



# FORMER FRIENDS SCHOOL FIELDS SAFFRON WALDEN

Transport Assessment

July 2024

**RESIDENTIAL DEVELOPMENT  
FORMER FRIENDS SCHOOL FIELDS  
SAFFRON WALDEN**

**TRANSPORT ASSESSMENT**

**CONTROLLED DOCUMENT**

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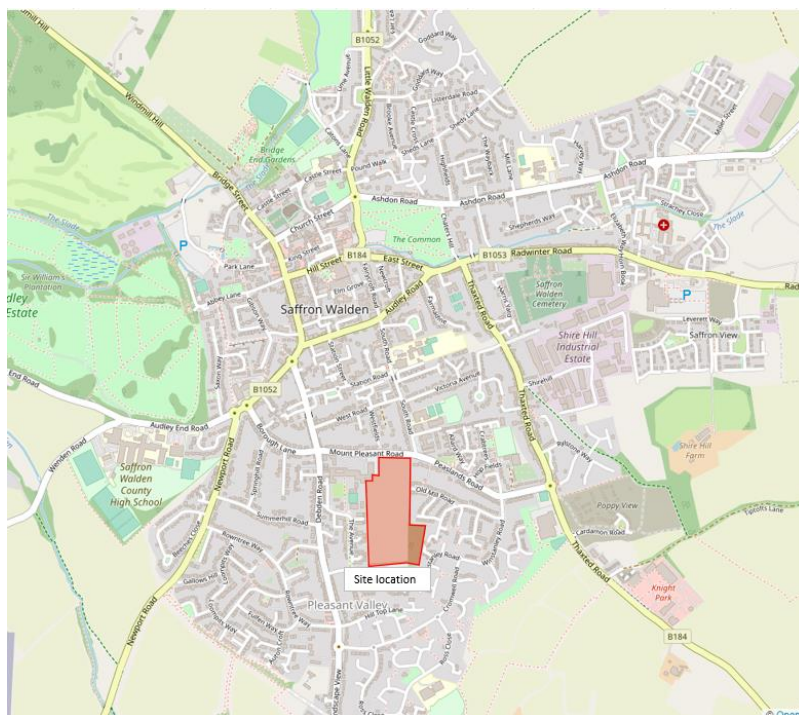
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## 1. INTRODUCTION

1.1 This Transport Assessment (TA) has been prepared by Paul Basham Associates on behalf of Chase New Homes to accompany a planning application for a residential development comprising of 91 dwellings with associated infrastructure and landscaping. As well as the provision of playing fields and a clubhouse (the 'proposed development') at the Former Friends School Fields, Saffron Walden, Essex (the 'site').

1.2 The site is located to the south of Mount Pleasant Road within Saffron Walden and is identified within **Figure 1**.



**Figure 1:** Site Location

1.3 Paul Basham Associates have prepared a Residential Travel Plan (TP) in conjunction with this application.

1.4 The scope of this TA has been discussed with Uttlesford District Council (UDC) and Essex County Council (ECC) highways officers through pre-application consultations.

1.5 As part of this TA a site visit was undertaken in September 2023, with highway boundary mapping and Personal Injury Collision (PIC) data obtained, along with traffic surveys undertaken in 2023.

1.6 Following this introduction, this TA includes the following:

- **Section 2 Planning Context:** outlines the planning applications relevant to the proposed development and surrounding the site location.
- **Section 3 Policy and Guidance Review:** outlines the national, regional and local planning policy and guidance documents related to transport and the proposed development.
- **Section 4 Existing Site Conditions and Accessibility:** outlines the existing site conditions and accessibility of the site as well as a review of available PIC data.
- **Section 5 Proposed Development:** sets out the development proposals including the access arrangements, swept path analysis (vehicle tracking), visibility splays and proposed car and cycle parking provision within the site.
- **Section 6 Highway Impact Assessment:** outlines the forecast vehicle trip generation assessment for the existing land use and the proposed development, the vehicle distribution and assignment on the local highway network and the results of junction modelling undertaken; and
- **Section 7 Summary and Conclusions:** provides an overall summary and conclusion to this TA.

## 2. PLANNING CONTEXT

- 2.1 A hybrid planning application (UTT/19/1744/OP) was refused at the proposed development site in March 2021. This application related to the full details of the development of 30 dwellings utilising existing access, re-provision the of swimming pool with new changing rooms, artificial grass pitches, sports pavilion, multi-use games area (MUGA), local equipped area for play (LEAP), local area for play (LAP), associated parking and demolition of the gym building. The remaining portion of the application was considered in outline for the development of up to 70 dwellings with associated infrastructure, public open space, a forest school and a perimeter path.
- 2.2 A planning application for the neighbouring site was submitted under section 62A of the Town and Country Planning Act (1990) in 2022 for 96 dwellings (S62A/22/0000002). This application was subsequently approved in October 2022 subject to conditions.

### 3. POLICY AND GUIDANCE REVIEW

#### Overview

3.1 The proposed development will comply with the policies and guidance documents set out at a national, regional and local scale, which relate to the following:

- National Planning Policy (NPPF, 2023);
- Essex County Council (ECC) Local Transport Plan 2011-2025 (2011);
- Uttlesford District Council's (UDC) Local Plan (2005);
- Saffron Walden Neighbourhood Plan (SWNP) 2021-2036 (2022); and
- ECC Parking Standards Design and Good Practice (2009).

3.2 In addition to the policy documents outlined out above, this TA also references the Chartered Institution of Highways & Transportation (CIHT) 'Planning for Walking' (2015), the Department of Transport (DfT) 'Manual for Streets' (MfS, 2007), and the Building Regulations 'Fire Safety Document B' (2019).

#### National Planning Policy Framework (2023)

3.3 The NPPF was adopted in 2012 with the latest revision adopted in December 2023, which acts as the central guidance for development planning. The following NPPF extracts are relevant to transport and the proposed development.

Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:

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

**(NPPF Para. 108)**

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

**(NPPF Para. 109)**

In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:

- a) appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;
- b) safe and suitable access to the site can be achieved for all users;
- c) the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code; and
- d) 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.

**(NPPF Para. 114)**

Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.

**(NPPF Para. 115)**

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

**(NPPF Para. 117)**

### Essex County Council Local Transport Plan 2011 – 2025 (2011)

- 3.4 ECC Local Transport Plan was adopted in 2011. It sets out a framework for the delivery of transport services provided by or on behalf of the council with support from transport operators and district and council authorities. The strategy aims to achieve sustainable long-term economic growth in Essex with the help of improved travel within the county. The plan states their vision for – “A transport system that supports sustainable economic growth and helps deliver the best quality of life for the residents of Essex”.
- 3.5 The ECC Local Transport Plan consists of two parts, with the Local Plan referred to as the ‘Essex Transport Strategy’ and the second part the ‘Implementation Plan’. The Local Transport Strategy sets out the vision for transport and the outcomes that are aimed to be achieved between 2011 and 2025. The Implementation Plan sets out in greater detail how the strategy will be delivered and monitored.
- 3.6 The Essex Transport Strategy sets out five key objectives:
1. Provide connectivity for Essex communities and international gateways to support sustainable economic growth and regeneration.
  2. Reduce carbon dioxide emissions and improve air quality through lifestyle changes, innovation, and technology.
  3. Improve safety on the transport network and enhance and promote a safe travelling environment.
  4. Secure and maintain all transport assets to an appropriate standard and ensure that the network is available for use; and
  5. Provide sustainable access and travel choice for Essex residents to help create sustainable communities.
- 3.7 The Plan continues to highlight several challenges it will face for each objective. The key issues for transport have been identified.
- **Challenge 1:** Providing good inter-urban connectivity within Essex and with adjacent major urban areas;
  - **Challenge 2:** Reducing the carbon-intensity of travel in Essex;
  - **Challenge 3:** Reducing the number of people killed or seriously injured on Essex roads;
  - **Challenge 4:** Future proofing transport connections to keep networks operations and safe at all times of the year;

- **Challenge 5:** Enabling Essex residents to access further education employment and vital services (including healthcare, hospitals and retail); and
- Challenge 6:** Encouraging and enabling healthier travel and leisure activities

### **Uttlesford District Council Local Plan (2005)**

3.8 UDC Local Plan was adopted in January 2005. A new local plan is still under review, following the government’s announcement in 2020 that instructed all authorities to update their local plan by December 2023. However, the 2005 Local Plan is still the currently adopted Local Plan. An overview of the most relevant policies included with the adopted UDC Local Plan are detailed below.

#### Policy GEN1 – Access

- 3.9 Policy Gen1 states a development will only be permitted if it meets all the following criteria:
- a) ‘Access to the main road network must be capable of carrying the traffic generated by the development safely’.
  - b) ‘The traffic generated by the development must be capable of being accommodated on the surrounding transport network’.
  - c) ‘The design of the site must not compromise road safety and must take account of the needs of cyclists, pedestrians, public transport users, horse riders and people whose mobility is impaired’.
  - d) ‘It must be designed to meet the needs of people with disabilities if it is development to which the general public expect to have access’.
  - e) ‘The development encourages movement by means other than driving a car’.

#### Policy GEN8 – Vehicle Parking Standards

3.10 Development will not be permitted unless the number, design and layout of vehicle parking places proposed is appropriate for the location, as set out in Supplementary Planning Guidance “Vehicle Parking Standards”.

#### PolicyT1- Transport Improvements

3.11 This policy outlines specific areas within Uttlesford that will undergo development to make the local network stronger. The Uttlesford Transport Strategy (UTS) (2001) is referenced within this policy to highlight existing issues with the network. The issues expressed within the UTS document are in relation to selected areas within Uttlesford, including Saffron Walden. The issues that relate to the proposed development are as follows:

- 1) There are a variety of existing community travel initiatives in the district. These should be examined to establish if opportunities exist to coordinate them better and to connect them with other public transport services.
- 2) There are opportunities to develop useful cycle routes in and around Saffron Walden and Great Dunmow. ECC has produced an overall plan, the “Uttlesford Cycle Network Plan”. This is being implemented during the plan period.

### **Saffron Walden Neighbourhood Plan 2021-2036 (2022)**

3.12 The Saffron Walden Neighbourhood Plan (SWNP) was adopted in 2022. The document highlights relevant steps needing to be taken to achieve long-term sustainability for Saffron Walden with the aim of achieving the stated development goals by 2036.

3.13 The following policies within the document are outlined below in relation to the proposed development:

#### Policy SW1- Housing Mix on New Developments

3.14 This policy states the need for all residential development proposals to include a mix of housing sizes, designed to fit within the existing landscape, and a mix of affordable homes to comply with the local housing need.

#### Policy SW2- Affordable Housing

3.15 This policy outlines the expectations of development on sites which provide for ‘10 dwellings or more’, or the site has an area of ‘0.5 hectares or more will be required to provide 40% of the total number of dwellings as affordable dwellings on the application site’, distributed evenly throughout. It discusses the need for 40% affordable housing to be the SWNP requirement, stating that ‘exceptional circumstances may be agreed if a payment in lieu was an equivalent or enhanced provision of affordable housing’. This policy states that schemes which don’t meet the objectives of SW2 should be refused.



#### Policy SW4- Parking on New Developments

- 3.16 SW4 describes the regulations that new developments must follow when issuing parking spaces. It states that all new developments must comply with the ECC Parking Standards Design and Good Practise (2009). Additionally, all developments are required to refer to the Essex Design Guide when designing the vehicle and cycle parking. This policy states that all dwellings must make provisions for electric vehicle (EV) charging.

#### Policy SW12- Promoting Walking and Cycling

- 3.17 This policy relates the footways and cycleways within the new development. SW12 states that 'new developments must retain, enhance or incorporate safe, attractive and direct walking and cycle routes on the site, and can be adopted by ECC Highway Authority'. SW12 states 'all new developments are required to be permeable to enable continued and efficient use of the walking and cycle routes'. Further guidance is addressed for the cycleways, suggesting the Uttlesford Cycling Action Plan should be considered.

#### Policy SW13- Travel Planning

- 3.18 This policy relates to larger developments which may cause a shift in the local network. Stating that 'sustainable travel initiatives need to be encouraged within the new development, with a travel plan'. This travel plan needs to have measurable objectives to meet the SWNP requirements.

#### Policy SW14- Improving Provision of Public Transport

- 3.19 SW14 states that 'developers need to take opportunities to promote the use of public transport within their development'. This can be done by highlighting the available routes and infrastructure services to residents.

### Policy SW15- Vehicular Transport

3.20 Policy SW15 has been formed to address the issues in relation to additional traffic movements as a result of new developments. The concerns outlined address issues such as an increased number of HGVs being put on the local network as a result of new developments. The development will only be supported by the Saffron Walden Town Council if the proposed development can be shown not to have an impact on the current congestion capacity, relative the UDC's Local Plan Highway Impact Assessment (2013), taking the appropriate steps to restrict the movements where possible. SW15 states that an Air Quality Assessment is required, allowing for mitigation to be implemented to help achieve a suitable residential environment for the new development. SW15 reinstates the need for sufficient EV charging points within the proposed development.

### **Essex County Council Parking Standards (2009)**

3.21 The ECC parking standards state that the car parking at trip origins (i.e., residential parking) is outlined as a minimum with the car parking for trip destinations (e.g. commercial, leisure and retail parking) identified as a maximum. The ECC parking standards document outlines that *'limiting parking availability at trip origins does not necessarily discourage car ownership and can push vehicle parking onto the adjacent public highway, diminishing the streetscape and potentially obstructing emergency and passenger transport vehicles'*.

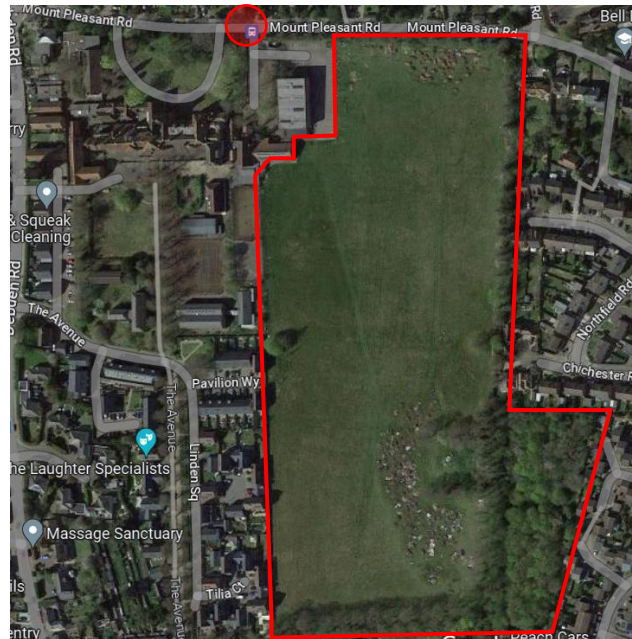
3.22 The ECC Parking Standards document outlines the following car and cycle parking standards which are relevant to the proposed development:

- 1 bedroom – 1 car parking space per dwelling;
- 2 bedrooms plus - 2 car parking spaces per dwelling; and
- Visitor/ unallocated - 0.25 spaces per dwelling (unallocated round to the nearest whole number)

#### 4. EXISTING SITE CONDITIONS AND ACCESSIBILITY

##### Overview

- 4.1 The site is located to the south of Mount Pleasant Road in Saffron Walden, Essex, as identified within **Figure 1**.
- 4.2 The existing site consists of the school playing fields of the Friends' School which had been closed. The existing school building is located to the west of the site and the school building is not in use.
- 4.3 The red line boundary of the site is shown in **Figure 2** along with the existing Site Access/Mount Pleasant Road T-junction (red circle). The site is accessed via an internal route for approximately 75m to the south of Mount Pleasant Road. Along the northern side of Mount Pleasant Road are various dwellings with access to driveways provided via dropped kerbs along the northbound footway.



**Figure 2:** Site Location

4.4 **Photographs 1** and **2** identify the existing access to the site and the westbound view along Mount Pleasant Road.



**Photograph 1:** Existing Site Access



**Photograph 2:** The Site Access Looking Out to the West

### Local Highway Network

4.5 Mount Pleasant Road borders the site along the northern boundary and runs in a west-east direction. Approximately 150m to the west of the site Mount Pleasant Road connects to the Mount Pleasant Road/Deben Road/Borough Lane signalised junction.

4.6 From the Mount Pleasant Road/Deben Road/Borough Lane signalised junction, as shown in **Photograph 3**, Deben Road runs in a north-south direction connecting to the London Road/Deben Road /High Street mini-roundabout approximately 330m to the north of the junction.



**Photograph 3:** Mount Pleasant Road/Deben Road/Borough Lane Signalised Junction

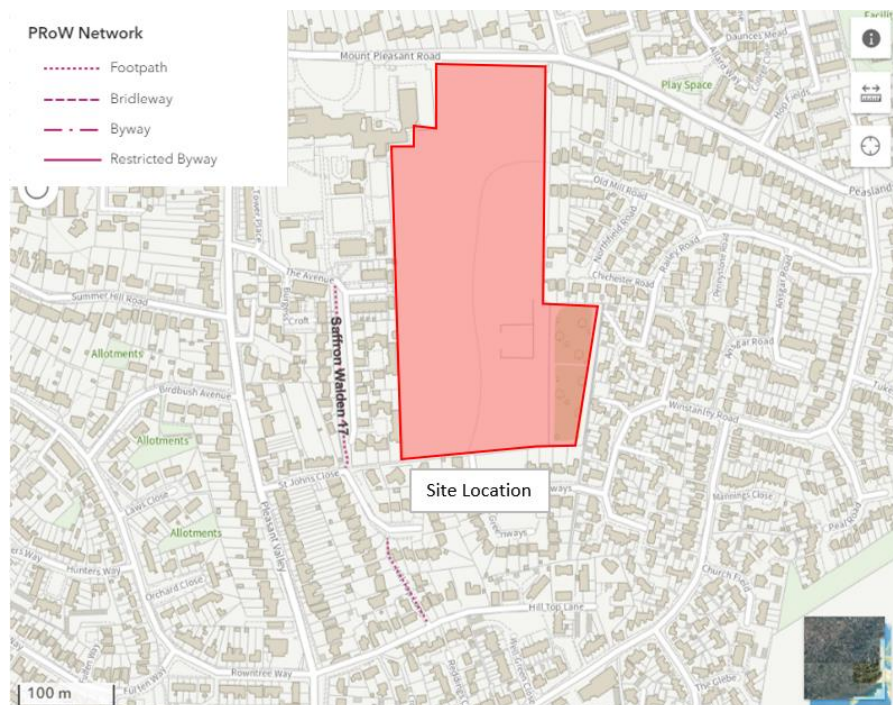
- 4.7 To the north of the London Road/Debden Road /High Street mini-roundabout, High Street becomes Windmill Hill which provides a connection to the north towards Littlebury and Little Chesterford. Approximately 220m to the south of the London Road/ Debden Road / High Street mini-roundabout, London Road connects to the London Road/Borough Lane mini-roundabout. The London Road/Borough Lane mini roundabout connects to the Mount Pleasant Road/Deben Road/Borough Lane signalised crossroads approximately 330m to the east of London Road.
- 4.8 Approximately 50m to the south of the London Road/Borough Lane mini-roundabout, London Road connects to the London Road/ Newport Road /Audley End Road mini-roundabout. Audley End Road connects to the west and provides a route towards Audley End.
- 4.9 Located at the northeast corner of the site, Mount Pleasant Road connects to the Mount Pleasant Road/South Road/Peaslands Road T-junction. Approximately 220m to the east of the Mount Pleasant Road/South Road/Peaslands Road T-Junction, Peaslands Road connects to the Peaslands Road/Hop Fields mini-roundabout.
- 4.10 Approximately 300m to the east of the Peaslands Road/hop Fields T-Junction, Peaslands Road connects the Peaslands Road/Thaxted Road mini-roundabout. Thaxted Road runs in a north-south direction and connects to Radwinter Road to the north. Thaxted Road provides a route towards Howlett End and Thaxted to the south.
- 4.11 The M11 runs in a north-south direction approximately 3km to the west of the site. The M11 Junction 9a is located approximately 8km to the north of the site and is accessed via Walden Road or Newmarket Road. The M11 is part of the Strategic Road Network (SRN) which is managed by National Highways.

### **Pedestrian Network**

- 4.12 Mount Pleasant Road provides footways along the northern and southern carriageway. The footways are approximately 2.5m wide and provide a connection between the Mount Pleasant Road/ Debden Road signalised junction to the west and the Peaslands Road/Thaxted Road mini roundabout to the east. The footways along Mount Pleasant Road are equipped with dropped kerbs, tactile paving, and streetlights, while the footway along the southern carriageway connects into the site.



- 4.13 The footways along Mount Pleasant Road connect to the west onto Debden Road at the Mount Pleasant Road/ Debden Road signalised junction. The signalised junction is equipped with tactile paving, dropped kerbs and marked crossings.
- 4.14 The footways provided along both sides of Debden Road carriageway connect to London Road, via the Debden Road/London Road mini roundabout. These footways along London Road run west-east northbound of the site and provide pedestrians with a route into the Town Centre.
- 4.15 ECC Public Rights of Way (PRoW) route map identifies that Footpath 17 is located approximately 180m south of the site, as shown in **Figure 3**. Footpath 17 runs in a north-south direction between The Avenue to the north and St John's Close to the south.

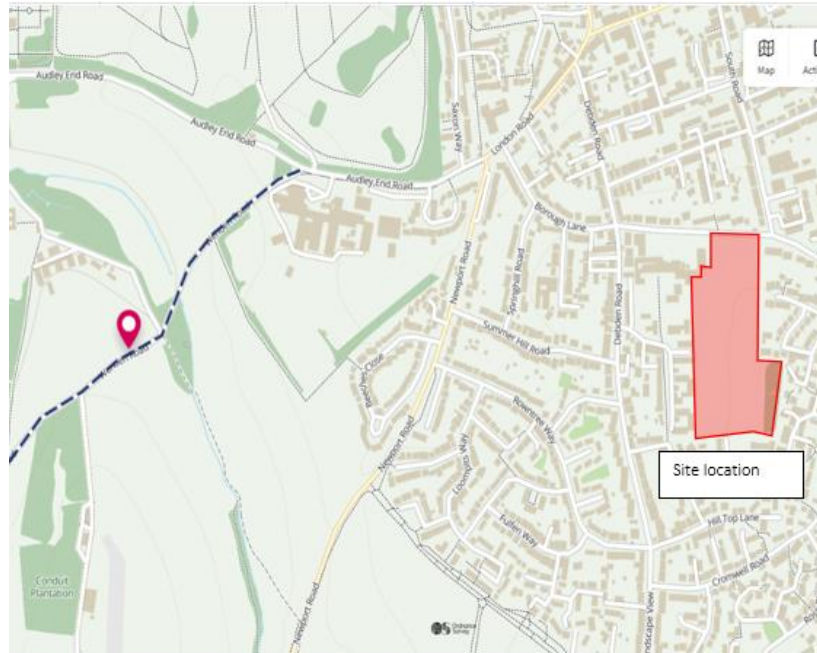


**Figure 3:** Local Public Rights of Way Routes

### Cycle Network

- 4.16 There are good opportunities surrounding the site to promote cycling given the 30mph speed limits along Mount Pleasant Road, Debden Road and London Road along predominately residential areas.

4.17 **Figure 4** identifies the National Cycle Network (NCN) route 11 is a public cycle route which runs along Wenden Road which joins Audley End Road at the Wenden Road/Audley End Road T-junction to the west of the site.



**Figure 4:** National Cycle Network

4.18 The Wenden Road/Audley End Road T-junction joins the site local highway at Audley End Road which merges with London Road, connecting to Borough Lane at the London Road/Borough Lane mini roundabout. Borough Lane is accessible to the west of the site at the Mount Pleasant Road/Debden Road/Borough Lane signalised junction which links to the site via Mount Pleasant Road.

4.19 Walden Road forms part of NCN Route 11, which connects to the neighbouring village of Wendens Ambo. NCN Route 11 travels in a north/south direction through the centre of Cambridge and further north to Peterborough.

4.20 Therefore, the local highway network provides a conducive environment for cyclists with good connections to NCN Route 11, which can provide wider access to Cambridge and Peterborough and encourage cycling as a key method of travel for future site users.

## Bus Services

- 4.21 Approximately 20m east of the site access located along Mount Pleasant Road are a pair of bus stops in the form of bus cages, named 'Friends School', shown in **Photograph 4**. Both bus stops provided a flagpole with timetable information as shown in **Photograph 5**.



**Photograph 4:** The Southbound Friends School Bus Stop



**Photograph 5:** Friends School Bus Stop Bus Timetable

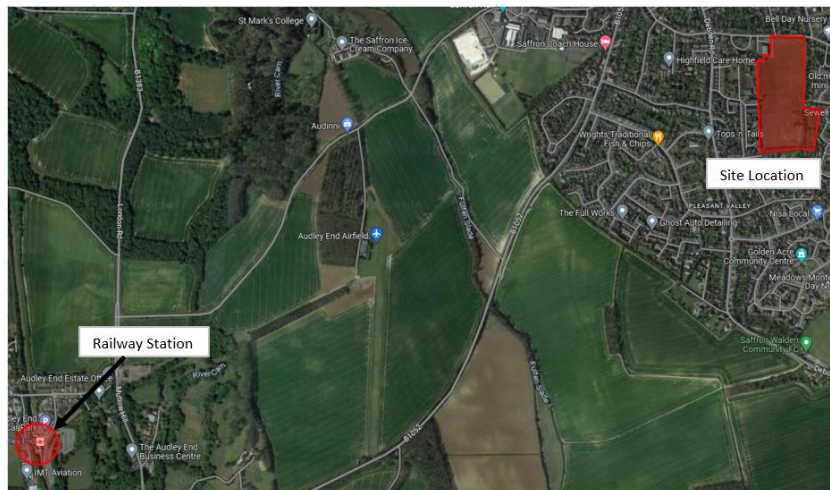
- 4.22 Central Connect operate bus services 316 and 318, and Stephenson's operates bus services 313 and 314 which service the pair of bus stops on Mount Pleasant Road.
- 4.23 Bus services 316 and 318 provide connection to Stansted Airport. The 316-bus service operates between 05:30-20:30, approximately every hour, Monday to Saturday. The 318-bus service is a school service for surrounding areas, running at 15:42 Monday to Saturday. The 318 service operates for Saffron Walden County High School and Joyce Frankland Academy, which is situated in Newport, southeast of the site. The 316 and 318 bus services do not run on Sundays.
- 4.24 The Stephenson's bus services 313 and 314 provides connections to Great Dunmow. Bus routes 313 and 314 run between Saffron Walden to the north and Great Dunmow to the south. The 313 and 314 bus services alternate throughout the day, arriving every hour between 08:09 and 21:09 for Monday to Saturday. The 313 and 314 bus services do not operate on a Sunday.



- 4.25 Located approximately 200m northwest of the site on Debden Road are a pair of bus stops known as 'West Road'. The 'West Road' bus stops provide access to bus service 590 which runs between Saffron Walden and Audley End Railway Station. The 590 bus services stop at the 'West Road' bus stops at 07:11 and 17:32.
- 4.26 Bus service 59 operates between Audley End Railway Station to the west of the site and the West Road bus stop at 17:59 and 18:29. The duration of the journey between West Road bus stop and Audley End Railway Station is approximately a 10 minutes journey.

### Rail Services

- 4.27 Audley End Railway Station is located approximately 4.5km southwest of the site, as shown in **Figure 5**. Audley End Railway station is accessible by cycle, via an approximately 11 minutes journey from the site, or by car via an approximate six-minute journey from the site.
- 4.28 Additionally, the West Road bus stop located circa 190m from the site provides access to Audley End Railway Station via the 590 bus service, with the journey taking approximately 10 minutes.



**Figure 5:** Location of Audley End Railway Station

- 4.29 Audley End Railway Station is operated by Greater Anglia and provides a direct route into London Liverpool Street, taking approximately 65 minutes. Additionally, northbound of Audley End Railway Station Cambridge Railway Station can be accessed via an approximately 20-minute journey, as well as Norwich via an approximate 1 hour and 50 minutes journey.
- 4.30 Audley End Railway Station has step-free access, a ticket office, a ticket machine, availability to a taxi-rank and cycle parking facilities, and a car park which provides 675 car parking spaces.

## Local Facilities and Amenities

4.31 The CIHT document, 'Planning for Walking' (2015), identifies the 'desirable', 'acceptable' and 'preferred maximum' distance for Town Centre locations, The average walking speed of 1.4m/s as defined by CIHT's 'Planning for Walking' (2015), which equates to approximately walking 400m per five minutes' (circa 3mph/4.8kph), which are outlined in **Table 1**.

	Town Centre (m)	Elsewhere (m)
Desirable	200	400
Acceptable	400	800
Preferred Maximum	800	1200

**Table 1:** CIHT's Preferred Walking Distances (2015)

4.32 **Table 2** provides a summary of the local facilities and amenities surrounding the site and identifies the approximate distance and the walking and cycling times from the site. A walking distance of 400m per five minutes and a cycling speed of 400m per minute (circa 15mph/24kph) has been applied.

Facilities and Amenities	Approximate Distance from Site (m)	Approximate Walking time (minutes)	Approximate Cycling time (minutes)
Bus stop (Friends school)	50m	<1	<1
Primary school (St Thomas More Catholic Primary school)	300m	4	<1
Dental practise (The Walden Dental Clinic)	500m	6	1
Restaurant (The Railway Arms)	550m	7	1
Convenience store (Old mill road mini market)	550m	7	1
Place of Worship (Saffron Walden Baptist Church)	600m	8	2
Hairdressers (Nineteen 57 Hair salon)	750m	9	2
Post office (Saffron Walden Food and wine & post office)	750m	9	2
Fitness and leisure centre (Lord Butler)	750m	9	2
GP surgery (The gold street surgery)	850m	11	2
Pharmacy (Well Pharmacy)	1000m	13	3
Car park (Fairy croft road car park)	1000m	13	3
Tennis Club (The Grove)	1100m	14	3
Chemist (Boots)	1100m	14	3
Supermarket (Aldi)	1200m	15	3
Hotel (Premier Inn)	1400m	18	4
Hospital (Saffron Walden Community Hospital)	1900m	24	5

**Table 2:** Local Facilities and Amenities Near to the Site Location

4.33 The site is located within reasonable walking and cycling distances to a range of local facilities and amenities.

### Accessibility Summary

- 4.34 The site is located in a very accessible and sustainable location, with continuous footways provided along the surrounding highway network with local pedestrian crossings provided.
- 4.35 Saffron Walden town provides a variety of local facilities and amenities, within a reasonable walking and cycling distance of the site. The regular bus services, within 50m of the site, provide direct connections to London Stansted Airport and surrounding villages.
- 4.36 Additionally, Audley End Railway Station can be accessed via cycling and bus routes. The Audley End Railway Station provides a direct route into London Liverpool Street, Cambridge North station and Cambridge Station, and Norwich. Therefore, the site is located within close proximity to a range of local facilities and amenities.

### Personal Injury Collision Data

- 4.37 To review safety surrounding the site, Personal Injury Collision (PIC) data has been obtained from the ECC collision database<sup>1</sup>. This has been obtained to provide collision data for the most recently available five-years period between September 2018 and August 2023 to understand if there are existing highway safety concerns, patterns or trends which could be exacerbated by the proposed development. **Figure 6**, identifies the location and severity of the PIC data.

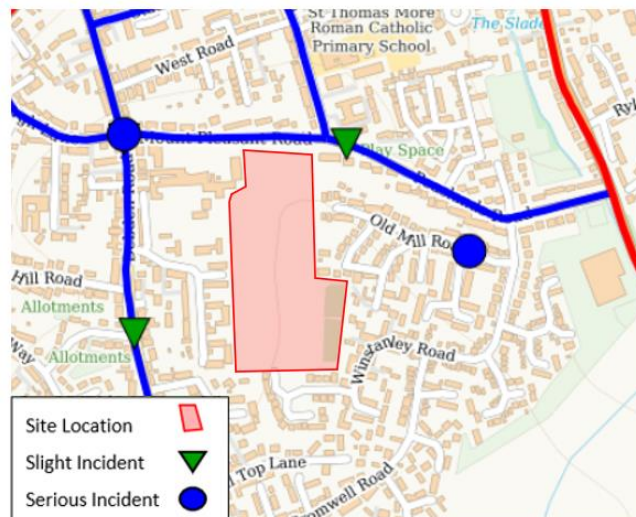


Figure 6: PIC Study Area

<sup>1</sup> <https://essex.traffweb.app/traffweb/3/Collisions>

- 4.38 **Figure 6** identifies there are no recorded collisions along Mount Pleasant Road and no recorded fatal collisions recorded within the study area.
- 4.39 One slight incident has been recorded on Peaslands Road in 2020 and two incidents, one slight and one serious, have been recorded at the Mount Pleasant Road/Borough Lane/Debden Road signalised junction in November and December 2020.
- 4.40 Based on the low number and distributed concentration of recorded incidents shown above, no existing trends or patterns have been identified that would indicate a specific safety concern for the local highway network as a result of the proposed development. Therefore, it is considered that the proposals would not exacerbate the safety of this location of the highway network.

## 5. PROPOSED DEVELOPMENT

### Overview

- 5.1 This section of the TA outlines the proposed development in relation to the number of proposed units, access arrangement and car and cycle parking provision. This includes a review of the proposed car and cycle parking in accordance with the ECC car and cycle parking standards.
- 5.2 The proposed development comprises a new residential development of 91 dwellings, consisting of 20 flats and 71 houses in addition to the provision of playing fields and a clubhouse. **Table 3** identifies the accommodation schedule for the proposed development. The proposed layout is provided in **Appendix A**. The proposed development also consists of either two youth football pitches or one adult or one cricket pitch, as indicated within the site layout.

Unit Type	Number of Units
1-bed flats	14
2-bed flats	6
3-bed houses	56
4-bed houses	9
5-bed houses	6
Total	91

**Table 3:** Accommodation Schedule

### Access

- 5.3 The existing access from Mount Pleasant Road will be maintained as per the existing arrangement. The existing access includes a 5m wide carriageway and 6m radii. Pedestrian access will be provided as per the existing arrangements, with the addition of a 2m wide footway along the western carriageway of the internal road through the proposed development.
- 5.4 Swept path analysis (vehicle tracking) for a private vehicle has been undertaken and shown in **Appendix B**. The swept path analysis demonstrates that two cars can pass one another internal to the site and enter and egress the site at the Mount Pleasant Road T-Junction concurrently.
- 5.5 Additionally, the swept path analysis has been undertaken to demonstrate a car reversing in and driving out in forward gear of the car parking spaces as shown in **Appendix B**.

### Visibility

- 5.6 A visibility splay assessment has been undertaken to demonstrate that visibility can be achieved for the existing access arrangement at the Site Access/Mount Pleasant Road T-Junction. A visibility splay of 2.4m x 43m can be achieved in both primary and secondary direction along Mount Pleasant Road, in accordance with MfS design guidance for a 30mph speed limit. The visibility splay assessment is provided within **Appendix C**.

### Refuse Vehicle

- 5.7 Swept path analysis of a UDC specification refuse vehicle has been undertaken and is provided within **Appendix D**. The swept path analysis of the UDC refuse vehicle demonstrates that the vehicle can enter the site, turn, and egress the site onto Mount Pleasant Road in forward gear.
- 5.8 At dwellings 1 to 7, a private gated access will be installed with delivery and service access available. Vehicle tracking has shown that the UDC specification refuse vehicle is capable of entering and exiting this private drive which has been designed in accordance with Essex Private Road Standards.

### Emergency Vehicle

- 5.9 Swept path analysis for a fire tender has been undertaken and is shown in **Appendix D**. The swept path analysis of the fire tender vehicle demonstrates the vehicle can enter the site, turn around, and egress the site onto Mount Pleasant Road in forward gear. The swept path analysis demonstrates the fire tender vehicle can reach within 45m of all buildings in accordance with the Building Regulations Approved Document B (2019).

### Car Parking Provision

- 5.10 UDC adopt the car parking standards set out in ECC 'Design and Good Practice' (2009) document, which identifies the car and cycle parking standards for new residential developments. **Table 4** below, identifies the car and cycle parking standards relevant to the proposed development.

Use Class		Parking Standards	
		Car Parking (minimum)	Cycle Parking
Residential Dwellings	1 Bedroom	1 Space per Dwelling	1 secure covered space per dwelling. None needed if garage/secure area is provided within curtilage of dwelling.
	2 Bedroom +	2 Spaces per Dwelling	
	Visitor/ Unallocated	0.25 Spaces per Dwelling (Unallocated round up to nearest whole number)	No garage/secure area provided within curtilage of dwelling then 1 space (covered and secure) needed per dwelling in a communal area for residents. + 1 space per 8 dwellings for visitors.

**Table 4:** ECC Car and Cycle Parking Standards

5.11 The proposed development includes two car parking spaces per house, located adjacent to the dwelling. Flats will be provided with one allocated car parking space per dwelling within a communal parking facility. **Table 5** identifies the proposed car parking spaces within the proposed development.

Parking Type	Number of Parking Spaces
Allocated Spaces	183
Unallocated Spaces	46
Coach Spaces	2
Total	231

**Table 5:** Car Parking Standards for Proposed Development

5.12 The proposed development includes a total of 183 allocated car parking, 46 unallocated spaces, and two coach spaces therefore providing a total of 231 parking spaces. A car parking strategy plan is included in **Appendix E**.

5.13 Included within the unallocated provision are 30 car parking spaces proposed to be associated with the clubhouse and sports field uses which are considered sufficient to meet future demand and ensure no overspill parking occurs onto residential roads. In addition, this will include 2 coach parking spaces. It is noted the car parking standards for team sports (outdoor sport pitches) are maximum vehicle parking standards, rather than a minimum standard as identified in the parking standards for 'use class D2: Assembly and Leisure' in ECC parking standards 'Design and Good Practice (2009)'. The approach to the visitor parking provision is to combine it as dual use with the sports pitch parking to maximise the efficiency of the proposed development overall.

5.14 This level of parking is considered to be appropriate to meet all demand from the proposed development and to encourage sustainable travel to and from the development in line with the accessible nature of the site.

### Cycle Parking

5.15 **Table 4** outlines the ECC requirements for cycle parking spaces within a residential development. Cycle parking will be provided in a secure location within curtilage of each house within the proposed development, through the use of garages or sheds. Additionally, the proposed flats will provide secure cycle parking storage via a shared communal cycle store located within the car park provided for the flats. An additional 14 cycle parking spaces are proposed as part of the clubhouse and sports pitch facility to be provided through the use of seven Sheffield stands.



## 6. HIGHWAY IMPACT

### Overview

- 6.1 The existing site was previously used as a school and is currently unoccupied. Therefore, it is considered that the site generates no vehicle movements. As a result, the vehicle movements forecast associated with the proposed development are considered to be new vehicle movements on the local highway network.
- 6.2 This chapter identifies the forecast vehicle trip generation associated with the proposed development, the methodology for assessing the proposed development and the results of the junction modelling.

### Proposed Development Trip Generation

- 6.3 A TRICS assessment for the proposed development has been informed by the parameters agreed as part of the previous planning application (reference UTT-19-1744-OP). These parameters have been applied to the proposed development as set out below.
- 6.4 It should be noted that the trip generation associated with the clubhouse and sports playing field has not been considered as part of the peak hour trip generation assessment as it is considered that these trips would fall outside of the traditional peak periods of operation on the network (0800-0900 and 1700-1800 during weekdays).
- 6.5 The TRICS assessment has been undertaken using the 'Houses Privately Owned' and 'Flats Privately Owned'. It is noted that 40% of the dwellings are proposed to be provided as affordable housing, however, to allow for a robust assessment of the highway network, all dwellings have been assessed as private dwellings for the purposes of this assessment. The TRICS parameters are outlined below.
- TRICS (v 7.10.2);
  - Use Class 'Residential' and sub-category 'Houses Privately Owned' and 'Flats Privately Owned';
  - Sites in England only (excluding Greater London);
  - Excluding surveys conducted during Covid-19 lockdown restrictions;
  - A Maximum parameter of 7 - 805 units;
  - Weekday surveys only; and
  - 'Suburban Area' locations only.

6.6 The results of the TRICS assessment are outlined in **Table 6** with the full TRICS outputs provided in **Appendix E**.

	AM Peak Hour (08:00-09:00)			PM Peak Hour (17:00-18:00)			12 Hours Daily Period (07:00-19:00)
	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way	
Trip Rates (Residential Privately Owned Flats)	0.055	0.148	0.203	0.109	0.098	0.207	1.568
Trip Generation (20 dwellings)	1	3	4	2	2	4	31
Trip Rates (Residential Privately Owned Houses)	0.107	0.438	0.545	0.42	0.172	0.592	4.935
Trip Generation (71 dwellings)	8	31	39	30	12	42	355
Total Trip Generation (71 Houses + 20 Flats)	9	33	43	32	14	46	350

**Table 6:** Proposed Development Trip Generation

6.7 The TRICS assessment forecasts that the proposed development is to generate 43 vehicle movements during the AM peak hour (08:00-09:00) and 46 vehicle movements during the PM peak hour (17:00-18:00) with 350 vehicle movements forecast across the 12 hours daily period (07:00-19:00).

### Vehicular Distribution

6.8 A vehicle distribution assessment has been undertaken to forecast the likely vehicle routes to/from the proposed development to assess the forecast impact on the surrounding highway network.

6.9 The 2011 census 'Travel to Work' data (ref: WU03EW) for a usual residence within the 'Uttlesford 002' MSOA (the site location), has been reviewed in order to assess the likely distribution to/from the site using route planning software (e.g. Google Maps) to determine the most likely route from each MSOA.

6.10 The results of the vehicle distribution assessment on the local highway network, including the site access, are shown below in **Table 7**, with full outputs included within **Appendix F**.

Proposed Site	Site Access / Mount Pleasant Road T-Junction		Mount Pleasant Road/Borough Lane/Debden Road Signalised Junction			Thaxted Road/Peaslands Road Mini-Roundabout	
	Mount Pleasant Road West	Mount Pleasant Road East	Debden Road North	Borough Lane West	Debden Road South	Thaxted Road North	Thaxted Road South
Junction approach / arm							
Direction of Travel (%)	81%	19%	48%	33%	0%	5%	13%
Total (%)	100%		81%			19%	

**Table 7:** Forecast Vehicle Distribution

6.11 In reference to the forecast vehicle trip generation of the proposed development outlined in **Table 6** and the vehicle trip distribution outlined in **Table 7**, **Table 8** identifies the forecast total number of vehicle movements at the Site Access/Mount Pleasant Road T-Junction in the AM (08:00-09:00) and PM (17:00-18:00) peak hours.

Site Access	AM Peak Hour (08:00-09:00)		PM Peak Hour (17:00-18:00)	
	Mount Pleasant Road West	Mount Pleasant Road East	Mount Pleasant Road West	Mount Pleasant Road East
	35	8	38	9

**Table 8:** Forecast Vehicle Movements at the Site Access/Mount Pleasant Road T-Junction

6.12 **Table 8** identifies 35 vehicle movements are forecast to travel along Mount Pleasant Road to the west of the site access and eight vehicle movements along Mount Pleasant Road to the east of the site access during the AM peak hour (08:00-09:00). During the PM peak hour (17:00-18:00), 38 vehicle movements are forecast to travel along Mount Pleasant Road to the west of the site access and nine vehicle movements to the east of the site access.

### Junction Modelling Methodology

#### Scope of Assessment

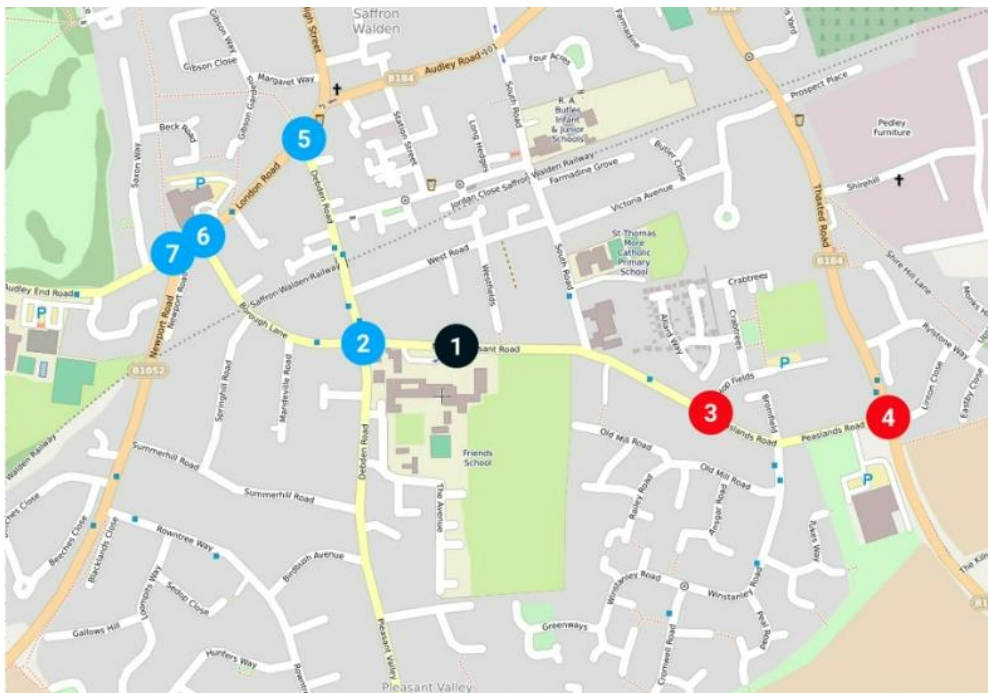
6.13 As indicated in **Table 6**, the proposed development results in 43 and 47 additional vehicle movements in the AM (08:00-09:00) and PM (17:00-18:00) peak hours respectively on the local highway network.

6.14 Based on the results of traffic surveys, details of which are provided below, the AM and PM peak hours of 08:00-09:00 and 17:00-18:00 are identified as the peak hours on the local highway network. Therefore, the hours of 08:00-09:00 and 17:00-18:00 have been assessed within the junction modelling to provide a robust worse-case assessment of the local highway network.

6.15 The methodology of this assessment has been reviewed against ECC Highway Authority comments on the previous planning application (UTT/1917/44/OP) which requested the modelling of the following junctions:

1. Site Access/Mount Pleasant Road T-Junction;
2. Mount Pleasant Road/Borough Lane/Debden Road signalised junction;
3. Peaslands Road/Hop Fields mini roundabout;
4. Thaxted Road/Peaslands Road mini roundabout;
5. London Road/Debden Road mini roundabout;
6. London Road/Borough Lane mini roundabout; and
7. Audley End Road/London Road/ Newport Road mini roundabout.

6.16 **Figure 7** identifies the location of the junctions assessed as part of this TA.



**Figure 7:** Location of Junction Modelling Assessments

#### Source of Baseline Traffic Flows

6.17 Manual Classified Counts (MCCs) were undertaken in September 2023 to identify the existing baseline traffic flows in the AM (08:00-09:00) and PM (17:00-18:00) peak hours at the junctions shown within **Figure 7**.

6.18 It is noted that during the traffic survey period an incident occurred at the London Road/Borough Lane mini roundabout. The traffic data has been reviewed across the AM peak period (07:00-10:00). Following a review of the data it appears that the incident did not impact the flows of vehicles at the London Road/Borough Lane mini roundabout or any other assessed junctions. Therefore, the traffic survey undertaken at the London Road/Borough mini roundabout is considered to be reflective of typical traffic flow conditions. The data is attached as **Appendix G**.

TEMPro

6.19 Trip End Model Presentation Program (TEMPro) is a software which provides an estimation of trip-end growth factors developed by the Department for Transport (DfT) for use in traffic growth projections. The results of the 2023 baseline traffic surveys have then been growthed applying the TEMPro factors with the following criteria:

- TEMPro 7.2;
- NTM AF15 Data Set from 2010 to 2040;
- Uttlesford geographic region;
- Urban area; and
- Minor road

6.20 The TEMPro growth factors for the AM and PM peak hours are identified in **Table 9**. The proposed development is forecast to be fully operational in 2029 and therefore the TEMPro growth factors are identified for 2023-2029.

	AM	PM
2023 - 2029	1.0470	1.0500

**Table 9: TEMPro Growth Factors**

Committed Development

6.21 The previous planning application at the site (UTT-19-1744-OP) incorporated the traffic impact of several different committed developments as part of its junction modelling assessment, including the Lindon development (UTT/13/3467/OP), the Civic Amenity and Granite development (UTT/18/2366/FUL), and the Land East of Thaxted Road development (UTT/18/0824/OP). It is understood that the majority of these committed developments have since been completed and are therefore accounted for within the traffic counts or the TEMPro growth factors detailed above.

6.22 The neighbouring residential development, known as Former Friends' School residential development (S62A/22/0000002) was granted planning permission in October 2022 however was still under construction during the collection of the traffic surveys. Therefore, to provide a robust assessment in terms of junction modelling, the Former Friends' School residential development has been included as a committed development in addition to the TEMPro growth.

#### Junction Modelling Assessment Scenarios

6.23 The following assessment Scenarios have been modelled to forecast the operation of the local highway network at the six junctions identified in **Figure 7**. The proposed development is forecast to be fully operational in 2029. Therefore, the following assessment scenarios have been assessed for the AM (08:00-09:00) and PM (17:00-18:00) peak hours.

- 2023 Baseline;
- 2029 Baseline;
- 2029 Baseline + Committed Development; and
- 2029 Baseline + Committed Development + Proposed Development.

6.24 The proposed development is forecast to generate the highest number of vehicle movements between 08:00-09:00 and 17:00-1800.

#### **2029 Junction Modelling Results**

6.25 Junction capacity modelling has been undertaken for the seven junctions using either Junctions 9 for priority junctions and roundabouts and LinSig for signalised junctions. The results of the junction modelling assessment are discussed in this section with full modelling outputs provided in **Appendix H**.

6.26 Junction modelling has been undertaken using Junctions 9 software, which is industry standard. Each of the six junctions have been modelled for the AM (08:00-09:00) and PM (17:00-18:00) peak hours.

6.27 The performance of junctions that are modelled in Junctions 9 are provided in the form of a Ratio to Flow Capacity (RFC). An RFC of less than 0.85 identifies the junction is forecast to operate within design capacity. An RFC between 0.85 and 1.00 indicates that the junction is forecast to operate close to theoretical capacity and that queueing, and delay is more likely to occur from this point. An RFC above 1.00 is forecast to operate above theoretical capacity.

6.28 Junction modelling has been undertaken of the for Mount Pleasant Road/Borough Lane/Debden Road signalised junction using LinSig software, which is industry standard. LinSig results show that where a junction is forecast to operate below 90% Degree of Saturation (DoS) is considered to operate within design capacity, whereas a junction that is forecast to operate between 90% and 100% DoS is considered to operate above design capacity but below theoretical capacity. A junction forecast to operate above 100% DoS is considered to operate above theoretical capacity.

Junction 1: Site Access onto Mount Pleasant Road

6.29 The results of junction modelling for Junction 1: Site Access/Mount Pleasant Avenue T-Junction are provided in **Table 10**. It should be noted that the results are only identified in 2029 Baseline with the committed development as the existing access into the site is not in use.

		AM Peak Hour 08:00-09:00			PM Peak Hour (17:00-18:00)		
		RFC	MMQ (PCU)	Delay (seconds)	RFC	MMQ (PCU)	Delay (seconds)
2029 Baseline + Committed Development	Site Access to Mount Pleasant Road East/West	0.11	0.1	10.12	0.06	0.0	10.51
	Mount Pleasant Road West to Site Access/Mount Pleasant Road East	0.00	0.0	4.77	0.02	0.0	4.62
2029 Baseline + Committed Development + Proposed Development	Site Access to Mount Pleasant Road East/West	0.20	0.3	11.36	0.11	0.1	11.28
	Mount Pleasant Road West to Site Access/Mount Pleasant Road East	0.01	0.0	4.77	0.03	0.0	4.61

**Table 10:** Modelling Results – Junction 1: Site Access/Mount Pleasant Road T-Junction

6.30 The table above identifies the junction is forecast to operate well within the design capacity (less than 0.85 RFC) in 2029 with the committed development during the AM and PM peak hours. The Site Access approach during the AM peak hour is forecast a maximum RFC of 0.11. The table above identifies the junction is forecast to operate well within the design capacity (less than 0.85 RFC) in '2029 + committed development + Proposed Development' scenario during the AM and PM peak hours. The Site Access approach during the AM peak hour is forecast a maximum RFC of 0.20.

Junction 2: Mount Pleasant Road/Borough Lane/Debden Road Signalised Junction

6.31 The results of junction modelling for Junction 2: Mount Pleasant Road/Borough Lane/Debden Road signalised junction is provided in **Table 11**.

		AM Peak Hour 08:00-09:00			PM Peak Hour (17:00-18:00)		
		DoS (%)	MMQ (PCU)	Delays (PCU/Hour)	DoS (%)	MMQ (PCU)	Delays (PCU/Hour)
2023 Baseline	Mount Pleasant Road East	76.90%	9.4	4.5	79.80%	8.3	4.3
	Debden Road South	77.80%	5.6	3.4	81.30%	7.6	4.2
	Borough Lane West	75.70%	12.9	6.1	82.00%	18.7	8.3
	Debden Road North	77.60%	16.0	7.2	81.10%	16.4	7.6
2029 Baseline	Mount Pleasant Road East	80.70%	10.2	5.1	83.60%	9.2	4.9
	Debden Road South	78.00%	5.8	3.5	85.70%	8.6	5.0
	Borough Lane West	81.50%	14.1	7.0	86.00%	20.3	9.3
	Debden Road North	81.40%	17.3	7.9	85.10%	17.7	8.6
2029 Baseline + Committed Development	Mount Pleasant Road East	84.40%	10.9	5.7	89.20%	10.4	6.1
	Debden Road South	83.50%	6.6	4.2	86.40%	9.1	5.2
	Borough Lane West	83.30%	14.7	7.3	89.00%	22.1	10.3
	Debden Road North	83.20%	19.0	8.6	89.50%	19.7	9.9
2029 Baseline + Committed Development + Proposed Development	Mount Pleasant Road East	86.50%	11.2	6.1	92.30%	11.3	7.0
	Debden Road South	84.80%	6.8	4.4	90.30%	10.5	6.2
	Borough Lane West	87.50%	15.7	8.2	91.20%	23.7	11.3
	Debden Road North	86.10%	20.9	9.5	92.80%	21.6	11.4

**Table 11:** Modelling Results – Junction 2: Mount Pleasant Road/Borough Lane/Debden Road Signalised Junction

6.32 The table above identifies the junction is forecast to operate within design capacity (less than 90%), in 2023 and 2029 scenarios during both the AM and PM peak hours and also the 2029 Base + Committed Development + Proposed Development' scenario.

6.33 The maximum DoS forecast is 92.80% on the Mount Pleasant Road East approach in the PM peak hour in '2029 Baseline + Committed Development + Proposed Development' scenario, which is slightly above the design capacity (90% DoS) but is less than theoretical capacity (100% DoS). However, the proposed development is forecast to have a negligible impact on the operation of the junction in 2029 compared the '2029 baseline + Committed Development' scenario, with a forecast increase circa 2%-3% in DoS during the PM peak hour (1700-18:00).



Junction 3: Peaslands Road/Hop fields Mini Roundabout

6.34 The results of junction modelling for Junction 3: Peaslands Road/Hop fields mini roundabout are provided in **Table 12**.

		AM Peak Hour 08:00-09:00			PM Peak Hour (17:00-18:00)		
		RFC	MMQ (PCU)	Delays (seconds)	RFC	MMQ (PCU)	Delays (seconds)
2023 Baseline	Peaslands Road West	0.36	0.6	6.05	0.26	0.3	5.00
	Hop Fields North	0.08	0.1	4.99	0.01	0.0	4.31
	Peaslands Road East	0.39	0.6	6.25	0.18	0.2	4.53
2029 Baseline	Peaslands Road West	0.38	0.6	6.23	0.27	0.4	5.10
	Hop Fields North	0.08	0.1	5.07	0.01	0.0	4.35
	Peaslands Road East	0.41	0.7	6.45	0.19	0.2	4.59
2029 Baseline + Committed Development	Peaslands Road West	0.39	0.7	6.31	0.27	0.4	5.12
	Hop Fields North	0.08	0.1	5.10	0.01	0.0	4.36
	Peaslands Road East	0.41	0.7	6.47	0.20	0.3	4.62
2029 Baseline + Committed Development + Proposed Development	Peaslands Road West	0.40	0.7	6.21	0.28	0.4	5.15
	Hop Fields North	0.08	0.1	5.13	0.01	0.0	4.37
	Peaslands Road East	0.41	0.7	6.38	0.21	0.3	4.66

**Table 12:** Modelling Results – Junction 3 Peaslands Road/Hop fields Mini Roundabout

6.35 The table above identifies the junction is forecast to operate within the design capacity, below 0.85 RFC, in the AM and PM peak hours. The maximum forecast RFC is 0.41 on the Peaslands Road East approach during the AM peak hour in the '2029 Baseline + Committed Development + Proposed Development' scenario. Therefore, the proposed development is forecast to have a negligible impact on the operation of the junction.

Junction 4: Thaxted Road/Peaslands Road Mini Roundabout

6.36 The results of junction modelling for Junction 4: Thaxted Road/Peaslands Road mini roundabout are provided in **Table 13**.

		AM Peak Hour 08:00-09:00			PM Peak Hour (17:00-18:00)		
		RFC	MMQ (PCU)	Delays (seconds)	RFC	MMQ (PCU)	Delays (seconds)
2023 Baseline	Thaxted Road North	0.48	1.0	9.44	0.77	3.2	21.67
	Thaxted Road South	0.66	2.0	14.73	0.56	1.3	11.89
	Peaslands Road West	0.73	2.7	18.87	0.68	2.1	14.86
2029 Baseline	Thaxted Road North	0.51	1.1	10.04	0.82	4.2	27.25
	Thaxted Road South	0.70	2.3	16.62	0.60	1.5	13.18
	Peaslands Road West	0.77	3.3	22.25	0.72	2.5	17.10
2029 Baseline + Committed Development	Thaxted Road North	0.51	1.1	10.12	0.82	4.3	28.07
	Thaxted Road South	0.70	2.3	16.70	0.61	1.5	13.45
	Peaslands Road West	0.78	3.5	23.30	0.73	2.6	17.46
2029 Baseline + Committed Development + Proposed Development	Thaxted Road North	0.52	1.1	9.98	0.83	4.4	28.55
	Thaxted Road South	0.70	2.3	16.43	0.61	1.6	13.76
	Peaslands Road West	0.79	3.7	23.84	0.73	2.7	17.74

**Table 13:** Modelling Results – Junction 4: Thaxted Road/Peaslands Road Mini Roundabout

6.37 The table above identifies the junction is forecast to operate within design capacity, below 0.85 RFC, in the AM and PM peak hours. The maximum RFC forecast is 0.83 on the Thaxted Road North approach during the PM peak hour in ‘2029 + Committed Development + Proposed Development’ scenario. Therefore, the proposed development is forecast to have a negligible impact on the operation of the junction.

Junction 5: London Road/Debden Road Mini Roundabout

6.38 The results of junction modelling for Junction 5: London Road/Debden Road mini roundabout are provided in **Table 14**.

		AM Peak Hour 08:00-09:00			PM (Peak Hour 17:00-18:00)		
		RFC	MMQ (PCU)	Delays (seconds)	RFC	MMQ (PCU)	Delays (seconds)
2023 Baseline	London Road North	0.74	2.9	16.93	0.97	14.6	65.64
	Debden Road South	0.81	3.8	36.72	0.51	1	14.85
	London Road West	0.69	2.3	18.05	0.64	1.8	13.41
2029 Baseline	London Road North	0.78	3.6	19.77	1.02	24.8	100.56
	Debden Road South	0.87	5.5	51.62	0.54	1.2	16.09
	London Road West	0.73	2.7	21.1	0.68	2.1	15.11
2029 Baseline + Committed Development	London Road North	0.79	3.7	20.34	1.04	31.6	121.68
	Debden Road South	0.91	7.3	65.79	0.56	1.3	16.6
	London Road West	0.74	2.9	22.52	0.69	2.1	15.57
2029 Baseline + Committed Development + Proposed Development	London Road North	0.79	3.7	20.23	1.06	37.8	140.44
	Debden Road South	0.95	10.1	85.27	0.57	1.3	16.5
	London Road West	0.76	3	22.83	0.69	2.2	15.74

**Table 14:** Modelling Results – Junction 5: London Road/Debden Road Mini Roundabout

6.39 The table above identifies on the Debden Road (south) approach the maximum RFC forecast is 0.87 RFC in the ‘2029 Baseline’ scenario, 0.91 ‘2029 baseline + Committed Development’ scenario and 0.95 RFC in the ‘2029 baseline’ scenario, with an increase of 0.04 RFC. The table above identifies the junction is forecast to operate below 1.00 RFC during the AM peak hour in all scenarios, with a minimal increase in RFC forecast. Therefore, the proposed development is forecast to have a negligible impact on the operation of the junction during the AM peak hour (08:00-09:00).

6.40 The table above identifies the junction is forecast to operate above 0.85 RFC in the PM peak hour in the ‘2023 baseline’ scenario, with a maximum RFC of 0.97 on the London Road (north) approach. Whereas the junction is forecast to operate above 1.00 RFC in the PM peak hour in the ‘2029 baseline’ scenario, with a maximum RFC of 1.02 on the London Road (north) approach, which is an increase of 0.05 RFC from the ‘2023 baseline’ scenario.

6.41 The table above identifies the junction is forecast to operate above 1.00 RFC in the PM peak hour in the ‘2029 baseline + Committed Development’ scenario, with a maximum RFC of 1.04 on the London Road (north) approach, which is an increase of 0.02 from the ‘2029 baseline’ scenario. Whereas the junction is forecast to operate above 1.00 RFC in the PM peak hour in the ‘2029 baseline + Committed

Development + Proposed Development’ scenario, with a maximum RFC of 1.06 on the London Road (north) approach, which is an increase of 0.02 from the ‘2029 baseline + Committed Development’ scenario.

6.42 The forecast increase in background traffic growth during the PM peak hour 17:00-18:00) is forecast to be greater than the forecast impact of the proposed development. In addition, the forecast impact of the proposed development is the same of the committed development (Former Friends’ School residential development, S62A/22/0000002). Therefore, the proposed development is forecast to have a negligible impact on the operation of the junction during the PM peak hour (17:00-18:00).

Junction 6: Thaxted Road/Peaslands Road Mini Roundabout

6.43 The results of junction modelling for Junction 6: Thaxted Road/Peaslands Road mini roundabout are provided in **Table 15**.

Junction 6		AM Peak Hour 08:00-09:00			PM (Peak Hour 17:00-18:00)		
		RFC	MMQ (PCU)	Delays (seconds)	RFC	MMQ (PCU)	Delays (seconds)
2023 Baseline	London Road North	0.59	1.5	10.59	0.61	1.6	11.22
	Borough Lane South	0.48	0.9	12.03	0.42	0.7	10.56
	London Road West	0.65	1.9	11.56	0.70	2.3	12.63
2029 Baseline	London Road North	0.62	1.7	11.52	0.65	1.8	12.43
	Borough Lane South	0.51	1.1	13.19	0.45	0.8	11.46
	London Road West	0.68	2.2	12.69	0.73	2.7	14.25
2029 Baseline + Committed Development	London Road North	0.62	1.7	11.59	0.65	1.9	12.77
	Borough Lane South	0.53	1.2	13.84	0.47	0.9	11.75
	London Road West	0.69	2.3	12.82	0.75	2.9	15.02
2029 Baseline + Committed Development + Proposed Development	London Road North	0.62	1.7	11.66	0.66	1.9	13.07
	Borough Lane South	0.56	1.3	14.5	0.47	0.9	11.92
	London Road West	0.69	2.3	12.97	0.76	3.1	15.72

**Table 15:** Modelling Results – Junction 6: Thaxted Road/Peaslands Road Mini Roundabout

6.44 The table above identifies the junction is forecast to operate within the design capacity, below 0.85 RFC, in the AM and PM peak hours, with a maximum RFC of 0.76 forecast on the London Road West approach during the PM peak hour. Therefore, the proposed development is forecast to have a negligible impact on the operation of the junction during the PM peak hour (17:00-18:00).

### Junction 7: Audley End Road/London Road/ Newport Road Mini Roundabout

6.45 The results of junction modelling for Junction 7: Audley End Road/London Road/ Newport Road mini roundabout are provided in **Table 16**.

Junction 7		AM Peak Hour 08:00-09:00			PM (Peak Hour 17:00-18:00)		
		RFC	MMQ (PCU)	Delays (seconds)	RFC	MMQ (PCU)	Delays (seconds)
2023 Baseline	London Road North	0.85	5.6	28.18	0.84	4.8	24.70
	Newport Road South	0.95	10.0	94.20	0.77	3.1	31.60
	Audley End Road West	0.46	0.9	8.29	0.54	1.1	9.32
2029 Baseline	London Road North	0.90	7.7	37.33	0.88	6.5	32.53
	Newport Road South	1.02	16.8	143.98	0.82	4.1	40.72
	Audley End Road West	0.49	1.0	8.69	0.57	1.3	10.19
2029 Baseline + Committed Development	London Road North	0.91	8.7	41.76	0.89	6.9	34.28
	Newport Road South	1.04	18.3	154.57	0.84	4.6	44.39
	Audley End Road West	0.49	1.0	8.73	0.58	1.4	10.48
2029 Baseline + Committed Development + Proposed Development	London Road North	0.93	9.8	46.55	0.89	7.3	35.85
	Newport Road South	1.05	19.9	165.63	0.85	5.0	48.30
	Audley End Road West	0.49	1.0	8.75	0.59	1.4	10.80

**Table 16:** Modelling Results – Junction 7: Audley End Road/London Road/ Newport Road Mini Roundabout

6.46 The table above identifies the junction is currently operating close to theoretical capacity (1.00 RFC) in the AM peak hour (08:00-09:00) in the '2023 Baseline' scenario on the Newport Road South approach with a maximum RFC of 0.95. In the '2029 Baseline' scenario the Newport Road South approach is forecast operate above theoretical capacity (above 1.00 RFC) without the proposed development, with a maximum RFC of 1.02, which is an increase of 0.07 RFC during the AM peak hour (08:00-09:00).

6.47 In the '2029 Baseline + Committed Development' scenario the Newport Road South approach is forecast operate above theoretical capacity (above 1.00 RFC) without the proposed development, with a maximum RFC of 1.04, which is an increase of 0.02 RFC from the '2029 Baseline' scenario, in the AM Peak Hour (08:00-09:00).

6.48 In the '2029 Baseline + Committed Development + Proposed Development' scenario, the junction is forecast to operate with a maximum RFC of 1.05, which is an increase of 0.01 RFC. Therefore, the proposed development is forecast to have a negligible impact on the operation of the junction during the AM peak hour (08:00-09:00).

- 6.49 The table above identifies the junction is forecast to operate close to design capacity (0.85 RFC) in '2023 Baseline' scenario, with a maximum RFC of 0.84 on the London Road (North) approach. However, the London Road (North) approach is forecast to operate above the design capacity (0.85 RFC) with a maximum RFC of 0.89 in '2029 Baseline + Committed Development' scenario, which is an increase of 0.04 RFC from the '2023 Baseline' scenario.
- 6.50 The table above identifies the junction is forecast to operate with a maximum RFC of 0.89 on the London Road (north) approach in '2029 Baseline + Committed Development' scenario, which is an increase of 0.01 RFC from the '2029 Baseline' scenario. In addition, the maximum RFC at the junction is not forecast to increase in the '2029 Baseline + Committed Development + Proposed Development' scenario with a maximum RFC of 0.89 on the London Road (North) approach. Therefore, the proposed development is forecast to have a negligible impact on the operation of the junction during the PM peak hour (17:00-18:00).

## 7. SUMMARY AND CONCLUSIONS

- 7.1 This Transport Assessment has been prepared by Paul Basham Associates on behalf of Chase New Homes to accompany a planning application for a residential development comprising 91 dwellings with associated infrastructure and landscaping. As well as the provision of playing fields and associated clubhouse at Former Friends School Fields, Saffron Walden.
- 7.2 Accessibility from the site is considered to be of a good standard given the location of the site in relation to sustainable travel opportunities in terms of pedestrian and cycle links which provide connection to existing facilities and residential areas within Saffron Walden as well as bus and rail services which provide connection to the wider area. Therefore, the site is considered to present a good opportunity to promote sustainable transport to future residents.
- 7.3 The proposed development will be accessed off Mount Pleasant Road as per the existing arrangement. Swept path analysis (vehicle tracking) has been undertaken to ensure that the proposed development can be serviced by cars, refuse, emergency, and delivery vehicles.
- 7.4 The proposed development includes a total of 183 allocated car parking, 46 unallocated spaces and two coach parking spaces providing a total of 231 parking spaces. Included within the unallocated provision are 30 car parking spaces proposed to be associated with the clubhouse and sports field uses which are considered sufficient to meet future demand and ensure no overspill parking occurs onto residential roads. The approach to the visitor parking provision is to combine it as dual use with the sports pitch parking to maximise the efficiency of the proposed development overall.
- 7.5 Cycle parking is provided in the form of a communal secure cycle store located within the car park for the proposed 20 flats and within the curtilage of the 71 dwelling houses in accordance with ECC standards with a minimum of one cycle parking space to one residential unit. An additional 14 cycle parking spaces are proposed as part of the clubhouse and sports pitch facility to be provided through the use of seven Sheffield Stands.
- 7.6 The proposed development is anticipated to generate 43 vehicle movements in the AM peak hour (08:00-09:00) and 47 vehicle movements in the PM peak hour (17:00-18:00). Therefore, the proposed development is forecast to generate a small number of vehicle movements in the AM and PM peak hours on the local highway network.

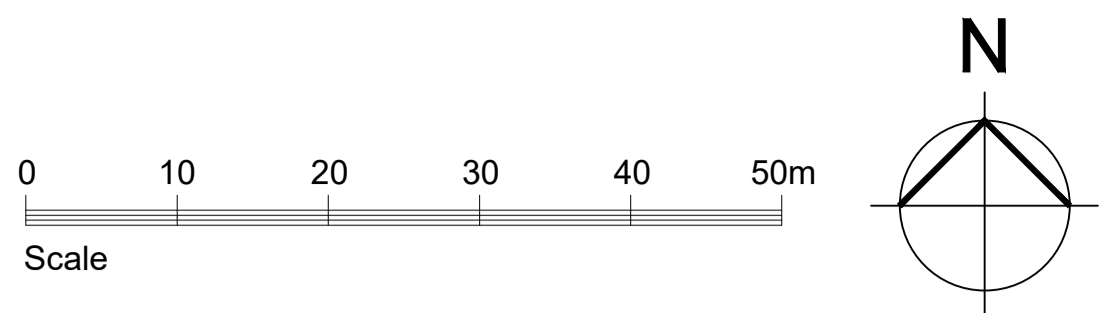
- 7.7 The junction capacity assessment has forecast that the proposed development will not have a significant impact on the local highway network. Of the seven junctions assessed, two are forecast to operate over capacity (above 1.00 RFC) in either the AM or PM peak hours in the '2029 Baseline + Committed Development' scenario, without the proposed development. These junctions are the London Road/Debden Road Mini Roundabout and Audley End Road/London Road/ Newport Road Mini Roundabout. In the '2029 + Committed Development + Proposed Development' scenario, the proposed development is forecast not to have a significant impact with the operation of the seven junctions modelled.
- 7.8 The Transport Assessment has demonstrated that the proposed development will have a negligible impact on the operation of the local highway network and that safe and suitable access is achievable. We would therefore encourage the local highway and planning authorities to look favourably upon this application with regards to highways.







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**KEY**  
 Blue circled plot number denotes an affordable housing unit.

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 architecture  
 planning  
 project management  
 interior design  
 graphics  
 www.cotesarchitects.co.uk  
 Bark House, 2 High Street, Gray, Buckinghamshire MK45 4YF  
 01234 241758 e: practice@cotesarchitects.co.uk

PROJECT: Walden School Saffron Walden  
 DRAWING TITLE: Proposed Site Layout

SCALE: 1:500 (A0) DATE: June 2024 BY: JB  
 ISSUE STATUS:  
 DESIGN  B of Q CONSTRUCTION  RECORD   
 CHECKED BY: DATE:

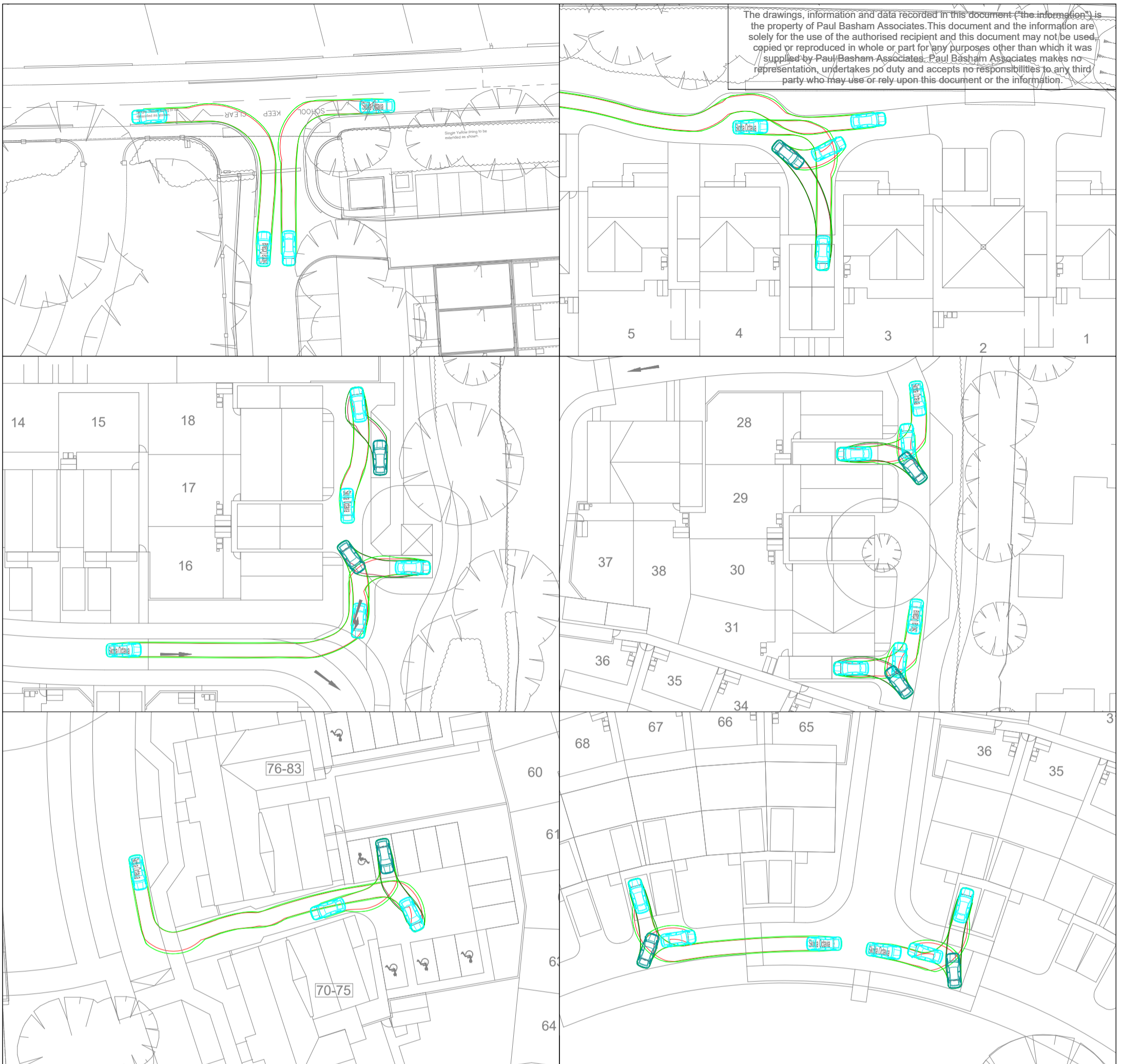
DRAWING NO: 23110 (D) 004 REVISION: A

A JB 18.06.24 Client updates  
 REV BY DATE DETAILS

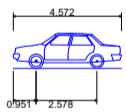




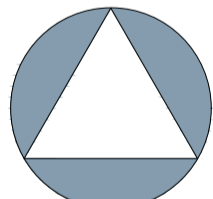
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**VEHICLE PROFILE:**



Skoda Octavia  
 Overall Length 4.572m  
 Overall Width 1.769m  
 Overall Body Height 1.488m  
 Min Body Ground Clearance 0.249m  
 Max Track Width 1.713m  
 Lock to lock time 4.00s  
 Kerb to Kerb Turning Radius 5.100m




**NORTH**

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Date Created	Drawn By	Approved By	Suitability Code	
22.05.24	BRM	WJF	-	
PBA Project Number		Scale	(AT A3)	
1033.0002		1:500		
PBA Drawing No:			Revision	
1033.0002-0002			P01	

Project Name	Title
<b>MOUNT PLEASANT ROAD, SAFFRON WALDEN</b>	<b>CAR SWEEP PATH ANALYSIS</b>
Project Phase	Client
<b>PRELIMINARY</b>	<b>PRIVATE CLIENT</b>

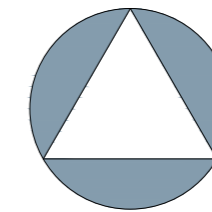
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22.05.24	BRM	WJF	-
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PBA Drawing No:			Revision
1033.0002-0002			P01

## Appendix C

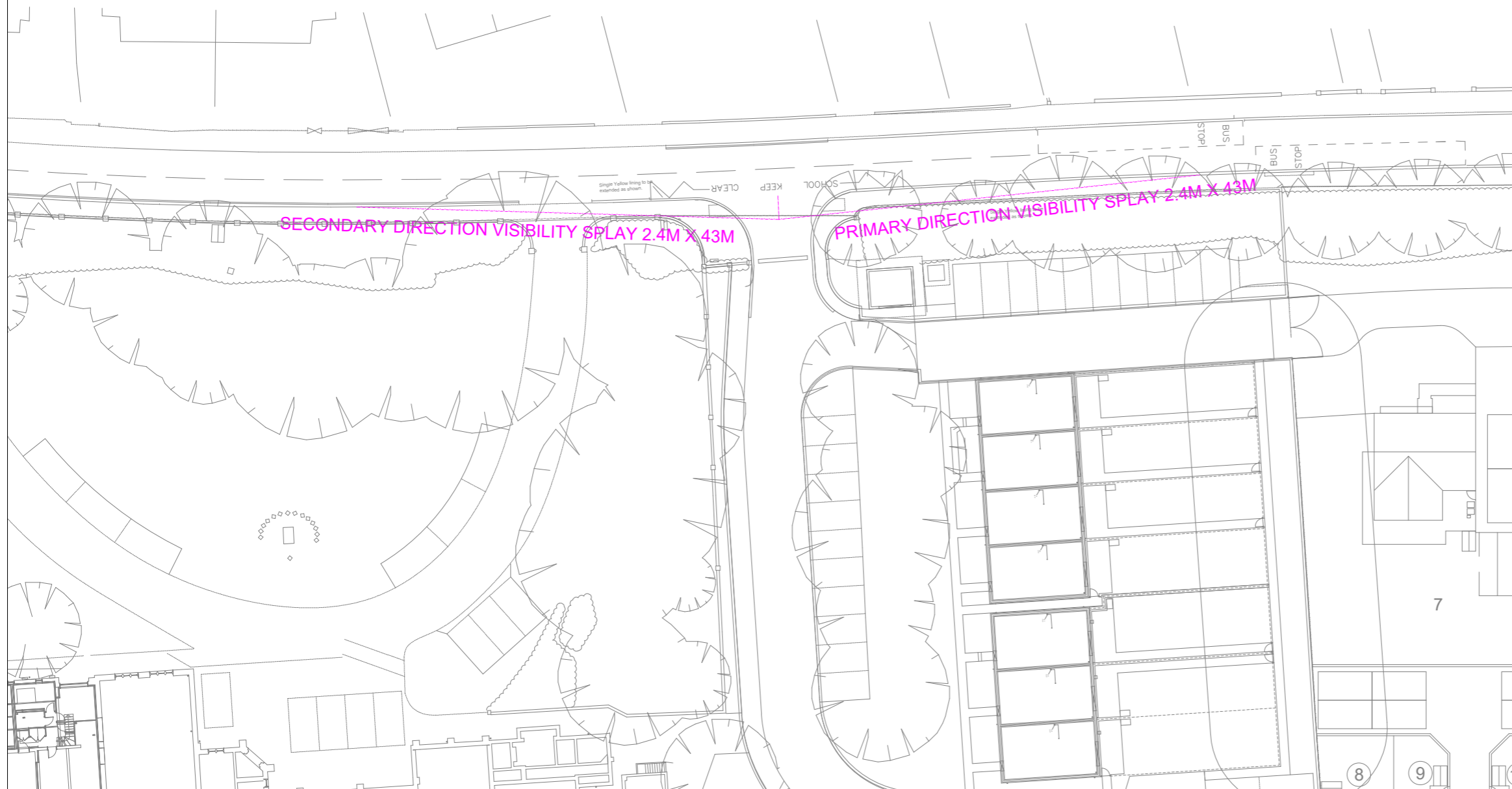
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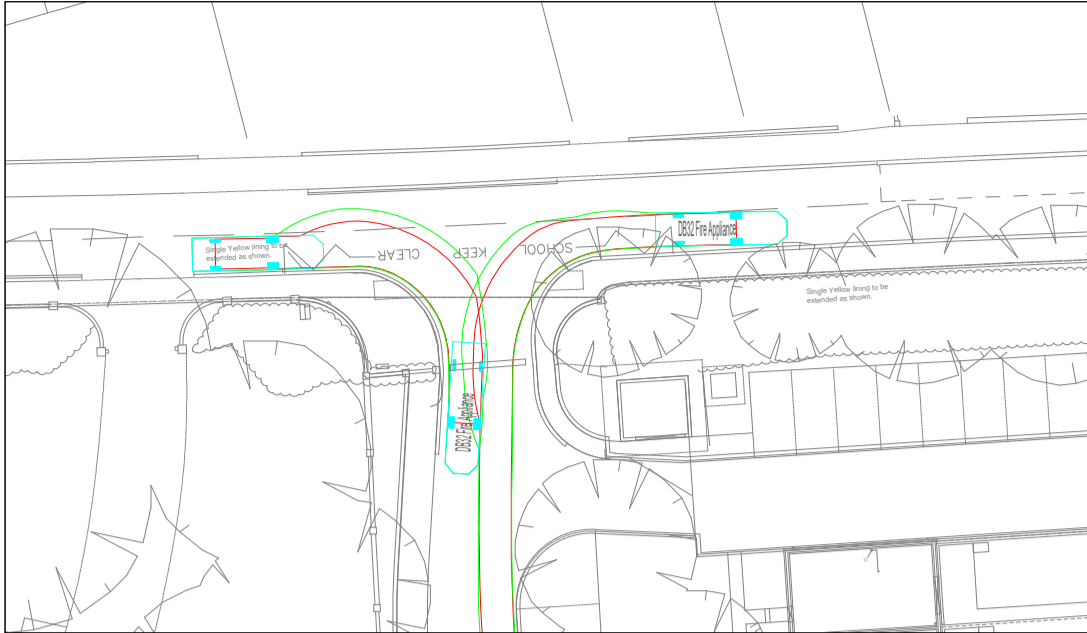
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	22.05.24	BRM	WJF	-
PBA Project Number		Scale		
1033.0002		1:500 (AT A3)		
PBA Drawing No:			Revision	
1033.0002-0001			P01	

Project Name	Title	<p><b>paulbasham</b> associates</p> <p>Paul Basham Associates Ltd Vision Park, Compass House, Chivers Way, Histon, Cambridge, CB24 9AD 01223 253699 info@paulbashamassociates.com www.paulbashamassociates.com</p>	Client
MOUNT PLEASANT ROAD, SAFFRON WALDEN	VISIBILITY SPLAY ASSESSMENT		PRIVATE CLIENT
Project Phase			
PRELIMINARY			

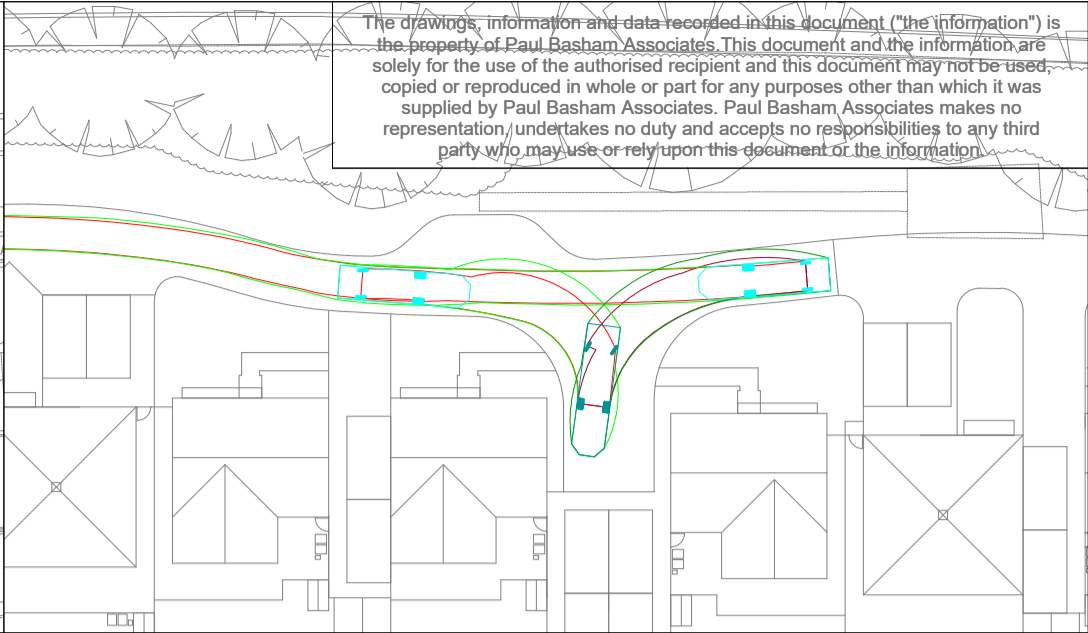
## Appendix D



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FIRE TENDER ENTERING AND EGRESSING FROM THE SITE ACCESS (1:500)



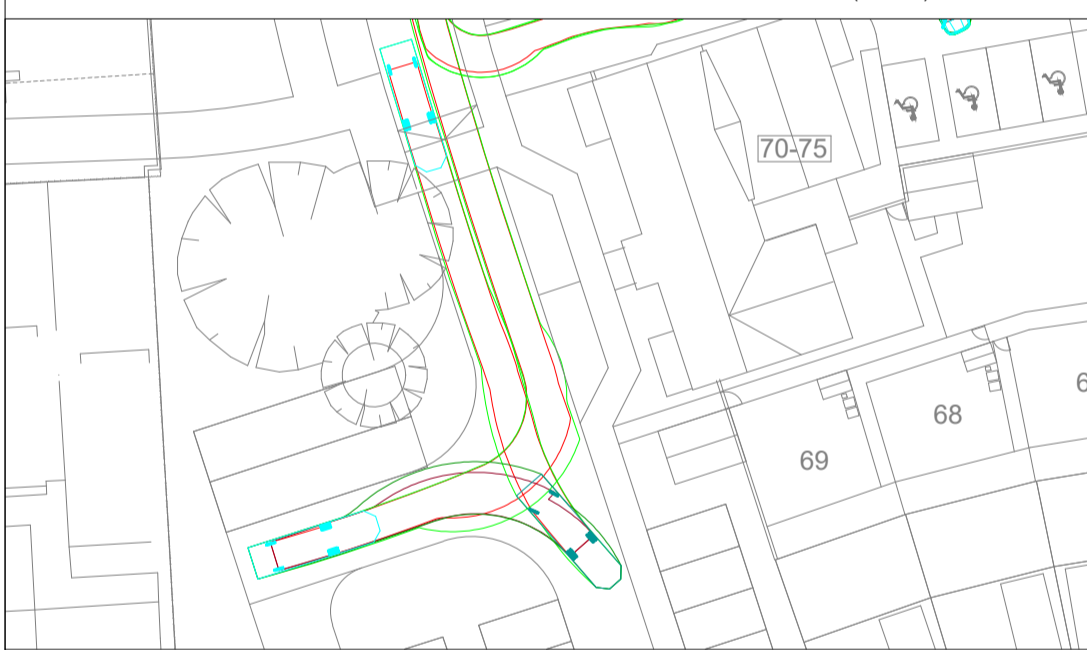
FIRE TENDER MANEUVERING IN THE NORTHEASTERN TURNING HEAD (1:500)



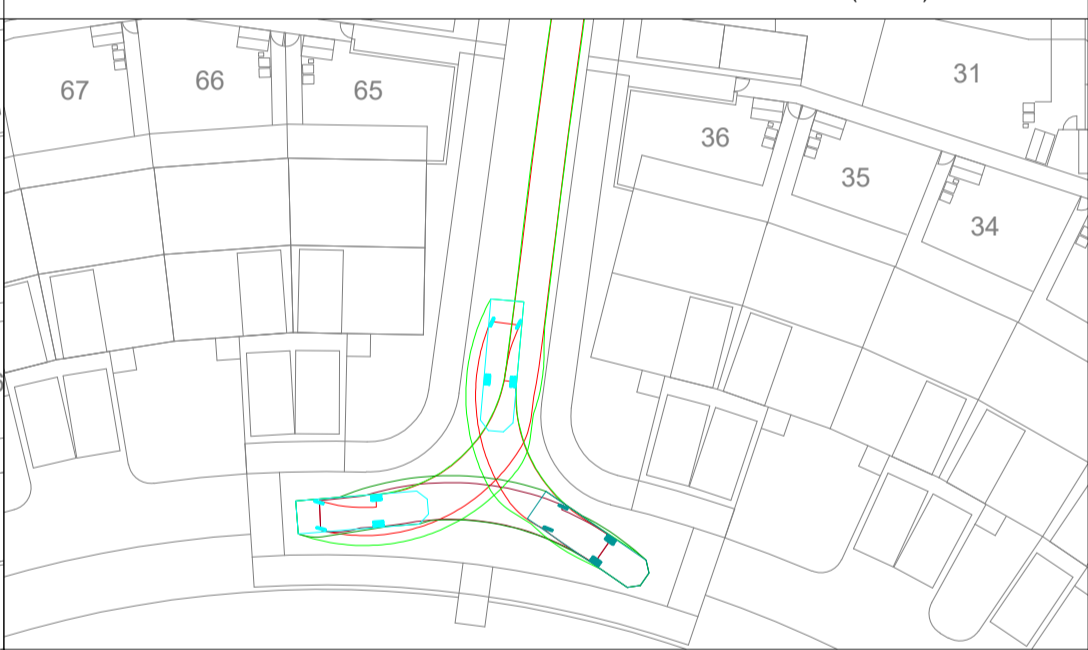
FIRE TENDER NAVIGATING THE NORTHERN SECTION OF THE ONE WAY STREET (1:1000)



FIRE TENDER NAVIGATING THE SOUTHERN SECTION OF THE ONE WAY STREET (1:1000)

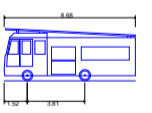


FIRE TENDER MANEUVERING WITHIN THE SOUTHWESTERN TURNING HEAD (1:500)

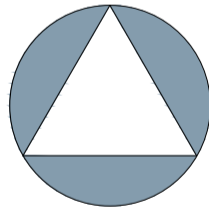


FIRE TENDER MANEUVERING WITHIN THE SOUTHERN TURNING HEAD (1:500)

**VEHICLE PROFILE:**



DB32 Fire Appliance  
 Overall Length 8.690m  
 Overall Width 2.180m  
 Overall Body Height 4.452m  
 Min Body Ground Clearance 0.337m  
 Max Track Width 2.121m  
 Lock to lock time 6.00s  
 Kerb to Kerb Turning Radius 7.910m



**NORTH**

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22.05.24	BRM	WJF	-

PBA Project Number	Scale
1033.0002	AS SHOWN (AT A3)

PBA Drawing No:	Revision
1033.0002-0003	P01

**Project Name**  
 MOUNT PLEASANT ROAD,  
 SAFFRON WALDEN

**Title**  
 FIRE TENDER  
 SWEEPED PATH ANALYSIS

**Project Phase**  
 PRELIMINARY

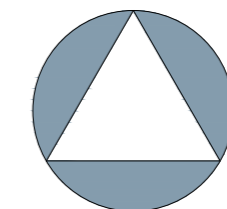
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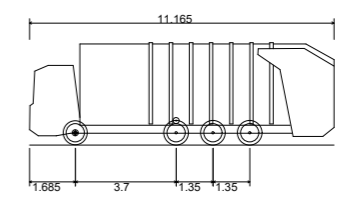
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**NORTH**

**VEHICLE PROFILE:**



Copy Of Uttlesford District Refuse Vehicle Spec	11.165m
Overall Length	2.550m
Overall Width	3.759m
Overall Body Height	0.312m
Min Body Ground Clearance	2.550m
Max Track Width	4.00s
Lock to lock time	11.200m
Kerb to Kerb Turning Radius	

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VIEWPORT 1, SCALE 1:1250

VIEWPORT 2, SCALE 1:500

**Project Name**  
MOUNT PLEASANT ROAD,  
SAFFRON WALDEN

**Project Phase**  
PRELIMINARY

**Title**  
REFUSE VEHICLE SWEEP  
PATH ANALYSIS

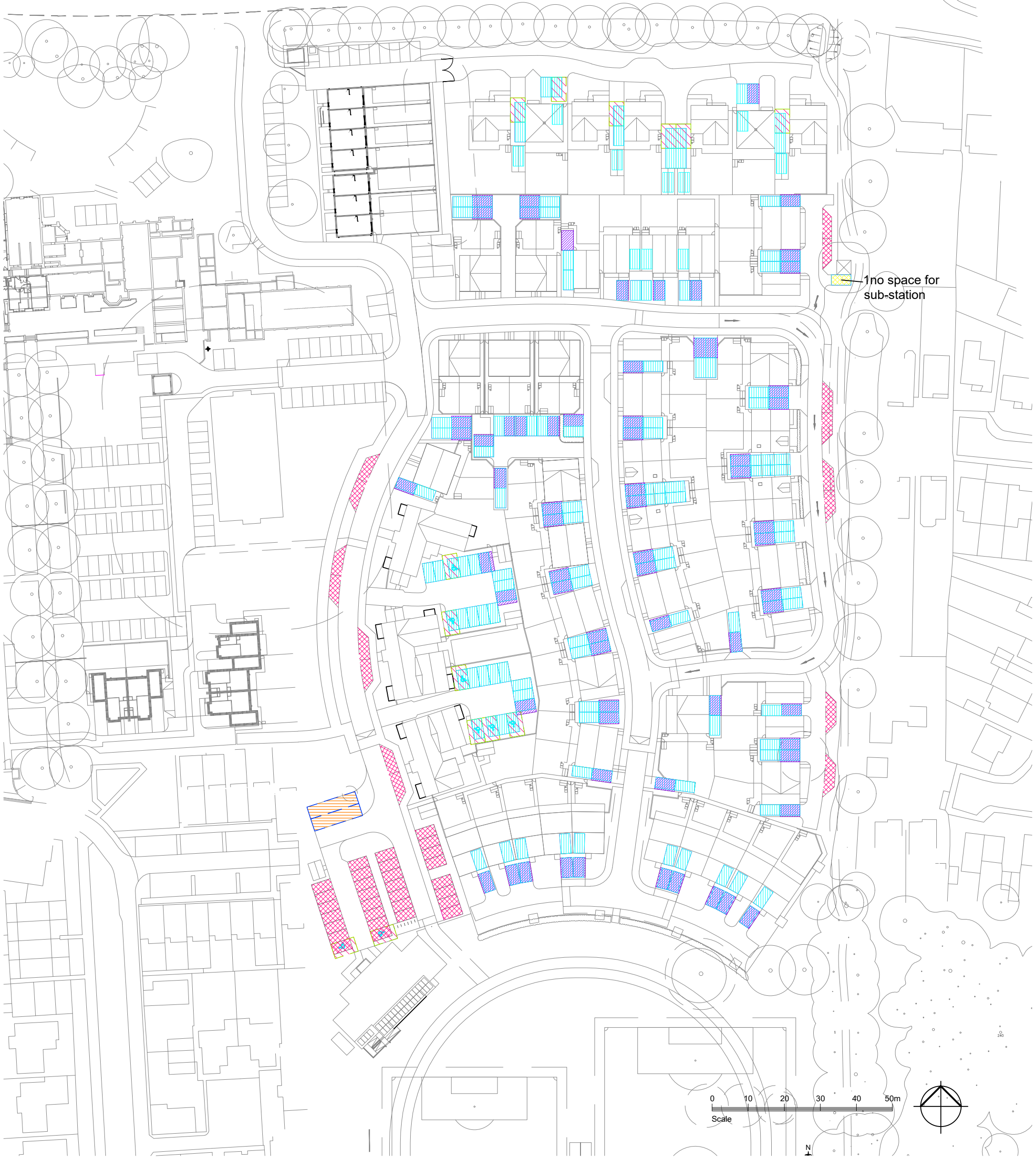
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associates

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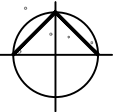
**Client**  
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PBA Drawing No:			Revision	
1033.0002-0004			P01	

## Appendix E



1 no space for sub-station



**Parking spaces**

- Allocated standard spaces
- Allocated M4(2) spaces
- Allocated M4(3) spaces
- Unallocated standard spaces
- Unallocated M4(3) spaces
- Coach spaces

Total of all above allocated parking spaces 183 no.

Allocated cycle parking accommodated within sheds in the private gardens

Total unallocated parking spaces 46 no. plus 2no coach spaces

Unallocated cycle parking to the clubhouse - 14no spaces



architecture  
 planning  
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 interior design  
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D	JB	11.07.24	Allocated spaces total updated.
C	JB	11.07.24	Scale bar updated.
B	JB	03.07.24	Title updated.
A	JB	28.06.24	Garage spaces added.

REV: BY: DATE: DETAILS:

PROJECT: **Former Friends School Fields Saffron Walden**

CLIENT: \_\_\_\_\_

ISSUE STATUS: \_\_\_\_\_

DESIGN  B of Q  CONSTRUCTION  RECORD

DRAWING TITLE: **Parking Strategy Plan**

SCALE: **1:1000 (A3)** DATE: **June 2024** BY: **JB**

DRAWING NO: \_\_\_\_\_ REVISION: \_\_\_\_\_

**23110 (D) 022 D**

## Appendix F



Calculation Reference: AUDIT-247601-230918-0912

## TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL  
 Category : A - HOUSES PRIVATELY OWNED  
 TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	HC HAMPSHIRE	1 days
04	EAST ANGLIA	
	NF NORFOLK	1 days
	SF SUFFOLK	1 days

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

## Primary Filtering selection:

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

Parameter: No of Dwellings  
 Actual Range: 34 to 73 (units: )  
 Range Selected by User: 7 to 805 (units: )

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/18 to 01/03/23

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

Selected survey days:

Tuesday	2 days
Thursday	1 days

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

Selected survey types:

Manual count	3 days
Directional ATC Count	0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	3
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*This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.*

Selected Location Sub Categories:

Residential Zone	3
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*This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.*

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	3 days - Selected
Servicing vehicles Excluded	2 days - Selected

Secondary Filtering selection:

Use Class:

C3 3 days

*This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS@.*

Population within 500m Range:

All Surveys Included

Population within 1 mile:

5,001 to 10,000 2 days

25,001 to 50,000 1 days

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

Population within 5 miles:

25,001 to 50,000 1 days

125,001 to 250,000 2 days

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

Car ownership within 5 miles:

0.6 to 1.0 1 days

1.1 to 1.5 2 days

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

Travel Plan:

Yes 2 days

No 1 days

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

PTAL Rating:

No PTAL Present 3 days

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

LIST OF SITES relevant to selection parameters

- |   |   |   |  |
|---|---|---|--|
| 1 | HC-03-A-23<br>CANADA WAY<br>LIPHOOK<br><br>Suburban Area (PPS6 Out of Centre)<br>Residential Zone<br>Total No of Dwellings: 62<br><i>Survey date: TUESDAY 19/11/19</i>    | HOUSES & FLATS<br><br><br><br><br><br><br><br><br><br>SEMI -DETACHED<br><br>CITY ROAD<br>NORWICH<br>LAKENHAM<br>Suburban Area (PPS6 Out of Centre)<br>Residential Zone<br>Total No of Dwellings: 34<br><i>Survey date: TUESDAY 13/09/22</i> | HAMPSHIRE<br><br><br><br><br><br><br><br><br><br>NORFOLK<br><br><br><br><br><br><br><br><br><br>SUFFOLK  |
| 2 | SF-03-A-07<br>FOXHALL ROAD<br>IPSWICH<br><br>Suburban Area (PPS6 Out of Centre)<br>Residential Zone<br>Total No of Dwellings: 73<br><i>Survey date: THURSDAY 09/05/19</i> | MIXED HOUSES  | Survey Type: <i>MANUAL</i><br><br><br><br><br><br><br><br><br><br>Survey Type: <i>MANUAL</i><br><br><br><br><br><br><br><br><br><br>Survey Type: <i>MANUAL</i> |

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

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
SF-03-A-09	covid

MANUALLY DESELECTED SURVEYS

Site Ref	Survey Date	Reason for Deselection
SF-03-A-09	24/06/21	covid

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

TOTAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	56	0.047	3	56	0.325	3	56	0.372
08:00 - 09:00	3	56	0.107	3	56	0.438	3	56	0.545
09:00 - 10:00	3	56	0.183	3	56	0.237	3	56	0.420
10:00 - 11:00	3	56	0.130	3	56	0.178	3	56	0.308
11:00 - 12:00	3	56	0.124	3	56	0.172	3	56	0.296
12:00 - 13:00	3	56	0.166	3	56	0.166	3	56	0.332
13:00 - 14:00	3	56	0.166	3	56	0.130	3	56	0.296
14:00 - 15:00	3	56	0.195	3	56	0.243	3	56	0.438
15:00 - 16:00	3	56	0.290	3	56	0.219	3	56	0.509
16:00 - 17:00	3	56	0.337	3	56	0.112	3	56	0.449
17:00 - 18:00	3	56	0.420	3	56	0.172	3	56	0.592
18:00 - 19:00	3	56	0.266	3	56	0.112	3	56	0.378
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
<b>Total Rates:</b>			2.431			2.504			4.935

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

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

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Parameter summary

Trip rate parameter range selected: 34 - 73 (units: )  
 Survey date date range: 01/01/18 - 01/03/23  
 Number of weekdays (Monday-Friday): 3  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys automatically removed from selection: 1  
 Surveys manually removed from selection: 1

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



Calculation Reference: AUDIT-247601-231005-1037

## TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL  
Category : C - FLATS PRIVATELY OWNED  
TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	BH BRIGHTON & HOVE	1 days
04	EAST ANGLIA	
	NF NORFOLK	1 days
05	EAST MIDLANDS	
	DY DERBY	1 days

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

## Primary Filtering selection:

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

Parameter: No of Dwellings  
Actual Range: 30 to 82 (units: )  
Range Selected by User: 6 to 215 (units: )

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/15 to 11/05/22

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

Selected survey days:

Monday 1 days  
Tuesday 1 days  
Wednesday 1 days

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

Selected survey types:

Manual count 3 days  
Directional ATC Count 0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre) 3

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

Selected Location Sub Categories:

Residential Zone 3

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

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included 2 days - Selected  
Servicing vehicles Excluded 2 days - Selected

## Secondary Filtering selection:

Use Class:

C3 3 days

*This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.*

Population within 500m Range:

All Surveys Included

## Secondary Filtering selection (Cont.):

Population within 1 mile:

20,001 to 25,000	2 days
50,001 to 100,000	1 days

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

Population within 5 miles:

125,001 to 250,000	1 days
250,001 to 500,000	2 days

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

Car ownership within 5 miles:

0.6 to 1.0	1 days
1.1 to 1.5	2 days

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

Travel Plan:

No	3 days
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*This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.*

PTAL Rating:

No PTAL Present	3 days
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*This data displays the number of selected surveys with PTAL Ratings.*

LIST OF SITES relevant to selection parameters

1	BH-03-C-01	BLOCK OF FLATS	BRIGHTON & HOVE
	OLD SHOREHAM RD		
	BRIGHTON		
	HOVE		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	71	
	Survey date: <i>TUESDAY</i>	<i>26/09/17</i>	<i>Survey Type: MANUAL</i>
2	DY-03-C-03	BLOCKS OF FLATS	DERBY
	CAESAR STREET		
	DERBY		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	30	
	Survey date: <i>WEDNESDAY</i>	<i>25/09/19</i>	<i>Survey Type: MANUAL</i>
3	NF-03-C-02	MIXED FLATS & HOUSES	NORFOLK
	HALL ROAD		
	NORWICH		
	LAKENHAM		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	82	
	Survey date: <i>MONDAY</i>	<i>18/11/19</i>	<i>Survey Type: MANUAL</i>

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

MANUALLY DESELECTED SURVEYS

Site Ref	Survey Date	Reason for Deselection
SF-03-C-04	16/09/20	Undertaken During COVID

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

TOTAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	61	0.027	3	61	0.109	3	61	0.136
08:00 - 09:00	3	61	0.055	3	61	0.148	3	61	0.203
09:00 - 10:00	3	61	0.033	3	61	0.071	3	61	0.104
10:00 - 11:00	3	61	0.027	3	61	0.044	3	61	0.071
11:00 - 12:00	3	61	0.049	3	61	0.055	3	61	0.104
12:00 - 13:00	3	61	0.044	3	61	0.049	3	61	0.093
13:00 - 14:00	3	61	0.038	3	61	0.055	3	61	0.093
14:00 - 15:00	3	61	0.038	3	61	0.033	3	61	0.071
15:00 - 16:00	3	61	0.087	3	61	0.038	3	61	0.125
16:00 - 17:00	3	61	0.087	3	61	0.071	3	61	0.158
17:00 - 18:00	3	61	0.109	3	61	0.098	3	61	0.207
18:00 - 19:00	3	61	0.137	3	61	0.066	3	61	0.203
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.731			0.837			1.568

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

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

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#### Parameter summary

Trip rate parameter range selected:	30 - 82 (units: )
Survey date date range:	01/01/15 - 11/05/22
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	1
Surveys manually removed from selection:	0

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

## Appendix G

















## Appendix H





SITE: Mount Pleasant Road (52.016926, 0.243602)

Class	Axles	Groups	Description	Parameters	Dominant Vehicle	Aggregate	
1	SV	2	1 OR 2	Short - Car, light Van	$d(1) >= 1.7m, d(1) <= 3.2m$ & axles=2		Light
2	SVT	3, 4 OR 5	3	Short Towing - Trailer, Caravan, Boat, etc.	groups=3, $d(1) >= 2.1m, d(1) <= 3.2m, d(2) >= 2.1m$ & axles=3,4,5		
3	TB2	2	2	Two axle truck or Bus	$d(1) > 3.2m$ & axles=2		Medium
4	TB3	3	2	Three axle truck or Bus	axles=3 & groups=2		
5	T4	>3	2	Four axle truck	axles>3 & groups=2		
6	ART3	3	3	Three axle articulated vehicle or Rigid vehicle and trailer	$d(1) > 3.2m, axles=3$ & groups=3		Heavy
7	ART4	4	>2	Four axle articulated vehicle or Rigid vehicle and trailer	$d(2) < 2.1m$ or $d(1) < 2.1m$ or $d(1) > 3.2m$ axles = 4 & groups>2		
8	ART5	5	>2	Five axle articulated vehicle or Rigid vehicle and trailer	$d(2) < 2.1m$ or $d(1) < 2.1m$ or $d(1) > 3.2m$ axles = 5 & groups>2		
9	ART6	>=6	>2	Six (or more) axle articulated vehicle or Rigid vehicle and trailer	axles=6 & groups>2 or axles>6 & groups=3		
10	BD	>6	4	B-Double or Heavy truck and trailer	groups=4 & axles>6		
11	DRT	>6	5	Double road train or Heavy truck and two trailers	groups=5,6 & axles>6		
12	TRT	>6	>6	Triple road train or Heavy truck and three (or more) trailers	groups>6 & axles>6		
14	M/C	2	1 OR 2	Motorcycle	$d(1) >= 1.18m, d(1) <= 1.7m$ & axles=2		Light
15	CYCLE	2	1 OR 2	Cycle	$d(1) < 1.18$ & axles=2		

	Eastbound	Westbound
<b>Total</b>	<b>21830</b>	<b>20045</b>
<b>Mean Speed</b>	<b>26.9</b>	<b>26.9</b>
<b>85%</b>	<b>31.3</b>	<b>31.5</b>



London Road (NE) / Borough Lane / London Road (SW) Roundabout (07:00-10:00) AM Peaks																			
MOVEMENT 10				MOVEMENT 11				MOVEMENT 12				MOVEMENT 13							
FROM LONDON ROAD (NE)				FROM LONDON ROAD (NE)				FROM LONDON ROAD (NE)				FROM LONDON ROAD (NE)							
LEFT TURN TO BOROUGH LANE				STRAIGHT AHEAD TO LONDON ROAD (SW)				STRAIGHT AHEAD TO LONDON ROAD (SW)				STRAIGHT AHEAD TO LONDON ROAD (SW)							
CAR	LGW	OGW	BUS	CAR	LGW	OGW	BUS	CAR	LGW	OGW	BUS	CAR	LGW	OGW	BUS	MCV	PCV	TOTAL	PCU
0700-0715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
0715-0730	4	0	0	0	0	0	0	4	4.00	127	117	1	0	2	5	123	149.840	0.00	
0730-0745	1	0	0	0	0	0	0	1	1.00	103	10	2	1	0	4	121	121.340	0.00	
0745-0800	0	1	0	0	0	0	0	0	0.00	126	19	2	1	1	0	149	152.260	0.00	
0800-0815	3	0	0	0	0	0	0	3	3.00	90	8	2	0	2	1	107	106.200	0.00	
0815-0830	5	0	0	0	0	0	0	5	5.00	105	4	3	1	2	0	125	129.800	0.00	
0830-0845	5	0	0	0	0	0	0	5	5.00	104	12	6	0	1	3	126	128.200	0.00	
0845-0900	1	0	0	0	0	0	0	1	1.00	75	9	3	1	2	1	87	95.420	0.00	
0900-0915	2	0	0	0	0	0	0	2	2.00	60	11	2	0	0	1	74	78.260	0.00	
0915-0930	2	1	0	0	0	0	0	3	3.00	84	10	3	2	0	0	99	102.300	0.00	
0930-0945	0	0	0	0	0	0	0	0	0.00	60	10	1	0	0	1	71	70.760	0.00	
0945-1000	7	1	0	0	0	0	0	8	8.00	65	12	3	2	0	2	82	87.640	0.00	
0700-1000	23	3	0	0	0	0	0	26	26.00	1097	131	29	7	7	16	1273	1285.640	0.00	

HOURLY TOTALS																			
CAR	LGW	OGW	BUS	CAR	LGW	OGW	BUS	CAR	LGW	OGW	BUS	CAR	LGW	OGW	BUS	MCV	PCV	TOTAL	PCU
0700-0800	5	1	0	0	0	0	0	6	6.00	318	55	6	2	4	14	391	403.200	0.00	
0715-0830	6	1	0	0	0	0	0	7	7.00	446	54	7	2	5	3	505	529.560	0.00	
0730-0845	1	1	0	0	0	0	0	2	2.00	424	41	9	3	6	16	500	503.000	0.00	
0745-0900	13	1	0	0	0	0	0	14	14.00	425	43	13	2	6	4	492	506.160	0.00	
0800-0900	14	0	0	0	0	0	0	14	14.00	324	33	14	2	7	5	405	405.000	0.00	
0815-0915	10	0	0	0	0	0	0	10	10.00	304	30	14	2	5	4	376	418.000	0.00	
0830-0930	11	1	0	0	0	0	0	12	12.00	325	42	14	1	5	4	391	400.340	0.00	
0845-0945	0	1	0	0	0	0	0	1	1.00	278	40	9	1	4	1	336	342.800	0.00	
0845-1000	4	1	0	0	0	0	0	5	5.00	265	43	9	2	4	2	326	336.640	0.00	

London Road (NE) / Borough Lane / London Road (SW) Roundabout (16:00-19:00) PM Peaks																			
MOVEMENT 10				MOVEMENT 11				MOVEMENT 12				MOVEMENT 13							
FROM LONDON ROAD (NE)				FROM LONDON ROAD (NE)				FROM LONDON ROAD (NE)				FROM LONDON ROAD (NE)							
LEFT TURN TO BOROUGH LANE				STRAIGHT AHEAD TO LONDON ROAD (SW)				STRAIGHT AHEAD TO LONDON ROAD (SW)				STRAIGHT AHEAD TO LONDON ROAD (SW)							
CAR	LGW	OGW	BUS	CAR	LGW	OGW	BUS	CAR	LGW	OGW	BUS	CAR	LGW	OGW	BUS	MCV	PCV	TOTAL	PCU
1600-1615	3	0	0	0	0	0	0	3	3.00	75	10	0	0	1	2	88	87.240	0.00	
1615-1630	4	0	0	0	0	0	0	4	4.00	73	11	1	0	0	0	84	85.520	0.00	
1630-1645	2	0	0	0	0	0	0	2	2.00	84	6	0	0	0	0	90	100.360	0.00	
1645-1700	7	1	0	0	0	0	0	8	8.00	81	10	1	0	0	0	92	92.520	0.00	
1700-1715	5	0	0	0	0	0	0	5	5.00	106	6	0	1	0	0	112	113.200	0.00	
1715-1730	5	0	0	0	0	0	0	5	5.00	95	5	0	1	0	2	102	103.360	0.00	
1730-1745	7	1	0	0	0	0	0	8	8.00	116	2	1	1	0	1	120	120.760	0.00	
1745-1800	8	0	0	0	0	0	0	8	8.00	116	2	1	1	0	2	120	120.760	0.00	
1800-1815	5	0	0	0	0	0	0	5	5.00	67	4	0	0	1	0	72	73.000	0.00	
1815-1830	1	0	0	0	0	0	0	1	1.00	73	3	0	0	1	0	77	78.000	0.00	
1830-1845	3	0	0	0	0	0	0	3	3.00	59	8	0	0	0	0	67	67.000	0.00	
1845-1900	6	0	0	0	0	0	0	6	6.00	59	8	0	0	0	0	67	67.000	0.00	
1600-1900	42	3	0	0	0	0	0	45	45.00	687	79	3	1	3	5	778	777.240	0.00	

HOURLY TOTALS																			
CAR	LGW	OGW	BUS	CAR	LGW	OGW	BUS	CAR	LGW	OGW	BUS	CAR	LGW	OGW	BUS	MCV	PCV	TOTAL	PCU
1600-1700	11	1	0	0	0	0	0	12	12.00	323	37	2	0	1	3	367	366.000	0.00	
1615-1715	5	1	0	0	0	0	0	6	6.00	346	35	2	1	1	5	389	388.200	0.00	
1630-1730	4	1	0	0	0	0	0	5	5.00	370	27	1	2	1	2	406	406.360	0.00	
1645-1745	19	2	0	0	0	0	0	21	21.00	272	20	1	2	1	4	310	313.200	0.00	
1700-1800	11	0	0	0	0	0	0	11	11.00	467	32	1	3	4	2	491	494.640	0.00	
1715-1815	19	1	0	0	0	0	0	20	20.00	374	20	1	2	2	4	403	403.300	0.00	
1730-1830	11	0	0	0	0	0	0	11	11.00	302	18	1	1	0	2	324	324.000	0.00	
1745-1845	6	0	0	0	0	0	0	6	6.00	315	17	1	1	0	3	334	344.000	0.00	
1800-1900	14	1	0	0	0	0	0	15	15.00	267	20	0	0	0	0	287	285.000	0.00	

London Road (NE) / Borough Lane / London Road (SW) Roundabout (07:00-10:00) AM Peaks																			
MOVEMENT 13				MOVEMENT 14				MOVEMENT 15				MOVEMENT 16							
FROM BOROUGH LANE				FROM BOROUGH LANE				FROM BOROUGH LANE				FROM BOROUGH LANE							
LEFT TURN TO LONDON ROAD (NE)				STRAIGHT AHEAD TO LONDON ROAD (NE)				STRAIGHT AHEAD TO LONDON ROAD (NE)				STRAIGHT AHEAD TO LONDON ROAD (NE)							
CAR	LGW	OGW	BUS	CAR	LGW	OGW	BUS	CAR	LGW	OGW	BUS	CAR	LGW	OGW	BUS	MCV	PCV	TOTAL	PCU
0700-0715	21	1	0	0	0	0	0	22	22.00	0	0	0	0	0	0	0	0	0.00	
0715-0730	33	6	1	0	1	0	0	41	42.40	0	0	0	0	0	0	0	0	0.00	
0730-0745	47	4	0	0	0	0	0	51	51.20	2	0	0	0	0	0	0	0	0.00	
0745-0800	52	6	1	0	0	0	0	60	62.80	0	0	0	0	0	0	0	0	0.00	
0800-0815	56	3	1	0	0	1	1	62	61.10	0	0	0	0	0	0	0	0	0.00	
0815-0830	56	3	0	0	2	0	0	61	63.00	0	0	0	0	0	0	0	0	0.00	
0830-0845	49	6	3	0	1	0	0	60	61.20	0	0	0	0	0	0	0	0	0.00	
0845-0900	41	3	0	0	0	0	0	45	44.20	7	0	0	0	0	0	0	0	0.00	
0900-0915	38	5	1	0	0	0	2	47	47.20	3	0	0	0	0	0	0	0	0.00	
0915-0930	25	2	0	0	1	0	0	28	27.40	0	1	0	0	0	0	0	0	0.00	
0930-0945	15	3	1	0	0	0	0	19	19.50	0	0	0	0	0	0	0	0	0.00	
0945-1000	29	1	0	0	0	0	0	30	26.50	0	0	0	0	0	0	0	0	0.00	
0700-1000	487	43	7	2	4	3	5	524	530.20	42	4	1	0	0	0	49	47.90	0.00	

HOURLY TOTALS																			
CAR	LGW	OGW	BUS	CAR	LGW	OGW	BUS	CAR	LGW	OGW	BUS	CAR	LGW	OGW	BUS	MCV	PCV	TOTAL	PCU
0700-0800	153	17	2	1	1	1	1	177	182.00	0	0	1	0	0	0	0	0	0.00	
0715-0830	188	19	3	1	1	2	2	204	217.60	11	0	0	0	0	0	1	1.00	0.00	
0730-0845	211	16	2	1	2	2	2	236	237.60	15	1	1	0	0	0	1	1.00	0.00	
0745-0900	233	16	5	3	2	1	2	260	261.80	19	1	0	0	0	0	1	1.00	0.00	
0800-0900	202	15	4	0	3	1	2	227	229.80	23	1	0	0	0	0	0	0	0.00	
0815-0915	184	17	4	1	3	3	3	212	215.80	21	1	0	0	0	0	0	0	0.00	
0830-0930	153	16	4	1	1	3	3	179	180.30	24	1	0	0	0	0	0	0	0.00	
0845-0945	119	13	2	1	0	1	0	135	138.60	19	2	0	0	0	0	1	1.00	0.00	
0900-1000	192	11	3	0	0	1	2	206	199.60	13	3	0	0	0	0	0	0	0.00	

London Road (NE) / Borough Lane / London Road (SW) Roundabout (16:00-19:00) PM Peaks												
MOVEMENT 13				MOVEMENT 14				MOVEMENT 15				MOVEMENT 16
FROM BOROUGH LANE				FROM BOROUGH LANE				FROM BOROUGH LANE				FROM BOROUGH LANE
LEFT TURN TO LONDON ROAD (NE)				STRAIGHT AHEAD TO LONDON ROAD (NE)				STRAIGHT AHEAD TO LONDON ROAD (NE)				STRAIGHT AHEAD TO LONDON ROAD (NE)
CAR	LGW	OGW	BUS									

Deben Road (NE) / Deben Road (S) / London Road Roundabout (07:00-10:00) AM Peaks																		
MOVEMENT 19				MOVEMENT 20				MOVEMENT 21										
FROM DEBEN ROAD (NE)				FROM DEBEN ROAD (S)				FROM DEBEN ROAD (S)										
LEFT TURN TO DEBEN ROAD (S)				STRAIGHT AHEAD TO LONDON ROAD				U-TURN BACK TO DEBEN ROAD (NE)										
CAR	LGW	OGW	OGD2	OG2	BUS	MCY	PCV	TOTAL	PCU	PCU	TOTAL	PCU						
0700-0715	11	5	0	0	1	0	0	17	18.00	35	8	1	0	1	0	1	44	66.70
0715-0730	15	5	2	0	1	1	0	24	25.40	118	17	1	0	1	3	141	139.50	
0730-0745	21	2	1	0	2	0	0	26	28.50	80	10	2	2	2	4	117	123.40	
0745-0800	23	9	0	0	0	0	0	32	32.00	172	19	2	0	0	2	146	144.40	
0800-0815	27	5	1	0	1	0	0	34	35.50	85	8	2	0	2	1	99	100.60	
0815-0830	35	4	0	0	1	0	0	40	41.00	122	4	2	1	0	2	134	137.20	
0830-0845	30	3	1	0	1	0	0	35	36.50	84	10	5	0	3	0	102	103.70	
0845-0900	30	7	1	0	1	0	0	39	40.50	65	9	3	1	2	1	81	83.40	
0900-0915	28	13	3	1	3	0	0	48	53.80	85	10	2	0	0	1	98	78.20	
0915-0930	22	10	0	0	0	0	0	32	33.00	75	9	3	1	0	0	88	90.50	
0930-0945	28	5	1	0	1	0	0	35	36.50	87	9	1	0	0	1	91	77.30	
0945-1000	26	6	1	0	1	0	0	34	34.50	70	9	3	2	0	0	84	91.40	
<b>9789-9798</b>	<b>293</b>	<b>124</b>	<b>11</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>433</b>	<b>412.20</b>	<b>1027</b>	<b>124</b>	<b>17</b>	<b>7</b>	<b>14</b>	<b>8</b>	<b>1218</b>	<b>1218.00</b>	

HOURLY TOTALS																	
0700-0800	70	21	3	0	4	1	0	89	103.90	304	32	6	2	2	10	489	470.00
0715-0815	86	21	4	0	4	1	0	116	121.40	424	52	7	2	5	10	642	502.30
0730-0830	108	20	2	0	4	0	0	134	137.20	428	39	8	3	7	9	498	502.10
0745-0845	115	21	2	0	3	0	0	141	145.00	413	41	11	1	5	4	486	486.40
0800-0900	122	19	3	0	4	0	0	148	153.00	360	31	12	2	7	5	431	430.40
0815-0915	123	27	5	1	6	0	0	162	171.80	340	33	12	2	5	4	480	488.00
0830-0930	110	33	5	1	5	0	0	144	142.80	293	28	13	1	5	4	354	360.80
0845-0945	108	35	5	1	5	0	0	162	160.80	276	37	9	1	3	3	338	335.80
0900-1000	101	34	5	1	5	0	0	146	154.80	273	28	9	3	2	2	338	337.80

Deben Road (NE) / Deben Road (S) / London Road Roundabout (16:00-19:00) PM Peaks																	
MOVEMENT 19				MOVEMENT 20				MOVEMENT 21									
FROM DEBEN ROAD (NE)				FROM DEBEN ROAD (S)				FROM DEBEN ROAD (S)									
LEFT TURN TO DEBEN ROAD (S)				STRAIGHT AHEAD TO LONDON ROAD				U-TURN BACK TO DEBEN ROAD (NE)									
CAR	LGW	OGW	OGD2	OG2	BUS	MCY	PCV	TOTAL	PCU	PCU	TOTAL	PCU					
1600-1615	16	5	0	0	2	0	1	23	23.00	75	9	0	0	1	0	87	85.80
1615-1630	37	9	0	0	1	0	0	47	46.00	75	9	0	0	1	0	87	86.40
1630-1645	49	3	1	0	1	1	0	55	55.90	86	6	0	0	0	1	93	92.90
1645-1700	58	7	1	0	0	0	0	66	66.50	79	10	0	0	0	0	89	87.50
1700-1715	77	7	1	0	1	0	0	86	84.50	84	5	0	2	1	0	92	90.00
1715-1730	80	5	0	0	3	0	1	89	91.20	86	4	0	0	0	1	91	90.20
1730-1745	81	3	0	0	1	0	0	85	84.00	84	11	0	0	0	0	96	107.80
1745-1800	86	4	0	0	2	0	0	92	94.00	103	3	1	1	2	0	111	114.00
1800-1815	85	3	2	0	1	0	0	91	92.00	65	2	0	0	1	0	68	68.00
1815-1830	80	2	0	0	0	0	0	82	82.00	71	2	0	0	1	0	74	75.00
1830-1845	86	6	0	0	1	0	1	94	87.20	85	8	0	0	0	0	93	93.00
1845-1900	89	2	0	0	2	0	0	93	95.00	85	4	0	0	0	0	89	91.00
<b>989-9908</b>	<b>728</b>	<b>84</b>	<b>5</b>	<b>0</b>	<b>13</b>	<b>1</b>	<b>3</b>	<b>834</b>	<b>856.00</b>	<b>826</b>	<b>74</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>2</b>	<b>831</b>	<b>831.00</b>

HOURLY TOTALS																	
1600-1700	217	23	2	0	3	1	1	247	249.60	310	35	1	0	1	2	352	349.90
1615-1715	238	28	3	0	2	1	1	271	273.00	321	30	1	2	1	1	387	393.00
1630-1730	281	22	3	0	5	1	1	323	335.00	332	25	1	2	2	383	365.10	
1745-1800	203	22	2	0	5	0	1	233	233.00	340	30	1	2	2	1	376	380.90
1800-1800	367	19	1	0	7	0	0	489	496.80	387	23	1	3	4	0	498	496.80
1715-1815	312	14	2	0	7	0	1	336	340.20	348	20	1	4	2	376	380.20	
1730-1830	202	11	2	0	4	0	0	219	219.00	233	18	1	5	0	1	288	305.00
1745-1845	270	14	2	0	4	0	1	291	293.20	209	15	1	4	0	1	231	232.00
1800-1900	245	12	2	0	3	0	0	262	262.00	243	16	0	4	0	0	263	270.00

Deben Road (NE) / Deben Road (S) / London Road Roundabout (07:00-10:00) AM Peaks																	
MOVEMENT 22				MOVEMENT 23				MOVEMENT 24									
FROM DEBEN ROAD (S)				FROM DEBEN ROAD (S)				FROM DEBEN ROAD (S)									
LEFT TURN TO LONDON ROAD				RIGHT TURN TO DEBEN ROAD (NE)				U-TURN BACK TO DEBEN ROAD (S)									
CAR	LGW	OGW	OGD2	OG2	BUS	MCY	PCV	TOTAL	PCU	PCU	TOTAL	PCU					
0700-0715	7	1	0	0	0	0	0	8	8.20	51	5	0	0	0	0	59	59.00
0715-0730	6	0	0	0	1	1	1	8	8.60	53	4	2	0	1	0	61	62.20
0730-0745	7	2	0	0	0	0	1	9	9.00	46	6	0	0	0	1	53	54.00
0745-0800	9	1	0	0	0	0	0	10	10.00	68	4	1	1	1	0	76	78.00
0800-0815	10	0	0	0	0	0	0	10	10.00	60	5	0	0	0	0	65	75.00
0815-0830	12	1	1	0	0	0	0	14	14.90	45	6	0	0	0	0	51	52.00
0830-0845	9	2	1	0	0	0	0	12	12.50	74	7	0	0	1	0	82	83.00
0845-0900	10	0	0	0	0	0	0	10	10.00	40	7	0	0	0	1	48	49.00
0900-0915	7	5	0	0	0	0	0	12	7.00	53	1	0	0	0	1	55	54.00
0915-0930	2	1	0	0	1	0	0	4	5.00	35	6	0	0	1	0	42	43.00
0930-0945	2	0	0	0	0	0	0	2	2.00	20	3	2	0	0	0	25	26.00
0945-1000	3	2	0	0	0	0	0	5	5.00	45	5	1	1	1	0	54	55.70
<b>9789-9798</b>	<b>69</b>	<b>10</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>82</b>	<b>82.00</b>	<b>478</b>	<b>68</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>558</b>	<b>574.50</b>

HOURLY TOTALS																		
0700-0800	26	4	0	0	0	1	2	34	33.80	208	24	3	1	2	0	3	261	263.40
0715-0815	32	3	0	0	0	1	2	37	35.60	246	22	3	1	2	0	3	277	279.40
0730-0830	38	4	1	0	0	0	2	45	43.90	238	24	1	1	0	3	288	288.40	
0745-0845	40	4	2	0	0	0	2	48	47.40	206	23	1	1	2	0	2	239	241.00
0800-0900	41	3	2	0	0	0	2	48	47.40	280	26	0	0	1	1	3	309	308.60
0815-0915	36	5	2	0	0	0	2	45	44.60	264	21	0	0	1	1	2	289	287.80
0830-0930	28	5	1	0	1	0	0	35	34.50	254	21	0	0	2	1	279	279.60	
0845-0945	19	3	0	0	1	0	0	23	24.00	213	17	2	0	1	1	235	235.60	
0900-1000	12	5	0	0	1	0	0	18	18.00	187	15	2	1	2	1	199	191.00	

Deben Road (NE) / Deben Road (S) / London Road Roundabout (16:00-19:00) PM Peaks																	
MOVEMENT 22				MOVEMENT 23				MOVEMENT 24									
FROM DEBEN ROAD (S)				FROM DEBEN ROAD (S)				FROM DEBEN ROAD (S)									
LEFT TURN TO LONDON ROAD				RIGHT TURN TO DEBEN ROAD (NE)				U-TURN BACK TO DEBEN ROAD (S)									
CAR	LGW	OGW	OGD2	OG2	BUS	MCY	PCV	TOTAL	PCU	PCU	TOTAL	PCU					
1600-1615	2	0	0	0	0	0	0	2	2.00	34	1	0	0	0	0	41	41.00
1615-1630	4	2	1	0	0	0	0	7	7.00	30	2	1	0	1	0	35	35.70
1630-1645	4	0	0	0	0	0	0	4	4.00	40	5						







## Appendix I



Junctions 9
PICADY 9 - Priority Intersection Module
Version: 9.0.2.5947 © Copyright TRL Limited, 2017
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**Filename:** Junction 1 Site access- Mount Pleasant Road T-junction.j9  
**Path:** P:\Eastern\1031-1040\1033 Chase New Homes\1033.0002 Mount Pleasant Road, Saffron Walden\03 Technical\TPL\Modelling\Junction 1 Site access- Mount Pleasant Road T-junction  
**Report generation date:** 23/05/2024 14:39:47

- »2023, AM
- »2023, PM
- »2029, AM
- »2029, PM
- »2029 + COM, AM
- »2029 + COM, PM
- »2029 + COM + DEV, AM
- »2029 + COM + DEV, PM

**Summary of junction performance**

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2023								
Stream B-AC	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-AB	0.0	0.00	0.00	A	0.0	0.00	0.00	A
2029								
Stream B-AC	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-AB	0.0	0.00	0.00	A	0.0	0.00	0.00	A
2029 + COM								
Stream B-AC	0.1	10.12	0.11	B	0.1	10.51	0.06	B
Stream C-AB	0.0	4.77	0.00	A	0.0	4.62	0.02	A
2029 + COM + DEV								
Stream B-AC	0.3	11.36	0.20	B	0.1	11.28	0.11	B
Stream C-AB	0.0	4.77	0.01	A	0.0	4.61	0.03	A

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

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

## File summary

### File Description

Title	(untitled)
Location	
Site number	
Date	20/10/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	AD\model.pc
Description	

## Units

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

## Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		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)
D1	2023	AM	ONE HOUR	07:45	09:15	15
D2	2023	PM	ONE HOUR	16:45	18:15	15
D3	2029	AM	ONE HOUR	07:45	09:15	15
D4	2029	PM	ONE HOUR	16:45	18:15	15
D5	2029 + COM	AM	ONE HOUR	07:45	09:15	15
D6	2029 + COM	PM	ONE HOUR	16:45	18:15	15
D7	2029 + COM + DEV	AM	ONE HOUR	07:45	09:15	15
D8	2029 + COM + DEV	PM	ONE HOUR	16:45	18:15	15

## Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

# 2023, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	Arm C - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

## Junction Network

### Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	0.00	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## Arms

### Arms

Arm	Name	Description	Arm type
A	Mount Pleasant Road East		Major
B	Site Access		Minor
C	Mount Pleasant Road West		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	5.57			175.0	✓	0.00

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

### Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	2.72	22	14

## Slope / Intercept / Capacity

### Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	478	0.089	0.224	0.141	0.320
1	B-C	615	0.096	0.243	-	-
1	C-B	675	0.267	0.267	-	-

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)
D1	2023	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	229	100.000
B		✓	0	100.000
C		✓	264	100.000

## Origin-Destination Data

### Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	0	229
	B	0	0	0
	C	264	0	0

## Vehicle Mix

### Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	0	0
	B	0	0	0
	C	2	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	479	0.000	0	0.0	0.000	A
C-AB	0	629	0.000	0	0.0	0.000	A
C-A	199			199			
A-B	0			0			
A-C	172			172			

#### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	467	0.000	0	0.0	0.000	A
C-AB	0	620	0.000	0	0.0	0.000	A
C-A	237			237			
A-B	0			0			
A-C	206			206			

#### 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	451	0.000	0	0.0	0.000	A
C-AB	0	608	0.000	0	0.0	0.000	A
C-A	291			291			
A-B	0			0			
A-C	252			252			

#### 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	451	0.000	0	0.0	0.000	A
C-AB	0	608	0.000	0	0.0	0.000	A
C-A	291			291			
A-B	0			0			
A-C	252			252			

#### 08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	467	0.000	0	0.0	0.000	A
C-AB	0	620	0.000	0	0.0	0.000	A
C-A	237			237			
A-B	0			0			
A-C	206			206			

#### 09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	479	0.000	0	0.0	0.000	A
C-AB	0	629	0.000	0	0.0	0.000	A
C-A	199			199			
A-B	0			0			
A-C	172			172			

# 2023, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	Arm C - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

## Junction Network

### Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	0.00	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## 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)
D2	2023	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	290	100.000
B		✓	0	100.000
C		✓	366	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A	B	C
From	A	0	0	290
	B	0	0	0
	C	366	0	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	2
	B	0	0	0
	C	4	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	461	0.000	0	0.0	0.000	A
C-AB	0	617	0.000	0	0.0	0.000	A
C-A	276			276			
A-B	0			0			
A-C	218			218			

#### 17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	445	0.000	0	0.0	0.000	A
C-AB	0	606	0.000	0	0.0	0.000	A
C-A	329			329			
A-B	0			0			
A-C	261			261			

#### 17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	424	0.000	0	0.0	0.000	A
C-AB	0	590	0.000	0	0.0	0.000	A
C-A	403			403			
A-B	0			0			
A-C	319			319			

#### 17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	424	0.000	0	0.0	0.000	A
C-AB	0	590	0.000	0	0.0	0.000	A
C-A	403			403			
A-B	0			0			
A-C	319			319			

**17:45 - 18:00**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	445	0.000	0	0.0	0.000	A
C-AB	0	606	0.000	0	0.0	0.000	A
C-A	329			329			
A-B	0			0			
A-C	261			261			

**18:00 - 18:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	461	0.000	0	0.0	0.000	A
C-AB	0	617	0.000	0	0.0	0.000	A
C-A	276			276			
A-B	0			0			
A-C	218			218			



# 2029, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	Arm C - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

## Junction Network

### Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	0.00	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## 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)
D3	2029	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	240	100.000
B		✓	0	100.000
C		✓	276	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A	B	C
From	A	0	0	240
	B	0	0	0
	C	276	0	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	2	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	476	0.000	0	0.0	0.000	A
C-AB	0	627	0.000	0	0.0	0.000	A
C-A	208			208			
A-B	0			0			
A-C	181			181			

#### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	464	0.000	0	0.0	0.000	A
C-AB	0	618	0.000	0	0.0	0.000	A
C-A	248			248			
A-B	0			0			
A-C	216			216			

#### 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	447	0.000	0	0.0	0.000	A
C-AB	0	605	0.000	0	0.0	0.000	A
C-A	304			304			
A-B	0			0			
A-C	264			264			

#### 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	447	0.000	0	0.0	0.000	A
C-AB	0	605	0.000	0	0.0	0.000	A
C-A	304			304			
A-B	0			0			
A-C	264			264			

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	464	0.000	0	0.0	0.000	A
C-AB	0	618	0.000	0	0.0	0.000	A
C-A	248			248			
A-B	0			0			
A-C	216			216			

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	476	0.000	0	0.0	0.000	A
C-AB	0	627	0.000	0	0.0	0.000	A
C-A	208			208			
A-B	0			0			
A-C	181			181			

# 2029, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	Arm C - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

## Junction Network

### Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	0.00	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## 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)
D4	2029	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	304	100.000
B		✓	0	100.000
C		✓	384	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A	B	C
From	A	0	0	304
	B	0	0	0
	C	384	0	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	2
	B	0	0	0
	C	4	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	457	0.000	0	0.0	0.000	A
C-AB	0	614	0.000	0	0.0	0.000	A
C-A	289			289			
A-B	0			0			
A-C	229			229			

#### 17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	440	0.000	0	0.0	0.000	A
C-AB	0	602	0.000	0	0.0	0.000	A
C-A	345			345			
A-B	0			0			
A-C	273			273			

#### 17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	418	0.000	0	0.0	0.000	A
C-AB	0	586	0.000	0	0.0	0.000	A
C-A	423			423			
A-B	0			0			
A-C	335			335			

#### 17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	418	0.000	0	0.0	0.000	A
C-AB	0	586	0.000	0	0.0	0.000	A
C-A	423			423			
A-B	0			0			
A-C	335			335			

**17:45 - 18:00**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	440	0.000	0	0.0	0.000	A
C-AB	0	602	0.000	0	0.0	0.000	A
C-A	345			345			
A-B	0			0			
A-C	273			273			

**18:00 - 18:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	0	457	0.000	0	0.0	0.000	A
C-AB	0	614	0.000	0	0.0	0.000	A
C-A	289			289			
A-B	0			0			
A-C	229			229			

# 2029 + COM, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	Arm C - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

## Junction Network

### Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	0.71	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## 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)
D5	2029 + COM	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	249	100.000
B		✓	38	100.000
C		✓	278	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A	B	C
From	A	0	9	240
	B	31	0	7
	C	276	2	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	2	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.11	10.12	0.1	B
C-AB	0.00	4.77	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	29	430	0.067	28	0.1	8.963	A
C-AB	2	761	0.003	2	0.0	4.769	A
C-A	207			207			
A-B	7			7			
A-C	181			181			

#### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	34	416	0.082	34	0.1	9.420	A
C-AB	3	779	0.003	3	0.0	4.664	A
C-A	247			247			
A-B	8			8			
A-C	216			216			

#### 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	42	398	0.105	42	0.1	10.112	B
C-AB	4	804	0.004	4	0.0	4.525	A
C-A	303			303			
A-B	10			10			
A-C	264			264			

#### 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	42	398	0.105	42	0.1	10.118	B
C-AB	4	804	0.004	4	0.0	4.528	A
C-A	303			303			
A-B	10			10			
A-C	264			264			



**08:45 - 09:00**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	34	416	0.082	34	0.1	9.427	A
C-AB	3	779	0.003	3	0.0	4.671	A
C-A	247			247			
A-B	8			8			
A-C	216			216			

**09:00 - 09:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	29	430	0.067	29	0.1	8.981	A
C-AB	2	761	0.003	2	0.0	4.771	A
C-A	207			207			
A-B	7			7			
A-C	181			181			

# 2029 + COM, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	Arm C - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

## Junction Network

### Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	0.36	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## 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)
D6	2029 + COM	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	333	100.000
B		✓	20	100.000
C		✓	391	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A	B	C
From	A	0	29	304
	B	16	0	4
	C	384	7	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	2
	B	0	0	0
	C	4	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.06	10.51	0.1	B
C-AB	0.02	4.62	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	15	408	0.037	15	0.0	9.162	A
C-AB	8	800	0.010	8	0.0	4.611	A
C-A	286			286			
A-B	22			22			
A-C	229			229			

#### 17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	18	390	0.046	18	0.0	9.683	A
C-AB	11	827	0.013	11	0.0	4.480	A
C-A	341			341			
A-B	26			26			
A-C	273			273			

#### 17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	22	364	0.060	22	0.1	10.513	B
C-AB	15	865	0.017	15	0.0	4.313	A
C-A	415			415			
A-B	32			32			
A-C	335			335			

#### 17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	22	364	0.060	22	0.1	10.514	B
C-AB	15	865	0.017	15	0.0	4.320	A
C-A	415			415			
A-B	32			32			
A-C	335			335			

**17:45 - 18:00**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	18	390	0.046	18	0.0	9.689	A
C-AB	11	827	0.013	11	0.0	4.493	A
C-A	341			341			
A-B	26			26			
A-C	273			273			

**18:00 - 18:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	15	408	0.037	15	0.0	9.169	A
C-AB	8	800	0.010	8	0.0	4.617	A
C-A	286			286			
A-B	22			22			
A-C	229			229			

# 2029 + COM + DEV, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	Arm C - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

## Junction Network

### Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	1.41	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## 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)
D7	2029 + COM + DEV	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	256	100.000
B		✓	73	100.000
C		✓	280	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A	B	C
From	A	0	16	240
	B	59	0	14
	C	276	4	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.20	11.36	0.3	B
C-AB	0.01	4.77	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	55	430	0.128	54	0.1	9.577	A
C-AB	4	760	0.005	4	0.0	4.764	A
C-A	207			207			
A-B	12			12			
A-C	181			181			

#### 08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	66	416	0.158	65	0.2	10.262	B
C-AB	5	777	0.007	5	0.0	4.661	A
C-A	246			246			
A-B	14			14			
A-C	216			216			

#### 08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	80	397	0.202	80	0.2	11.341	B
C-AB	7	803	0.009	7	0.0	4.524	A
C-A	301			301			
A-B	18			18			
A-C	264			264			

#### 08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	80	397	0.202	80	0.3	11.359	B
C-AB	7	803	0.009	7	0.0	4.524	A
C-A	301			301			
A-B	18			18			
A-C	264			264			

**08:45 - 09:00**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	66	416	0.158	66	0.2	10.286	B
C-AB	5	777	0.007	5	0.0	4.661	A
C-A	246			246			
A-B	14			14			
A-C	216			216			

**09:00 - 09:15**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	55	430	0.128	55	0.1	9.615	A
C-AB	4	760	0.005	4	0.0	4.766	A
C-A	207			207			
A-B	12			12			
A-C	181			181			

# 2029 + COM + DEV, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	Arm C - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

## Junction Network

### Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	0.62	A

### Junction Network Options

Driving side	Lighting
Left	Normal/unknown

## 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)
D8	2029 + COM + DEV	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	359	100.000
B		✓	34	100.000
C		✓	397	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		A	B	C
From	A	0	55	304
	B	28	0	6
	C	384	13	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0



## Results

### Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.11	11.28	0.1	B
C-AB	0.03	4.61	0.0	A
C-A				
A-B				
A-C				

### Main Results for each time segment

#### 16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	26	402	0.064	25	0.1	9.563	A
C-AB	15	795	0.019	15	0.0	4.614	A
C-A	284			284			
A-B	41			41			
A-C	229			229			

#### 17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	31	383	0.080	30	0.1	10.220	B
C-AB	20	822	0.025	20	0.0	4.492	A
C-A	337			337			
A-B	49			49			
A-C	273			273			

#### 17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	37	356	0.105	37	0.1	11.280	B
C-AB	28	859	0.033	28	0.0	4.333	A
C-A	409			409			
A-B	61			61			
A-C	335			335			

#### 17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	37	356	0.105	37	0.1	11.284	B
C-AB	28	859	0.033	28	0.0	4.334	A
C-A	409			409			
A-B	61			61			
A-C	335			335			

**17:45 - 18:00**

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	31	383	0.080	31	0.1	10.233	B
C-AB	20	822	0.025	20	0.0	4.494	A
C-A	337			337			
A-B	49			49			
A-C	273			273			

**18:00 - 18:15**

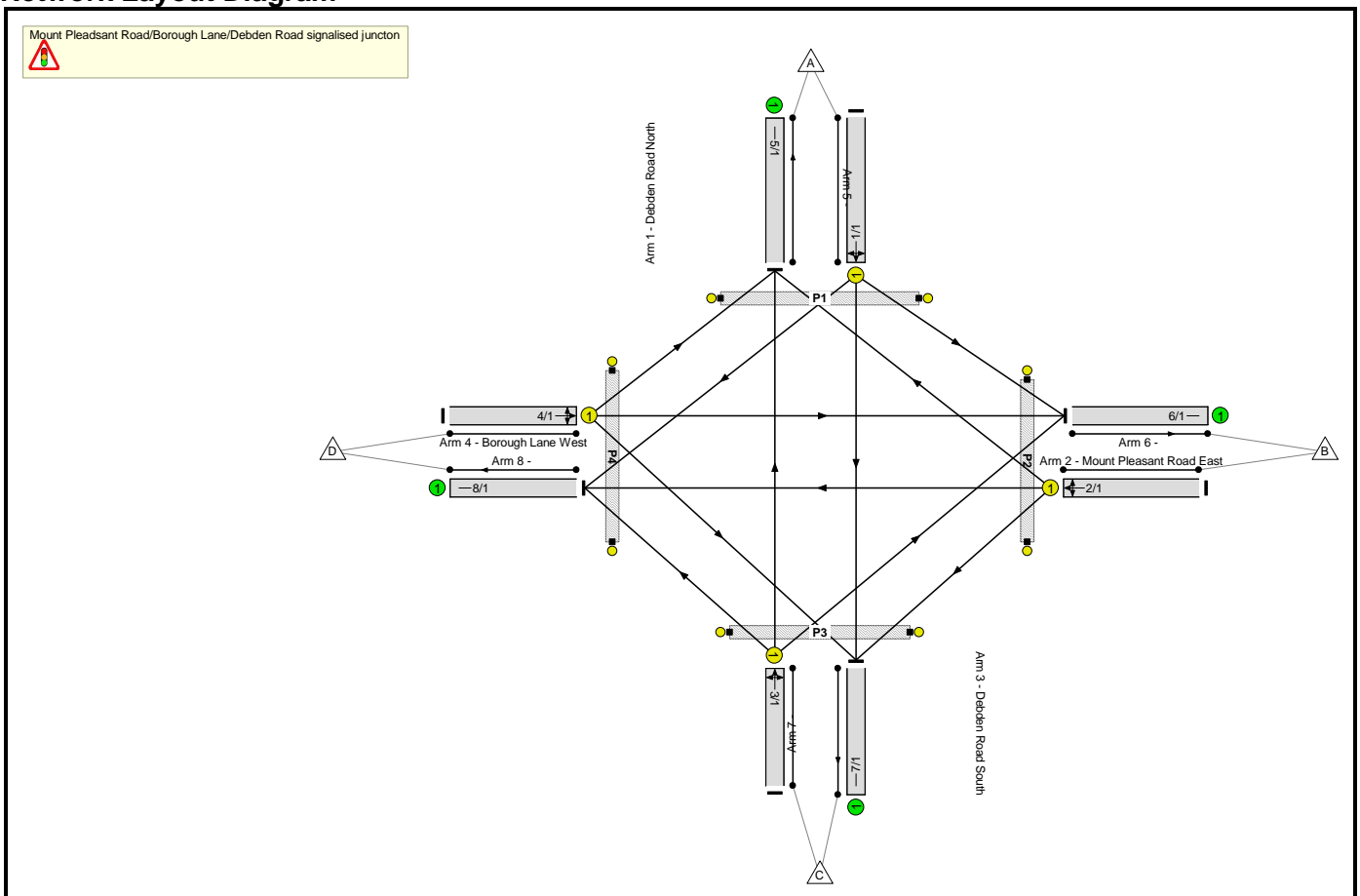
Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-AC	26	401	0.064	26	0.1	9.582	A
C-AB	15	796	0.019	15	0.0	4.614	A
C-A	283			283			
A-B	41			41			
A-C	229			229			

Full Input Data And Results  
**Full Input Data and Results**

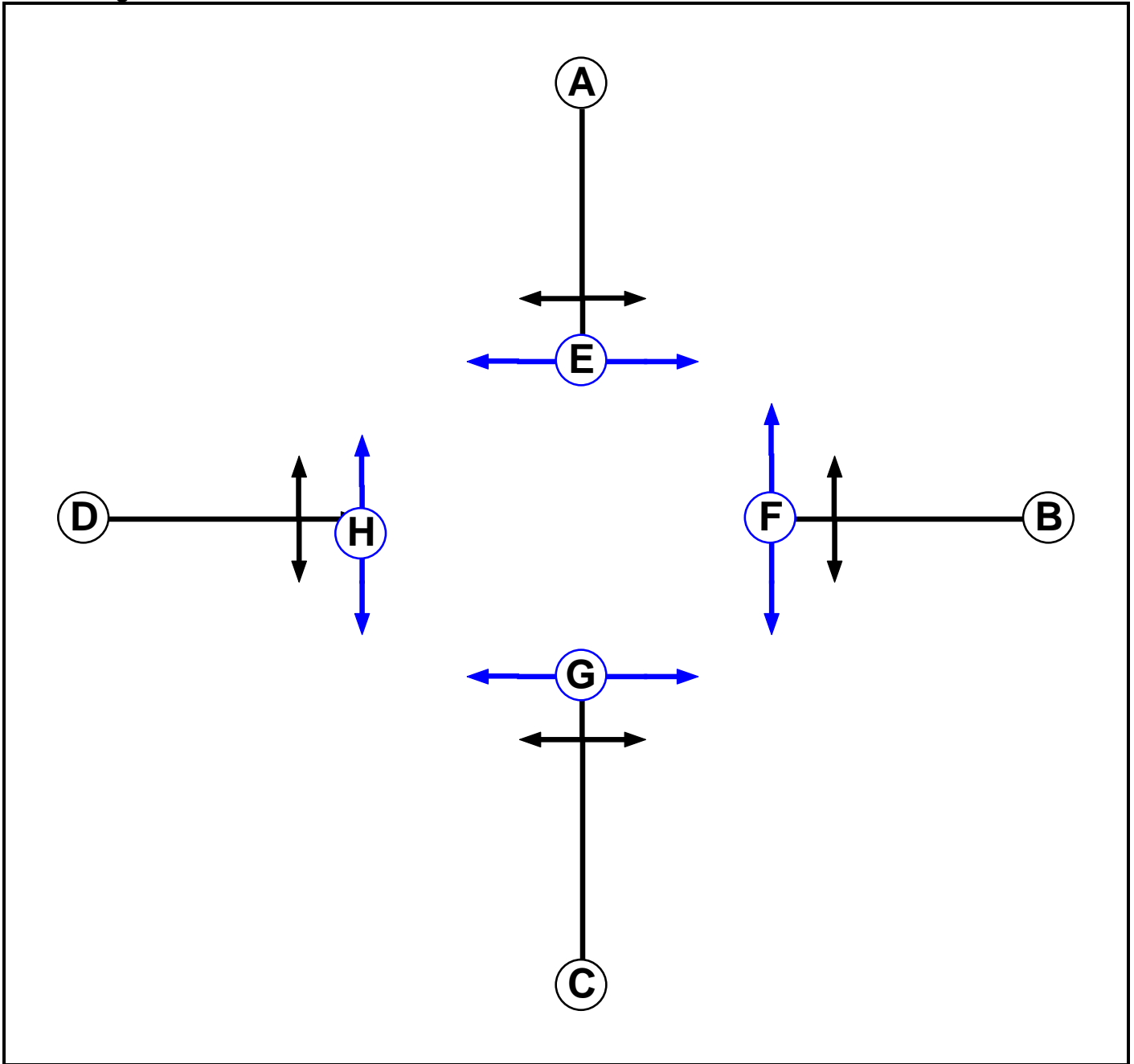
**User and Project Details**

<b>Project:</b>	1033.0002 Mount Pleasant Road, Saffron Walden
<b>Title:</b>	
<b>Location:</b>	
<b>Additional detail:</b>	
<b>File name:</b>	Mount Pleasant Road-Debden Road-Borough Lane.lsg3x
<b>Author:</b>	
<b>Company:</b>	
<b>Address:</b>	

**Network Layout Diagram**



**Phase Diagram**



**Phase Input Data**

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Pedestrian		5	5
F	Pedestrian		5	5
G	Pedestrian		5	5
H	Pedestrian		5	5

## Full Input Data And Results

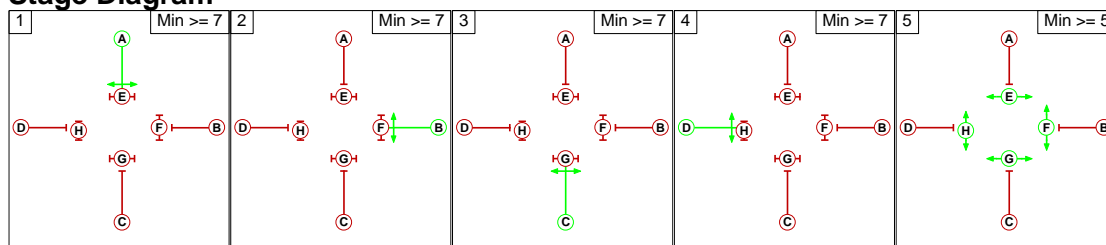
### Phase Intergrens Matrix

		Starting Phase							
		A	B	C	D	E	F	G	H
Terminating Phase	A		5	5	5	5	5	7	5
	B	5		5	5	5	5	5	7
	C	5	5		5	7	5	5	5
	D	5	5	5		5	7	5	5
	E	6	6	6	6		-	-	-
	F	6	6	6	6	-		-	-
	G	6	6	6	6	-	-		-
	H	6	6	6	6	-	-	-	

### Phases in Stage

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

### Stage Diagram



### Phase Delays

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

### Prohibited Stage Change

		To Stage				
		1	2	3	4	5
From Stage	1		5	5	5	7
	2	5		5	5	7
	3	5	5		5	7
	4	5	5	5		7
	5	6	6	6	6	

Full Input Data And Results

**Give-Way Lane Input Data**

**Junction: Mount Pledsant Road/Borough Lane/Debden Road signalised juncton**

There are no Opposed Lanes in this Junction

Full Input Data And Results

**Lane Input Data**

Junction: Mount Pleasants Road/Borough Lane/Debden Road signalised juncton												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Debden Road North)	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 6 Left	4.00
											Arm 7 Ahead	Inf
											Arm 8 Right	6.00
											Arm 5 Right	6.00
2/1 (Mount Pleasant Road East)	U	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 7 Left	4.00
											Arm 8 Ahead	Inf
3/1 (Debden Road South)	U	C	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Ahead	Inf
											Arm 6 Right	6.00
											Arm 8 Left	4.00
4/1 (Borough Lane West)	U	D	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Left	4.00
											Arm 6 Ahead	Inf
											Arm 7 Right	6.00
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1	U		2	3	60.0	Inf	-	-	-	-	-	-

**Traffic Flow Groups**

Flow Group	Start Time	End Time	Duration	Formula
1: '2023 AM'	08:00	09:00	01:00	
2: '2023 PM'	17:00	18:00	01:00	
3: '2029 AM'	08:00	09:00	01:00	
4: '2029 PM'	17:00	18:00	01:00	
5: '2029 + Com AM'	08:00	09:00	01:00	
6: '2029 + Com PM'	17:00	18:00	01:00	
7: '2029 + Com + Dev AM'	08:00	09:00	01:00	
8: '2029 + Com + Dev PM'	17:00	18:00	01:00	

Full Input Data And Results

**Scenario 1: '2023 AM'** (FG1: '2023 AM', Plan 1: 'Network Control Plan 1')

**Traffic Flows, Desired**

**Desired Flow :**

		Destination				
Origin		A	B	C	D	Tot.
	A	0	32	169	107	308
	B	60	0	57	215	332
	C	137	13	0	15	165
	D	91	128	23	0	242
	Tot.	288	173	249	337	1047

**Traffic Lane Flows**

Lane	Scenario 1: 2023 AM
<b>Junction: Mount Pleasants Road/Borough Lane/Debden Road signalised juncton</b>	
1/1	308
2/1	332
3/1	165
4/1	242
5/1	288
6/1	173
7/1	249
8/1	337



**Lane Saturation Flows**

Junction: Mount Pleasants Road/Borough Lane/Debden Road signalised junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Debden Road North)	3.00	0.00	Y	Arm 6 Left	4.00	10.4 %	1701	1701
				Arm 7 Ahead	Inf	54.9 %		
				Arm 8 Right	6.00	34.7 %		
2/1 (Mount Pleasant Road East)	3.00	0.00	Y	Arm 5 Right	6.00	18.1 %	1726	1726
				Arm 7 Left	4.00	17.2 %		
				Arm 8 Ahead	Inf	64.8 %		
3/1 (Debden Road South)	3.00	0.00	Y	Arm 5 Ahead	Inf	83.0 %	1817	1817
				Arm 6 Right	6.00	7.9 %		
				Arm 8 Left	4.00	9.1 %		
4/1 (Borough Lane West)	3.00	0.00	Y	Arm 5 Left	4.00	37.6 %	1644	1644
				Arm 6 Ahead	Inf	52.9 %		
				Arm 7 Right	6.00	9.5 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

**Scenario 2: '2023 PM'** (FG2: '2023 PM', Plan 1: 'Network Control Plan 1')

**Traffic Flows, Desired**

**Desired Flow :**

	Destination					
	A	B	C	D	Tot.	
Origin	A	0	59	194	49	302
	B	67	0	21	159	247
	C	180	18	0	10	208
	D	149	194	9	0	352
	Tot.	396	271	224	218	1109

**Traffic Lane Flows**

Lane	Scenario 2: 2023 PM
<b>Junction: Mount Pleasants Road/Borough Lane/Debden Road signalised junction</b>	
1/1	302
2/1	247
3/1	208
4/1	352
5/1	396
6/1	271
7/1	224
8/1	218

**Lane Saturation Flows**

<b>Junction: Mount Pleasants Road/Borough Lane/Debden Road signalised junction</b>								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Debden Road North)	3.00	0.00	Y	Arm 6 Left	4.00	19.5 %	1719	1719
				Arm 7 Ahead	Inf	64.2 %		
				Arm 8 Right	6.00	16.2 %		
2/1 (Mount Pleasant Road East)	3.00	0.00	Y	Arm 5 Right	6.00	27.1 %	1741	1741
				Arm 7 Left	4.00	8.5 %		
				Arm 8 Ahead	Inf	64.4 %		
3/1 (Debden Road South)	3.00	0.00	Y	Arm 5 Ahead	Inf	86.5 %	1842	1842
				Arm 6 Right	6.00	8.7 %		
				Arm 8 Left	4.00	4.8 %		
4/1 (Borough Lane West)	3.00	0.00	Y	Arm 5 Left	4.00	42.3 %	1644	1644
				Arm 6 Ahead	Inf	55.1 %		
				Arm 7 Right	6.00	2.6 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: '2029 AM' (FG3: '2029 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	34	177	112	323
	B	63	0	60	225	348
	C	143	14	0	16	173
	D	95	134	24	0	253
	Tot.	301	182	261	353	1097

Traffic Lane Flows

Lane	Scenario 3: 2029 AM
<b>Junction: Mount Pleasants Road/Borough Lane/Debden Road signalised junction</b>	
1/1	323
2/1	348
3/1	173
4/1	253
5/1	301
6/1	182
7/1	261
8/1	353

Lane Saturation Flows

<b>Junction: Mount Pleasants Road/Borough Lane/Debden Road signalised junction</b>								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Debden Road North)	3.00	0.00	Y	Arm 6 Left	4.00	10.5 %	1700	1700
				Arm 7 Ahead	Inf	54.8 %		
				Arm 8 Right	6.00	34.7 %		
2/1 (Mount Pleasant Road East)	3.00	0.00	Y	Arm 5 Right	6.00	18.1 %	1725	1725
				Arm 7 Left	4.00	17.2 %		
				Arm 8 Ahead	Inf	64.7 %		
3/1 (Debden Road South)	3.00	0.00	Y	Arm 5 Ahead	Inf	82.7 %	1815	1815
				Arm 6 Right	6.00	8.1 %		
				Arm 8 Left	4.00	9.2 %		
4/1 (Borough Lane West)	3.00	0.00	Y	Arm 5 Left	4.00	37.5 %	1644	1644
				Arm 6 Ahead	Inf	53.0 %		
				Arm 7 Right	6.00	9.5 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

**Scenario 4: '2029 PM'** (FG4: '2029 PM', Plan 1: 'Network Control Plan 1')

**Traffic Flows, Desired**

**Desired Flow :**

		Destination				
		A	B	C	D	Tot.
Origin	A	0	62	204	51	317
	B	70	0	22	167	259
	C	189	19	0	11	219
	D	156	204	9	0	369
	Tot.	415	285	235	229	1164

**Traffic Lane Flows**

Lane	Scenario 4: 2029 PM
<b>Junction: Mount Pledsant Road/Borough Lane/Debden Road signalised juncton</b>	
1/1	317
2/1	259
3/1	219
4/1	369
5/1	415
6/1	285
7/1	235
8/1	229

Full Input Data And Results

**Lane Saturation Flows**

Junction: Mount Pleasants Road/Borough Lane/Debden Road signalised junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Debden Road North)	3.00	0.00	Y	Arm 6 Left	4.00	19.6 %	1720	1720
				Arm 7 Ahead	Inf	64.4 %		
				Arm 8 Right	6.00	16.1 %		
2/1 (Mount Pleasant Road East)	3.00	0.00	Y	Arm 5 Right	6.00	27.0 %	1742	1742
				Arm 7 Left	4.00	8.5 %		
				Arm 8 Ahead	Inf	64.5 %		
3/1 (Debden Road South)	3.00	0.00	Y	Arm 5 Ahead	Inf	86.3 %	1840	1840
				Arm 6 Right	6.00	8.7 %		
				Arm 8 Left	4.00	5.0 %		
4/1 (Borough Lane West)	3.00	0.00	Y	Arm 5 Left	4.00	42.3 %	1644	1644
				Arm 6 Ahead	Inf	55.3 %		
				Arm 7 Right	6.00	2.4 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

**Scenario 5: '2029 + Com AM'** (FG5: '2029 + Com AM', Plan 1: 'Network Control Plan 1')

**Traffic Flows, Desired**

**Desired Flow :**

	Destination					
	A	B	C	D	Tot.	
Origin	A	0	34	189	130	353
	B	63	0	60	225	348
	C	147	14	0	16	177
	D	100	134	24	0	258
	Tot.	310	182	273	371	1136

**Traffic Lane Flows**

Lane	Scenario 5: 2029 + Com AM
<b>Junction: Mount Pleasants Road/Borough Lane/Debden Road signalised junction</b>	
1/1	353
2/1	348
3/1	177
4/1	258
5/1	310
6/1	182
7/1	273
8/1	371

**Lane Saturation Flows**

<b>Junction: Mount Pleasants Road/Borough Lane/Debden Road signalised junction</b>								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Debden Road North)	3.00	0.00	Y	Arm 6 Left	4.00	9.6 %	1697	1697
				Arm 7 Ahead	Inf	53.5 %		
				Arm 8 Right	6.00	36.8 %		
2/1 (Mount Pleasant Road East)	3.00	0.00	Y	Arm 5 Right	6.00	18.1 %	1725	1725
				Arm 7 Left	4.00	17.2 %		
				Arm 8 Ahead	Inf	64.7 %		
3/1 (Debden Road South)	3.00	0.00	Y	Arm 5 Ahead	Inf	83.1 %	1817	1817
				Arm 6 Right	6.00	7.9 %		
				Arm 8 Left	4.00	9.0 %		
4/1 (Borough Lane West)	3.00	0.00	Y	Arm 5 Left	4.00	38.8 %	1639	1639
				Arm 6 Ahead	Inf	51.9 %		
				Arm 7 Right	6.00	9.3 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 6: '2029 +Com PM' (FG6: '2029 + Com PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	62	210	61	333
	B	70	0	22	167	259
	C	200	19	0	11	230
	D	174	204	9	0	387
	Tot.	444	285	241	239	1209

Traffic Lane Flows

Lane	Scenario 6: 2029 +Com PM
<b>Junction: Mount Pleasants Road/Borough Lane/Debden Road signalised junction</b>	
1/1	333
2/1	259
3/1	230
4/1	387
5/1	444
6/1	285
7/1	241
8/1	239

Lane Saturation Flows

<b>Junction: Mount Pleasants Road/Borough Lane/Debden Road signalised junction</b>								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Debden Road North)	3.00	0.00	Y	Arm 6 Left	4.00	18.6 %	1717	1717
				Arm 7 Ahead	Inf	63.1 %		
				Arm 8 Right	6.00	18.3 %		
2/1 (Mount Pleasant Road East)	3.00	0.00	Y	Arm 5 Right	6.00	27.0 %	1742	1742
				Arm 7 Left	4.00	8.5 %		
				Arm 8 Ahead	Inf	64.5 %		
3/1 (Debden Road South)	3.00	0.00	Y	Arm 5 Ahead	Inf	87.0 %	1844	1844
				Arm 6 Right	6.00	8.3 %		
				Arm 8 Left	4.00	4.8 %		
4/1 (Borough Lane West)	3.00	0.00	Y	Arm 5 Left	4.00	45.0 %	1631	1631
				Arm 6 Ahead	Inf	52.7 %		
				Arm 7 Right	6.00	2.3 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

**Scenario 7: '2029 + Com + Dev AM'** (FG7: '2029 + Com + Dev AM', Plan 1: 'Network Control Plan 1')

**Traffic Flows, Desired**

**Desired Flow :**

		Destination				
		A	B	C	D	Tot.
Origin	A	0	34	200	147	381
	B	63	0	60	225	348
	C	150	14	0	16	180
	D	104	134	24	0	262
	Tot.	317	182	284	388	1171

**Traffic Lane Flows**

Lane	Scenario 7: 2029 + Com + Dev AM
<b>Junction: Mount Pledsant Road/Borough Lane/Debden Road signalised juncton</b>	
1/1	381
2/1	348
3/1	180
4/1	262
5/1	317
6/1	182
7/1	284
8/1	388



**Lane Saturation Flows**

Junction: Mount Pleasants Road/Borough Lane/Debden Road signalised junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Debden Road North)	3.00	0.00	Y	Arm 6 Left	4.00	8.9 %	1695	1695
				Arm 7 Ahead	Inf	52.5 %		
				Arm 8 Right	6.00	38.6 %		
2/1 (Mount Pleasant Road East)	3.00	0.00	Y	Arm 5 Right	6.00	18.1 %	1725	1725
				Arm 7 Left	4.00	17.2 %		
				Arm 8 Ahead	Inf	64.7 %		
3/1 (Debden Road South)	3.00	0.00	Y	Arm 5 Ahead	Inf	83.3 %	1819	1819
				Arm 6 Right	6.00	7.8 %		
				Arm 8 Left	4.00	8.9 %		
4/1 (Borough Lane West)	3.00	0.00	Y	Arm 5 Left	4.00	39.7 %	1634	1634
				Arm 6 Ahead	Inf	51.1 %		
				Arm 7 Right	6.00	9.2 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

**Scenario 8: '2029 + Com + Dev PM' (FG8: '2029 + Com + Dev PM', Plan 1: 'Network Control Plan 1')**

**Traffic Flows, Desired**

**Desired Flow :**

	Destination					
	A	B	C	D	Tot.	
Origin	A	0	62	215	68	345
	B	70	0	22	167	259
	C	211	19	0	11	241
	D	189	204	9	0	402
	Tot.	470	285	246	246	1247

**Traffic Lane Flows**

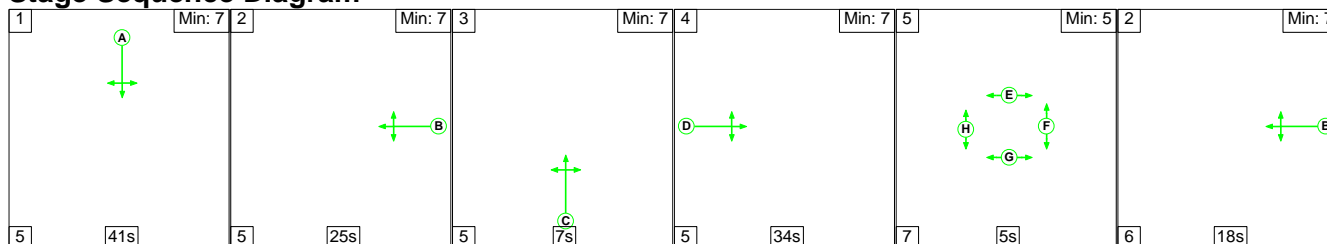
Lane	Scenario 8: 2029 + Com + Dev PM
<b>Junction: Mount Pleasants Road/Borough Lane/Debden Road signalised junction</b>	
1/1	345
2/1	259
3/1	241
4/1	402
5/1	470
6/1	285
7/1	246
8/1	246

**Lane Saturation Flows**

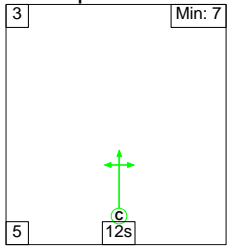
<b>Junction: Mount Pleasants Road/Borough Lane/Debden Road signalised junction</b>								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Debden Road North)	3.00	0.00	Y	Arm 6 Left	4.00	18.0 %	1715	1715
				Arm 7 Ahead	Inf	62.3 %		
				Arm 8 Right	6.00	19.7 %		
2/1 (Mount Pleasant Road East)	3.00	0.00	Y	Arm 5 Right	6.00	27.0 %	1742	1742
				Arm 7 Left	4.00	8.5 %		
				Arm 8 Ahead	Inf	64.5 %		
3/1 (Debden Road South)	3.00	0.00	Y	Arm 5 Ahead	Inf	87.6 %	1847	1847
				Arm 6 Right	6.00	7.9 %		
				Arm 8 Left	4.00	4.6 %		
4/1 (Borough Lane West)	3.00	0.00	Y	Arm 5 Left	4.00	47.0 %	1620	1620
				Arm 6 Ahead	Inf	50.7 %		
				Arm 7 Right	6.00	2.2 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

**Scenario 1: '2023 AM' (FG1: '2023 AM', Plan 1: 'Network Control Plan 1')**

**Stage Sequence Diagram**



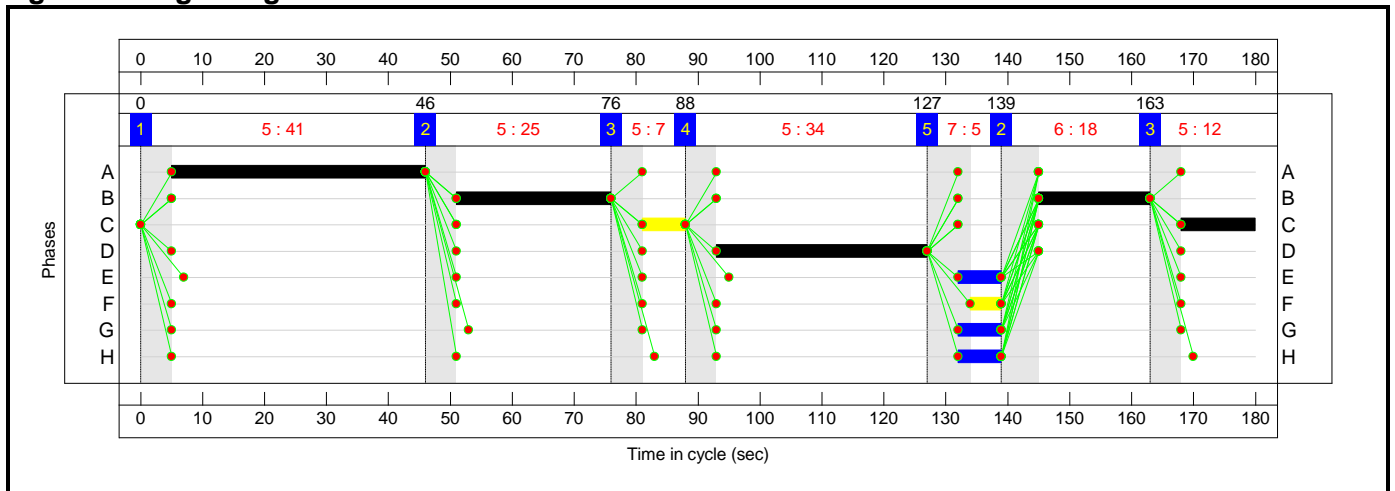
## Full Input Data And Results



## Stage Timings

Stage	1	2	3	4	5	2	3
Duration	41	25	7	34	5	18	12
Change Point	0	46	76	88	127	139	163

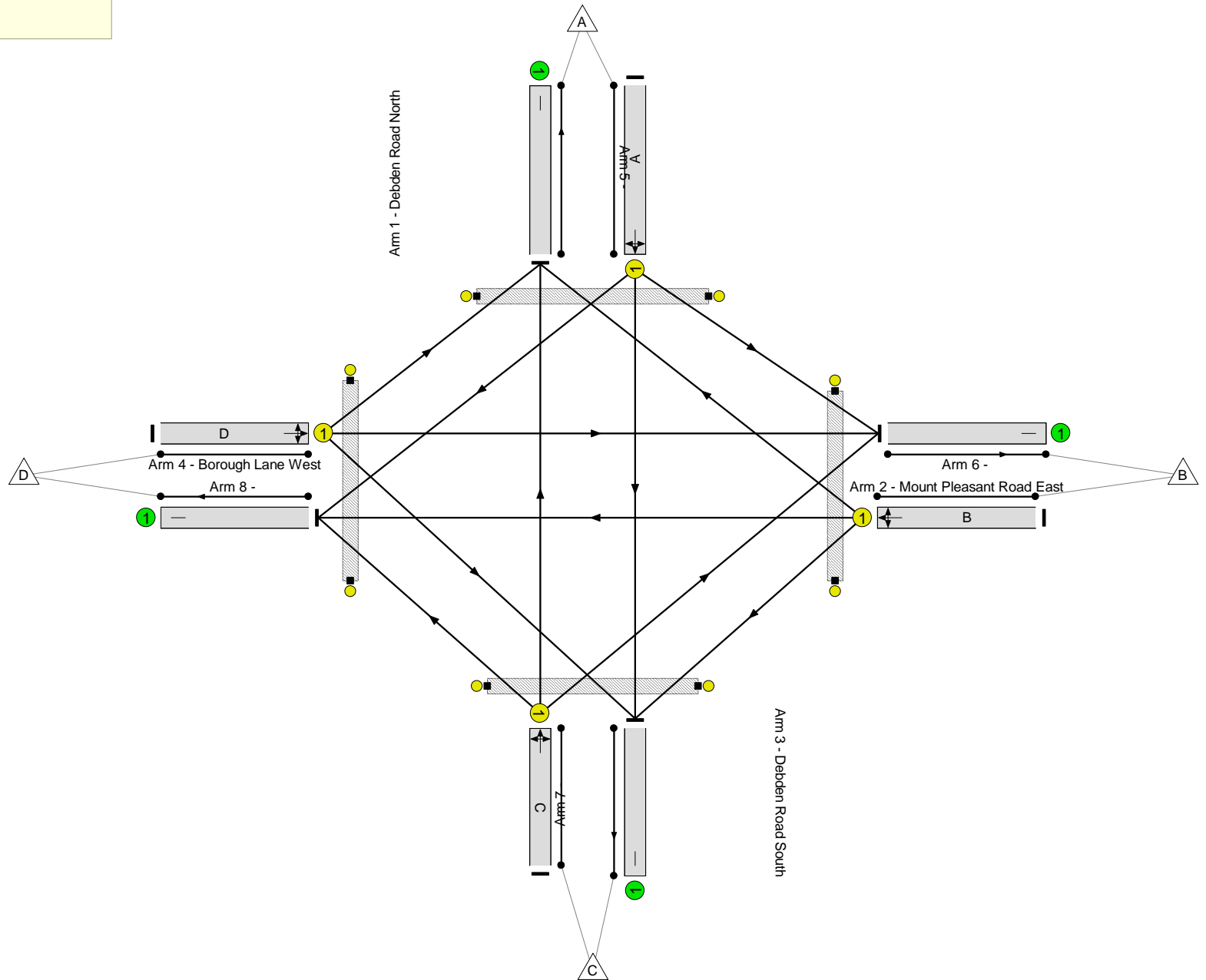
## Signal Timings Diagram



Full Input Data And Results  
**Network Layout Diagram**

# Full Input Data And Results

Mount Pleadant Road/Borough Lane/Debden Road signalised junction  
PRC: 15.6 %  
Total Traffic Delay: 21.2 pcuHr  
Ave. Route Delay Per Ped: 0.0 s/Ped



Full Input Data And Results

**Network Results**

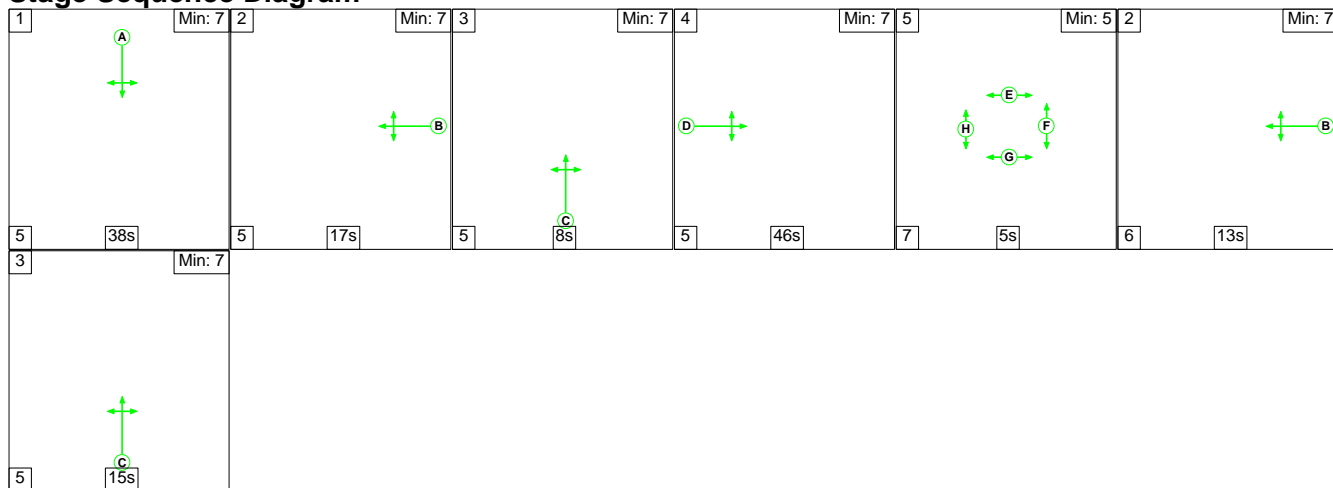
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
<b>Network</b>	-	-	N/A	-	-		-	-	-	-	-	-	77.8%
<b>Mount Pleasants Road/Borough Lane/Debden Road signalised junction</b>	-	-	N/A	-	-		-	-	-	-	-	-	77.8%
1/1	Debden Road North Left Ahead Right	U	N/A	N/A	A		1	41	-	308	1701	397	77.6%
2/1	Mount Pleasant Road East Right Left Ahead	U	N/A	N/A	B		2	43	-	332	1726	431	76.9%
3/1	Debden Road South Ahead Right Left	U	N/A	N/A	C		2	19	-	165	1817	212	77.8%
4/1	Borough Lane West Left Ahead Right	U	N/A	N/A	D		1	34	-	242	1644	320	75.7%
5/1		U	N/A	N/A	-		-	-	-	288	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	173	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	249	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	337	Inf	Inf	0.0%
Ped Link: P1	Debden Road North	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P2	Mount Pleasant Road East	-	N/A	-	F		1	5	-	0	-	0	0.0%
Ped Link: P3	Debden Road South	-	N/A	-	G		1	7	-	0	-	0	0.0%
Ped Link: P4	Borough Lane West	-	N/A	-	H		1	7	-	0	-	0	0.0%



Full Input Data And Results

Scenario 2: '2023 PM' (FG2: '2023 PM', Plan 1: 'Network Control Plan 1')

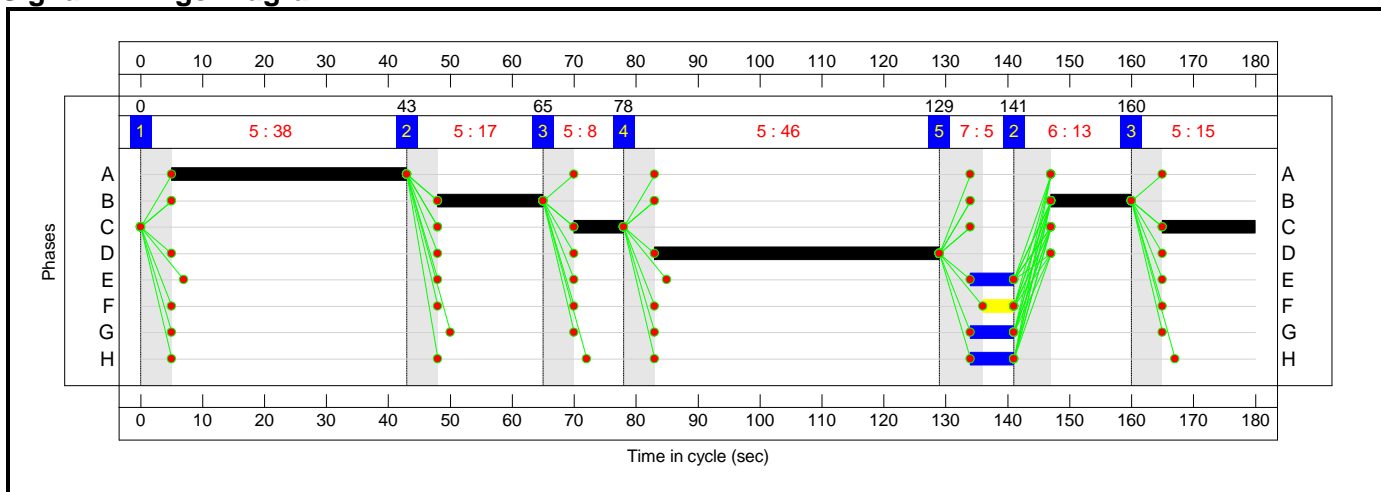
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5	2	3
Duration	38	17	8	46	5	13	15
Change Point	0	43	65	78	129	141	160

Signal Timings Diagram

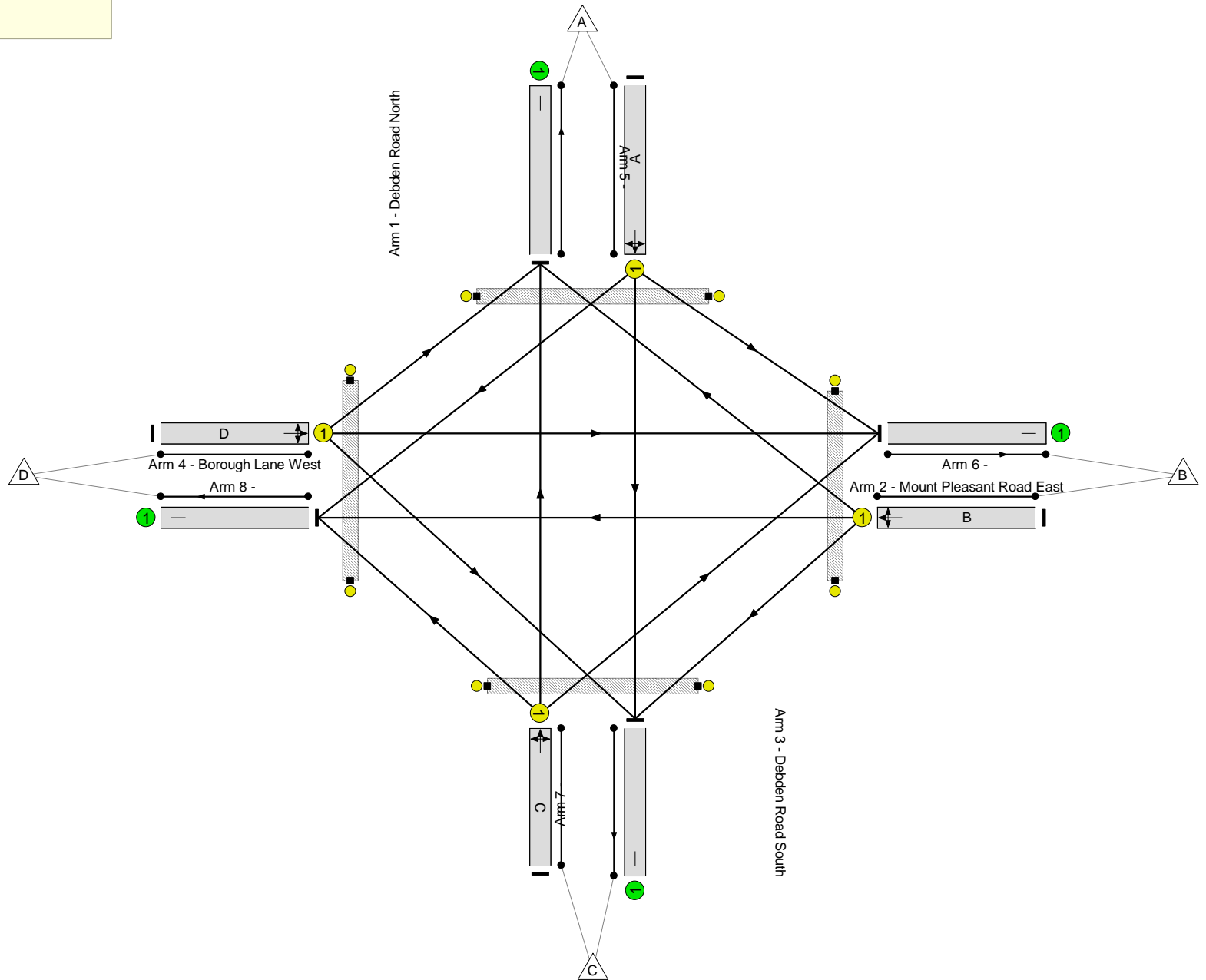




Full Input Data And Results  
**Network Layout Diagram**

# Full Input Data And Results

Mount Pleasant Road/Borough Lane/Debden Road signalised junction  
PRC: 9.8 %  
Total Traffic Delay: 24.4 pcuHr  
Ave. Route Delay Per Ped: 0.0 s/Ped



Full Input Data And Results

**Network Results**

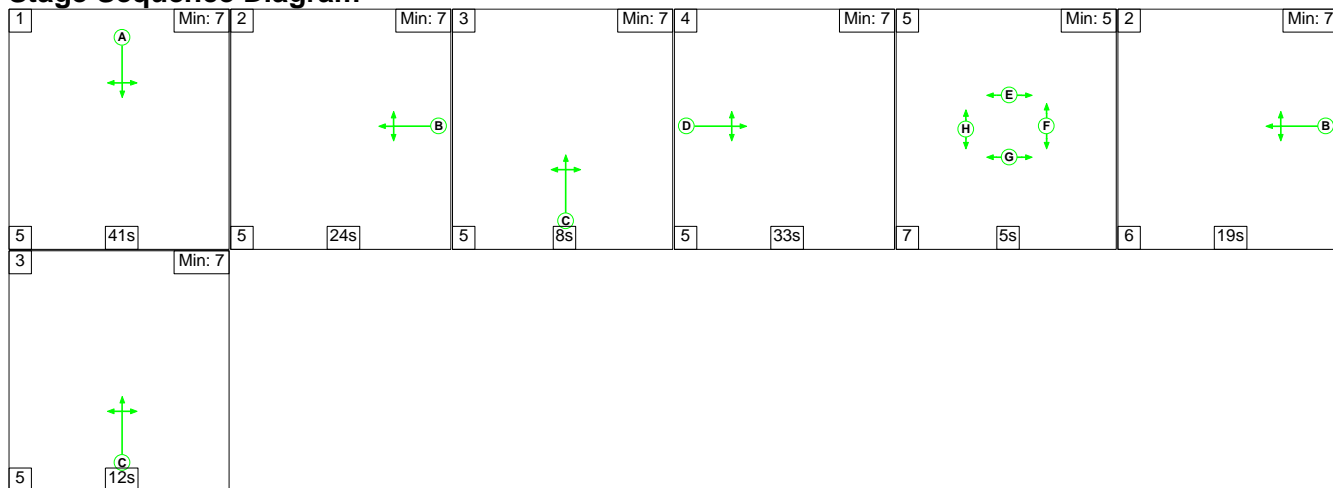
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
<b>Network</b>	-	-	N/A	-	-		-	-	-	-	-	-	82.0%
<b>Mount Pleasants Road/Borough Lane/Debden Road signalised junction</b>	-	-	N/A	-	-		-	-	-	-	-	-	82.0%
1/1	Debden Road North Left Ahead Right	U	N/A	N/A	A		1	38	-	302	1719	372	81.1%
2/1	Mount Pleasant Road East Right Left Ahead	U	N/A	N/A	B		2	30	-	247	1741	310	79.8%
3/1	Debden Road South Ahead Right Left	U	N/A	N/A	C		2	23	-	208	1842	256	81.3%
4/1	Borough Lane West Left Ahead Right	U	N/A	N/A	D		1	46	-	352	1644	429	82.0%
5/1		U	N/A	N/A	-		-	-	-	396	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	271	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	224	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	218	Inf	Inf	0.0%
Ped Link: P1	Debden Road North	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P2	Mopunt Pleasant Road East	-	N/A	-	F		1	5	-	0	-	0	0.0%
Ped Link: P3	Debden Road South	-	N/A	-	G		1	7	-	0	-	0	0.0%
Ped Link: P4	Borough Lane West	-	N/A	-	H		1	7	-	0	-	0	0.0%



Full Input Data And Results

Scenario 3: '2029 AM' (FG3: '2029 AM', Plan 1: 'Network Control Plan 1')

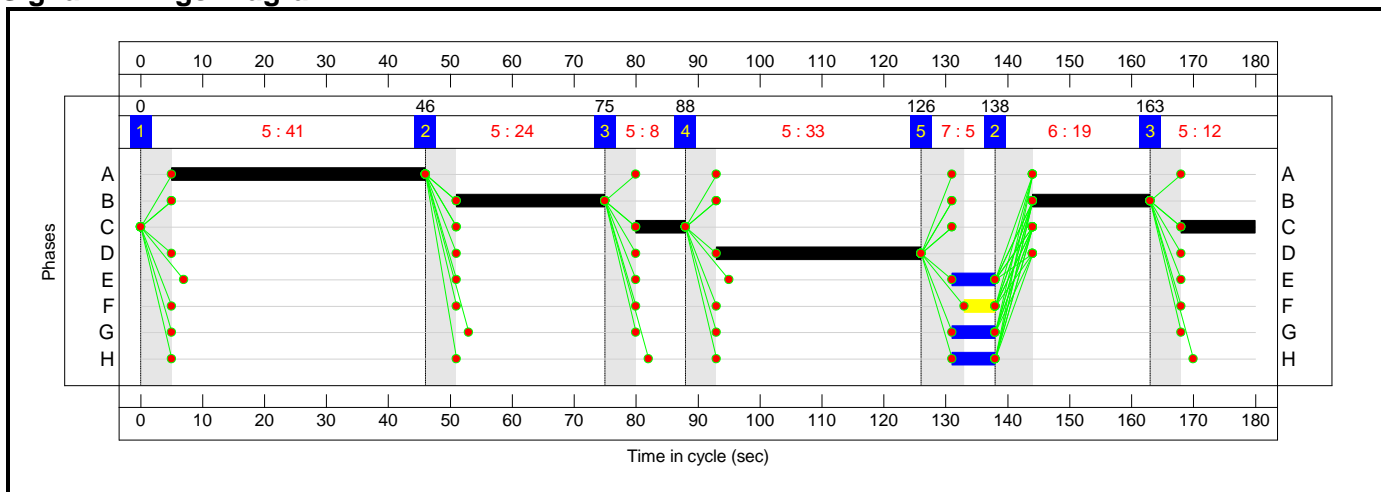
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5	2	3
Duration	41	24	8	33	5	19	12
Change Point	0	46	75	88	126	138	163

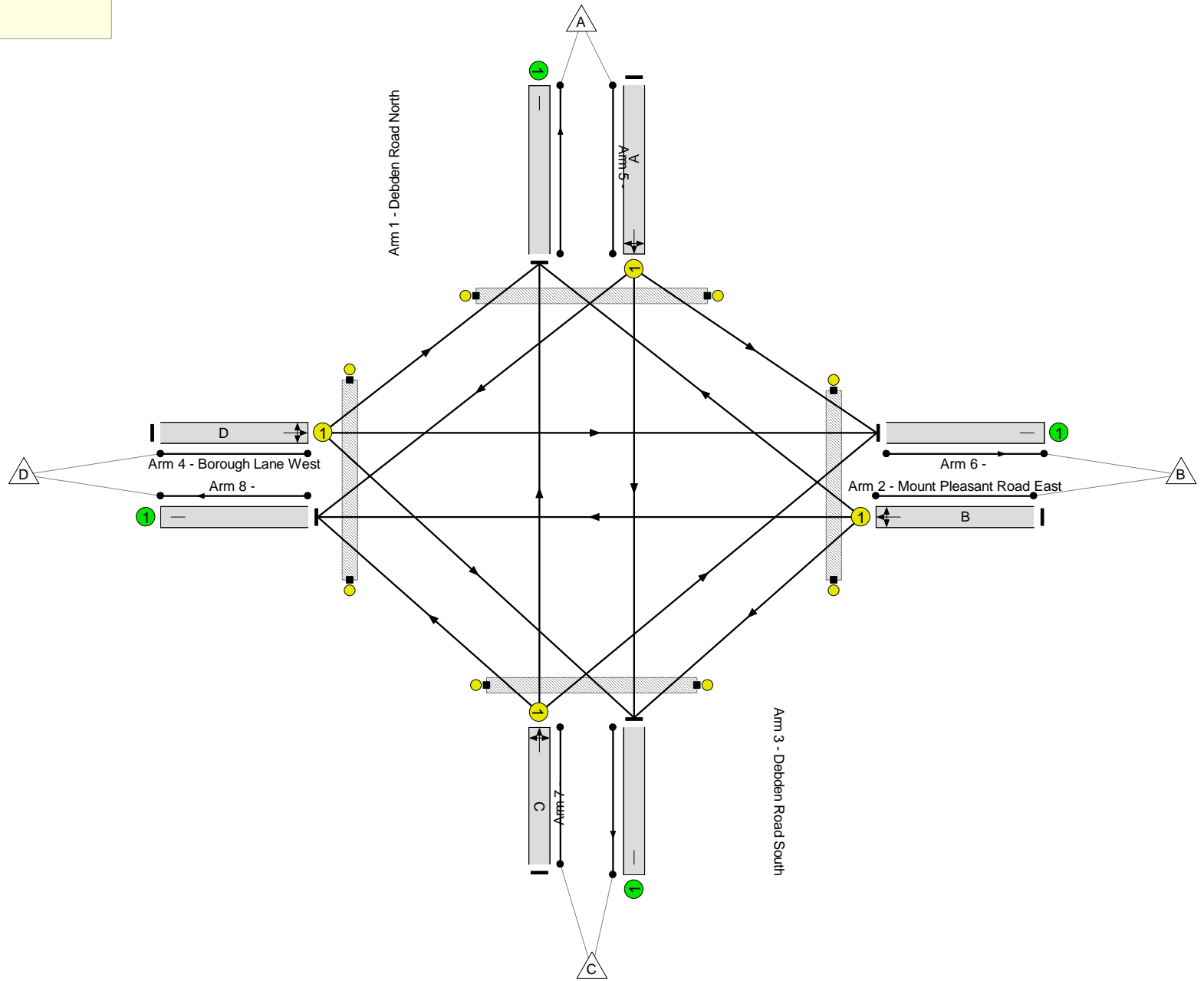
Signal Timings Diagram



Full Input Data And Results  
**Network Layout Diagram**

# Full Input Data And Results

Mount Pleadant Road/Borough Lane/Debden Road signalised junction  
PRC: 10.5 %  
Total Traffic Delay: 23.5 pcuHr  
Ave. Route Delay Per Ped: 0.0 s/Ped



Full Input Data And Results

**Network Results**

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
<b>Network</b>	-	-	N/A	-	-		-	-	-	-	-	-	81.5%
<b>Mount Pleasants Road/Borough Lane/Debden Road signalised junction</b>	-	-	N/A	-	-		-	-	-	-	-	-	81.5%
1/1	Debden Road North Left Ahead Right	U	N/A	N/A	A		1	41	-	323	1700	397	81.4%
2/1	Mount Pleasant Road East Right Left Ahead	U	N/A	N/A	B		2	43	-	348	1725	431	80.7%
3/1	Debden Road South Ahead Right Left	U	N/A	N/A	C		2	20	-	173	1815	222	78.0%
4/1	Borough Lane West Left Ahead Right	U	N/A	N/A	D		1	33	-	253	1644	311	81.5%
5/1		U	N/A	N/A	-		-	-	-	301	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	182	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	261	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	353	Inf	Inf	0.0%
Ped Link: P1	Debden Road North	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P2	Mopunt Pleasant Road East	-	N/A	-	F		1	5	-	0	-	0	0.0%
Ped Link: P3	Debden Road South	-	N/A	-	G		1	7	-	0	-	0	0.0%
Ped Link: P4	Borough Lane West	-	N/A	-	H		1	7	-	0	-	0	0.0%



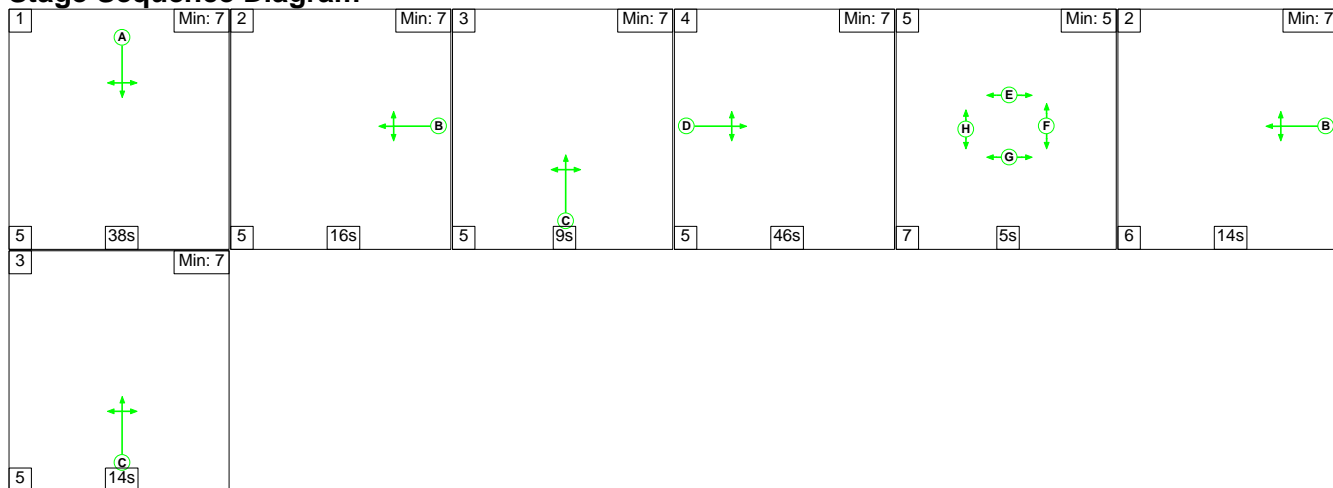
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	0	0	0	15.7	7.8	0.0	23.5	-	-	-	-
Mount Pleasants Road/Borough Lane/Debden Road signalised junction	-	-	0	0	0	15.7	7.8	0.0	23.5	-	-	-	-
1/1	323	323	-	-	-	5.9	2.1	-	7.9	88.4	15.3	2.1	17.3
2/1	348	348	-	-	-	3.1	2.0	-	5.1	52.3	8.2	2.0	10.2
3/1	173	173	-	-	-	1.8	1.7	-	3.5	72.9	4.2	1.7	5.8
4/1	253	253	-	-	-	4.9	2.1	-	7.0	99.2	12.1	2.1	14.1
5/1	301	301	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	182	182	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	261	261	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	353	353	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
C1                      PRC for Signalled Lanes (%): 10.5                      Total Delay for Signalled Lanes (pcuHr): 23.47                      Cycle Time (s): 180 PRC Over All Lanes (%): 10.5                      Total Delay Over All Lanes(pcuHr): 23.47													

Full Input Data And Results

Scenario 4: '2029 PM' (FG4: '2029 PM', Plan 1: 'Network Control Plan 1')

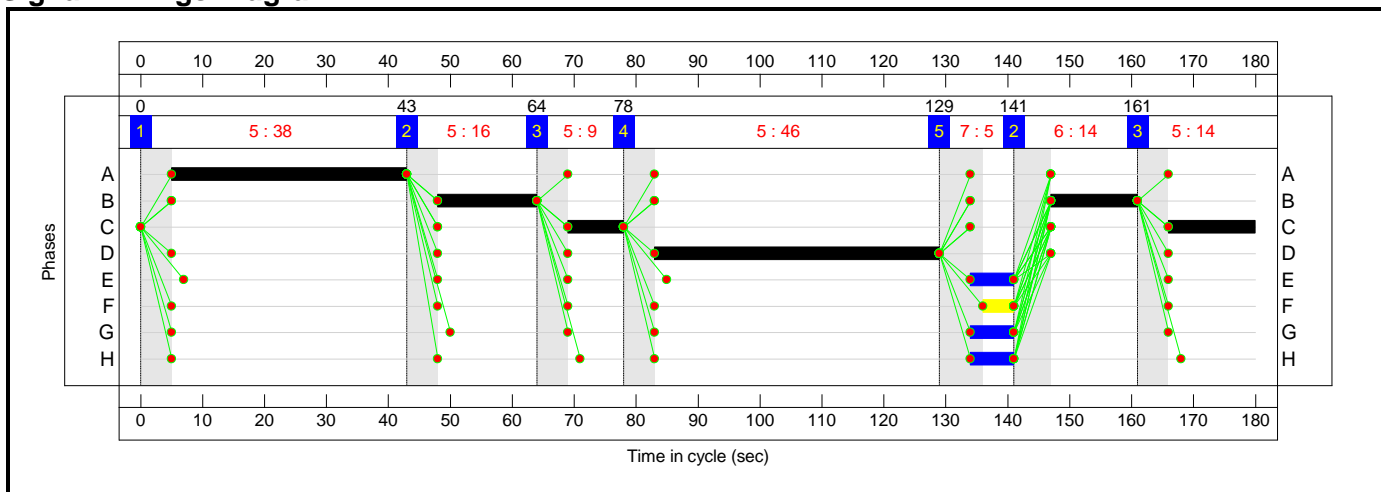
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5	2	3
Duration	38	16	9	46	5	14	14
Change Point	0	43	64	78	129	141	161

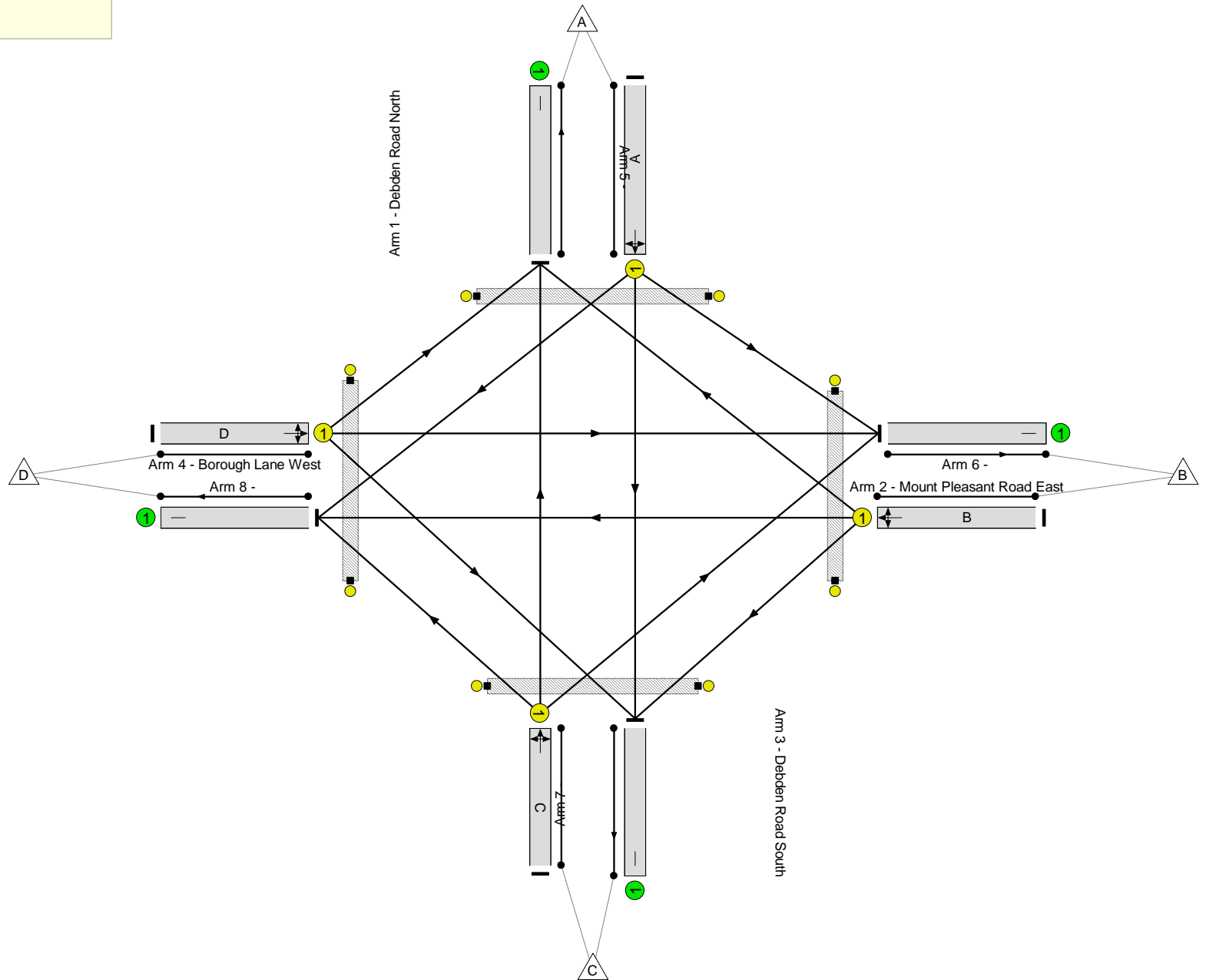
Signal Timings Diagram



Full Input Data And Results  
**Network Layout Diagram**

# Full Input Data And Results

Mount Pleasant Road/Borough Lane/Debden Road signalised junction  
PRC: 4.7 %  
Total Traffic Delay: 27.8 pcuHr  
Ave. Route Delay Per Ped: 0.0 s/Ped



Full Input Data And Results

**Network Results**

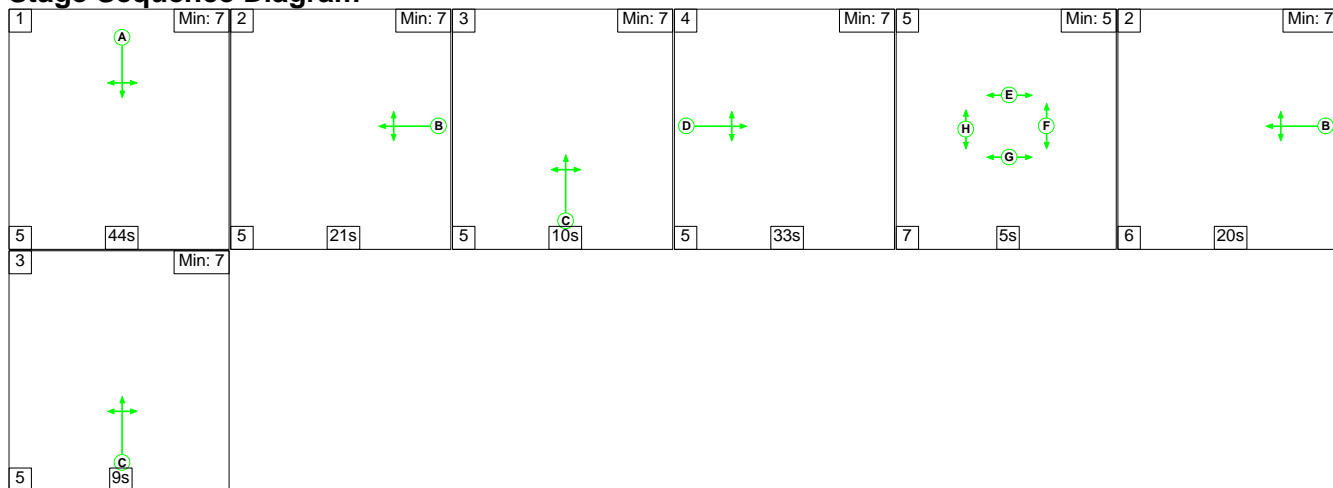
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
<b>Network</b>	-	-	N/A	-	-		-	-	-	-	-	-	86.0%
<b>Mount Pleasants Road/Borough Lane/Debden Road signalised junction</b>	-	-	N/A	-	-		-	-	-	-	-	-	86.0%
1/1	Debden Road North Left Ahead Right	U	N/A	N/A	A		1	38	-	317	1720	373	85.1%
2/1	Mount Pleasant Road East Right Left Ahead	U	N/A	N/A	B		2	30	-	259	1742	310	83.6%
3/1	Debden Road South Ahead Right Left	U	N/A	N/A	C		2	23	-	219	1840	256	85.7%
4/1	Borough Lane West Left Ahead Right	U	N/A	N/A	D		1	46	-	369	1644	429	86.0%
5/1		U	N/A	N/A	-		-	-	-	415	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	285	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	235	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	229	Inf	Inf	0.0%
Ped Link: P1	Debden Road North	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P2	Mount Pleasant Road East	-	N/A	-	F		1	5	-	0	-	0	0.0%
Ped Link: P3	Debden Road South	-	N/A	-	G		1	7	-	0	-	0	0.0%
Ped Link: P4	Borough Lane West	-	N/A	-	H		1	7	-	0	-	0	0.0%



Full Input Data And Results

Scenario 5: '2029 + Com AM' (FG5: '2029 + Com AM', Plan 1: 'Network Control Plan 1')

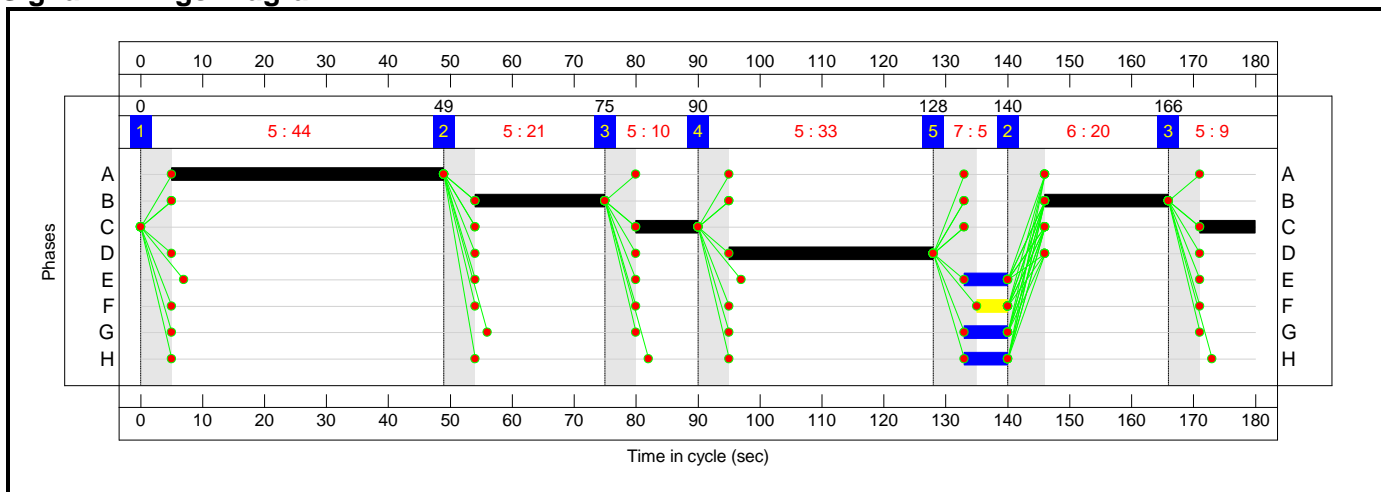
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5	2	3
Duration	44	21	10	33	5	20	9
Change Point	0	49	75	90	128	140	166

Signal Timings Diagram

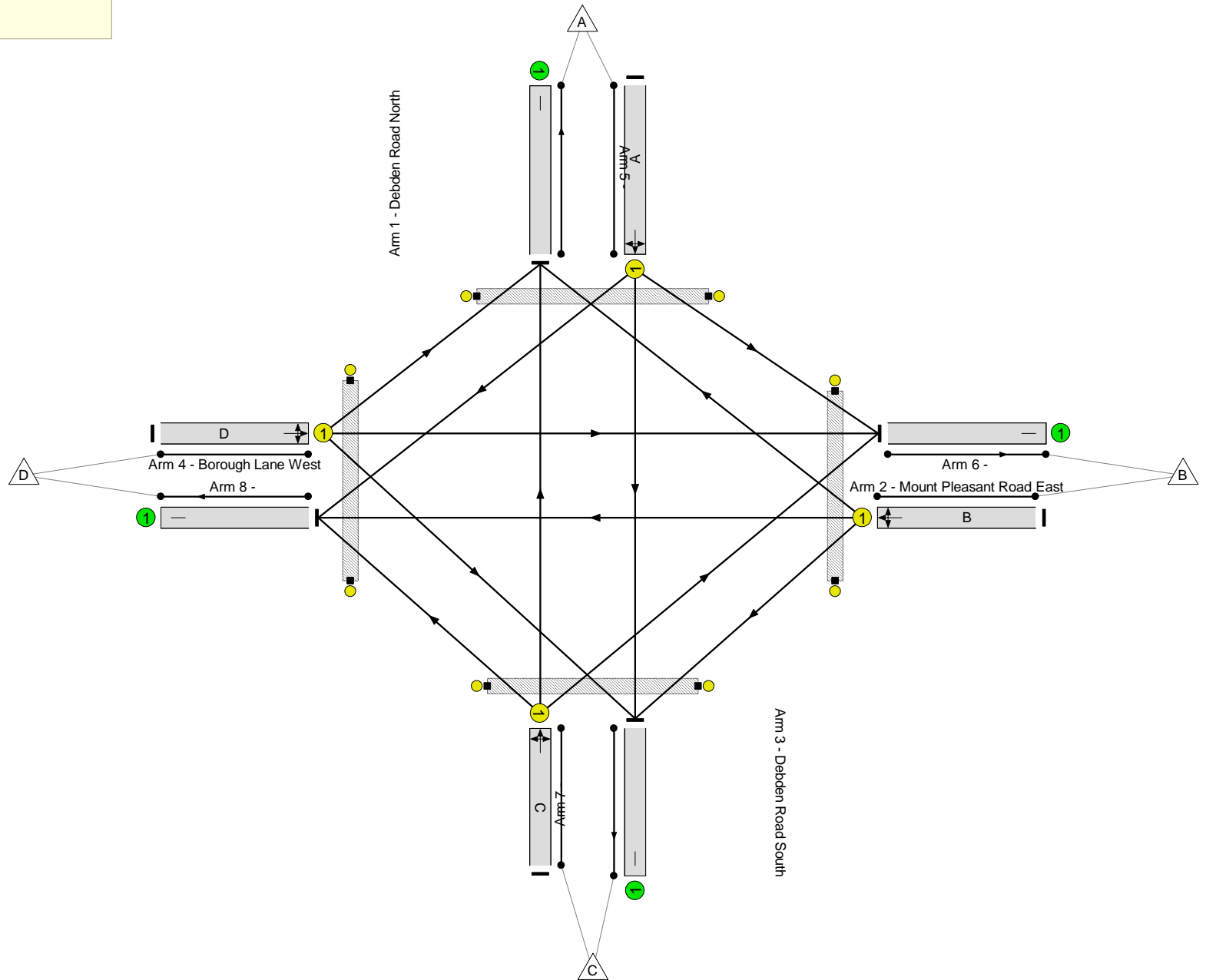


Full Input Data And Results  
**Network Layout Diagram**



# Full Input Data And Results

Mount Pleasant Road/Borough Lane/Debden Road signalised junction  
PRC: 6.6 %  
Total Traffic Delay: 25.8 pcuHr  
Ave. Route Delay Per Ped: 0.0 s/Ped



Full Input Data And Results

**Network Results**

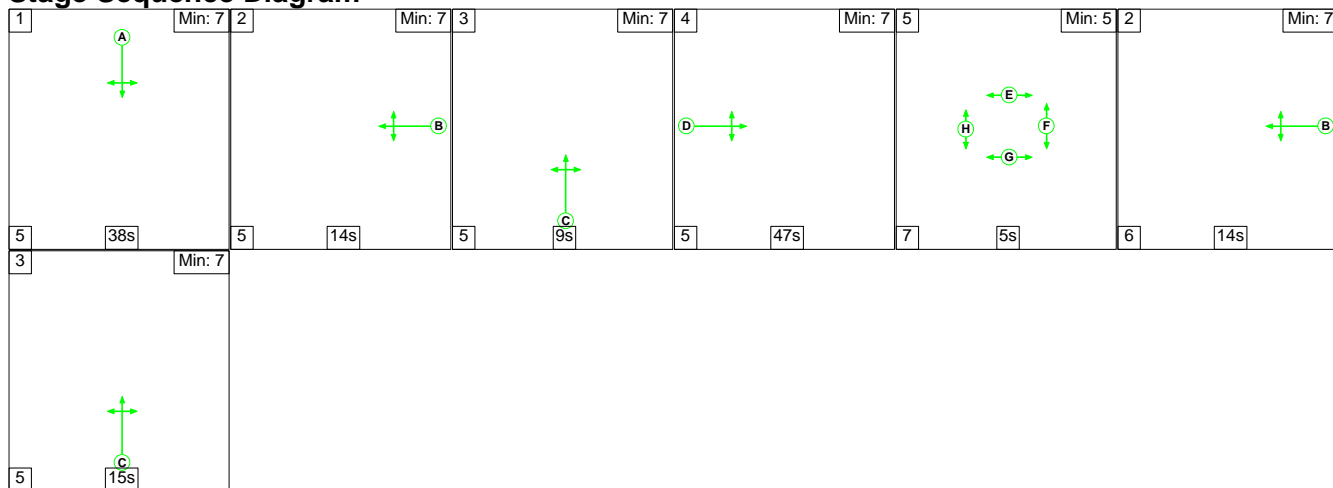
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
<b>Network</b>	-	-	N/A	-	-		-	-	-	-	-	-	84.4%
<b>Mount Pleasants Road/Borough Lane/Debden Road signalised junction</b>	-	-	N/A	-	-		-	-	-	-	-	-	84.4%
1/1	Debden Road North Left Ahead Right	U	N/A	N/A	A		1	44	-	353	1697	424	83.2%
2/1	Mount Pleasant Road East Right Left Ahead	U	N/A	N/A	B		2	41	-	348	1725	412	84.4%
3/1	Debden Road South Ahead Right Left	U	N/A	N/A	C		2	19	-	177	1817	212	83.5%
4/1	Borough Lane West Left Ahead Right	U	N/A	N/A	D		1	33	-	258	1639	310	83.3%
5/1		U	N/A	N/A	-		-	-	-	310	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	182	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	273	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	371	Inf	Inf	0.0%
Ped Link: P1	Debden Road North	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P2	Mount Pleasant Road East	-	N/A	-	F		1	5	-	0	-	0	0.0%
Ped Link: P3	Debden Road South	-	N/A	-	G		1	7	-	0	-	0	0.0%
Ped Link: P4	Borough Lane West	-	N/A	-	H		1	7	-	0	-	0	0.0%



Full Input Data And Results

Scenario 6: '2029 +Com PM' (FG6: '2029 + Com PM', Plan 1: 'Network Control Plan 1')

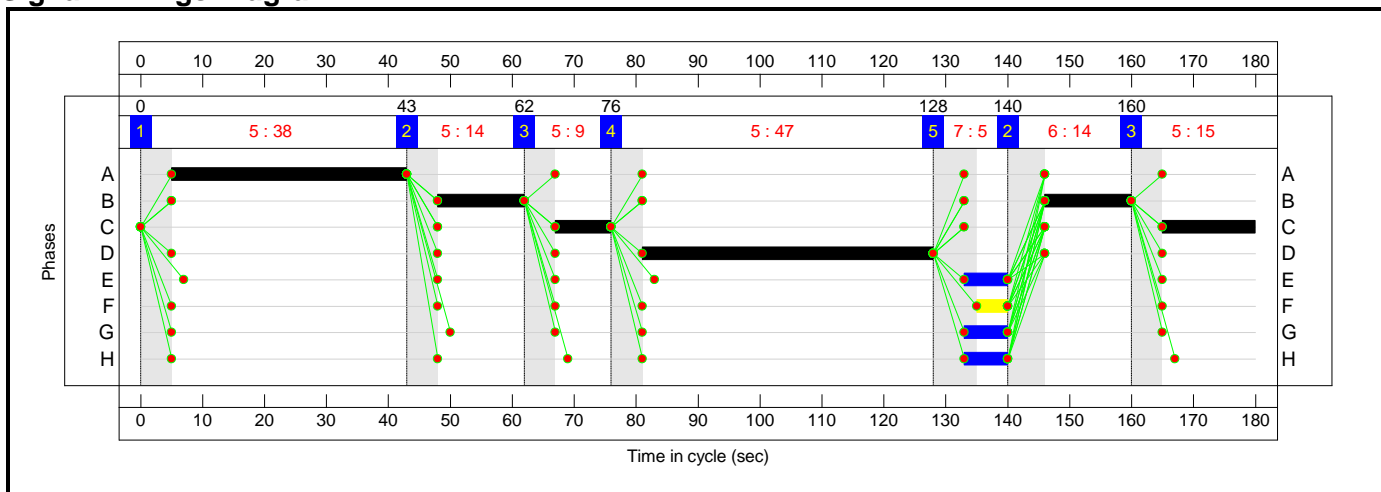
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5	2	3
Duration	38	14	9	47	5	14	15
Change Point	0	43	62	76	128	140	160

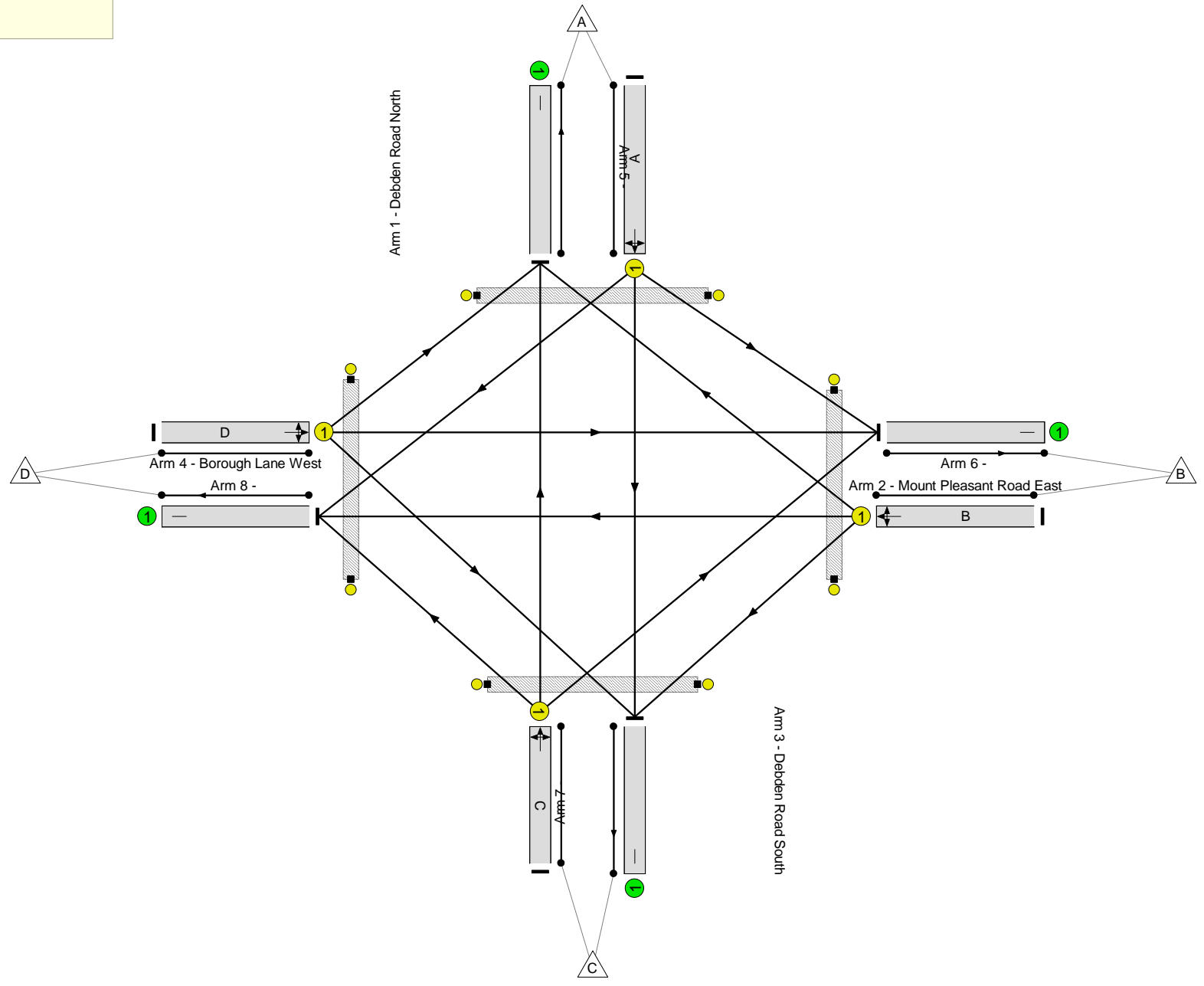
Signal Timings Diagram



Full Input Data And Results  
**Network Layout Diagram**

# Full Input Data And Results

Mount Pleadant Road/Borough Lane/Debden Road signalised junction  
PRC: 0.5 %  
Total Traffic Delay: 31.6 pcuHr  
Ave. Route Delay Per Ped: 0.0 s/Ped



Full Input Data And Results

**Network Results**

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
<b>Network</b>	-	-	N/A	-	-		-	-	-	-	-	-	89.5%
<b>Mount Pleasants Road/Borough Lane/Debden Road signalised junction</b>	-	-	N/A	-	-		-	-	-	-	-	-	89.5%
1/1	Debden Road North Left Ahead Right	U	N/A	N/A	A		1	38	-	333	1717	372	89.5%
2/1	Mount Pleasant Road East Right Left Ahead	U	N/A	N/A	B		2	28	-	259	1742	290	89.2%
3/1	Debden Road South Ahead Right Left	U	N/A	N/A	C		2	24	-	230	1844	266	86.4%
4/1	Borough Lane West Left Ahead Right	U	N/A	N/A	D		1	47	-	387	1631	435	89.0%
5/1		U	N/A	N/A	-		-	-	-	444	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	285	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	241	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	239	Inf	Inf	0.0%
Ped Link: P1	Debden Road North	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P2	Mopunt Pleasant Road East	-	N/A	-	F		1	5	-	0	-	0	0.0%
Ped Link: P3	Debden Road South	-	N/A	-	G		1	7	-	0	-	0	0.0%
Ped Link: P4	Borough Lane West	-	N/A	-	H		1	7	-	0	-	0	0.0%

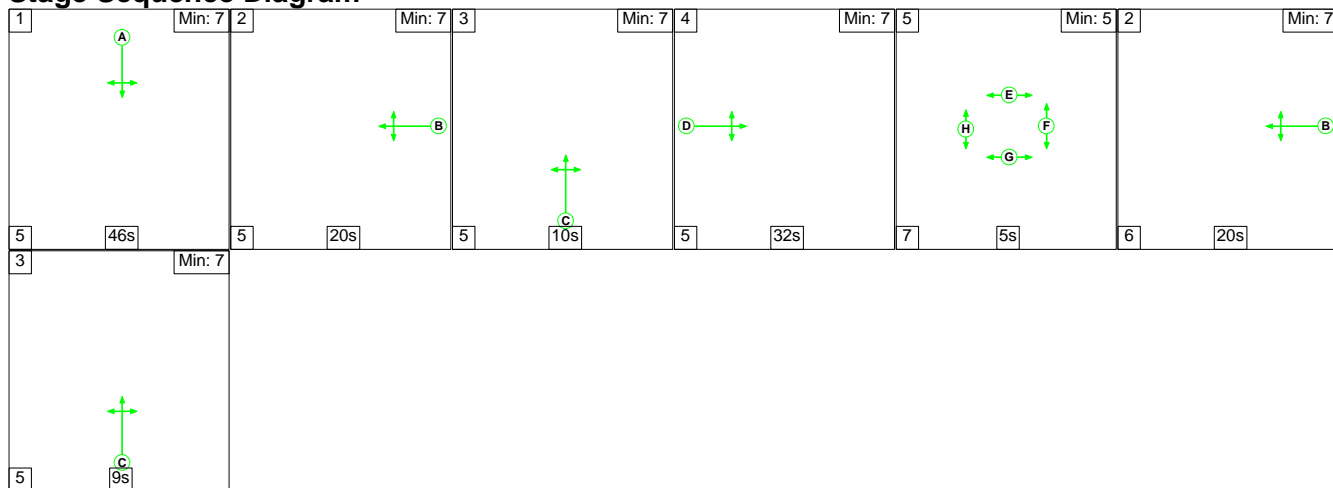




Full Input Data And Results

Scenario 7: '2029 + Com + Dev AM' (FG7: '2029 + Com + Dev AM', Plan 1: 'Network Control Plan 1')

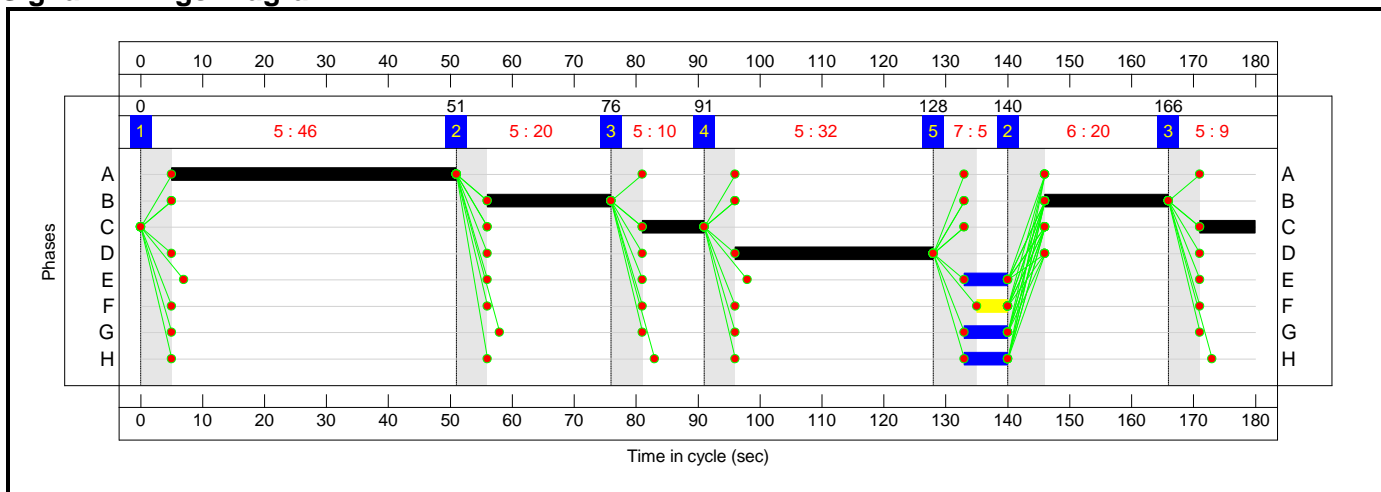
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5	2	3
Duration	46	20	10	32	5	20	9
Change Point	0	51	76	91	128	140	166

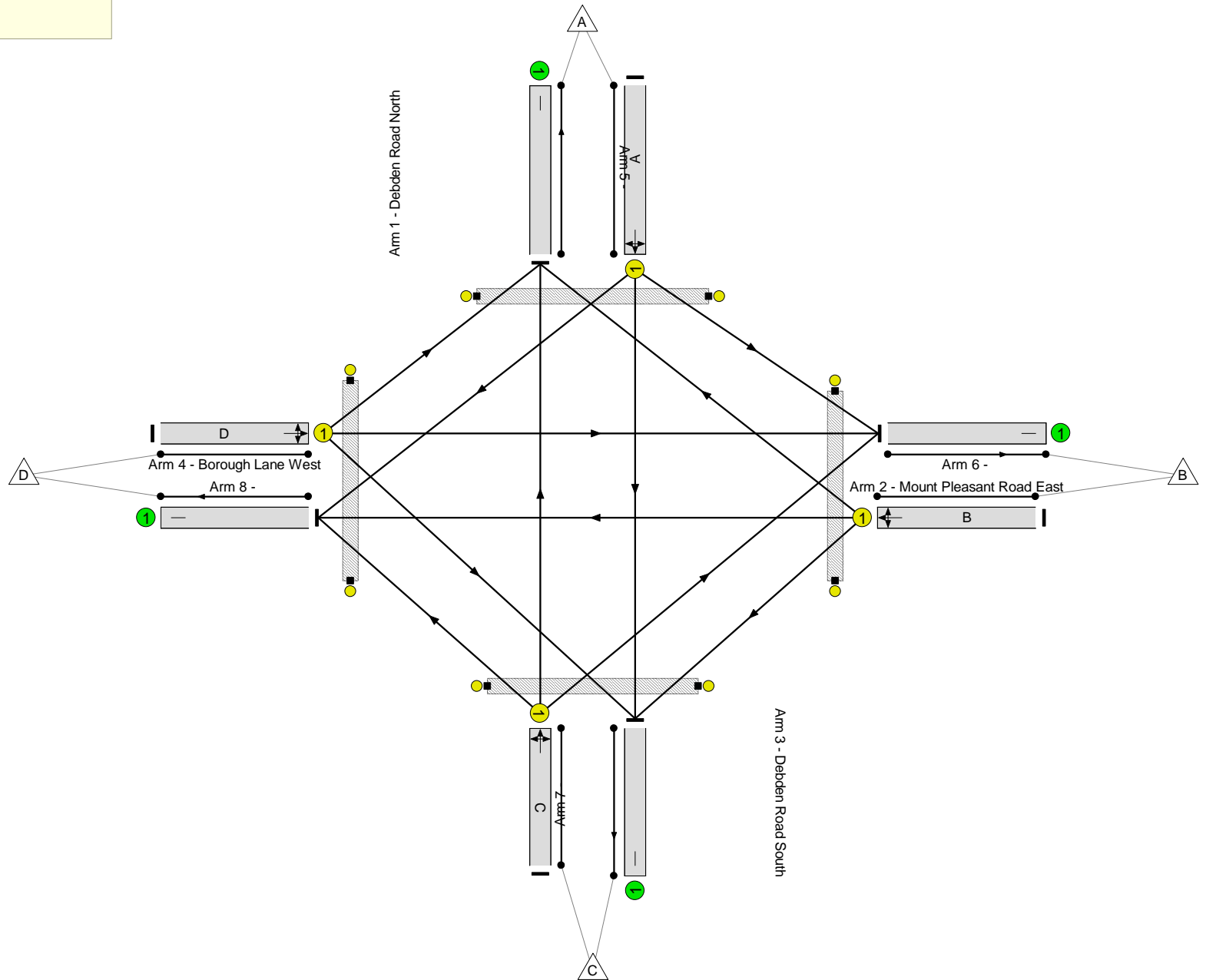
Signal Timings Diagram



Full Input Data And Results  
**Network Layout Diagram**

# Full Input Data And Results

Mount Pleadant Road/Borough Lane/Debden Road signalised junction  
PRC: 2.9%  
Total Traffic Delay: 28.2 pcuHr  
Ave. Route Delay Per Ped: 0.0 s/Ped



Full Input Data And Results

**Network Results**

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
<b>Network</b>	-	-	N/A	-	-		-	-	-	-	-	-	87.5%
<b>Mount Pleasants Road/Borough Lane/Debden Road signalised junction</b>	-	-	N/A	-	-		-	-	-	-	-	-	87.5%
1/1	Debden Road North Left Ahead Right	U	N/A	N/A	A		1	46	-	381	1695	443	86.1%
2/1	Mount Pleasant Road East Right Left Ahead	U	N/A	N/A	B		2	40	-	348	1725	403	86.5%
3/1	Debden Road South Ahead Right Left	U	N/A	N/A	C		2	19	-	180	1819	212	84.8%
4/1	Borough Lane West Left Ahead Right	U	N/A	N/A	D		1	32	-	262	1634	300	87.5%
5/1		U	N/A	N/A	-		-	-	-	317	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	182	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	284	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	388	Inf	Inf	0.0%
Ped Link: P1	Debden Road North	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P2	Mount Pleasant Road East	-	N/A	-	F		1	5	-	0	-	0	0.0%
Ped Link: P3	Debden Road South	-	N/A	-	G		1	7	-	0	-	0	0.0%
Ped Link: P4	Borough Lane West	-	N/A	-	H		1	7	-	0	-	0	0.0%

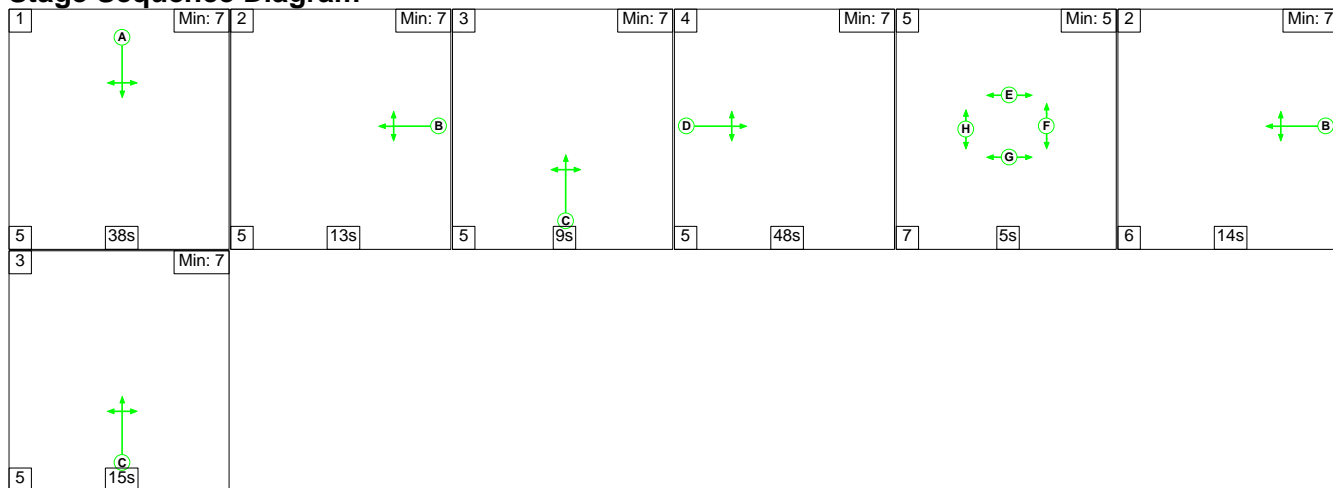
Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	0	0	0	17.1	11.2	0.0	28.2	-	-	-	-
Mount Pleadsant Road/Borough Lane/Debden Road signalised junction	-	-	0	0	0	17.1	11.2	0.0	28.2	-	-	-	-
1/1	381	381	-	-	-	6.7	2.8	-	9.5	90.2	18.1	2.8	20.9
2/1	348	348	-	-	-	3.2	2.9	-	6.1	63.0	8.3	2.9	11.2
3/1	180	180	-	-	-	1.9	2.4	-	4.4	87.5	4.4	2.4	6.8
4/1	262	262	-	-	-	5.2	3.0	-	8.2	112.8	12.7	3.0	15.7
5/1	317	317	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	182	182	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	284	284	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	388	388	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P3	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P4	0	0	-	-	-	-	-	-	-	-	-	-	-
C1                      PRC for Signalled Lanes (%):    2.9                      Total Delay for Signalled Lanes (pcuHr):    28.22                      Cycle Time (s):    180 PRC Over All Lanes (%):    2.9                      Total Delay Over All Lanes(pcuHr):    28.22													

Full Input Data And Results

Scenario 8: '2029 + Com + Dev PM' (FG8: '2029 + Com + Dev PM', Plan 1: 'Network Control Plan 1')

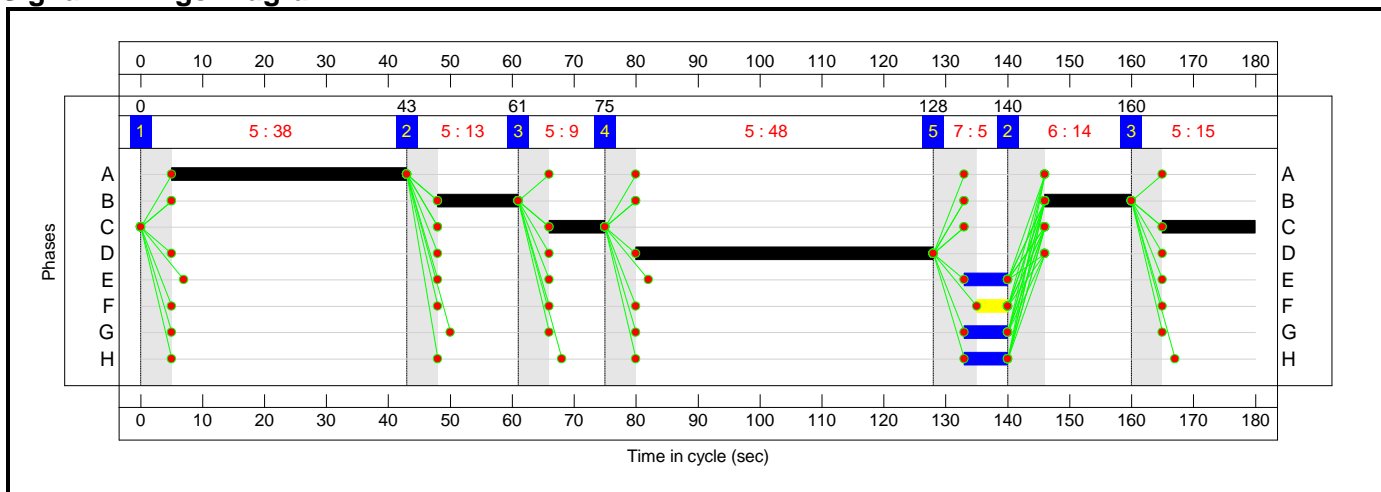
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	5	2	3
Duration	38	13	9	48	5	14	15
Change Point	0	43	61	75	128	140	160

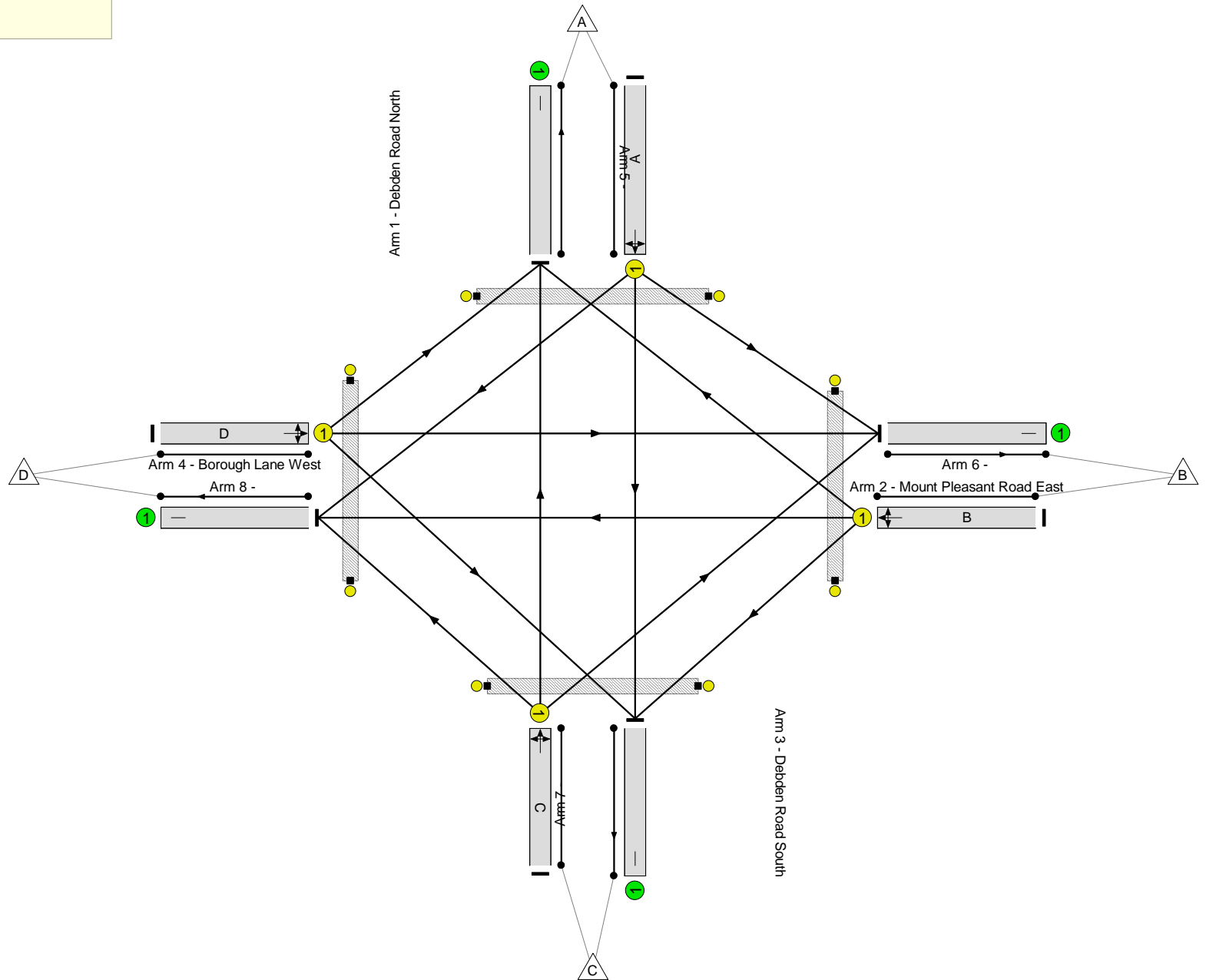
Signal Timings Diagram



Full Input Data And Results  
**Network Layout Diagram**

# Full Input Data And Results

Mount Pleasant Road/Borough Lane/Debden Road signalised junction  
PRC: -3.2 %  
Total Traffic Delay: 36.0 pcuHr  
Ave. Route Delay Per Ped: 0.0 s/Ped





Full Input Data And Results

**Network Results**

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	92.8%
Mount Pleasants Road/Borough Lane/Debden Road signalised junction	-	-	N/A	-	-		-	-	-	-	-	-	92.8%
1/1	Debden Road North Left Ahead Right	U	N/A	N/A	A		1	38	-	345	1715	372	92.8%
2/1	Mount Pleasant Road East Right Left Ahead	U	N/A	N/A	B		2	27	-	259	1742	281	92.3%
3/1	Debden Road South Ahead Right Left	U	N/A	N/A	C		2	24	-	241	1847	267	90.3%
4/1	Borough Lane West Left Ahead Right	U	N/A	N/A	D		1	48	-	402	1620	441	91.2%
5/1		U	N/A	N/A	-		-	-	-	470	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	285	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	246	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	246	Inf	Inf	0.0%
Ped Link: P1	Debden Road North	-	N/A	-	E		1	7	-	0	-	0	0.0%
Ped Link: P2	Mopunt Pleasant Road East	-	N/A	-	F		1	5	-	0	-	0	0.0%
Ped Link: P3	Debden Road South	-	N/A	-	G		1	7	-	0	-	0	0.0%
Ped Link: P4	Borough Lane West	-	N/A	-	H		1	7	-	0	-	0	0.0%



<h1>Junctions 9</h1>
<h2>ARCADY 9 - Roundabout Module</h2>
Version: 9.0.2.5947 © Copyright TRL Limited, 2017
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**Filename:** Junction 3 Peaslands Road- Hop Fields Mini-Roundabout.j9

**Path:** P:\Eastern\1031-1040\1033 Chase New Homes\1033.0002 Mount Pleasant Road, Saffron Walden\03 Technical\TPL\Modelling\Junction 3 Peaslands Road- Hop Fields Mini-Roundabout

**Report generation date:** 24/05/2024 08:58:05

- »2023, AM
- »2023, PM
- »2029, AM
- »2029, PM
- »2029 + COM, AM
- »2029 + COM, PM
- »2029 + COM + PROPOSED DEV, AM
- »2029 + COM + PROPOSED DEV, PM

### Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
<b>2023</b>								
Arm 1	0.6	6.05	0.36	A	0.3	5.00	0.26	A
Arm 2	0.1	4.99	0.08	A	0.0	4.31	0.01	A
Arm 3	0.6	6.25	0.39	A	0.2	4.53	0.18	A
<b>2029</b>								
Arm 1	0.6	6.23	0.38	A	0.4	5.10	0.27	A
Arm 2	0.1	5.07	0.08	A	0.0	4.35	0.01	A
Arm 3	0.7	6.45	0.41	A	0.2	4.59	0.19	A
<b>2029 + COM</b>								
Arm 1	0.7	6.31	0.39	A	0.4	5.12	0.27	A
Arm 2	0.1	5.10	0.08	A	0.0	4.36	0.01	A
Arm 3	0.7	6.47	0.41	A	0.3	4.62	0.20	A
<b>2029 + COM + PROPOSED DEV</b>								
Arm 1	0.7	6.21	0.40	A	0.4	5.15	0.28	A
Arm 2	0.1	5.13	0.08	A	0.0	4.37	0.01	A
Arm 3	0.7	6.38	0.41	A	0.3	4.66	0.21	A

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

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

### File summary

#### File Description

Title	(untitled)
-------	------------

Location	
Site number	
Date	19/10/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	AD\model.pc
Description	

## Units

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

## Analysis Options

Mini-roundabout model	Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
JUNCTIONS 9			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)
D1	2023	AM	ONE HOUR	07:45	09:15	15
D2	2023	PM	ONE HOUR	16:45	18:15	15
D3	2029	AM	ONE HOUR	07:45	09:15	15
D4	2029	PM	ONE HOUR	16:45	18:15	15
D5	2029 + COM	AM	ONE HOUR	07:45	09:15	15
D6	2029 + COM	PM	ONE HOUR	16:45	18:15	15
D7	2029 + COM + PROPOSED DEV	AM	ONE HOUR	07:45	09:15	15
D8	2029 + COM + PROPOSED DEV	PM	ONE HOUR	16:45	18:15	15

## Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

# 2023, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 92% of the total flow for the roundabout for one or more time segments]

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	6.06	A

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Arms

### Arms

Arm	Name	Description
1	Peaslands Road West	
2	Hop Fields North	
3	Peaslands Road East	

### Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1	3.00	3.00	3.00	0.0	5.00	2.00	0.0	
2	3.00	3.00	3.00	0.0	5.00	2.00	0.0	
3	3.00	3.00	3.00	0.0	5.00	2.00	0.0	

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.590	985
2	0.590	985
3	0.590	985

*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)
D1	2023	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	320	100.000
2		✓	57	100.000
3		✓	339	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	11	309
	2	30	0	27
	3	316	23	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	4
	2	0	0	0
	3	3	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.36	6.05	0.6	A
2	0.08	4.99	0.1	A
3	0.39	6.25	0.6	A

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	241	17	975	0.247	240	0.3	5.076	A
2	43	231	848	0.051	43	0.1	4.467	A
3	255	22	972	0.263	254	0.4	5.144	A

#### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	288	21	973	0.296	287	0.4	5.453	A
2	51	277	821	0.062	51	0.1	4.675	A

3	305	27	969	0.315	304	0.5	5.564	A
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**08:15 - 08:30**

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	352	25	970	0.363	352	0.6	6.041	A
2	63	340	784	0.080	63	0.1	4.987	A
3	373	33	965	0.387	373	0.6	6.233	A

**08:30 - 08:45**

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	352	25	970	0.363	352	0.6	6.053	A
2	63	340	784	0.080	63	0.1	4.990	A
3	373	33	965	0.387	373	0.6	6.248	A

**08:45 - 09:00**

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	288	21	973	0.296	288	0.4	5.469	A
2	51	278	821	0.062	51	0.1	4.679	A
3	305	27	969	0.315	305	0.5	5.582	A

**09:00 - 09:15**

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	241	17	975	0.247	241	0.3	5.100	A
2	43	233	847	0.051	43	0.1	4.475	A
3	255	23	972	0.263	256	0.4	5.171	A

# 2023, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 97% of the total flow for the roundabout for one or more time segments]

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	4.79	A

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## 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)
D2	2023	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	229	100.000
2		✓	10	100.000
3		✓	163	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	16	213
	2	5	0	5
	3	153	10	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3



From	1	0	0	1
	2	0	0	0
	3	1	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.26	5.00	0.3	A
2	0.01	4.31	0.0	A
3	0.18	4.53	0.2	A

### Main Results for each time segment

#### 16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	172	7	980	0.176	172	0.2	4.487	A
2	8	160	891	0.008	7	0.0	4.075	A
3	123	4	983	0.125	122	0.1	4.220	A

#### 17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	206	9	980	0.210	206	0.3	4.693	A
2	9	191	872	0.010	9	0.0	4.171	A
3	147	4	982	0.149	146	0.2	4.347	A

#### 17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	252	11	978	0.258	252	0.3	4.998	A
2	11	234	847	0.013	11	0.0	4.307	A
3	179	5	982	0.183	179	0.2	4.527	A

#### 17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	252	11	978	0.258	252	0.3	5.002	A
2	11	235	846	0.013	11	0.0	4.308	A
3	179	6	982	0.183	179	0.2	4.529	A

#### 17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	206	9	980	0.210	206	0.3	4.701	A
2	9	192	872	0.010	9	0.0	4.172	A
3	147	5	982	0.149	147	0.2	4.349	A

#### 18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS

1	172	8	980	0.176	173	0.2	4.500	A
2	8	161	890	0.008	8	0.0	4.078	A
3	123	4	983	0.125	123	0.1	4.226	A

# 2029, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 92% of the total flow for the roundabout for one or more time segments]

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	6.24	A

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## 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)
D3	2029	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	335	100.000
2		✓	59	100.000
3		✓	355	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	12	323
	2	31	0	28
	3	331	24	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3

From	1	0	0	4
	2	0	0	0
	3	3	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.38	6.23	0.6	A
2	0.08	5.07	0.1	A
3	0.41	6.45	0.7	A

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	252	18	974	0.259	251	0.4	5.157	A
2	44	242	842	0.053	44	0.1	4.510	A
3	267	23	971	0.275	266	0.4	5.234	A

#### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	301	22	972	0.310	301	0.5	5.564	A
2	53	290	814	0.065	53	0.1	4.731	A
3	319	28	968	0.330	319	0.5	5.691	A

#### 08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	369	26	969	0.381	368	0.6	6.213	A
2	65	355	775	0.084	65	0.1	5.066	A
3	391	34	965	0.405	390	0.7	6.432	A

#### 08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	369	26	969	0.381	369	0.6	6.225	A
2	65	356	775	0.084	65	0.1	5.069	A
3	391	34	965	0.405	391	0.7	6.447	A

#### 08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	301	22	972	0.310	302	0.5	5.582	A
2	53	291	813	0.065	53	0.1	4.738	A
3	319	28	968	0.330	320	0.5	5.714	A

#### 09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS

1	252	18	974	0.259	253	0.4	5.185	A
2	44	244	841	0.053	44	0.1	4.518	A
3	267	23	971	0.275	268	0.4	5.264	A

# 2029, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 97% of the total flow for the roundabout for one or more time segments]

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	4.87	A

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## 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)
D4	2029	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	241	100.000
2		✓	10	100.000
3		✓	172	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	17	224
	2	5	0	5
	3	161	11	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3

From	1	0	0	1
	2	0	0	0
	3	1	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.27	5.10	0.4	A
2	0.01	4.35	0.0	A
3	0.19	4.59	0.2	A

### Main Results for each time segment

#### 16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	181	8	980	0.185	181	0.2	4.540	A
2	8	168	886	0.009	7	0.0	4.098	A
3	129	4	983	0.132	129	0.2	4.253	A

#### 17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	217	10	979	0.221	216	0.3	4.763	A
2	9	201	866	0.010	9	0.0	4.199	A
3	155	4	982	0.157	154	0.2	4.390	A

#### 17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	265	12	978	0.271	265	0.4	5.095	A
2	11	246	840	0.013	11	0.0	4.344	A
3	189	5	982	0.193	189	0.2	4.584	A

#### 17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	265	12	978	0.271	265	0.4	5.099	A
2	11	247	839	0.013	11	0.0	4.345	A
3	189	6	982	0.193	189	0.2	4.586	A

#### 17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	217	10	979	0.221	217	0.3	4.769	A
2	9	202	866	0.010	9	0.0	4.201	A
3	155	5	982	0.157	155	0.2	4.392	A

#### 18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS

1	181	8	980	0.185	182	0.2	4.552	A
2	8	169	885	0.009	8	0.0	4.102	A
3	129	4	983	0.132	130	0.2	4.260	A



# 2029 + COM, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 92% of the total flow for the roundabout for one or more time segments]

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	6.29	A

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## 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)
D5	2029 + COM	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	342	100.000
2		✓	59	100.000
3		✓	357	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	12	330
	2	31	0	28
	3	333	24	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3

From	1	0	0	4
	2	0	0	0
	3	3	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.39	6.31	0.7	A
2	0.08	5.10	0.1	A
3	0.41	6.47	0.7	A

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	257	18	974	0.264	256	0.4	5.195	A
2	44	247	839	0.053	44	0.1	4.527	A
3	269	23	971	0.277	267	0.4	5.245	A

#### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	307	22	972	0.316	307	0.5	5.617	A
2	53	296	810	0.065	53	0.1	4.755	A
3	321	28	968	0.331	320	0.5	5.707	A

#### 08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	377	26	969	0.388	376	0.7	6.291	A
2	65	363	771	0.084	65	0.1	5.099	A
3	393	34	965	0.407	392	0.7	6.454	A

#### 08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	377	26	969	0.388	377	0.7	6.307	A
2	65	363	770	0.084	65	0.1	5.102	A
3	393	34	965	0.407	393	0.7	6.472	A

#### 08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	307	22	972	0.316	308	0.5	5.638	A
2	53	297	809	0.066	53	0.1	4.760	A
3	321	28	968	0.331	322	0.5	5.728	A

#### 09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS

1	257	18	974	0.264	258	0.4	5.222	A
2	44	249	838	0.053	44	0.1	4.538	A
3	269	23	971	0.277	269	0.4	5.277	A

# 2029 + COM, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 97% of the total flow for the roundabout for one or more time segments]

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	4.90	A

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## 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)
D6	2029 + COM	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	244	100.000
2		✓	10	100.000
3		✓	178	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	17	227
	2	5	0	5
	3	167	11	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3
From	1			
	2			
	3			

From	1	0	0	1
	2	0	0	0
	3	1	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.27	5.12	0.4	A
2	0.01	4.36	0.0	A
3	0.20	4.62	0.3	A

### Main Results for each time segment

#### 16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	184	8	980	0.187	183	0.2	4.553	A
2	8	170	885	0.009	7	0.0	4.104	A
3	134	4	983	0.136	133	0.2	4.276	A

#### 17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	219	10	979	0.224	219	0.3	4.780	A
2	9	204	865	0.010	9	0.0	4.207	A
3	160	4	982	0.163	160	0.2	4.419	A

#### 17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	269	12	978	0.275	268	0.4	5.119	A
2	11	250	838	0.013	11	0.0	4.354	A
3	196	5	982	0.200	196	0.3	4.623	A

#### 17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	269	12	978	0.275	269	0.4	5.123	A
2	11	250	837	0.013	11	0.0	4.355	A
3	196	6	982	0.200	196	0.3	4.624	A

#### 17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	219	10	979	0.224	220	0.3	4.788	A
2	9	204	864	0.010	9	0.0	4.208	A
3	160	5	982	0.163	160	0.2	4.423	A

#### 18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS

1	184	8	980	0.187	184	0.2	4.565	A
2	8	171	884	0.009	8	0.0	4.109	A
3	134	4	983	0.136	134	0.2	4.284	A

# 2029 + COM + PROPOSED DEV, AM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 92% of the total flow for the roundabout for one or more time segments]

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	6.21	A

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## 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)
D7	2029 + COM + PROPOSED DEV	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	349	100.000
2		✓	59	100.000
3		✓	359	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	12	337
	2	31	0	28
	3	335	24	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3
From	1			
	2			
	3			

		1	2	3
From	1	0	0	1
	2	0	0	0
	3	1	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.40	6.21	0.7	A
2	0.08	5.13	0.1	A
3	0.41	6.38	0.7	A

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	263	18	974	0.270	261	0.4	5.087	A
2	44	252	836	0.053	44	0.1	4.545	A
3	270	23	971	0.278	269	0.4	5.161	A

#### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	314	22	972	0.323	313	0.5	5.513	A
2	53	303	806	0.066	53	0.1	4.778	A
3	323	28	968	0.333	322	0.5	5.620	A

#### 08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	384	26	969	0.396	384	0.7	6.197	A
2	65	370	766	0.085	65	0.1	5.132	A
3	395	34	965	0.410	394	0.7	6.362	A

#### 08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	384	26	969	0.396	384	0.7	6.212	A
2	65	371	766	0.085	65	0.1	5.135	A
3	395	34	965	0.410	395	0.7	6.379	A

#### 08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	314	22	972	0.323	314	0.5	5.534	A
2	53	304	806	0.066	53	0.1	4.783	A
3	323	28	968	0.333	323	0.5	5.642	A

#### 09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS



Arm	(PCU/hr)	(PCU/hr)	(PCU/hr)	RFC	(PCU/hr)	(PCU)	Delay (s)	LOS
1	263	18	974	0.270	263	0.4	5.114	A
2	44	254	835	0.053	44	0.1	4.554	A
3	270	23	971	0.278	271	0.4	5.191	A

# 2029 + COM + PROPOSED DEV, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 97% of the total flow for the roundabout for one or more time segments]

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	4.93	A

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## 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)
D8	2029 + COM + PROPOSED DEV	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	247	100.000
2		✓	10	100.000
3		✓	184	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	17	230
	2	5	0	5
	3	173	11	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3
From	1			
	2			
	3			

		1	2	3
From	1	0	0	1
	2	0	0	0
	3	1	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.28	5.15	0.4	A
2	0.01	4.37	0.0	A
3	0.21	4.66	0.3	A

### Main Results for each time segment

#### 16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	186	8	980	0.190	185	0.2	4.563	A
2	8	172	883	0.009	7	0.0	4.110	A
3	139	4	983	0.141	138	0.2	4.301	A

#### 17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	222	10	979	0.227	222	0.3	4.797	A
2	9	207	863	0.010	9	0.0	4.215	A
3	165	4	982	0.168	165	0.2	4.448	A

#### 17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	272	12	978	0.278	272	0.4	5.143	A
2	11	253	836	0.013	11	0.0	4.365	A
3	203	5	982	0.206	202	0.3	4.662	A

#### 17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	272	12	978	0.278	272	0.4	5.147	A
2	11	253	835	0.013	11	0.0	4.366	A
3	203	6	982	0.206	203	0.3	4.664	A

#### 17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	222	10	979	0.227	222	0.3	4.806	A
2	9	207	863	0.010	9	0.0	4.218	A
3	165	5	982	0.168	166	0.2	4.452	A

#### 18:00 - 18:15

	Total Demand	Circulating flow	Capacity		Throughput	End queue		

Arm	(PCU/hr)	(PCU/hr)	(PCU/hr)	RFC	(PCU/hr)	(PCU)	Delay (s)	LOS
1	186	8	980	0.190	186	0.2	4.578	A
2	8	173	883	0.009	8	0.0	4.115	A
3	139	4	983	0.141	139	0.2	4.307	A

<h1>Junctions 9</h1>
<h2>ARCADY 9 - Roundabout Module</h2>
Version: 9.0.2.5947 © Copyright TRL Limited, 2017
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 770558 software@trl.co.uk www.trlsoftware.co.uk
<b>The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution</b>

**Filename:** Junction 4 Peaslands Road -Thaxted Road Mini-Roundabout.j9

**Path:** P:\Eastern\1031-1040\1033 Chase New Homes\1033.0002 Mount Pleasant Road, Saffron Walden\03 Technical\TPL\Modelling\Junction 4 Peaslands Road- Thaxted Road Mini-Roundabout

**Report generation date:** 24/05/2024 09:04:32

- »2023, AM
- »2023, PM
- »2029, AM
- »2029, PM
- »2029 + COM, AM
- »2029 + COM, PM
- »2029 + COM + PROPOSED DEV, AM
- »2029 + COM + PROPOSED DEV, PM

### Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
<b>2023</b>								
Arm 1	1.0	9.44	0.48	A	3.2	21.67	0.77	C
Arm 2	2.0	14.73	0.66	B	1.3	11.89	0.56	B
Arm 3	2.7	18.87	0.73	C	2.1	14.86	0.68	B
<b>2029</b>								
Arm 1	1.1	10.04	0.51	B	4.2	27.25	0.82	D
Arm 2	2.3	16.62	0.70	C	1.5	13.18	0.60	B
Arm 3	3.3	22.25	0.77	C	2.5	17.10	0.72	C
<b>2029 + COM</b>								
Arm 1	1.1	10.12	0.51	B	4.3	28.07	0.82	D
Arm 2	2.3	16.70	0.70	C	1.5	13.45	0.61	B
Arm 3	3.5	23.30	0.78	C	2.6	17.46	0.73	C
<b>2029 + COM + PROPOSED DEV</b>								
Arm 1	1.1	9.98	0.52	A	4.4	28.55	0.83	D
Arm 2	2.3	16.43	0.70	C	1.6	13.76	0.61	B
Arm 3	3.7	23.84	0.79	C	2.7	17.74	0.73	C

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

### File summary

#### File Description

Title	(untitled)
Location	

<b>Site number</b>	
<b>Date</b>	16/10/2023
<b>Version</b>	
<b>Status</b>	(new file)
<b>Identifier</b>	
<b>Client</b>	
<b>Jobnumber</b>	
<b>Enumerator</b>	AD\model.pc
<b>Description</b>	

## Units

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

## Analysis Options

Mini-roundabout model	Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
JUNCTIONS 9			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)
D1	2023	AM	ONE HOUR	07:45	09:15	15
D2	2023	PM	ONE HOUR	16:45	18:15	15
D3	2029	AM	ONE HOUR	07:45	09:15	15
D4	2029	PM	ONE HOUR	16:45	18:15	15
D5	2029 + COM	AM	ONE HOUR	07:45	09:15	15
D6	2029 + COM	PM	ONE HOUR	16:45	18:15	15
D7	2029 + COM + PROPOSED DEV	AM	ONE HOUR	07:45	09:15	15
D8	2029 + COM + PROPOSED DEV	PM	ONE HOUR	16:45	18:15	15

## Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

# 2023, AM

## Data Errors and Warnings

*No errors or warnings*

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	14.93	B

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Arms

### Arms

Arm	Name	Description
1	Thaxsted Road North	Thaxsted Road North
2	Thaxsted Road South	
3	Peasland Road West	

### Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1	2.50	2.50	3.50	1.0	10.00	2.00	0.0	
2	3.00	3.00	4.50	2.0	8.50	6.00	0.0	
3	3.00	3.00	3.00	0.0	13.50	2.00	0.0	

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.580	886
2	0.607	877
3	0.590	871

*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)
D1	2023	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	333	100.000
2		✓	445	100.000
3		✓	488	100.000

### Origin-Destination Data

#### Demand (PCU/hr)

	To			
	1	2	3	
From	1	0	133	200
	2	214	0	231
	3	290	198	0

### Vehicle Mix

#### Heavy Vehicle Percentages

	To			
	1	2	3	
From	1	0	3	3
	2	5	0	3
	3	1	6	0

### Results

#### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.48	9.44	1.0	A
2	0.66	14.73	2.0	B
3	0.73	18.87	2.7	C

#### Main Results for each time segment

##### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	251	148	800	0.313	249	0.5	6.705	A
2	335	149	786	0.426	332	0.8	8.183	A
3	367	160	777	0.473	364	0.9	8.892	A

##### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	299	177	783	0.382	299	0.6	7.648	A
2	400	179	768	0.521	399	1.1	10.089	B
3	439	192	758	0.579	437	1.4	11.464	B

##### 08:15 - 08:30

	Total Demand	Circulating flow	Capacity		Throughput	End queue		



Arm	(PCU/hr)	(PCU/hr)	(PCU/hr)	RFC	(PCU/hr)	(PCU)	Delay (s)	LOS
1	367	216	760	0.482	365	0.9	9.359	A
2	490	219	744	0.659	487	1.9	14.369	B
3	537	234	733	0.733	532	2.6	17.990	C

**08:30 - 08:45**

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	367	218	759	0.483	367	1.0	9.441	A
2	490	220	743	0.659	490	2.0	14.728	B
3	537	236	732	0.734	537	2.7	18.867	C

**08:45 - 09:00**

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	299	180	781	0.383	301	0.6	7.735	A
2	400	181	767	0.521	403	1.2	10.366	B
3	439	194	757	0.580	444	1.5	12.020	B

**09:00 - 09:15**

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	251	150	799	0.314	251	0.5	6.783	A
2	335	151	785	0.427	337	0.8	8.366	A
3	367	162	776	0.474	369	0.9	9.168	A

# 2023, PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	16.65	C

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## 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)
D2	2023	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	505	100.000
2		✓	356	100.000
3		✓	473	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	238	267
	2	166	0	190
	3	215	258	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	1	0
	2	2	0	1
	3	0	1	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.77	21.67	3.2	C
2	0.56	11.89	1.3	B
3	0.68	14.86	2.1	B

### Main Results for each time segment

#### 16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	380	192	774	0.491	376	1.0	9.015	A
2	268	199	756	0.354	266	0.5	7.416	A
3	356	124	798	0.446	353	0.8	8.072	A

#### 17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	454	231	752	0.604	452	1.5	11.984	B
2	320	239	732	0.437	319	0.8	8.827	A
3	425	149	784	0.543	424	1.2	10.017	B

#### 17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	556	282	722	0.770	550	3.1	20.263	C
2	392	291	701	0.559	390	1.3	11.687	B
3	521	182	764	0.682	517	2.1	14.453	B

#### 17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	556	284	721	0.771	555	3.2	21.670	C
2	392	294	699	0.561	392	1.3	11.893	B
3	521	183	764	0.682	521	2.1	14.865	B

#### 17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	454	234	750	0.605	461	1.6	12.762	B
2	320	243	729	0.439	322	0.8	9.008	A
3	425	150	783	0.543	429	1.2	10.321	B

#### 18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	380	195	772	0.492	383	1.0	9.336	A
2	268	202	754	0.355	269	0.6	7.544	A
3	356	125	797	0.447	358	0.8	8.262	A

# 2029, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	17.05	C

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## 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)
D3	2029	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	349	100.000
2		✓	466	100.000
3		✓	510	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	140	209
	2	224	0	242
	3	303	207	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	3
	2	5	0	3
	3	1	6	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.51	10.04	1.1	B
2	0.70	16.62	2.3	C
3	0.77	22.25	3.3	C

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	263	154	796	0.330	261	0.5	6.902	A
2	351	156	782	0.448	348	0.8	8.545	A
3	384	167	773	0.497	380	1.0	9.346	A

#### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	314	185	778	0.403	313	0.7	7.959	A
2	419	187	763	0.549	417	1.2	10.766	B
3	458	201	753	0.609	456	1.6	12.396	B

#### 08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	384	225	755	0.509	383	1.0	9.925	A
2	513	229	738	0.695	509	2.2	16.065	C
3	562	245	727	0.772	555	3.2	20.780	C

#### 08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	384	228	754	0.510	384	1.1	10.037	B
2	513	230	737	0.696	513	2.3	16.616	C
3	562	247	726	0.774	561	3.3	22.252	C

#### 08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	314	189	776	0.404	315	0.7	8.070	A
2	419	189	762	0.549	423	1.3	11.151	B
3	458	203	751	0.610	465	1.7	13.234	B

#### 09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	263	157	795	0.331	264	0.5	6.994	A
2	351	158	781	0.449	353	0.9	8.767	A
3	384	169	771	0.498	386	1.0	9.694	A

# 2029, PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	19.89	C

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## 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)
D4	2029	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	530	100.000
2		✓	375	100.000
3		✓	497	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	249	281
	2	175	0	200
	3	226	271	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	1	0
	2	2	0	1
	3	0	1	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.82	27.25	4.2	D
2	0.60	13.18	1.5	B
3	0.72	17.10	2.5	C

### Main Results for each time segment

#### 16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	399	202	768	0.519	395	1.1	9.578	A
2	282	209	750	0.376	280	0.6	7.732	A
3	374	131	794	0.471	371	0.9	8.477	A

#### 17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	476	243	745	0.640	474	1.7	13.216	B
2	337	251	725	0.465	336	0.9	9.376	A
3	447	157	779	0.574	445	1.3	10.785	B

#### 17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	584	296	714	0.817	575	3.9	24.519	C
2	413	305	692	0.597	411	1.5	12.865	B
3	547	192	758	0.722	543	2.5	16.436	C

#### 17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	584	298	713	0.819	582	4.2	27.251	D
2	413	309	690	0.599	413	1.5	13.180	B
3	547	193	758	0.722	547	2.5	17.103	C

#### 17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	476	246	743	0.641	486	1.9	14.543	B
2	337	258	721	0.468	339	0.9	9.639	A
3	447	158	778	0.574	451	1.4	11.233	B

#### 18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	399	205	767	0.520	402	1.1	10.000	A
2	282	213	748	0.378	283	0.6	7.889	A
3	374	132	793	0.472	376	0.9	8.714	A

# 2029 + COM, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	17.54	C

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## 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)
D5	2029 + COM	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	349	100.000
2		✓	467	100.000
3		✓	517	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	140	209
	2	224	0	243
	3	305	212	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	3	3
	2	5	0	3
	3	1	6	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.51	10.12	1.1	B
2	0.70	16.70	2.3	C
3	0.78	23.30	3.5	C

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	263	158	794	0.331	261	0.5	6.927	A
2	352	156	782	0.449	348	0.8	8.560	A
3	389	167	773	0.504	385	1.0	9.469	A

#### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	314	190	776	0.405	313	0.7	8.003	A
2	420	187	763	0.550	418	1.2	10.794	B
3	465	201	753	0.617	462	1.6	12.654	B

#### 08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	384	231	752	0.511	383	1.1	10.008	B
2	514	229	738	0.697	510	2.3	16.135	C
3	569	245	727	0.783	562	3.4	21.606	C

#### 08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	384	233	750	0.512	384	1.1	10.124	B
2	514	230	737	0.697	514	2.3	16.696	C
3	569	247	726	0.784	569	3.5	23.297	C

#### 08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	314	194	773	0.406	315	0.7	8.119	A
2	420	189	762	0.551	424	1.3	11.181	B
3	465	203	751	0.619	472	1.7	13.590	B

#### 09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	263	161	792	0.332	264	0.5	7.024	A
2	352	158	781	0.450	353	0.9	8.783	A
3	389	169	771	0.505	392	1.1	9.838	A

# 2029 + COM, PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	20.38	C

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## 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)
D6	2029 + COM	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	532	100.000
2		✓	379	100.000
3		✓	501	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	249	283
	2	175	0	204
	3	227	274	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	1	0
	2	2	0	1
	3	0	1	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.82	28.07	4.3	D
2	0.61	13.45	1.5	B
3	0.73	17.46	2.6	C

### Main Results for each time segment

#### 16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	401	204	767	0.522	396	1.1	9.647	A
2	285	211	749	0.381	283	0.6	7.794	A
3	377	131	794	0.475	374	0.9	8.534	A

#### 17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	478	245	743	0.643	476	1.7	13.372	B
2	341	253	723	0.471	340	0.9	9.488	A
3	450	157	779	0.578	449	1.3	10.899	B

#### 17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	586	299	712	0.823	577	4.0	25.106	D
2	417	307	691	0.604	415	1.5	13.116	B
3	552	192	758	0.727	547	2.5	16.744	C

#### 17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	586	302	711	0.824	585	4.3	28.065	D
2	417	311	688	0.606	417	1.5	13.454	B
3	552	193	758	0.728	551	2.6	17.460	C

#### 17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	478	249	741	0.645	488	1.9	14.787	B
2	341	260	719	0.474	343	0.9	9.766	A
3	450	158	778	0.579	455	1.4	11.372	B

#### 18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	401	207	765	0.523	404	1.1	10.085	B
2	285	215	747	0.382	287	0.6	7.958	A
3	377	132	793	0.475	379	0.9	8.780	A

# 2029 + COM + PROPOSED DEV, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	17.64	C

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## 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)
D7	2029 + COM + PROPOSED DEV	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	350	100.000
2		✓	468	100.000
3		✓	524	100.000

## Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	140	210
	2	224	0	244
	3	307	217	0

## Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	1	0
	2	2	0	1

	3	0	1	0
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## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.52	9.98	1.1	A
2	0.70	16.43	2.3	C
3	0.79	23.84	3.7	C

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	263	162	792	0.333	262	0.5	6.792	A
2	352	157	782	0.451	349	0.8	8.381	A
3	394	167	773	0.510	390	1.0	9.357	A

#### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	315	194	773	0.407	314	0.7	7.860	A
2	421	188	763	0.552	419	1.2	10.581	B
3	471	201	753	0.626	469	1.6	12.605	B

#### 08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	385	236	749	0.515	384	1.0	9.865	A
2	515	230	737	0.699	511	2.2	15.878	C
3	577	245	727	0.794	570	3.5	21.967	C

#### 08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	385	239	747	0.516	385	1.1	9.985	A
2	515	231	737	0.699	515	2.3	16.430	C
3	577	247	726	0.795	576	3.7	23.836	C

#### 08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	315	198	771	0.408	316	0.7	7.977	A
2	421	190	762	0.552	425	1.3	10.960	B
3	471	203	751	0.627	479	1.7	13.603	B

#### 09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	263	164	790	0.333	264	0.5	6.882	A
2	352	159	781	0.451	354	0.8	8.597	A

3	394	169	771	0.511	397	1.1	9.729	A
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# 2029 + COM + PROPOSED DEV, PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	20.72	C

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## 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)
D8	2029 + COM + PROPOSED DEV	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	533	100.000
2		✓	384	100.000
3		✓	504	100.000

## Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	249	284
	2	175	0	209
	3	228	276	0

## Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	1	0
	2	2	0	1

	3	0	1	0
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## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.83	28.55	4.4	D
2	0.61	13.76	1.6	B
3	0.73	17.74	2.7	C

### Main Results for each time segment

#### 16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	401	206	766	0.524	397	1.1	9.690	A
2	289	212	749	0.386	287	0.6	7.863	A
3	379	131	794	0.478	376	0.9	8.577	A

#### 17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	479	247	742	0.646	476	1.8	13.465	B
2	345	254	723	0.478	344	0.9	9.612	A
3	453	157	779	0.582	451	1.4	10.985	B

#### 17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	587	301	711	0.826	577	4.1	25.453	D
2	423	308	690	0.613	420	1.5	13.398	B
3	555	192	758	0.732	550	2.6	16.983	C

#### 17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	587	304	709	0.827	586	4.4	28.554	D
2	423	312	688	0.615	423	1.6	13.764	B
3	555	193	758	0.732	555	2.7	17.737	C

#### 17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	479	251	740	0.647	489	1.9	14.937	B
2	345	261	719	0.480	348	1.0	9.909	A
3	453	158	778	0.582	458	1.4	11.478	B

#### 18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	401	209	764	0.525	404	1.1	10.134	B
2	289	215	746	0.387	290	0.7	8.034	A



3	379	132	793	0.478	381	0.9	8.831	A
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<h1>Junctions 9</h1>
<h2>ARCADY 9 - Roundabout Module</h2>
Version: 9.0.2.5947 © Copyright TRL Limited, 2017
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<b>The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution</b>

**Filename:** Junction 5 London Road-Debden Road- High Street mini-roundabout.j9

**Path:** P:\Eastern\1031-1040\1033 Chase New Homes\1033.0002 Mount Pleasant Road, Saffron Walden\03 Technical\TPL\Modelling\Junction 5 London Road- Debden Road- High Street Mini-Roundabout

**Report generation date:** 24/05/2024 09:11:10

- »2023, AM
- »2023, PM
- »2029, AM
- »2029, PM
- »2029 + COM, AM
- »2029 + COM, PM
- »2029 + COM + PROPOSED DEV, AM
- »2029 + COM + PROPOSED DEV, PM

### Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
<b>2023</b>								
Arm 1	2.9	16.93	0.74	C	14.6	65.64	0.97	F
Arm 2	3.8	36.72	0.81	E	1.0	14.85	0.51	B
Arm 3	2.3	18.05	0.69	C	1.8	13.41	0.64	B
<b>2029</b>								
Arm 1	3.6	19.77	0.78	C	24.8	100.56	1.02	F
Arm 2	5.5	51.62	0.87	F	1.2	16.09	0.54	C
Arm 3	2.7	21.10	0.73	C	2.1	15.11	0.68	C
<b>2029 + COM</b>								
Arm 1	3.7	20.34	0.79	C	31.6	121.68	1.04	F
Arm 2	7.3	65.79	0.91	F	1.3	16.60	0.56	C
Arm 3	2.9	22.52	0.74	C	2.1	15.57	0.69	C
<b>2029 + COM + PROPOSED DEV</b>								
Arm 1	3.7	20.23	0.79	C	37.8	140.44	1.06	F
Arm 2	10.1	85.27	0.95	F	1.3	16.50	0.57	C
Arm 3	3.0	22.83	0.76	C	2.2	15.74	0.69	C

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

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

### File summary

#### File Description

Title	(untitled)
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Location	
Site number	
Date	13/10/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	AD\model.pc
Description	

## Units

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

## Analysis Options

Mini-roundabout model	Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
JUNCTIONS 9			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)
D1	2023	AM	ONE HOUR	07:45	09:15	15
D2	2023	PM	ONE HOUR	16:45	18:15	15
D3	2029	AM	ONE HOUR	07:45	09:15	15
D4	2029	PM	ONE HOUR	16:45	18:15	15
D5	2029 + COM	AM	ONE HOUR	07:45	09:15	15
D6	2029 + COM	PM	ONE HOUR	16:45	18:15	15
D7	2029 + COM + PROPOSED DEV	AM	ONE HOUR	07:45	09:15	15
D8	2029 + COM + PROPOSED DEV	PM	ONE HOUR	16:45	18:15	15

## Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

# 2023, AM

## Data Errors and Warnings

*No errors or warnings*

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	22.46	C

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Arms

### Arms

Arm	Name	Description
1	London Road North	
2	Debden Road South	
3	London Road West	

### Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1	3.00	3.00	3.00	0.0	14.00	12.00	0.0	
2	3.00	3.00	3.50	2.5	9.00	5.50	0.0	
3	3.00	3.00	3.00	0.0	17.00	17.00	0.0	

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.596	904
2	0.602	771
3	0.658	897

*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)
D1	2023	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

## Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	584	100.000
2		✓	356	100.000
3		✓	421	100.000

## Origin-Destination Data

### Demand (PCU/hr)

	To			
	1	2	3	
From	1	0	154	430
	2	309	0	47
	3	362	59	0

## Vehicle Mix

### Heavy Vehicle Percentages

	To			
	1	2	3	
From	1	0	5	5
	2	0	0	4
	3	6	5	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.74	16.93	2.9	C
2	0.81	36.72	3.8	E
3	0.69	18.05	2.3	C

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	440	44	877	0.501	436	1.0	8.479	A
2	268	321	578	0.463	265	0.8	11.416	B
3	317	230	745	0.425	314	0.8	8.770	A

#### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	525	53	872	0.602	523	1.5	10.763	B
2	320	385	540	0.593	318	1.4	16.148	C
3	378	276	715	0.529	377	1.2	11.215	B

#### 08:15 - 08:30

	Total Demand	Circulating flow	Capacity		Throughput	End queue		

Arm	(PCU/hr)	(PCU/hr)	(PCU/hr)	RFC	(PCU/hr)	(PCU)	Delay (s)	LOS
1	643	64	865	0.743	638	2.8	16.247	C
2	392	470	489	0.802	384	3.5	32.190	D
3	464	333	677	0.684	459	2.2	17.167	C

**08:30 - 08:45**

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	643	65	865	0.743	643	2.9	16.933	C
2	392	473	487	0.806	391	3.8	36.722	E
3	464	339	673	0.688	463	2.3	18.053	C

**08:45 - 09:00**

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	525	54	872	0.602	530	1.6	11.236	B
2	320	390	536	0.597	329	1.6	18.119	C
3	378	285	709	0.534	383	1.2	11.821	B

**09:00 - 09:15**

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	440	45	877	0.501	442	1.1	8.735	A
2	268	325	575	0.466	271	0.9	11.970	B
3	317	235	742	0.427	319	0.8	9.040	A

# 2023, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 83% of the total flow for the roundabout for one or more time segments]

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	41.38	E

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## 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)
D2	2023	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	763	100.000
2		✓	234	100.000
3		✓	440	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	356	407
	2	195	0	39
	3	387	53	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3

	1	0	2	2
From	2	3	0	0
	3	1	2	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.97	65.64	14.6	F
2	0.51	14.85	1.0	B
3	0.64	13.41	1.8	B

### Main Results for each time segment

#### 16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	574	40	880	0.653	567	1.8	11.482	B
2	176	302	589	0.299	174	0.4	8.859	A
3	331	145	801	0.414	328	0.7	7.661	A

#### 17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	686	47	875	0.784	680	3.4	18.200	C
2	210	363	553	0.380	210	0.6	10.717	B
3	396	175	782	0.506	394	1.0	9.367	A

#### 17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	840	58	869	0.967	808	11.4	45.306	E
2	258	431	512	0.503	256	1.0	14.332	B
3	484	213	756	0.641	482	1.7	13.117	B

#### 17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	840	58	869	0.967	827	14.6	65.641	F
2	258	441	506	0.509	257	1.0	14.850	B
3	484	215	755	0.641	484	1.8	13.409	B

#### 17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	686	48	875	0.784	728	4.1	29.974	D
2	210	388	538	0.391	212	0.7	11.377	B
3	396	177	780	0.507	398	1.1	9.598	A

#### 18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS



1	574	40	880	0.653	583	2.0	12.699	B
2	176	311	584	0.302	177	0.4	9.081	A
3	331	148	799	0.414	333	0.7	7.820	A

# 2029, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	28.51	D

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## 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)
D3	2029	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	612	100.000
2		✓	373	100.000
3		✓	441	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	161	451
	2	323	0	50
	3	379	62	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	5	5
	2	0	0	4
	3	6	5	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.78	19.77	3.6	C
2	0.87	51.62	5.5	F
3	0.73	21.10	2.7	C

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	461	46	876	0.526	456	1.1	8.914	A
2	281	336	569	0.494	277	1.0	12.242	B
3	332	240	739	0.449	329	0.8	9.219	A

#### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	550	55	870	0.632	548	1.7	11.624	B
2	335	404	528	0.635	332	1.7	18.207	C
3	396	288	707	0.561	395	1.3	12.119	B

#### 08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	674	68	863	0.781	667	3.4	18.634	C
2	411	492	475	0.864	398	4.8	41.462	E
3	486	345	670	0.725	480	2.6	19.610	C

#### 08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	674	68	863	0.781	673	3.6	19.770	C
2	411	496	473	0.869	408	5.5	51.620	F
3	486	353	664	0.731	485	2.7	21.104	C

#### 08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	550	56	870	0.632	557	1.9	12.330	B
2	335	410	524	0.640	350	1.9	22.199	C
3	396	303	697	0.569	402	1.4	13.105	B

#### 09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	461	47	876	0.526	463	1.2	9.234	A
2	281	342	566	0.496	284	1.0	13.010	B
3	332	246	735	0.452	334	0.9	9.569	A

# 2029, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 83% of the total flow for the roundabout for one or more time segments]

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	60.63	F

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## 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)
D4	2029	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	800	100.000
2		✓	245	100.000
3		✓	462	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	373	427
	2	204	0	41
	3	407	55	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3
From	1			
	2			
	3			

From	1	0	2	2
	2	3	0	0
	3	1	2	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	1.02	100.56	24.8	F
2	0.54	16.09	1.2	C
3	0.68	15.11	2.1	C

### Main Results for each time segment

#### 16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	602	41	879	0.685	594	2.1	12.529	B
2	184	317	581	0.318	183	0.5	9.228	A
3	348	152	797	0.437	345	0.8	8.004	A

#### 17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	719	49	874	0.823	711	4.2	21.415	C
2	220	379	543	0.406	219	0.7	11.371	B
3	415	183	776	0.535	414	1.1	9.999	A

#### 17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	881	60	868	1.015	830	17.0	60.131	F
2	270	443	505	0.534	268	1.1	15.456	C
3	509	223	750	0.678	505	2.0	14.658	B

#### 17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	881	61	867	1.015	849	24.8	100.555	F
2	270	453	498	0.541	270	1.2	16.094	C
3	509	224	749	0.679	508	2.1	15.106	C

#### 17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	719	50	874	0.823	796	5.7	58.946	F
2	220	425	516	0.427	222	0.8	12.624	B
3	415	185	775	0.536	419	1.2	10.323	B

#### 18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS

1	602	42	879	0.685	616	2.3	14.618	B
2	184	329	574	0.322	186	0.5	9.539	A
3	348	155	795	0.438	349	0.8	8.202	A

# 2029 + COM, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	33.27	D

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## 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)
D5	2029 + COM	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	617	100.000
2		✓	391	100.000
3		✓	441	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	166	451
	2	341	0	50
	3	379	62	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	5	5
	2	0	0	4
	3	6	5	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.79	20.34	3.7	C
2	0.91	65.79	7.3	F
3	0.74	22.52	2.9	C

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	465	46	876	0.530	460	1.2	8.988	A
2	294	336	569	0.517	290	1.0	12.793	B
3	332	253	730	0.455	329	0.9	9.411	A

#### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	555	55	870	0.637	552	1.8	11.778	B
2	352	404	528	0.665	348	1.9	19.700	C
3	396	304	697	0.569	394	1.4	12.522	B

#### 08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	679	67	863	0.787	672	3.5	19.094	C
2	430	491	476	0.905	414	6.0	49.024	E
3	486	361	659	0.737	480	2.7	20.656	C

#### 08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	679	68	863	0.787	679	3.7	20.336	C
2	430	496	473	0.911	425	7.3	65.790	F
3	486	371	652	0.744	485	2.9	22.520	C

#### 08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	555	57	870	0.638	562	1.9	12.540	B
2	352	411	524	0.671	372	2.2	26.418	D
3	396	324	683	0.580	402	1.5	13.817	B

#### 09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	465	47	876	0.531	467	1.2	9.322	A
2	294	342	566	0.520	299	1.1	13.749	B
3	332	260	725	0.458	334	0.9	9.812	A



# 2029 + COM, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 83% of the total flow for the roundabout for one or more time segments]

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	72.29	F

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## 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)
D6	2029 + COM	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	818	100.000
2		✓	255	100.000
3		✓	462	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	391	427
	2	214	0	41
	3	407	55	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3
From	1			
	2			
	3			

From	1	0	2	2
	2	3	0	0
	3	1	2	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	1.04	121.68	31.6	F
2	0.56	16.60	1.3	C
3	0.69	15.57	2.1	C

### Main Results for each time segment

#### 16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	616	41	879	0.701	607	2.3	13.084	B
2	192	317	581	0.331	190	0.5	9.398	A
3	348	159	792	0.439	345	0.8	8.091	A

#### 17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	735	49	874	0.841	726	4.7	23.284	C
2	229	379	543	0.422	228	0.7	11.679	B
3	415	192	770	0.539	414	1.2	10.162	B

#### 17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	901	60	868	1.038	838	20.4	68.521	F
2	281	437	508	0.553	279	1.2	15.952	C
3	509	234	743	0.685	505	2.1	15.075	C

#### 17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	901	61	867	1.038	856	31.6	121.676	F
2	281	447	502	0.559	281	1.3	16.604	C
3	509	235	742	0.686	508	2.1	15.570	C

#### 17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	735	50	874	0.842	833	7.3	85.248	F
2	229	435	510	0.450	231	0.9	13.309	B
3	415	194	769	0.540	419	1.2	10.507	B

#### 18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS

1	616	42	879	0.701	635	2.5	16.106	C
2	192	331	572	0.336	193	0.5	9.781	A
3	348	162	790	0.440	349	0.8	8.298	A

# 2029 + COM + PROPOSED DEV, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	39.06	E

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## 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)
D7	2029 + COM + PROPOSED DEV	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	621	100.000
2		✓	408	100.000
3		✓	441	100.000

## Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	170	451
	2	358	0	50
	3	379	62	0

## Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	2	2
	2	3	0	0

	3	1	2	0
--	---	---	---	---

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.79	20.23	3.7	C
2	0.95	85.27	10.1	F
3	0.76	22.83	3.0	C

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	468	46	876	0.534	463	1.1	8.797	A
2	307	336	569	0.540	303	1.2	13.641	B
3	332	265	722	0.460	329	0.8	9.182	A

#### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	558	55	870	0.641	556	1.8	11.575	B
2	367	404	528	0.694	363	2.2	21.776	C
3	396	318	687	0.577	394	1.3	12.356	B

#### 08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	684	67	863	0.792	677	3.5	18.956	C
2	449	491	476	0.945	427	7.8	58.736	F
3	486	374	650	0.747	480	2.7	20.716	C

#### 08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	684	68	863	0.792	683	3.7	20.229	C
2	449	496	473	0.950	440	10.1	85.271	F
3	486	386	642	0.756	485	3.0	22.829	C

#### 08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	558	57	870	0.642	566	1.9	12.334	B
2	367	411	524	0.700	397	2.6	34.070	D
3	396	348	668	0.594	402	1.5	13.990	B

#### 09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	468	47	876	0.534	470	1.2	9.123	A
2	307	342	566	0.543	313	1.3	14.886	B

3	332	274	716	0.464	335	0.9	9.605	A
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# 2029 + COM + PROPOSED DEV, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 83% of the total flow for the roundabout for one or more time segments]
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	82.58	F

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## 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)
D8	2029 + COM + PROPOSED DEV	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	833	100.000
2		✓	262	100.000
3		✓	462	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	406	427
	2	221	0	41
	3	407	55	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	0
	2	0	0	0
	3	0	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	1.06	140.44	37.8	F
2	0.57	16.50	1.3	C
3	0.69	15.74	2.2	C

### Main Results for each time segment

#### 16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	627	41	879	0.713	618	2.4	13.332	B
2	197	317	581	0.340	195	0.5	9.291	A
3	348	165	788	0.441	345	0.8	8.062	A

#### 17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	749	49	874	0.857	738	5.1	24.615	C
2	236	378	544	0.433	235	0.7	11.611	B
3	415	198	766	0.542	414	1.2	10.166	B

#### 17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	917	60	868	1.057	844	23.5	75.501	F
2	288	432	511	0.564	286	1.2	15.882	C
3	509	242	738	0.690	505	2.1	15.217	C

#### 17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	917	61	867	1.057	860	37.8	140.439	F
2	288	441	506	0.570	288	1.3	16.497	C
3	509	243	737	0.691	508	2.2	15.738	C

#### 17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	749	50	874	0.857	851	12.2	112.176	F
2	236	436	509	0.463	237	0.9	13.337	B
3	415	200	765	0.543	419	1.2	10.522	B

#### 18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1								
2								
3								



Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	627	42	879	0.714	665	2.6	19.564	C
2	197	341	566	0.348	199	0.5	9.835	A
3	348	168	786	0.442	349	0.8	8.272	A

Junctions 9
ARCADY 9 - Roundabout Module
Version: 9.0.2.5947 © Copyright TRL Limited, 2017
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**Filename:** Junction 6 London Road-Borough Lane Mini-Roundabout.j9  
**Path:** P:\Eastern\1031-1040\1033 Chase New Homes\1033.0002 Mount Pleasant Road, Saffron Walden\03 Technical\TPL\Modelling\Junction 6 London Road-Borough Lane Mini-Roundabout  
**Report generation date:** 12/01/2024 14:41:29

- »2023, AM
- »2023, PM
- »2029, AM
- »2029, PM
- »2029 + DEV, AM
- »2029 + DEV, PM

**Summary of junction performance**

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
<b>2023</b>								
Arm 1	1.5	10.59	0.59	B	1.6	11.22	0.61	B
Arm 2	0.9	12.03	0.48	B	0.7	10.56	0.42	B
Arm 3	1.9	11.56	0.65	B	2.3	12.63	0.70	B
<b>2029</b>								
Arm 1	1.7	11.52	0.62	B	1.8	12.43	0.65	B
Arm 2	1.1	13.19	0.51	B	0.8	11.46	0.45	B
Arm 3	2.2	12.69	0.68	B	2.7	14.25	0.73	B
<b>2029 + DEV</b>								
Arm 1	1.7	11.57	0.62	B	1.9	12.71	0.65	B
Arm 2	1.1	13.79	0.53	B	0.9	11.66	0.46	B
Arm 3	2.2	12.78	0.69	B	2.8	14.88	0.74	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.*

## File summary

### File Description

<b>Title</b>	(untitled)
<b>Location</b>	
<b>Site number</b>	
<b>Date</b>	13/10/2023
<b>Version</b>	
<b>Status</b>	(new file)
<b>Identifier</b>	
<b>Client</b>	
<b>Jobnumber</b>	
<b>Enumerator</b>	AD\model.pc
<b>Description</b>	

## Units

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

## Analysis Options

Mini-roundabout model	Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
JUNCTIONS 9			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)
D1	2023	AM	ONE HOUR	07:45	09:15	15
D2	2023	PM	ONE HOUR	16:45	18:15	15
D3	2029	AM	ONE HOUR	07:45	09:15	15
D4	2029	PM	ONE HOUR	16:45	18:15	15
D5	2029 + DEV	AM	ONE HOUR	07:45	09:15	15
D6	2029 + DEV	PM	ONE HOUR	16:45	18:15	15

## Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

# 2023, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	11.30	B

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Arms

### Arms

Arm	Name	Description
1	London Road North	
2	Borough Lane South	
3	London Road West	

### Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1	3.00	3.00	3.50	1.0	7.00	5.00	0.0	
2	3.00	3.00	4.50	2.0	7.50	5.50	0.0	
3	3.00	3.00	3.00	0.0	13.00	13.00	0.0	

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.597	965
2	0.607	888
3	0.599	955

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)
D1	2023	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	465	100.000
2		✓	254	100.000
3		✓	556	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	14	451
	2	24	0	230
	3	408	148	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	5
	2	0	0	3
	3	6	3	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.59	10.59	1.5	B
2	0.48	12.03	0.9	B
3	0.65	11.56	1.9	B

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	350	111	899	0.389	347	0.7	6.807	A
2	191	337	684	0.280	190	0.4	7.459	A
3	419	18	944	0.443	415	0.8	7.113	A

#### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	418	133	886	0.472	417	0.9	8.028	A
2	228	404	643	0.355	228	0.6	8.893	A
3	500	22	942	0.530	498	1.2	8.505	A

**08:15 - 08:30**

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	512	162	868	0.590	510	1.5	10.461	B
2	280	494	588	0.475	278	0.9	11.877	B
3	612	26	939	0.652	609	1.9	11.367	B

**08:30 - 08:45**

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	512	163	868	0.590	512	1.5	10.594	B
2	280	496	587	0.476	280	0.9	12.026	B
3	612	26	939	0.652	612	1.9	11.559	B

**08:45 - 09:00**

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	418	134	885	0.472	420	1.0	8.150	A
2	228	408	641	0.356	230	0.6	9.021	A
3	500	22	942	0.531	503	1.2	8.675	A

**09:00 - 09:15**

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	350	112	898	0.390	351	0.7	6.909	A
2	191	341	682	0.281	192	0.4	7.564	A
3	419	18	944	0.443	420	0.8	7.242	A

# 2023, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 82% of the total flow for the roundabout for one or more time segments]

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	11.76	B

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## 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)
D2	2023	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	466	100.000
2		✓	226	100.000
3		✓	602	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	19	447
	2	9	0	217
	3	411	191	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	2
	2	0	0	0
	3	1	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.61	11.22	1.6	B
2	0.42	10.56	0.7	B
3	0.70	12.63	2.3	B

### Main Results for each time segment

#### 16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	351	143	880	0.399	348	0.7	6.864	A
2	170	334	686	0.248	169	0.3	6.950	A
3	453	7	951	0.477	450	0.9	7.176	A

#### 17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	419	171	863	0.485	418	0.9	8.220	A
2	203	401	645	0.315	203	0.5	8.132	A
3	541	8	950	0.570	540	1.3	8.790	A

#### 17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	513	209	840	0.611	511	1.6	11.047	B
2	249	490	591	0.421	248	0.7	10.458	B
3	663	10	949	0.698	659	2.2	12.331	B

#### 17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	513	210	840	0.611	513	1.6	11.223	B
2	249	492	590	0.422	249	0.7	10.562	B
3	663	10	949	0.698	663	2.3	12.627	B

#### 17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	419	173	862	0.486	421	1.0	8.370	A
2	203	404	643	0.316	204	0.5	8.223	A
3	541	8	950	0.570	545	1.4	9.021	A

#### 18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	351	144	879	0.399	352	0.7	6.979	A
2	170	338	683	0.249	171	0.3	7.028	A
3	453	7	951	0.477	455	0.9	7.333	A



# 2029, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	12.36	B

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## 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)
D3	2029	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	487	100.000
2		✓	266	100.000
3		✓	582	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	15	472
	2	25	0	241
	3	427	155	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	5
	2	0	0	3
	3	6	3	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.62	11.52	1.7	B
2	0.51	13.19	1.1	B
3	0.68	12.69	2.2	B

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	367	116	896	0.409	364	0.7	7.052	A
2	200	353	674	0.297	199	0.4	7.745	A
3	438	19	944	0.464	435	0.9	7.383	A

#### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	438	139	882	0.496	437	1.0	8.449	A
2	239	423	631	0.379	238	0.6	9.390	A
3	523	22	942	0.556	522	1.3	8.981	A

#### 08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	536	170	864	0.621	534	1.7	11.337	B
2	293	517	574	0.510	291	1.0	12.978	B
3	641	27	939	0.683	637	2.2	12.411	B

#### 08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	536	171	863	0.621	536	1.7	11.523	B
2	293	520	573	0.511	293	1.1	13.193	B
3	641	28	939	0.683	641	2.2	12.686	B

#### 08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	438	140	881	0.497	440	1.1	8.606	A
2	239	427	629	0.380	241	0.6	9.561	A
3	523	23	942	0.556	527	1.3	9.204	A

#### 09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	367	117	895	0.410	368	0.7	7.173	A
2	200	357	672	0.298	201	0.4	7.867	A
3	438	19	944	0.464	440	0.9	7.538	A

# 2029, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 82% of the total flow for the roundabout for one or more time segments]

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	13.11	B

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## 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)
D4	2029	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	489	100.000
2		✓	237	100.000
3		✓	632	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	20	469
	2	9	0	228
	3	431	201	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	2
	2	0	0	0
	3	1	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.65	12.43	1.8	B
2	0.45	11.46	0.8	B
3	0.73	14.25	2.7	B

### Main Results for each time segment

#### 16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	368	150	876	0.420	365	0.7	7.150	A
2	178	350	676	0.264	177	0.4	7.199	A
3	476	7	951	0.500	472	1.0	7.502	A

#### 17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	440	180	858	0.513	438	1.1	8.721	A
2	213	420	633	0.337	212	0.5	8.546	A
3	568	8	950	0.598	566	1.5	9.390	A

#### 17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	538	220	834	0.646	535	1.8	12.169	B
2	261	514	577	0.453	260	0.8	11.316	B
3	696	10	949	0.733	691	2.6	13.796	B

#### 17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	538	221	833	0.646	538	1.8	12.427	B
2	261	516	575	0.454	261	0.8	11.460	B
3	696	10	949	0.733	696	2.7	14.251	B

#### 17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	440	182	856	0.513	443	1.1	8.925	A
2	213	424	631	0.338	214	0.5	8.672	A
3	568	8	950	0.598	573	1.5	9.715	A

#### 18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	368	152	874	0.421	370	0.8	7.288	A
2	178	354	673	0.265	179	0.4	7.293	A
3	476	7	951	0.500	478	1.0	7.694	A

# 2029 + DEV, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	12.55	B

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## 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)
D5	2029 + DEV	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	487	100.000
2		✓	277	100.000
3		✓	584	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	15	472
	2	25	0	252
	3	427	157	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	5
	2	0	0	3
	3	6	3	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.62	11.57	1.7	B
2	0.53	13.79	1.1	B
3	0.69	12.78	2.2	B

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	367	117	895	0.410	364	0.7	7.064	A
2	209	353	674	0.309	207	0.5	7.879	A
3	440	19	944	0.466	436	0.9	7.405	A

#### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	438	141	881	0.497	437	1.0	8.465	A
2	249	423	631	0.394	248	0.7	9.628	A
3	525	22	942	0.558	523	1.3	9.017	A

#### 08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	536	172	863	0.622	534	1.7	11.380	B
2	305	517	574	0.531	303	1.1	13.536	B
3	643	27	939	0.685	639	2.2	12.498	B

#### 08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	536	173	862	0.622	536	1.7	11.569	B
2	305	520	573	0.532	305	1.1	13.788	B
3	643	28	939	0.685	643	2.2	12.779	B

#### 08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	438	142	880	0.497	440	1.1	8.628	A
2	249	427	629	0.396	251	0.7	9.823	A
3	525	23	942	0.558	529	1.4	9.246	A

#### 09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	367	119	894	0.410	368	0.7	7.188	A
2	209	357	672	0.310	209	0.5	8.011	A
3	440	19	944	0.466	441	0.9	7.563	A

# 2029 + DEV, PM

## Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 82% of the total flow for the roundabout for one or more time segments]

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	13.54	B

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## 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)
D6	2029 + DEV	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	489	100.000
2		✓	242	100.000
3		✓	642	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	20	469
	2	9	0	233
	3	431	211	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	0	2
	2	0	0	0
	3	1	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.65	12.71	1.9	B
2	0.46	11.66	0.9	B
3	0.74	14.88	2.8	B

### Main Results for each time segment

#### 16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	368	158	871	0.423	365	0.7	7.210	A
2	182	350	676	0.270	181	0.4	7.254	A
3	483	7	951	0.508	479	1.0	7.617	A

#### 17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	440	189	852	0.516	438	1.1	8.832	A
2	218	420	633	0.344	217	0.5	8.637	A
3	577	8	950	0.607	575	1.5	9.608	A

#### 17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	538	231	827	0.651	535	1.8	12.427	B
2	266	513	577	0.462	265	0.8	11.510	B
3	707	10	949	0.745	702	2.8	14.357	B

#### 17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	538	232	827	0.651	538	1.9	12.711	B
2	266	516	575	0.463	266	0.9	11.662	B
3	707	10	949	0.745	707	2.8	14.885	B

#### 17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	440	191	851	0.517	443	1.1	9.052	A
2	218	425	631	0.345	219	0.5	8.770	A
3	577	8	950	0.607	582	1.6	9.974	A

#### 18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	368	160	870	0.423	370	0.8	7.355	A
2	182	354	673	0.271	183	0.4	7.353	A
3	483	7	951	0.508	485	1.1	7.820	A



<h1>Junctions 9</h1>
<h2>ARCADY 9 - Roundabout Module</h2>
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**Filename:** Junction 7 London Road- Newport Road- Audley End Road mini-roundabout.j9

**Path:** P:\Eastern\1031-1040\1033 Chase New Homes\1033.0002 Mount Pleasant Road, Saffron Walden\03 Technical\TPL\Modelling\Junction 7 London Road- Newport Road- Audley End Road Mini-Roundabout

**Report generation date:** 24/05/2024 09:23:35

- »2023, AM
- »2023, PM
- »2029, AM
- »2029, PM
- »2029 + COM, AM
- »2029 + COM, PM
- »2029 + COM + PROPOSED DEV, AM
- »2029 + COM + PROPOSED DEV, PM

### Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
<b>2023</b>								
Arm 1	5.6	28.18	0.85	D	4.8	24.70	0.84	C
Arm 2	10.0	94.20	0.95	F	3.1	31.60	0.77	D
Arm 3	0.9	8.29	0.46	A	1.1	9.32	0.54	A
<b>2029</b>								
Arm 1	7.7	37.33	0.90	E	6.5	32.53	0.88	D
Arm 2	16.8	143.98	1.02	F	4.1	40.72	0.82	E
Arm 3	1.0	8.69	0.49	A	1.3	10.19	0.57	B
<b>2029 + COM</b>								
Arm 1	8.7	41.76	0.91	E	6.9	34.28	0.89	D
Arm 2	18.3	154.57	1.04	F	4.6	44.39	0.84	E
Arm 3	1.0	8.73	0.49	A	1.4	10.48	0.58	B
<b>2029 + COM + PROPOSED DEV</b>								
Arm 1	9.8	46.55	0.93	E	7.3	35.85	0.89	E
Arm 2	19.9	165.63	1.05	F	5.0	48.30	0.85	E
Arm 3	1.0	8.75	0.49	A	1.4	10.80	0.59	B

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

### File summary

#### File Description

Title	(untitled)
Location	

<b>Site number</b>	
<b>Date</b>	13/10/2023
<b>Version</b>	
<b>Status</b>	(new file)
<b>Identifier</b>	
<b>Client</b>	
<b>Jobnumber</b>	
<b>Enumerator</b>	AD\model.pc
<b>Description</b>	

## Units

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

## Analysis Options

Mini-roundabout model	Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
JUNCTIONS 9			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)
D1	2023	AM	ONE HOUR	07:45	09:15	15
D2	2023	PM	ONE HOUR	16:45	18:15	15
D3	2029	AM	ONE HOUR	07:45	09:15	15
D4	2029	PM	ONE HOUR	16:45	18:15	15
D5	2029 + COM	AM	ONE HOUR	07:45	09:15	15
D6	2029 + COM	PM	ONE HOUR	16:45	18:15	15
D7	2029 + COM + PROPOSED DEV	AM	ONE HOUR	07:45	09:15	15
D8	2029 + COM + PROPOSED DEV	PM	ONE HOUR	16:45	18:15	15

## Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

# 2023, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	40.41	E

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## Arms

### Arms

Arm	Name	Description
1	London Road North	
2	Newport Road South	
3	Audley End Road West	

### Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1	3.00	3.00	4.00	2.0	12.50	11.50	0.0	
2	3.00	3.00	3.00	0.0	11.00	8.00	0.0	
3	3.00	3.00	3.00	0.0	18.50	18.50	0.0	

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.609	930
2	0.591	680
3	0.734	1060

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)
D1	2023	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

## Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	685	100.000
2		✓	367	100.000
3		✓	354	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	292	393
	2	277	0	90
	3	283	71	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	8	2
	2	8	0	0
	3	3	9	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.85	28.18	5.6	D
2	0.95	94.20	10.0	F
3	0.46	8.29	0.9	A

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	516	53	898	0.575	510	1.4	9.580	A
2	276	293	507	0.545	271	1.2	15.898	C
3	267	205	910	0.293	265	0.4	5.797	A

#### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	616	64	891	0.691	612	2.2	13.323	B
2	330	351	472	0.699	326	2.3	25.338	D
3	318	246	880	0.362	318	0.6	6.662	A

#### 08:15 - 08:30

	Total Demand	Circulating flow	Capacity		Throughput	End queue		

Arm	(PCU/hr)	(PCU/hr)	(PCU/hr)	RFC	(PCU/hr)	(PCU)	Delay (s)	LOS
1	754	78	882	0.855	742	5.2	24.932	C
2	404	426	428	0.944	383	7.6	64.696	F
3	390	289	848	0.459	389	0.9	8.136	A

## 08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	754	78	882	0.855	753	5.6	28.180	D
2	404	432	425	0.952	395	10.0	94.201	F
3	390	298	842	0.463	390	0.9	8.293	A

## 08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	616	64	891	0.691	628	2.4	14.948	B
2	330	361	467	0.707	359	2.8	41.647	E
3	318	271	862	0.369	319	0.6	6.929	A

## 09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	516	54	897	0.575	520	1.4	10.067	B
2	276	298	503	0.549	282	1.3	17.669	C
3	267	213	904	0.295	267	0.4	5.895	A

# 2023, PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	21.92	C

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## 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)
D2	2023	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	665	100.000
2		✓	337	100.000
3		✓	406	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	364	301
	2	282	0	55
	3	325	81	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	2	0
	2	2	0	0
	3	0	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.84	24.70	4.8	C
2	0.77	31.60	3.1	D
3	0.54	9.32	1.1	A

### Main Results for each time segment

#### 16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	501	61	893	0.561	496	1.3	9.048	A
2	254	224	547	0.464	250	0.9	12.195	B
3	306	209	907	0.337	304	0.5	5.953	A

#### 17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	598	73	886	0.675	595	2.0	12.379	B
2	303	269	521	0.582	301	1.4	16.506	C
3	365	252	875	0.417	364	0.7	7.029	A

#### 17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	732	89	876	0.836	722	4.5	22.349	C
2	371	327	487	0.763	365	2.9	28.706	D
3	447	305	836	0.535	445	1.1	9.170	A

#### 17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	732	89	876	0.836	731	4.8	24.697	C
2	371	331	484	0.766	370	3.1	31.601	D
3	447	310	833	0.537	447	1.1	9.323	A

#### 17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	598	73	885	0.675	608	2.2	13.584	B
2	303	275	517	0.586	309	1.5	18.124	C
3	365	259	870	0.419	367	0.7	7.173	A

#### 18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	501	61	893	0.561	504	1.3	9.448	A
2	254	228	545	0.466	256	0.9	12.776	B
3	306	214	903	0.339	307	0.5	6.046	A

# 2029, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	57.97	F

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## 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)
D3	2029	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	717	100.000
2		✓	384	100.000
3		✓	370	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	306	411
	2	290	0	94
	3	296	74	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	8	2
	2	8	0	0
	3	3	9	0



## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.90	37.33	7.7	E
2	1.02	143.98	16.8	F
3	0.49	8.69	1.0	A

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	540	55	896	0.602	534	1.5	10.211	B
2	289	306	499	0.579	284	1.4	17.292	C
3	279	214	903	0.308	277	0.5	5.969	A

#### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	645	66	889	0.725	640	2.6	14.836	B
2	345	367	463	0.746	340	2.8	29.676	D
3	333	257	872	0.381	332	0.6	6.934	A

#### 08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	789	81	880	0.897	772	6.8	30.811	D
2	423	443	418	1.011	389	11.2	85.951	F
3	407	294	845	0.482	406	1.0	8.525	A

#### 08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	789	81	880	0.897	786	7.7	37.325	E
2	423	451	413	1.023	400	16.8	143.981	F
3	407	302	838	0.486	407	1.0	8.693	A

#### 08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	645	67	889	0.725	664	2.9	17.878	C
2	345	380	455	0.759	396	4.0	80.128	F
3	333	299	841	0.396	334	0.7	7.413	A

#### 09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	540	56	896	0.603	545	1.6	10.872	B
2	289	312	495	0.584	299	1.6	20.322	C
3	279	226	895	0.311	279	0.5	6.103	A

# 2029, PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	28.05	D

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## 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)
D4	2029	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	698	100.000
2		✓	354	100.000
3		✓	426	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	382	316
	2	296	0	58
	3	341	85	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	2	0
	2	2	0	0
	3	0	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.88	32.53	6.5	D
2	0.82	40.72	4.1	E
3	0.57	10.19	1.3	B

### Main Results for each time segment

#### 16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	525	64	891	0.590	520	1.4	9.659	A
2	267	235	541	0.493	263	1.0	12.988	B
3	321	220	899	0.357	319	0.5	6.177	A

#### 17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	627	76	883	0.710	624	2.4	13.802	B
2	318	282	513	0.621	316	1.6	18.327	C
3	383	264	866	0.442	382	0.8	7.419	A

#### 17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	769	93	873	0.880	754	5.9	27.697	D
2	390	341	478	0.816	381	3.7	35.005	E
3	469	319	826	0.568	467	1.3	9.961	A

#### 17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	769	94	873	0.880	766	6.5	32.527	D
2	390	347	475	0.821	388	4.1	40.716	E
3	469	325	822	0.571	469	1.3	10.186	B

#### 17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	627	77	883	0.711	643	2.6	16.044	C
2	318	291	508	0.627	328	1.8	21.259	C
3	383	274	859	0.446	385	0.8	7.620	A

#### 18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	525	64	891	0.590	530	1.5	10.206	B
2	267	240	538	0.495	270	1.0	13.792	B
3	321	225	895	0.358	322	0.6	6.292	A

# 2029 + COM, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	62.78	F

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## 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)
D5	2029 + COM	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	729	100.000
2		✓	386	100.000
3		✓	372	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	313	416
	2	292	0	94
	3	298	74	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	8	2
	2	8	0	0
	3	3	9	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.91	41.76	8.7	E
2	1.04	154.57	18.3	F
3	0.49	8.73	1.0	A

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	549	55	896	0.612	542	1.6	10.455	B
2	291	310	497	0.585	285	1.4	17.567	C
3	280	216	902	0.310	278	0.5	5.991	A

#### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	655	66	889	0.737	651	2.8	15.453	C
2	347	371	460	0.754	341	2.9	30.588	D
3	334	258	871	0.384	334	0.6	6.972	A

#### 08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	803	81	880	0.912	783	7.6	33.387	D
2	425	447	416	1.023	389	11.9	90.154	F
3	410	294	844	0.485	408	1.0	8.572	A

#### 08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	803	81	880	0.912	798	8.7	41.764	E
2	425	456	411	1.035	399	18.3	154.571	F
3	410	302	839	0.488	410	1.0	8.733	A

#### 08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	655	67	889	0.737	678	3.1	19.367	C
2	347	387	451	0.769	403	4.4	92.138	F
3	334	305	837	0.400	336	0.7	7.500	A

#### 09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	549	56	896	0.613	555	1.7	11.198	B
2	291	316	493	0.590	302	1.6	21.021	C
3	280	228	893	0.314	281	0.5	6.136	A

# 2029 + COM, PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	29.85	D

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## 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)
D6	2029 + COM	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	704	100.000
2		✓	360	100.000
3		✓	431	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	385	319
	2	302	0	58
	3	346	85	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	2	0
	2	2	0	0
	3	0	0	0

## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.89	34.28	6.9	D
2	0.84	44.39	4.6	E
3	0.58	10.48	1.4	B

### Main Results for each time segment

#### 16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	530	64	891	0.595	524	1.4	9.772	A
2	271	238	539	0.503	267	1.0	13.261	B
3	324	224	896	0.362	322	0.6	6.253	A

#### 17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	633	76	883	0.716	629	2.4	14.074	B
2	324	285	511	0.633	321	1.7	18.958	C
3	387	269	863	0.449	386	0.8	7.545	A

#### 17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	775	93	873	0.888	760	6.2	28.795	D
2	396	344	476	0.832	387	4.1	37.359	E
3	475	324	822	0.577	472	1.3	10.228	B

#### 17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	775	94	873	0.888	772	6.9	34.275	D
2	396	350	473	0.838	394	4.6	44.395	E
3	475	331	817	0.581	474	1.4	10.483	B

#### 17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	633	77	883	0.717	650	2.7	16.593	C
2	324	294	506	0.640	334	1.9	22.500	C
3	387	280	854	0.453	390	0.8	7.776	A

#### 18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	530	64	891	0.595	535	1.5	10.349	B
2	271	242	537	0.505	274	1.1	14.136	B
3	324	230	891	0.364	326	0.6	6.374	A

# 2029 + COM + PROPOSED DEV, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	67.94	F

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## 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)
D7	2029 + COM + PROPOSED DEV	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	740	100.000
2		✓	388	100.000
3		✓	373	100.000

## Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	319	421
	2	294	0	94
	3	299	74	0

## Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	8	2
	2	8	0	0



	3	3	9	0
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## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.93	46.55	9.8	E
2	1.05	165.63	19.9	F
3	0.49	8.75	1.0	A

### Main Results for each time segment

#### 07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	557	55	896	0.622	550	1.7	10.684	B
2	292	313	495	0.591	286	1.5	17.849	C
3	281	217	901	0.312	279	0.5	6.008	A

#### 08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	665	66	889	0.748	660	2.9	16.059	C
2	349	376	458	0.762	343	3.0	31.549	D
3	335	260	870	0.386	335	0.6	6.998	A

#### 08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	815	81	880	0.925	793	8.4	36.007	E
2	427	451	413	1.034	389	12.6	94.506	F
3	411	294	844	0.487	409	1.0	8.597	A

#### 08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	815	81	880	0.926	809	9.8	46.553	E
2	427	460	408	1.048	398	19.9	165.629	F
3	411	302	839	0.490	411	1.0	8.749	A

#### 08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	665	67	889	0.748	691	3.3	21.069	C
2	349	393	447	0.780	409	4.9	105.955	F
3	335	310	833	0.403	336	0.7	7.570	A

#### 09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	557	56	896	0.622	563	1.8	11.518	B
2	292	320	490	0.596	305	1.6	21.861	C

3	281	231	891	0.315	282	0.5	6.165	A
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# 2029 + COM + PROPOSED DEV, PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Mini-roundabout	1, 2, 3	31.64	D

### Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

## 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)
D8	2029 + COM + PROPOSED DEV	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

### Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	709	100.000
2		✓	366	100.000
3		✓	436	100.000

## Origin-Destination Data

### Demand (PCU/hr)

		To		
		1	2	3
From	1	0	388	321
	2	308	0	58
	3	351	85	0

## Vehicle Mix

### Heavy Vehicle Percentages

		To		
		1	2	3
From	1	0	2	0
	2	2	0	0

	3	0	0	0
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## Results

### Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.89	35.85	7.3	E
2	0.85	48.30	5.0	E
3	0.59	10.80	1.4	B

### Main Results for each time segment

#### 16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	534	64	891	0.599	528	1.5	9.867	A
2	276	239	538	0.512	271	1.0	13.511	B
3	328	228	893	0.368	326	0.6	6.328	A

#### 17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	637	76	883	0.721	633	2.5	14.307	B
2	329	287	510	0.645	326	1.7	19.572	C
3	392	274	859	0.456	391	0.8	7.677	A

#### 17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	781	93	873	0.894	764	6.5	29.758	D
2	403	346	475	0.848	392	4.4	39.751	E
3	480	330	818	0.587	478	1.4	10.511	B

#### 17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	781	94	873	0.894	778	7.3	35.850	E
2	403	352	472	0.854	401	5.0	48.305	E
3	480	337	813	0.591	480	1.4	10.801	B

#### 17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	637	77	883	0.722	655	2.8	17.092	C
2	329	297	504	0.652	341	2.0	23.830	C
3	392	287	850	0.461	394	0.9	7.940	A

#### 18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	534	64	891	0.599	539	1.6	10.472	B
2	276	244	536	0.514	279	1.1	14.473	B

3	328	235	888	0.370	329	0.6	6.458	A
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