Drive	120	30	1532	149	0.808	118	0	2.8	3.3	107.290	F
3 - A259 Goring Way East	892	223	587	767	1.163	766	1064	41.2	72.7	278.355	F
4 - Aldsworth Avenue	294	73	1146	292	1.005	280	206	8.7	12.3	157.264	F
5 - Goring Way West	591	148	966	564	1.049	554	460	15.7	25.0	147.992	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1250	313	277	1254	0.997	1249	1216	154.9	155.3	446.132	F
2 - Ardingly Drive	98	24	1526	150	0.654	102	0	3.3	2.2	80.803	F
3 - A259 Goring Way East	728	182	575	771	0.944	761	1053	72.7	64.5	325.120	F
4 - Aldsworth Avenue	240	60	1133	295	0.814	266	203	12.3	5.8	123.452	F
5 - Goring Way West	483	121	944	571	0.846	549	455	25.0	8.3	118.186	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1047	262	217	1288	0.813	1280	1105	155.3	97.1	356.008	F
2 - Ardingly Drive	82	21	1498	155	0.528	86	0	2.2	1.2	54.108	F
3 - A259 Goring Way East	610	152	568	774	0.788	762	1016	64.5	26.4	218.894	F
4 - Aldsworth Avenue	201	50	1132	295	0.681	215	198	5.8	2.4	49.871	E
5 - Goring Way West	404	101	894	588	0.688	428	452	8.3	2.4	25.353	D

2033 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	364.99	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-29	2 - Ardingly Drive

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	2033 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A259 North		ONE HOUR	✓	1382	100.000
2 - Ardingly Drive		ONE HOUR	✓	116	100.000
3 - A259 Goring Way East		ONE HOUR	✓	827	100.000
4 - Aldsworth Avenue		ONE HOUR	✓	284	100.000
5 - Goring Way West		ONE HOUR	✓	569	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	830	177	375
	2 - Ardingly Drive	46	0	39	17	14
	3 - A259 Goring Way East	727	0	2	9	89
	4 - Aldsworth Avenue	209	0	36	1	38
	5 - Goring Way West	319	0	213	30	7

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	2	2	1
	2 - Ardingly Drive	0	0	0	0	0
	3 - A259 Goring Way East	2	0	0	0	13
	4 - Aldsworth Avenue	1	0	0	0	0
	5 - Goring Way West	0	0	6	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A259 North	1.22	437.06	151.4	F	1268	1902
2 - Ardingly Drive	0.86	130.46	4.2	F	106	160
3 - A259 Goring Way East	1.21	424.92	89.7	F	759	1138
4 - Aldsworth Avenue	1.07	218.66	18.8	F	261	391
5 - Goring Way West	1.11	221.90	39.0	F	522	783

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1040	260	213	1291	0.806	1025	958	0.0	3.9	12.880	B
2 - Ardingly Drive	87	22	1238	205	0.427	85	0	0.0	0.7	29.377	D
3 - A259 Goring Way East	623	156	494	801	0.777	610	829	0.0	3.2	17.787	C
4 - Aldsworth Avenue	214	53	930	337	0.635	207	173	0.0	1.6	26.685	D
5 - Goring Way West	428	107	751	637	0.672	421	387	0.0	1.9	16.106	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1242	311	253	1268	0.980	1199	1129	3.9	14.7	38.160	E
2 - Ardingly Drive	104	26	1452	164	0.636	101	0	0.7	1.5	54.657	F
3 - A259 Goring Way East	743	186	579	769	0.966	713	974	3.2	10.7	48.118	E
4 - Aldsworth Avenue	255	64	1089	306	0.835	247	203	1.6	3.8	54.241	F
5 - Goring Way West	512	128	883	593	0.863	500	453	1.9	4.9	34.819	D

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1522	380	282	1252	1.216	1248	1224	14.7	83.2	150.830	F
2 - Ardingly Drive	128	32	1530	149	0.856	120	0	1.5	3.5	102.276	F
3 - A259 Goring Way East	911	228	615	756	1.204	751	1035	10.7	50.5	160.942	F
4 - Aldsworth Avenue	313	78	1151	294	1.065	279	216	3.8	12.2	130.000	F
5 - Goring Way West	626	157	951	569	1.100	555	478	4.9	22.9	108.908	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1522	380	286	1249	1.218	1249	1238	83.2	151.4	344.236	F
2 - Ardingly Drive	128	32	1535	148	0.862	125	0	3.5	4.2	130.462	F
3 - A259 Goring Way East	911	228	619	755	1.206	754	1040	50.5	89.7	344.297	F
4 - Aldsworth Avenue	313	78	1156	293	1.068	286	217	12.2	18.8	218.656	F
5 - Goring Way West	626	157	962	566	1.107	562	480	22.9	39.0	213.335	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1242	311	282	1252	0.992	1243	1229	151.4	151.3	437.061	F
2 - Ardingly Drive	104	26	1524	150	0.695	110	0	4.2	2.7	97.731	F
3 - A259 Goring Way East	743	186	606	759	0.979	759	1028	89.7	85.7	424.922	F
4 - Aldsworth Avenue	255	64	1152	293	0.870	283	214	18.8	11.9	210.584	F
5 - Goring Way West	512	128	958	567	0.902	553	477	39.0	28.6	221.899	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1040	260	267	1260	0.826	1252	1179	151.3	98.4	360.177	F
2 - Ardingly Drive	87	22	1519	151	0.577	92	0	2.7	1.5	64.464	F
3 - A259 Goring Way East	623	156	596	763	0.816	754	1014	85.7	52.8	332.508	F
4 - Aldsworth Avenue	214	53	1140	296	0.723	249	211	11.9	3.2	92.175	F
5 - Goring Way West	428	107	917	581	0.737	529	472	28.6	3.4	94.734	F

2033 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	481.52	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-32	2 - Ardingly Drive

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	2033 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A259 North		ONE HOUR	✓	1473	100.000
2 - Ardingly Drive		ONE HOUR	✓	116	100.000
3 - A259 Goring Way East		ONE HOUR	✓	858	100.000
4 - Aldsworth Avenue		ONE HOUR	✓	284	100.000
5 - Goring Way West		ONE HOUR	✓	571	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	916	177	380
	2 - Ardingly Drive	46	0	39	17	14
	3 - A259 Goring Way East	758	0	2	9	89
	4 - Aldsworth Avenue	209	0	36	1	38
	5 - Goring Way West	321	0	213	30	7

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A259 North	2 - Ardingly Drive	3 - A259 Goring Way East	4 - Aldsworth Avenue	5 - Goring Way West
From	1 - A259 North	0	0	2	2	1
	2 - Ardingly Drive	0	0	0	0	0
	3 - A259 Goring Way East	2	0	0	0	13
	4 - Aldsworth Avenue	1	0	0	0	0
	5 - Goring Way West	0	0	6	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A259 North	1.30	641.45	230.8	F	1352	2027
2 - Ardingly Drive	0.86	130.88	4.2	F	106	160
3 - A259 Goring Way East	1.24	498.38	105.8	F	787	1181
4 - Aldsworth Avenue	1.06	215.44	18.5	F	261	391
5 - Goring Way West	1.12	245.85	42.1	F	524	786

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1109	277	213	1291	0.859	1088	981	0.0	5.3	16.308	C
2 - Ardingly Drive	87	22	1301	193	0.453	84	0	0.0	0.8	32.362	D
3 - A259 Goring Way East	646	161	495	801	0.806	631	890	0.0	3.7	19.752	C
4 - Aldsworth Avenue	214	53	954	332	0.644	207	173	0.0	1.7	27.544	D
5 - Goring Way West	430	107	772	630	0.682	422	389	0.0	2.0	16.706	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1324	331	253	1268	1.044	1236	1149	5.3	27.3	59.452	F
2 - Ardingly Drive	104	26	1489	157	0.665	101	0	0.8	1.7	60.503	F
3 - A259 Goring Way East	771	193	568	774	0.996	732	1022	3.7	13.7	57.020	F
4 - Aldsworth Avenue	255	64	1101	303	0.842	246	198	1.7	3.9	55.844	F
5 - Goring Way West	513	128	901	586	0.876	500	446	2.0	5.3	37.093	E

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1622	405	280	1253	1.295	1251	1237	27.3	119.9	219.936	F
2 - Ardingly Drive	128	32	1531	149	0.858	120	0	1.7	3.5	104.735	F
3 - A259 Goring Way East	945	236	590	766	1.233	763	1062	13.7	59.2	185.331	F
4 - Aldsworth Avenue	313	78	1146	295	1.062	280	206	3.9	12.1	129.790	F
5 - Goring Way West	629	157	965	565	1.113	552	461	5.3	24.5	116.038	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1622	405	284	1251	1.297	1250	1250	119.9	212.8	484.163	F
2 - Ardingly Drive	128	32	1534	148	0.861	125	0	3.5	4.2	130.877	F
3 - A259 Goring Way East	945	236	593	765	1.235	764	1066	59.2	104.3	393.922	F
4 - Aldsworth Avenue	313	78	1150	294	1.064	287	207	12.1	18.5	215.441	F
5 - Goring Way West	629	157	975	561	1.120	558	462	24.5	42.1	229.857	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1324	331	280	1253	1.057	1252	1238	212.8	230.8	641.446	F
2 - Ardingly Drive	104	26	1532	149	0.702	110	0	4.2	2.8	100.566	F
3 - A259 Goring Way East	771	193	583	768	1.004	765	1059	104.3	105.8	498.378	F
4 - Aldsworth Avenue	255	64	1144	295	0.865	284	205	18.5	11.3	204.147	F
5 - Goring Way West	513	128	968	564	0.910	551	460	42.1	32.7	245.845	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A259 North	1109	277	273	1257	0.882	1251	1201	230.8	195.2	613.233	F
2 - Ardingly Drive	87	22	1524	150	0.581	92	0	2.8	1.6	66.217	F
3 - A259 Goring Way East	646	161	571	773	0.836	766	1046	105.8	75.8	428.227	F
4 - Aldsworth Avenue	214	53	1135	297	0.721	247	201	11.3	3.1	86.574	F
5 - Goring Way West	430	107	929	577	0.745	545	453	32.7	3.9	119.167	F

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.1.7462

For sales and distribution information, program advice and maintenance, contact TRL:
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Filename: A259 - Ferring Lane junction.j9
Path: P:\18 Jobs\122 Land at Chatsmore Farm - Goring, West Sussex\Technical Assessments\PICADY\18122 - A259 - Ferring Lane
Report generation date: 27/01/2021 14:51:36

»2018 Base, AM
»2018 Base, PM
»2024 Base , AM
»2024 Base, PM
»2024 Base + Dev, AM
»2024 Base + Dev, PM
»2033 Base , AM
»2033 Base, PM
»2033 Base + Dev, AM
»2033 Base + Dev, PM

Summary of junction performance

	AM							PM						
	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
2018 Base														
Stream B-AC	0.0	8.07	0.05	A	0.06	A	103 % [Stream B-AC]	0.1	8.93	0.08	A	0.10	A	80 % [Stream B-AC]
Stream C-B	0.0	0.00	0.00	A				0.0	0.00	0.00	A			
2024 Base														
Stream B-AC	0.1	8.91	0.06	A	0.07	A	80 % [Stream B-AC]	0.1	10.30	0.09	B	0.11	A	57 % [Stream B-AC]
Stream C-B	0.0	0.00	0.00	A				0.0	0.00	0.00	A			
2024 Base + Dev														
Stream B-AC	0.1	9.03	0.06	A	0.07	A	78 % [Stream B-AC]	0.1	10.40	0.09	B	0.11	A	56 % [Stream B-AC]
Stream C-B	0.0	0.00	0.00	A				0.0	0.00	0.00	A			
2033 Base														
Stream B-AC	0.1	9.45	0.06	A	0.07	A	70 % [Stream B-AC]	0.1	11.15	0.11	B	0.12	A	48 % [Stream B-AC]
Stream C-B	0.0	0.00	0.00	A				0.0	0.00	0.00	A			
2033 Base + Dev														
Stream B-AC	0.1	9.58	0.06	A	0.07	A	68 % [Stream B-AC]	0.1	11.26	0.11	B	0.12	A	47 % [Stream B-AC]
Stream C-B	0.0	0.00	0.00	A				0.0	0.00	0.00	A			

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	04/11/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	mtp\MTPGeneral
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2018 Base	AM	ONE HOUR	07:45	09:15	15	✓
D2	2018 Base	PM	ONE HOUR	16:45	18:15	15	✓
D3	2024 Base	AM	ONE HOUR	07:45	09:15	15	✓
D4	2024 Base	PM	ONE HOUR	16:45	18:15	15	✓
D5	2024 Base + Dev	AM	ONE HOUR	07:45	09:15	15	✓
D6	2024 Base + Dev	PM	ONE HOUR	16:45	18:15	15	✓
D7	2033 Base	AM	ONE HOUR	07:45	09:15	15	✓
D8	2033 Base	PM	ONE HOUR	16:45	18:15	15	✓
D9	2033 Base + Dev	AM	ONE HOUR	07:45	09:15	15	✓
D10	2033 Base + Dev	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

2018 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.06	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	103	Stream B-AC

Arms

Arms

Arm	Name	Description	Arm type
A	untitled		Major
B	untitled		Minor
C	untitled		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	8.80			94.0		-

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	4.68	0	71

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	598	0.096	0.242	0.152	0.346
B-C	781	0.105	0.266	-	-
C-B	628	0.214	0.214	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2018 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1070	100.000
B		ONE HOUR	✓	20	100.000
C		ONE HOUR	✓	1424	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	53	1017
	B	0	0	20
	C	1424	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	8	3
	B	0	0	0
	C	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.05	8.07	0.0	A	18	28
C-A					1307	1960
C-B	0.00	0.00	0.0	A	0	0
A-B					49	73
A-C					933	1400

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	15	4	567	0.027	15	0.0	0.0	6.521	A
C-A	1072	268			1072				
C-B	0	0	451	0.000	0	0.0	0.0	0.000	A
A-B	40	10			40				
A-C	766	191			766				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	18	4	525	0.034	18	0.0	0.0	7.092	A
C-A	1280	320			1280				
C-B	0	0	416	0.000	0	0.0	0.0	0.000	A
A-B	48	12			48				
A-C	914	229			914				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	22	6	468	0.047	22	0.0	0.0	8.070	A
C-A	1568	392			1568				
C-B	0	0	368	0.000	0	0.0	0.0	0.000	A
A-B	58	15			58				
A-C	1120	280			1120				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	22	6	468	0.047	22	0.0	0.0	8.071	A
C-A	1568	392			1568				
C-B	0	0	368	0.000	0	0.0	0.0	0.000	A
A-B	58	15			58				
A-C	1120	280			1120				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	18	4	525	0.034	18	0.0	0.0	7.094	A
C-A	1280	320			1280				
C-B	0	0	416	0.000	0	0.0	0.0	0.000	A
A-B	48	12			48				
A-C	914	229			914				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	15	4	567	0.027	15	0.0	0.0	6.522	A
C-A	1072	268			1072				
C-B	0	0	451	0.000	0	0.0	0.0	0.000	A
A-B	40	10			40				
A-C	766	191			766				

2018 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.10	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	80	Stream B-AC

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	2018 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1218	100.000
B		ONE HOUR	✓	30	100.000
C		ONE HOUR	✓	1385	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	83	1135
	B	0	0	30
	C	1385	0	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.08	8.93	0.1	A	28	41
C-A					1271	1906
C-B	0.00	0.00	0.0	A	0	0
A-B					76	114
A-C					1041	1562

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	23	6	545	0.041	22	0.0	0.0	6.885	A
C-A	1043	261			1043				
C-B	0	0	430	0.000	0	0.0	0.0	0.000	A
A-B	62	16			62				
A-C	854	214			854				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	27	7	499	0.054	27	0.0	0.1	7.620	A
C-A	1245	311			1245				
C-B	0	0	392	0.000	0	0.0	0.0	0.000	A
A-B	75	19			75				
A-C	1020	255			1020				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	33	8	436	0.076	33	0.1	0.1	8.930	A
C-A	1525	381			1525				
C-B	0	0	339	0.000	0	0.0	0.0	0.000	A
A-B	91	23			91				
A-C	1250	312			1250				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	33	8	436	0.076	33	0.1	0.1	8.933	A
C-A	1525	381			1525				
C-B	0	0	339	0.000	0	0.0	0.0	0.000	A
A-B	91	23			91				
A-C	1250	312			1250				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	27	7	499	0.054	27	0.1	0.1	7.623	A
C-A	1245	311			1245				
C-B	0	0	392	0.000	0	0.0	0.0	0.000	A
A-B	75	19			75				
A-C	1020	255			1020				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	23	6	545	0.041	23	0.1	0.0	6.889	A
C-A	1043	261			1043				
C-B	0	0	430	0.000	0	0.0	0.0	0.000	A
A-B	62	16			62				
A-C	854	214			854				

2024 Base , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.07	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	80	Stream B-AC

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	2024 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1205	100.000
B		ONE HOUR	✓	22	100.000
C		ONE HOUR	✓	1624	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	58	1147
	B	0	0	22
	C	1624	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	7	3
	B	0	0	0
	C	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.06	8.91	0.1	A	20	30
C-A					1490	2235
C-B	0.00	0.00	0.0	A	0	0
A-B					53	80
A-C					1053	1579

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	17	4	540	0.031	16	0.0	0.0	6.876	A
C-A	1223	306			1223				
C-B	0	0	428	0.000	0	0.0	0.0	0.000	A
A-B	44	11			44				
A-C	864	216			864				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	20	5	493	0.040	20	0.0	0.0	7.606	A
C-A	1460	365			1460				
C-B	0	0	389	0.000	0	0.0	0.0	0.000	A
A-B	52	13			52				
A-C	1031	258			1031				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	24	6	428	0.057	24	0.0	0.1	8.908	A
C-A	1788	447			1788				
C-B	0	0	336	0.000	0	0.0	0.0	0.000	A
A-B	64	16			64				
A-C	1263	316			1263				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	24	6	428	0.057	24	0.1	0.1	8.909	A
C-A	1788	447			1788				
C-B	0	0	336	0.000	0	0.0	0.0	0.000	A
A-B	64	16			64				
A-C	1263	316			1263				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	20	5	493	0.040	20	0.1	0.0	7.611	A
C-A	1460	365			1460				
C-B	0	0	389	0.000	0	0.0	0.0	0.000	A
A-B	52	13			52				
A-C	1031	258			1031				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	17	4	540	0.031	17	0.0	0.0	6.879	A
C-A	1223	306			1223				
C-B	0	0	428	0.000	0	0.0	0.0	0.000	A
A-B	44	11			44				
A-C	864	216			864				

2024 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.11	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	57	Stream B-AC

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	2024 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1392	100.000
B		ONE HOUR	✓	33	100.000
C		ONE HOUR	✓	1555	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	90	1302
	B	0	0	33
	C	1555	0	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.09	10.30	0.1	B	30	45
C-A					1427	2140
C-B	0.00	0.00	0.0	A	0	0
A-B					83	124
A-C					1195	1792

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	25	6	511	0.049	25	0.0	0.1	7.399	A
C-A	1171	293			1171				
C-B	0	0	402	0.000	0	0.0	0.0	0.000	A
A-B	68	17			68				
A-C	980	245			980				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	30	7	458	0.065	30	0.1	0.1	8.394	A
C-A	1398	349			1398				
C-B	0	0	358	0.000	0	0.0	0.0	0.000	A
A-B	81	20			81				
A-C	1170	293			1170				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	36	9	386	0.094	36	0.1	0.1	10.286	B
C-A	1712	428			1712				
C-B	0	0	298	0.000	0	0.0	0.0	0.000	A
A-B	99	25			99				
A-C	1434	358			1434				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	36	9	386	0.094	36	0.1	0.1	10.297	B
C-A	1712	428			1712				
C-B	0	0	298	0.000	0	0.0	0.0	0.000	A
A-B	99	25			99				
A-C	1434	358			1434				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	30	7	458	0.065	30	0.1	0.1	8.402	A
C-A	1398	349			1398				
C-B	0	0	358	0.000	0	0.0	0.0	0.000	A
A-B	81	20			81				
A-C	1170	293			1170				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	25	6	511	0.049	25	0.1	0.1	7.407	A
C-A	1171	293			1171				
C-B	0	0	402	0.000	0	0.0	0.0	0.000	A
A-B	68	17			68				
A-C	980	245			980				

2024 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.07	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	78	Stream B-AC

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	2024 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1223	100.000
B		ONE HOUR	✓	22	100.000
C		ONE HOUR	✓	1631	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	58	1165
	B	0	0	22
	C	1631	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	7	3
	B	0	0	0
	C	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.06	9.03	0.1	A	20	30
C-A					1497	2245
C-B	0.00	0.00	0.0	A	0	0
A-B					53	80
A-C					1069	1604

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	17	4	536	0.031	16	0.0	0.0	6.925	A
C-A	1228	307			1228				
C-B	0	0	425	0.000	0	0.0	0.0	0.000	A
A-B	44	11			44				
A-C	877	219			877				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	20	5	489	0.040	20	0.0	0.0	7.678	A
C-A	1466	367			1466				
C-B	0	0	386	0.000	0	0.0	0.0	0.000	A
A-B	52	13			52				
A-C	1047	262			1047				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	24	6	423	0.057	24	0.0	0.1	9.030	A
C-A	1796	449			1796				
C-B	0	0	331	0.000	0	0.0	0.0	0.000	A
A-B	64	16			64				
A-C	1283	321			1283				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	24	6	423	0.057	24	0.1	0.1	9.031	A
C-A	1796	449			1796				
C-B	0	0	331	0.000	0	0.0	0.0	0.000	A
A-B	64	16			64				
A-C	1283	321			1283				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	20	5	489	0.040	20	0.1	0.0	7.682	A
C-A	1466	367			1466				
C-B	0	0	386	0.000	0	0.0	0.0	0.000	A
A-B	52	13			52				
A-C	1047	262			1047				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	17	4	536	0.031	17	0.0	0.0	6.931	A
C-A	1228	307			1228				
C-B	0	0	425	0.000	0	0.0	0.0	0.000	A
A-B	44	11			44				
A-C	877	219			877				

2024 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.11	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	56	Stream B-AC

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	2024 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1403	100.000
B		ONE HOUR	✓	33	100.000
C		ONE HOUR	✓	1572	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	90	1313
	B	0	0	33
	C	1572	0	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.09	10.40	0.1	B	30	45
C-A					1442	2164
C-B	0.00	0.00	0.0	A	0	0
A-B					83	124
A-C					1205	1807

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	25	6	509	0.049	25	0.0	0.1	7.434	A
C-A	1183	296			1183				
C-B	0	0	400	0.000	0	0.0	0.0	0.000	A
A-B	68	17			68				
A-C	988	247			988				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	30	7	456	0.065	30	0.1	0.1	8.447	A
C-A	1413	353			1413				
C-B	0	0	356	0.000	0	0.0	0.0	0.000	A
A-B	81	20			81				
A-C	1180	295			1180				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	36	9	383	0.095	36	0.1	0.1	10.389	B
C-A	1731	433			1731				
C-B	0	0	295	0.000	0	0.0	0.0	0.000	A
A-B	99	25			99				
A-C	1446	361			1446				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	36	9	383	0.095	36	0.1	0.1	10.397	B
C-A	1731	433			1731				
C-B	0	0	295	0.000	0	0.0	0.0	0.000	A
A-B	99	25			99				
A-C	1446	361			1446				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	30	7	456	0.065	30	0.1	0.1	8.456	A
C-A	1413	353			1413				
C-B	0	0	356	0.000	0	0.0	0.0	0.000	A
A-B	81	20			81				
A-C	1180	295			1180				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	25	6	509	0.049	25	0.1	0.1	7.445	A
C-A	1183	296			1183				
C-B	0	0	400	0.000	0	0.0	0.0	0.000	A
A-B	68	17			68				
A-C	988	247			988				

2033 Base , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.07	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	70	Stream B-AC

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	2033 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1280	100.000
B		ONE HOUR	✓	23	100.000
C		ONE HOUR	✓	1725	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	61	1219
	B	0	0	23
	C	1725	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	8	3
	B	0	0	0
	C	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.06	9.45	0.1	A	21	32
C-A					1583	2374
C-B	0.00	0.00	0.0	A	0	0
A-B					56	84
A-C					1119	1678

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	17	4	525	0.033	17	0.0	0.0	7.091	A
C-A	1299	325			1299				
C-B	0	0	416	0.000	0	0.0	0.0	0.000	A
A-B	46	11			46				
A-C	918	229			918				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	21	5	475	0.044	21	0.0	0.0	7.923	A
C-A	1551	388			1551				
C-B	0	0	374	0.000	0	0.0	0.0	0.000	A
A-B	55	14			55				
A-C	1096	274			1096				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	25	6	406	0.062	25	0.0	0.1	9.450	A
C-A	1899	475			1899				
C-B	0	0	317	0.000	0	0.0	0.0	0.000	A
A-B	67	17			67				
A-C	1342	336			1342				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	25	6	406	0.062	25	0.1	0.1	9.453	A
C-A	1899	475			1899				
C-B	0	0	317	0.000	0	0.0	0.0	0.000	A
A-B	67	17			67				
A-C	1342	336			1342				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	21	5	475	0.044	21	0.1	0.0	7.927	A
C-A	1551	388			1551				
C-B	0	0	374	0.000	0	0.0	0.0	0.000	A
A-B	55	14			55				
A-C	1096	274			1096				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	17	4	525	0.033	17	0.0	0.0	7.098	A
C-A	1299	325			1299				
C-B	0	0	416	0.000	0	0.0	0.0	0.000	A
A-B	46	11			46				
A-C	918	229			918				

2033 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.12	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	48	Stream B-AC

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	2033 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1478	100.000
B		ONE HOUR	✓	35	100.000
C		ONE HOUR	✓	1652	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	96	1382
	B	0	0	35
	C	1652	0	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.11	11.15	0.1	B	32	48
C-A					1516	2274
C-B	0.00	0.00	0.0	A	0	0
A-B					88	132
A-C					1268	1902

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	26	7	494	0.053	26	0.0	0.1	7.688	A
C-A	1244	311			1244				
C-B	0	0	388	0.000	0	0.0	0.0	0.000	A
A-B	72	18			72				
A-C	1040	260			1040				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	31	8	438	0.072	31	0.1	0.1	8.841	A
C-A	1485	371			1485				
C-B	0	0	341	0.000	0	0.0	0.0	0.000	A
A-B	86	22			86				
A-C	1242	311			1242				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	39	10	361	0.107	38	0.1	0.1	11.136	B
C-A	1819	455			1819				
C-B	0	0	277	0.000	0	0.0	0.0	0.000	A
A-B	106	26			106				
A-C	1522	380			1522				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	39	10	361	0.107	39	0.1	0.1	11.147	B
C-A	1819	455			1819				
C-B	0	0	277	0.000	0	0.0	0.0	0.000	A
A-B	106	26			106				
A-C	1522	380			1522				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	31	8	438	0.072	32	0.1	0.1	8.853	A
C-A	1485	371			1485				
C-B	0	0	341	0.000	0	0.0	0.0	0.000	A
A-B	86	22			86				
A-C	1242	311			1242				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	26	7	494	0.053	26	0.1	0.1	7.697	A
C-A	1244	311			1244				
C-B	0	0	388	0.000	0	0.0	0.0	0.000	A
A-B	72	18			72				
A-C	1040	260			1040				

2033 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.07	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	68	Stream B-AC

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	2033 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1298	100.000
B		ONE HOUR	✓	23	100.000
C		ONE HOUR	✓	1732	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	61	1237
	B	0	0	23
	C	1732	0	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.06	9.58	0.1	A	21	32
C-A					1589	2384
C-B	0.00	0.00	0.0	A	0	0
A-B					56	84
A-C					1135	1703

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	17	4	521	0.033	17	0.0	0.0	7.138	A
C-A	1304	326			1304				
C-B	0	0	413	0.000	0	0.0	0.0	0.000	A
A-B	46	11			46				
A-C	931	233			931				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	21	5	471	0.044	21	0.0	0.0	7.993	A
C-A	1557	389			1557				
C-B	0	0	372	0.000	0	0.0	0.0	0.000	A
A-B	55	14			55				
A-C	1112	278			1112				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	25	6	401	0.063	25	0.0	0.1	9.572	A
C-A	1907	477			1907				
C-B	0	0	314	0.000	0	0.0	0.0	0.000	A
A-B	67	17			67				
A-C	1362	340			1362				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	25	6	401	0.063	25	0.1	0.1	9.576	A
C-A	1907	477			1907				
C-B	0	0	314	0.000	0	0.0	0.0	0.000	A
A-B	67	17			67				
A-C	1362	340			1362				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	21	5	471	0.044	21	0.1	0.0	7.997	A
C-A	1557	389			1557				
C-B	0	0	372	0.000	0	0.0	0.0	0.000	A
A-B	55	14			55				
A-C	1112	278			1112				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	17	4	521	0.033	17	0.0	0.0	7.142	A
C-A	1304	326			1304				
C-B	0	0	413	0.000	0	0.0	0.0	0.000	A
A-B	46	11			46				
A-C	931	233			931				

2033 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.12	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	47	Stream B-AC

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	2033 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1489	100.000
B		ONE HOUR	✓	35	100.000
C		ONE HOUR	✓	1669	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	96	1393
	B	0	0	35
	C	1669	0	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.11	11.26	0.1	B	32	48
C-A					1532	2297
C-B	0.00	0.00	0.0	A	0	0
A-B					88	132
A-C					1278	1917

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	26	7	492	0.054	26	0.0	0.1	7.725	A
C-A	1257	314			1257				
C-B	0	0	386	0.000	0	0.0	0.0	0.000	A
A-B	72	18			72				
A-C	1049	262			1049				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	31	8	436	0.072	31	0.1	0.1	8.899	A
C-A	1500	375			1500				
C-B	0	0	339	0.000	0	0.0	0.0	0.000	A
A-B	86	22			86				
A-C	1252	313			1252				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	39	10	358	0.108	38	0.1	0.1	11.249	B
C-A	1838	459			1838				
C-B	0	0	274	0.000	0	0.0	0.0	0.000	A
A-B	106	26			106				
A-C	1534	383			1534				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	39	10	358	0.108	39	0.1	0.1	11.260	B
C-A	1838	459			1838				
C-B	0	0	274	0.000	0	0.0	0.0	0.000	A
A-B	106	26			106				
A-C	1534	383			1534				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	31	8	436	0.072	32	0.1	0.1	8.911	A
C-A	1500	375			1500				
C-B	0	0	339	0.000	0	0.0	0.0	0.000	A
A-B	86	22			86				
A-C	1252	313			1252				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	26	7	492	0.054	26	0.1	0.1	7.734	A
C-A	1257	314			1257				
C-B	0	0	386	0.000	0	0.0	0.0	0.000	A
A-B	72	18			72				
A-C	1049	262			1049				

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.1.7462

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

Filename: 18122 - A280 - A27 - Arundel Road - Mitigation.j9
Path: P:\18 Jobs\122 Land at Chatsmore Farm - Goring, West Sussex\Technical Assessments\ARCADY\18122 - A27 - Angmering Bypass
Report generation date: 27/01/2021 15:55:16

»2018, AM
»2018, PM
»2024 Base, AM
»2024 Base, PM
»2024 Base + Dev, AM
»2024 Base + Dev, PM
»2033 Base, AM
»2033 Base, PM
»2033 Base + Dev, AM
»2033 Base + Dev, PM

Summary of junction performance

	AM							PM						
	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
2018														
1 - A280 Long Furlong	0.7	3.54	0.43	A	5.12	A	28 % [4 - A27 Off-Slip]	1.2	3.91	0.55	A	3.76	A	59 % [1 - A280 Long Furlong]
3 - A280 South	1.0	3.86	0.51	A				0.6	3.08	0.37	A			
4 - A27 Off-Slip	1.6	8.55	0.61	A				0.5	4.40	0.32	A			
5 - Arundel Road	0.1	6.86	0.10	A				0.1	4.54	0.07	A			
2024 Base														
1 - A280 Long Furlong	1.0	4.39	0.51	A	8.09	A	9 % [4 - A27 Off-Slip]	1.9	5.29	0.65	A	4.73	A	36 % [1 - A280 Long Furlong]
3 - A280 South	1.5	4.83	0.61	A				0.8	3.46	0.44	A			
4 - A27 Off-Slip	3.5	16.70	0.78	C				0.7	5.38	0.42	A			
5 - Arundel Road	0.2	9.76	0.14	A				0.1	5.32	0.08	A			
2024 Base + Dev														
1 - A280 Long Furlong	1.0	4.41	0.51	A	8.09	A	8 % [4 - A27 Off-Slip]	2.1	5.69	0.68	A	4.98	A	32 % [1 - A280 Long Furlong]
3 - A280 South	1.7	5.12	0.63	A				0.8	3.55	0.46	A			
4 - A27 Off-Slip	3.5	16.63	0.78	C				0.8	5.47	0.43	A			
5 - Arundel Road	0.2	10.12	0.15	B				0.1	5.47	0.09	A			
2033 Base														
1 - A280 Long Furlong	1.2	4.91	0.55	A	11.19	B	2 % [4 - A27 Off-Slip]	2.3	6.20	0.70	A	5.32	A	28 % [1 - A280 Long Furlong]
3 - A280 South	1.8	5.32	0.64	A				0.9	3.63	0.47	A			
4 - A27 Off-Slip	5.7	26.42	0.86	D				0.8	5.85	0.45	A			
5 - Arundel Road	0.2	11.71	0.17	B				0.1	5.66	0.09	A			
2033 Base + Dev														
1 - A280 Long Furlong	1.2	4.92	0.56	A	11.16	B	2 % [4 - A27 Off-Slip]	2.6	6.76	0.72	A	5.64	A	25 % [1 - A280 Long Furlong]
3 - A280 South	2.0	5.67	0.66	A				0.9	3.73	0.48	A			
4 - A27 Off-Slip	5.7	26.50	0.86	D				0.9	5.96	0.47	A			
5 - Arundel Road	0.2	12.20	0.18	B				0.1	5.82	0.10	A			

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	
Location	
Site number	
Date	10/06/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	mtp\MTPGeneral
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2018	AM	ONE HOUR	07:45	09:15	15	✓
D2	2018	PM	ONE HOUR	16:45	18:15	15	✓
D3	2024 Base	AM	ONE HOUR	07:45	09:15	15	✓
D4	2024 Base	PM	ONE HOUR	16:45	18:15	15	✓
D5	2024 Base + Dev	AM	ONE HOUR	07:45	09:15	15	✓
D6	2024 Base + Dev	PM	ONE HOUR	16:45	18:15	15	✓
D7	2033 Base	AM	ONE HOUR	07:45	09:15	15	✓
D8	2033 Base	PM	ONE HOUR	16:45	18:15	15	✓
D9	2033 Base + Dev	AM	ONE HOUR	07:45	09:15	15	✓
D10	2033 Base + Dev	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

2018, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A280 Long Furlong - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	5.12	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	28	4 - A27 Off-Slip

Arms

Arms

Arm	Name	Description
1	A280 Long Furlong	
2	A27 On-Slip	
3	A280 South	
4	A27 Off-Slip	
5	Arundel Road	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A280 Long Furlong	3.65	8.40	62.0	45.0	60.0	20.0	
2 - A27 On-Slip							✓
3 - A280 South	3.65	8.10	14.0	37.0	60.0	12.0	
4 - A27 Off-Slip	3.65	6.60	30.0	15.0	60.0	44.0	
5 - Arundel Road	3.65	6.30	6.5	25.0	60.0	45.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A280 Long Furlong	0.695	2402
2 - A27 On-Slip		
3 - A280 South	0.618	1925
4 - A27 Off-Slip	0.535	1670
5 - Arundel Road	0.493	1393

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	2018	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 Long Furlong		ONE HOUR	✓	685	100.000
2 - A27 On-Slip					
3 - A280 South		ONE HOUR	✓	867	100.000
4 - A27 Off-Slip		ONE HOUR	✓	603	100.000
5 - Arundel Road		ONE HOUR	✓	50	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	19	664	0	2
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	655	191	0	0	21
	4 - A27 Off-Slip	178	29	396	0	0
	5 - Arundel Road	19	6	25	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	0	7	0	50
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	2	1	0	0	5
	4 - A27 Off-Slip	11	0	4	0	0
	5 - Arundel Road	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 Long Furlong	0.43	3.54	0.7	A	629	943
2 - A27 On-Slip						
3 - A280 South	0.51	3.86	1.0	A	796	1193
4 - A27 Off-Slip	0.61	8.55	1.6	A	553	830
5 - Arundel Road	0.10	6.86	0.1	A	46	69

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	516	129	485	1922	0.268	514	639	0.0	0.4	2.554	A
2 - A27 On-Slip			815				184				
3 - A280 South	653	163	2	1889	0.346	651	814	0.0	0.5	2.902	A
4 - A27 Off-Slip	454	113	652	1241	0.366	452	0	0.0	0.6	4.546	A
5 - Arundel Road	38	9	1087	839	0.045	37	17	0.0	0.0	4.491	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	616	154	581	1858	0.331	615	765	0.4	0.5	2.894	A
2 - A27 On-Slip			976				220				
3 - A280 South	779	195	2	1888	0.413	779	974	0.5	0.7	3.242	A
4 - A27 Off-Slip	542	136	781	1175	0.461	541	0	0.6	0.8	5.666	A
5 - Arundel Road	45	11	1301	730	0.062	45	21	0.0	0.1	5.257	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	754	189	710	1772	0.426	753	936	0.5	0.7	3.530	A
2 - A27 On-Slip			1194				269				
3 - A280 South	955	239	2	1888	0.506	953	1192	0.7	1.0	3.847	A
4 - A27 Off-Slip	664	166	956	1085	0.612	661	0	0.8	1.5	8.435	A
5 - Arundel Road	55	14	1591	581	0.095	55	25	0.1	0.1	6.835	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	754	189	712	1770	0.426	754	938	0.7	0.7	3.541	A
2 - A27 On-Slip			1197				270				
3 - A280 South	955	239	2	1888	0.506	955	1195	1.0	1.0	3.856	A
4 - A27 Off-Slip	664	166	957	1085	0.612	664	0	1.5	1.6	8.553	A
5 - Arundel Road	55	14	1595	579	0.095	55	25	0.1	0.1	6.864	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	616	154	584	1856	0.332	617	768	0.7	0.5	2.906	A
2 - A27 On-Slip			980				221				
3 - A280 South	779	195	2	1888	0.413	781	978	1.0	0.7	3.255	A
4 - A27 Off-Slip	542	136	782	1174	0.462	545	0	1.6	0.9	5.743	A
5 - Arundel Road	45	11	1307	727	0.062	45	21	0.1	0.1	5.282	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	516	129	488	1920	0.269	516	642	0.5	0.4	2.566	A
2 - A27 On-Slip			820				185				
3 - A280 South	653	163	2	1889	0.346	653	818	0.7	0.5	2.917	A
4 - A27 Off-Slip	454	113	655	1240	0.366	455	0	0.9	0.6	4.592	A
5 - Arundel Road	38	9	1093	836	0.045	38	17	0.1	0.0	4.513	A

2018, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A280 Long Furlong - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	3.76	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	59	1 - A280 Long Furlong

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	2018	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 Long Furlong		ONE HOUR	✓	1023	100.000
2 - A27 On-Slip					
3 - A280 South		ONE HOUR	✓	633	100.000
4 - A27 Off-Slip		ONE HOUR	✓	354	100.000
5 - Arundel Road		ONE HOUR	✓	51	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	33	985	0	5
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	449	158	0	0	26
	4 - A27 Off-Slip	153	14	186	0	1
	5 - Arundel Road	8	8	35	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	0	2	0	0
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	4	1	0	0	0
	4 - A27 Off-Slip	9	7	4	0	0
	5 - Arundel Road	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 Long Furlong	0.55	3.91	1.2	A	939	1408
2 - A27 On-Slip						
3 - A280 South	0.37	3.08	0.6	A	581	871
4 - A27 Off-Slip	0.32	4.40	0.5	A	325	487
5 - Arundel Road	0.07	4.54	0.1	A	47	70

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	770	193	301	2146	0.359	768	458	0.0	0.6	2.607	A
2 - A27 On-Slip			909				160				
3 - A280 South	477	119	4	1865	0.256	475	905	0.0	0.3	2.587	A
4 - A27 Off-Slip	267	67	479	1323	0.201	266	0	0.0	0.3	3.401	A
5 - Arundel Road	38	10	720	1022	0.038	38	24	0.0	0.0	3.657	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	920	230	360	2105	0.437	919	548	0.6	0.8	3.034	A
2 - A27 On-Slip			1088				191				
3 - A280 South	569	142	4	1865	0.305	569	1083	0.3	0.4	2.777	A
4 - A27 Off-Slip	318	80	573	1274	0.250	318	0	0.3	0.3	3.764	A
5 - Arundel Road	46	11	862	949	0.048	46	29	0.0	0.1	3.983	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1126	282	441	2048	0.550	1125	671	0.8	1.2	3.890	A
2 - A27 On-Slip			1331				234				
3 - A280 South	697	174	5	1864	0.374	696	1326	0.4	0.6	3.081	A
4 - A27 Off-Slip	390	97	702	1207	0.323	389	0	0.3	0.5	4.397	A
5 - Arundel Road	56	14	1056	850	0.066	56	35	0.1	0.1	4.534	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1126	282	442	2048	0.550	1126	672	1.2	1.2	3.906	A
2 - A27 On-Slip			1333				235				
3 - A280 South	697	174	6	1864	0.374	697	1328	0.6	0.6	3.083	A
4 - A27 Off-Slip	390	97	702	1207	0.323	390	0	0.5	0.5	4.403	A
5 - Arundel Road	56	14	1057	849	0.066	56	35	0.1	0.1	4.537	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	920	230	361	2104	0.437	921	549	1.2	0.8	3.050	A
2 - A27 On-Slip			1091				192				
3 - A280 South	569	142	5	1865	0.305	570	1086	0.6	0.4	2.782	A
4 - A27 Off-Slip	318	80	574	1274	0.250	319	0	0.5	0.3	3.774	A
5 - Arundel Road	46	11	864	949	0.048	46	29	0.1	0.1	3.988	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	770	193	302	2145	0.359	771	460	0.8	0.6	2.620	A
2 - A27 On-Slip			913				161				
3 - A280 South	477	119	4	1865	0.256	477	909	0.4	0.3	2.593	A
4 - A27 Off-Slip	267	67	481	1322	0.202	267	0	0.3	0.3	3.414	A
5 - Arundel Road	38	10	723	1021	0.038	38	24	0.1	0.0	3.663	A

2024 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A280 Long Furlong - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	8.09	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	9	4 - A27 Off-Slip

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	2024 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 Long Furlong		ONE HOUR	✓	766	100.000
2 - A27 On-Slip					
3 - A280 South		ONE HOUR	✓	1039	100.000
4 - A27 Off-Slip		ONE HOUR	✓	700	100.000
5 - Arundel Road		ONE HOUR	✓	55	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	21	743	0	2
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	766	249	0	0	24
	4 - A27 Off-Slip	193	31	476	0	0
	5 - Arundel Road	21	7	27	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	0	7	0	50
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	2	1	0	0	4
	4 - A27 Off-Slip	11	10	4	0	0
	5 - Arundel Road	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 Long Furlong	0.51	4.39	1.0	A	703	1054
2 - A27 On-Slip						
3 - A280 South	0.61	4.83	1.5	A	953	1430
4 - A27 Off-Slip	0.78	16.70	3.5	C	642	963
5 - Arundel Road	0.14	9.76	0.2	A	50	76

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	577	144	592	1850	0.312	575	735	0.0	0.5	2.820	A
2 - A27 On-Slip			935				231				
3 - A280 South	782	196	2	1890	0.414	779	934	0.0	0.7	3.235	A
4 - A27 Off-Slip	527	132	781	1172	0.450	524	0	0.0	0.8	5.527	A
5 - Arundel Road	41	10	1285	737	0.056	41	20	0.0	0.1	5.172	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	689	172	708	1772	0.389	688	880	0.5	0.6	3.320	A
2 - A27 On-Slip			1120				277				
3 - A280 South	934	234	2	1889	0.494	933	1118	0.7	1.0	3.761	A
4 - A27 Off-Slip	629	157	935	1093	0.576	627	0	0.8	1.3	7.695	A
5 - Arundel Road	49	12	1539	608	0.081	49	23	0.1	0.1	6.445	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	843	211	863	1668	0.506	842	1075	0.6	1.0	4.351	A
2 - A27 On-Slip			1367				338				
3 - A280 South	1144	286	2	1889	0.606	1142	1365	1.0	1.5	4.803	A
4 - A27 Off-Slip	771	193	1144	985	0.782	763	0	1.3	3.3	15.628	C
5 - Arundel Road	61	15	1878	435	0.139	60	29	0.1	0.2	9.613	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	843	211	869	1664	0.507	843	1079	1.0	1.0	4.388	A
2 - A27 On-Slip			1374				339				
3 - A280 South	1144	286	2	1889	0.606	1144	1371	1.5	1.5	4.832	A
4 - A27 Off-Slip	771	193	1146	984	0.783	770	0	3.3	3.5	16.699	C
5 - Arundel Road	61	15	1888	430	0.141	61	29	0.2	0.2	9.755	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	689	172	717	1766	0.390	690	885	1.0	0.6	3.350	A
2 - A27 On-Slip			1129				278				
3 - A280 South	934	234	2	1889	0.494	936	1127	1.5	1.0	3.787	A
4 - A27 Off-Slip	629	157	938	1091	0.577	638	0	3.5	1.4	8.076	A
5 - Arundel Road	49	12	1552	601	0.082	50	23	0.2	0.1	6.539	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	577	144	597	1846	0.312	577	739	0.6	0.5	2.838	A
2 - A27 On-Slip			942				232				
3 - A280 South	782	196	2	1890	0.414	783	940	1.0	0.7	3.256	A
4 - A27 Off-Slip	527	132	785	1170	0.451	529	0	1.4	0.8	5.641	A
5 - Arundel Road	41	10	1294	732	0.057	42	20	0.1	0.1	5.212	A

2024 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A280 Long Furlong - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	4.73	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	36	1 - A280 Long Furlong

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	2024 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 Long Furlong		ONE HOUR	✓	1159	100.000
2 - A27 On-Slip					
3 - A280 South		ONE HOUR	✓	753	100.000
4 - A27 Off-Slip		ONE HOUR	✓	439	100.000
5 - Arundel Road		ONE HOUR	✓	57	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	36	1118	0	5
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	519	205	0	0	29
	4 - A27 Off-Slip	166	15	257	0	1
	5 - Arundel Road	9	9	39	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	0	2	0	0
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	4	0	0	0	0
	4 - A27 Off-Slip	9	0	3	0	0
	5 - Arundel Road	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 Long Furlong	0.65	5.29	1.9	A	1064	1595
2 - A27 On-Slip						
3 - A280 South	0.44	3.46	0.8	A	691	1036
4 - A27 Off-Slip	0.42	5.38	0.7	A	403	604
5 - Arundel Road	0.08	5.32	0.1	A	52	78

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	873	218	394	2084	0.419	870	521	0.0	0.7	2.960	A
2 - A27 On-Slip			1065				199				
3 - A280 South	567	142	4	1871	0.303	565	1061	0.0	0.4	2.753	A
4 - A27 Off-Slip	331	83	569	1291	0.256	329	0	0.0	0.3	3.739	A
5 - Arundel Road	43	11	872	947	0.045	43	26	0.0	0.0	3.978	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1042	260	471	2030	0.513	1041	623	0.7	1.0	3.633	A
2 - A27 On-Slip			1274				238				
3 - A280 South	677	169	4	1871	0.362	676	1270	0.4	0.6	3.012	A
4 - A27 Off-Slip	395	99	681	1232	0.320	394	0	0.3	0.5	4.292	A
5 - Arundel Road	51	13	1044	859	0.060	51	31	0.0	0.1	4.454	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1276	319	577	1957	0.652	1273	763	1.0	1.8	5.238	A
2 - A27 On-Slip			1559				291				
3 - A280 South	829	207	5	1870	0.443	828	1553	0.6	0.8	3.451	A
4 - A27 Off-Slip	483	121	834	1152	0.419	482	0	0.5	0.7	5.364	A
5 - Arundel Road	63	16	1278	740	0.085	63	38	0.1	0.1	5.316	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1276	319	578	1956	0.652	1276	764	1.8	1.9	5.290	A
2 - A27 On-Slip			1562				292				
3 - A280 South	829	207	6	1870	0.443	829	1557	0.8	0.8	3.457	A
4 - A27 Off-Slip	483	121	835	1152	0.420	483	0	0.7	0.7	5.383	A
5 - Arundel Road	63	16	1279	739	0.085	63	39	0.1	0.1	5.323	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1042	260	473	2029	0.513	1045	625	1.9	1.1	3.671	A
2 - A27 On-Slip			1279				239				
3 - A280 South	677	169	5	1871	0.362	678	1275	0.8	0.6	3.019	A
4 - A27 Off-Slip	395	99	682	1232	0.320	396	0	0.7	0.5	4.311	A
5 - Arundel Road	51	13	1046	858	0.060	51	32	0.1	0.1	4.463	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	873	218	396	2083	0.419	874	523	1.1	0.7	2.983	A
2 - A27 On-Slip			1070				200				
3 - A280 South	567	142	4	1871	0.303	567	1066	0.6	0.4	2.764	A
4 - A27 Off-Slip	331	83	571	1290	0.256	331	0	0.5	0.3	3.759	A
5 - Arundel Road	43	11	876	945	0.045	43	26	0.1	0.0	3.990	A

2024 Base + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A280 Long Furlong - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	8.09	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	8	4 - A27 Off-Slip

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	2024 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 Long Furlong		ONE HOUR	✓	781	100.000
2 - A27 On-Slip					
3 - A280 South		ONE HOUR	✓	1081	100.000
4 - A27 Off-Slip		ONE HOUR	✓	706	100.000
5 - Arundel Road		ONE HOUR	✓	55	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	21	758	0	2
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	808	249	0	0	24
	4 - A27 Off-Slip	193	31	482	0	0
	5 - Arundel Road	21	7	27	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	0	7	0	50
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	2	0	0	0	4
	4 - A27 Off-Slip	11	0	0	0	0
	5 - Arundel Road	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 Long Furlong	0.51	4.41	1.0	A	717	1075
2 - A27 On-Slip						
3 - A280 South	0.63	5.12	1.7	A	992	1488
4 - A27 Off-Slip	0.78	16.63	3.5	C	648	972
5 - Arundel Road	0.15	10.12	0.2	B	50	76

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	588	147	596	1859	0.316	586	766	0.0	0.5	2.825	A
2 - A27 On-Slip			951				231				
3 - A280 South	814	203	2	1894	0.430	811	950	0.0	0.7	3.314	A
4 - A27 Off-Slip	532	133	812	1192	0.446	528	0	0.0	0.8	5.395	A
5 - Arundel Road	41	10	1321	728	0.057	41	20	0.0	0.1	5.240	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	702	176	714	1782	0.394	701	917	0.5	0.6	3.328	A
2 - A27 On-Slip			1139				276				
3 - A280 South	972	243	2	1893	0.513	971	1137	0.7	1.0	3.896	A
4 - A27 Off-Slip	635	159	972	1108	0.573	633	0	0.8	1.3	7.540	A
5 - Arundel Road	49	12	1582	597	0.083	49	23	0.1	0.1	6.571	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	860	215	870	1681	0.512	858	1121	0.6	1.0	4.368	A
2 - A27 On-Slip			1390				338				
3 - A280 South	1190	298	2	1893	0.629	1188	1388	1.0	1.7	5.085	A
4 - A27 Off-Slip	777	194	1190	993	0.783	769	0	1.3	3.3	15.549	C
5 - Arundel Road	61	15	1931	421	0.144	60	29	0.1	0.2	9.959	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	860	215	876	1677	0.513	860	1125	1.0	1.0	4.405	A
2 - A27 On-Slip			1397				339				
3 - A280 South	1190	298	2	1893	0.629	1190	1395	1.7	1.7	5.121	A
4 - A27 Off-Slip	777	194	1192	992	0.784	777	0	3.3	3.5	16.635	C
5 - Arundel Road	61	15	1941	416	0.145	61	29	0.2	0.2	10.115	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	702	176	722	1777	0.395	704	923	1.0	0.7	3.358	A
2 - A27 On-Slip			1148				278				
3 - A280 South	972	243	2	1893	0.513	974	1146	1.7	1.1	3.928	A
4 - A27 Off-Slip	635	159	976	1106	0.574	643	0	3.5	1.4	7.914	A
5 - Arundel Road	49	12	1596	590	0.084	50	23	0.2	0.1	6.670	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	588	147	601	1856	0.317	589	771	0.7	0.5	2.845	A
2 - A27 On-Slip			958				232				
3 - A280 South	814	203	2	1894	0.430	815	956	1.1	0.8	3.343	A
4 - A27 Off-Slip	532	133	817	1190	0.447	534	0	1.4	0.8	5.504	A
5 - Arundel Road	41	10	1331	723	0.057	42	20	0.1	0.1	5.283	A

2024 Base + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A280 Long Furlong - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	4.98	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	32	1 - A280 Long Furlong

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	2024 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 Long Furlong		ONE HOUR	✓	1198	100.000
2 - A27 On-Slip					
3 - A280 South		ONE HOUR	✓	778	100.000
4 - A27 Off-Slip		ONE HOUR	✓	454	100.000
5 - Arundel Road		ONE HOUR	✓	57	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	36	1157	0	5
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	544	205	0	0	29
	4 - A27 Off-Slip	166	15	272	0	1
	5 - Arundel Road	9	9	39	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	0	2	0	0
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	4	0	0	0	0
	4 - A27 Off-Slip	9	0	0	0	0
	5 - Arundel Road	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 Long Furlong	0.68	5.69	2.1	A	1099	1649
2 - A27 On-Slip						
3 - A280 South	0.46	3.55	0.8	A	714	1071
4 - A27 Off-Slip	0.43	5.47	0.8	A	417	625
5 - Arundel Road	0.09	5.47	0.1	A	52	78

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	902	225	405	2080	0.434	899	539	0.0	0.8	3.040	A
2 - A27 On-Slip			1105				199				
3 - A280 South	586	146	4	1870	0.313	584	1101	0.0	0.5	2.794	A
4 - A27 Off-Slip	342	85	588	1304	0.262	340	0	0.0	0.4	3.731	A
5 - Arundel Road	43	11	902	935	0.046	43	26	0.0	0.0	4.033	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1077	269	485	2026	0.532	1076	646	0.8	1.1	3.784	A
2 - A27 On-Slip			1322				238				
3 - A280 South	699	175	4	1870	0.374	699	1318	0.5	0.6	3.072	A
4 - A27 Off-Slip	408	102	703	1242	0.328	408	0	0.4	0.5	4.309	A
5 - Arundel Road	51	13	1080	845	0.061	51	31	0.0	0.1	4.536	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1319	330	594	1952	0.676	1315	791	1.1	2.0	5.625	A
2 - A27 On-Slip			1618				291				
3 - A280 South	857	214	5	1869	0.458	856	1612	0.6	0.8	3.548	A
4 - A27 Off-Slip	500	125	861	1159	0.431	499	0	0.5	0.8	5.447	A
5 - Arundel Road	63	16	1321	722	0.087	63	38	0.1	0.1	5.461	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1319	330	595	1951	0.676	1319	792	2.0	2.1	5.694	A
2 - A27 On-Slip			1622				292				
3 - A280 South	857	214	6	1869	0.458	857	1616	0.8	0.8	3.553	A
4 - A27 Off-Slip	500	125	862	1158	0.432	500	0	0.8	0.8	5.469	A
5 - Arundel Road	63	16	1323	721	0.087	63	39	0.1	0.1	5.469	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1077	269	486	2025	0.532	1081	647	2.1	1.1	3.830	A
2 - A27 On-Slip			1328				239				
3 - A280 South	699	175	5	1870	0.374	700	1324	0.8	0.6	3.079	A
4 - A27 Off-Slip	408	102	705	1242	0.329	409	0	0.8	0.5	4.329	A
5 - Arundel Road	51	13	1083	843	0.061	51	32	0.1	0.1	4.548	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	902	225	407	2079	0.434	903	542	1.1	0.8	3.068	A
2 - A27 On-Slip			1111				200				
3 - A280 South	586	146	4	1870	0.313	586	1107	0.6	0.5	2.804	A
4 - A27 Off-Slip	342	85	590	1303	0.262	342	0	0.5	0.4	3.752	A
5 - Arundel Road	43	11	906	933	0.046	43	26	0.1	0.0	4.045	A

2033 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A280 Long Furlong - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	11.19	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	2	4 - A27 Off-Slip

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	2033 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 Long Furlong		ONE HOUR	✓	814	100.000
2 - A27 On-Slip					
3 - A280 South		ONE HOUR	✓	1101	100.000
4 - A27 Off-Slip		ONE HOUR	✓	744	100.000
5 - Arundel Road		ONE HOUR	✓	58	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	22	790	0	2
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	813	263	0	0	25
	4 - A27 Off-Slip	206	34	504	0	0
	5 - Arundel Road	22	7	29	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	0	7	0	50
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	2	1	0	0	4
	4 - A27 Off-Slip	11	9	4	0	0
	5 - Arundel Road	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 Long Furlong	0.55	4.91	1.2	A	747	1120
2 - A27 On-Slip						
3 - A280 South	0.64	5.32	1.8	A	1010	1515
4 - A27 Off-Slip	0.86	26.42	5.7	D	683	1024
5 - Arundel Road	0.17	11.71	0.2	B	53	80

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	613	153	627	1827	0.335	611	780	0.0	0.5	2.955	A
2 - A27 On-Slip			993				244				
3 - A280 South	829	207	2	1890	0.439	826	991	0.0	0.8	3.374	A
4 - A27 Off-Slip	560	140	827	1148	0.488	556	0	0.0	0.9	6.045	A
5 - Arundel Road	44	11	1363	697	0.063	43	20	0.0	0.1	5.503	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	732	183	750	1744	0.420	731	934	0.5	0.7	3.550	A
2 - A27 On-Slip			1188				293				
3 - A280 South	990	247	2	1889	0.524	989	1187	0.8	1.1	3.990	A
4 - A27 Off-Slip	669	167	990	1065	0.628	666	0	0.9	1.6	8.966	A
5 - Arundel Road	52	13	1632	560	0.093	52	24	0.1	0.1	7.083	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	896	224	910	1637	0.548	894	1140	0.7	1.2	4.837	A
2 - A27 On-Slip			1447				358				
3 - A280 South	1212	303	2	1889	0.642	1210	1445	1.1	1.8	5.277	A
4 - A27 Off-Slip	819	205	1212	951	0.861	805	0	1.6	5.2	22.694	C
5 - Arundel Road	64	16	1987	379	0.168	63	30	0.1	0.2	11.389	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	896	224	920	1630	0.550	896	1146	1.2	1.2	4.906	A
2 - A27 On-Slip			1458				359				
3 - A280 South	1212	303	2	1889	0.642	1212	1455	1.8	1.8	5.319	A
4 - A27 Off-Slip	819	205	1214	950	0.863	817	0	5.2	5.7	26.416	D
5 - Arundel Road	64	16	2002	371	0.172	64	30	0.2	0.2	11.706	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	732	183	765	1734	0.422	734	942	1.2	0.7	3.605	A
2 - A27 On-Slip			1204				295				
3 - A280 South	990	247	2	1889	0.524	992	1202	1.8	1.1	4.025	A
4 - A27 Off-Slip	669	167	994	1063	0.629	685	0	5.7	1.7	9.898	A
5 - Arundel Road	52	13	1655	548	0.095	53	24	0.2	0.1	7.267	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	613	153	633	1822	0.336	614	786	0.7	0.5	2.980	A
2 - A27 On-Slip			1001				246				
3 - A280 South	829	207	2	1890	0.439	830	999	1.1	0.8	3.401	A
4 - A27 Off-Slip	560	140	832	1146	0.489	563	0	1.7	1.0	6.208	A
5 - Arundel Road	44	11	1375	691	0.063	44	20	0.1	0.1	5.561	A

2033 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A280 Long Furlong - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	5.32	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	28	1 - A280 Long Furlong

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	2033 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 Long Furlong		ONE HOUR	✓	1231	100.000
2 - A27 On-Slip					
3 - A280 South		ONE HOUR	✓	797	100.000
4 - A27 Off-Slip		ONE HOUR	✓	464	100.000
5 - Arundel Road		ONE HOUR	✓	59	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	38	1187	0	6
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	550	216	0	0	31
	4 - A27 Off-Slip	177	16	270	0	1
	5 - Arundel Road	9	9	41	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	0	2	0	0
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	4	0	0	0	0
	4 - A27 Off-Slip	9	0	3	0	0
	5 - Arundel Road	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 Long Furlong	0.70	6.20	2.3	A	1130	1694
2 - A27 On-Slip						
3 - A280 South	0.47	3.63	0.9	A	731	1097
4 - A27 Off-Slip	0.45	5.85	0.8	A	426	639
5 - Arundel Road	0.09	5.66	0.1	A	54	81

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	927	232	414	2070	0.448	924	552	0.0	0.8	3.131	A
2 - A27 On-Slip			1128				209				
3 - A280 South	600	150	5	1871	0.321	598	1124	0.0	0.5	2.825	A
4 - A27 Off-Slip	349	87	603	1273	0.274	348	0	0.0	0.4	3.885	A
5 - Arundel Road	44	11	922	922	0.048	44	29	0.0	0.1	4.102	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1107	277	496	2013	0.550	1105	661	0.8	1.2	3.955	A
2 - A27 On-Slip			1350				251				
3 - A280 South	716	179	5	1870	0.383	716	1345	0.5	0.6	3.117	A
4 - A27 Off-Slip	417	104	721	1211	0.344	417	0	0.4	0.5	4.529	A
5 - Arundel Road	53	13	1104	829	0.064	53	34	0.1	0.1	4.640	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1355	339	607	1937	0.700	1351	809	1.2	2.3	6.102	A
2 - A27 On-Slip			1651				307				
3 - A280 South	878	219	7	1869	0.469	876	1644	0.6	0.9	3.622	A
4 - A27 Off-Slip	511	128	883	1126	0.454	510	0	0.5	0.8	5.828	A
5 - Arundel Road	65	16	1351	702	0.093	65	42	0.1	0.1	5.645	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1355	339	608	1936	0.700	1355	810	2.3	2.3	6.197	A
2 - A27 On-Slip			1656				307				
3 - A280 South	878	219	7	1869	0.469	878	1649	0.9	0.9	3.628	A
4 - A27 Off-Slip	511	128	884	1126	0.454	511	0	0.8	0.8	5.852	A
5 - Arundel Road	65	16	1353	701	0.093	65	42	0.1	0.1	5.657	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1107	277	497	2012	0.550	1111	663	2.3	1.2	4.014	A
2 - A27 On-Slip			1357				251				
3 - A280 South	716	179	5	1870	0.383	718	1352	0.9	0.6	3.127	A
4 - A27 Off-Slip	417	104	723	1210	0.345	418	0	0.8	0.5	4.553	A
5 - Arundel Road	53	13	1107	827	0.064	53	34	0.1	0.1	4.654	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	927	232	416	2068	0.448	928	555	1.2	0.8	3.164	A
2 - A27 On-Slip			1134				210				
3 - A280 South	600	150	5	1871	0.321	601	1130	0.6	0.5	2.837	A
4 - A27 Off-Slip	349	87	605	1272	0.275	350	0	0.5	0.4	3.909	A
5 - Arundel Road	44	11	926	919	0.048	44	29	0.1	0.1	4.116	A

2033 Base + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A280 Long Furlong - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	11.16	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	2	4 - A27 Off-Slip

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	2033 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 Long Furlong		ONE HOUR	✓	829	100.000
2 - A27 On-Slip					
3 - A280 South		ONE HOUR	✓	1143	100.000
4 - A27 Off-Slip		ONE HOUR	✓	750	100.000
5 - Arundel Road		ONE HOUR	✓	58	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	22	805	0	2
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	855	263	0	0	25
	4 - A27 Off-Slip	206	34	510	0	0
	5 - Arundel Road	22	7	29	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	0	7	0	50
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	2	0	0	0	4
	4 - A27 Off-Slip	11	0	0	0	0
	5 - Arundel Road	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 Long Furlong	0.56	4.92	1.2	A	761	1141
2 - A27 On-Slip						
3 - A280 South	0.66	5.67	2.0	A	1049	1573
4 - A27 Off-Slip	0.86	26.50	5.7	D	688	1032
5 - Arundel Road	0.18	12.20	0.2	B	53	80

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	624	156	631	1836	0.340	622	812	0.0	0.5	2.960	A
2 - A27 On-Slip			1009				244				
3 - A280 South	861	215	2	1894	0.454	857	1007	0.0	0.8	3.461	A
4 - A27 Off-Slip	565	141	859	1168	0.484	561	0	0.0	0.9	5.898	A
5 - Arundel Road	44	11	1399	689	0.063	43	20	0.0	0.1	5.576	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	745	186	755	1755	0.425	744	972	0.5	0.7	3.557	A
2 - A27 On-Slip			1207				293				
3 - A280 South	1028	257	2	1893	0.543	1026	1205	0.8	1.2	4.144	A
4 - A27 Off-Slip	674	169	1028	1078	0.625	671	0	0.9	1.6	8.783	A
5 - Arundel Road	52	13	1675	550	0.095	52	24	0.1	0.1	7.228	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	913	228	917	1651	0.553	911	1186	0.7	1.2	4.853	A
2 - A27 On-Slip			1470				357				
3 - A280 South	1258	315	2	1893	0.665	1255	1468	1.2	1.9	5.619	A
4 - A27 Off-Slip	826	206	1258	957	0.863	811	0	1.6	5.3	22.679	C
5 - Arundel Road	64	16	2039	367	0.174	63	30	0.1	0.2	11.852	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	913	228	927	1644	0.555	913	1192	1.2	1.2	4.922	A
2 - A27 On-Slip			1481				359				
3 - A280 South	1258	315	2	1893	0.665	1258	1478	1.9	2.0	5.670	A
4 - A27 Off-Slip	826	206	1261	956	0.864	824	0	5.3	5.7	26.500	D
5 - Arundel Road	64	16	2055	359	0.178	64	30	0.2	0.2	12.201	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	745	186	770	1746	0.427	747	980	1.2	0.8	3.614	A
2 - A27 On-Slip			1223				295				
3 - A280 South	1028	257	2	1893	0.543	1031	1221	2.0	1.2	4.188	A
4 - A27 Off-Slip	674	169	1032	1076	0.627	690	0	5.7	1.7	9.700	A
5 - Arundel Road	52	13	1698	538	0.097	53	24	0.2	0.1	7.422	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	624	156	637	1832	0.341	625	817	0.8	0.5	2.986	A
2 - A27 On-Slip			1016				246				
3 - A280 South	861	215	2	1894	0.454	862	1015	1.2	0.8	3.495	A
4 - A27 Off-Slip	565	141	863	1165	0.485	568	0	1.7	1.0	6.056	A
5 - Arundel Road	44	11	1411	683	0.064	44	20	0.1	0.1	5.633	A

2033 Base + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - A280 Long Furlong - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	5.64	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	25	1 - A280 Long Furlong

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	2033 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 Long Furlong		ONE HOUR	✓	1270	100.000
2 - A27 On-Slip					
3 - A280 South		ONE HOUR	✓	822	100.000
4 - A27 Off-Slip		ONE HOUR	✓	479	100.000
5 - Arundel Road		ONE HOUR	✓	59	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	38	1226	0	6
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	575	216	0	0	31
	4 - A27 Off-Slip	177	16	285	0	1
	5 - Arundel Road	9	9	41	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	0	2	0	0
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	4	0	0	0	0
	4 - A27 Off-Slip	9	0	0	0	0
	5 - Arundel Road	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 Long Furlong	0.72	6.76	2.6	A	1165	1748
2 - A27 On-Slip						
3 - A280 South	0.48	3.73	0.9	A	754	1131
4 - A27 Off-Slip	0.47	5.96	0.9	A	440	659
5 - Arundel Road	0.10	5.82	0.1	A	54	81

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	956	239	425	2066	0.463	953	571	0.0	0.9	3.223	A
2 - A27 On-Slip			1169				209				
3 - A280 South	619	155	5	1870	0.331	617	1164	0.0	0.5	2.873	A
4 - A27 Off-Slip	361	90	621	1286	0.280	359	0	0.0	0.4	3.879	A
5 - Arundel Road	44	11	952	909	0.049	44	29	0.0	0.1	4.159	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1142	285	509	2009	0.568	1140	683	0.9	1.3	4.133	A
2 - A27 On-Slip			1398				251				
3 - A280 South	739	185	5	1869	0.395	738	1393	0.5	0.6	3.181	A
4 - A27 Off-Slip	431	108	744	1221	0.353	430	0	0.4	0.5	4.546	A
5 - Arundel Road	53	13	1140	814	0.065	53	34	0.1	0.1	4.729	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1398	350	623	1932	0.724	1393	837	1.3	2.6	6.626	A
2 - A27 On-Slip			1710				307				
3 - A280 South	905	226	7	1869	0.484	904	1703	0.6	0.9	3.725	A
4 - A27 Off-Slip	527	132	910	1132	0.466	526	0	0.5	0.9	5.931	A
5 - Arundel Road	65	16	1395	684	0.095	65	42	0.1	0.1	5.807	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1398	350	624	1931	0.724	1398	838	2.6	2.6	6.755	A
2 - A27 On-Slip			1715				307				
3 - A280 South	905	226	7	1869	0.484	905	1709	0.9	0.9	3.734	A
4 - A27 Off-Slip	527	132	912	1131	0.466	527	0	0.9	0.9	5.960	A
5 - Arundel Road	65	16	1397	683	0.095	65	42	0.1	0.1	5.821	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1142	285	511	2008	0.569	1147	685	2.6	1.3	4.203	A
2 - A27 On-Slip			1406				251				
3 - A280 South	739	185	5	1869	0.395	740	1401	0.9	0.7	3.190	A
4 - A27 Off-Slip	431	108	745	1220	0.353	432	0	0.9	0.5	4.576	A
5 - Arundel Road	53	13	1143	812	0.065	53	34	0.1	0.1	4.742	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	956	239	427	2065	0.463	958	574	1.3	0.9	3.257	A
2 - A27 On-Slip			1175				210				
3 - A280 South	619	155	5	1870	0.331	619	1171	0.7	0.5	2.879	A
4 - A27 Off-Slip	361	90	624	1284	0.281	361	0	0.5	0.4	3.904	A
5 - Arundel Road	44	11	957	907	0.049	44	29	0.1	0.1	4.173	A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.1.7462

For sales and distribution information, program advice and maintenance, contact TRL:
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Filename: 18122 - A27 - Titnore Lane - A280 - Base.j9
Path: P:\18 Jobs\122 Land at Chatsmore Farm - Goring, West Sussex\Technical Assessments\ARCADY\18122 - A27 - Angmering Bypass
Report generation date: 27/01/2021 15:45:55

»2018, AM
»2018, PM
»2024 Base, AM
»2024 Base, PM
»2024 Base + Dev, AM
»2024 Base + Dev, PM
»2033 Base, AM
»2033 Base, PM
»2033 Base + Dev, AM
»2033 Base + Dev, PM

Summary of junction performance

	AM							PM						
	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
2018														
1 - A280 North	1.8	5.63	0.64	A	7.91	A	13 % [4 - A280 South West]	2.5	6.55	0.71	A	6.29	A	33 % [1 - A280 North]
2 - A27 Off-Slip	0.6	6.53	0.38	A				0.6	6.81	0.39	A			
3 - Titnore Lane	0.7	4.43	0.42	A				1.0	5.90	0.50	A			
4 - A280 South West	3.4	13.62	0.78	B				0.9	5.75	0.46	A			
2024 Base														
1 - A280 North	2.8	7.88	0.74	A	41.95	E	-9 % [4 - A280 South West]	4.8	11.39	0.83	B	10.41	B	14 % [1 - A280 North]
2 - A27 Off-Slip	1.0	9.38	0.51	A				1.2	11.18	0.56	B			
3 - Titnore Lane	1.1	5.86	0.53	A				1.9	9.41	0.66	A			
4 - A280 South West	39.5	113.23	1.04	F				1.7	8.83	0.64	A			
2024 Base + Dev														
1 - A280 North	3.0	8.22	0.75	A	53.23	F	-11 % [4 - A280 South West]	6.0	13.88	0.86	B	12.06	B	10 % [1 - A280 North]
2 - A27 Off-Slip	1.1	9.68	0.52	A				1.4	12.68	0.59	B			
3 - Titnore Lane	1.4	6.55	0.58	A				2.2	10.44	0.69	B			
4 - A280 South West	54.1	150.54	1.08	F				1.8	9.35	0.65	A			
2033 Base														
1 - A280 North	3.5	9.46	0.78	A	75.41	F	-14 % [4 - A280 South West]	7.3	16.59	0.89	C	14.25	B	7 % [1 - A280 North]
2 - A27 Off-Slip	1.3	11.38	0.57	B				1.7	14.94	0.64	B			
3 - Titnore Lane	1.4	6.73	0.58	A				2.6	12.34	0.73	B			
4 - A280 South West	81.3	213.89	1.13	F				2.2	10.64	0.69	B			
2033 Base + Dev														
1 - A280 North	3.8	9.93	0.79	A	89.82	F	-15 % [4 - A280 South West]	9.9	21.93	0.92	C	17.58	C	4 % [1 - A280 North]
2 - A27 Off-Slip	1.4	11.78	0.58	B				2.1	17.65	0.68	C			
3 - Titnore Lane	1.7	7.69	0.63	A				3.1	14.11	0.76	B			
4 - A280 South West	98.9	263.11	1.17	F				2.3	11.39	0.70	B			

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	
Location	
Site number	
Date	10/06/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	mtp\MTPGeneral
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2018	AM	ONE HOUR	07:45	09:15	15	✓
D2	2018	PM	ONE HOUR	16:45	18:15	15	✓
D3	2024 Base	AM	ONE HOUR	07:45	09:15	15	✓
D4	2024 Base	PM	ONE HOUR	16:45	18:15	15	✓
D5	2024 Base + Dev	AM	ONE HOUR	07:45	09:15	15	✓
D6	2024 Base + Dev	PM	ONE HOUR	16:45	18:15	15	✓
D7	2033 Base	AM	ONE HOUR	07:45	09:15	15	✓
D8	2033 Base	PM	ONE HOUR	16:45	18:15	15	✓
D9	2033 Base + Dev	AM	ONE HOUR	07:45	09:15	15	✓
D10	2033 Base + Dev	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

2018, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - A27 Off-Slip - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A280 South West - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	7.91	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	13	4 - A280 South West

Arms

Arms

Arm	Name	Description
1	A280 North	
2	A27 Off-Slip	
3	Titnore Lane	
4	A280 South West	
5	A27 On-Slip	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A280 North	3.70	7.80	18.0	42.0	60.0	10.0	
2 - A27 Off-Slip	4.00	6.00	35.0	25.0	60.0	38.0	
3 - Titnore Lane	3.40	7.80	30.0	25.0	60.0	24.0	
4 - A280 South West	3.65	6.00	36.0	14.0	60.0	33.0	
5 - A27 On-Slip							✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A280 North	0.636	2014
2 - A27 Off-Slip	0.551	1693
3 - Titnore Lane	0.617	1997
4 - A280 South West	0.539	1642
5 - A27 On-Slip		

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	2018	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 North		ONE HOUR	✓	1037	100.000
2 - A27 Off-Slip		ONE HOUR	✓	313	100.000
3 - Titnore Lane		ONE HOUR	✓	527	100.000
4 - A280 South West		ONE HOUR	✓	828	100.000
5 - A27 On-Slip					

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	525	292	220
	2 - A27 Off-Slip	51	0	25	237	0
	3 - Titnore Lane	227	0	0	79	221
	4 - A280 South West	589	0	194	0	45
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	4	3	12
	2 - A27 Off-Slip	2	0	8	1	0
	3 - Titnore Lane	1	0	0	11	1
	4 - A280 South West	2	0	1	0	4
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 North	0.64	5.63	1.8	A	952	1427
2 - A27 Off-Slip	0.38	6.53	0.6	A	287	431
3 - Titnore Lane	0.42	4.43	0.7	A	484	725
4 - A280 South West	0.78	13.62	3.4	B	760	1140
5 - A27 On-Slip						

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	781	195	145	1822	0.428	778	649	0.0	0.7	3.436	A
2 - A27 Off-Slip	236	59	923	1141	0.207	235	0	0.0	0.3	3.968	A
3 - Titnore Lane	397	99	600	1570	0.253	395	558	0.0	0.3	3.063	A
4 - A280 South West	623	156	539	1314	0.475	620	456	0.0	0.9	5.163	A
5 - A27 On-Slip			795				364				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	932	233	174	1805	0.517	931	778	0.7	1.1	4.113	A
2 - A27 Off-Slip	281	70	1105	1038	0.271	281	0	0.3	0.4	4.753	A
3 - Titnore Lane	474	118	718	1495	0.317	473	668	0.3	0.5	3.520	A
4 - A280 South West	744	186	646	1255	0.593	742	546	0.9	1.4	6.990	A
5 - A27 On-Slip			951				436				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1142	285	212	1782	0.641	1139	949	1.1	1.8	5.576	A
2 - A27 Off-Slip	345	86	1351	898	0.384	344	0	0.4	0.6	6.480	A
3 - Titnore Lane	580	145	879	1394	0.416	579	816	0.5	0.7	4.411	A
4 - A280 South West	912	228	790	1175	0.776	904	668	1.4	3.3	12.951	B
5 - A27 On-Slip			1161				534				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1142	285	214	1781	0.641	1142	954	1.8	1.8	5.630	A
2 - A27 Off-Slip	345	86	1355	896	0.385	345	0	0.6	0.6	6.532	A
3 - Titnore Lane	580	145	881	1393	0.417	580	819	0.7	0.7	4.429	A
4 - A280 South West	912	228	792	1174	0.776	911	669	3.3	3.4	13.622	B
5 - A27 On-Slip			1168				535				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	932	233	176	1804	0.517	935	785	1.8	1.1	4.157	A
2 - A27 Off-Slip	281	70	1111	1034	0.272	282	0	0.6	0.4	4.794	A
3 - Titnore Lane	474	118	721	1493	0.317	475	672	0.7	0.5	3.539	A
4 - A280 South West	744	186	648	1254	0.594	752	548	3.4	1.5	7.277	A
5 - A27 On-Slip			961				438				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	781	195	147	1822	0.429	782	655	1.1	0.8	3.466	A
2 - A27 Off-Slip	236	59	929	1138	0.207	236	0	0.4	0.3	3.995	A
3 - Titnore Lane	397	99	603	1568	0.253	397	561	0.5	0.3	3.076	A
4 - A280 South West	623	156	542	1312	0.475	626	459	1.5	0.9	5.260	A
5 - A27 On-Slip			801				366				

2018, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - A27 Off-Slip - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A280 South West - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	6.29	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	33	1 - A280 North

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	2018	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 North		ONE HOUR	✓	1240	100.000
2 - A27 Off-Slip		ONE HOUR	✓	309	100.000
3 - Titnore Lane		ONE HOUR	✓	563	100.000
4 - A280 South West		ONE HOUR	✓	488	100.000
5 - A27 On-Slip					

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	477	471	292
	2 - A27 Off-Slip	26	0	28	249	6
	3 - Titnore Lane	242	0	0	144	177
	4 - A280 South West	362	0	98	0	28
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	1	2	2
	2 - A27 Off-Slip	0	0	0	0	0
	3 - Titnore Lane	4	0	0	1	6
	4 - A280 South West	2	0	1	0	4
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 North	0.71	6.55	2.5	A	1138	1707
2 - A27 Off-Slip	0.39	6.81	0.6	A	284	425
3 - Titnore Lane	0.50	5.90	1.0	A	517	775
4 - A280 South West	0.46	5.75	0.9	A	448	672
5 - A27 On-Slip						

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	934	233	73	1936	0.482	930	472	0.0	0.9	3.565	A
2 - A27 Off-Slip	233	58	1003	1132	0.206	232	0	0.0	0.3	3.996	A
3 - Titnore Lane	424	106	783	1451	0.292	422	452	0.0	0.4	3.492	A
4 - A280 South West	367	92	557	1306	0.281	366	648	0.0	0.4	3.822	A
5 - A27 On-Slip			546				377				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1115	279	88	1927	0.579	1113	566	0.9	1.4	4.413	A
2 - A27 Off-Slip	278	69	1201	1021	0.272	277	0	0.3	0.4	4.837	A
3 - Titnore Lane	506	127	937	1358	0.373	505	541	0.4	0.6	4.217	A
4 - A280 South West	439	110	667	1246	0.352	438	776	0.4	0.5	4.453	A
5 - A27 On-Slip			654				452				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1365	341	108	1914	0.713	1361	692	1.4	2.4	6.456	A
2 - A27 Off-Slip	340	85	1469	871	0.391	339	0	0.4	0.6	6.753	A
3 - Titnore Lane	620	155	1146	1232	0.503	618	662	0.6	1.0	5.846	A
4 - A280 South West	537	134	816	1165	0.461	536	948	0.5	0.8	5.716	A
5 - A27 On-Slip			800				552				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1365	341	108	1914	0.713	1365	694	2.4	2.5	6.552	A
2 - A27 Off-Slip	340	85	1473	869	0.392	340	0	0.6	0.6	6.811	A
3 - Titnore Lane	620	155	1149	1230	0.504	620	664	1.0	1.0	5.896	A
4 - A280 South West	537	134	818	1163	0.462	537	951	0.8	0.9	5.749	A
5 - A27 On-Slip			802				554				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1115	279	88	1927	0.579	1119	568	2.5	1.4	4.480	A
2 - A27 Off-Slip	278	69	1207	1017	0.273	279	0	0.6	0.4	4.880	A
3 - Titnore Lane	506	127	942	1355	0.373	508	544	1.0	0.6	4.257	A
4 - A280 South West	439	110	670	1244	0.353	440	780	0.9	0.5	4.482	A
5 - A27 On-Slip			656				454				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	934	233	74	1936	0.482	935	475	1.4	0.9	3.607	A
2 - A27 Off-Slip	233	58	1009	1128	0.206	233	0	0.4	0.3	4.023	A
3 - Titnore Lane	424	106	788	1448	0.293	425	455	0.6	0.4	3.521	A
4 - A280 South West	367	92	560	1304	0.282	368	652	0.5	0.4	3.848	A
5 - A27 On-Slip			549				379				

2024 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - A27 Off-Slip - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A280 South West - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	41.95	E

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-9	4 - A280 South West

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	2024 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 North		ONE HOUR	✓	1175	100.000
2 - A27 Off-Slip		ONE HOUR	✓	361	100.000
3 - Titnore Lane		ONE HOUR	✓	627	100.000
4 - A280 South West		ONE HOUR	✓	1065	100.000
5 - A27 On-Slip					

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	579	357	239
	2 - A27 Off-Slip	55	0	27	279	0
	3 - Titnore Lane	266	0	0	115	246
	4 - A280 South West	734	0	256	0	75
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	4	3	12
	2 - A27 Off-Slip	2	0	7	1	0
	3 - Titnore Lane	1	0	0	9	1
	4 - A280 South West	2	0	1	0	3
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 North	0.74	7.88	2.8	A	1078	1617
2 - A27 Off-Slip	0.51	9.38	1.0	A	331	497
3 - Titnore Lane	0.53	5.86	1.1	A	575	863
4 - A280 South West	1.04	113.23	39.5	F	977	1466
5 - A27 On-Slip						

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	885	221	191	1796	0.493	881	789	0.0	1.0	3.917	A
2 - A27 Off-Slip	272	68	1072	1059	0.257	270	0	0.0	0.3	4.560	A
3 - Titnore Lane	472	118	697	1510	0.313	470	645	0.0	0.5	3.456	A
4 - A280 South West	802	200	604	1279	0.627	795	563	0.0	1.6	7.349	A
5 - A27 On-Slip			980				420				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1056	264	228	1773	0.596	1054	943	1.0	1.5	4.993	A
2 - A27 Off-Slip	325	81	1283	939	0.346	324	0	0.3	0.5	5.842	A
3 - Titnore Lane	564	141	834	1423	0.396	563	772	0.5	0.7	4.180	A
4 - A280 South West	957	239	723	1213	0.789	950	674	1.6	3.5	13.317	B
5 - A27 On-Slip			1171				502				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1294	323	262	1753	0.738	1289	1103	1.5	2.7	7.670	A
2 - A27 Off-Slip	397	99	1550	787	0.505	396	0	0.5	1.0	9.155	A
3 - Titnore Lane	690	173	1020	1307	0.528	689	926	0.7	1.1	5.805	A
4 - A280 South West	1173	293	885	1124	1.043	1089	824	3.5	24.3	58.511	F
5 - A27 On-Slip			1365				609				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1294	323	267	1750	0.739	1293	1120	2.7	2.8	7.884	A
2 - A27 Off-Slip	397	99	1561	781	0.509	397	0	1.0	1.0	9.377	A
3 - Titnore Lane	690	173	1024	1304	0.529	690	934	1.1	1.1	5.864	A
4 - A280 South West	1173	293	887	1123	1.045	1112	827	24.3	39.5	113.232	F
5 - A27 On-Slip			1387				612				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1056	264	264	1752	0.603	1061	1047	2.8	1.5	5.252	A
2 - A27 Off-Slip	325	81	1325	916	0.354	326	0	1.0	0.6	6.128	A
3 - Titnore Lane	564	141	840	1420	0.397	565	811	1.1	0.7	4.224	A
4 - A280 South West	957	239	727	1211	0.791	1098	678	39.5	4.3	51.975	F
5 - A27 On-Slip			1311				515				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	885	221	195	1793	0.493	887	802	1.5	1.0	3.981	A
2 - A27 Off-Slip	272	68	1082	1053	0.258	273	0	0.6	0.4	4.617	A
3 - Titnore Lane	472	118	702	1507	0.313	473	653	0.7	0.5	3.486	A
4 - A280 South West	802	200	608	1277	0.628	812	567	4.3	1.7	7.912	A
5 - A27 On-Slip			997				423				

2024 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - A27 Off-Slip - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A280 South West - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	10.41	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	14	1 - A280 North

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	2024 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 North		ONE HOUR	✓	1427	100.000
2 - A27 Off-Slip		ONE HOUR	✓	369	100.000
3 - Titnore Lane		ONE HOUR	✓	664	100.000
4 - A280 South West		ONE HOUR	✓	646	100.000
5 - A27 On-Slip					

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	542	569	316
	2 - A27 Off-Slip	28	0	30	304	7
	3 - Titnore Lane	273	0	0	195	196
	4 - A280 South West	458	0	140	0	48
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	1	2	2
	2 - A27 Off-Slip	0	0	0	0	0
	3 - Titnore Lane	4	0	0	1	6
	4 - A280 South West	2	0	1	0	2
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 North	0.83	11.39	4.8	B	1309	1964
2 - A27 Off-Slip	0.56	11.18	1.2	B	339	508
3 - Titnore Lane	0.66	9.41	1.9	A	609	914
4 - A280 South West	0.64	8.83	1.7	A	593	889
5 - A27 On-Slip						

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1074	269	105	1916	0.561	1069	569	0.0	1.3	4.226	A
2 - A27 Off-Slip	278	69	1174	1036	0.268	276	0	0.0	0.4	4.730	A
3 - Titnore Lane	500	125	917	1372	0.364	498	533	0.0	0.6	4.104	A
4 - A280 South West	486	122	614	1276	0.381	484	800	0.0	0.6	4.530	A
5 - A27 On-Slip			674				425				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1283	321	126	1903	0.674	1280	681	1.3	2.0	5.748	A
2 - A27 Off-Slip	332	83	1405	907	0.366	331	0	0.4	0.6	6.244	A
3 - Titnore Lane	597	149	1098	1263	0.472	596	639	0.6	0.9	5.381	A
4 - A280 South West	581	145	736	1210	0.480	580	958	0.6	0.9	5.700	A
5 - A27 On-Slip			806				509				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1571	393	153	1885	0.833	1561	832	2.0	4.7	10.751	B
2 - A27 Off-Slip	406	102	1714	734	0.554	404	0	0.6	1.2	10.824	B
3 - Titnore Lane	731	183	1339	1118	0.654	727	779	0.9	1.8	9.124	A
4 - A280 South West	711	178	898	1121	0.634	708	1168	0.9	1.7	8.652	A
5 - A27 On-Slip			985				621				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1571	393	154	1885	0.834	1571	836	4.7	4.8	11.393	B
2 - A27 Off-Slip	406	102	1725	728	0.558	406	0	1.2	1.2	11.181	B
3 - Titnore Lane	731	183	1347	1113	0.657	731	784	1.8	1.9	9.412	A
4 - A280 South West	711	178	903	1118	0.636	711	1175	1.7	1.7	8.832	A
5 - A27 On-Slip			990				624				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1283	321	127	1902	0.674	1294	686	4.8	2.1	6.019	A
2 - A27 Off-Slip	332	83	1420	898	0.369	334	0	1.2	0.6	6.411	A
3 - Titnore Lane	597	149	1109	1256	0.475	601	645	1.9	0.9	5.524	A
4 - A280 South West	581	145	743	1206	0.482	584	968	1.7	0.9	5.815	A
5 - A27 On-Slip			813				514				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1074	269	106	1915	0.561	1078	573	2.1	1.3	4.312	A
2 - A27 Off-Slip	278	69	1183	1031	0.269	279	0	0.6	0.4	4.792	A
3 - Titnore Lane	500	125	924	1368	0.365	501	538	0.9	0.6	4.161	A
4 - A280 South West	486	122	619	1274	0.382	488	806	0.9	0.6	4.588	A
5 - A27 On-Slip			679				428				

2024 Base + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - A27 Off-Slip - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A280 South West - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	53.23	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-11	4 - A280 South West

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	2024 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 North		ONE HOUR	✓	1196	100.000
2 - A27 Off-Slip		ONE HOUR	✓	363	100.000
3 - Titnore Lane		ONE HOUR	✓	689	100.000
4 - A280 South West		ONE HOUR	✓	1066	100.000
5 - A27 On-Slip					

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	600	357	239
	2 - A27 Off-Slip	55	0	29	279	0
	3 - Titnore Lane	311	0	0	117	261
	4 - A280 South West	734	0	257	0	75
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	4	3	12
	2 - A27 Off-Slip	2	0	7	1	0
	3 - Titnore Lane	1	0	0	8	1
	4 - A280 South West	2	0	1	0	3
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 North	0.75	8.22	3.0	A	1097	1646
2 - A27 Off-Slip	0.52	9.68	1.1	A	333	500
3 - Titnore Lane	0.58	6.55	1.4	A	632	948
4 - A280 South West	1.08	150.54	54.1	F	978	1467
5 - A27 On-Slip						

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	900	225	192	1796	0.501	896	822	0.0	1.0	3.985	A
2 - A27 Off-Slip	273	68	1088	1049	0.260	272	0	0.0	0.3	4.623	A
3 - Titnore Lane	519	130	697	1514	0.343	517	663	0.0	0.5	3.601	A
4 - A280 South West	803	201	649	1255	0.640	796	564	0.0	1.7	7.730	A
5 - A27 On-Slip			1014				431				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1075	269	229	1773	0.606	1073	982	1.0	1.5	5.126	A
2 - A27 Off-Slip	326	82	1302	928	0.352	326	0	0.3	0.5	5.969	A
3 - Titnore Lane	619	155	834	1427	0.434	618	793	0.5	0.8	4.445	A
4 - A280 South West	958	240	777	1184	0.809	950	676	1.7	3.9	14.811	B
5 - A27 On-Slip			1211				516				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1317	329	257	1756	0.750	1311	1135	1.5	2.9	7.990	A
2 - A27 Off-Slip	400	100	1568	777	0.515	398	0	0.5	1.0	9.449	A
3 - Titnore Lane	759	190	1019	1310	0.579	756	946	0.8	1.4	6.469	A
4 - A280 South West	1174	293	950	1089	1.078	1065	825	3.9	31.1	71.913	F
5 - A27 On-Slip			1391				623				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1317	329	261	1754	0.751	1317	1148	2.9	3.0	8.222	A
2 - A27 Off-Slip	400	100	1577	771	0.518	400	0	1.0	1.1	9.678	A
3 - Titnore Lane	759	190	1024	1308	0.580	759	953	1.4	1.4	6.553	A
4 - A280 South West	1174	293	953	1087	1.080	1082	829	31.1	54.1	150.540	F
5 - A27 On-Slip			1409				627				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1075	269	277	1744	0.617	1080	1123	3.0	1.6	5.469	A
2 - A27 Off-Slip	326	82	1358	897	0.364	328	0	1.1	0.6	6.350	A
3 - Titnore Lane	619	155	840	1423	0.435	622	846	1.4	0.8	4.503	A
4 - A280 South West	958	240	782	1182	0.811	1151	680	54.1	6.0	96.806	F
5 - A27 On-Slip			1400				532				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	900	225	197	1792	0.502	903	840	1.6	1.0	4.057	A
2 - A27 Off-Slip	273	68	1100	1042	0.262	274	0	0.6	0.4	4.691	A
3 - Titnore Lane	519	130	702	1511	0.343	520	672	0.8	0.5	3.635	A
4 - A280 South West	803	201	653	1252	0.641	819	568	6.0	1.8	8.613	A
5 - A27 On-Slip			1038				435				

2024 Base + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - A27 Off-Slip - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A280 South West - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	12.06	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	10	1 - A280 North

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	2024 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 North		ONE HOUR	✓	1479	100.000
2 - A27 Off-Slip		ONE HOUR	✓	374	100.000
3 - Titnore Lane		ONE HOUR	✓	701	100.000
4 - A280 South West		ONE HOUR	✓	648	100.000
5 - A27 On-Slip					

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	594	569	316
	2 - A27 Off-Slip	28	0	35	304	7
	3 - Titnore Lane	300	0	0	196	205
	4 - A280 South West	458	0	142	0	48
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	1	2	2
	2 - A27 Off-Slip	0	0	0	0	0
	3 - Titnore Lane	4	0	0	1	5
	4 - A280 South West	2	0	1	0	2
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 North	0.86	13.88	6.0	B	1357	2036
2 - A27 Off-Slip	0.59	12.68	1.4	B	343	515
3 - Titnore Lane	0.69	10.44	2.2	B	643	965
4 - A280 South West	0.65	9.35	1.8	A	595	892
5 - A27 On-Slip						

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1113	278	106	1915	0.581	1108	589	0.0	1.4	4.428	A
2 - A27 Off-Slip	282	70	1214	1014	0.278	280	0	0.0	0.4	4.897	A
3 - Titnore Lane	528	132	917	1376	0.384	525	578	0.0	0.6	4.220	A
4 - A280 South West	488	122	641	1262	0.386	485	801	0.0	0.6	4.619	A
5 - A27 On-Slip			695				432				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1330	332	127	1902	0.699	1326	705	1.4	2.3	6.208	A
2 - A27 Off-Slip	336	84	1453	880	0.382	335	0	0.4	0.6	6.600	A
3 - Titnore Lane	630	158	1097	1267	0.497	629	691	0.6	1.0	5.630	A
4 - A280 South West	583	146	768	1193	0.488	581	958	0.6	0.9	5.871	A
5 - A27 On-Slip			832				517				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1628	407	156	1884	0.864	1614	861	2.3	5.8	12.721	B
2 - A27 Off-Slip	412	103	1770	703	0.586	409	0	0.6	1.4	12.125	B
3 - Titnore Lane	772	193	1337	1122	0.688	767	842	1.0	2.1	10.013	B
4 - A280 South West	713	178	936	1101	0.648	710	1168	0.9	1.8	9.125	A
5 - A27 On-Slip			1016				630				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1628	407	156	1884	0.864	1627	865	5.8	6.0	13.880	B
2 - A27 Off-Slip	412	103	1784	695	0.592	412	0	1.4	1.4	12.682	B
3 - Titnore Lane	772	193	1347	1116	0.692	772	848	2.1	2.2	10.435	B
4 - A280 South West	713	178	942	1098	0.650	713	1176	1.8	1.8	9.355	A
5 - A27 On-Slip			1021				634				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1330	332	128	1902	0.699	1344	711	6.0	2.4	6.622	A
2 - A27 Off-Slip	336	84	1473	869	0.387	339	0	1.4	0.6	6.834	A
3 - Titnore Lane	630	158	1112	1258	0.501	635	700	2.2	1.0	5.820	A
4 - A280 South West	583	146	776	1188	0.490	586	971	1.8	1.0	6.007	A
5 - A27 On-Slip			840				523				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1113	278	107	1915	0.581	1117	593	2.4	1.4	4.536	A
2 - A27 Off-Slip	282	70	1225	1008	0.279	283	0	0.6	0.4	4.971	A
3 - Titnore Lane	528	132	925	1371	0.385	529	582	1.0	0.6	4.283	A
4 - A280 South West	488	122	646	1259	0.387	489	808	1.0	0.6	4.681	A
5 - A27 On-Slip			701				435				

2033 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - A27 Off-Slip - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A280 South West - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	75.41	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-14	4 - A280 South West

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	2033 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 North		ONE HOUR	✓	1248	100.000
2 - A27 Off-Slip		ONE HOUR	✓	384	100.000
3 - Titnore Lane		ONE HOUR	✓	665	100.000
4 - A280 South West		ONE HOUR	✓	1123	100.000
5 - A27 On-Slip					

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	616	378	254
	2 - A27 Off-Slip	59	0	29	296	0
	3 - Titnore Lane	283	0	0	120	262
	4 - A280 South West	776	0	269	0	78
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	4	3	12
	2 - A27 Off-Slip	2	0	7	1	0
	3 - Titnore Lane	1	0	0	8	1
	4 - A280 South West	2	0	1	0	3
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 North	0.78	9.46	3.5	A	1145	1718
2 - A27 Off-Slip	0.57	11.38	1.3	B	352	529
3 - Titnore Lane	0.58	6.73	1.4	A	610	915
4 - A280 South West	1.13	213.89	81.3	F	1030	1546
5 - A27 On-Slip						

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	940	235	201	1790	0.525	935	835	0.0	1.1	4.190	A
2 - A27 Off-Slip	289	72	1136	1022	0.283	288	0	0.0	0.4	4.890	A
3 - Titnore Lane	501	125	739	1486	0.337	499	684	0.0	0.5	3.637	A
4 - A280 South West	845	211	643	1257	0.672	837	595	0.0	2.0	8.423	A
5 - A27 On-Slip			1036				445				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1122	280	239	1767	0.635	1119	996	1.1	1.7	5.540	A
2 - A27 Off-Slip	345	86	1358	896	0.385	344	0	0.4	0.6	6.514	A
3 - Titnore Lane	598	149	885	1394	0.429	597	817	0.5	0.7	4.509	A
4 - A280 South West	1010	252	770	1187	0.850	997	712	2.0	5.0	17.903	C
5 - A27 On-Slip			1235				532				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1374	344	258	1755	0.783	1367	1121	1.7	3.5	9.117	A
2 - A27 Off-Slip	423	106	1625	744	0.568	420	0	0.6	1.3	11.032	B
3 - Titnore Lane	732	183	1081	1271	0.576	730	965	0.7	1.3	6.626	A
4 - A280 South West	1236	309	941	1093	1.131	1079	870	5.0	44.5	94.594	F
5 - A27 On-Slip			1379				641				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1374	344	261	1753	0.784	1374	1129	3.5	3.5	9.460	A
2 - A27 Off-Slip	423	106	1635	739	0.572	423	0	1.3	1.3	11.380	B
3 - Titnore Lane	732	183	1086	1267	0.578	732	971	1.3	1.4	6.725	A
4 - A280 South West	1236	309	945	1091	1.133	1089	874	44.5	81.3	213.894	F
5 - A27 On-Slip			1390				644				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1122	280	280	1742	0.644	1129	1117	3.5	1.8	5.939	A
2 - A27 Off-Slip	345	86	1409	868	0.398	348	0	1.3	0.7	6.954	A
3 - Titnore Lane	598	149	893	1389	0.430	600	864	1.4	0.8	4.577	A
4 - A280 South West	1010	252	775	1184	0.852	1170	718	81.3	41.2	190.316	F
5 - A27 On-Slip			1398				547				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	940	235	240	1766	0.532	942	950	1.8	1.1	4.385	A
2 - A27 Off-Slip	289	72	1182	997	0.290	290	0	0.7	0.4	5.101	A
3 - Titnore Lane	501	125	745	1482	0.338	502	727	0.8	0.5	3.673	A
4 - A280 South West	845	211	647	1255	0.674	1002	600	41.2	2.2	25.273	D
5 - A27 On-Slip			1190				459				

2033 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - A27 Off-Slip - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A280 South West - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	14.25	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	7	1 - A280 North

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	2033 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 North		ONE HOUR	✓	1516	100.000
2 - A27 Off-Slip		ONE HOUR	✓	390	100.000
3 - Titnore Lane		ONE HOUR	✓	703	100.000
4 - A280 South West		ONE HOUR	✓	681	100.000
5 - A27 On-Slip					

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	576	603	337
	2 - A27 Off-Slip	30	0	32	321	7
	3 - Titnore Lane	290	0	0	205	208
	4 - A280 South West	484	0	147	0	50
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	1	2	2
	2 - A27 Off-Slip	0	0	0	0	0
	3 - Titnore Lane	4	0	0	1	6
	4 - A280 South West	2	0	1	0	2
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 North	0.89	16.59	7.3	C	1391	2087
2 - A27 Off-Slip	0.64	14.94	1.7	B	358	537
3 - Titnore Lane	0.73	12.34	2.6	B	645	968
4 - A280 South West	0.69	10.64	2.2	B	625	937
5 - A27 On-Slip						

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1141	285	110	1913	0.597	1135	602	0.0	1.5	4.599	A
2 - A27 Off-Slip	294	73	1246	996	0.295	292	0	0.0	0.4	5.102	A
3 - Titnore Lane	529	132	972	1339	0.395	527	565	0.0	0.6	4.417	A
4 - A280 South West	513	128	653	1255	0.409	510	846	0.0	0.7	4.814	A
5 - A27 On-Slip			712				451				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1363	341	132	1899	0.718	1359	721	1.5	2.5	6.614	A
2 - A27 Off-Slip	351	88	1491	859	0.408	350	0	0.4	0.7	7.054	A
3 - Titnore Lane	632	158	1163	1224	0.516	630	677	0.6	1.1	6.049	A
4 - A280 South West	612	153	782	1185	0.517	611	1012	0.7	1.1	6.256	A
5 - A27 On-Slip			853				540				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1669	417	161	1881	0.888	1651	880	2.5	6.9	14.697	B
2 - A27 Off-Slip	429	107	1812	679	0.633	426	0	0.7	1.7	14.006	B
3 - Titnore Lane	774	194	1415	1072	0.722	768	823	1.1	2.5	11.632	B
4 - A280 South West	750	187	952	1091	0.687	746	1231	1.1	2.1	10.281	B
5 - A27 On-Slip			1040				657				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1669	417	162	1880	0.888	1667	885	6.9	7.3	16.591	C
2 - A27 Off-Slip	429	107	1829	669	0.642	429	0	1.7	1.7	14.941	B
3 - Titnore Lane	774	194	1428	1064	0.727	774	831	2.5	2.6	12.344	B
4 - A280 South West	750	187	959	1087	0.690	750	1242	2.1	2.2	10.643	B
5 - A27 On-Slip			1047				662				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1363	341	133	1898	0.718	1382	729	7.3	2.6	7.213	A
2 - A27 Off-Slip	351	88	1515	845	0.415	355	0	1.7	0.7	7.396	A
3 - Titnore Lane	632	158	1182	1212	0.521	638	687	2.6	1.1	6.330	A
4 - A280 South West	612	153	793	1179	0.519	617	1028	2.2	1.1	6.451	A
5 - A27 On-Slip			862				548				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1141	285	111	1912	0.597	1146	607	2.6	1.5	4.726	A
2 - A27 Off-Slip	294	73	1257	990	0.297	295	0	0.7	0.4	5.188	A
3 - Titnore Lane	529	132	981	1334	0.397	531	571	1.1	0.7	4.494	A
4 - A280 South West	513	128	659	1252	0.410	514	853	1.1	0.7	4.891	A
5 - A27 On-Slip			718				455				

2033 Base + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - A27 Off-Slip - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A280 South West - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	89.82	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-15	4 - A280 South West

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	2033 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 North		ONE HOUR	✓	1269	100.000
2 - A27 Off-Slip		ONE HOUR	✓	386	100.000
3 - Titnore Lane		ONE HOUR	✓	727	100.000
4 - A280 South West		ONE HOUR	✓	1124	100.000
5 - A27 On-Slip					

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	637	378	254
	2 - A27 Off-Slip	59	0	31	296	0
	3 - Titnore Lane	328	0	0	122	277
	4 - A280 South West	776	0	270	0	78
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	4	3	12
	2 - A27 Off-Slip	2	0	6	1	0
	3 - Titnore Lane	1	0	0	8	1
	4 - A280 South West	2	0	1	0	3
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 North	0.79	9.93	3.8	A	1164	1747
2 - A27 Off-Slip	0.58	11.78	1.4	B	354	531
3 - Titnore Lane	0.63	7.69	1.7	A	667	1001
4 - A280 South West	1.17	263.11	98.9	F	1031	1547
5 - A27 On-Slip						

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	955	239	201	1790	0.534	951	868	0.0	1.1	4.266	A
2 - A27 Off-Slip	291	73	1152	1014	0.287	289	0	0.0	0.4	4.957	A
3 - Titnore Lane	547	137	739	1487	0.368	545	702	0.0	0.6	3.810	A
4 - A280 South West	846	212	688	1233	0.686	838	596	0.0	2.1	8.921	A
5 - A27 On-Slip			1070				456				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1141	285	239	1767	0.646	1138	1035	1.1	1.8	5.701	A
2 - A27 Off-Slip	347	87	1377	886	0.392	346	0	0.4	0.6	6.657	A
3 - Titnore Lane	654	163	885	1395	0.468	652	838	0.6	0.9	4.837	A
4 - A280 South West	1010	253	824	1159	0.872	996	714	2.1	5.8	20.460	C
5 - A27 On-Slip			1274				545				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1397	349	252	1759	0.794	1390	1148	1.8	3.7	9.546	A
2 - A27 Off-Slip	425	106	1641	735	0.578	422	0	0.6	1.3	11.404	B
3 - Titnore Lane	800	200	1080	1272	0.629	797	983	0.9	1.7	7.533	A
4 - A280 South West	1238	309	1006	1058	1.170	1048	872	5.8	53.2	113.015	F
5 - A27 On-Slip			1400				655				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1397	349	253	1758	0.795	1397	1154	3.7	3.8	9.930	A
2 - A27 Off-Slip	425	106	1650	730	0.582	425	0	1.3	1.4	11.777	B
3 - Titnore Lane	800	200	1086	1268	0.631	800	989	1.7	1.7	7.688	A
4 - A280 South West	1238	309	1011	1056	1.172	1055	876	53.2	98.9	263.110	F
5 - A27 On-Slip			1407				658				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1141	285	275	1745	0.654	1148	1139	3.8	1.9	6.103	A
2 - A27 Off-Slip	347	87	1423	861	0.403	350	0	1.4	0.7	7.085	A
3 - Titnore Lane	654	163	893	1390	0.470	657	879	1.7	0.9	4.929	A
4 - A280 South West	1010	253	830	1155	0.875	1144	720	98.9	65.6	258.726	F
5 - A27 On-Slip			1414				559				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	955	239	264	1752	0.545	958	1051	1.9	1.2	4.553	A
2 - A27 Off-Slip	291	73	1222	975	0.298	292	0	0.7	0.4	5.277	A
3 - Titnore Lane	547	137	745	1484	0.369	549	768	0.9	0.6	3.856	A
4 - A280 South West	846	212	693	1231	0.688	1099	601	65.6	2.4	72.460	F
5 - A27 On-Slip			1315				477				

2033 Base + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - A27 Off-Slip - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A280 South West - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	17.58	C

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	4	1 - A280 North

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	2033 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 North		ONE HOUR	✓	1568	100.000
2 - A27 Off-Slip		ONE HOUR	✓	395	100.000
3 - Titnore Lane		ONE HOUR	✓	740	100.000
4 - A280 South West		ONE HOUR	✓	683	100.000
5 - A27 On-Slip					

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	628	603	337
	2 - A27 Off-Slip	30	0	37	321	7
	3 - Titnore Lane	317	0	0	206	217
	4 - A280 South West	484	0	149	0	50
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	1	2	2
	2 - A27 Off-Slip	0	0	0	0	0
	3 - Titnore Lane	4	0	0	1	5
	4 - A280 South West	2	0	1	0	2
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 North	0.92	21.93	9.9	C	1439	2158
2 - A27 Off-Slip	0.68	17.65	2.1	C	362	544
3 - Titnore Lane	0.76	14.11	3.1	B	679	1019
4 - A280 South West	0.70	11.39	2.3	B	627	940
5 - A27 On-Slip						

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1180	295	112	1912	0.617	1174	622	0.0	1.6	4.837	A
2 - A27 Off-Slip	297	74	1286	974	0.305	296	0	0.0	0.4	5.295	A
3 - Titnore Lane	557	139	972	1343	0.415	554	609	0.0	0.7	4.550	A
4 - A280 South West	514	129	680	1241	0.414	511	846	0.0	0.7	4.915	A
5 - A27 On-Slip			734				458				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1410	352	134	1898	0.743	1405	745	1.6	2.8	7.223	A
2 - A27 Off-Slip	355	89	1538	832	0.427	354	0	0.4	0.7	7.507	A
3 - Titnore Lane	665	166	1163	1227	0.542	663	729	0.7	1.2	6.366	A
4 - A280 South West	614	154	814	1168	0.526	612	1012	0.7	1.1	6.462	A
5 - A27 On-Slip			879				548				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1726	432	163	1880	0.919	1702	908	2.8	9.0	18.135	C
2 - A27 Off-Slip	435	109	1865	650	0.669	430	0	0.7	1.9	16.065	C
3 - Titnore Lane	815	204	1410	1078	0.756	808	885	1.2	2.9	13.007	B
4 - A280 South West	752	188	989	1072	0.701	747	1229	1.1	2.3	10.927	B
5 - A27 On-Slip			1071				665				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1726	432	164	1879	0.919	1723	914	9.0	9.9	21.928	C
2 - A27 Off-Slip	435	109	1887	637	0.682	434	0	1.9	2.1	17.648	C
3 - Titnore Lane	815	204	1426	1068	0.763	814	895	2.9	3.1	14.113	B
4 - A280 South West	752	188	998	1067	0.705	752	1242	2.3	2.3	11.395	B
5 - A27 On-Slip			1078				672				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1410	352	135	1897	0.743	1437	754	9.9	3.0	8.271	A
2 - A27 Off-Slip	355	89	1572	813	0.437	360	0	2.1	0.8	8.032	A
3 - Titnore Lane	665	166	1188	1212	0.549	673	744	3.1	1.2	6.765	A
4 - A280 South West	614	154	828	1160	0.529	619	1033	2.3	1.1	6.705	A
5 - A27 On-Slip			889				558				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1180	295	113	1912	0.618	1186	628	3.0	1.6	4.998	A
2 - A27 Off-Slip	297	74	1298	967	0.308	299	0	0.8	0.4	5.400	A
3 - Titnore Lane	557	139	982	1337	0.417	559	615	1.2	0.7	4.642	A
4 - A280 South West	514	129	686	1238	0.415	516	854	1.1	0.7	4.999	A
5 - A27 On-Slip			740				462				

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.1.7462

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

Filename: 18122 - A27 - Titnore Lane - A280 - Mitigation.j9
Path: P:\18 Jobs\122 Land at Chatsmore Farm - Goring, West Sussex\Technical Assessments\ARCADY\18122 - A27 - Angmering Bypass
Report generation date: 27/01/2021 15:48:51

»2018, AM
»2018, PM
»2024 Base, AM
»2024 Base, PM
»2024 Base + Dev, AM
»2024 Base + Dev, PM
»2033 Base, AM
»2033 Base, PM
»2033 Base + Dev, AM
»2033 Base + Dev, PM

Summary of junction performance

	AM							PM						
	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
2018														
1 - A280 North	1.6	5.15	0.62	A	5.50	A	35 % [4 - A280 South West]	2.2	5.88	0.69	A	5.61	A	37 % [1 - A280 North]
2 - A27 Off-Slip	0.6	6.53	0.38	A				0.6	6.81	0.39	A			
3 - Titnore Lane	0.7	4.43	0.42	A				1.0	5.90	0.50	A			
4 - A280 South West	1.6	6.24	0.61	A				0.6	3.83	0.36	A			
2024 Base														
1 - A280 North	2.5	7.11	0.72	A	9.34	A	10 % [4 - A280 South West]	4.1	9.53	0.81	A	8.77	A	17 % [2 - A27 Off-Slip]
2 - A27 Off-Slip	1.0	9.58	0.51	A				1.2	11.19	0.56	B			
3 - Titnore Lane	1.1	5.86	0.53	A				1.9	9.41	0.66	A			
4 - A280 South West	4.4	13.86	0.82	B				1.0	5.04	0.50	A			
2024 Base + Dev														
1 - A280 North	6.2	14.22	0.87	B	11.86	B	10 % [1 - A280 North]	4.5	10.43	0.82	B	9.47	A	15 % [2 - A27 Off-Slip]
2 - A27 Off-Slip	1.7	14.99	0.63	B				1.4	12.10	0.58	B			
3 - Titnore Lane	2.3	11.12	0.71	B				2.1	10.06	0.68	B			
4 - A280 South West	1.0	5.31	0.51	A				1.0	5.17	0.51	A			
2033 Base														
1 - A280 North	3.2	8.61	0.77	A	12.91	B	4 % [4 - A280 South West]	5.8	13.01	0.86	B	11.57	B	10 % [2 - A27 Off-Slip]
2 - A27 Off-Slip	1.4	12.11	0.59	B				1.7	14.98	0.64	B			
3 - Titnore Lane	1.4	6.73	0.58	A				2.6	12.36	0.73	B			
4 - A280 South West	7.1	21.81	0.89	C				1.2	5.62	0.54	A			
2033 Base + Dev														
1 - A280 North	3.5	9.11	0.78	A	15.18	C	1 % [4 - A280 South West]	7.5	16.28	0.89	C	13.88	B	7 % [1 - A280 North]
2 - A27 Off-Slip	1.5	12.76	0.60	B				2.1	17.75	0.68	C			
3 - Titnore Lane	1.7	7.69	0.63	A				3.1	14.16	0.76	B			
4 - A280 South West	9.0	27.96	0.91	D				1.2	5.85	0.55	A			

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	
Location	
Site number	
Date	10/06/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	mtp\MTPGeneral
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2018	AM	ONE HOUR	07:45	09:15	15	✓
D2	2018	PM	ONE HOUR	16:45	18:15	15	✓
D3	2024 Base	AM	ONE HOUR	07:45	09:15	15	✓
D4	2024 Base	PM	ONE HOUR	16:45	18:15	15	✓
D5	2024 Base + Dev	AM	ONE HOUR	07:45	09:15	15	✓
D6	2024 Base + Dev	PM	ONE HOUR	16:45	18:15	15	✓
D7	2033 Base	AM	ONE HOUR	07:45	09:15	15	✓
D8	2033 Base	PM	ONE HOUR	16:45	18:15	15	✓
D9	2033 Base + Dev	AM	ONE HOUR	07:45	09:15	15	✓
D10	2033 Base + Dev	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

2018, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - A27 Off-Slip - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A280 South West - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	5.50	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	35	4 - A280 South West

Arms

Arms

Arm	Name	Description
1	A280 North	
2	A27 Off-Slip	
3	Titnore Lane	
4	A280 South West	
5	A27 On-Slip	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A280 North	3.70	7.80	22.0	42.0	60.0	10.0	
2 - A27 Off-Slip	4.00	6.00	35.0	25.0	60.0	38.0	
3 - Titnore Lane	3.40	7.80	30.0	25.0	60.0	24.0	
4 - A280 South West	3.65	7.50	50.0	20.0	60.0	33.0	
5 - A27 On-Slip							✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A280 North	0.648	2080
2 - A27 Off-Slip	0.551	1693
3 - Titnore Lane	0.617	1997
4 - A280 South West	0.610	2021
5 - A27 On-Slip		

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	2018	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 North		ONE HOUR	✓	1037	100.000
2 - A27 Off-Slip		ONE HOUR	✓	313	100.000
3 - Titnore Lane		ONE HOUR	✓	527	100.000
4 - A280 South West		ONE HOUR	✓	828	100.000
5 - A27 On-Slip					

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	525	292	220
	2 - A27 Off-Slip	51	0	25	237	0
	3 - Titnore Lane	227	0	0	79	221
	4 - A280 South West	589	0	194	0	45
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	4	3	12
	2 - A27 Off-Slip	2	0	8	1	0
	3 - Titnore Lane	1	0	0	11	1
	4 - A280 South West	2	0	1	0	4
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 North	0.62	5.15	1.6	A	952	1427
2 - A27 Off-Slip	0.38	6.53	0.6	A	287	431
3 - Titnore Lane	0.42	4.43	0.7	A	484	725
4 - A280 South West	0.61	6.24	1.6	A	760	1140
5 - A27 On-Slip						

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	781	195	145	1883	0.415	778	650	0.0	0.7	3.250	A
2 - A27 Off-Slip	236	59	923	1141	0.207	235	0	0.0	0.3	3.969	A
3 - Titnore Lane	397	99	600	1570	0.253	395	558	0.0	0.3	3.063	A
4 - A280 South West	623	156	539	1646	0.379	621	456	0.0	0.6	3.506	A
5 - A27 On-Slip			796				365				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	932	233	174	1865	0.500	931	778	0.7	1.0	3.850	A
2 - A27 Off-Slip	281	70	1105	1038	0.271	281	0	0.3	0.4	4.755	A
3 - Titnore Lane	474	118	718	1495	0.317	473	668	0.3	0.5	3.520	A
4 - A280 South West	744	186	646	1580	0.471	743	546	0.6	0.9	4.298	A
5 - A27 On-Slip			952				436				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1142	285	213	1841	0.620	1139	952	1.0	1.6	5.113	A
2 - A27 Off-Slip	345	86	1352	897	0.384	344	0	0.4	0.6	6.489	A
3 - Titnore Lane	580	145	879	1394	0.416	579	817	0.5	0.7	4.412	A
4 - A280 South West	912	228	790	1489	0.612	909	668	0.9	1.6	6.173	A
5 - A27 On-Slip			1165				534				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1142	285	214	1840	0.620	1142	955	1.6	1.6	5.152	A
2 - A27 Off-Slip	345	86	1355	896	0.385	345	0	0.6	0.6	6.532	A
3 - Titnore Lane	580	145	881	1393	0.417	580	819	0.7	0.7	4.429	A
4 - A280 South West	912	228	792	1489	0.612	912	669	1.6	1.6	6.237	A
5 - A27 On-Slip			1168				535				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	932	233	175	1864	0.500	935	782	1.6	1.0	3.882	A
2 - A27 Off-Slip	281	70	1110	1035	0.272	282	0	0.6	0.4	4.789	A
3 - Titnore Lane	474	118	721	1493	0.317	475	671	0.7	0.5	3.539	A
4 - A280 South West	744	186	648	1578	0.472	747	548	1.6	0.9	4.345	A
5 - A27 On-Slip			957				438				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	781	195	146	1882	0.415	782	654	1.0	0.7	3.277	A
2 - A27 Off-Slip	236	59	928	1138	0.207	236	0	0.4	0.3	3.995	A
3 - Titnore Lane	397	99	603	1568	0.253	397	561	0.5	0.3	3.076	A
4 - A280 South West	623	156	542	1645	0.379	625	458	0.9	0.6	3.535	A
5 - A27 On-Slip			800				366				

2018, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - A27 Off-Slip - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A280 South West - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	5.61	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	37	1 - A280 North

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	2018	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 North		ONE HOUR	✓	1240	100.000
2 - A27 Off-Slip		ONE HOUR	✓	309	100.000
3 - Titnore Lane		ONE HOUR	✓	563	100.000
4 - A280 South West		ONE HOUR	✓	488	100.000
5 - A27 On-Slip					

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	477	471	292
	2 - A27 Off-Slip	26	0	28	249	6
	3 - Titnore Lane	242	0	0	144	177
	4 - A280 South West	362	0	98	0	28
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	1	2	2
	2 - A27 Off-Slip	0	0	0	0	0
	3 - Titnore Lane	4	0	0	1	6
	4 - A280 South West	2	0	1	0	4
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 North	0.69	5.88	2.2	A	1138	1707
2 - A27 Off-Slip	0.39	6.81	0.6	A	284	425
3 - Titnore Lane	0.50	5.90	1.0	A	517	775
4 - A280 South West	0.36	3.83	0.6	A	448	672
5 - A27 On-Slip						

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	934	233	74	1999	0.467	930	473	0.0	0.9	3.355	A
2 - A27 Off-Slip	233	58	1004	1131	0.206	232	0	0.0	0.3	3.997	A
3 - Titnore Lane	424	106	783	1451	0.292	422	452	0.0	0.4	3.492	A
4 - A280 South West	367	92	557	1637	0.224	366	648	0.0	0.3	2.829	A
5 - A27 On-Slip			546				377				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1115	279	88	1990	0.560	1113	566	0.9	1.3	4.098	A
2 - A27 Off-Slip	278	69	1201	1021	0.272	277	0	0.3	0.4	4.838	A
3 - Titnore Lane	506	127	937	1358	0.373	505	541	0.4	0.6	4.218	A
4 - A280 South West	439	110	667	1569	0.280	438	776	0.3	0.4	3.182	A
5 - A27 On-Slip			654				452				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1365	341	108	1977	0.690	1362	692	1.3	2.2	5.812	A
2 - A27 Off-Slip	340	85	1469	871	0.391	339	0	0.4	0.6	6.758	A
3 - Titnore Lane	620	155	1146	1232	0.503	618	662	0.6	1.0	5.848	A
4 - A280 South West	537	134	816	1477	0.364	537	949	0.4	0.6	3.827	A
5 - A27 On-Slip			800				552				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1365	341	108	1977	0.690	1365	694	2.2	2.2	5.879	A
2 - A27 Off-Slip	340	85	1473	869	0.392	340	0	0.6	0.6	6.811	A
3 - Titnore Lane	620	155	1149	1230	0.504	620	664	1.0	1.0	5.896	A
4 - A280 South West	537	134	818	1476	0.364	537	951	0.6	0.6	3.834	A
5 - A27 On-Slip			802				554				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1115	279	88	1990	0.560	1118	568	2.2	1.3	4.147	A
2 - A27 Off-Slip	278	69	1207	1018	0.273	279	0	0.6	0.4	4.878	A
3 - Titnore Lane	506	127	942	1355	0.373	508	544	1.0	0.6	4.256	A
4 - A280 South West	439	110	670	1568	0.280	439	779	0.6	0.4	3.192	A
5 - A27 On-Slip			656				454				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	934	233	74	1999	0.467	935	475	1.3	0.9	3.387	A
2 - A27 Off-Slip	233	58	1009	1128	0.206	233	0	0.4	0.3	4.024	A
3 - Titnore Lane	424	106	787	1448	0.293	425	455	0.6	0.4	3.518	A
4 - A280 South West	367	92	560	1636	0.225	368	652	0.4	0.3	2.839	A
5 - A27 On-Slip			549				379				

2024 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - A27 Off-Slip - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A280 South West - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	9.34	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	10	4 - A280 South West

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	2024 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 North		ONE HOUR	✓	1175	100.000
2 - A27 Off-Slip		ONE HOUR	✓	361	100.000
3 - Titnore Lane		ONE HOUR	✓	627	100.000
4 - A280 South West		ONE HOUR	✓	1065	100.000
5 - A27 On-Slip					

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	579	357	239
	2 - A27 Off-Slip	55	0	27	279	0
	3 - Titnore Lane	266	0	0	115	246
	4 - A280 South West	734	0	256	0	75
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	4	3	12
	2 - A27 Off-Slip	2	0	7	1	0
	3 - Titnore Lane	1	0	0	9	1
	4 - A280 South West	2	0	1	0	3
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 North	0.72	7.11	2.5	A	1078	1617
2 - A27 Off-Slip	0.51	9.58	1.0	A	331	497
3 - Titnore Lane	0.53	5.86	1.1	A	575	863
4 - A280 South West	0.82	13.86	4.4	B	977	1466
5 - A27 On-Slip						

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	885	221	192	1856	0.477	881	791	0.0	0.9	3.680	A
2 - A27 Off-Slip	272	68	1073	1058	0.257	270	0	0.0	0.3	4.563	A
3 - Titnore Lane	472	118	697	1510	0.313	470	646	0.0	0.5	3.457	A
4 - A280 South West	802	200	604	1607	0.499	798	563	0.0	1.0	4.430	A
5 - A27 On-Slip			982				420				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1056	264	230	1832	0.577	1055	946	0.9	1.3	4.620	A
2 - A27 Off-Slip	325	81	1284	938	0.346	324	0	0.3	0.5	5.850	A
3 - Titnore Lane	564	141	834	1423	0.396	563	773	0.5	0.7	4.180	A
4 - A280 South West	957	239	723	1532	0.625	955	674	1.0	1.6	6.205	A
5 - A27 On-Slip			1176				503				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1294	323	279	1801	0.718	1289	1153	1.3	2.5	6.969	A
2 - A27 Off-Slip	397	99	1569	777	0.512	395	0	0.5	1.0	9.387	A
3 - Titnore Lane	690	173	1020	1307	0.528	689	944	0.7	1.1	5.806	A
4 - A280 South West	1173	293	885	1432	0.819	1162	824	1.6	4.2	12.908	B
5 - A27 On-Slip			1433				614				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1294	323	282	1800	0.719	1294	1161	2.5	2.5	7.108	A
2 - A27 Off-Slip	397	99	1575	773	0.514	397	0	1.0	1.0	9.575	A
3 - Titnore Lane	690	173	1024	1304	0.529	690	949	1.1	1.1	5.864	A
4 - A280 South West	1173	293	887	1430	0.820	1172	827	4.2	4.4	13.861	B
5 - A27 On-Slip			1443				616				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1056	264	233	1830	0.577	1061	957	2.5	1.4	4.706	A
2 - A27 Off-Slip	325	81	1294	933	0.348	327	0	1.0	0.5	5.955	A
3 - Titnore Lane	564	141	840	1420	0.397	565	780	1.1	0.7	4.224	A
4 - A280 South West	957	239	727	1530	0.626	968	678	4.4	1.7	6.524	A
5 - A27 On-Slip			1190				506				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	885	221	193	1855	0.477	886	797	1.4	0.9	3.724	A
2 - A27 Off-Slip	272	68	1080	1054	0.258	273	0	0.5	0.3	4.611	A
3 - Titnore Lane	472	118	702	1507	0.313	473	651	0.7	0.5	3.486	A
4 - A280 South West	802	200	608	1604	0.500	805	567	1.7	1.0	4.517	A
5 - A27 On-Slip			990				422				

2024 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - A27 Off-Slip - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A280 South West - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	8.77	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	17	2 - A27 Off-Slip

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	2024 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 North		ONE HOUR	✓	1427	100.000
2 - A27 Off-Slip		ONE HOUR	✓	369	100.000
3 - Titnore Lane		ONE HOUR	✓	664	100.000
4 - A280 South West		ONE HOUR	✓	646	100.000
5 - A27 On-Slip					

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	542	569	316
	2 - A27 Off-Slip	28	0	30	304	7
	3 - Titnore Lane	273	0	0	195	196
	4 - A280 South West	458	0	140	0	48
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	1	2	2
	2 - A27 Off-Slip	0	0	0	0	0
	3 - Titnore Lane	4	0	0	1	6
	4 - A280 South West	2	0	1	0	2
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 North	0.81	9.53	4.1	A	1309	1964
2 - A27 Off-Slip	0.56	11.19	1.2	B	339	508
3 - Titnore Lane	0.66	9.41	1.9	A	609	914
4 - A280 South West	0.50	5.04	1.0	A	593	889
5 - A27 On-Slip						

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1074	269	105	1979	0.543	1070	569	0.0	1.2	3.938	A
2 - A27 Off-Slip	278	69	1175	1036	0.268	276	0	0.0	0.4	4.732	A
3 - Titnore Lane	500	125	917	1372	0.364	498	534	0.0	0.6	4.105	A
4 - A280 South West	486	122	615	1604	0.303	485	800	0.0	0.4	3.212	A
5 - A27 On-Slip			674				425				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1283	321	126	1966	0.653	1280	681	1.2	1.8	5.230	A
2 - A27 Off-Slip	332	83	1406	906	0.366	331	0	0.4	0.6	6.247	A
3 - Titnore Lane	597	149	1098	1263	0.473	596	639	0.6	0.9	5.382	A
4 - A280 South West	581	145	736	1529	0.380	580	958	0.4	0.6	3.792	A
5 - A27 On-Slip			807				509				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1571	393	154	1948	0.807	1563	833	1.8	4.0	9.154	A
2 - A27 Off-Slip	406	102	1716	732	0.555	404	0	0.6	1.2	10.867	B
3 - Titnore Lane	731	183	1340	1117	0.654	727	780	0.9	1.8	9.142	A
4 - A280 South West	711	178	898	1428	0.498	710	1169	0.6	1.0	5.001	A
5 - A27 On-Slip			987				621				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1571	393	154	1947	0.807	1571	836	4.0	4.1	9.531	A
2 - A27 Off-Slip	406	102	1725	728	0.558	406	0	1.2	1.2	11.186	B
3 - Titnore Lane	731	183	1347	1113	0.657	731	784	1.8	1.9	9.414	A
4 - A280 South West	711	178	903	1425	0.499	711	1176	1.0	1.0	5.041	A
5 - A27 On-Slip			990				624				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1283	321	126	1965	0.653	1291	685	4.1	1.9	5.410	A
2 - A27 Off-Slip	332	83	1418	900	0.369	334	0	1.2	0.6	6.395	A
3 - Titnore Lane	597	149	1108	1257	0.475	601	644	1.9	0.9	5.515	A
4 - A280 South West	581	145	742	1525	0.381	582	967	1.0	0.6	3.827	A
5 - A27 On-Slip			811				513				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1074	269	106	1979	0.543	1077	573	1.9	1.2	4.007	A
2 - A27 Off-Slip	278	69	1183	1031	0.269	279	0	0.6	0.4	4.790	A
3 - Titnore Lane	500	125	924	1368	0.365	501	537	0.9	0.6	4.160	A
4 - A280 South West	486	122	619	1601	0.304	487	806	0.6	0.4	3.232	A
5 - A27 On-Slip			678				428				

2024 Base + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - A27 Off-Slip - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A280 South West - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	11.86	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	10	1 - A280 North

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	2024 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 North		ONE HOUR	✓	1479	100.000
2 - A27 Off-Slip		ONE HOUR	✓	374	100.000
3 - Titnore Lane		ONE HOUR	✓	701	100.000
4 - A280 South West		ONE HOUR	✓	648	100.000
5 - A27 On-Slip					

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	594	569	316
	2 - A27 Off-Slip	28	0	35	304	7
	3 - Titnore Lane	300	0	0	196	205
	4 - A280 South West	458	0	142	0	48
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	4	3	12
	2 - A27 Off-Slip	2	0	7	1	0
	3 - Titnore Lane	1	0	0	8	1
	4 - A280 South West	2	0	1	0	3
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 North	0.87	14.22	6.2	B	1357	2036
2 - A27 Off-Slip	0.63	14.99	1.7	B	343	515
3 - Titnore Lane	0.71	11.12	2.3	B	643	965
4 - A280 South West	0.51	5.31	1.0	A	595	892
5 - A27 On-Slip						

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1113	278	107	1908	0.583	1108	589	0.0	1.4	4.467	A
2 - A27 Off-Slip	282	70	1214	975	0.289	280	0	0.0	0.4	5.168	A
3 - Titnore Lane	528	132	917	1364	0.387	525	578	0.0	0.6	4.278	A
4 - A280 South West	488	122	641	1580	0.309	486	801	0.0	0.4	3.284	A
5 - A27 On-Slip			696				432				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1330	332	127	1895	0.701	1326	705	1.4	2.3	6.281	A
2 - A27 Off-Slip	336	84	1453	839	0.401	335	0	0.4	0.7	7.130	A
3 - Titnore Lane	630	158	1097	1251	0.504	629	691	0.6	1.0	5.771	A
4 - A280 South West	583	146	768	1501	0.388	582	958	0.4	0.6	3.913	A
5 - A27 On-Slip			833				517				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1628	407	156	1878	0.867	1614	862	2.3	5.9	12.988	B
2 - A27 Off-Slip	412	103	1770	659	0.625	408	0	0.7	1.6	14.146	B
3 - Titnore Lane	772	193	1336	1101	0.701	767	842	1.0	2.3	10.604	B
4 - A280 South West	713	178	935	1395	0.511	712	1167	0.6	1.0	5.254	A
5 - A27 On-Slip			1018				629				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1628	407	156	1878	0.867	1627	865	5.9	6.2	14.216	B
2 - A27 Off-Slip	412	103	1784	651	0.632	411	0	1.6	1.7	14.989	B
3 - Titnore Lane	772	193	1347	1094	0.705	771	848	2.3	2.3	11.122	B
4 - A280 South West	713	178	942	1391	0.513	713	1176	1.0	1.0	5.311	A
5 - A27 On-Slip			1022				634				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1330	332	128	1895	0.702	1345	710	6.2	2.4	6.714	A
2 - A27 Off-Slip	336	84	1473	828	0.406	340	0	1.7	0.7	7.435	A
3 - Titnore Lane	630	158	1113	1241	0.508	635	700	2.3	1.0	5.993	A
4 - A280 South West	583	146	777	1495	0.390	584	971	1.0	0.6	3.960	A
5 - A27 On-Slip			838				523				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1113	278	107	1908	0.584	1117	593	2.4	1.4	4.575	A
2 - A27 Off-Slip	282	70	1224	969	0.290	283	0	0.7	0.4	5.252	A
3 - Titnore Lane	528	132	925	1359	0.388	529	582	1.0	0.6	4.346	A
4 - A280 South West	488	122	647	1577	0.309	489	808	0.6	0.5	3.309	A
5 - A27 On-Slip			700				435				

2024 Base + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - A27 Off-Slip - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A280 South West - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	9.47	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	15	2 - A27 Off-Slip

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	2024 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 North		ONE HOUR	✓	1456	100.000
2 - A27 Off-Slip		ONE HOUR	✓	374	100.000
3 - Titnore Lane		ONE HOUR	✓	689	100.000
4 - A280 South West		ONE HOUR	✓	648	100.000
5 - A27 On-Slip					

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	571	569	316
	2 - A27 Off-Slip	28	0	35	304	7
	3 - Titnore Lane	291	0	0	196	202
	4 - A280 South West	458	0	142	0	48
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	1	2	2
	2 - A27 Off-Slip	0	0	0	0	0
	3 - Titnore Lane	4	0	0	1	5
	4 - A280 South West	2	0	1	0	2
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 North	0.82	10.43	4.5	B	1336	2004
2 - A27 Off-Slip	0.58	12.10	1.4	B	343	515
3 - Titnore Lane	0.68	10.06	2.1	B	632	948
4 - A280 South West	0.51	5.17	1.0	A	595	892
5 - A27 On-Slip						

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1096	274	107	1978	0.554	1091	583	0.0	1.2	4.037	A
2 - A27 Off-Slip	282	70	1198	1023	0.275	280	0	0.0	0.4	4.836	A
3 - Titnore Lane	519	130	917	1376	0.377	516	561	0.0	0.6	4.176	A
4 - A280 South West	488	122	632	1594	0.306	486	801	0.0	0.4	3.244	A
5 - A27 On-Slip			689				429				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1309	327	127	1965	0.666	1306	697	1.2	2.0	5.441	A
2 - A27 Off-Slip	336	84	1433	891	0.377	335	0	0.4	0.6	6.468	A
3 - Titnore Lane	619	155	1098	1267	0.489	618	671	0.6	0.9	5.539	A
4 - A280 South West	583	146	757	1517	0.384	582	959	0.4	0.6	3.851	A
5 - A27 On-Slip			825				514				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1603	401	156	1946	0.824	1593	852	2.0	4.4	9.930	A
2 - A27 Off-Slip	412	103	1749	714	0.577	409	0	0.6	1.3	11.684	B
3 - Titnore Lane	759	190	1339	1121	0.677	754	819	0.9	2.0	9.710	A
4 - A280 South West	713	178	924	1413	0.505	712	1170	0.6	1.0	5.121	A
5 - A27 On-Slip			1008				627				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1603	401	156	1946	0.824	1603	855	4.4	4.5	10.434	B
2 - A27 Off-Slip	412	103	1759	709	0.581	412	0	1.3	1.4	12.101	B
3 - Titnore Lane	759	190	1347	1116	0.680	758	823	2.0	2.1	10.056	B
4 - A280 South West	713	178	929	1410	0.506	713	1177	1.0	1.0	5.167	A
5 - A27 On-Slip			1012				631				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1309	327	128	1964	0.666	1319	702	4.5	2.0	5.659	A
2 - A27 Off-Slip	336	84	1447	883	0.381	339	0	1.4	0.6	6.651	A
3 - Titnore Lane	619	155	1109	1260	0.492	624	677	2.1	1.0	5.697	A
4 - A280 South West	583	146	764	1512	0.385	584	969	1.0	0.6	3.887	A
5 - A27 On-Slip			830				519				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1096	274	107	1978	0.554	1099	586	2.0	1.3	4.111	A
2 - A27 Off-Slip	282	70	1206	1018	0.277	283	0	0.6	0.4	4.901	A
3 - Titnore Lane	519	130	924	1372	0.378	520	565	1.0	0.6	4.236	A
4 - A280 South West	488	122	637	1591	0.307	489	807	0.6	0.4	3.270	A
5 - A27 On-Slip			693				433				

2033 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - A27 Off-Slip - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A280 South West - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	12.91	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	4	4 - A280 South West

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	2033 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 North		ONE HOUR	✓	1248	100.000
2 - A27 Off-Slip		ONE HOUR	✓	384	100.000
3 - Titnore Lane		ONE HOUR	✓	665	100.000
4 - A280 South West		ONE HOUR	✓	1123	100.000
5 - A27 On-Slip					

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	616	378	254
	2 - A27 Off-Slip	59	0	29	296	0
	3 - Titnore Lane	283	0	0	120	262
	4 - A280 South West	776	0	269	0	78
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	4	3	12
	2 - A27 Off-Slip	2	0	7	1	0
	3 - Titnore Lane	1	0	0	8	1
	4 - A280 South West	2	0	1	0	3
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 North	0.77	8.61	3.2	A	1145	1718
2 - A27 Off-Slip	0.59	12.11	1.4	B	352	529
3 - Titnore Lane	0.58	6.73	1.4	A	610	915
4 - A280 South West	0.89	21.81	7.1	C	1030	1546
5 - A27 On-Slip						

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	940	235	201	1849	0.508	935	837	0.0	1.0	3.922	A
2 - A27 Off-Slip	289	72	1137	1022	0.283	288	0	0.0	0.4	4.894	A
3 - Titnore Lane	501	125	740	1486	0.337	499	685	0.0	0.5	3.638	A
4 - A280 South West	845	211	643	1582	0.534	841	595	0.0	1.1	4.827	A
5 - A27 On-Slip			1039				445				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1122	280	241	1825	0.615	1120	1002	1.0	1.6	5.088	A
2 - A27 Off-Slip	345	86	1361	895	0.386	344	0	0.4	0.6	6.529	A
3 - Titnore Lane	598	149	885	1394	0.429	597	820	0.5	0.7	4.510	A
4 - A280 South West	1010	252	770	1503	0.672	1006	712	1.1	2.0	7.191	A
5 - A27 On-Slip			1243				533				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1374	344	292	1793	0.766	1368	1217	1.6	3.2	8.336	A
2 - A27 Off-Slip	423	106	1660	725	0.583	420	0	0.6	1.4	11.678	B
3 - Titnore Lane	732	183	1081	1271	0.576	730	999	0.7	1.3	6.626	A
4 - A280 South West	1236	309	941	1396	0.885	1218	870	2.0	6.5	18.592	C
5 - A27 On-Slip			1509				651				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1374	344	296	1791	0.767	1374	1229	3.2	3.2	8.614	A
2 - A27 Off-Slip	423	106	1669	720	0.588	423	0	1.4	1.4	12.107	B
3 - Titnore Lane	732	183	1086	1267	0.578	732	1006	1.3	1.4	6.725	A
4 - A280 South West	1236	309	945	1394	0.887	1234	874	6.5	7.1	21.814	C
5 - A27 On-Slip			1525				654				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1122	280	247	1821	0.616	1128	1020	3.2	1.6	5.242	A
2 - A27 Off-Slip	345	86	1375	887	0.389	348	0	1.4	0.6	6.722	A
3 - Titnore Lane	598	149	893	1389	0.430	600	830	1.4	0.8	4.576	A
4 - A280 South West	1010	252	775	1500	0.673	1029	718	7.1	2.1	7.961	A
5 - A27 On-Slip			1267				538				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	940	235	203	1848	0.508	942	845	1.6	1.0	3.981	A
2 - A27 Off-Slip	289	72	1145	1017	0.284	290	0	0.6	0.4	4.960	A
3 - Titnore Lane	501	125	745	1483	0.338	502	690	0.8	0.5	3.675	A
4 - A280 South West	845	211	647	1580	0.535	849	599	2.1	1.2	4.954	A
5 - A27 On-Slip			1048				448				

2033 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - A27 Off-Slip - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A280 South West - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	11.57	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	10	2 - A27 Off-Slip

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	2033 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 North		ONE HOUR	✓	1516	100.000
2 - A27 Off-Slip		ONE HOUR	✓	390	100.000
3 - Titnore Lane		ONE HOUR	✓	703	100.000
4 - A280 South West		ONE HOUR	✓	681	100.000
5 - A27 On-Slip					

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	576	603	337
	2 - A27 Off-Slip	30	0	32	321	7
	3 - Titnore Lane	290	0	0	205	208
	4 - A280 South West	484	0	147	0	50
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	1	2	2
	2 - A27 Off-Slip	0	0	0	0	0
	3 - Titnore Lane	4	0	0	1	6
	4 - A280 South West	2	0	1	0	2
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 North	0.86	13.01	5.8	B	1391	2087
2 - A27 Off-Slip	0.64	14.98	1.7	B	358	537
3 - Titnore Lane	0.73	12.36	2.6	B	645	968
4 - A280 South West	0.54	5.62	1.2	A	625	937
5 - A27 On-Slip						

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1141	285	110	1976	0.578	1136	603	0.0	1.4	4.260	A
2 - A27 Off-Slip	294	73	1246	996	0.295	292	0	0.0	0.4	5.105	A
3 - Titnore Lane	529	132	972	1339	0.395	527	566	0.0	0.6	4.418	A
4 - A280 South West	513	128	653	1580	0.325	511	846	0.0	0.5	3.361	A
5 - A27 On-Slip			713				451				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1363	341	132	1962	0.695	1359	721	1.4	2.2	5.943	A
2 - A27 Off-Slip	351	88	1491	858	0.408	350	0	0.4	0.7	7.059	A
3 - Titnore Lane	632	158	1164	1224	0.517	630	677	0.6	1.1	6.051	A
4 - A280 South West	612	153	782	1500	0.408	611	1012	0.5	0.7	4.047	A
5 - A27 On-Slip			853				540				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1669	417	161	1943	0.859	1656	881	2.2	5.6	12.017	B
2 - A27 Off-Slip	429	107	1817	676	0.635	425	0	0.7	1.7	14.147	B
3 - Titnore Lane	774	194	1417	1071	0.723	768	825	1.1	2.5	11.687	B
4 - A280 South West	750	187	953	1394	0.538	748	1233	0.7	1.1	5.555	A
5 - A27 On-Slip			1043				658				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1669	417	162	1942	0.859	1668	885	5.6	5.8	13.008	B
2 - A27 Off-Slip	429	107	1830	669	0.642	429	0	1.7	1.7	14.977	B
3 - Titnore Lane	774	194	1428	1064	0.727	774	831	2.5	2.6	12.361	B
4 - A280 South West	750	187	960	1390	0.539	750	1242	1.1	1.2	5.623	A
5 - A27 On-Slip			1047				662				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1363	341	133	1961	0.695	1377	727	5.8	2.3	6.300	A
2 - A27 Off-Slip	351	88	1509	848	0.413	355	0	1.7	0.7	7.351	A
3 - Titnore Lane	632	158	1179	1214	0.521	638	685	2.6	1.1	6.310	A
4 - A280 South West	612	153	792	1494	0.410	614	1026	1.2	0.7	4.098	A
5 - A27 On-Slip			859				546				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1141	285	111	1975	0.578	1145	607	2.3	1.4	4.355	A
2 - A27 Off-Slip	294	73	1256	990	0.297	295	0	0.7	0.4	5.184	A
3 - Titnore Lane	529	132	981	1334	0.397	531	570	1.1	0.7	4.492	A
4 - A280 South West	513	128	659	1577	0.325	514	853	0.7	0.5	3.391	A
5 - A27 On-Slip			718				455				

2033 Base + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - A27 Off-Slip - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A280 South West - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	15.18	C

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	1	4 - A280 South West

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	2033 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 North		ONE HOUR	✓	1269	100.000
2 - A27 Off-Slip		ONE HOUR	✓	386	100.000
3 - Titnore Lane		ONE HOUR	✓	727	100.000
4 - A280 South West		ONE HOUR	✓	1124	100.000
5 - A27 On-Slip					

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	637	378	254
	2 - A27 Off-Slip	59	0	31	296	0
	3 - Titnore Lane	328	0	0	122	277
	4 - A280 South West	776	0	270	0	78
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	4	3	12
	2 - A27 Off-Slip	2	0	6	1	0
	3 - Titnore Lane	1	0	0	8	1
	4 - A280 South West	2	0	1	0	3
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 North	0.78	9.11	3.5	A	1164	1747
2 - A27 Off-Slip	0.60	12.76	1.5	B	354	531
3 - Titnore Lane	0.63	7.69	1.7	A	667	1001
4 - A280 South West	0.91	27.96	9.0	D	1031	1547
5 - A27 On-Slip						

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	955	239	202	1849	0.517	951	871	0.0	1.1	3.990	A
2 - A27 Off-Slip	291	73	1153	1013	0.287	289	0	0.0	0.4	4.961	A
3 - Titnore Lane	547	137	739	1487	0.368	545	703	0.0	0.6	3.810	A
4 - A280 South West	846	212	688	1555	0.544	841	596	0.0	1.2	5.011	A
5 - A27 On-Slip			1073				456				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1141	285	242	1825	0.625	1138	1042	1.1	1.6	5.227	A
2 - A27 Off-Slip	347	87	1380	884	0.392	346	0	0.4	0.6	6.677	A
3 - Titnore Lane	654	163	885	1395	0.468	652	841	0.6	0.9	4.837	A
4 - A280 South West	1010	253	824	1471	0.687	1007	714	1.2	2.1	7.692	A
5 - A27 On-Slip			1284				546				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1397	349	292	1794	0.779	1390	1262	1.6	3.4	8.771	A
2 - A27 Off-Slip	425	106	1682	713	0.596	422	0	0.6	1.4	12.234	B
3 - Titnore Lane	800	200	1080	1272	0.629	797	1023	0.9	1.7	7.533	A
4 - A280 South West	1238	309	1006	1357	0.912	1214	871	2.1	8.0	22.292	C
5 - A27 On-Slip			1554				666				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1397	349	296	1791	0.780	1397	1278	3.4	3.5	9.114	A
2 - A27 Off-Slip	425	106	1693	707	0.601	425	0	1.4	1.5	12.756	B
3 - Titnore Lane	800	200	1086	1268	0.631	800	1032	1.7	1.7	7.688	A
4 - A280 South West	1238	309	1011	1354	0.914	1234	876	8.0	9.0	27.964	D
5 - A27 On-Slip			1574				670				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1141	285	249	1820	0.627	1148	1066	3.5	1.7	5.408	A
2 - A27 Off-Slip	347	87	1397	875	0.397	350	0	1.5	0.7	6.904	A
3 - Titnore Lane	654	163	894	1390	0.470	657	854	1.7	0.9	4.930	A
4 - A280 South West	1010	253	830	1467	0.689	1037	721	9.0	2.3	8.884	A
5 - A27 On-Slip			1315				552				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	955	239	204	1848	0.517	958	879	1.7	1.1	4.056	A
2 - A27 Off-Slip	291	73	1162	1008	0.288	292	0	0.7	0.4	5.034	A
3 - Titnore Lane	547	137	745	1484	0.369	549	709	0.9	0.6	3.855	A
4 - A280 South West	846	212	693	1552	0.545	850	601	2.3	1.2	5.161	A
5 - A27 On-Slip			1084				460				

2033 Base + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - A27 Off-Slip - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A280 South West - 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	untitled	Standard Roundabout		1, 2, 3, 4, 5	13.88	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	7	1 - A280 North

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	2033 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 North		ONE HOUR	✓	1568	100.000
2 - A27 Off-Slip		ONE HOUR	✓	395	100.000
3 - Titnore Lane		ONE HOUR	✓	740	100.000
4 - A280 South West		ONE HOUR	✓	683	100.000
5 - A27 On-Slip					

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	628	603	337
	2 - A27 Off-Slip	30	0	37	321	7
	3 - Titnore Lane	317	0	0	206	217
	4 - A280 South West	484	0	149	0	50
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 North	2 - A27 Off-Slip	3 - Titnore Lane	4 - A280 South West	5 - A27 On-Slip
From	1 - A280 North	0	0	1	2	2
	2 - A27 Off-Slip	0	0	0	0	0
	3 - Titnore Lane	4	0	0	1	5
	4 - A280 South West	2	0	1	0	2
	5 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 North	0.89	16.28	7.5	C	1439	2158
2 - A27 Off-Slip	0.68	17.75	2.1	C	362	544
3 - Titnore Lane	0.76	14.16	3.1	B	679	1019
4 - A280 South West	0.55	5.85	1.2	A	627	940
5 - A27 On-Slip						

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1180	295	112	1975	0.598	1175	623	0.0	1.5	4.466	A
2 - A27 Off-Slip	297	74	1286	973	0.306	296	0	0.0	0.4	5.298	A
3 - Titnore Lane	557	139	972	1342	0.415	554	610	0.0	0.7	4.551	A
4 - A280 South West	514	129	680	1564	0.329	512	846	0.0	0.5	3.417	A
5 - A27 On-Slip			735				458				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1410	352	134	1961	0.719	1405	746	1.5	2.5	6.435	A
2 - A27 Off-Slip	355	89	1539	832	0.427	354	0	0.4	0.7	7.515	A
3 - Titnore Lane	665	166	1163	1227	0.542	663	730	0.7	1.2	6.369	A
4 - A280 South West	614	154	814	1481	0.415	613	1013	0.5	0.7	4.142	A
5 - A27 On-Slip			879				548				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1726	432	164	1942	0.889	1708	910	2.5	7.0	14.427	B
2 - A27 Off-Slip	435	109	1872	646	0.674	430	0	0.7	2.0	16.346	C
3 - Titnore Lane	815	204	1414	1075	0.758	808	888	1.2	3.0	13.112	B
4 - A280 South West	752	188	990	1372	0.548	750	1231	0.7	1.2	5.768	A
5 - A27 On-Slip			1074				667				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1726	432	164	1941	0.889	1725	915	7.0	7.5	16.278	C
2 - A27 Off-Slip	435	109	1889	636	0.684	434	0	2.0	2.1	17.755	C
3 - Titnore Lane	815	204	1428	1067	0.764	814	895	3.0	3.1	14.160	B
4 - A280 South West	752	188	999	1367	0.550	752	1243	1.2	1.2	5.854	A
5 - A27 On-Slip			1079				672				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1410	352	134	1960	0.719	1429	752	7.5	2.6	7.005	A
2 - A27 Off-Slip	355	89	1563	818	0.434	360	0	2.1	0.8	7.945	A
3 - Titnore Lane	665	166	1183	1215	0.548	673	740	3.1	1.2	6.732	A
4 - A280 South West	614	154	826	1474	0.417	616	1030	1.2	0.7	4.208	A
5 - A27 On-Slip			886				556				

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 North	1180	295	112	1975	0.598	1185	627	2.6	1.5	4.585	A
2 - A27 Off-Slip	297	74	1297	967	0.307	299	0	0.8	0.4	5.395	A
3 - Titnore Lane	557	139	981	1337	0.417	559	615	1.2	0.7	4.639	A
4 - A280 South West	514	129	686	1560	0.330	515	854	0.7	0.5	3.446	A
5 - A27 On-Slip			740				462				

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.1.7462

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

Filename: 18122 - A280 - A27 - Arundel Road - Base.j9
Path: P:\18 Jobs\122 Land at Chatsmore Farm - Goring, West Sussex\Technical Assessments\ARCADY\18122 - A27 - Angmering Bypass
Report generation date: 27/01/2021 15:52:38

»2018, AM
»2018, PM
»2024 Base, AM
»2024 Base, PM
»2024 Base + Dev, AM
»2024 Base + Dev, PM
»2033 Base, AM
»2033 Base, PM
»2033 Base + Dev, AM
»2033 Base + Dev, PM

Summary of junction performance

	AM							PM						
	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Queue (Veh)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
2018														
1 - A280 Long Furlong	1.2	5.82	0.55	A	5.85	A	28 % [4 - A27 Off-Slip]	2.3	7.56	0.70	A	5.55	A	28 % [1 - A280 Long Furlong]
3 - A280 South	1.0	3.86	0.51	A				0.6	3.08	0.37	A			
4 - A27 Off-Slip	1.6	8.55	0.61	A				0.5	4.40	0.32	A			
5 - Arundel Road	0.1	6.86	0.10	A				0.1	4.54	0.07	A			
2024 Base														
1 - A280 Long Furlong	1.9	8.22	0.66	A	9.27	A	9 % [4 - A27 Off-Slip]	4.9	14.35	0.84	B	9.06	A	10 % [1 - A280 Long Furlong]
3 - A280 South	1.5	4.83	0.61	A				0.8	3.46	0.44	A			
4 - A27 Off-Slip	3.5	16.70	0.78	C				0.7	5.38	0.42	A			
5 - Arundel Road	0.2	9.76	0.14	A				0.1	5.32	0.08	A			
2024 Base + Dev														
1 - A280 Long Furlong	2.0	8.31	0.67	A	9.29	A	8 % [4 - A27 Off-Slip]	6.1	17.54	0.87	C	10.66	B	7 % [1 - A280 Long Furlong]
3 - A280 South	1.7	5.12	0.63	A				0.8	3.55	0.46	A			
4 - A27 Off-Slip	3.5	16.63	0.78	C				0.8	5.47	0.43	A			
5 - Arundel Road	0.2	10.12	0.15	B				0.1	5.47	0.09	A			
2033 Base														
1 - A280 Long Furlong	2.5	10.09	0.72	B	12.78	B	2 % [4 - A27 Off-Slip]	8.0	22.53	0.90	C	13.14	B	4 % [1 - A280 Long Furlong]
3 - A280 South	1.8	5.32	0.64	A				0.9	3.63	0.47	A			
4 - A27 Off-Slip	5.7	26.42	0.86	D				0.8	5.85	0.45	A			
5 - Arundel Road	0.2	11.71	0.17	B				0.1	5.66	0.09	A			
2033 Base + Dev														
1 - A280 Long Furlong	2.5	10.21	0.72	B	12.79	B	2 % [4 - A27 Off-Slip]	11.0	30.12	0.93	D	16.87	C	1 % [1 - A280 Long Furlong]
3 - A280 South	2.0	5.67	0.66	A				0.9	3.73	0.48	A			
4 - A27 Off-Slip	5.7	26.50	0.86	D				0.9	5.96	0.47	A			
5 - Arundel Road	0.2	12.20	0.18	B				0.1	5.82	0.10	A			

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	
Location	
Site number	
Date	10/06/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	mtp\MTPGeneral
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2018	AM	ONE HOUR	07:45	09:15	15	✓
D2	2018	PM	ONE HOUR	16:45	18:15	15	✓
D3	2024 Base	AM	ONE HOUR	07:45	09:15	15	✓
D4	2024 Base	PM	ONE HOUR	16:45	18:15	15	✓
D5	2024 Base + Dev	AM	ONE HOUR	07:45	09:15	15	✓
D6	2024 Base + Dev	PM	ONE HOUR	16:45	18:15	15	✓
D7	2033 Base	AM	ONE HOUR	07:45	09:15	15	✓
D8	2033 Base	PM	ONE HOUR	16:45	18:15	15	✓
D9	2033 Base + Dev	AM	ONE HOUR	07:45	09:15	15	✓
D10	2033 Base + Dev	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

2018, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	5.85	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	28	4 - A27 Off-Slip

Arms

Arms

Arm	Name	Description
1	A280 Long Furlong	
2	A27 On-Slip	
3	A280 South	
4	A27 Off-Slip	
5	Arundel Road	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - A280 Long Furlong	3.65	7.30	29.0	35.0	60.0	35.0	
2 - A27 On-Slip							✓
3 - A280 South	3.65	8.10	14.0	37.0	60.0	12.0	
4 - A27 Off-Slip	3.65	6.60	30.0	15.0	60.0	44.0	
5 - Arundel Road	3.65	6.30	6.5	25.0	60.0	45.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A280 Long Furlong	0.593	1901
2 - A27 On-Slip		
3 - A280 South	0.618	1925
4 - A27 Off-Slip	0.535	1670
5 - Arundel Road	0.493	1393

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	2018	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 Long Furlong		ONE HOUR	✓	685	100.000
2 - A27 On-Slip					
3 - A280 South		ONE HOUR	✓	867	100.000
4 - A27 Off-Slip		ONE HOUR	✓	603	100.000
5 - Arundel Road		ONE HOUR	✓	50	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	19	664	0	2
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	655	191	0	0	21
	4 - A27 Off-Slip	178	29	396	0	0
	5 - Arundel Road	19	6	25	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	0	7	0	50
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	2	1	0	0	5
	4 - A27 Off-Slip	11	0	4	0	0
	5 - Arundel Road	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 Long Furlong	0.55	5.82	1.2	A	629	943
2 - A27 On-Slip						
3 - A280 South	0.51	3.86	1.0	A	796	1193
4 - A27 Off-Slip	0.61	8.55	1.6	A	553	830
5 - Arundel Road	0.10	6.86	0.1	A	46	69

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	516	129	485	1502	0.343	514	639	0.0	0.5	3.635	A
2 - A27 On-Slip			815				184				
3 - A280 South	653	163	1	1889	0.346	651	813	0.0	0.5	2.902	A
4 - A27 Off-Slip	454	113	652	1241	0.366	452	0	0.0	0.6	4.546	A
5 - Arundel Road	38	9	1087	839	0.045	37	17	0.0	0.0	4.491	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	616	154	581	1447	0.426	615	765	0.5	0.7	4.321	A
2 - A27 On-Slip			976				220				
3 - A280 South	779	195	2	1888	0.413	779	974	0.5	0.7	3.242	A
4 - A27 Off-Slip	542	136	781	1175	0.461	541	0	0.6	0.8	5.666	A
5 - Arundel Road	45	11	1301	730	0.062	45	21	0.0	0.1	5.257	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	754	189	710	1374	0.549	752	936	0.7	1.2	5.778	A
2 - A27 On-Slip			1193				269				
3 - A280 South	955	239	2	1888	0.506	953	1191	0.7	1.0	3.847	A
4 - A27 Off-Slip	664	166	956	1085	0.612	661	0	0.8	1.5	8.435	A
5 - Arundel Road	55	14	1591	581	0.095	55	25	0.1	0.1	6.835	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	754	189	712	1372	0.550	754	938	1.2	1.2	5.824	A
2 - A27 On-Slip			1197				270				
3 - A280 South	955	239	2	1888	0.506	955	1195	1.0	1.0	3.856	A
4 - A27 Off-Slip	664	166	957	1085	0.612	664	0	1.5	1.6	8.553	A
5 - Arundel Road	55	14	1595	579	0.095	55	25	0.1	0.1	6.864	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	616	154	584	1445	0.426	618	768	1.2	0.7	4.358	A
2 - A27 On-Slip			981				221				
3 - A280 South	779	195	2	1888	0.413	781	979	1.0	0.7	3.255	A
4 - A27 Off-Slip	542	136	782	1174	0.462	545	0	1.6	0.9	5.743	A
5 - Arundel Road	45	11	1307	727	0.062	45	21	0.1	0.1	5.282	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	516	129	488	1500	0.344	517	642	0.7	0.5	3.663	A
2 - A27 On-Slip			820				185				
3 - A280 South	653	163	2	1889	0.346	653	818	0.7	0.5	2.917	A
4 - A27 Off-Slip	454	113	655	1240	0.366	455	0	0.9	0.6	4.594	A
5 - Arundel Road	38	9	1093	836	0.045	38	17	0.1	0.0	4.511	A

2018, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	5.55	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	28	1 - A280 Long Furlong

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	2018	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 Long Furlong		ONE HOUR	✓	1023	100.000
2 - A27 On-Slip					
3 - A280 South		ONE HOUR	✓	633	100.000
4 - A27 Off-Slip		ONE HOUR	✓	354	100.000
5 - Arundel Road		ONE HOUR	✓	51	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	33	985	0	5
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	449	158	0	0	26
	4 - A27 Off-Slip	153	14	186	0	1
	5 - Arundel Road	8	8	35	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	0	2	0	0
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	4	1	0	0	0
	4 - A27 Off-Slip	9	7	4	0	0
	5 - Arundel Road	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 Long Furlong	0.70	7.56	2.3	A	939	1408
2 - A27 On-Slip						
3 - A280 South	0.37	3.08	0.6	A	581	871
4 - A27 Off-Slip	0.32	4.40	0.5	A	325	487
5 - Arundel Road	0.07	4.54	0.1	A	47	70

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	770	193	301	1686	0.457	767	458	0.0	0.8	3.903	A
2 - A27 On-Slip			908				160				
3 - A280 South	477	119	4	1865	0.256	475	904	0.0	0.3	2.587	A
4 - A27 Off-Slip	267	67	479	1323	0.201	266	0	0.0	0.3	3.401	A
5 - Arundel Road	38	10	720	1022	0.038	38	24	0.0	0.0	3.657	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	920	230	360	1651	0.557	918	548	0.8	1.2	4.903	A
2 - A27 On-Slip			1087				191				
3 - A280 South	569	142	4	1865	0.305	569	1082	0.3	0.4	2.777	A
4 - A27 Off-Slip	318	80	573	1274	0.250	318	0	0.3	0.3	3.764	A
5 - Arundel Road	46	11	862	949	0.048	46	29	0.0	0.1	3.983	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1126	282	441	1602	0.703	1122	671	1.2	2.3	7.431	A
2 - A27 On-Slip			1329				234				
3 - A280 South	697	174	5	1864	0.374	696	1323	0.4	0.6	3.081	A
4 - A27 Off-Slip	390	97	702	1207	0.323	389	0	0.3	0.5	4.397	A
5 - Arundel Road	56	14	1056	850	0.066	56	35	0.1	0.1	4.534	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1126	282	442	1602	0.703	1126	672	2.3	2.3	7.560	A
2 - A27 On-Slip			1333				235				
3 - A280 South	697	174	6	1864	0.374	697	1328	0.6	0.6	3.083	A
4 - A27 Off-Slip	390	97	702	1207	0.323	390	0	0.5	0.5	4.403	A
5 - Arundel Road	56	14	1057	849	0.066	56	35	0.1	0.1	4.537	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	920	230	361	1650	0.557	924	549	2.3	1.3	4.987	A
2 - A27 On-Slip			1093				192				
3 - A280 South	569	142	5	1865	0.305	570	1089	0.6	0.4	2.780	A
4 - A27 Off-Slip	318	80	574	1274	0.250	319	0	0.5	0.3	3.771	A
5 - Arundel Road	46	11	864	949	0.048	46	29	0.1	0.1	3.989	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	770	193	302	1685	0.457	772	460	1.3	0.8	3.949	A
2 - A27 On-Slip			914				161				
3 - A280 South	477	119	4	1865	0.256	477	910	0.4	0.3	2.593	A
4 - A27 Off-Slip	267	67	481	1322	0.202	267	0	0.3	0.3	3.411	A
5 - Arundel Road	38	10	723	1021	0.038	38	24	0.1	0.0	3.663	A

2024 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	9.27	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	9	4 - A27 Off-Slip

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	2024 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 Long Furlong		ONE HOUR	✓	766	100.000
2 - A27 On-Slip					
3 - A280 South		ONE HOUR	✓	1039	100.000
4 - A27 Off-Slip		ONE HOUR	✓	700	100.000
5 - Arundel Road		ONE HOUR	✓	55	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	21	743	0	2
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	766	249	0	0	24
	4 - A27 Off-Slip	193	31	476	0	0
	5 - Arundel Road	21	7	27	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	0	7	0	50
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	2	1	0	0	4
	4 - A27 Off-Slip	11	10	4	0	0
	5 - Arundel Road	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 Long Furlong	0.66	8.22	1.9	A	703	1054
2 - A27 On-Slip						
3 - A280 South	0.61	4.83	1.5	A	953	1430
4 - A27 Off-Slip	0.78	16.70	3.5	C	642	963
5 - Arundel Road	0.14	9.76	0.2	A	50	76

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	577	144	592	1440	0.401	574	735	0.0	0.7	4.145	A
2 - A27 On-Slip			935				231				
3 - A280 South	782	196	1	1890	0.414	779	933	0.0	0.7	3.234	A
4 - A27 Off-Slip	527	132	781	1172	0.450	524	0	0.0	0.8	5.527	A
5 - Arundel Road	41	10	1285	737	0.056	41	20	0.0	0.1	5.172	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	689	172	708	1373	0.502	687	880	0.7	1.0	5.241	A
2 - A27 On-Slip			1119				276				
3 - A280 South	934	234	2	1889	0.494	933	1117	0.7	1.0	3.761	A
4 - A27 Off-Slip	629	157	935	1093	0.576	627	0	0.8	1.3	7.695	A
5 - Arundel Road	49	12	1539	608	0.081	49	23	0.1	0.1	6.445	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	843	211	863	1285	0.657	840	1075	1.0	1.9	8.034	A
2 - A27 On-Slip			1365				338				
3 - A280 South	1144	286	2	1889	0.606	1142	1363	1.0	1.5	4.803	A
4 - A27 Off-Slip	771	193	1144	985	0.782	763	0	1.3	3.3	15.628	C
5 - Arundel Road	61	15	1878	435	0.139	60	29	0.1	0.2	9.613	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	843	211	869	1281	0.658	843	1079	1.9	1.9	8.217	A
2 - A27 On-Slip			1374				339				
3 - A280 South	1144	286	2	1889	0.606	1144	1371	1.5	1.5	4.832	A
4 - A27 Off-Slip	771	193	1146	984	0.783	770	0	3.3	3.5	16.699	C
5 - Arundel Road	61	15	1888	430	0.141	61	29	0.2	0.2	9.755	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	689	172	717	1368	0.503	692	885	1.9	1.0	5.351	A
2 - A27 On-Slip			1131				278				
3 - A280 South	934	234	2	1889	0.494	936	1129	1.5	1.0	3.787	A
4 - A27 Off-Slip	629	157	938	1091	0.577	638	0	3.5	1.4	8.076	A
5 - Arundel Road	49	12	1552	601	0.082	50	23	0.2	0.1	6.536	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	577	144	597	1437	0.401	578	739	1.0	0.7	4.199	A
2 - A27 On-Slip			943				232				
3 - A280 South	782	196	2	1890	0.414	783	941	1.0	0.7	3.256	A
4 - A27 Off-Slip	527	132	785	1170	0.451	529	0	1.4	0.8	5.641	A
5 - Arundel Road	41	10	1294	732	0.057	42	20	0.1	0.1	5.212	A

2024 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	9.06	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	10	1 - A280 Long Furlong

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	2024 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 Long Furlong		ONE HOUR	✓	1159	100.000
2 - A27 On-Slip					
3 - A280 South		ONE HOUR	✓	753	100.000
4 - A27 Off-Slip		ONE HOUR	✓	439	100.000
5 - Arundel Road		ONE HOUR	✓	57	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	36	1118	0	5
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	519	205	0	0	29
	4 - A27 Off-Slip	166	15	257	0	1
	5 - Arundel Road	9	9	39	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	0	2	0	0
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	4	0	0	0	0
	4 - A27 Off-Slip	9	0	3	0	0
	5 - Arundel Road	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 Long Furlong	0.84	14.35	4.9	B	1064	1595
2 - A27 On-Slip						
3 - A280 South	0.44	3.46	0.8	A	691	1036
4 - A27 Off-Slip	0.42	5.38	0.7	A	403	604
5 - Arundel Road	0.08	5.32	0.1	A	52	78

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	873	218	394	1633	0.534	868	521	0.0	1.1	4.681	A
2 - A27 On-Slip			1063				199				
3 - A280 South	567	142	4	1871	0.303	565	1059	0.0	0.4	2.753	A
4 - A27 Off-Slip	331	83	569	1291	0.256	329	0	0.0	0.3	3.739	A
5 - Arundel Road	43	11	872	947	0.045	43	26	0.0	0.0	3.978	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1042	260	471	1587	0.657	1039	623	1.1	1.9	6.534	A
2 - A27 On-Slip			1272				238				
3 - A280 South	677	169	4	1871	0.362	676	1268	0.4	0.6	3.012	A
4 - A27 Off-Slip	395	99	681	1232	0.320	394	0	0.3	0.5	4.292	A
5 - Arundel Road	51	13	1044	859	0.060	51	31	0.0	0.1	4.454	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1276	319	577	1525	0.837	1265	763	1.9	4.7	13.303	B
2 - A27 On-Slip			1551				291				
3 - A280 South	829	207	5	1870	0.443	828	1545	0.6	0.8	3.451	A
4 - A27 Off-Slip	483	121	834	1152	0.419	482	0	0.5	0.7	5.364	A
5 - Arundel Road	63	16	1278	740	0.085	63	38	0.1	0.1	5.316	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1276	319	578	1524	0.837	1275	764	4.7	4.9	14.348	B
2 - A27 On-Slip			1562				292				
3 - A280 South	829	207	6	1870	0.443	829	1556	0.8	0.8	3.457	A
4 - A27 Off-Slip	483	121	835	1152	0.420	483	0	0.7	0.7	5.383	A
5 - Arundel Road	63	16	1279	739	0.085	63	39	0.1	0.1	5.323	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1042	260	473	1586	0.657	1054	625	4.9	2.0	6.908	A
2 - A27 On-Slip			1288				239				
3 - A280 South	677	169	5	1871	0.362	678	1283	0.8	0.6	3.019	A
4 - A27 Off-Slip	395	99	682	1232	0.320	396	0	0.7	0.5	4.311	A
5 - Arundel Road	51	13	1046	858	0.060	51	32	0.1	0.1	4.465	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	873	218	396	1632	0.535	876	523	2.0	1.2	4.783	A
2 - A27 On-Slip			1072				200				
3 - A280 South	567	142	4	1871	0.303	567	1068	0.6	0.4	2.761	A
4 - A27 Off-Slip	331	83	571	1290	0.256	331	0	0.5	0.3	3.756	A
5 - Arundel Road	43	11	876	945	0.045	43	26	0.1	0.0	3.991	A

2024 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	9.29	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	8	4 - A27 Off-Slip

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	2024 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 Long Furlong		ONE HOUR	✓	781	100.000
2 - A27 On-Slip					
3 - A280 South		ONE HOUR	✓	1081	100.000
4 - A27 Off-Slip		ONE HOUR	✓	706	100.000
5 - Arundel Road		ONE HOUR	✓	55	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	21	758	0	2
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	808	249	0	0	24
	4 - A27 Off-Slip	193	31	482	0	0
	5 - Arundel Road	21	7	27	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	0	7	0	50
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	2	0	0	0	4
	4 - A27 Off-Slip	11	0	0	0	0
	5 - Arundel Road	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 Long Furlong	0.67	8.31	2.0	A	717	1075
2 - A27 On-Slip						
3 - A280 South	0.63	5.12	1.7	A	992	1488
4 - A27 Off-Slip	0.78	16.63	3.5	C	648	972
5 - Arundel Road	0.15	10.12	0.2	B	50	76

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	588	147	596	1448	0.406	585	766	0.0	0.7	4.163	A
2 - A27 On-Slip			950				231				
3 - A280 South	814	203	1	1894	0.430	811	949	0.0	0.7	3.314	A
4 - A27 Off-Slip	532	133	812	1192	0.446	528	0	0.0	0.8	5.395	A
5 - Arundel Road	41	10	1321	728	0.057	41	20	0.0	0.1	5.240	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	702	176	714	1382	0.508	701	917	0.7	1.0	5.270	A
2 - A27 On-Slip			1138				276				
3 - A280 South	972	243	2	1893	0.513	971	1136	0.7	1.0	3.896	A
4 - A27 Off-Slip	635	159	972	1108	0.573	633	0	0.8	1.3	7.540	A
5 - Arundel Road	49	12	1582	597	0.083	49	23	0.1	0.1	6.571	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	860	215	870	1296	0.664	856	1121	1.0	1.9	8.123	A
2 - A27 On-Slip			1388				338				
3 - A280 South	1190	298	2	1893	0.629	1188	1386	1.0	1.7	5.085	A
4 - A27 Off-Slip	777	194	1190	993	0.783	769	0	1.3	3.3	15.548	C
5 - Arundel Road	61	15	1931	421	0.144	60	29	0.1	0.2	9.959	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	860	215	876	1292	0.665	860	1125	1.9	2.0	8.315	A
2 - A27 On-Slip			1397				339				
3 - A280 South	1190	298	2	1893	0.629	1190	1394	1.7	1.7	5.121	A
4 - A27 Off-Slip	777	194	1192	992	0.784	777	0	3.3	3.5	16.635	C
5 - Arundel Road	61	15	1941	416	0.145	61	29	0.2	0.2	10.115	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	702	176	722	1378	0.510	706	923	2.0	1.1	5.388	A
2 - A27 On-Slip			1150				278				
3 - A280 South	972	243	2	1893	0.513	974	1148	1.7	1.1	3.928	A
4 - A27 Off-Slip	635	159	976	1106	0.574	643	0	3.5	1.4	7.912	A
5 - Arundel Road	49	12	1596	590	0.084	50	23	0.2	0.1	6.667	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	588	147	601	1445	0.407	589	771	1.1	0.7	4.215	A
2 - A27 On-Slip			958				232				
3 - A280 South	814	203	2	1894	0.430	815	957	1.1	0.8	3.340	A
4 - A27 Off-Slip	532	133	817	1190	0.447	534	0	1.4	0.8	5.504	A
5 - Arundel Road	41	10	1331	723	0.057	42	20	0.1	0.1	5.283	A

2024 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	10.66	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	7	1 - A280 Long Furlong

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	2024 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 Long Furlong		ONE HOUR	✓	1198	100.000
2 - A27 On-Slip					
3 - A280 South		ONE HOUR	✓	778	100.000
4 - A27 Off-Slip		ONE HOUR	✓	454	100.000
5 - Arundel Road		ONE HOUR	✓	57	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	36	1157	0	5
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	544	205	0	0	29
	4 - A27 Off-Slip	166	15	272	0	1
	5 - Arundel Road	9	9	39	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	0	2	0	0
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	4	0	0	0	0
	4 - A27 Off-Slip	9	0	0	0	0
	5 - Arundel Road	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 Long Furlong	0.87	17.54	6.1	C	1099	1649
2 - A27 On-Slip						
3 - A280 South	0.46	3.55	0.8	A	714	1071
4 - A27 Off-Slip	0.43	5.47	0.8	A	417	625
5 - Arundel Road	0.09	5.47	0.1	A	52	78

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	902	225	405	1630	0.553	897	539	0.0	1.2	4.882	A
2 - A27 On-Slip			1103				199				
3 - A280 South	586	146	4	1870	0.313	584	1099	0.0	0.5	2.794	A
4 - A27 Off-Slip	342	85	588	1304	0.262	340	0	0.0	0.4	3.731	A
5 - Arundel Road	43	11	902	935	0.046	43	26	0.0	0.0	4.033	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1077	269	485	1583	0.680	1074	646	1.2	2.1	7.017	A
2 - A27 On-Slip			1321				238				
3 - A280 South	699	175	4	1870	0.374	699	1316	0.5	0.6	3.072	A
4 - A27 Off-Slip	408	102	703	1242	0.328	408	0	0.4	0.5	4.309	A
5 - Arundel Road	51	13	1080	845	0.061	51	31	0.0	0.1	4.536	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1319	330	594	1520	0.868	1304	791	2.1	5.8	15.698	C
2 - A27 On-Slip			1607				291				
3 - A280 South	857	214	5	1869	0.458	856	1601	0.6	0.8	3.547	A
4 - A27 Off-Slip	500	125	861	1159	0.431	499	0	0.5	0.8	5.447	A
5 - Arundel Road	63	16	1321	722	0.087	63	38	0.1	0.1	5.461	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1319	330	595	1519	0.868	1318	792	5.8	6.1	17.545	C
2 - A27 On-Slip			1620				292				
3 - A280 South	857	214	5	1869	0.458	857	1615	0.8	0.8	3.553	A
4 - A27 Off-Slip	500	125	862	1158	0.432	500	0	0.8	0.8	5.469	A
5 - Arundel Road	63	16	1323	721	0.087	63	39	0.1	0.1	5.469	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1077	269	486	1582	0.681	1093	647	6.1	2.2	7.582	A
2 - A27 On-Slip			1340				239				
3 - A280 South	699	175	5	1870	0.374	700	1336	0.8	0.6	3.079	A
4 - A27 Off-Slip	408	102	705	1242	0.329	409	0	0.8	0.5	4.329	A
5 - Arundel Road	51	13	1083	843	0.061	51	32	0.1	0.1	4.546	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	902	225	407	1628	0.554	906	542	2.2	1.3	5.005	A
2 - A27 On-Slip			1113				200				
3 - A280 South	586	146	4	1870	0.313	586	1109	0.6	0.5	2.804	A
4 - A27 Off-Slip	342	85	590	1303	0.262	342	0	0.5	0.4	3.752	A
5 - Arundel Road	43	11	906	933	0.046	43	26	0.1	0.0	4.047	A

2033 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	12.78	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	2	4 - A27 Off-Slip

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	2033 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 Long Furlong		ONE HOUR	✓	814	100.000
2 - A27 On-Slip					
3 - A280 South		ONE HOUR	✓	1101	100.000
4 - A27 Off-Slip		ONE HOUR	✓	744	100.000
5 - Arundel Road		ONE HOUR	✓	58	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	22	790	0	2
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	813	263	0	0	25
	4 - A27 Off-Slip	206	34	504	0	0
	5 - Arundel Road	22	7	29	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	0	7	0	50
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	2	1	0	0	4
	4 - A27 Off-Slip	11	9	4	0	0
	5 - Arundel Road	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 Long Furlong	0.72	10.09	2.5	B	747	1120
2 - A27 On-Slip						
3 - A280 South	0.64	5.32	1.8	A	1010	1515
4 - A27 Off-Slip	0.86	26.42	5.7	D	683	1024
5 - Arundel Road	0.17	11.71	0.2	B	53	80

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	613	153	627	1420	0.432	610	780	0.0	0.8	4.427	A
2 - A27 On-Slip			992				244				
3 - A280 South	829	207	1	1890	0.439	826	990	0.0	0.8	3.374	A
4 - A27 Off-Slip	560	140	827	1148	0.488	556	0	0.0	0.9	6.045	A
5 - Arundel Road	44	11	1363	697	0.063	43	20	0.0	0.1	5.503	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	732	183	750	1349	0.542	730	934	0.8	1.2	5.797	A
2 - A27 On-Slip			1188				293				
3 - A280 South	990	247	2	1889	0.524	989	1186	0.8	1.1	3.990	A
4 - A27 Off-Slip	669	167	990	1065	0.628	666	0	0.9	1.6	8.966	A
5 - Arundel Road	52	13	1632	560	0.093	52	24	0.1	0.1	7.083	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	896	224	910	1258	0.712	891	1140	1.2	2.4	9.692	A
2 - A27 On-Slip			1444				357				
3 - A280 South	1212	303	2	1889	0.642	1210	1442	1.1	1.8	5.277	A
4 - A27 Off-Slip	819	205	1212	951	0.861	805	0	1.6	5.2	22.693	C
5 - Arundel Road	64	16	1987	379	0.168	63	30	0.1	0.2	11.389	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	896	224	920	1252	0.716	896	1146	2.4	2.5	10.088	B
2 - A27 On-Slip			1457				359				
3 - A280 South	1212	303	2	1889	0.642	1212	1455	1.8	1.8	5.319	A
4 - A27 Off-Slip	819	205	1214	950	0.863	817	0	5.2	5.7	26.416	D
5 - Arundel Road	64	16	2002	371	0.172	64	30	0.2	0.2	11.706	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	732	183	765	1341	0.546	737	942	2.5	1.2	6.005	A
2 - A27 On-Slip			1207				295				
3 - A280 South	990	247	2	1889	0.524	992	1205	1.8	1.1	4.025	A
4 - A27 Off-Slip	669	167	994	1063	0.629	685	0	5.7	1.7	9.900	A
5 - Arundel Road	52	13	1655	548	0.095	53	24	0.2	0.1	7.264	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	613	153	633	1416	0.433	615	786	1.2	0.8	4.499	A
2 - A27 On-Slip			1001				246				
3 - A280 South	829	207	2	1890	0.439	830	1000	1.1	0.8	3.401	A
4 - A27 Off-Slip	560	140	832	1146	0.489	563	0	1.7	1.0	6.210	A
5 - Arundel Road	44	11	1375	691	0.063	44	20	0.1	0.1	5.559	A

2033 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	13.14	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	4	1 - A280 Long Furlong

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	2033 Base	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 Long Furlong		ONE HOUR	✓	1231	100.000
2 - A27 On-Slip					
3 - A280 South		ONE HOUR	✓	797	100.000
4 - A27 Off-Slip		ONE HOUR	✓	464	100.000
5 - Arundel Road		ONE HOUR	✓	59	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	38	1187	0	6
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	550	216	0	0	31
	4 - A27 Off-Slip	177	16	270	0	1
	5 - Arundel Road	9	9	41	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	0	2	0	0
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	4	0	0	0	0
	4 - A27 Off-Slip	9	0	3	0	0
	5 - Arundel Road	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 Long Furlong	0.90	22.53	8.0	C	1130	1694
2 - A27 On-Slip						
3 - A280 South	0.47	3.63	0.9	A	731	1097
4 - A27 Off-Slip	0.45	5.85	0.8	A	426	639
5 - Arundel Road	0.09	5.66	0.1	A	54	81

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	927	232	414	1621	0.572	921	552	0.0	1.3	5.110	A
2 - A27 On-Slip			1126				209				
3 - A280 South	600	150	4	1871	0.321	598	1122	0.0	0.5	2.825	A
4 - A27 Off-Slip	349	87	603	1273	0.274	348	0	0.0	0.4	3.885	A
5 - Arundel Road	44	11	922	922	0.048	44	29	0.0	0.1	4.102	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1107	277	496	1573	0.704	1103	661	1.3	2.3	7.594	A
2 - A27 On-Slip			1348				251				
3 - A280 South	716	179	5	1870	0.383	716	1342	0.5	0.6	3.117	A
4 - A27 Off-Slip	417	104	721	1211	0.344	417	0	0.4	0.5	4.529	A
5 - Arundel Road	53	13	1104	829	0.064	53	34	0.1	0.1	4.640	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1355	339	607	1507	0.899	1335	809	2.3	7.4	19.035	C
2 - A27 On-Slip			1636				306				
3 - A280 South	878	219	7	1869	0.469	876	1629	0.6	0.9	3.622	A
4 - A27 Off-Slip	511	128	883	1126	0.454	510	0	0.5	0.8	5.827	A
5 - Arundel Road	65	16	1351	702	0.093	65	42	0.1	0.1	5.645	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1355	339	608	1507	0.900	1353	810	7.4	8.0	22.531	C
2 - A27 On-Slip			1653				307				
3 - A280 South	878	219	7	1869	0.469	878	1647	0.9	0.9	3.628	A
4 - A27 Off-Slip	511	128	884	1126	0.454	511	0	0.8	0.8	5.852	A
5 - Arundel Road	65	16	1353	701	0.093	65	42	0.1	0.1	5.657	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1107	277	497	1572	0.704	1129	663	8.0	2.4	8.518	A
2 - A27 On-Slip			1374				252				
3 - A280 South	716	179	6	1870	0.383	718	1369	0.9	0.6	3.125	A
4 - A27 Off-Slip	417	104	723	1210	0.345	418	0	0.8	0.5	4.555	A
5 - Arundel Road	53	13	1107	827	0.064	53	34	0.1	0.1	4.652	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	927	232	416	1620	0.572	931	555	2.4	1.4	5.263	A
2 - A27 On-Slip			1137				210				
3 - A280 South	600	150	5	1871	0.321	601	1132	0.6	0.5	2.837	A
4 - A27 Off-Slip	349	87	605	1272	0.275	350	0	0.5	0.4	3.909	A
5 - Arundel Road	44	11	926	919	0.048	44	29	0.1	0.1	4.115	A

2033 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	12.79	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	2	4 - A27 Off-Slip

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	2033 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 Long Furlong		ONE HOUR	✓	829	100.000
2 - A27 On-Slip					
3 - A280 South		ONE HOUR	✓	1143	100.000
4 - A27 Off-Slip		ONE HOUR	✓	750	100.000
5 - Arundel Road		ONE HOUR	✓	58	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	22	805	0	2
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	855	263	0	0	25
	4 - A27 Off-Slip	206	34	510	0	0
	5 - Arundel Road	22	7	29	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	0	7	0	50
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	2	0	0	0	4
	4 - A27 Off-Slip	11	0	0	0	0
	5 - Arundel Road	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 Long Furlong	0.72	10.21	2.5	B	761	1141
2 - A27 On-Slip						
3 - A280 South	0.66	5.67	2.0	A	1049	1573
4 - A27 Off-Slip	0.86	26.50	5.7	D	688	1032
5 - Arundel Road	0.18	12.20	0.2	B	53	80

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	624	156	631	1428	0.437	621	812	0.0	0.8	4.443	A
2 - A27 On-Slip			1008				244				
3 - A280 South	861	215	1	1894	0.454	857	1006	0.0	0.8	3.461	A
4 - A27 Off-Slip	565	141	859	1168	0.484	561	0	0.0	0.9	5.897	A
5 - Arundel Road	44	11	1399	689	0.063	43	20	0.0	0.1	5.576	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	745	186	755	1359	0.548	744	972	0.8	1.2	5.829	A
2 - A27 On-Slip			1206				293				
3 - A280 South	1028	257	2	1893	0.543	1026	1205	0.8	1.2	4.144	A
4 - A27 Off-Slip	674	169	1028	1078	0.625	671	0	0.9	1.6	8.783	A
5 - Arundel Road	52	13	1675	550	0.095	52	24	0.1	0.1	7.228	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	913	228	917	1270	0.719	908	1186	1.2	2.5	9.802	A
2 - A27 On-Slip			1467				357				
3 - A280 South	1258	315	2	1893	0.665	1255	1465	1.2	1.9	5.618	A
4 - A27 Off-Slip	826	206	1258	957	0.863	811	0	1.6	5.3	22.678	C
5 - Arundel Road	64	16	2039	367	0.174	63	30	0.1	0.2	11.852	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	913	228	927	1264	0.722	912	1192	2.5	2.5	10.212	B
2 - A27 On-Slip			1480				359				
3 - A280 South	1258	315	2	1893	0.665	1258	1478	1.9	2.0	5.670	A
4 - A27 Off-Slip	826	206	1261	956	0.864	824	0	5.3	5.7	26.500	D
5 - Arundel Road	64	16	2055	359	0.178	64	30	0.2	0.2	12.201	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	745	186	770	1351	0.552	750	980	2.5	1.2	6.046	A
2 - A27 On-Slip			1226				295				
3 - A280 South	1028	257	2	1893	0.543	1031	1224	2.0	1.2	4.188	A
4 - A27 Off-Slip	674	169	1032	1076	0.627	690	0	5.7	1.7	9.702	A
5 - Arundel Road	52	13	1698	538	0.097	53	24	0.2	0.1	7.422	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	624	156	637	1425	0.438	626	817	1.2	0.8	4.518	A
2 - A27 On-Slip			1017				246				
3 - A280 South	861	215	2	1894	0.454	862	1016	1.2	0.8	3.493	A
4 - A27 Off-Slip	565	141	863	1165	0.485	568	0	1.7	1.0	6.056	A
5 - Arundel Road	44	11	1411	683	0.064	44	20	0.1	0.1	5.636	A

2033 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	16.87	C

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	1	1 - A280 Long Furlong

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	2033 Base + Dev	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	Average Demand (Veh/hr)	Scaling Factor (%)
1 - A280 Long Furlong		ONE HOUR	✓	1270	100.000
2 - A27 On-Slip					
3 - A280 South		ONE HOUR	✓	822	100.000
4 - A27 Off-Slip		ONE HOUR	✓	479	100.000
5 - Arundel Road		ONE HOUR	✓	59	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	38	1226	0	6
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	575	216	0	0	31
	4 - A27 Off-Slip	177	16	285	0	1
	5 - Arundel Road	9	9	41	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A280 Long Furlong	2 - A27 On-Slip	3 - A280 South	4 - A27 Off-Slip	5 - Arundel Road
From	1 - A280 Long Furlong	0	0	2	0	0
	2 - A27 On-Slip	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	3 - A280 South	4	0	0	0	0
	4 - A27 Off-Slip	9	0	0	0	0
	5 - Arundel Road	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - A280 Long Furlong	0.93	30.12	11.0	D	1165	1748
2 - A27 On-Slip						
3 - A280 South	0.48	3.73	0.9	A	754	1131
4 - A27 Off-Slip	0.47	5.96	0.9	A	440	659
5 - Arundel Road	0.10	5.82	0.1	A	54	81

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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	956	239	425	1618	0.591	950	571	0.0	1.4	5.350	A
2 - A27 On-Slip			1166				209				
3 - A280 South	619	155	4	1870	0.331	617	1162	0.0	0.5	2.873	A
4 - A27 Off-Slip	361	90	621	1286	0.280	359	0	0.0	0.4	3.879	A
5 - Arundel Road	44	11	952	909	0.049	44	29	0.0	0.1	4.159	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1142	285	509	1569	0.728	1137	683	1.4	2.6	8.244	A
2 - A27 On-Slip			1396				250				
3 - A280 South	739	185	5	1869	0.395	738	1390	0.5	0.6	3.181	A
4 - A27 Off-Slip	431	108	744	1221	0.353	430	0	0.4	0.5	4.546	A
5 - Arundel Road	53	13	1140	814	0.065	53	34	0.1	0.1	4.729	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1398	350	623	1503	0.930	1370	837	2.6	9.6	23.390	C
2 - A27 On-Slip			1687				306				
3 - A280 South	905	226	6	1869	0.484	904	1681	0.6	0.9	3.725	A
4 - A27 Off-Slip	527	132	910	1132	0.466	526	0	0.5	0.9	5.931	A
5 - Arundel Road	65	16	1395	684	0.095	65	42	0.1	0.1	5.807	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1398	350	624	1502	0.931	1393	838	9.6	11.0	30.124	D
2 - A27 On-Slip			1710				307				
3 - A280 South	905	226	7	1869	0.484	905	1704	0.9	0.9	3.734	A
4 - A27 Off-Slip	527	132	912	1131	0.466	527	0	0.9	0.9	5.960	A
5 - Arundel Road	65	16	1397	683	0.095	65	42	0.1	0.1	5.821	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	1142	285	511	1568	0.728	1174	685	11.0	2.8	9.863	A
2 - A27 On-Slip			1433				252				
3 - A280 South	739	185	6	1869	0.395	740	1428	0.9	0.7	3.192	A
4 - A27 Off-Slip	431	108	746	1220	0.353	432	0	0.9	0.6	4.579	A
5 - Arundel Road	53	13	1143	812	0.065	53	34	0.1	0.1	4.744	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 side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1 - A280 Long Furlong	956	239	427	1617	0.591	961	574	2.8	1.5	5.538	A
2 - A27 On-Slip			1178				210				
3 - A280 South	619	155	5	1870	0.331	619	1174	0.7	0.5	2.882	A
4 - A27 Off-Slip	361	90	624	1284	0.281	361	0	0.6	0.4	3.902	A
5 - Arundel Road	44	11	957	907	0.049	44	29	0.1	0.1	4.175	A

Proposed Residential-Led Mixed-Use Development,

Land North West of Goring Station, Goring-by-Sea, West Sussex

Residential Travel Plan prepared on behalf of Persimmon Homes Thames Valley

February 2021

MILESTONE TRANSPORT PLANNING

Land North West of Goring Station, Goring-by-Sea, West Sussex

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-	19/12/2019	Residential Travel Plan (1st Draft)	O. Hennessy	T. Wares	T. Wares
-	24/06/2020	Residential Travel Plan (2nd Draft)	O. Hennessy	T. Wares	T. Wares
-	07/08/2020	Residential Travel Plan (Final)	O. Hennessy	T. Wares	T. Wares
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Appendix 1 Architects' Site Layout Plan

1. Introduction

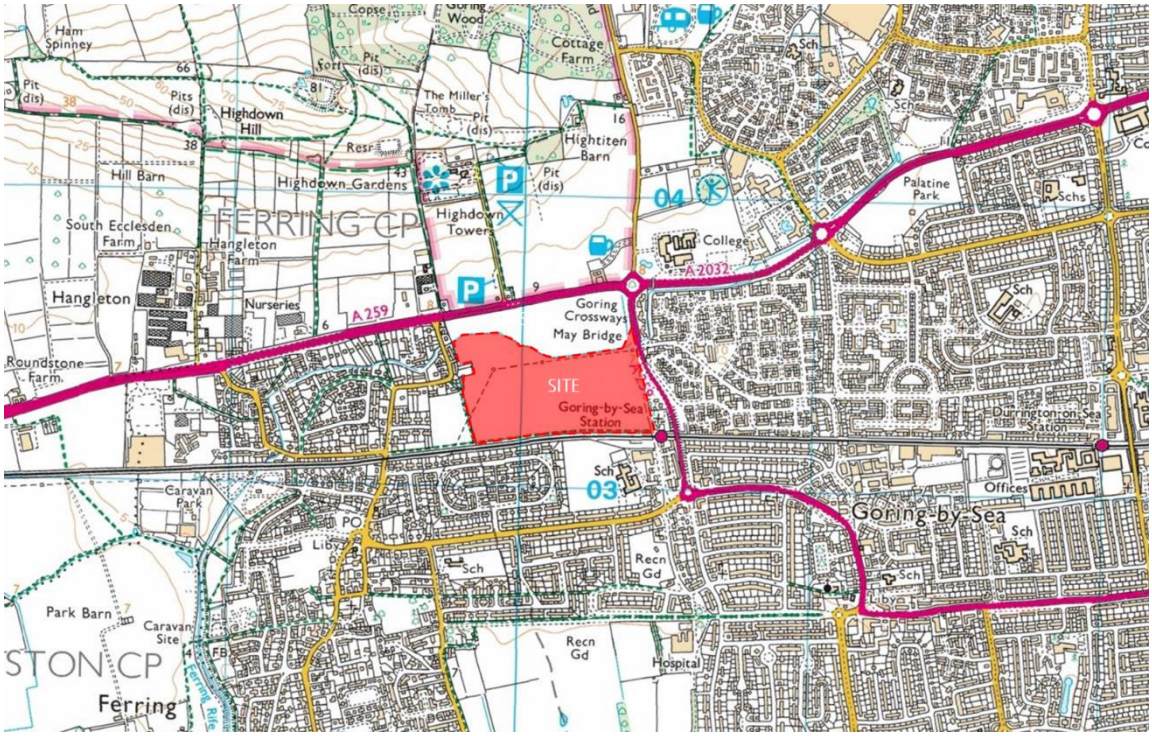
Scope of Residential Travel Plan

1.1 This Residential Travel Plan (RTP) has been prepared by Milestone Transport Planning (MTP) on behalf of Persimmon Homes Thames Valley (*'the applicant'*) in support of an outline planning application (Reference: AWDM/1264/20) with all matters of detail reserved for a mixed use development comprising up to 475 dwellings (Use Class C3) along with associated access, internal roads and footpaths, car parking, public open space, landscaping, local centre (uses including A1, A2, A3, A4, A5, D1, D2) with associated car parking, car parking for the adjacent rail station, undergrounding of overhead HV cables and other supporting infrastructure and utilities on land North West of Goring Station, Goring-by-Sea in West Sussex.

1.2 The application site is a rectilinear shaped parcel of land circa 19.96 ha in size and comprises of flat arable fields, bordered by semi-improved grasslands, Ferring Rife River (flows east to west) and a line of pylons running just south of the Rife. It lies entirely within the confines of the Local Planning Authority, Worthing Borough Council (WBC).

1.3 The site is located to the south and west of the A259 Littlehampton Road and Goring Street, north of the West Coastway rail line, north-west of Goring rail station, and east of Ferring Lane and a public right of way (Footpath No. 2121_1), approximately 1.5-kilometres west of Goring district centre. The site in context with the local area and highway network is shown in Figure 1.

Figure 1 Site Location Plan



1.4 As defined in the Department for Transport's (DfT's) 'Good Practice Guidelines: Delivery Travel Plans through the Planning Process' document (April 2009), a Travel Plan is defined as *"a long-term management strategy for an occupier or site that seeks to deliver sustainable transport objectives through positive action and is articulated in a document that is regularly reviewed. It involves the development of agreed explicit outcomes linked to an appropriate package of measures aimed at encouraging more sustainable travel, with an emphasis on reducing single occupancy car use."*

1.5 The purpose of this RTP is to provide a long-term strategy aimed at encouraging future end-users (i.e. households and visitors) to reduce their dependency on travelling by single occupancy vehicles (SOVs) in favour of the more sustainable modes such as car sharing, public transport, walking and cycling. To accomplish this aim, the document sets out measures and initiatives, appropriate to future households, thereby ensuring a targeted approach is applied. The RTP should be read in conjunction with the Transport Assessment (TA) that has been prepared by MTP to accompany the full planning application.

1.6 Since details of future households are not yet known, it is not possible to derive site specific targets. In this regard, provisional trip rate targets, based on the multi-modal trip generation of the proposed residential-led mixed-use development have been used. The main target of the RTP would aim to achieve a 12-hour weekday vehicle trip rate that is 15% lower than that predicted for the proposed residential-led mixed-use development, as set out in the Transport Assessment (TA) and Transport Assessment Addendum (TAA) note, under a scenario in which the RTP were not implemented.

1.7 Consequently, this document therefore represents an initial strategy through which sustainable travel patterns and behaviour can be promoted amongst future end-users (i.e. households and visitors) of the proposed residential-led mixed-use development. It is designed to be a flexible document, which will evolve over time, thereby ensuring that it remains relevant to all future households.

Policy Background

1.8 In preparing this RTP, reference is made to the National Planning Policy Framework (July 2018), Worthing new Local Plan, Worthing Core Strategy (2011), Adur Local Plan (2017), West Sussex Local Transport Plan 2011 – 2026, West Sussex Walking and Cycling Strategy 2016 – 2026, and West Sussex County Council's (WSCC's) '*Development Travel Plan Policy*'.

National Planning Policy Framework (NPPF)

1.9 The Ministry of Housing Communities & Local Government published the revised National Planning Policy Framework (NPPF) in February 2019. Promoting sustainable transport is a key thread of the NPPF and paragraph 102 highlights the importance of considering transport issues from the earliest stages of development proposals to ensure that:

- Potential impacts on transport networks can be assessed;
- Opportunities from existing and proposed transport infrastructure, changing transport technology and usage are realised;
- Opportunities to promote walking, cycling and public transport use are identified and pursued;
- Environmental impacts of traffic and transport infrastructure are identified, assessed and considered – identifying opportunities for avoiding and mitigating any adverse effects and for net environmental gains; and

- Patterns of movement, streets, parking and other transport considerations are integral to the design of schemes and contribute to making high quality places.

1.10 Paragraph 103 goes on to state that: "*The planning system should actively manage patterns of growth…Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes…*"

1.11 Paragraph 108 requires specific allocations for development to ensure that:

- Appropriate opportunities to promote sustainable transport modes have been taken up;
- Safe and suitable access to the site can be achieved for all users; and
- Any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.

1.12 Paragraph 110 requires that application for development should:

- First, give priority to pedestrian and cycle movements, both within the scheme and with neighbouring areas;
- Second, so far as is possible, facilitate access to high quality public transport, maximising catchment areas to services and implementing appropriate facilities to encourage use;
- Address the need of people with disabilities and reduced mobility;
- Create places that are safe, secure and attractive which minimise conflicts between pedestrians, cyclists and vehicles;
- Allow for the efficient delivery of goods and access by service and emergency vehicles; and
- Be designed to enable charging of plug-in and other ultra-low emission vehicles.

Worthing Local Plan Transport Study (2018)

1.13 WSP published the Worthing local plan transport assessment in August 2018, to support the development of the new Worthing Local Plan, highlighting key policies for new development proposals:

- *'Promotion and delivery of sustainable transport measures provides a means to manage the level of vehicular trip generation from new developments'. P.80*
- *'Travel plan measures could be secured as planning obligations in Section 106 agreements and the delivery of such measures would be subject to the relevant local planning enforcement policies and procedures that apply'. P. 85*

The Worthing Core Strategy (2011)

1.14 Worthing District council published the Core Strategy to help guide planning and development in the Borough up until 2026. Policy 19 (Sustainable Travel) highlights the Council's approach to '*ensuring the travelling environment for residents is safe, accessible and sustainable. This will be achieved by*:

- *Supporting continued improvements to public transport services;*

- *Improving walking and cycling networks to create sustainable links between the town centre and the suburbs;*
- *Producing a car parking strategy for the town centre which will provide a balance between parking demand and overall provision, which will maintain the economic viability of the town centre, whilst promoting it as an area which is safe and accessible for pedestrians and cyclists;*

1.15 *The demands that users have for local public transport services and the impacts that car users have on the surrounding road network will be assessed for all new development. Developer contributions will be sought to implement and necessary measures to reduce local road congestion.*

1.16 *Major new development will require the provision of a Transport Assessment, which will specify how it will affect the surrounding transport environment and how it can mitigate against any adverse effects. Where appropriate, new development will require the provision of a Travel Plan and / or Transport Assessment, which will need to demonstrate that infrastructure is needed to promote the priorities set out in the Local Transport Plan and the Statement of Common Ground'.*

West Sussex Transport Plan (2011-2026)

1.17 West Sussex Council published its third Transport Plan in February 2011, lasting until 2026. The document focuses on a number of key Long-Term Strategies, including:

- *'To reduce unnecessary trips by motorised vehicles and encourage use of more sustainable modes of transport. This will be achieved by continuing to secure travel plans for new residential and employment developments and encouraging members of the community to work with existing groups to instil positive changes in travel behaviour and nurture a culture which embraces sustainable travel'; P. 11*
- *'To reduce the need to travel at all by encouraging the provision of local services. This will be achieved by requiring that transport assessments assess accessibility to key services and have clear links with travel plans and encouraging home working and the promotion of home delivery services through workplace and residential travel plans'; P. 12*

West Sussex Walking and Cycling Strategy (2016-2026)

1.18 The West Sussex County Council's Walking and Cycling Strategy (2016-2026) outlines the design and safety principles for walking and cycling that the County Council will follow, and developers will be expected to follow, when implementing infrastructure schemes:

- *'All new (development) and improvement / maintenance schemes will consider, and wherever possible prioritise, the needs of cyclists and walkers'. P.17*
- *'In partnership with the Local Planning Authorities we will continue to secure and agree Travel Plans for appropriate new employment and residential development sites'. P.22*
- *'We will make the full list of potential schemes, and those additional schemes that may be added over time, available on the WSCC website with the expectation that, where and when possible schemes, irrespective of their position on the list, are promoted via other agreed works or development'. P.28*

Report Structure

1.19 The remainder of this RTP is structured as follows: -

- Section 2 details the main aims and objectives of the RTP;
- Section 3 assesses the site's accessibility credentials in regards to existing public transport infrastructure / services and the pedestrian and cycling network;
- Section 4 provides an overview of the proposed development including access, parking, delivery and servicing arrangements;
- Section 5 proposes a structure for managing the RTP including a description of the responsibilities of the appointed Travel Plan Co-ordinator;
- Section 6 sets out a range of measures aimed at encouraging future households to adopt sustainable travel patterns and behaviour, primarily for their journeys to and from various workplace destinations; and
- Section 7 sets out provisional mode share targets, which seek to achieve a progressive decrease in private car use and a corresponding increase in those travelling by sustainable means.

2. Aims & Objectives

Aims

2.1 The primary aim of the RTP is to achieve a reduction in the dependency of future households to travel by private car for essential and non-essential journeys to / from the proposed residential-led mixed-use development. This will reduce the impact of such travel on the local environment as a whole by:

- Encouraging safe and viable alternatives to the private car for various journey purposes, thereby generating a lower number of vehicular movements;
- Achieving a reduction in overall private vehicle mileage, thereby leading to a corresponding reduction in environmental pollution;
- Improving safety for vulnerable road users such as pedestrians and cyclists; and
- Raising awareness of environmental issues, especially those which impact on personal health and involve transport.

Objectives

2.2 The aims of the RTP are supported by objectives that are in accordance with national, regional, and local planning policies. The key objectives are:

- To minimise trips to and from the residential-led nixed-use development, particularly single occupancy vehicles trips in the weekday AM and PM peak hour periods; and
- To promote the use of all alternative modes of travel to the private car including walking, cycling, public transport and car sharing.

3. Site Description and Accessibility Credentials

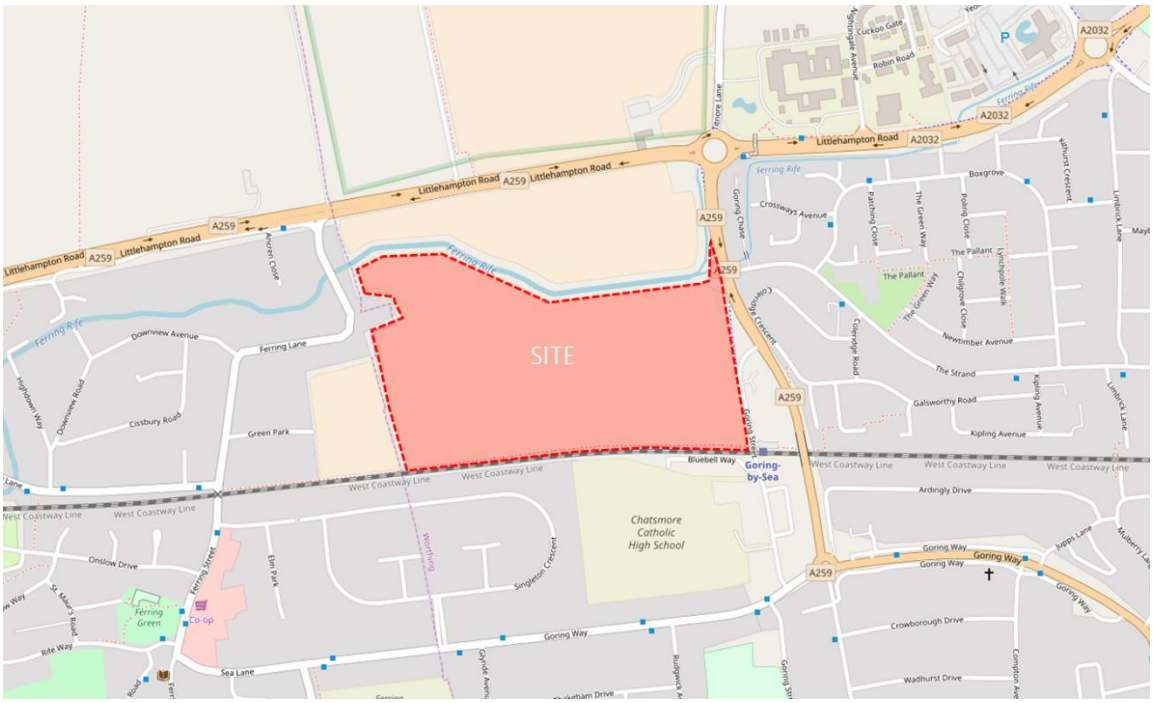
3.1 To gain an understanding of the potential for future households and other end-users of the residential-led mixed-use development to adopt long-term sustainable travel patterns and behaviour for various journey purposes, this section of the RTP evaluates the existing provision of transport infrastructure and services within the vicinity of the site.

Site Description and Context

3.2 The site encompasses a parcel of land with an area of 19.96 hectares, off the western side of the A259 Goring Street. The land is comprised of arable land and Ferring Rife, running from the west to the east of the site. Access to the site is currently taken from a field gate off the western side of the A259 Goring Street.

3.3 The site boundaries are formed by Ferring Rife to the north, the A259 Goring Street to the east, a railway line to the south and residential dwellings to the west. In a wider context, the site is located on the outskirts of Goring-By-Sea town and circa 5-kilometres west of Worthing. A plan showing the location of the site in context with the local area and highway network is shown in Figure 2.

Figure 2 Site Location Plan



Local Highway Network

3.4 The A259 Goring Street is a single carriageway two-way road that runs in a north to south alignment and is subject to a 40mph speed limit. It operates as a 'Secondary / Residential Distributor Road' and provides access to / from the strategic road network and the centre and residential areas of Goring-by-Sea.

3.5 In the vicinity of the existing site access, the A259 junctions with The Strand via an all movement priority T-junction with right turn lane. The Strand is a single carriageway two-way road that runs in a west to east alignment and is subject to a 30mph speed restriction. The Strand has raised tables along its extent acting as traffic calming measures. The Strand provides access to the nearest bus stops to the site.

3.6 Approximately 100m south of the existing site access, the A259 Goring Street junctions with Goring Street via an all movement priority T-junction with right turn lane. Goring Street is a single carriageway two-way road that runs in a north to south alignment and is subject to a 30mph speed limit. It operates as a '*Minor Road*', providing access to a number of residential dwellings in addition to Goring-by-Sea rail station and car park, which currently provides circa 11 spaces. It is noted that Goring Street is not subject to on-street parking restrictions and therefore there is often on-street parking along the east kerb line most likely associated with the station.

3.7 To the north the A259 Goring Street junctions with the A2032 / A259 Littlehampton Road / Titnore Lane via a 4-arm roundabout. Titnore Lane continues north to join with the A27 via a single carriageway two-way road. The A2032 is in the form of a separated dual carriageway and heads east towards residential suburbs of Worthing. The A259 continues west in the form of a separated single carriageway for approximately 650m and then increases to a dual carriageway. The A259 Littlehampton Road is subject to a 50mph speed limit and continues towards Littlehampton and Chichester.

3.8 The A259 Goring Street continues south over the railway line and junctions with Aldsworth Avenue via a 4-arm roundabout whereby the A259 continues west to Ferring and east to Goring Town Centre and Worthing.

Accessibility by Non-Car Modes

3.9 The planning process at national and local level seeks to ensure that development proposals are located in areas where the need to travel will be minimised and opportunities for encouraging sustainable travel behaviour and patterns can be maximised. Consequently, this section of report assesses the existing provision of transport infrastructure and services by mode within the vicinity of the site.

Walk and Cycle Accessibility

3.10 Walking and cycling play a vital role in healthy and active lifestyles and if convenient and safe links are available there is significant opportunity to reduce the need for short journeys to be undertaken by private car, thus reducing the level of traffic on the surrounding highway network.

3.11 Pedestrian access to the site is via the provision of 2.8-metres wide, lit footways on either side of the A259 Goring Street. A toucan crossing is present south of the site's access, providing a safe crossing on the A259 Goring Street. Additionally, a shared foot / cycleway circa 25-metres south of the site (see figure 3), provides access to Goring Street, where the presence of dropped kerbs and tactile paving allows access to Goring-By-Sea rail station in a safe and convenient manner.

3.12 To the north of the site, the footways along the A259 Goring Street connect to the southern footway of the A2032 Littlehampton Road via tactile paving. The dual carriageway is served by a footbridge, which provides access to local bus stops, Northbrook College (eastbound / westbound) and Northbrook Metropolitan College.

3.13 To the south-east, the footways along the A259 Goring Street adjoin to the wider pedestrian network via dropped kerbs, tactile paving and a toucan crossing situated at the 4-arm roundabout junction with Goring Way, Aldsworth Avenue, and the A259 Goring Way.

3.14 Footways along the A259 Goring Way / Mulberry Lane / Goring Road provide a direct, safe, and convenient walking route to Goring-By-Sea town centre via dropped kerbs and tactile paving. The town centre is served by a range of local amenities.

Figure 3 View of Shared Footway / Cycleway along the A259 Goring Street

3.15 As previously mentioned, cycle infrastructure is present along both sides of the A259 Goring Street in the form of a shared footway / cycleway. The dedicated cycleway / footway along the western side of the A259 Goring Street extends to the A259 Littlehampton Road, providing a safe and accessible route to the town of Ferring.

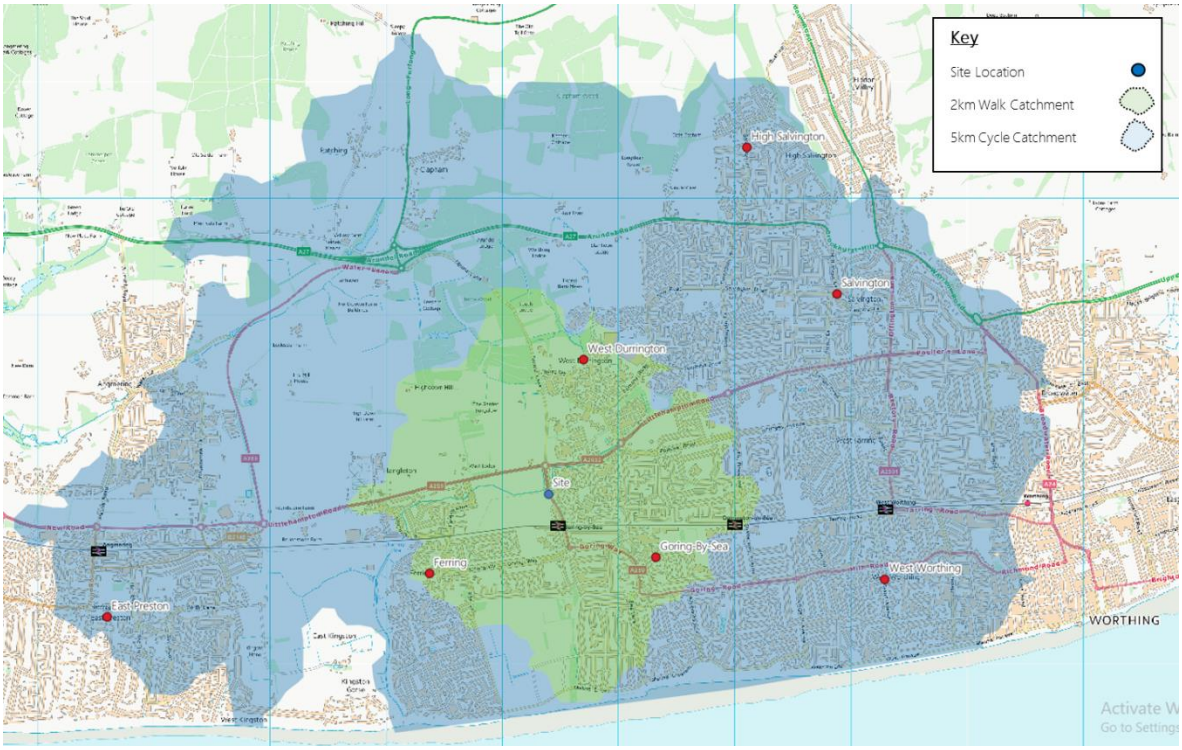
3.16 The site is also within close proximity of the South Coast Cycle Route, as recognised by West Sussex County Council. The cycle route can be accessed from the A259 Littlehampton Road, approximately 1.7-kilometres west of the site. The route is situated along shared footways / cycleways and quiet roads, providing a safe route to the towns of Angmering and Littlehampton.

3.17 Within various national, regional, and local planning policy and best practice guidance documents, the '*active*' modes of walking and cycling are recognised as having the potential to replace short journeys undertaken by private car.

3.18 The Chartered Institute of Highways and Transportation's (CIHT's) publication '*Providing for Journeys on Foot*' (2000), states the average length of a walk journey is 1.0 kilometre. It further suggests a preferred maximum walking distance of 2.0 kilometres for commuting / school journeys and 1.2 kilometres for other journey destinations. Other national planning guidance / best practice publications have previously recommended a maximum distance of 5.0 kilometres for reasonably fit individuals to cycle to / from workplace destinations.

3.19 As shown in Figure 4, a significant proportion of Goring including the town centre, rail station and the residential areas of Ferring and West Durrington are accessible on-foot, within the preferred maximum distance of 2.0-kilometres. In addition, the neighbouring town / village centres of Salvington, High Salvington, West Worthing and East Preston are accessible by cycle.

Figure 4 Walk and Cycle Catchment Plan



Public Transport Accessibility

Bus Services

3.20 The nearest bus stops are located on either side of The Strand (opp. Boxgrove Parade for north-westbound and adj. Boxgrove Parade for south-eastbound), circa 250-metres and 350-metres south-east of the site for the opposite and adjacent stops, respectively. Both stops are served by signage and timetable information, whilst the adjacent stop provides a shelter.

3.21 Additional bus stops are located on either side of the A2032 Littlehampton Road (i.e. Stop A for eastbound services and Stop B for westbound services), approximately 300-metres and 400-metres north-east of the site for Stops B and A, respectively. Both Stop A and B provide a flagpole and timetable information, whilst stop B also provides a shelter.

3.22 A further two bus stops are located along Langbury Lane to the west of the site, which are served by two additional services. The bus stops are currently located a 1.3-kilometre walk from the site, however with the provision of a pedestrian access to the west of the site this distance would be dramatically reduced for households.

3.23 As shown in Table 3.1, these stops are served by 4 bus routes which operate on a frequent basis throughout a typical week and weekend, providing access to a multitude of local and regional destinations including local town centres of Goring, Littlehampton, and Worthing.

Table 3.1 Summary of Bus Services Available from the A2032 Littlehampton Road / The Strand

Nearest Bus Stops	Route No.	Frequency (per hour)				Route
		Monday - Saturday		Sunday		
		Day	Eves	Day	Eves	
Boxgrove Parade (opp. / adj.)	10	3	-	-	-	Worthing – Durrington
Northbrook College (A / B)	9	1	-	-	-	Arundel – Shoreham
Henty Arms	8	2	-	-	-	Worthing – Goring – South Ferring
Henty Arms	700 Coastliner	6	3	3	2	Wick – Littlehampton – Worthing - Shoreham - Brighton

3.24 In addition, it is noteworthy that the Coastliner 700 bus route, which is operated by Stagecoach South on a regular basis (i.e. every 10-minutes) between Brighton and Southsea via Worthing, Littlehampton, Wick, Bognor Regis, Chichester, Havant and Portsmouth is accessible from bus stops located along either side of Goring Way and Langbury Lane to the south and south-west of the residential-led mixed-use development.

Mainline Rail Services

3.25 Goring-by-Sea is situated off the eastern side of Goring Street, approximately 300-metres south of the site. The station is managed by Southern and provides frequent, direct rail services to a host of local and regional destinations including London Victoria, Brighton, Southampton Central and Worthing. Table 3.2 provides a summary of rail services accessible from Goring-by-Sea rail station including typical daytime frequency and journey times to key local and regional destinations.

Table 3.2 Summary of Rail Services Available at Goring-by-Sea Rail Station

Destination	Service Frequency	Journey Time
London Victoria	2 per hour	1 hour 32 minutes – 1 hour 52 minutes
Worthing	4 - 5 per hour	7-9 minutes
Brighton	3 – 4 per hour	33-38 minutes
Southampton Central	1 per hour	1 hour 17 minutes
Littlehampton	3 per hour	14-17 minutes
Gatwick Airport	2 per hour	1 hour 5 minutes
Clapham Junction	2 per hour	1 hour 24 minutes – 1 hour 34 minutes

3.26 At present the station comprises a central footbridge, whilst step free access is available to platforms 1 and 2 via the level crossing on Goring Street.

3.27 The station contains a coffee kiosk, ticket machines, toilets, and a waiting room on platform 1. In addition, a total of 23 cycle parking spaces are available from platforms 1 and 2, accessible via Goring Street.

Accessibility to Local Amenities

3.28 As identified in Table 3.3, the site benefits from being accessible on-foot and by cycle to a broad range of amenities, which are likely to cater for the convenience, education, healthcare, retail, and leisure needs of future households.

Table 3.3 Summary of Local Amenities Accessible On-Foot and By Cycle

Type of Amenity	Destination	Distance	Walk Journey Time	Cycle Journey Time
Convenience	Tesco Express	600-metres	8-minutes	2-minutes
	Tesco Extra	1.8-kilometres	23-minutes	6-minutes
	Royal Mail	1.1-kilometre	14-minutes	3-minutes
Education	Ferring Funtime Pre-school within Ferring C of E Primary School	1.5-kilometres	18-minutes	5-minutes
	Goring Church of England Primary School	1.3-kilometres	16-minutes	4-minutes
	Chatsmore Catholic High School	450-metres	6-minutes	2-minutes
	Northbrook College	500-metres	7-minutes	3-minutes
Faith	English Martyrs Catholic Church	750-metres	9-minutes	3-minutes
	Goring-by-Sea Methodist Church	900-metres	11-minutes	3-minutes
Healthcare	Rowlands Pharmacy	550-metres	7-minutes	2-minutes
	The Barn Surgery	1.7-kilometres	18-minutes	5-minutes
	Goring Hall Hospital	1.0-kilometres	13-minutes	4-minutes
	Ferring Dental Practice	1.3-kilometres	16-minutes	6-minutes
Leisure and Fitness	David Lloyd Worthing	1.1-kilometres	13-minutes	3-minutes
	Goring Cricket & Football Club	650-metres	8-minutes	2-minutes
	Fernhurst Recreation Ground	1.1-kilometres	13-minutes	3-minutes
	Highdown Gardens	1.3-kilometres	17-minutes	8-minutes

Employment	Brookside Industrial Estate	5.2-kilometres	-	16-minutes
	Woods Way Mulberry Lane Trading Estate	1.3-kilometres	16-minutes	4-minutes
Retail	Rustington Retail Park	4.7-kilometres	-	15-minutes
	Worthing Town Centre	5.0-kilometres	-	15-minutes

Summary

3.29 It is evident that the site is well connected to the local highway network with good sustainable access to Goring-by-Sea and the wider areas with a comprehensive range of local and accessible services and local sustainable transport with a good level of service.

3.30 The accessibility of the site by alternative mode to the private car is evidenced by the 2011 National Census Travel to Work Data (detailed further in Section 5) which demonstrates up to 25% of the working age population travel to work by sustainable modes.

3.31 The location of the site therefore reflects the requirements of the NPPF and local policy in ensuring the patterns of growth make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are sustainable. The site provides a realistic choice in travel mode to cater for a number of day to day journeys which would act to reduce occupant's reliance on the private car.

4. Proposed Development

Overview

4.1 The residential-led mixed use development proposals comprise the erection of up to 475 dwellings (Use Class C3) along with associated access, internal roads and footpaths, car parking, public open space, landscaping, local centre (uses including A1, A2, A3, A4, A5, D1, D2) with associated car parking, car parking for the adjacent rail station, undergrounding of overhead HV cables and other supporting infrastructure and utilities.

4.2 A proposed Masterplan Layout Plan (Drawing No. CMP-02 Rev P6), prepared by Thrive Architects is attached at Appendix 1 of this report.

4.3 Since all matters of detail will be reserved, the schedule of accommodation set out in Table 4.1 below is only indicative. Approximately 143 (30%) of the proposed residential units would be comprised of affordable housing, of which 70% (100 units) would be affordable rent and 30% (43 units) as shared ownership. The remaining 332 (70%) of the proposed units would be private open market. Regarding the mix of development, a total of 91 units (19%) would be comprised of one-bed; 172 units (36%) of two-beds; 152 units (32%) of three-beds and 60 units (13%) of four-beds.

Table 4.1 Schedule of Accommodation

Tenure	Housing Type	No. of Units
Private Open Market (POM)	1 Bedroom Unit	34
	2 Bedroom Unit	132
	3 Bedroom Unit	116
	4 Bedroom Unit	50
Affordable Rent	1 Bedroom Unit	45
	2 Bedroom Unit	25
	3 Bedroom Unit	25
	4 Bedroom Unit	5
Shared Ownership	1 Bedroom Unit	12
	2 Bedroom Unit	15
	3 Bedroom Unit	11
	4 Bedroom Unit	5
TOTAL		475

4.4 The commercial aspect of the residential-led development proposals would comprise a convenience foodstore (Use Class A1) with a Gross Floor Area (GFA) of 353 sq.m and a crèche (Use Class D1) with a GFA of 279 sq.m catering for up to 78 children and 39 staff over separate shifts.

4.5 It is anticipated that the convenience foodstore would serve the adjoining residential development and surrounding local community with the hours of operation between 06:00 and 23:00, Monday to Sunday. As shown in Table 4.2, the proposed crèche would operate 3 sessions throughout a typical weekday.

Table 4.2 Proposed Operation of Crèche

Session	Time	No. of Children	No. of Staff
AM Session	08:00 – 13:00	26	4
PM Session	13:00 – 18:00	26	4
Full-Day Session	08:00 – 18:00	26	4

Proposed Access Arrangements

4.6 Vehicular, pedestrian and cycle access to all parts of the proposed residential-led mixed-use development would be achieved via the creation of a 3-arm roundabout junction located approximately 230-metres south and 430-metres north of the A259 Goring Street / A2032 / Titnore Lane (i.e. Goring Crossways); and A259 Goring Street / Goring Way / Aldsworth Avenue / Ardingly Drive / Goring Way 5-arm roundabout junctions, respectively.

4.7 As shown on Drawing No. 18122/001 Rev C (attached) the northern and southern arms of the proposed 3-arm roundabout junction would comprise two-lane approaches with a carriageway width of 3.2-metres.

4.8 The A259 Goring Street / The Strand priority give-way junction would be converted to accommodate '*left-in*' and '*left-out*' manoeuvres-only. Under this arrangement, motorised users intending to undertake right-turn movements into and out of The Strand would be required to divert to the north and south and undertake '*U-turn*' manoeuvres via the A259 Littlehampton Road - Goring Street / A2032 / Titnore Lane and A259 Goring Street / Goring Way / Aldsworth Avenue / Ardingly Drive / Goring Way roundabout junctions or choose alternative routes.

4.9 In addition, the proposed access arrangement would involve the permanent closure of the A259 Goring Street / Minor Goring Street priority give-way junction and the creation of an internal link road circa 70-metres to the south-west. This internal link would operate as a secondary access and enable future households / end-users as well as other motorised users to gain access to Goring rail station including the new car park facility (i.e. 75 spaces), Station House, Church of Jesus Christ, several residential blocks (Hereford, Salisbury and Winchester) situated at the northern end of Minor Goring Street.

4.10 The closed section of carriageway would be reinstated as a shared foot / cycleway, which would connect a relocated toucan crossing and a segregated two-way cycleway and footway measuring 4.0-metres and 2.0-metres in width, respectively along the eastern side of the A259 Goring Street.

4.11 This new infrastructure would extend from the modified junction of the A259 Goring Street / The Strand to provide a safe and direct walk and cycle route connecting the predominately residential area off the eastern side of the A259 Goring Street to Goring-by-Sea rail station. It would also cater for the main pedestrian desire line (south-west to north-east) of future end-users travelling to / from Northbrook College, located north-east of the site.

4.12 A segregated cycleway and footway would be provided along the southern side of the internal access road as well as the western and eastern sides (in-part) of Minor Goring Street. This would adjoin to an uncontrolled pedestrian crossing and provide future households and other end-users with a safe and direct cycle link to enhanced cycle parking facilities and Goring rail station.

4.13 The existing section of shared foot / cycleway off the western side of the A259 Goring Street, north of the proposed access would remain unaltered, as the residential-led mixed-use development is unlikely to generate a material increase in pedestrian and cycle movements.

Internal Access

4.14 Details of the internal access and layout will be determined as part of a future Reserved Matters planning application. However, the design will be developed in accordance with the DfT's MfS1 publication and WSCC's '*Local Design Guide – Supplementary Guidance for Residential Development Proposals*' (January 2008), most notably: -

- Primary Access – minimum carriageway width of 6.75-metres flanked by 3.0-metre wide shared foot / cycleways along both sides.
- Primary Street – minimum 5.5-metre wide carriageway with 2.0-metre wide footways on the primary routes through the development.
- Secondary Street – minimum of 5.0-metre shared surfaces with service margins designed to enable access for refuse vehicles; and
- Private Driveways – narrower shared surface areas where refuse vehicles do not need to enter.

Pedestrian and Cycle Access

4.15 The existing public rights of way that runs east-west along the south boundary of the site and north-south between the site will be retained.

4.16 An additional pedestrian access point will be provided to the north-west of the development. The existing public right of way (path number 2121_1) connecting to Ferring Lane, will be upgraded to facilitate increased pedestrian movements to access the bus stops located along the A259.

Proposed Parking Arrangements

Car

4.17 Car parking standards applicable to all aspects of the mixed-use development proposals are set out in WSCC's 'Guidance on Parking at New Developments' (August 2019). Parking standards for new residential developments are split into 5 Parking Behaviour Zones. The site is located within Zone 4 and the relevant parking standards have been reproduced below in Table 4.3.

Table 4.3 WSCC Residential Parking Demand - Zone 4

Number of bedrooms	Number of habitable rooms	Spaces per dwelling
1	1 to 3	0.9
2	4	1.1
3	5 to 6	1.7
4+	7 or more	2.2

4.18 When applying these standards to the proposed residential development, a total of 663 parking spaces would be required to satisfy potential demand. However, it is noted that details on car parking provision will be determined as part of a RM planning application.

Cycle

4.19 Cycle parking standards relevant to the residential aspect of the mixed-use development proposals are set out in Table 1 of WSCC '*Guidance on Parking at New Developments (August 2019).* Table 4.4 reproduces the minimum cycle parking standards for residential uses.

Table 4.4 Residential Minimum Cycle Parking Provision Standards

Type of Housing	Dwelling Size	Cycle Provision (per unit)
Houses	Up to 4 rooms (1 & 2 bed)	1 space
	5+ rooms (3+ bed)	2 spaces
Flats	Up to 3 rooms (1 & 2 bed)	0.5 space (if communal storage otherwise 1 space)
	4+ rooms (3+ bed)	1 space

4.20 Cycle parking standards for commercial retail (Use Class A1) is to be provided at a rate of 1 space per 100 sq.m for staff and 1 space per 100 sq.m for customers. The guidance specifies a site specific assessment for nurseries (Use Class D1), based on travel plan and needs.

4.21 When applying these standards to this use, a total of 8 cycle spaces including 4 for staff and 4 for customers would need to be provided to ensure compliance.

4.22 As with car parking, details on the number and type of cycle parking for both the residential and commercial uses in context with the adopted standards will be considered in greater detail, as part of a RM planning application.

5. Management

Travel Plan Co-ordinator

5.1 The applicant will be responsible for appointing a Travel Plan Coordinator (TPC) to delivery the RTP over a 5-year period after initial occupation (i.e. within the first 3-months) and once the vehicle trip rate target has been achieved, prior to the role being transferred to a Residents Association.

5.2 The TPC will be responsible for the implementation, communication, monitoring and management of the overall aims and objectives defined in the RTP, including:

- Overseeing the development and implementation of the sustainable transport strategy;
- Raising awareness of the RTP by designing and implementing effective marketing campaigns to promote sustainable transport patterns and behaviour;
- Acting as the point of liaison for future households / end-users of the mixed-use development as well as other external organisations (i.e. WSCC's Travel Plan Officer, Rights of Way Officer and Public Transport Operators etc);
- Coordinating the on-going monitoring process of the RTP in accordance with the Trip Rate Information Computer System (TRICS) UK Standard Assessment Methodology (aka TRICS SAM), to assess the performance of the RTP in achieving set targets on a regular basis.
- Promoting the RTP through the provision of effective communication at all levels.

5.3 The TPC will be appointed prior to occupation of the first residential unit. The contact details of the appointed TPC and any successors will be issued to WSCC's Travel Plan Officer.

Residents Association

5.4 The TPC will set up a Residents Association once the residential-led mixed-use development is fully occupied to continue the long-term promotion of sustainable travel patterns and behaviour. The Residents Association will transition into this role after the fifth-year anniversary of implementation and subject to the set trip rate target being satisfactorily achieved.

Communication

5.5 The success of the RTP will rely on the support of future households, and the TPC will need to ensure that the principles and initiatives within the document are fully understood. The TPC will act as the first point of contact for any travel planning related issues or queries.

5.6 All future households / end-users will be made aware of the RTP, its key aims / objectives and package of '*hard*' infrastructural and '*soft*' information-led measures aimed at encouraging the use of sustainable modes in favour of the private car, prior to relocating to the residential-led mixed-use development through the preparation of a Travel Information Pack.

5.7 Promotional material will also be used periodically to highlight the RTP initiatives. The promotional material including sales literature will include advice on the appropriate channels for raising specific transport-related matters, encouraging households to contact the nominated TPC who in turn will liaise with the appropriate authorities.

5.8 If appropriate, the TPC will notify future households / end-users with information / updates on changes to local highway and transport networks / services, which may affect journeys to / from the mixed-use development. The TPC will also liaise with the Residents Association to maintain a two-way communication flow regarding travel to and from the mixed-use development.

Monitoring

5.9 The RTP is a strategy that will evolve over time. Although the objectives of the document are to '*educate*' future households and end-users and to facilitate travel by sustainable modes will not change, it may be possible over time to define or re-define specific targets. The RTP will therefore be the subject of a regular monitoring and review process to ascertain success or otherwise and to identify the potential for improvements to the travel initiatives being offered.

5.10 A programme of monitoring and review will be in place to gather data on the travel patterns / behaviour of households / end-users. This information will be used to evaluate the performance of the RTP over a 5-year period following initial occupation, particularly in terms of establishing whether the 15% vehicle trip rate target has been successfully achieved. The appointed TPC will be responsible for implementing the monitoring and review strategy.

Formal Methodology

5.11 In accordance with WSCC's '*Development Travel Plan Policy*' the monitoring and review strategy will comprise a combination of formal and informal survey methodologies to identify the modal split, travel choice / behaviour and the actual degree of mode shift achieved.

5.12 The formal methodology for monitoring the RTP will require the applicant to commission an accredited data collection company to conduct 3 (multi-modal TRICS Standard Assessment Methodology (SAM) surveys at the residential-led mixed-use development over a 5-year period. The first survey will be conducted at a point in time when 50% occupation has been achieved. This process will then be repeated on a biennial basis (i.e. once every two years) at Years 3 and 5.

5.13 Data from each survey will need to be verified by managers, prior to being incorporated into the national TRICS database. The cost of each survey will be borne by the applicant.

5.14 Following completion of each TRICS SAM survey a monitoring report will be prepared to summarise the results in context with the 15% trip rate reduction target. The monitoring report together with an audit fee of £500 per survey will be issued to WSCC's Travel Plan Officer, to enable them to assess the performance of the RTP.

Informal Methodology

5.15 In addition to the formal TRICS monitoring, an informal online questionnaire will be issued to all households / end-users of the residential-led mixed-use development to gather insight into the reasons influencing travel choice / behaviour for various journey purposes. More specifically, the questionnaire will cover a range of topics and aim to gather both quantitative and qualitative data on the following aspects: -

- The average number of trips by each travel mode per day;
- The reasons influencing households / end-users to travel by private car to / from workplace destinations;
- The barriers / reasons preventing households / end-users to travel to / from workplace destinations by sustainable means;
- The uptake of free travel vouchers to the first owners / occupiers of each residential unit;
- The levels of uptake / interest in WSCC's car sharing scheme;
- The use of on-site cycle parking facilities including new infrastructure at Goring-by-Sea rail station;
- The use of car parking spaces in the proposed Goring-by-Sea rail station car park, as well as establish whether there are any problems with overspill / displaced parking on the surrounding local highway network; and
- Comments / feedback from future households / end-users and local public transport operators (e.g. Stagecoach / Southern Rail).

5.16 The re-issue of the informal questionnaire to all households / end-users will offer the opportunity to gather new information about wider attitudes to travel. Analysis of the travel questionnaire results will also yield up to date information for comparison with data derived at the introduction of the RTP. The questionnaire will be re-issued on the third and fifth anniversary of the first survey.

5.17 The results of the informal monitoring will be used by the TPC to monitor the success of individual Travel Plan measures, assess the reasons for travel choice, identify improvements or new incentives and measure achievements against set targets. The data will be stored by the TPC to enable comparisons and long-term trends between various measures to be determined over a period of time.

Biennial Monitoring Report

5.18 The results of the formal and informal methodologies will be presented in a biennial monitoring report, which will be prepared and submitted to WSCC's Travel Plan Officer within 3-months of the TRICS SAM and household / end-user questionnaires being undertaken. The appointed TPC will be responsible for ensuring that the biennial progress reports are submitted to WSCC's Travel Plan Officer over the 5-year monitoring period.

5.19 The biennial monitoring report will incorporate the following:

- Details of any changes within the residential-led mixed-use development over the time period that could affect travel patterns;
- An outline of the monitoring processes undertaken, as well as analysis of the results from data collection exercises in terms of performance against targets / milestones set within preceding period; and
- Details of new RTP related activities / measures for the proceeding 2-year period.

5.20 In line with WSCC's '*Development Travel Plan Policy*' the biennial monitoring report will be structured as follows: -

- Executive Summary;
- Development Overview;
- Summary of Agreed Travel Plan;
- Targets;
- Implementation Timetable;
- Monitoring Timetable;
- TRICS Validation Report;
- Analysis of Monitoring Results;
- Issues, Constraints and Reasons for Progress;
- Corrective Measures; and
- Conclusions.

Administration

5.21 Specifically, in relation to the operation of the RTP, the TPC will be required to maintain:

- Details of travel patterns: This information will be derived from the travel questionnaire and will be retained for input to the review process;
- Monitoring Records: Feedback from the monitoring procedures will be maintained for input to the review process; and
- Review Reports: Copies of historic review reports will be retained for reference purposes and for analysis of the longer-term effectiveness of the Plan.

Funding

5.22 The applicant will provide the appointed TPC with an annual budget to deliver all of the '*hard*' infrastructural and '*soft*' information-led measures including the on-going monitoring and review of the RTP for a minimum period of 5-years, and subject to the set vehicle trip rate target being successfully achieved.

5.23 In addition, the TPC will liaise with WSCC to ensure sufficient financial support is available for the on-going promotion and support of the TPC role.

Securing

5.24 In terms of planning obligations, it is intended that the RTP will be secured by way of a planning condition.

6. Travel Measures and Initiatives

6.1 This section outlines the range of '*hard*' physical and '*soft*' information-led management measures / initiatives, which will be implemented by the TPC over the 5-year period to facilitate a change in travel behaviour and patterns amongst future households and end-users.

6.2 As far as is possible, the travel initiatives outlined are designed to be suitable for review and monitoring. However, this list is not exhaustive and the TPC will be free to investigate other potential initiatives.

6.3 Whilst some of the travel initiatives may be implemented from the commencement of occupation of the development, others will need to be determined once a review of the initial travel survey has been completed.

Sales and Marketing

6.4 Past Travel Planning research has demonstrated that modal shift away from use of the private car to more sustainable forms is more effective when targeting regular journeys, which are short in length. Furthermore, it is recognised by both Transport Planning practitioners and academics that the lifetime event of home relocation, which is of relevance to new households, represents a change in the situational context, providing a '*window of opportunity*' for enabling previous habitual travel behaviour (i.e. private car use) to be reconsidered.

6.5 When this is combined with the provision of information on sustainable alternatives (e.g. public transport timetables and walking / cycling maps), it is likely that new households will be more preconceived to changing their travel behaviour towards the use of sustainable modes such as public transport, walking and cycling.

6.6 Consequently, the applicant will work closely with the Sales and Marketing Team of PHTV to ensure that they are aware of the aims / objectives of the RTP in terms of encouraging sustainable means of travel and reduce dependency on use of the private car for various journey purposes.

6.7 In this regards, potential purchasers, will be provided with information about the benefits of the RTP and the site's accessibility by sustainable modes of transport prior to relocating to the development and travel behaviour becoming habitual. The Sales and Marketing team will be trained to be able to advise on sustainable travel and have an information pack to distribute to potential purchasers.

Travel Information Pack (Welcome Pack)

6.8 An introductory Travel Information Pack will be provided to all households and end-occupiers of the commercial aspect of the mixed-use development to raise awareness of the RTP and associated measures. The Travel Information Pack will include:

- An outline of the main aims / objectives and the role of individuals in achieving the aspirations of the RTP;
- Details of the financial, environmental and personal health benefits associated with the '*active*' travel modes of walking and cycling;
- Local walking and cycling route maps including information on dedicated cycle parking facilities;

- Information on WSCC's free adult cycle training courses and the online cycle journey planner (https://cyclejourneyplanner.westsussex.gov.uk/)
- Public transport fares, service timetables, and maps showing the location of the nearest bus stops along the A259 Littlehampton Road, The Strand, Goring Way and Langbury Lane, and Goring-by-Sea rail station.
- A map showing the range of local facilities / services in Goring-by-Sea and Worthing which are available and accessible on-foot and by cycle including major employment areas, health care services (hospitals, doctor's surgeries, and dentists), leisure facilities / services etc.
- Details of financial incentives aimed at encouraging sustainable travel (i.e. £150 travel voucher, discounted travel cards and offers at local cycle retailers);
- Simple cost-benefit analysis of public transport versus the use of the private car, as appropriate; and
- Contact details of the appointed TPC.

6.9 The information will be prepared immediately prior to initial occupation of the residential and commercial aspects of the mixed-use development. It will be updated on a biennial basis as part of the review process.

Personal Sustainable Travel Planning

6.10 The TPC will be offered the opportunity to discuss their individual travel needs with the TPC through organising Personal Travel Planning meetings. The purpose of the meeting will be to raise awareness of the various travel options available to households as well as gain an understanding of the main aims and objectives of the RTP.

Sustainable Travel Voucher

6.11 To incentivise future households to travel by sustainable means of travel, the applicant will as part of the TIP issue Sustainable Travel Vouchers to the first homeowners / occupiers of each residential unit. The Sustainable Travel Voucher will be to the value of £150, which can be exchanged for the following: -

- A season ticket for the local bus service;
- A rail season ticket or network card;
- A contribution towards the purchase of a new bicycle and / or equipment; and
- Cycle training up to 4 members of the household.

On-Site Infrastructure

6.12 As part of the development proposals, a number of internal and external segregated foot / cycleways will be provided to connect to the wider pedestrian / cycle network.

6.13 In accordance with national, regional, and local planning policy, all residential units will be provided with secure and sheltered cycle storage facilities capable of accommodating cycles of various size and type. The provision of secure storage will increase the likelihood of new households owning and using their cycles. Further information on cycle routes and storage facilities at other local destinations including Goring-by-Sea rail station will be contained within the TIPs.

6.14 In addition, all residential units will be provided with broadband service capability, to enable future households to work from home, and hence reduce the need to travel for various journey purposes including commuting over the course of a typical weekday. The provision of broadband services will also enable future households to purchase goods and services online and for these delivered to be individual properties, further minimising the number of private car journeys.

Walking and Cycling

6.15 In addition to the provision of new infrastructure such as segregated cycleways and footways within the vicinity of the mixed-use development and information on safe walking / cycling routes, the TPC will create a Bicycle User Group (BUG) comprised of households and other end-users interested in promoting cycling as a mode of travel.

6.16 The TPC and BUG will be responsible for negotiating discounts with local cycle retailers on behalf of new households regarding the purchase of cycles and associated equipment. The BUG will meet regularly to discuss issues related to cycling to / from the mixed-use development and surrounding area. Households will be encouraged to manage the meetings themselves and to provide feedback / comments to the TPC and WSCC's Travel Plan Officer.

6.17 The BUG would also provide information regarding the Government backed '*Cycle-to-Work*' scheme, which allows employees to purchase a cycle tax-free via their employer. There are a number of benefits associated with this scheme, which include: -

- Reduced cost of purchasing a cycle to an employee, equivalent to saving on Income Tax and National Insurance.
- An employer would save National Insurance contributions since the scheme is based on a salary sacrifice and would redeem the VAT on the purchase; and
- The information provided by BUG would provide households with the necessary information to encourage their employer to implement a 'Cycle-to-Work' scheme.

6.18 The TPC will promote walk and cycle campaigns in conjunction with national travel awareness events including '*Walk to School Week*', '*National Bike Week*', '*Cycle to Work Day*', and '*European Mobility Week*'.

Public Transport

6.19 As part of the residential-led mixed-use development proposals, a number of existing bus stops along Goring Way and Ferring Lane, served by Route 700 (Coastliner) bus service will be enhanced through the provision of sheltered seating and '*real-time*' information. These infrastructural improvements will enhance the waiting area for patrons and increase the likelihood for future households and other end-users to travel to / from the mixed-use development by local bus services.

6.20 To further promote the use of existing public transport services, the TPC would liaise with local bus operators (Stagecoach and Compass Bus) to negotiate free '*bus taster*' tickets for each first owner / occupier of each household. Up-to-date and relevant timetable / route map information would also be sought from the operator for inclusion within the TIP.

6.21 The provision of these financial initiatives would help influence new households to reconsider their travel patterns and behaviour, in favour of using existing public transport services, thereby reducing dependency on the private car for various journey purposes.

6.22 It is noteworthy that the 2011 Census identifies that approximately 5% of households within the Worthing 006 Middle Layer Super Output Area (MSOA) currently travel by public transport as part of their regular journeys to various workplace destinations. When this is considered in conjunction with the financial incentive and free bus '*taster*' tickets, there is significant potential for encouraging new households to travel by bus as part or for all of their journey to work.

6.23 Details of local public transport services will be included within the Travel Information Pack and on notice boards. This will include the location of bus stops, operator websites and the ticket types and discounts available.

Car Sharing

6.24 Car sharing involved two or more people travelling together for all or part of a journey. It represents a relatively convenient, flexible, and cost-effective mode of travel if car sharers live and work in similar locations.

6.25 Liftshare is the UK's largest car share database with over 600,000 registered members. Liftshare operates over 1200 car share schemes around the UK. Typically, around 45% of registered members regularly car share, often as part of their journey to and from work.

6.26 The Liftshare website provides a '*savings calculator*' to enable members to work out the cost savings of car sharing as part of a regular journey. It is noteworthy that for journeys comprised of 5-miles, an individual can potentially save in the order of £334 per annum if travelling within a standard sized vehicle (i.e. between 1.4 and 2.0 litres).

6.27 It is anticipated that a car share scheme could deliver a reduction in private car use in the region of 1% - 3%. To encourage future households to car share with other individuals undertaking similar journeys, details of WSCC's Carshare scheme (https://liftshare.com/uk/community/westsussexcarshare) and Liftshare's national car share database including information on how to register for free and identify suitable journey matches will be promoted within the TIPS.

Homeworking

6.28 All residential units within the proposed development will be provided with the necessary telecommunication facilities that will enable households to connect to broadband through the various internet providers. This will in turn, provide households with the possibility of working from home in addition to gaining access to online shopping, banking and websites administered by public transport operators, the Local Authority, local taxi companies and local cycle shops etc.

7. Targets

7.1 To determine the effectiveness of the Travel Plan strategy in accomplishing the set aims and objectives, targets based on the DfT's '*Specific, Measurable, Achievable, Realistic and Time-bound*' (SMART) criteria are detailed in this section of the document.

7.2 It is generally considered that the predominant indicator of a successful Travel Plan is the change in the modal share of trips to and from a development, in which a greater proportion of journeys are made by sustainable means as opposed to by private car, particularly as single occupancy car drivers.

7.3 Since the travel patterns and behaviour of future households of the mixed-use development have not yet been established, the multi-modal trip rates and corresponding generation over the course of a typical 12-hour weekday, as presented in Section 6 of the Transport Assessment (TA) prepared by MTP in support of the planning application has been used to provide to derive the main target of the RTP.

7.4 As identified in Table 6.4 of the TA, the mixed-use development is anticipated to generate in the order of 2,634 two-way vehicular movements over the course of a typical weekday including 291 and 297 two-way movements during the AM (08:00 – 09:00) and PM (17:00 – 18:00) peak hour periods, respectively.

Trip Rate Target

7.5 In line with WSCC's Development Travel Plan Policy, the main target of the RTP will seek to achieve a 12-hour weekday vehicle trip rate / generation that is 15% lower than that predicted for the mixed-use development, as set out in the TA. Consequently, the trip target aims to reduce the number of two-way vehicular movements by 395 (i.e. 2,634 to 2,239) after the fifth-year of the RTP being actively implemented.

8. Action Plan

8.1 The primary aim of the RTP is to increase awareness of sustainable travel options and to encourage their use, with the objective of reducing demand for private car-based travel. Progress of the RTP will be assessed in the context of specific targets.

8.2 In order to achieve the aims and objectives of the RTP, a framework of targets and milestones for implementation is required, against which the success of the Travel Plan can be judged. The targets and milestones defined herein are designed to be transparent, realistic, and justified in the context of current national and regional guidance.

8.3 The implementation of the RTP will be structured in the form of an Action Plan that will define targets and milestones for the first 5 years of implementation. The Action Plan will be reviewed by the TPC prior to the annual review to check performance and identify the need for any corrective actions that may need to be put in place for the following period. Details of the Action Plan for the proposed development are outlined in Table 8.1.

Table 8.1 Action Plan

Action	Responsibility	Timescale
Provide infrastructure (i.e. cabling) for '*broadband*' connections and secure cycle parking facilities for each dwelling.	Applicant	During construction phase of development
Ensure pedestrian and cycle links and bus stop enhancements are in place.	Applicant	During construction phase of development
Appoint organisation to perform the role of the TPC.	Applicant	Prior to the occupation of the development
Implement Travel Plan process.	TPC	Prior to 1st occupation
Produce TIPs.	Applicant and TPC	Prior to occupation of the development.
Issue TIPs including Sustainable Travel Vouchers to all new households, prior to them relocating to TBC.	TPC	Prior to the occupation of the development.
Liaise with local cycle retailers to obtain discounts on behalf of new households for the purchase of cycles and accessories.	TPC	Prior to the occupation of the development.
Liaise with local bus operators to obtain '*bus taster*' tickets on behalf of new households.	TPC	Prior to the occupation of the development.
Conduct TRICS SAM and household questionnaires.	TPC	Within 3 months of 50% occupation
Set up a BUG	TPC	Within 6 months of 50% occupation
Submit results of the initial surveys to WSCC's Travel Plan Advisor	TPC	Within 3 months of issuing the questionnaire to households
Repeat TRICS SAM and household questionnaires.	TPC	Years 3 and 5 years after the initial survey

Submit a Review Report to WSCC's Travel Plan Advisor	TPC	Within 3 months of re-issuing the travel surveys

Remedial Measures

8.4 In the event that the 12-hour weekday vehicle trip rate target has not been achieved after 5-years of implementation, the TPC will meet with WSCC's Travel Plan Officer to discuss a number of remedial measures, which can be introduced to further reduce the number of vehicular movements to / from the mixed-use development. The remedial measures are not exhaustive but may include: -

- Re-distribution of Sustainable Travel Vouchers to each household;
- Cycle training;
- Additional promotion of walking and cycling campaigns such as 'Walk-to-School' and 'National Bike Week' and car sharing; and
- Extending Personalised Travel Planning service to all households.

Appendix 1

A1

SuDS
SuDS
SuDS
PLAY AREA
200m WALKING DISTANCE
Car Park Entrance
Cycle, Motorcycle Stores.
Station Green
Ground Floor Mixed Uses/Retail, Commercial, Nursery Creche.
GORING TRAIN STATION
N
0 50m 100m
(1:1250)

NOTES

 DO NOT scale from this drawing.
Contractors, Sub-contractors and suppliers are to check all relevant dimensions and levels of the site and building before commencing any shop drawings or building work. Any discrepancies should be recorded to the Architect.
Where applicable this drawing is to be read in conjunction with the Consultants' drawings.

REV	DESCRIPTION	DATE	AUTHOR	CHK'D
P1	Preliminary Issue	12/06/19	PM/SWD	MB
P2	Amendments to Layout	19/06/20	MB/aa	MB
P3	Amendments to Layout	26/06/20	MB/aa	MB
P4	Amendments to Layout	29/06/20	MB/aa	MB
P5	Amendments to Layout and Redline Boundary	10/07/20	MB/aa	MB
P6	Amendments Boundaries	15/07/20	MB/aa	MB

KEY

- Site Boundary (19.96 Ha)
- Land in Applicant's Control (11.17 Ha)
- Proposed Development Parcels
- Indicative Development Units
- Mixed Use Development Blocks
- Key Space
- Shared Surface
- Courtyard
- Mews Lane
- Parkland
- Open Space
- Sustainable Drainage Strategy (SuDS)
- Existing Vegetation
- Proposed Vegetation
- Proposed Planting to Northern Boundary
- Potential New Pedestrian Route
- Principal Vehicular Access Point
- Principal Vehicular Route
- Potential Location of Play Area
- 200m Walking Distance from Goring Station
- Existing High Voltage Cable
- Pylon Grounded
- Potential Secondary Access
- Proposed Car Park Entrance

thrive. architects
Romsey Office
Building 300, The Grange, Romsey Road, Michelmersh, SO51 0AE
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PROJECT
Goring Station
Goring-on-Sea
For: Persimmon Thames Valley

DRAWING
Concept Masterplan - 02

SCALE	DATE	AUTHOR	CHK'D
1:1250 @ A1	12/06/19	PM/SWD	PM

JOB NO.	DRAWING NO.	REV
PERS190227	CMP-02	P6

Drawings

INDICATIVE

A259 / The Strand
Converted to left in
/ left out junction

Provision of Toucan
Crossing Facility

Access to Mixed-use
Development

Goring Street
closed to provide
improved
pedestrian / cycle
access to Goring
Rail Station

New Goring Street Link

Provision of segregated
cycleway and footway.

Proposed Car Park for
Goring Rail Station +
Neighbourhood Centre

Provision of cycle parking
facilities for Goring rail station

Provision of uncontrolled
pedestrian crossing.

Provision of Motorcycle
parking for Goring rail station

Disabled parking retained

Notes

1. Do not scale from this drawing. All dimensions shown are in metres unless noted otherwise.
2. This drawing has been based upon topographical survey information produced by others and Milestone Transport Planning cannot be held responsible for any discrepancies which may arise because of it.

Key

- Footway
- Segregated 2-way Cycleway
- Verge
- Existing vegetation to remain

Drawing Revisions

Rev:	Drn:	Date:	Details	Chk:
-	IP	12/02/2019	First issue	TW
A	ZM	03/07/2020	Revised drawing	TW
B	ZM	16/11/2020	Inclusion of segregated cycleway	TW
C	DC	09/12/2020	Updated Cycleway and Car Park Layout	TW

Client
Persimmon Homes Ltd
(Thames Valley)

Project
Land North West of Goring Station, Goring by Sea

Title
Proposed Access Strategy

MILESTONE TRANSPORT PLANNING
7 Wey Court, Mary Road, Guildford, Surrey, GU1 4QU Tel: 01483 397888
Gateshead IBC, Mulgrave Terrace, Gateshead, NE8 1AN Tel: 0191 338 7220
web: www.milestonetp.co.uk

Drawing Number:
18122-001

Scale:
1,000 @ A3

Revision:
C

Drawings

INDICATIVE

A259 / The Strand
Converted to left in
/ left out junction

Provision of Toucan
Crossing Facility

Access to Mixed-use
Development

Goring Street
closed to provide
improved
pedestrian / cycle
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-	IP	12/02/2019	First issue	TW
A	ZM	03/07/2020	Revised drawing	TW
B	ZM	16/11/2020	Inclusion of segregated cycleway	TW
C	DC	09/12/2020	Updated Cycleway and Car Park Layout	TW

Client
Persimmon Homes Ltd
(Thames Valley)

Project
Land North West of Goring Station, Goring by Sea

Title
Proposed Access Strategy

MILESTONE TRANSPORT PLANNING
7 Wey Court, Mary Road, Guildford, Surrey, GU1 4QU Tel: 01483 397888
Gateshead IBC, Mulgrave Terrace, Gateshead, NE8 1AN Tel: 0191 338 7220
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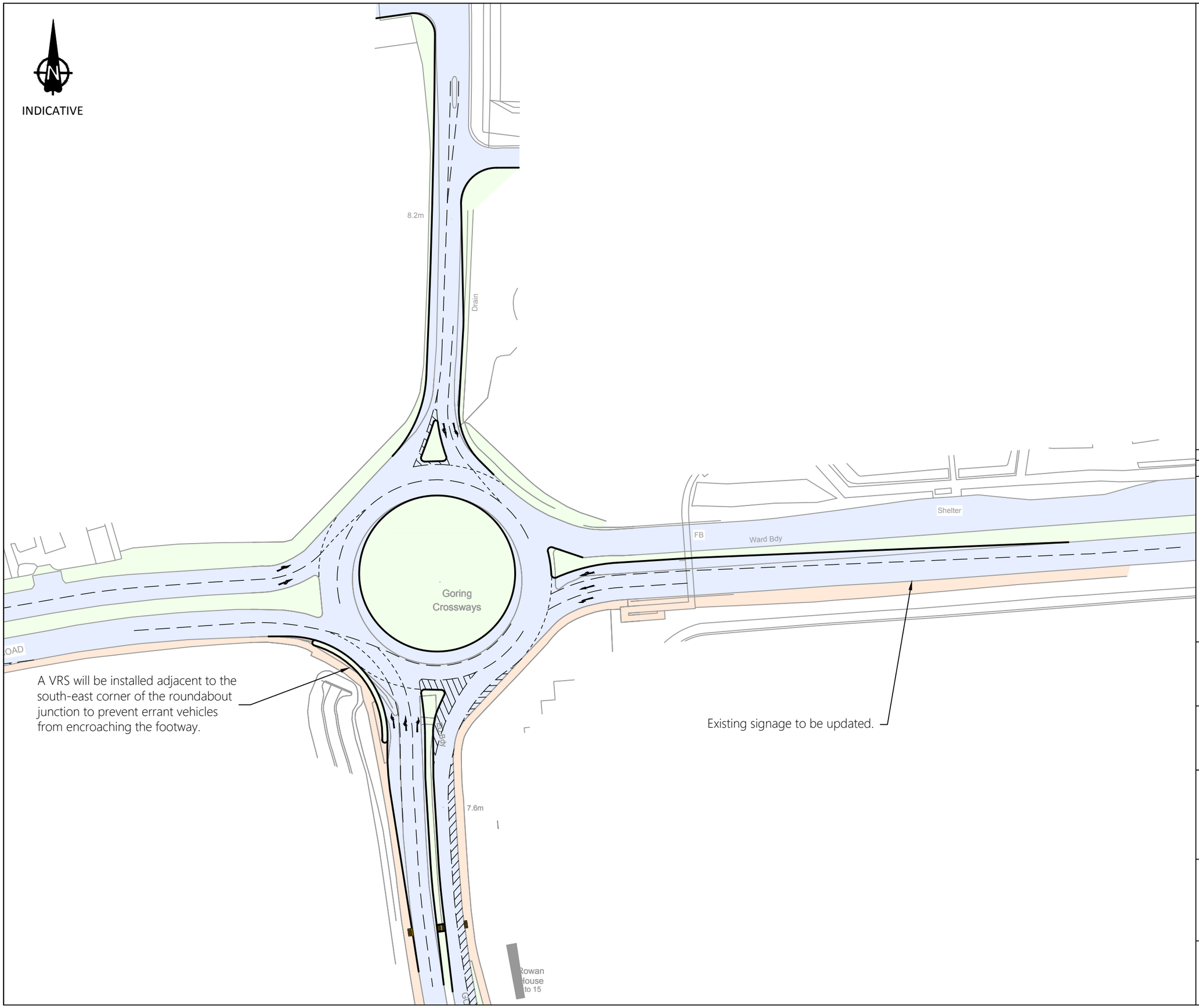
Drawing Number:
18122-001

Scale:
1,000 @ A3

Revision:
C

INDICATIVE



Notes

1. Do not scale from this drawing. All dimensions shown are in metres unless noted otherwise.

Drawing Revisions

Rev:	Drn:	Date:	Details	Chk:
-	ZM	02/04/2020	First issue	TW
A	ZM	03/07/2020	Revised drawing	TW
B	ZM	10/07/2020	Revised drawing	TW

Client

Persimmon Homes Ltd (Thames Valley)

Project

Land North West of Goring Station, Goring by Sea

Title

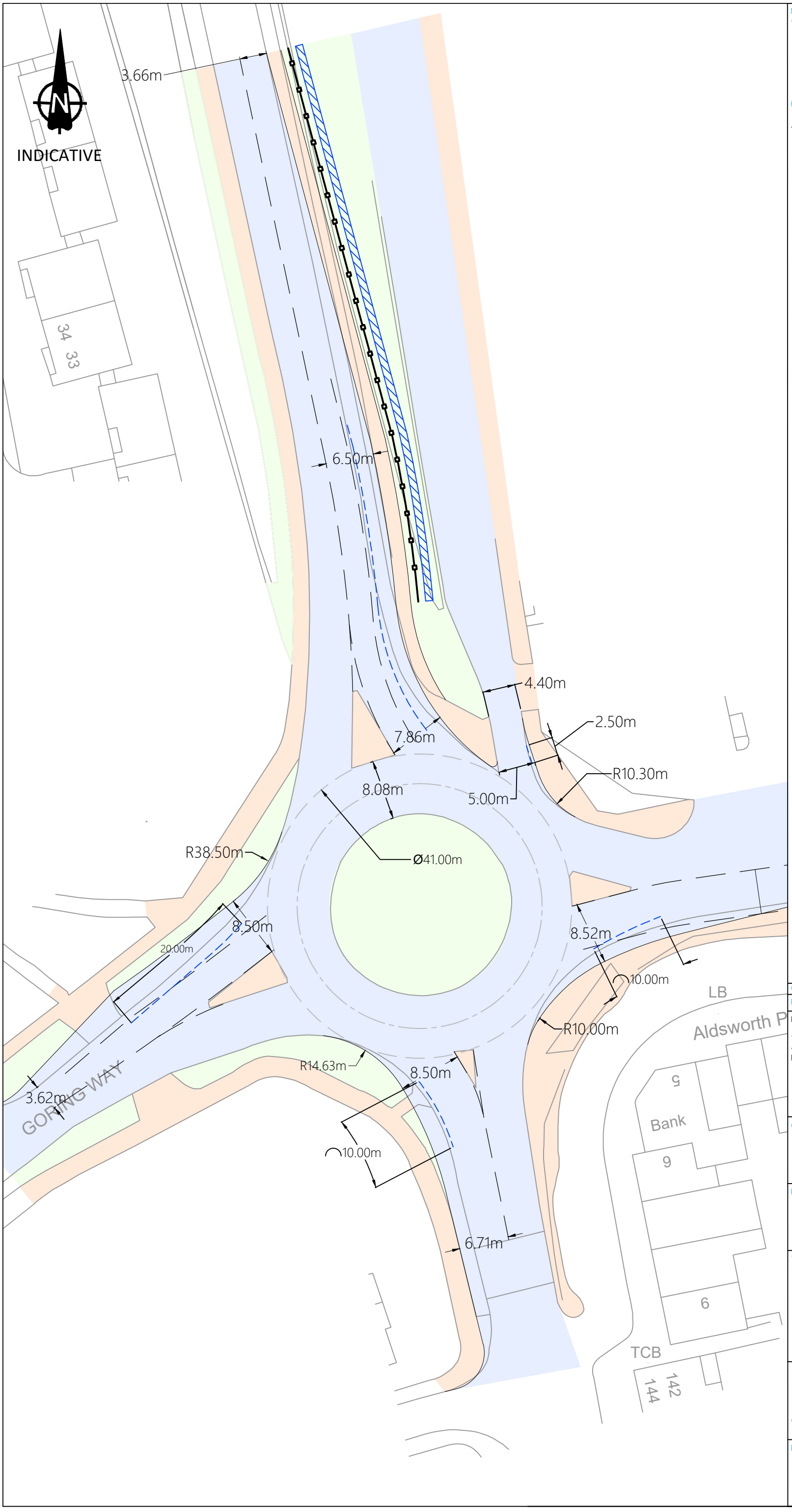
Proposed Northern Roundabout Mitigation Measures

MILESTONE TRANSPORT PLANNING
Abbey House, 282 Farnborough Rd, Farnborough, Hants GU14 7NA
Tel: 01483 397888
Gateshead IBC, Mulgrave Terrace, Gateshead, NE8 1AN
Tel: 0191 338 7220
web: www.milestonetp.co.uk

Drawing Number: 18122-002

Scale: 1:1000 @ A3

Revision: B



Notes

1. Do not scale from this drawing. All dimensions are in metres unless stated otherwise.

Key

- Proposed Kerb Alignment / Entry radius
- Effective flare length
- Length of proposed retaining feature
- Section of new VRS + Fence

Drawing Revisions

Rev:	Drn:	Date:	Details	Chk:
-	ZM	02/04/2020	First issue	TW
A	ZM	03/07/2020	Revised drawing	TW
B	DC	11/12/2020	Revised Layout	TW

Client

Persimmon Homes Ltd (Thames Valley)

Project

Land at Chatsmore Farm, Goring by Sea

Title

Proposed Southern Roundabout Mitigation Measures

MILESTONE TRANSPORT PLANNING
7 Wey Court, Mary Road, Guildford, Surrey, GU1 4QU Tel: 01483 397888
Gateshead IBC, Mulgrave Terrace, Gateshead, NE8 1AN Tel: 0191 338 7220
web: www.milestonetp.co.uk

Drawing Number: 18122-003

Scale: 1:500 @ A3

Revision: B