APPENDIX A

ILLUSTRATIVE MASTERPLAN

KEY

- Site Boundary
- Surrounding Urban Context
- Proposed Residential (Indicative Only)
- Site Access
- Primary Access Roads
- Secondary Shared Surface Roads
- PROW to be Retained
- Open Space Areas
- Proposed LEAP
- Attenuation Basin
- Potential Pedestrian Link to Chestnut Close
- Existing Hedgerows/ Trees to be Retained
- Strong Landscaping Buffer to Southern Boundary
- Landscape Gateway Feature to Southern Boundary
- Surrounding Open Countryside
- Potential Location for Bungalows
- Potential Key Buildings/Feature Plots

Rev	Description	Initial	Date
B	Updated to Scheme 3		12.01.18
C	Updated to Scheme 4		26.01.18
D	Red line Updated		31.01.18
E	Red line Updated-SW Corner		01.02.18

Land Off Barkby Road - Queniborough - Conceptual Plan

Dominium Design
Residential Design Consultancy

CONCEPTUAL PLAN

DAVID WILSON HOMES
WHERE QUALITY LIVES

Drwg No.	QUEN-CONC-SK2 Rev. E		
Scale	NTS@A2	Date	19.12.17
Drawn by	–	Checked by	–

DOMINIUM DESIGN LTD
16 Tregony Rise
Lichfield
Staffs WS14 9SN

APPENDIX B

LCC HIGHWAYS COMMENTS

Substantive response of the Local Highway Authority to a planning consultation received under The Development Management Order.

Leicestershire County Council

Response provided under the delegated authority of the Director of Environment & Transport**.**

APPLICATION DETAILS:

Planning Application Number: P/20/2380/2

Highway Reference Number: 2020/2380/02/H/R1

Application Address: Barkby Road Queniborough Leicestershire

Application Type: Outline (with access)

Description of Application:

Re-consultation. Outline application for up to 150 dwellings, together with new open space, landscaping and drainage infrastructure, with all matters reserved accept for access.

GENERAL DETAILS

Planning Case Officer: Mark Pickrell

Applicant: David Wilson Homes

County Councillor: Cllr James Poland

Parish: Queniborough

Road Classification:

Substantive Response provided in accordance with article 22(5) of The Town and Country Planning (Development Management Procedure) (England) Order 2015:

The Local Highway Authority does not consider that the application as submitted fully assesses the highway impact of the proposed development and further information is required as set out in this response. Without this information the Local Highway Authority is unable to provide final highway advice on this application. Under the current Covid-19 situation we would ask that any such work is carried out in accordance with the latest Government guidance.

Advice to Local Planning Authority

Background

The Local Highway Authority (LHA) has been consulted on an outline application for up to 150 dwellings, together with new open space, landscaping and drainage infrastructure, with all matters reserved accept for access. The site is located at Barkby Road Queniborough.

These highway observations are based on a review of the following documents and drawings:

- Transport Assessment prepared by ADC Infrastructure dated 8th February 2018;
- Travel Plan prepared by ADC Infrastructure dated 8th February 2018;
- Illustrative Masterplan drawing no. QUEN-CONC-SK2 Rev E;
- ADC1659-DR-001-P2 (Proposed Access Junction Layout); and
- Location Plan drawing no. QUEN-LOCA-01 Rev B

The following sections of this document form the LHA's observations on various aspects of the planning application.

Site Access

Barkby Road is an adopted C classified road. The proposed access is shown in on Drawing ADC1659-DR-001-P2 in Appendix B of the TA and is a priority controlled T-junction with a 5.5m wide carriageway, 2m wide footways either side of the carriageway, and 6m kerb radii.

The location of the proposed access is subject to a 30mph speed limit and therefore visibility splays of 2.4 x 43m are demonstrated on drawing ADC1659-DR-001-P2. However, the existing gateway feature where the limit changes from 30mph to 40mph is to the immediate south of the proposed site access. Hence, visibility splays of 2.4 x 120m are also demonstrated.

Notwithstanding the above, the LHA note there has been no swept path analysis undertaken for the site access. This should be carried out and submitted to demonstrate a large vehicle i.e. a refuse vehicle can enter and egress the site in a forward gear. The LHA also note there has been no Road Safety Audit undertaken for the proposed site access. At this stage, an independent Stage 1 Road Safety Audit should be carried out with an accompanying designer's response submitted as part of this planning application, along with an amended access design if required.

Highway Safety

The Applicant has used the Crashmap database to obtain Personal Injury Collision (PIC) data for the study area. The data shows the recorded accidents near the site between 2013 and June 2017 as shown in figure 4 of the TA.

No accidents have been recorded in the urban section of Barkby Road. Three slight accidents have been recorded along Syston Road and Queniborough Road at or near the crossroads.

Notwithstanding this, the LHA would request for the most recent PIC data for the last five years for the study area to be obtained and demonstrated. Leicestershire County Council's Network Data & Intelligence team can be contacted to obtain the most up to date data.

Trip Generation

Immediately north of the development is an estate of 64 houses clustered around the Glebe Road cul-de-sac. Given the locational comparability, the trip rate and distribution of traffic of residents on Glebe Road should be similar to those of the proposed development. Hence a traffic count was undertaken at the Barkby Road/Glebe Road junction. From that count, trip rates were determined, that were used to forecast the amount of traffic generate by 160 dwellings, as shown in the table below.

GLEBE ROAD COUNT		arrive	depart	two-way
trip rates (per dwelling)	AM peak hour	0.125	0.297	0.422
	PM peak hour	0.250	0.203	0.453
vehicle trips (160 dwellings)	AM peak hour	20	48	68
	PM peak hour	40	32	72

Based on this method, the proposed development would generate 68 two-way vehicles in the AM peak and 72 trips in the PM peak hour.

To provide a further measure, the ‘privately owned houses’ category of the TRICS database was examined. The 85th percentile trip rates and resultant traffic generation are shown in the table below.

TRICS DATABASE		arrive	depart	two-way
trip rates (per dwelling)	AM peak hour	0.177	0.523	0.700
	PM peak hour	0.478	0.248	0.726
vehicle trips (160 dwellings)	AM peak hour	28	84	112
	PM peak hour	76	40	116

Using TRICS, the proposed development would generate 112 two-way vehicles in the AM peak and 116 trips in the PM peak hour.

The figures derived from TRICS are significantly greater than the estimate based on the local survey. The Appicant states that the local survey is more representative. Notwithstanding this, for robustness, the TRICS figures have been adopted for the remainder of the analysis in the TA.

The LHA are therefore satisfied with the proposed trip rates.

Modal split and person trip generation

The proportion of trips by each mode was calculated using the 2011 National Census 'Method of travel to Work' data (dataset QS701EW). The site is in the parish of Queniborough and data for this parish was examined. The resultant modal split and person trip generation is shown in the table below.

	walk	cycle	bus	train	m/cycle	car driver	passenger
	6.0%	3.0%	4.2%	0.4%	0.6%	79.2%	5.0%
AM Peak	9	4	6	2	1	112	7
PM Peak	9	4	6	2	1	116	7

The proposed residential development would generate approximately nine pedestrian trips, four bicycle trips, and six bus trips in the peak hours.

The TA details the existing accessibility of the site, including a description of the existing pedestrian, cycle and public transport infrastructure. The Applicant states that the existing and proposed infrastructure has the capacity to accommodate the additional trips, and no further infrastructure is required as part of the development.

Vehicle Distribution and Assignment

Traffic turning in and out of the proposed development was assigned at the access junction in the same proportions as recorded in the traffic count at the Barkby Road/Glebe Road junction. At the remaining three junctions that form the study area, development traffic was assigned in the same proportions as recorded in the November 2017 traffic counts. The LHA would prefer for the distribution to be calculated by using a Census based approach.

Assessment Traffic Flows

As a result of the increase in traffic associated with the proposed development, the detailed capacity assessments have been carried out at the junctions below:

- Proposed site access;
- Rearsby Road/Queniborough Road/Barkby Road/Syston Road crossroads;
- Queniborough Roundabout; and
- Syston Road/Melton Road T-junction

Observed traffic flows

Traffic flows at the junctions were obtained from traffic counts undertaken on Tuesday 7 November 2017. The surveyed morning and evening peak hour traffic flows are shown in Diagrams 1 and 2 in Appendix D of the TA.

Growth Factors

An assessment year of 2023 has been adopted for this report, five years from the submission of the planning application. The observed traffic flows were therefore growthed to 2023 levels using TEMPRO (version 7.2, dataset 72). TEMPRO gives the following growth rates for 'all roads' in the Charnwood 015 MSOA:

- 2017 to 2023 (AM) 1.0957
- 2017 to 2023 (PM) 1.0961

The LHA would request for the assessment year of 2026 to be assessed as the planning application has been submitted and registered in 2021. The LHA have not reviewed any of the submitted development flow scenarios due to the assessment year used and the earlier comments on distribution / assignment. Once revised traffic flow scenarios have been submitted, the LHA will provide detailed comments.

Highway Impact

The Applicant has assessed the following junctions using a 2023 with development scenario.

- Site Access
- Rearsby Road / Queniborough Road / Barkby Road / Syston Road crossroads - existing layout
- Rearsby Road / Queniborough Road / Barkby Road / Syston Road crossroads – proposed layout
- Queniborough Roundabout
- Melton Road / Syston Road T-junction

The LHA has reviewed the proposed mitigation for the Rearsby Road / Queniborough Road / Barkby Road / Syston Road crossroads and has concerns over the junction design, as it would appear that traffic going ahead from Rearsby Road to Barkby Road will be lined up with traffic waiting to turn right from Barkby Road. The alignment is such that a vehicle going ahead will have to dog-leg around a vehicle waiting at the give way line on Barkby Road and risk side swiping a vehicle turning left from Rearsby Road.

As mentioned in the section above, a design year of 2026 should be used for assessing the capacity for each junction listed.

The LHA will provide further comments on the junction analysis once the traffic flow scenarios have been updated and revised junction capacity analysis provided.

Internal Layout

As access only is to be determined at this stage, the submitted indicative site layout and matters such as the proposed numbers of parking spaces have not been reviewed or considered by the LHA in preparing this response. However, the TA suggests that the internal road network would be put forward for adoption and accordingly, the accordingly the LHA advises that that the

proposals are required to be designed in accordance with the prevailing Leicestershire Highways Design Guide (LHDG) and local parking standards when a future reserved matters application is submitted. The LHA will require these matters to be conditioned appropriately.

Transport Sustainability

Bus accessibility

The nearest bus stops located to the site are on Melton Road and Syston Road, as demonstrated on figure 9 extracted from the TA below.

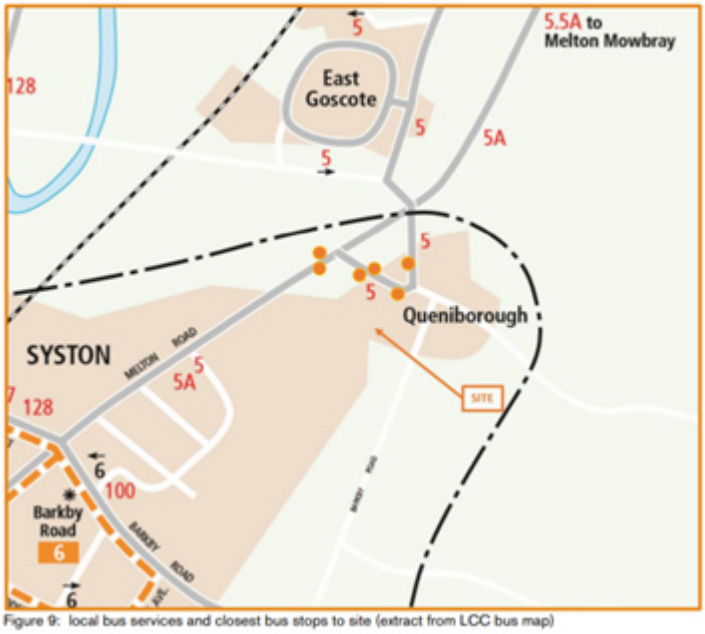

Figure 9: local bus services and closest bus stops to site (extract from LCC bus map)

The bus stop on Syston Road adjacent to Barkby Road is approximately 320m from the site and serves the number 5 bus which runs from East Goscote to Leicester City centre via Syston.

Rail Accessibility

The nearest train station to the site is Syston Railway Station, approximately 2.4 km from the site and therefore well within the acceptable cycling distance.

The Applicant states in the TA that the rail journeys from Syston Railway Station can form part of a multi-modal journey from the site as the station provides six cycle spaces. Additionally, the number 5 bus route provides regular access to the train station from the site, stopping 160m from the station.

Cycle Accessibility

Barkby Road is a recommended on-road cycle route and adjoins with Queniborough Road, Thorpe Lane and Barkbythorpe Road to provide cycle access to northeast Leicester. In addition, Syston Road is an on-road cycle route that provides cycle access through the heart of Queniborough.

Melton Road, to the west of the site, provides a shared footway/cycleway which is also utilised as National Cycle Network (NCN) route 48. NCN48 provides cyclists with good connectivity to Syston and Birstall both of which are within the 5km cycle catchment, whilst adjoining with NCN route 6, providing direct access to the centre of Leicester.

Pedestrian Accessibility

Footpath I84/1 runs through the heart of the site in a southwest to northeast direction, connecting Melton Road with Barkby Road via Millstone Lane and Avenue Road.

To the northeast, there is a cluster of local facilities along Queniborough Road and the adjoining Main Street, which includes a Church, Primary School, Post Office and Convenience Store. There is also a cluster of local amenities to the southwest of the site.

Travel Plan

The LHA have reviewed the submitted Travel Plan prepared by ADC Infrastructure dated 8th February 2018 and can confirm that the principle measures and targets within the Travel Plan are acceptable, subject to the following amendments / considerations being provided in a revised travel plan:

- A copy of both the application form for free bus passes/£50 bike voucher and the proposed Welcome Packs (which are to be funded by the developer) will need to be submitted to Leicestershire County Council (LCC) for approval before being issued to residents. An administration fee of £500 will be required when submitting these documents for approval.

- Ensure that an action plan detailing initiatives, promotions and incentives is documented on to the MODESHIFT STARS for monitoring system

- A contingency plan for if a steering group is not established by the Travel Plan Coordinator i.e. commitment that the developer will continue to fund/resource a Travel Plan Coordinator throughout the lifespan of the Travel Plan until such a steering group is formed.

- LCC's role is to undertake with the Travel Plan Co-ordinator the on-going monitoring and review of the Travel Plan. If the developer would like LCC to attend the steering group a further fee in addition to the Travel Plan Monitoring fee would be required to ensure officer resource is available as this is not part of the monitoring agreement.

- The preferred system to capture survey information is MODESHIFT STARS.

Date Received	Case Officer	Reviewer	Date issued
10 March 2021	Suraj Dave	AW	6 April 2021

APPENDIX C

ACCIDENT DATA REPORTS

Accidents between dates **01/01/2016** **and** **28/02/2021** (62) months

Selection:

; Refined using Accidents within selected Polygons -Data request polygons ("ADC Queniborough 06.05.2021")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
201600835	20/05/2016	464275	312875	Fine without high winds	Dry	Daylight	Slight

Location: A607 QUENIBOROUGH AT ROUNDABOUT WITH MELTON ROAD.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Entering roundabout	Turning left	E	S
Pedal Cycle	Mid Junction - on roundabout or main road	Turning right	NE	W

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
201601528	13/09/2016	463860	312595	Fine without high winds	Dry	Daylight	Slight

Location: C3308 MELTON ROAD QUEINBOROUGH JW SYSTON ROAD.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Entering main road	Turning right	E	NE
Car	Mid Junction - on roundabout or main road	Going ahead other	NE	SW

Casualties:

Class	Severity
Driver / Rider	Slight
Driver / Rider	Slight

Accidents between dates **01/01/2016** **and** **28/02/2021** (62) months

Selection:

; Refined using Accidents within selected Polygons -Data request polygons ("ADC Queniborough 06.05.2021")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
201601830	07/11/2016	464175	311940	Fine without high winds	Dry	Daylight	Slight

Location: C4304 BARKBY ROAD SYSTON AT ENTRANCE TO RUGBY CLUB.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Leaving main road	Turning right	S	E
Car	Mid Junction - on roundabout or main road	Going ahead other	N	S

Casualties:

Class	Severity
Driver / Rider	Slight
Vehicle Passenger	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
201601863	12/11/2016	464311	312474	Fine without high winds	Wet/Damp	Daylight	Slight

Location: C4303 QUENIBOROUGH ROAD J/W BARKBY ROAD QUENIBOROUGH

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Entering main road	Going ahead other	S	N
Car	Mid Junction - on roundabout or main road	Going ahead other	NW	SE

Casualties:

Class	Severity
Driver / Rider	Slight
Vehicle Passenger	Slight

Accidents between dates **01/01/2016** **and** **28/02/2021** (62) months

Selection:

; Refined using Accidents within selected Polygons -Data request polygons ("ADC Queniborough 06.05.2021")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
201701173	14/08/2017	463853	312593	Fine without high winds	Dry	Daylight	Slight

Location: C3308 MELTON ROAD QUENIBOROUGH JW SYSTON ROAD.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Entering main road	Turning left	E	SW
Car	Mid Junction - on roundabout or main road	Stopping	SW	NE
Car	Mid Junction - on roundabout or main road	Going ahead other	NE	SW

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
201800166	02/02/2018	463696	312429	Fine without high winds	Wet/Damp	Daylight	Slight

Location: C3308 MELTON ROAD QUENIBOROUGH JW MARSDEN AVENUE.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Mid Junction - on roundabout or main road	Waiting to turn right	SW	SE
Car	Mid Junction - on roundabout or main road	Stopping	SW	NE

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2016** **and** **28/02/2021** (62) months

Selection:

; Refined using Accidents within selected Polygons -Data request polygons ("ADC Queniborough 06.05.2021")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
201800808	03/08/2018	464315	312470	Fine without high winds	Dry	Daylight	Slight

Location: C4303 REARSBY ROAD QUENIBOROUGH JW BARKBY ROAD.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Entering main road	Turning right	N	W
Car	Mid Junction - on roundabout or main road	Going ahead other	W	E

Casualties:

Class	Severity
Driver / Rider	Slight

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
201802040	12/11/2018	463854	312595	Fine without high winds	Wet/Damp	Daylight	Slight

Location: C3308 MELTON ROAD QUENIBOROUGH JW SYSTON ROAD

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Jct Approach	Waiting to turn right	SW	SE
Car	Jct Approach	Going ahead other	SW	NE

Casualties:

Class	Severity
Driver / Rider	Slight

Accidents between dates **01/01/2016** **and** **28/02/2021** (62) months

Selection:

; Refined using Accidents within selected Polygons -Data request polygons ("ADC Queniborough 06.05.2021")

Notes:

Police_ref	Date	Easting	Northing	Weather	Road_cond	Visibility	Severity
202000735	24/09/2020	464275	312895	Other	Wet/Damp	Darkness: street lights present and lit	Serious

Location: A607 METON ROAD QUENIBOROUGH JW REARSBY ROAD.

Vehicles:

Type	Junct_Locn	Manvres	Movef	Movet
Car	Leaving roundabout	Turning right	S	NE

Casualties:

Class	Severity
Driver / Rider	Serious

Number of records in selection: **9**

APPENDIX D

RESPONSE REPORT TO STAGE ONE ROAD SAFETY AUDIT

DAVID WILSON HOMES

BARKBY ROAD, QUENIBROUGH

RESPONSE REPORT TO STAGE 1 ROAD SAFETY AUDIT (PROPOSED ACCESS JUNCTION LAYOUT)

ADC Infrastructure Limited
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King Edward Street
Nottingham
NG1 1EW
tel: 0115 941 4817

www.ADCinfrastructure.com

project number: ADC1659			report reference: ADC1659-RP-D
version	date	author	comments
1	18/06/2021	Holly Curran	issue as part of Transport Assessment

1. **Appendix 1** contains the Stage 1 Road Safety Audit carried out by Sevenairs Consulting Ltd on the proposed access junction layout on Barkby Road, Queniborough. The audit report includes background information about the location and works proposed. This document is the Response Report to the findings in the Road Safety Audit.

2. The following drawings were the subject of the Road Safety Audit:
   - ADC1659-DR-001-P2 – Proposed Access Junction Layout.

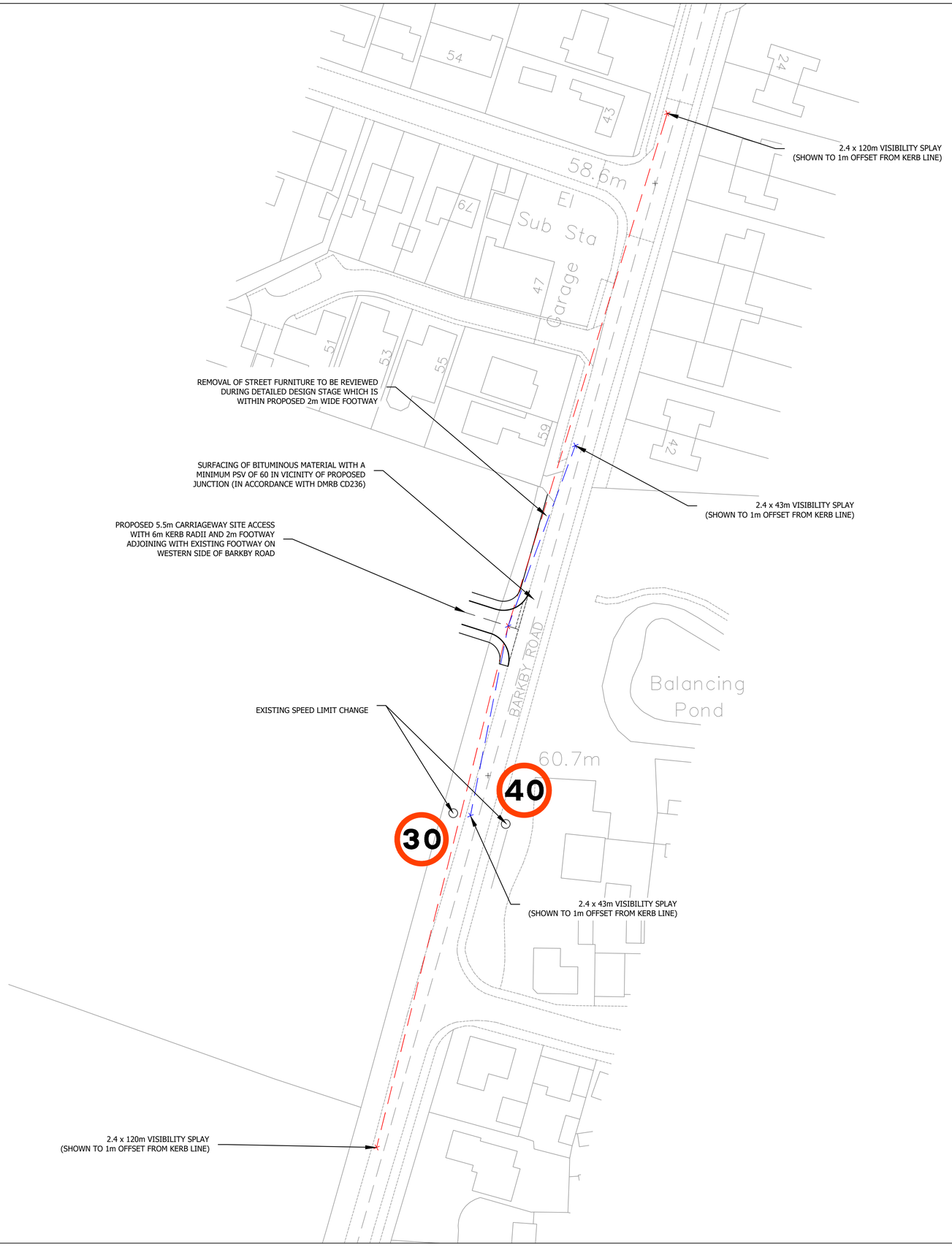
3. The Audit noted three problems, listed in the Decision Log shown below. Our response is included.

4. Drawing ADC1659-DR-001-P1 listed above has been amended as described in the Decision Log, to address the problem raised. The revised drawing, provided in this report, is as follows.
   ADC1659-DR-001-P3 – Proposed Access Junction Layout.

problem/issue		Design Team Response	Overseeing Organisation Response
A - 01	Location – Barkby Road Summary: Skid Resistance – Poor skidding resistance may increase the risk of junction related collisions At this early stage, the drawings do not indicate the required PSV to be provided on the surface course material. The Collision data indicates a single slight collision about 200m south of the site in the last five years, making a low investigatory level appropriate at this site. Traffic data in the Transport Assessment suggests a two-way commercial vehicle flow of less than 250 per day. Insufficient skidding resistance may increase the risk of loss of control, skidding or junction related collisions. RECOMMENDATION: It is recommended that with reference to DMRB CD236, bituminous material with a minimum PSV of 60 is used in the vicinity of the proposed junction (Site Category Q) across the full carriageway width. It is also recommended that inspection chamber covers in carriageway areas are provided with a similar skid resistance to that of the surrounding carriageway surface.	Agreed. The surfacing in the vicinity of the proposed site access will be improved where necessary, in accordance with DMRB CD236. This will form past of the detailed design. This is referred to in the revised drawing **ADC1659-DR-001-P3**.	
A - 02	Location –Barkby Road Summary: Network Management – Junctions – Poor width provision for vehicles may increase the risk of head on or shunt collisions on the main carriageway or access The proposed geometry indicates a 5.5m wide carriageway on the proposed access. Whilst providing just enough width for two goods vehicles to pass on a straight road, the width at the junction mouth may not provide sufficient width for a large vehicle such as a refuse vehicle to enter the proposed access road whilst another vehicle is waiting to turn out of the junction. The information supplied indicates that the development site will have about 160 dwellings, which increases the likelihood of two vehicles using the junction at the same time, consequently increasing the risk of shunt type collisions or head on type collisions for following vehicles overtaking the paused large vehicle. RECOMMENDATION: It is recommended that a swept path analysis is undertaken to inform the next stage of design in terms of suitable road widths at the junction mouth. This analysis should at very least allow a refuse vehicle to enter the proposed access road whilst another vehicle is waiting to exit the access.	Disagreed. **Drawing ADC1659-DR-003-P1** shows that a large refuse vehicle can enter and exit the proposed development. However, it is standard practise for a large refuse vehicle to utilise both sides of an access carriageway when entering a development and, therefore, the need for two-way movements is rejected.	
A - 03	Location – Barkby Road Summary: Pedestrians – Poor width provision for pedestrians may increase the risk of collisions involving pedestrians stepping into the main carriageway. The proposed design indicates a footway between the proposed access and the existing footway to the north. There are several street furniture items within the proposed length that would appear closer than 2.0m to the existing kerb edge, including street lights, a warning sign, a service box and a street name plate. These items if left in place would create width restrictions in the proposed footway, which may increase the risk of pedestrians stepping into the main carriageway, especially when passing another pedestrian walking in the opposite direction. Although it is acknowledged that cycles should not be on the footway, there is a potential for a cycle to be on the footway at this point, this may further exacerbate the problem. RECOMMENDATION: It is recommended that a clear footway width of 2.0m is provided along the frontage of the site between the proposed access and the existing footway to the north	Agreed. As part of the detailed design stage, the proposed footway along the site frontage will be reviewed and street furniture will be relocated behind the proposed footway.	

DRAWINGS

DRAWING 1659-DR-001-P3



Rev	Description	Date
P3	Addresses RSA comments	14/06/21
P2	Updated access location	20/01/21
P1	Preliminary Issue	08/01/18

Client:

DAVID WILSON HOMES
WHERE QUALITY LIVES

Project:

Barkby Road, Queniborough

Title:

Proposed Access Junction Layout

ADC INFRASTRUCTURE

Drg Size:	Scale:	Date:
A1	1:500	08/01/2018

Drg No:	Rev:
ADC1659-DR-001	P3

APPENDIX 1

STAGE ONE ROAD SAFETY AUDIT

Sevenairs Consulting Ltd

Barkby Road, Queniborough, Leicestershire

Road Safety Audit Stage 1

May 2021

Document Control

Report Title:

Barkby Road, Queniborough, Leicestershire - Road Safety Audit Stage 1

Date of Site Visit

5th May 2021

Document Reference

2021-05 Queniborough RSA1 – Revision 0

Report Prepared By:

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On behalf of

ADC Infrastructure – Suite 3a, King Edward Court, King Edward Street, Nottingham, NG1 1EW

Highway Authority / Overseeing Organisation

Leicestershire County Council

Document History:

Revision	Date	Description	By
0	06.05.2021	For Issue	HV

Introduction

Commissioning and Scope

This report results from a Stage 1 Road Safety Audit carried out at the site a proposed residential development off Barkby Road, in Queniborough, Leicestershire, at the request of ADC Infrastructure on behalf of the developer of the site.

The Road Safety Audit Brief was supplied by Holly Curran, Graduate Engineer, ADC Infrastructure on behalf of the developer.

The Road Safety Audit Brief was approved by Holly Curran, Graduate Engineer, ADC Infrastructure on behalf of the developer.

The Road Safety Audit team membership approved by Holly Curran, Graduate Engineer, ADC Infrastructure on behalf of the developer, and was as follows:

The Audit Team	Haydn Vernals FCIHT FIHE CMILT MSoRSA, Road Safety Team Leader in accordance with GG119 and Directive 2008/96/EC (Certificate of Competency)
	Colin Blue, Road Safety Team Member in accordance with GG119 and Directive 2008/96/EC (Certificate of Competency)
Audit Observers	None

A site visit took place comprising of the RSA team on Wednesday 5th May 2021 between 11:00 and 11:30 hours during which the weather was sunny with light cloud and the road surface was dry. Traffic conditions were light and free flowing, with some pedestrians observed, and no cyclists observed.

The main project comprises of the development of a site for about 160 new homes with a single point of access onto Barkby Road. The scope of this Road Safety Audit is to review the proposed access point from Barkby Road.

The RSA took place in May 2021 at the Sevenairs Consulting Office in Sheffield and was undertaken in accordance with the RSA brief provided by Holly Curran, Graduate Engineer, ADC Infrastructure on behalf of the developer. The audit comprised of an examination of the documents provided as outlined in the audit brief and the scheme as proposed on site.

No departures from standard have been brought to the attention of the RSA team with regard to the scheme as designed.

Documents Supplied

- E-mail proposal background
- ADC1659-B-v4 (Transport Assessment - bound)
- ADC1659-DR-001-P2 (Proposed Access Junction Layout)
- ADC1659-DR-003-P1 (Swept Path Assessment of Proposed Access Junction- Refuse)

Terms of Reference

The terms of reference of this Road Safety Audit are as described in GG119 Road Safety Audit. The Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria.

Each of the auditors' responses is classified as a 'Problem' that is likely to result in a significant road safety hazard. All comments and recommendations are referenced to the detailed design drawings and the locations have been indicated on the plan at the end of the report.

Where recommendations are made, these do not comprise design decisions, and it remains the responsibility of the Design Team to incorporate any changes into the scheme, and consider any interactions between design elements.

Problems Raised at this Stage 1 RSA

PROBLEM – A-01

Location: Barkby Road

Summary: Skid Resistance – Poor skidding resistance may increase the risk of junction related collisions.

At this early stage, the drawings do not indicate the required PSV to be provided on the surface course material. The Collision data indicates a single slight collision about 200m south of the site in the last five years, making a low investigatory level appropriate at this site. Traffic data in the Transport Assessment suggests a two-way commercial vehicle flow of less than 250 per day. Insufficient skidding resistance may increase the risk of loss of control, skidding or junction related collisions.

RECOMMENDATION

It is recommended that with reference to DMRB CD236, bituminous material with a minimum PSV of 60 is used in the vicinity of the proposed junction (Site Category Q) across the full carriageway width. It is also recommended that inspection chamber covers in carriageway areas are provided with a similar skid resistance to that of the surrounding carriageway surface.

PROBLEM – A-02

Location: Barkby Road

Summary: Junctions – Poor width provision for vehicles may increase the risk of head on or shunt collisions on the main carriageway or access.

The proposed geometry indicates a 5.5m wide carriageway on the proposed access. Whilst providing just enough width for two goods vehicles to pass on a straight road, the width at the junction mouth may not provide sufficient width for a large vehicle such as a refuse vehicle to enter the proposed access road whilst another vehicle is waiting to turn out of the junction. The information supplied indicates that the development site will have about 160 dwellings, which increases the likelihood of two vehicles using the junction at the same time, consequently increasing the risk of shunt type collisions or head on type collisions for following vehicles overtaking the paused large vehicle.

RECOMMENDATION

It is recommended that a swept path analysis is undertaken to inform the next stage of design in terms of suitable road widths at the junction mouth. This analysis should at very least allow a refuse vehicle to enter the proposed access road whilst another vehicle is waiting to exit the access.

PROBLEM – A-03

Location: Barkby Road

Summary: Pedestrians – Poor width provision for pedestrians may increase the risk of collisions involving pedestrians stepping into the main carriageway.

The proposed design indicates a footway between the proposed access and the existing footway to the north. There are several street furniture items within the proposed length that would appear closer than 2.0m to the existing kerb edge, including street lights, a warning sign, a service box and a street name plate. These items if left in place would create width restrictions in the proposed footway, which may increase the risk of pedestrians stepping into the main carriageway, especially when passing another pedestrian walking in the opposite direction. Although it is acknowledged that cycles should not be on the footway, there is a potential for a cycle to be on the footway at this point, this may further exacerbate the problem.

RECOMMENDATION

It is recommended that a clear footway width of 2.0m is provided along the frontage of the site between the proposed access and the existing footway to the north

Audit Team Statement

We certify that this Road Safety Audit has been carried out in accordance with GG119.

Road Safety Audit Team Leader

Haydn Vernals FCIHT FIHE CMILT MSoRSA, Directive 2008/96/EC (Certificate of Competency)

Sevenairs Consulting Ltd
59 Sevenairs Road, Beighton, Sheffield
South Yorkshire, S20 1NY

Signed: 

Date: 6th May 2021

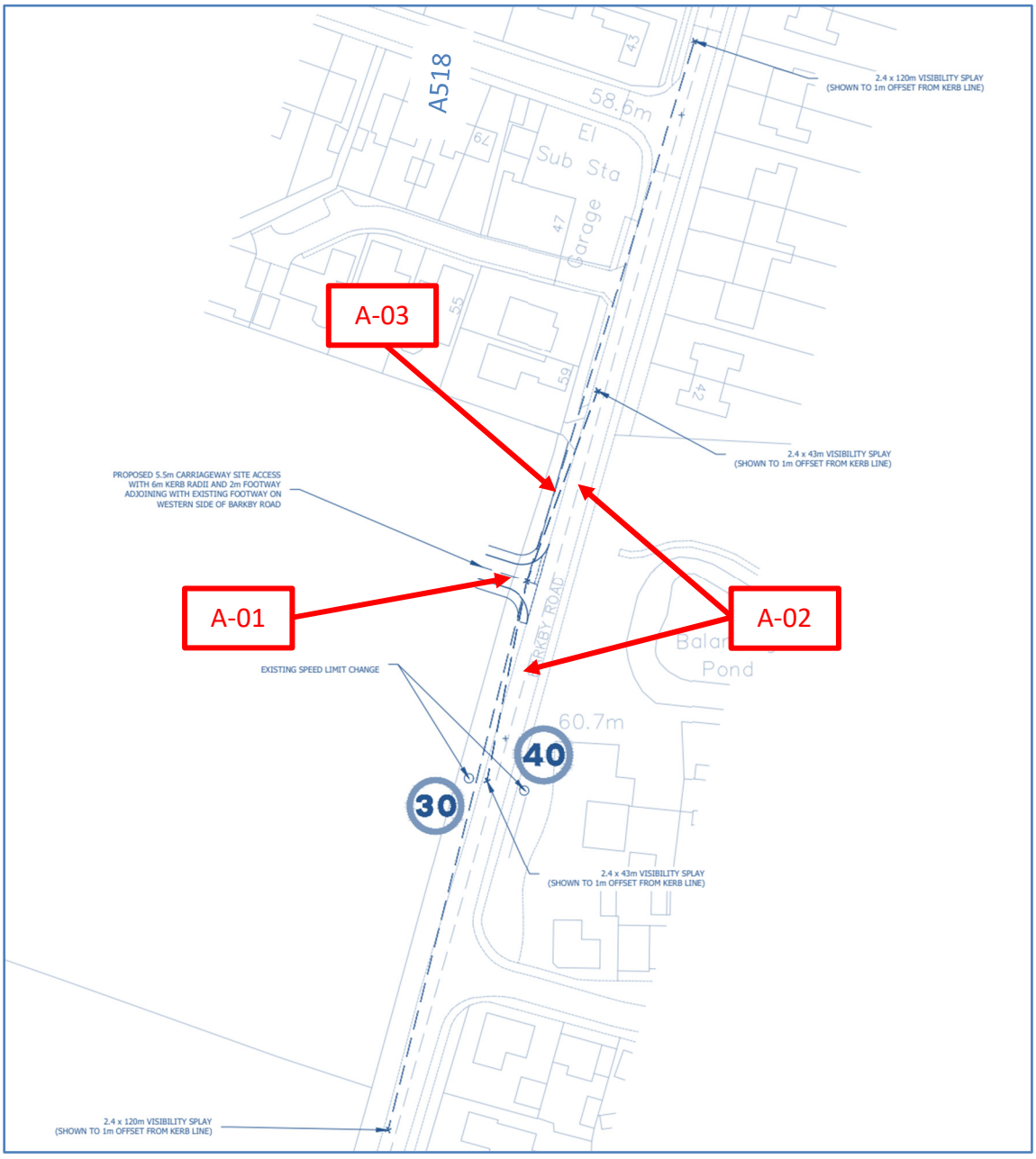
Road Safety Audit Team Member

Colin Blue, Road Safety Team Member in accordance with GG119 and Directive 2008/96/EC (Certificate of Competency)

Signed: 

Date: 6th May 2021

Problem Location Plan



APPENDIX E

TRICS OUTPUTS

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

VEHICLES

Selected regions and areas:

02	**SOUTH EAST**		
	EX	ESSEX	1 days
	HC	HAMPSHIRE	1 days
	SC	SURREY	1 days
	WS	WEST SUSSEX	1 days
03	**SOUTH WEST**		
	CW	CORNWALL	1 days
	DC	DORSET	1 days
	DV	DEVON	2 days
04	**EAST ANGLIA**		
	NF	NORFOLK	1 days
	SF	SUFFOLK	2 days
05	**EAST MIDLANDS**		
	LN	LINCOLNSHIRE	2 days
06	**WEST MIDLANDS**		
	SH	SHROPSHIRE	2 days
	WM	WEST MIDLANDS	1 days
07	**YORKSHIRE & NORTH LINCOLNSHIRE**		
	NE	NORTH EAST LINCOLNSHIRE	1 days
	NY	NORTH YORKSHIRE	3 days
	SY	SOUTH YORKSHIRE	1 days
08	**NORTH WEST**		
	CH	CHESHIRE	2 days
09	**NORTH**		
	CB	CUMBRIA	1 days
	DH	DURHAM	2 days

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

Secondary Filtering selection:

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

Parameter: Number of dwellings
Actual Range: 50 to 237 (units:)
Range Selected by User: 50 to 250 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/07 to 28/03/17

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	6 days
Tuesday	9 days
Wednesday	3 days
Thursday	5 days
Friday	3 days

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

Selected survey types:

Manual count	26 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 undertaking using machines.

Selected Locations:

Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	14
Edge of Town	10
Neighbourhood Centre (PPS6 Local Centre)	1

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:

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

Secondary Filtering selection:

Use Class:

C3	26 days

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

Population within 1 mile:

1,001 to 5,000	4 days
5,001 to 10,000	8 days
10,001 to 15,000	4 days
15,001 to 20,000	6 days
20,001 to 25,000	3 days
25,001 to 50,000	1 days

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

Population within 5 miles:

5,001 to 25,000	5 days
25,001 to 50,000	4 days
75,001 to 100,000	5 days
100,001 to 125,000	5 days
125,001 to 250,000	4 days
250,001 to 500,000	3 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	5 days
1.1 to 1.5	21 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	24 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	26 days

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

LIST OF SITES relevant to selection parameters

1 **CB-03-A-04** **SEMI DETACHED** **CUMBRIA**
MOORCLOSE ROAD
SALTERBACK
WORKINGTON
Edge of Town
No Sub Category
Total Number of dwellings: 82
Survey date: FRIDAY *24/04/09* *Survey Type: MANUAL*

2 **CH-03-A-02** **HOUSES/FLATS** **CHESHIRE**
SYDNEY ROAD

CREWE
Edge of Town
Residential Zone
Total Number of dwellings: 174
Survey date: TUESDAY *14/10/08* *Survey Type: MANUAL*

3 **CH-03-A-06** **SEMI-DET./BUNGALOWS** **CHESHIRE**
CREWE ROAD

CREWE
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Number of dwellings: 129
Survey date: TUESDAY *14/10/08* *Survey Type: MANUAL*

4 **CW-03-A-02** **SEMI D./DETATCHED** **CORNWALL**
BOSVEAN GARDENS

TRURO
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 73
Survey date: TUESDAY *18/09/07* *Survey Type: MANUAL*

5 **DC-03-A-01** **DETACHED** **DORSET**
ISAACS CLOSE

POOLE
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 51
Survey date: WEDNESDAY *16/07/08* *Survey Type: MANUAL*

6 **DH-03-A-01** **SEMI DETACHED** **DURHAM**
GREENFIELDS ROAD

BISHOP AUCKLAND
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 50
Survey date: TUESDAY *28/03/17* *Survey Type: MANUAL*

7 **DH-03-A-02** **MIXED HOUSES** **DURHAM**
LEAZES LANE
ST HELEN AUCKLAND
BISHOP AUCKLAND
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total Number of dwellings: 125
Survey date: MONDAY *27/03/17* *Survey Type: MANUAL*

8 **DV-03-A-02** **HOUSES & BUNGALOWS** **DEVON**
MILLHEAD ROAD

HONITON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 116
Survey date: FRIDAY *25/09/15* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

9 **DV-03-A-03** **TERRACED & SEMI DETACHED** **DEVON**
LOWER BRAND LANE

HONITON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 70
Survey date: MONDAY *28/09/15* *Survey Type: MANUAL*

10 **EX-03-A-01** **SEMI-DET.** **ESSEX**
MILTON ROAD
CORRINGHAM
STANFORD-LE-HOPE
Edge of Town
Residential Zone
Total Number of dwellings: 237
Survey date: TUESDAY *13/05/08* *Survey Type: MANUAL*

11 **HC-03-A-18** **HOUSES & FLATS** **HAMPSHIRE**
CANADA WAY

LIPHOOK
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 62
Survey date: TUESDAY *29/11/16* *Survey Type: MANUAL*

12 **LN-03-A-01** **MIXED HOUSES** **LINCOLNSHIRE**
BRANT ROAD
BRACEBRIDGE
LINCOLN
Edge of Town
Residential Zone
Total Number of dwellings: 150
Survey date: TUESDAY *15/05/07* *Survey Type: MANUAL*

13 **LN-03-A-02** **MIXED HOUSES** **LINCOLNSHIRE**
HYKEHAM ROAD

LINCOLN
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 186
Survey date: MONDAY *14/05/07* *Survey Type: MANUAL*

14 **NE-03-A-03** **PRIVATE HOUSES** **NORTH EAST LINCOLNSHIRE**
STATION ROAD

SCUNTHORPE
Edge of Town Centre
Residential Zone
Total Number of dwellings: 180
Survey date: TUESDAY *20/05/14* *Survey Type: MANUAL*

15 **NF-03-A-02** **HOUSES & FLATS** **NORFOLK**
DEREHAM ROAD

NORWICH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 98
Survey date: MONDAY *22/10/12* *Survey Type: MANUAL*

16 **NY-03-A-06** **BUNGALOWS & SEMI DET.** **NORTH YORKSHIRE**
HORSEFAIR

BOROUGHBRIDGE
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 115
Survey date: FRIDAY *14/10/11* *Survey Type: MANUAL*

17 **NY-03-A-09** **MIXED HOUSING** **NORTH YORKSHIRE**
GRAMMAR SCHOOL LANE

NORTHALLERTON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 52
Survey date: MONDAY *16/09/13* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

18 **NY-03-A-10** **HOUSES AND FLATS** **NORTH YORKSHIRE**
BOROUGHBRIDGE ROAD

RIPON
Edge of Town
No Sub Category
Total Number of dwellings: 71
Survey date: TUESDAY *17/09/13* *Survey Type: MANUAL*

19 **SC-03-A-04** **DETACHED & TERRACED** **SURREY**
HIGH ROAD

BYFLEET
Edge of Town
Residential Zone
Total Number of dwellings: 71
Survey date: THURSDAY *23/01/14* *Survey Type: MANUAL*

20 **SF-03-A-01** **SEMI DETACHED** **SUFFOLK**
A1156 FELIXSTOWE ROAD
RACECOURSE
IPSWICH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 77
Survey date: WEDNESDAY *23/05/07* *Survey Type: MANUAL*

21 **SF-03-A-02** **SEMI DET./TERRACED** **SUFFOLK**
STOKE PARK DRIVE
MAIDENHALL
IPSWICH
Edge of Town
Residential Zone
Total Number of dwellings: 230
Survey date: THURSDAY *24/05/07* *Survey Type: MANUAL*

22 **SH-03-A-04** **TERRACED** **SHROPSHIRE**
ST MICHAEL'S STREET

SHREWSBURY
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Number of dwellings: 108
Survey date: THURSDAY *11/06/09* *Survey Type: MANUAL*

23 **SH-03-A-05** **SEMI-DETACHED/TERRACED** **SHROPSHIRE**
SANDCROFT
SUTTON HILL
TELFORD
Edge of Town
Residential Zone
Total Number of dwellings: 54
Survey date: THURSDAY *24/10/13* *Survey Type: MANUAL*

24 **SY-03-A-01** **SEMI DETACHED HOUSES** **SOUTH YORKSHIRE**
A19 BENTLEY ROAD
BENTLEY RISE
DONCASTER
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 54
Survey date: WEDNESDAY *18/09/13* *Survey Type: MANUAL*

25 **WM-03-A-03** **MIXED HOUSING** **WEST MIDLANDS**
BASELEY WAY
ROWLEYS GREEN
COVENTRY
Edge of Town
Residential Zone
Total Number of dwellings: 84
Survey date: MONDAY *24/09/07* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

26 WS-03-A-04 MIXED HOUSES WEST SUSSEX
HILLS FARM LANE
BROADBRIDGE HEATH
HORSHAM
Edge of Town
Residential Zone
Total Number of dwellings: 151
Survey date: THURSDAY *11/12/14* *Survey Type: MANUAL*

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

RANK ORDER for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

VEHICLES

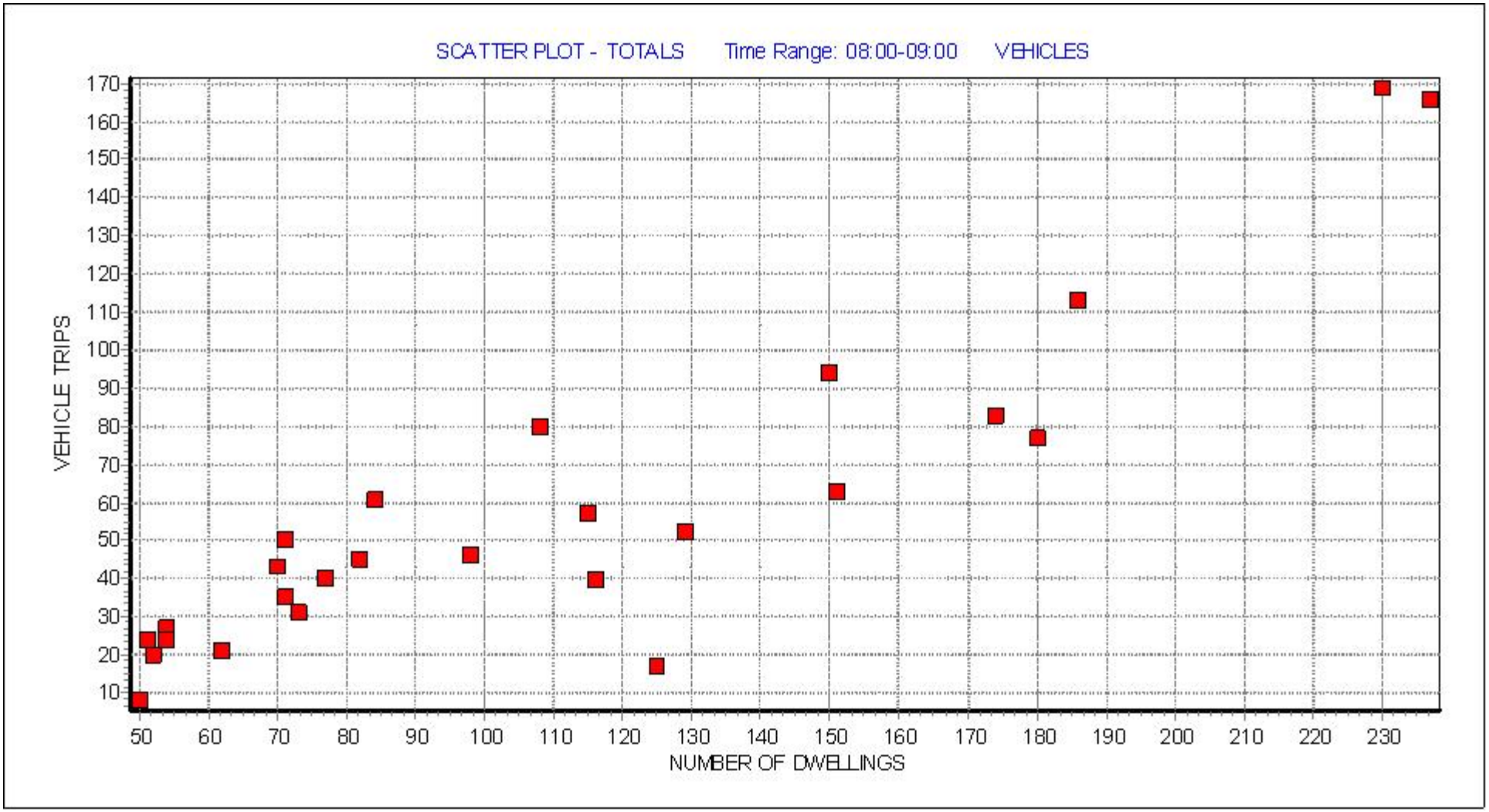
Ranking Type: **TOTALS** Time Range: 08:00-09:00
15th Percentile = No. **22** NY-03-A-09 Tot: 0.385
85th Percentile = No. **5** EX-03-A-01 Tot: 0.700

Median Values		Mean Values	
Arrivals:	0.122	Arrivals:	0.140
Departures:	0.363	Departures:	0.356
Totals:	0.485	Totals:	0.497

Rank	Site-Ref	Description	Town/City	Area	DWELLS	Day	Date	Trip Rate (Sorted by Totals)			Park Spaces Per Dwelling
								Arrivals	Departures	Totals	
1	SH-03-A-04	TERRACED	SHREWSBURY	SHROPSHIRE	108	Thu	11/06/09	0.287	0.454	0.741	1.86
2	SF-03-A-02	SEMI DET./TERR	IPSWICH	SUFFOLK	230	Thu	24/05/07	0.243	0.491	0.734	2.48
3	WM-03-A-03	MIXED HOUSING	COVENTRY	WEST MIDLANDS	84	Mon	24/09/07	0.321	0.405	0.726	2.60
4	NY-03-A-10	HOUSES AND FLA	RIPON	NORTH YORKSHIRE	71	Tue	17/09/13	0.183	0.521	0.704	0.83
5	**EX-03-A-01**	**SEMI-DET.**	**STANFORD-LE-HOPE**	**ESSEX**	**237**	**Tue**	**13/05/08**	**0.177**	**0.523**	**0.700**	**2.53**
6	LN-03-A-01	MIXED HOUSES	LINCOLN	LINCOLNSHIRE	150	Tue	15/05/07	0.187	0.440	0.627	4.91
7	DV-03-A-03	TERRACED & SEM	HONITON	DEVON	70	Mon	28/09/15	0.086	0.529	0.615	1.66
8	LN-03-A-02	MIXED HOUSES	LINCOLN	LINCOLNSHIRE	186	Mon	14/05/07	0.183	0.425	0.608	4.13
9	CB-03-A-04	SEMI DETACHED	WORKINGTON	CUMBRIA	82	Fri	24/04/09	0.183	0.366	0.549	1.74
10	SF-03-A-01	SEMI DETACHED	IPSWICH	SUFFOLK	77	Wed	23/05/07	0.104	0.416	0.520	2.22
11	SH-03-A-05	SEMI-DETACHED/	TELFORD	SHROPSHIRE	54	Thu	24/10/13	0.130	0.370	0.500	1.17
12	NY-03-A-06	BUNGALOWS & SE	BOROUGHBRIDGE	NORTH YORKSHIRE	115	Fri	14/10/11	0.096	0.400	0.496	3.50
13	SC-03-A-04	DETACHED & TER	BYFLEET	SURREY	71	Thu	23/01/14	0.141	0.352	0.493	2.49
14	CH-03-A-02	HOUSES/FLATS	CREWE	CHESHIRE	174	Tue	14/10/08	0.103	0.374	0.477	2.81
15	DC-03-A-01	DETACHED	POOLE	DORSET	51	Wed	16/07/08	0.098	0.373	0.471	3.00
16	NF-03-A-02	HOUSES & FLATS	NORWICH	NORFOLK	98	Mon	22/10/12	0.122	0.347	0.469	2.24
17	SY-03-A-01	SEMI DETACHED	DONCASTER	SOUTH YORKSHIRE	54	Wed	18/09/13	0.056	0.389	0.445	1.13
18	NE-03-A-03	PRIVATE HOUSES	SCUNTHORPE	NORTH EAST LINCOLNS	180	Tue	20/05/14	0.144	0.283	0.427	2.68
19	CW-03-A-02	SEMI D./DETATC	TRURO	CORNWALL	73	Tue	18/09/07	0.096	0.329	0.425	3.73
20	WS-03-A-04	MIXED HOUSES	HORSHAM	WEST SUSSEX	151	Thu	11/12/14	0.139	0.278	0.417	2.28
21	CH-03-A-06	SEMI-DET./BUNG	CREWE	CHESHIRE	129	Tue	14/10/08	0.163	0.240	0.403	2.59
22	**NY-03-A-09**	**MIXED HOUSING**	**NORTHALLERTON**	**NORTH YORKSHIRE**	**52**	**Mon**	**16/09/13**	**0.173**	**0.212**	**0.385**	**2.60**
23	DV-03-A-02	HOUSES & BUNGA	HONITON	DEVON	116	Fri	25/09/15	0.103	0.241	0.344	2.25
24	HC-03-A-18	HOUSES & FLATS	LIPHOOK	HAMPSHIRE	62	Tue	29/11/16	0.081	0.258	0.339	2.19
25	DH-03-A-01	SEMI DETACHED	BISHOP AUCKLAND	DURHAM	50	Tue	28/03/17	0.020	0.140	0.160	1.74
26	DH-03-A-02	MIXED HOUSES	BISHOP AUCKLAND	DURHAM	125	Mon	27/03/17	0.032	0.104	0.136	0.99

This section displays actual (not average) trip rates for each of the survey days in the selected set, and ranks them in order of relative trip rate intensity, for a given time period (or peak period irrespective of time) selected by the user. The count type and direction are both displayed just above the table, along with the rows within the table representing the 85th and 15th percentile trip rate figures (highlighted in bold within the table itself).

The table itself displays details of each individual survey, alongside arrivals, departures and totals trip rates, sorted by whichever of the three directional options has been chosen by the user. As with the preceeding trip rate calculation results table, the trip rates shown are per the calculation factor (e.g. per 100m2 GFA, per employee, per hectare, etc). Note that if the peak period option has been selected (as opposed to a specific chosen time period), the peak period for each individual survey day in the table is also displayed.



This graph is a visual representation of the correlation between the selected trip rate calculation parameter and the rank order trip rates generated by each individual survey day in the selected set. The range of the trip rate parameter is shown along the x axis, with the level of trips shown on the y axis. The selected time range used to create the rank order list from which the graph is derived is displayed at the top of the graph (unless the peak period irrespective of time range has been selected). A line of best fit is sometimes displayed in the graph, should it be selected for inclusion by the user.

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

VEHICLES

Selected regions and areas:

02	**SOUTH EAST**		
	EX	ESSEX	1 days
	HC	HAMPSHIRE	1 days
	SC	SURREY	1 days
	WS	WEST SUSSEX	1 days
03	**SOUTH WEST**		
	CW	CORNWALL	1 days
	DC	DORSET	1 days
	DV	DEVON	2 days
04	**EAST ANGLIA**		
	NF	NORFOLK	1 days
	SF	SUFFOLK	2 days
05	**EAST MIDLANDS**		
	LN	LINCOLNSHIRE	2 days
06	**WEST MIDLANDS**		
	SH	SHROPSHIRE	2 days
	WM	WEST MIDLANDS	1 days
07	**YORKSHIRE & NORTH LINCOLNSHIRE**		
	NE	NORTH EAST LINCOLNSHIRE	1 days
	NY	NORTH YORKSHIRE	3 days
	SY	SOUTH YORKSHIRE	1 days
08	**NORTH WEST**		
	CH	CHESHIRE	2 days
09	**NORTH**		
	CB	CUMBRIA	1 days
	DH	DURHAM	2 days

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

Secondary Filtering selection:

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

Parameter: Number of dwellings
Actual Range: 50 to 237 (units:)
Range Selected by User: 50 to 250 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/07 to 28/03/17

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	6 days
Tuesday	9 days
Wednesday	3 days
Thursday	5 days
Friday	3 days

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

Selected survey types:

Manual count	26 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 undertaking using machines.

Selected Locations:

Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	14
Edge of Town	10
Neighbourhood Centre (PPS6 Local Centre)	1

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	23

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

Secondary Filtering selection:

Use Class:

C3	26 days

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

Population within 1 mile:

1,001 to 5,000	4 days
5,001 to 10,000	8 days
10,001 to 15,000	4 days
15,001 to 20,000	6 days
20,001 to 25,000	3 days
25,001 to 50,000	1 days

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

Population within 5 miles:

5,001 to 25,000	5 days
25,001 to 50,000	4 days
75,001 to 100,000	5 days
100,001 to 125,000	5 days
125,001 to 250,000	4 days
250,001 to 500,000	3 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	5 days
1.1 to 1.5	21 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	24 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	26 days

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

LIST OF SITES relevant to selection parameters

1 **CB-03-A-04** **SEMI DETACHED** **CUMBRIA**
MOORCLOSE ROAD
SALTERBACK
WORKINGTON
Edge of Town
No Sub Category
Total Number of dwellings: 82
Survey date: FRIDAY *24/04/09* *Survey Type: MANUAL*

2 **CH-03-A-02** **HOUSES/FLATS** **CHESHIRE**
SYDNEY ROAD

CREWE
Edge of Town
Residential Zone
Total Number of dwellings: 174
Survey date: TUESDAY *14/10/08* *Survey Type: MANUAL*

3 **CH-03-A-06** **SEMI-DET./BUNGALOWS** **CHESHIRE**
CREWE ROAD

CREWE
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Number of dwellings: 129
Survey date: TUESDAY *14/10/08* *Survey Type: MANUAL*

4 **CW-03-A-02** **SEMI D./DETATCHED** **CORNWALL**
BOSVEAN GARDENS

TRURO
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 73
Survey date: TUESDAY *18/09/07* *Survey Type: MANUAL*

5 **DC-03-A-01** **DETACHED** **DORSET**
ISAACS CLOSE

POOLE
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 51
Survey date: WEDNESDAY *16/07/08* *Survey Type: MANUAL*

6 **DH-03-A-01** **SEMI DETACHED** **DURHAM**
GREENFIELDS ROAD

BISHOP AUCKLAND
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 50
Survey date: TUESDAY *28/03/17* *Survey Type: MANUAL*

7 **DH-03-A-02** **MIXED HOUSES** **DURHAM**
LEAZES LANE
ST HELEN AUCKLAND
BISHOP AUCKLAND
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total Number of dwellings: 125
Survey date: MONDAY *27/03/17* *Survey Type: MANUAL*

8 **DV-03-A-02** **HOUSES & BUNGALOWS** **DEVON**
MILLHEAD ROAD

HONITON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 116
Survey date: FRIDAY *25/09/15* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

9 **DV-03-A-03** **TERRACED & SEMI DETACHED** **DEVON**
LOWER BRAND LANE

HONITON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 70
Survey date: MONDAY *28/09/15* *Survey Type: MANUAL*

10 **EX-03-A-01** **SEMI-DET.** **ESSEX**
MILTON ROAD
CORRINGHAM
STANFORD-LE-HOPE
Edge of Town
Residential Zone
Total Number of dwellings: 237
Survey date: TUESDAY *13/05/08* *Survey Type: MANUAL*

11 **HC-03-A-18** **HOUSES & FLATS** **HAMPSHIRE**
CANADA WAY

LIPHOOK
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 62
Survey date: TUESDAY *29/11/16* *Survey Type: MANUAL*

12 **LN-03-A-01** **MIXED HOUSES** **LINCOLNSHIRE**
BRANT ROAD
BRACEBRIDGE
LINCOLN
Edge of Town
Residential Zone
Total Number of dwellings: 150
Survey date: TUESDAY *15/05/07* *Survey Type: MANUAL*

13 **LN-03-A-02** **MIXED HOUSES** **LINCOLNSHIRE**
HYKEHAM ROAD

LINCOLN
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 186
Survey date: MONDAY *14/05/07* *Survey Type: MANUAL*

14 **NE-03-A-03** **PRIVATE HOUSES** **NORTH EAST LINCOLNSHIRE**
STATION ROAD

SCUNTHORPE
Edge of Town Centre
Residential Zone
Total Number of dwellings: 180
Survey date: TUESDAY *20/05/14* *Survey Type: MANUAL*

15 **NF-03-A-02** **HOUSES & FLATS** **NORFOLK**
DEREHAM ROAD

NORWICH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 98
Survey date: MONDAY *22/10/12* *Survey Type: MANUAL*

16 **NY-03-A-06** **BUNGALOWS & SEMI DET.** **NORTH YORKSHIRE**
HORSEFAIR

BOROUGHBRIDGE
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 115
Survey date: FRIDAY *14/10/11* *Survey Type: MANUAL*

17 **NY-03-A-09** **MIXED HOUSING** **NORTH YORKSHIRE**
GRAMMAR SCHOOL LANE

NORTHALLERTON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 52
Survey date: MONDAY *16/09/13* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

18 **NY-03-A-10** **HOUSES AND FLATS** **NORTH YORKSHIRE**
BOROUGHBRIDGE ROAD

RIPON
Edge of Town
No Sub Category
Total Number of dwellings: 71
Survey date: TUESDAY *17/09/13* *Survey Type: MANUAL*

19 **SC-03-A-04** **DETACHED & TERRACED** **SURREY**
HIGH ROAD

BYFLEET
Edge of Town
Residential Zone
Total Number of dwellings: 71
Survey date: THURSDAY *23/01/14* *Survey Type: MANUAL*

20 **SF-03-A-01** **SEMI DETACHED** **SUFFOLK**
A1156 FELIXSTOWE ROAD
RACECOURSE
IPSWICH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 77
Survey date: WEDNESDAY *23/05/07* *Survey Type: MANUAL*

21 **SF-03-A-02** **SEMI DET./TERRACED** **SUFFOLK**
STOKE PARK DRIVE
MAIDENHALL
IPSWICH
Edge of Town
Residential Zone
Total Number of dwellings: 230
Survey date: THURSDAY *24/05/07* *Survey Type: MANUAL*

22 **SH-03-A-04** **TERRACED** **SHROPSHIRE**
ST MICHAEL'S STREET

SHREWSBURY
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Number of dwellings: 108
Survey date: THURSDAY *11/06/09* *Survey Type: MANUAL*

23 **SH-03-A-05** **SEMI-DETACHED/TERRACED** **SHROPSHIRE**
SANDCROFT
SUTTON HILL
TELFORD
Edge of Town
Residential Zone
Total Number of dwellings: 54
Survey date: THURSDAY *24/10/13* *Survey Type: MANUAL*

24 **SY-03-A-01** **SEMI DETACHED HOUSES** **SOUTH YORKSHIRE**
A19 BENTLEY ROAD
BENTLEY RISE
DONCASTER
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 54
Survey date: WEDNESDAY *18/09/13* *Survey Type: MANUAL*

25 **WM-03-A-03** **MIXED HOUSING** **WEST MIDLANDS**
BASELEY WAY
ROWLEYS GREEN
COVENTRY
Edge of Town
Residential Zone
Total Number of dwellings: 84
Survey date: MONDAY *24/09/07* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

26 WS-03-A-04 MIXED HOUSES WEST SUSSEX
HILLS FARM LANE
BROADBRIDGE HEATH
HORSHAM
Edge of Town
Residential Zone
Total Number of dwellings: 151
Survey date: THURSDAY *11/12/14* *Survey Type: MANUAL*

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

RANK ORDER for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

VEHICLES

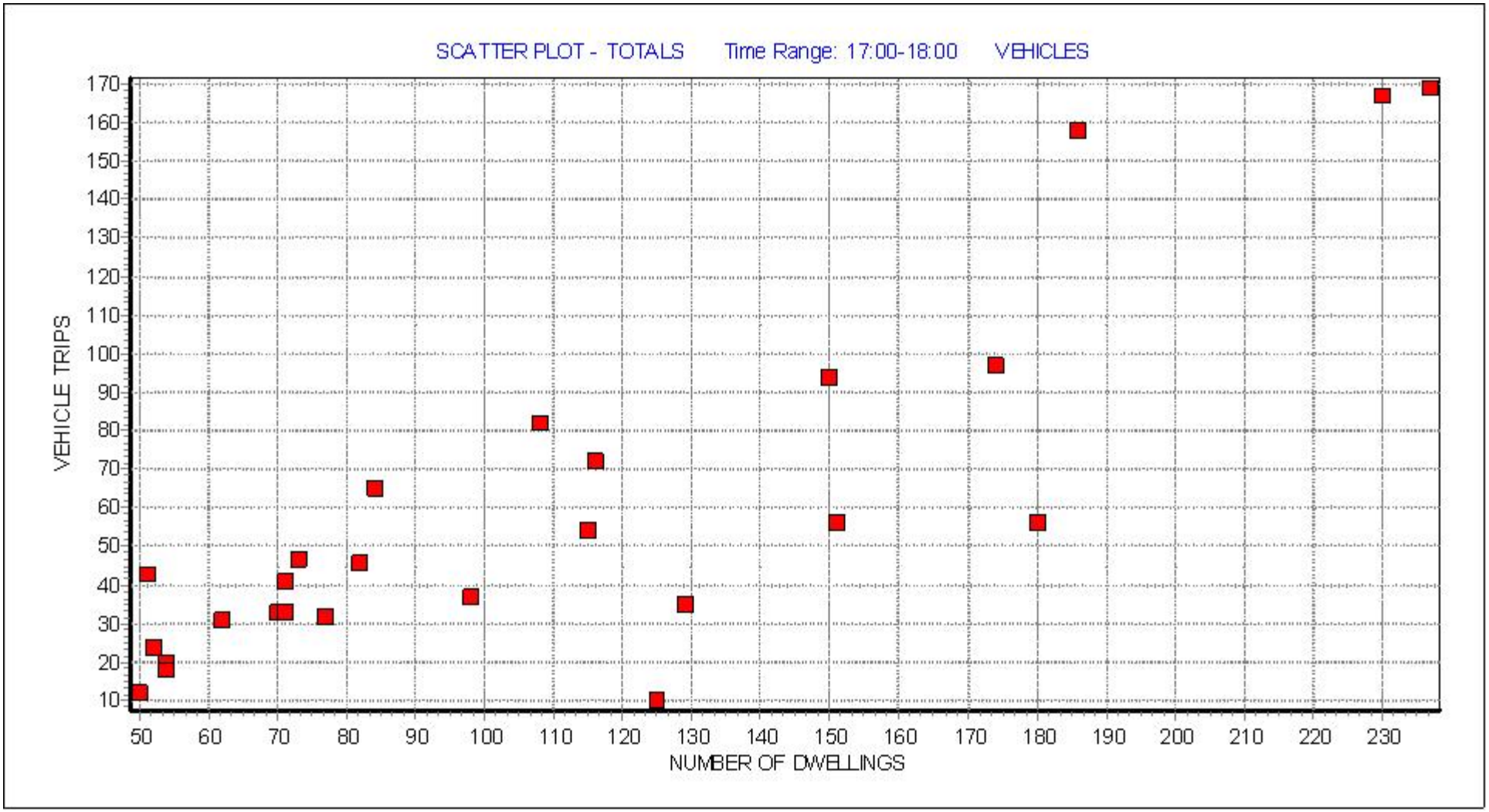
Ranking Type: **TOTALS** Time Range: 17:00-18:00
15th Percentile = No. **22** SY-03-A-01 Tot: 0.334
85th Percentile = No. **5** SF-03-A-02 Tot: 0.726

Median Values		Mean Values	
Arrivals:	0.363	Arrivals:	0.332
Departures:	0.122	Departures:	0.183
Totals:	0.485	Totals:	0.515

Rank	Site-Ref	Description	Town/City	Area	DWELLS	Day	Date	Trip Rate (Sorted by Totals)			Park Spaces Per Dwelling
								Arrivals	Departures	Totals	
1	LN-03-A-02	MIXED HOUSES	LINCOLN	LINCOLNSHIRE	186	Mon	14/05/07	0.495	0.355	0.850	4.13
2	DC-03-A-01	DETACHED	POOLE	DORSET	51	Wed	16/07/08	0.510	0.333	0.843	3.00
3	WM-03-A-03	MIXED HOUSING	COVENTRY	WEST MIDLANDS	84	Mon	24/09/07	0.405	0.369	0.774	2.60
4	SH-03-A-04	TERRACED	SHREWSBURY	SHROPSHIRE	108	Thu	11/06/09	0.463	0.296	0.759	1.86
5	**SF-03-A-02**	**SEMI DET./TERR**	**IPSWICH**	**SUFFOLK**	**230**	**Thu**	**24/05/07**	**0.478**	**0.248**	**0.726**	**2.48**
6	EX-03-A-01	SEMI-DET.	STANFORD-LE-HOPE	ESSEX	237	Tue	13/05/08	0.439	0.274	0.713	2.53
7	CW-03-A-02	SEMI D./DETATC	TRURO	CORNWALL	73	Tue	18/09/07	0.425	0.219	0.644	3.73
8	LN-03-A-01	MIXED HOUSES	LINCOLN	LINCOLNSHIRE	150	Tue	15/05/07	0.413	0.213	0.626	4.91
9	DV-03-A-02	HOUSES & BUNGA	HONITON	DEVON	116	Fri	25/09/15	0.388	0.233	0.621	2.25
10	NY-03-A-10	HOUSES AND FLA	RIPON	NORTH YORKSHIRE	71	Tue	17/09/13	0.479	0.099	0.578	0.83
11	CB-03-A-04	SEMI DETACHED	WORKINGTON	CUMBRIA	82	Fri	24/04/09	0.354	0.207	0.561	1.74
12	CH-03-A-02	HOUSES/FLATS	CREWE	CHESHIRE	174	Tue	14/10/08	0.322	0.236	0.558	2.81
13	HC-03-A-18	HOUSES & FLATS	LIPHOOK	HAMPSHIRE	62	Tue	29/11/16	0.355	0.145	0.500	2.19
14	DV-03-A-03	TERRACED & SEM	HONITON	DEVON	70	Mon	28/09/15	0.371	0.100	0.471	1.66
15	NY-03-A-06	BUNGALOWS & SE	BOROUGHBRIDGE	NORTH YORKSHIRE	115	Fri	14/10/11	0.296	0.174	0.470	3.50
16	SC-03-A-04	DETACHED & TER	BYFLEET	SURREY	71	Thu	23/01/14	0.366	0.099	0.465	2.49
17	NY-03-A-09	MIXED HOUSING	NORTHALLERTON	NORTH YORKSHIRE	52	Mon	16/09/13	0.269	0.192	0.461	2.60
18	SF-03-A-01	SEMI DETACHED	IPSWICH	SUFFOLK	77	Wed	23/05/07	0.247	0.169	0.416	2.22
19	NF-03-A-02	HOUSES & FLATS	NORWICH	NORFOLK	98	Mon	22/10/12	0.235	0.143	0.378	2.24
20	WS-03-A-04	MIXED HOUSES	HORSHAM	WEST SUSSEX	151	Thu	11/12/14	0.252	0.119	0.371	2.28
21	SH-03-A-05	SEMI-DETACHED/	TELFORD	SHROPSHIRE	54	Thu	24/10/13	0.241	0.130	0.371	1.17
22	**SY-03-A-01**	**SEMI DETACHED**	**DONCASTER**	**SOUTH YORKSHIRE**	**54**	**Wed**	**18/09/13**	**0.278**	**0.056**	**0.334**	**1.13**
23	NE-03-A-03	PRIVATE HOUSES	SCUNTHORPE	NORTH EAST LINCOLNS	180	Tue	20/05/14	0.128	0.183	0.311	2.68
24	CH-03-A-06	SEMI-DET./BUNG	CREWE	CHESHIRE	129	Tue	14/10/08	0.132	0.140	0.272	2.59
25	DH-03-A-01	SEMI DETACHED	BISHOP AUCKLAND	DURHAM	50	Tue	28/03/17	0.220	0.020	0.240	1.74
26	DH-03-A-02	MIXED HOUSES	BISHOP AUCKLAND	DURHAM	125	Mon	27/03/17	0.064	0.016	0.080	0.99

This section displays actual (not average) trip rates for each of the survey days in the selected set, and ranks them in order of relative trip rate intensity, for a given time period (or peak period irrespective of time) selected by the user. The count type and direction are both displayed just above the table, along with the rows within the table representing the 85th and 15th percentile trip rate figures (highlighted in bold within the table itself).

The table itself displays details of each individual survey, alongside arrivals, departures and totals trip rates, sorted by whichever of the three directional options has been chosen by the user. As with the preceeding trip rate calculation results table, the trip rates shown are per the calculation factor (e.g. per 100m2 GFA, per employee, per hectare, etc). Note that if the peak period option has been selected (as opposed to a specific chosen time period), the peak period for each individual survey day in the table is also displayed.



This graph is a visual representation of the correlation between the selected trip rate calculation parameter and the rank order trip rates generated by each individual survey day in the selected set. The range of the trip rate parameter is shown along the x axis, with the level of trips shown on the y axis. The selected time range used to create the rank order list from which the graph is derived is displayed at the top of the graph (unless the peak period irrespective of time range has been selected). A line of best fit is sometimes displayed in the graph, should it be selected for inclusion by the user.

APPENDIX F

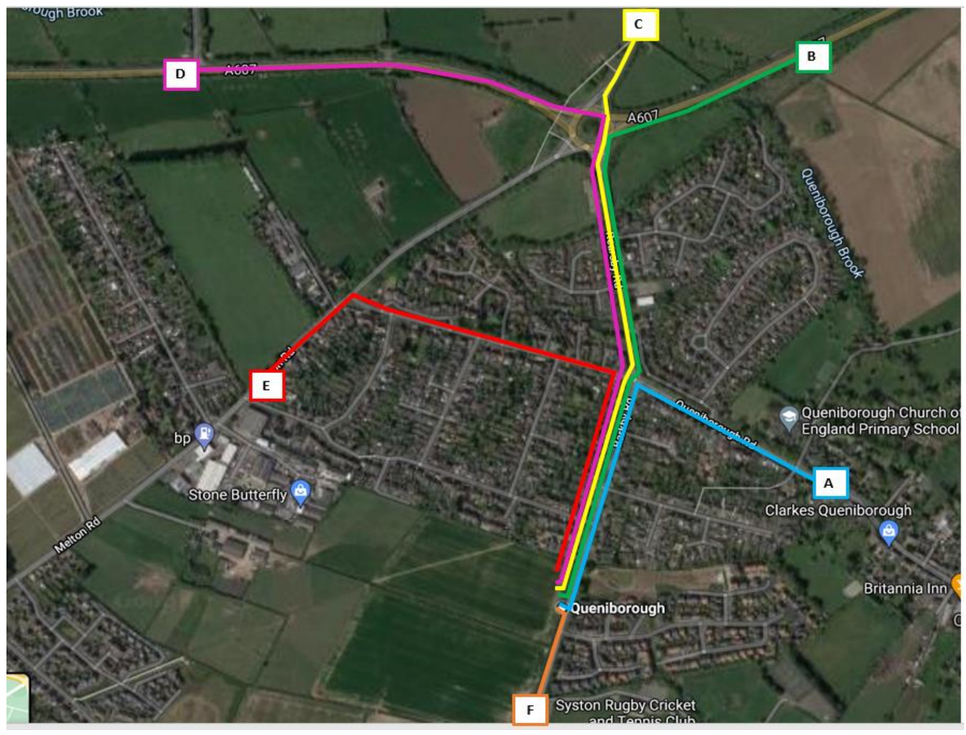
CENSUS DATA

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

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

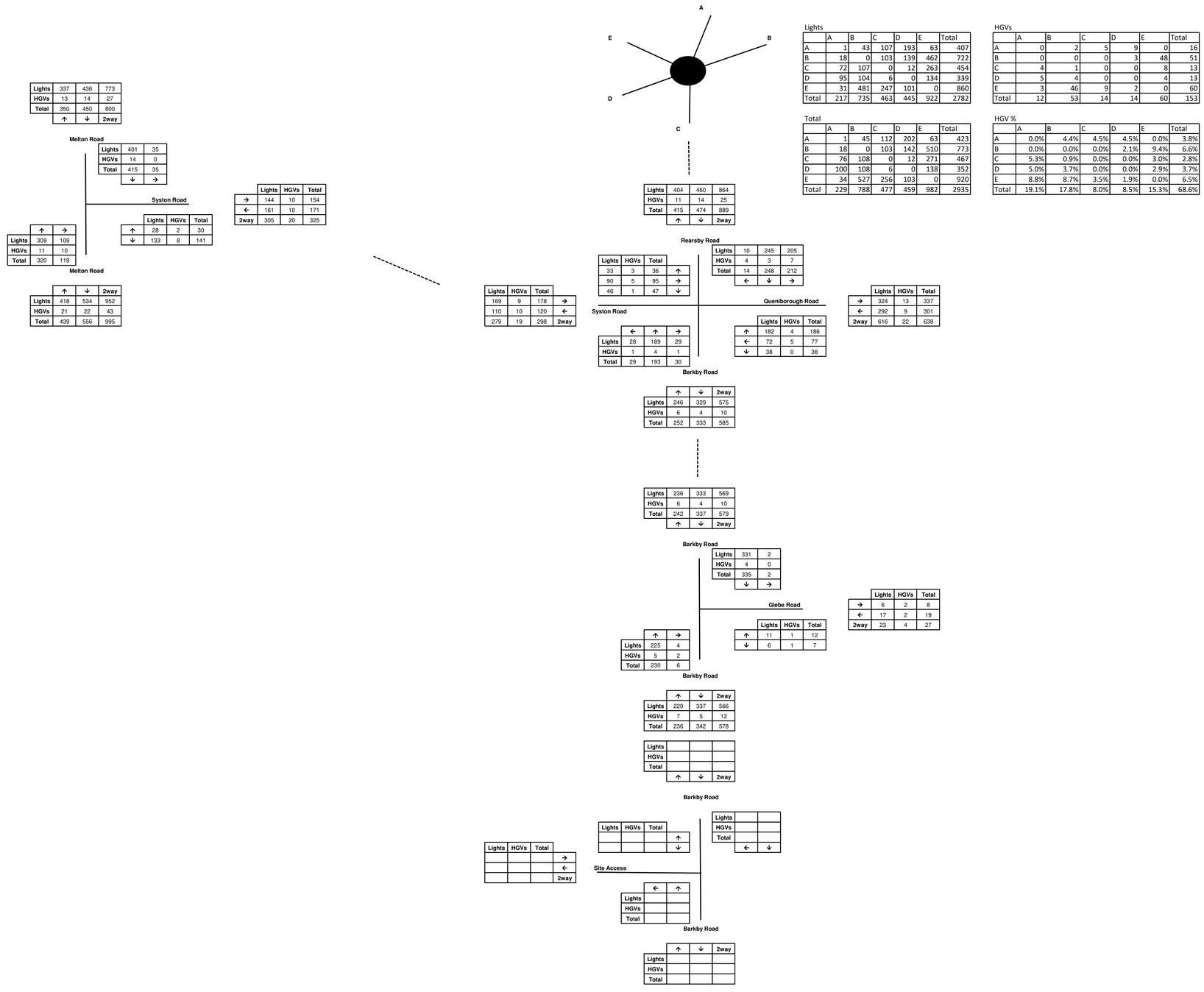
place of work : 2011 census merged local authority district	usual residence E02005359 : Charnwood 015		
Peterborough	6	0.3%	A
Kettering	4	0.2%	A
Rutland	11	0.6%	A
E02005359 : Charnwood 015	104	5.4%	A/C/F
Harborough	41	2.1%	A/F
Melton	110	5.7%	B/D
South Kesteven	5	0.3%	B/D
E02005352 : Charnwood 008	36	1.9%	C/D
Northampton	8	0.4%	D
E02002852 : Leicester 026	7	0.4%	D
E02005345 : Charnwood 001	1	0.1%	D
E02005346 : Charnwood 002	50	2.6%	D
E02005347 : Charnwood 003	30	1.5%	D
E02005349 : Charnwood 005	5	0.3%	D
E02005351 : Charnwood 007	8	0.4%	D
E02005353 : Charnwood 009	24	1.2%	D
E02005354 : Charnwood 010	6	0.3%	D
E02005355 : Charnwood 011	17	0.9%	D
E02005356 : Charnwood 012	22	1.1%	D
E02005360 : Charnwood 016	6	0.3%	D
E02005363 : Charnwood 019	9	0.5%	D
E02005366 : Charnwood 022	4	0.2%	D
North West Leicestershire	58	3.0%	D
Hinckley and Bosworth	34	1.8%	D
Nottingham	33	1.7%	D
Rushcliffe	17	0.9%	D
Derby	8	0.4%	D
Warwick	7	0.4%	D
Solihull	7	0.4%	D
Birmingham	5	0.3%	D
Westminster,City of London	5	0.3%	D
Sheffield	3	0.2%	D
Erewash	3	0.2%	D
East Staffordshire	3	0.2%	D
Rugby	3	0.2%	D
Luton	3	0.2%	D/A
E02002827 : Leicester 001	25	1.3%	D/F
E02002829 : Leicester 003	8	0.4%	D/F
E02002830 : Leicester 004	47	2.4%	D/F
E02002832 : Leicester 006	40	2.1%	D/F
E02002833 : Leicester 007	4	0.2%	D/F
E02002834 : Leicester 008	67	3.5%	D/F
E02002836 : Leicester 010	22	1.1%	D/F
E02002838 : Leicester 012	10	0.5%	D/F
E02002842 : Leicester 016	8	0.4%	D/F
E02002844 : Leicester 018	7	0.4%	D/F
E02002846 : Leicester 020	10	0.5%	D/F
E02002849 : Leicester 023	13	0.7%	D/F
E02002855 : Leicester 029	7	0.4%	D/F
E02002857 : Leicester 031	11	0.6%	D/F
E02002861 : Leicester 035	5	0.3%	D/F
E02002862 : Leicester 036	3	0.2%	D/F
E02006819 : Leicester 039	21	1.1%	D/F
E02006851 : Leicester 041	99	5.1%	D/F
E02005357 : Charnwood 013	18	0.9%	D/F
E02005358 : Charnwood 014	13	0.7%	D/F
E02005361 : Charnwood 017	134	6.9%	D/F
E02005364 : Charnwood 020	10	0.5%	D/F
E02005365 : Charnwood 021	105	5.4%	D/F
Blaby	149	7.7%	D/F
Coventry	7	0.4%	D/F
Nuneaton and Bedworth	4	0.2%	D/F
E02002828 : Leicester 002	85	4.4%	F
E02002831 : Leicester 005	14	0.7%	F
E02002835 : Leicester 009	24	1.2%	F
E02002843 : Leicester 017	8	0.4%	F
E02002845 : Leicester 019	34	1.8%	F
E02002847 : Leicester 021	13	0.7%	F
E02002848 : Leicester 022	3	0.2%	F
E02002851 : Leicester 025	4	0.2%	F
E02002853 : Leicester 027	4	0.2%	F
E02002856 : Leicester 030	23	1.2%	F
E02006815 : Leicester 037	4	0.2%	F
E02006850 : Leicester 040	72	3.7%	F
Oadby and Wigston	39	2.0%	F
E02002837 : Leicester 011	16	0.8%	F/E
E02005362 : Charnwood 018	49	2.5%	F/E
Total	**1,942**	**100%**	

	A	B	C	D	E	F	
	6						
	4						
	11						
	35		35			35	
	21					21	
		55		55			
		3		3			
			18	18			
				8			
				7			
				1			
				50			
				30			
				5			
				8			
				24			
				6			
				17			
				22			
				6			
				9			
				4			
				58			
				34			
				33			
				17			
				8			
				7			
				7			
				5			
				5			
				3			
				3			
				3			
				3			
	2			2			
				13		13	
				4		4	
				24		24	
				20		20	
				2		2	
				34		34	
				11		11	
				5		5	
				4		4	
				4		4	
				5		5	
				7		7	
				4		4	
				6		6	
				3		3	
				2		2	
				11		11	
				50		50	
				9		9	
				7		7	
				67		67	
				5		5	
				53		53	
				75		75	
				4		4	
				2		2	
						85	
						14	
						24	
						8	
						34	
						13	
						3	
						4	
						4	
						23	
						4	
						72	
						39	
					8	8	
					25	25	
Total	**78**	**58**	**53**	**884**	**33**	**838**	**1942**
	4%	3%	3%	45%	2%	43%	**100%**



APPENDIX G

TRAFFIC DIAGRAMS



Lights

	A	B	C	D	E	Total
A	1	43	107	193	63	407
B	18	0	103	139	462	722
C	72	107	0	12	263	454
D	95	104	6	0	134	339
E	31	481	247	101	0	860
Total	217	735	463	445	922	2782

HGVs

	A	B	C	D	E	Total
A	0	2	5	9	0	16
B	0	0	0	3	48	51
C	4	1	0	0	8	13
D	5	4	0	0	4	13
E	3	46	9	2	0	60
Total	12	53	14	14	60	153

Total

	A	B	C	D	E	Total
A	1	45	112	202	63	423
B	18	0	103	142	510	773
C	76	108	0	12	271	467
D	100	108	6	0	138	352
E	34	527	256	103	0	920
Total	229	788	477	459	982	2935

HGV %

	A	B	C	D	E	Total
A	0.0%	4.4%	4.5%	4.5%	0.0%	3.8%
B	0.0%	0.0%	0.0%	2.1%	9.4%	6.6%
C	5.3%	0.9%	0.0%	0.0%	3.0%	2.8%
D	5.0%	3.7%	0.0%	0.0%	2.9%	3.7%
E	8.8%	8.7%	3.5%	1.9%	0.0%	6.5%
Total	19.1%	17.8%	8.0%	8.5%	15.3%	68.6%

Lights	337	436	773
HGVs	13	14	27
Total	350	450	800
	↑	↓	2way

Lights	401	35	
HGVs	14	0	
Total	415	35	
	↓	→	

→	144	10	154
←	161	10	171
2way	305	20	325

↑	28	2	30
↓	133	8	141

	↑	→	
Lights	309	109	
HGVs	11	10	
Total	320	119	

	↑	↓	2way
Lights	418	534	952
HGVs	21	22	43
Total	439	556	995

Lights	404	460	864
HGVs	11	14	25
Total	415	474	889
	↑	↓	2way

Lights	10	245	205
HGVs	4	3	7
Total	14	248	212
	←	↓	→

Lights	HGVs	Total	
33	3	36	↑
90	5	95	→
46	1	47	↓

	←	↑	→
Lights	28	189	29
HGVs	1	4	1
Total	29	193	30

Lights	HGVs	Total	
169	9	178	→
110	10	120	←
279	19	298	2way

Lights	HGVs	Total	
182	4	186	↑
72	5	77	←
38	0	38	↓

Lights	HGVs	Total	
324	13	337	→
292	9	301	←
616	22	638	2way

	↑	↓	2way
Lights	246	329	575
HGVs	6	4	10
Total	252	333	585

Lights	236	333	569
HGVs	6	4	10
Total	242	337	579
	↑	↓	2way

Lights	331	2	
HGVs	4	0	
Total	335	2	
	↓	→	

	Lights	HGVs	Total
→	6	2	8
←	17	2	19
2way	23	4	27

	↑	→	
Lights	225	4	
HGVs	5	2	
Total	230	6	

Lights	HGVs	Total	
11	1	12	↑
6	1	7	↓

	↑	↓	2way
Lights	229	337	566
HGVs	7	5	12
Total	236	342	578

Lights			
HGVs			
Total			
	↑	↓	2way

Lights	HGVs	Total	
			→
			←
			2way

Lights	HGVs	Total	
			↑
			↓

Lights			
HGVs			
Total			
	←	↓	

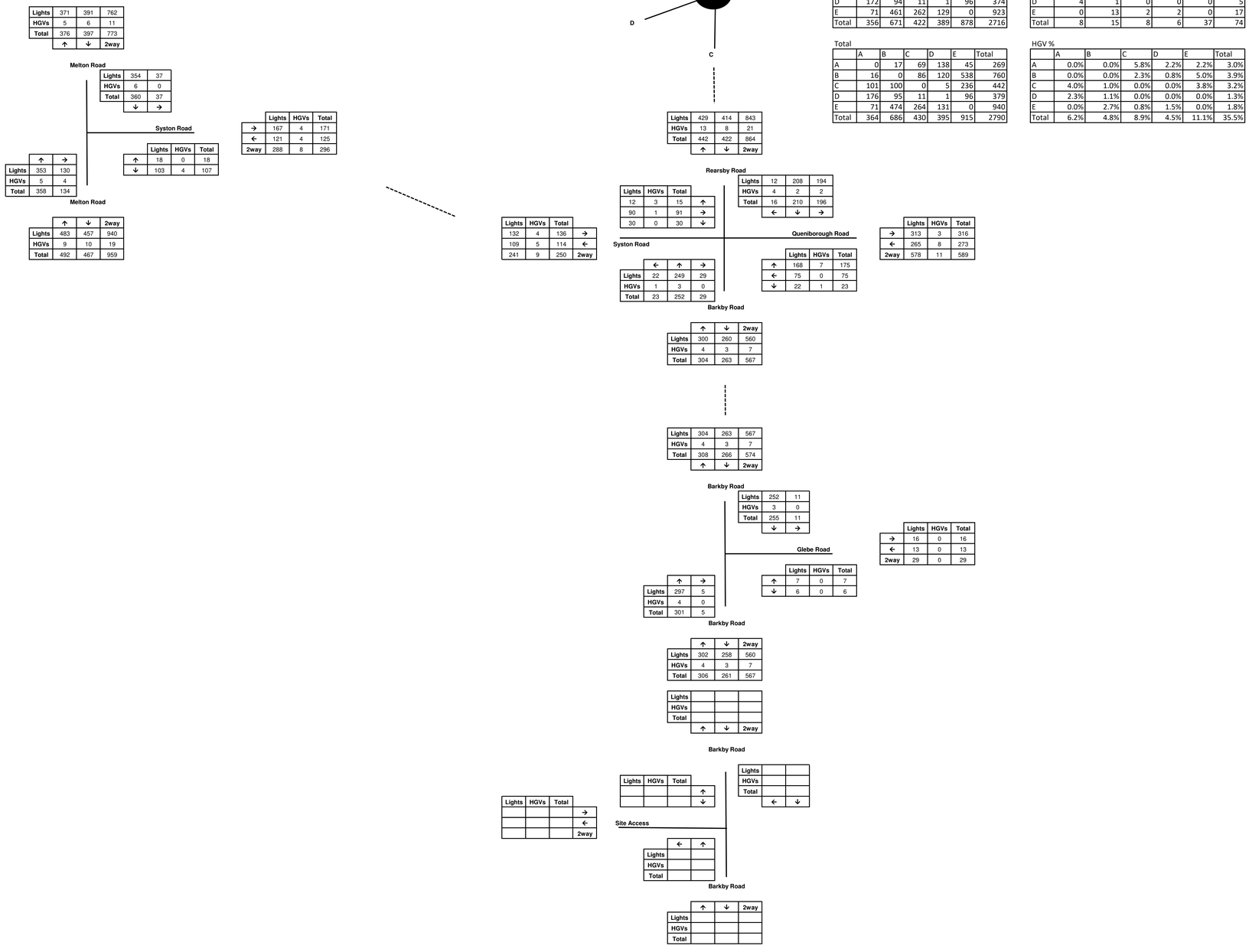
	←	↑	
Lights			
HGVs			
Total			

	↑	↓	2way
Lights			
HGVs			
Total			

Diagram 1

2017 Surveyed AM (0745-0845)

ADC INFRASTRUCTURE



Lights

	A	B	C	D	E	Total
A	0	17	65	135	44	261
B	16	0	84	119	511	730
C	97	99	0	5	227	428
D	172	94	11	1	96	374
E	71	461	262	129	0	923
Total	356	671	422	389	878	2716

HGVs

	A	B	C	D	E	Total
A	0	0	4	3	1	8
B	0	0	2	1	27	30
C	4	1	0	0	9	14
D	4	1	0	0	0	5
E	0	13	2	2	0	17
Total	8	15	8	6	37	74

Total

	A	B	C	D	E	Total
A	0	17	69	138	45	269
B	16	0	86	120	538	760
C	101	100	0	5	236	442
D	176	95	11	1	96	379
E	71	474	264	131	0	940
Total	364	686	430	395	915	2790

HGV %

	A	B	C	D	E	Total
A	0.0%	0.0%	5.8%	2.2%	2.2%	3.0%
B	0.0%	0.0%	2.3%	0.8%	5.0%	3.9%
C	4.0%	1.0%	0.0%	0.0%	3.8%	3.2%
D	2.3%	1.1%	0.0%	0.0%	0.0%	1.3%
E	0.0%	2.7%	0.8%	1.5%	0.0%	1.8%
Total	6.2%	4.8%	8.9%	4.5%	11.1%	35.5%

Lights	371	391	762
HGVs	5	6	11
Total	376	397	773
	↑	↓	2way

Lights	354	37
HGVs	6	0
Total	360	37
	↓	→

→	167	4	171
←	121	4	125
2way	288	8	296

↑	18	0	18
↓	103	4	107

	↑	→
Lights	353	130
HGVs	5	4
Total	358	134

	↑	↓	2way
Lights	483	457	940
HGVs	9	10	19
Total	492	467	959

Lights	429	414	843
HGVs	13	8	21
Total	442	422	864
	↑	↓	2way

Lights	12	208	194
HGVs	4	2	2
Total	16	210	196
	←	↓	→

Lights	HGVs	Total	
12	3	15	↑
90	1	91	→
30	0	30	↓

Lights	132	4	136	→
	109	5	114	←
	241	9	250	2way

	←	↑	→
Lights	22	249	29
HGVs	1	3	0
Total	23	252	29

Lights	HGVs	Total	
168	7	175	↑
75	0	75	←
22	1	23	↓

Lights	HGVs	Total	
313	3	316	→
265	8	273	←
578	11	589	2way

	↑	↓	2way
Lights	300	260	560
HGVs	4	3	7
Total	304	263	567

Lights	304	263	567
HGVs	4	3	7
Total	308	266	574
	↑	↓	2way

Lights	252	11
HGVs	3	0
Total	255	11
	↓	→

→	16	0	16
←	13	0	13
2way	29	0	29

	↑	→
Lights	297	5
HGVs	4	0
Total	301	5

↑	7	0	7
↓	6	0	6

	↑	↓	2way
Lights	302	258	560
HGVs	4	3	7
Total	306	261	567

Lights			
HGVs			
Total			
	↑	↓	2way

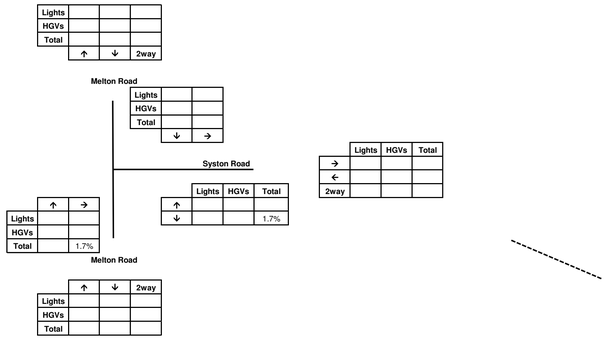
Lights			
HGVs			
Total			
	←	↓	

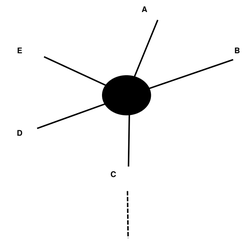
Lights	HGVs	Total	
			→
			←
			2way

Lights	HGVs	Total	
			↑
			↓

	←	↑
Lights		
HGVs		
Total		

	↑	↓	2way
Lights			
HGVs			
Total			





Lights

	A	B	C	D	E	Total
A						
B						
C						
D						
E						
Total						

HGVs

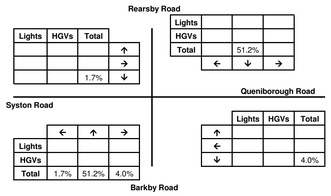
	A	B	C	D	E	Total
A						
B						
C						
D						
E						
Total						

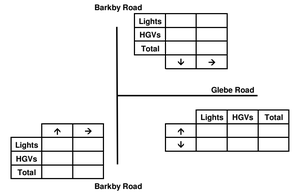
Total

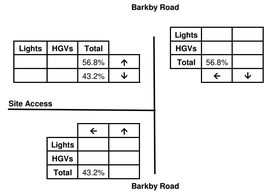
	A	B	C	D	E	Total
A			2.7%			
B			3.0%			
C	2.7%	3.0%			45.5%	51.2%
D						
E			45.5%			
Total			51.2%			

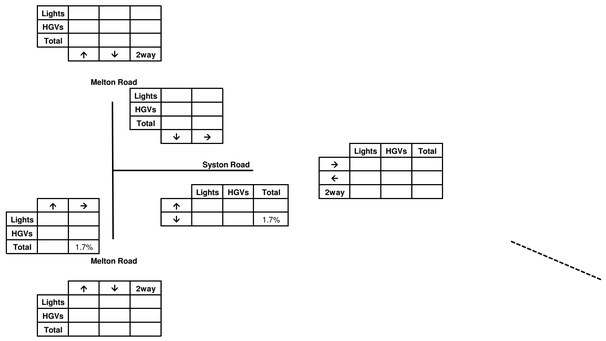
HGV %

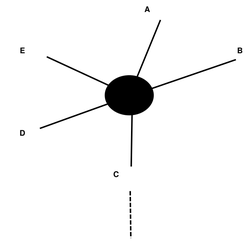
	A	B	C	D	E	Total
A						
B						
C						
D						
E						
Total						











Lights

	A	B	C	D	E	Total
A						
B						
C						
D						
E						
Total						

HGVs

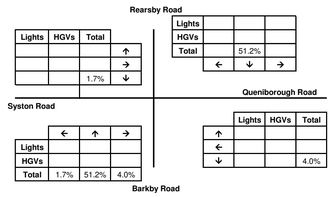
	A	B	C	D	E	Total
A						
B						
C						
D						
E						
Total						

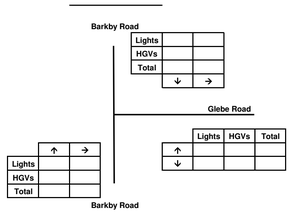
Total

	A	B	C	D	E	Total
A			2.7%			
B			3.0%			
C	2.7%	3.0%			45.5%	51.2%
D						
E			45.5%			
Total			51.2%			

HGV %

	A	B	C	D	E	Total
A						
B						
C						
D						
E						
Total						





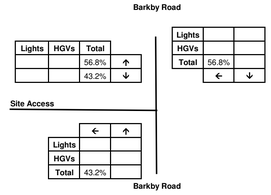
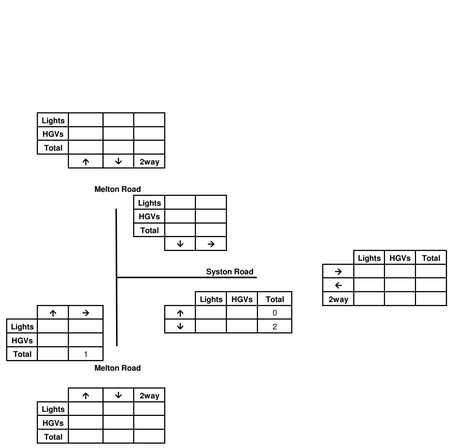
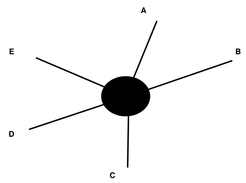


Diagram 4

Trip Distribution PM

ADC INFRASTRUCTURE





Lights

	A	B	C	D	E	Total
A						
B						
C						
D						
E						
Total						

HGVs

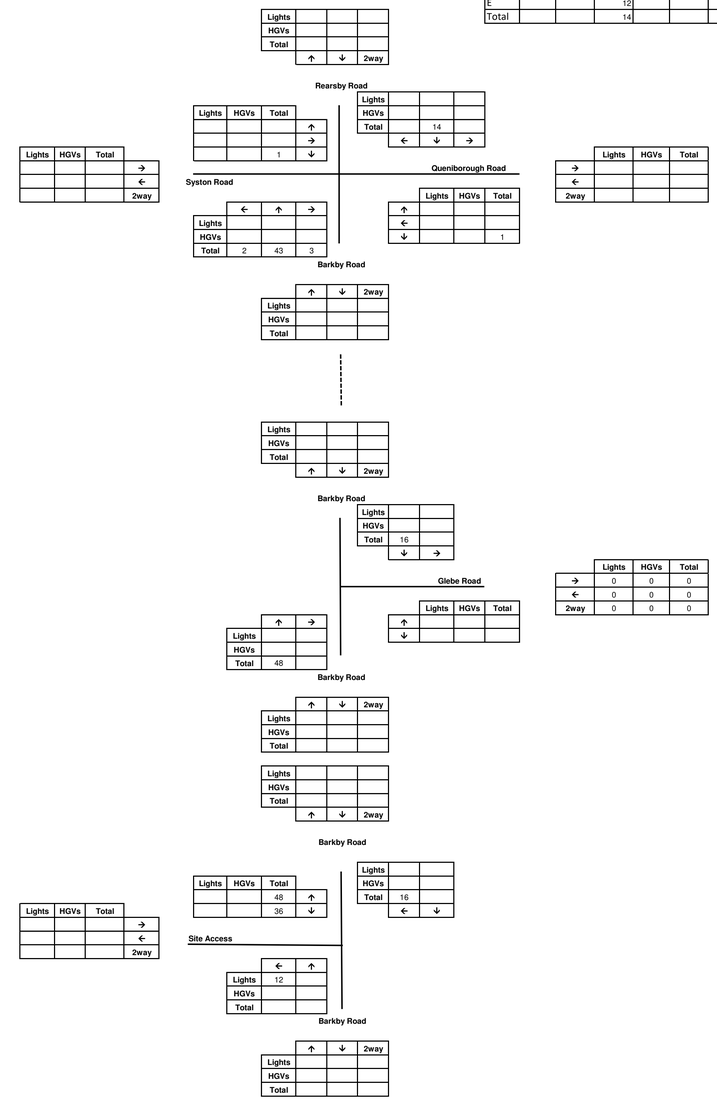
	A	B	C	D	E	Total
A						
B						
C						
D						
E						
Total						

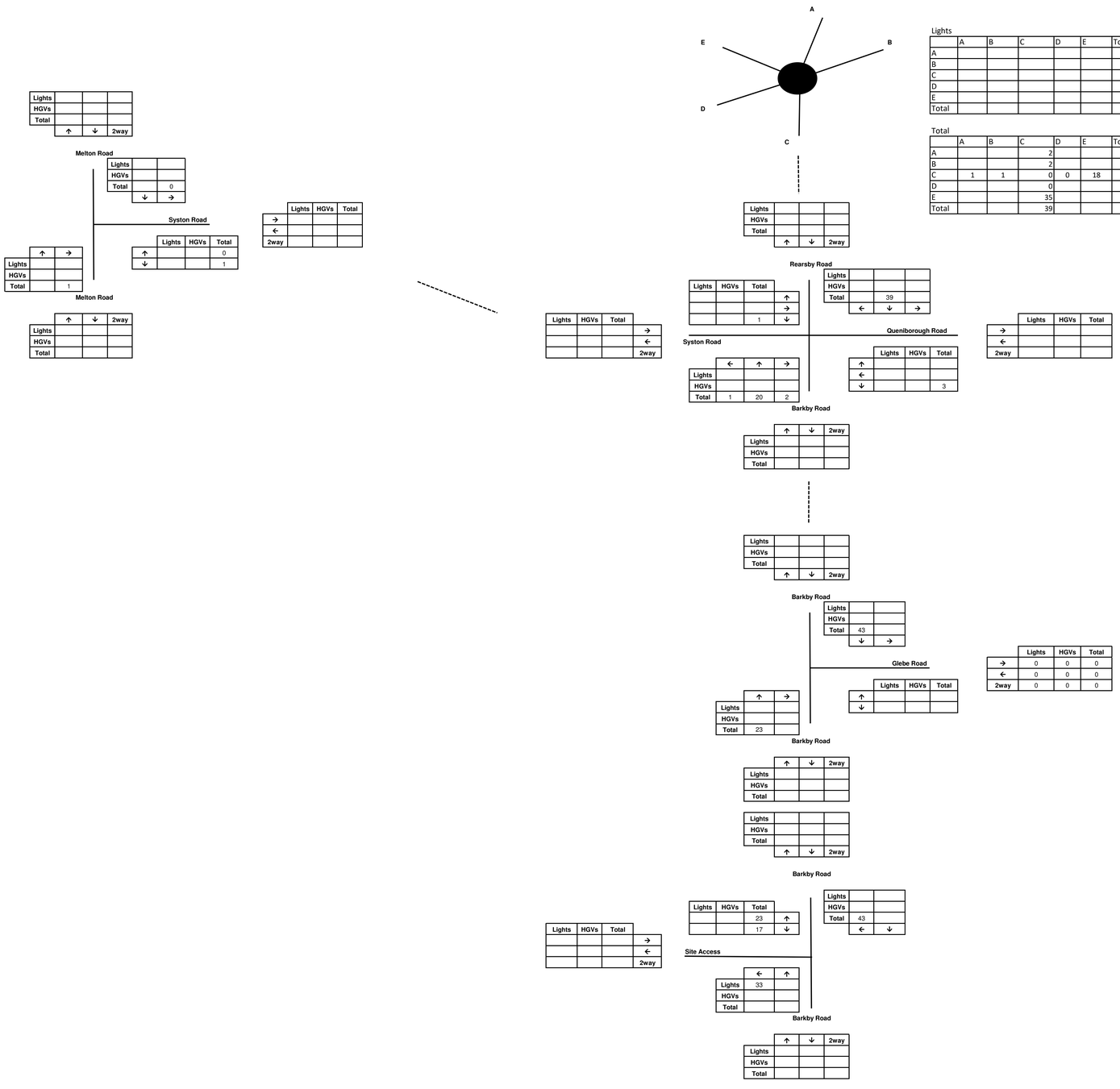
Total

	A	B	C	D	E	Total
A			1			
B			1			
C	3	2		0	38	43
D			0			
E			12			
Total			14			

HGV %

	A	B	C	D	E	Total
A						
B						
C						
D						
E						
Total						





Lights

	A	B	C	D	E	Total
A						
B						
C						
D						
E						
Total						

HGVs

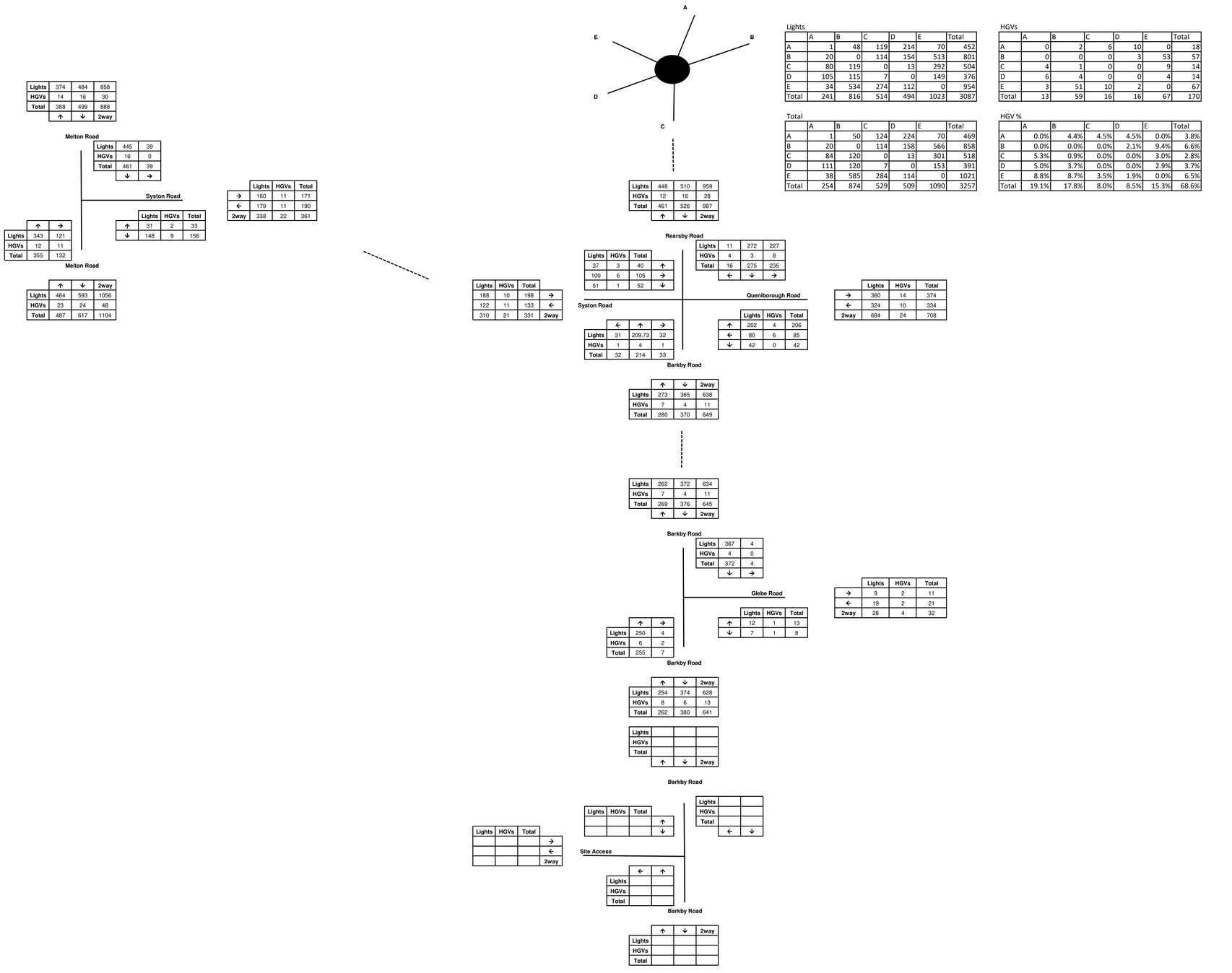
	A	B	C	D	E	Total
A						
B						
C						
D						
E						
Total						

Total

	A	B	C	D	E	Total
A			2			
B			2			
C	1	1	0	0	18	20
D			0			
E			35			
Total			39			

HGV %

	A	B	C	D	E	Total
A						
B						
C						
D						
E						
Total						



Lights	A	B	C	D	E	Total
A	1	48	119	214	70	452
B	20	0	114	154	513	801
C	80	119	0	13	292	504
D	105	115	7	0	149	376
E	34	534	274	112	0	954
Total	241	816	514	494	1023	3087

HGVs	A	B	C	D	E	Total
A	0	2	6	10	0	18
B	0	0	0	3	53	57
C	4	1	0	0	9	14
D	6	4	0	0	4	14
E	3	51	10	2	0	67
Total	13	59	16	16	67	170

Total	A	B	C	D	E	Total
A	1	50	124	224	70	469
B	20	0	114	158	566	858
C	84	120	0	13	301	518
D	111	120	7	0	153	391
E	38	585	284	114	0	1021
Total	254	874	529	509	1090	3257

HGV %	A	B	C	D	E	Total
A	0.0%	4.4%	4.5%	4.5%	0.0%	3.8%
B	0.0%	0.0%	0.0%	2.1%	9.4%	6.6%
C	5.3%	0.9%	0.0%	0.0%	3.0%	2.8%
D	5.0%	3.7%	0.0%	0.0%	2.9%	3.7%
E	8.8%	8.7%	3.5%	1.9%	0.0%	6.5%
Total	19.1%	17.8%	8.0%	8.5%	15.3%	68.6%

	↑	↓	2way
Lights	374	484	858
HGVs	14	16	30
Total	388	499	888

	↑	→
Lights	445	39
HGVs	16	0
Total	461	39

	Lights	HGVs	Total
→	160	11	171
←	179	11	190
2way	338	22	361

	↑	→
Lights	343	121
HGVs	12	11
Total	355	132

	↑	→
Lights	31	2	33
HGVs	148	9	156

	↑	↓	2way
Lights	464	593	1056
HGVs	23	24	48
Total	487	617	1104

	↑	↓	2way
Lights	448	510	959
HGVs	12	16	28
Total	461	526	987

	Lights	HGVs	Total
→	188	10	198
←	122	11	133
2way	310	21	331

	Lights	HGVs	Total
↑	37	3	40
→	100	6	105
↓	51	1	52

	←	↑	→
Lights	31	209.73	32
HGVs	1	4	1
Total	32	214	33

	Lights	HGVs	Total
↑	11	272	227
HGVs	4	3	8
Total	16	275	235
	←	↓	→

	Lights	HGVs	Total
↑	202	4	206
←	80	6	85
↓	42	0	42

	Lights	HGVs	Total
→	360	14	374
←	324	10	334
2way	684	24	708

	↑	↓	2way
Lights	273	365	638
HGVs	7	4	11
Total	280	370	649

	↑	↓	2way
Lights	262	372	634
HGVs	7	4	11
Total	269	376	645

	Lights	HGVs	Total
→	9	2	11
←	19	2	21
2way	28	4	32

	↑	→
Lights	367	4
HGVs	4	0
Total	372	4

	↑	→
Lights	250	4
HGVs	6	2
Total	255	7

	Lights	HGVs	Total
↑	12	1	13
↓	7	1	8

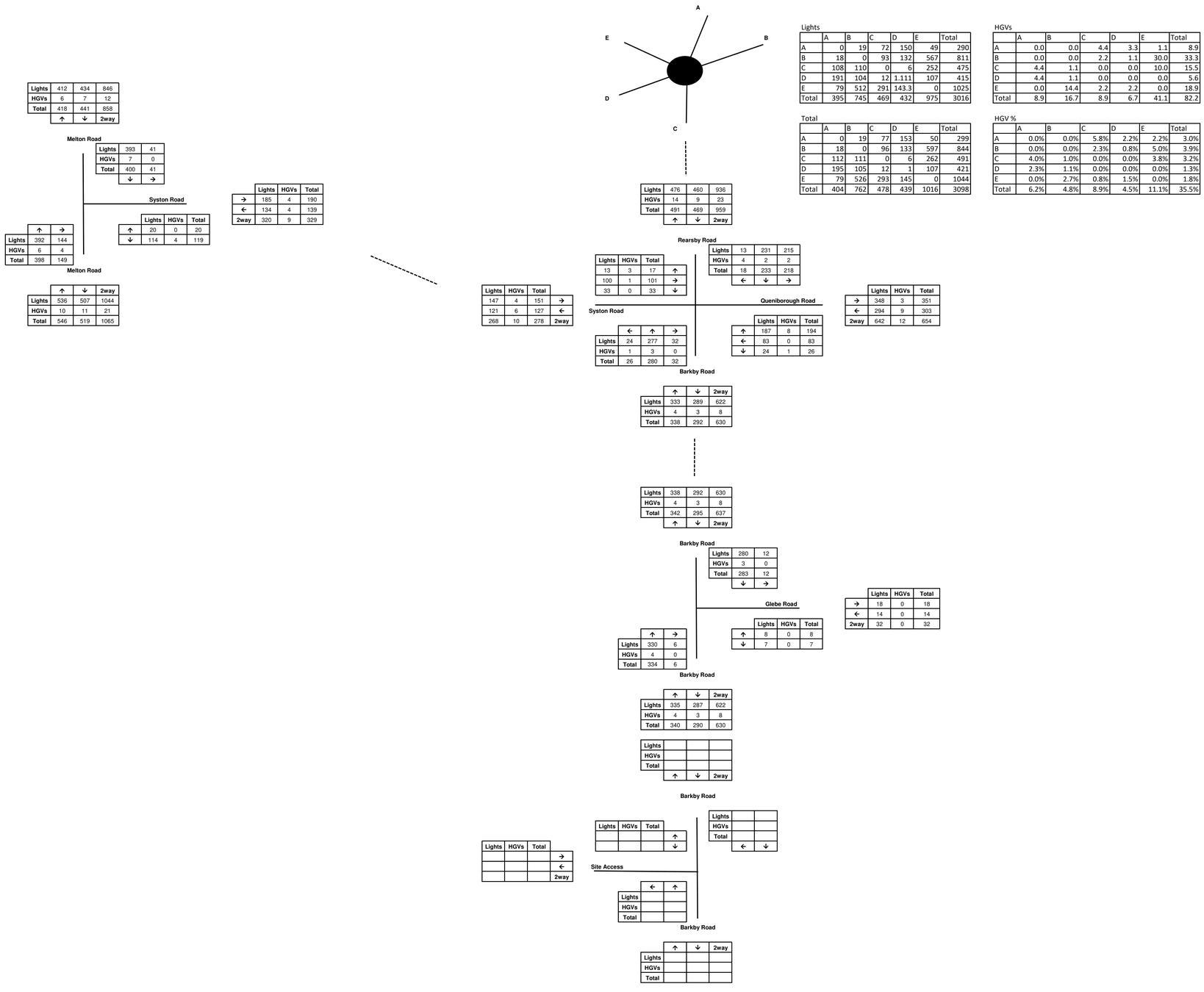
	↑	↓	2way
Lights	254	374	628
HGVs	8	6	13
Total	262	380	641

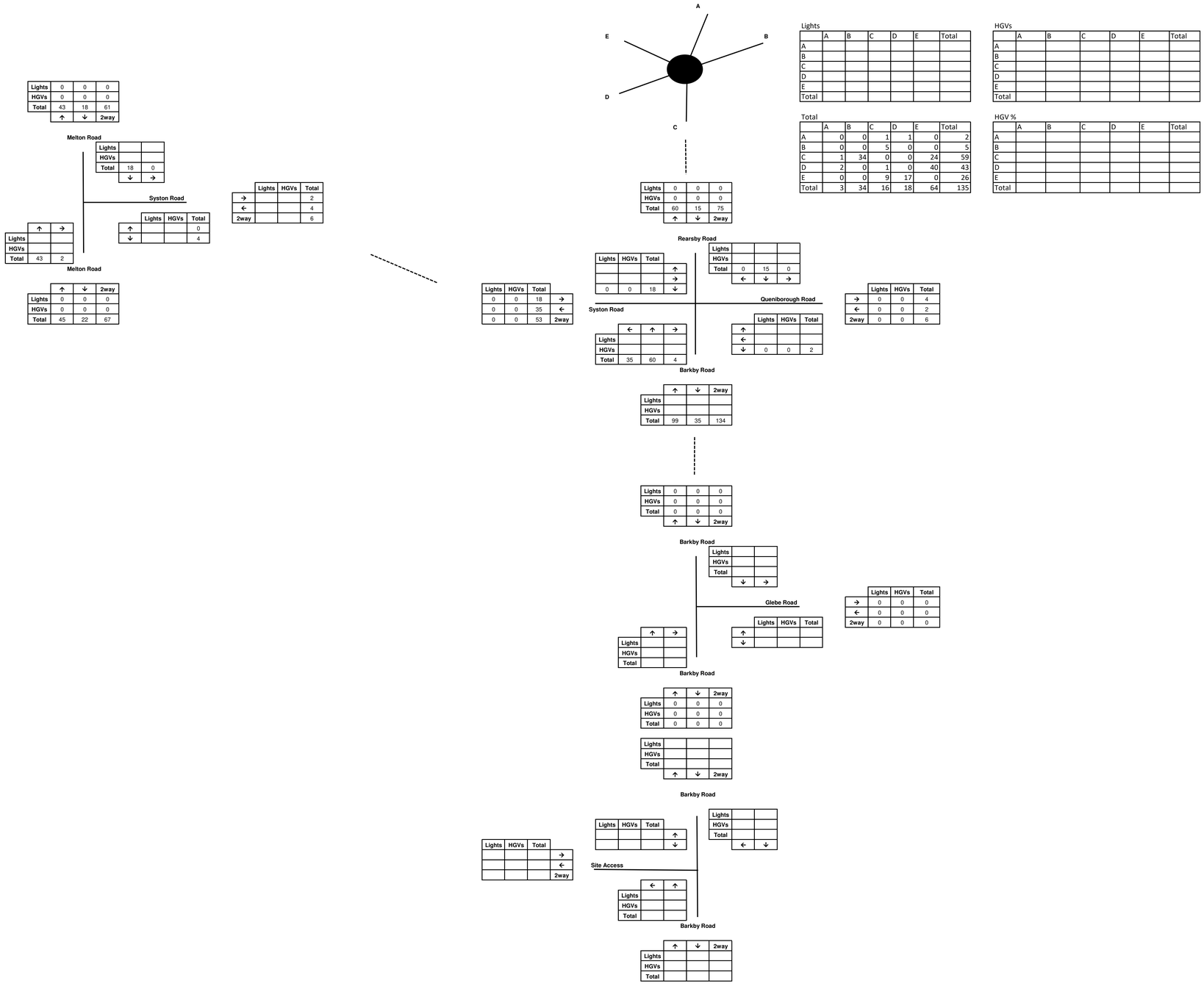
	↑	↓	2way
Lights			
HGVs			
Total			

	Lights	HGVs	Total
→			
←			
2way			

	←	↑
Lights		
HGVs		
Total		

	↑	↓	2way
Lights			
HGVs			
Total			


A
B
C
D
E
Lights
A B C D E Total
A 0 19 72 150 49 290
B 18 0 93 132 567 811
C 108 110 0 6 252 475
D 191 104 12 1.111 107 415
E 79 512 291 143.3 0 1025
Total 395 745 469 432 975 3016
HGVs
A B C D E Total
A 0.0 0.0 4.4 3.3 1.1 8.9
B 0.0 0.0 2.2 1.1 30.0 33.3
C 4.4 1.1 0.0 0.0 10.0 15.5
D 4.4 1.1 0.0 0.0 0.0 5.6
E 0.0 14.4 2.2 2.2 0.0 18.9
Total 8.9 16.7 8.9 6.7 41.1 82.2
Total
A B C D E Total
A 0 19 77 153 50 299
B 18 0 96 133 597 844
C 112 111 0 6 262 491
D 195 105 12 1 107 421
E 79 526 293 145 0 1044
Total 404 762 478 439 1016 3098
HGV %
A B C D E Total
A 0.0% 0.0% 5.8% 2.2% 2.2% 3.0%
B 0.0% 0.0% 2.3% 0.8% 5.0% 3.9%
C 4.0% 1.0% 0.0% 0.0% 3.8% 3.2%
D 2.3% 1.1% 0.0% 0.0% 0.0% 1.3%
E 0.0% 2.7% 0.8% 1.5% 0.0% 1.8%
Total 6.2% 4.8% 8.9% 4.5% 11.1% 35.5%
Lights HGVs Total
476 460 936
14 9 23
491 469 959
↑ ↓ 2way
Rearsby Road
Lights HGVs Total
13 3 17 ↑
100 1 101 →
33 0 33 ↓
Lights 13 231 215
HGVs 4 2 2
Total 18 233 218
← ↓ →
Queniborough Road
Syston Road
← ↑ →
Lights 24 277 32
HGVs 1 3 0
Total 26 280 32
Lights HGVs Total
↑ 187 8 194
← 83 0 83
↓ 24 1 26
Lights HGVs Total
→ 348 3 351
← 294 9 303
2way 642 12 654
Lights HGVs Total
147 4 151 →
121 6 127 ←
268 10 278 2way
Barkby Road
↑ ↓ 2way
Lights 333 289 622
HGVs 4 3 8
Total 338 292 630
Lights 338 292 630
HGVs 4 3 8
Total 342 295 637
↑ ↓ 2way
Barkby Road
Lights 280 12
HGVs 3 0
Total 283 12
↓ →
Glebe Road
Lights HGVs Total
↑ 8 0 8
↓ 7 0 7
Lights HGVs Total
→ 18 0 18
← 14 0 14
2way 32 0 32
↑ →
Lights 330 6
HGVs 4 0
Total 334 6
Barkby Road
↑ ↓ 2way
Lights 335 287 622
HGVs 4 3 8
Total 340 290 630
Lights
HGVs
Total
↑ ↓ 2way
Barkby Road
Lights HGVs Total
→
←
2way
Lights HGVs Total
↑
↓
Lights
HGVs
Total
← ↓
Site Access
← ↑
Lights
HGVs
Total
Barkby Road
↑ ↓ 2way
Lights
HGVs
Total
Lights HGVs Total
185 4 190
134 4 139
2way 320 9 329
Lights 412 434 846
HGVs 6 7 12
Total 418 441 858
↑ ↓ 2way
Melton Road
Lights 393 41
HGVs 7 0
Total 400 41
↓ →
Syston Road
Lights HGVs Total
↑ 20 0 20
↓ 114 4 119
↑ →
Lights 392 144
HGVs 6 4
Total 398 149
Melton Road
↑ ↓ 2way
Lights 536 507 1044
HGVs 10 11 21
Total 546 519 1065



Lights

	A	B	C	D	E	Total
A						
B						
C						
D						
E						
Total						

HGVs

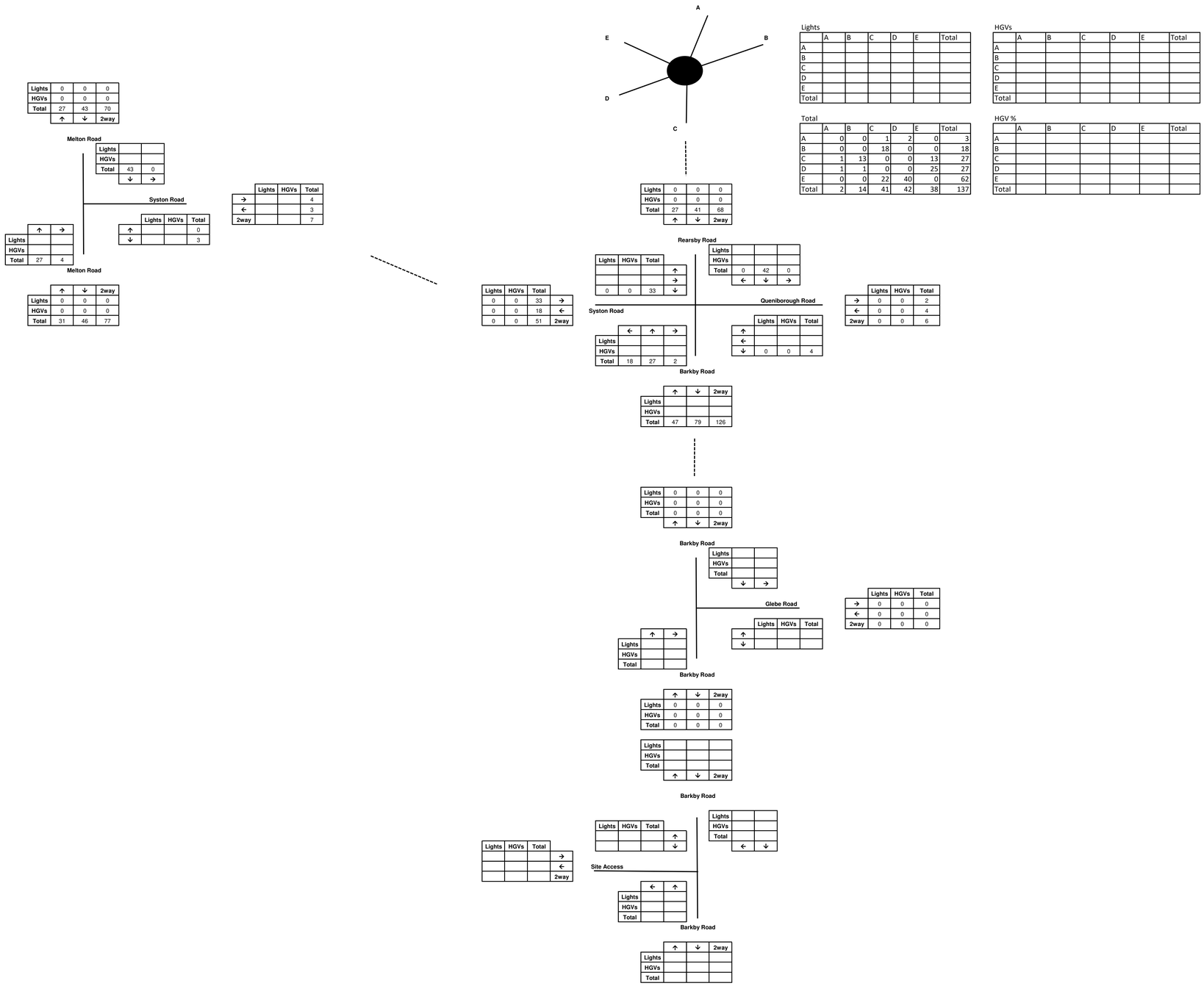
	A	B	C	D	E	Total
A						
B						
C						
D						
E						
Total						

Total

	A	B	C	D	E	Total
A	0	0	1	1	0	2
B	0	0	5	0	0	5
C	1	34	0	0	24	59
D	2	0	1	0	40	43
E	0	0	9	17	0	26
Total	3	34	16	18	64	135

HGV %

	A	B	C	D	E	Total
A						
B						
C						
D						
E						
Total						



Lights

	A	B	C	D	E	Total
A						
B						
C						
D						
E						
Total						

HGVs

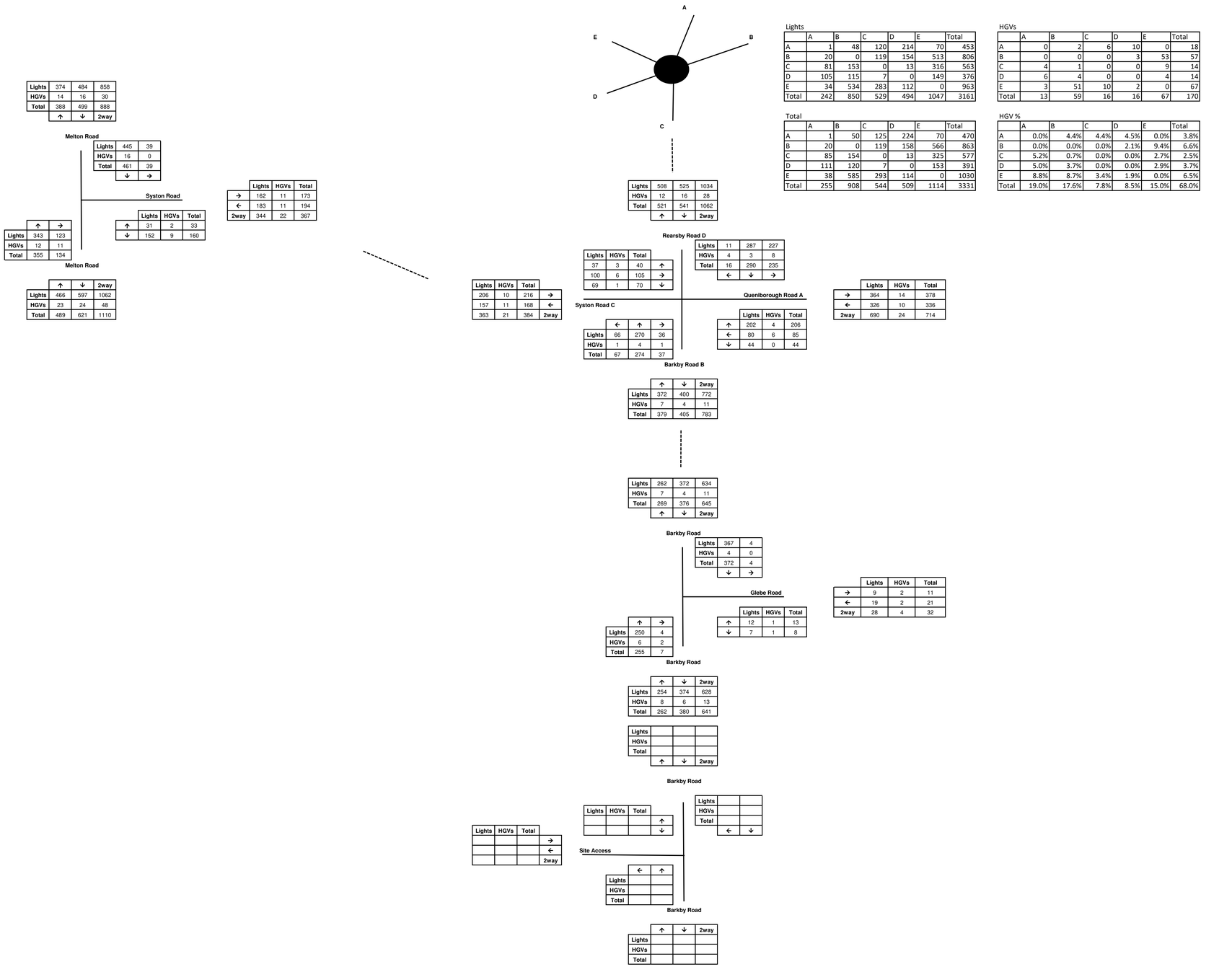
	A	B	C	D	E	Total
A						
B						
C						
D						
E						
Total						

Total

	A	B	C	D	E	Total
A	0	0	1	2	0	3
B	0	0	18	0	0	18
C	1	13	0	0	13	27
D	1	1	0	0	25	27
E	0	0	22	40	0	62
Total	2	14	41	42	38	137

HGV %

	A	B	C	D	E	Total
A						
B						
C						
D						
E						
Total						



	A	B	C	D	E	Total
A	1	48	120	214	70	453
B	20	0	119	154	513	806
C	81	153	0	13	316	563
D	105	115	7	0	149	376
E	34	534	283	112	0	963
Total	242	850	529	494	1047	3161

	A	B	C	D	E	Total
A	0	2	6	10	0	18
B	0	0	0	3	53	57
C	4	1	0	0	9	14
D	6	4	0	0	4	14
E	3	51	10	2	0	67
Total	13	59	16	16	67	170

	A	B	C	D	E	Total
A	1	50	125	224	70	470
B	20	0	119	158	566	863
C	85	154	0	13	325	577
D	111	120	7	0	153	391
E	38	585	293	114	0	1030
Total	255	908	544	509	1114	3331

	A	B	C	D	E	Total
A	0.0%	4.4%	4.4%	4.5%	0.0%	3.8%
B	0.0%	0.0%	0.0%	2.1%	9.4%	6.6%
C	5.2%	0.7%	0.0%	0.0%	2.7%	2.5%
D	5.0%	3.7%	0.0%	0.0%	2.9%	3.7%
E	8.8%	8.7%	3.4%	1.9%	0.0%	6.5%
Total	19.0%	17.6%	7.8%	8.5%	15.0%	68.0%

	↑	↓	2way
Lights	374	484	858
HGVs	14	16	30
Total	388	499	888

	↑	→
Lights	445	39
HGVs	16	0
Total	461	39

	Lights	HGVs	Total
→	162	11	173
←	183	11	194
2way	344	22	367

	↑	→
Lights	343	123
HGVs	12	11
Total	355	134

	Lights	HGVs	Total
↑	31	2	33
↓	152	9	160

	↑	↓	2way
Lights	466	597	1062
HGVs	23	24	48
Total	489	621	1110

	↑	↓	2way
Lights	508	525	1034
HGVs	12	16	28
Total	521	541	1062

	Lights	HGVs	Total
206	10	216	→
157	11	168	←
363	21	384	2way

	Lights	HGVs	Total
37	3	40	↑
100	6	105	→
69	1	70	↓

	Lights	HGVs	Total
Lights	11	287	227
HGVs	4	3	8
Total	16	290	235
	←	↓	→

	←	↑	→
Lights	66	270	36
HGVs	1	4	1
Total	67	274	37

	Lights	HGVs	Total
↑	202	4	206
←	80	6	85
↓	44	0	44

	Lights	HGVs	Total
→	364	14	378
←	326	10	336
2way	690	24	714

	↑	↓	2way
Lights	372	400	772
HGVs	7	4	11
Total	379	405	783

	↑	↓	2way
Lights	262	372	634
HGVs	7	4	11
Total	269	376	645

	Lights	HGVs	Total
Lights	367	4	
HGVs	4	0	
Total	372	4	
	↓	→	

	Lights	HGVs	Total
→	9	2	11
←	19	2	21
2way	28	4	32

	↑	→
Lights	250	4
HGVs	6	2
Total	255	7

	Lights	HGVs	Total
↑	12	1	13
↓	7	1	8

	↑	↓	2way
Lights	254	374	628
HGVs	8	6	13
Total	262	380	641

	↑	↓	2way
Lights			
HGVs			
Total			

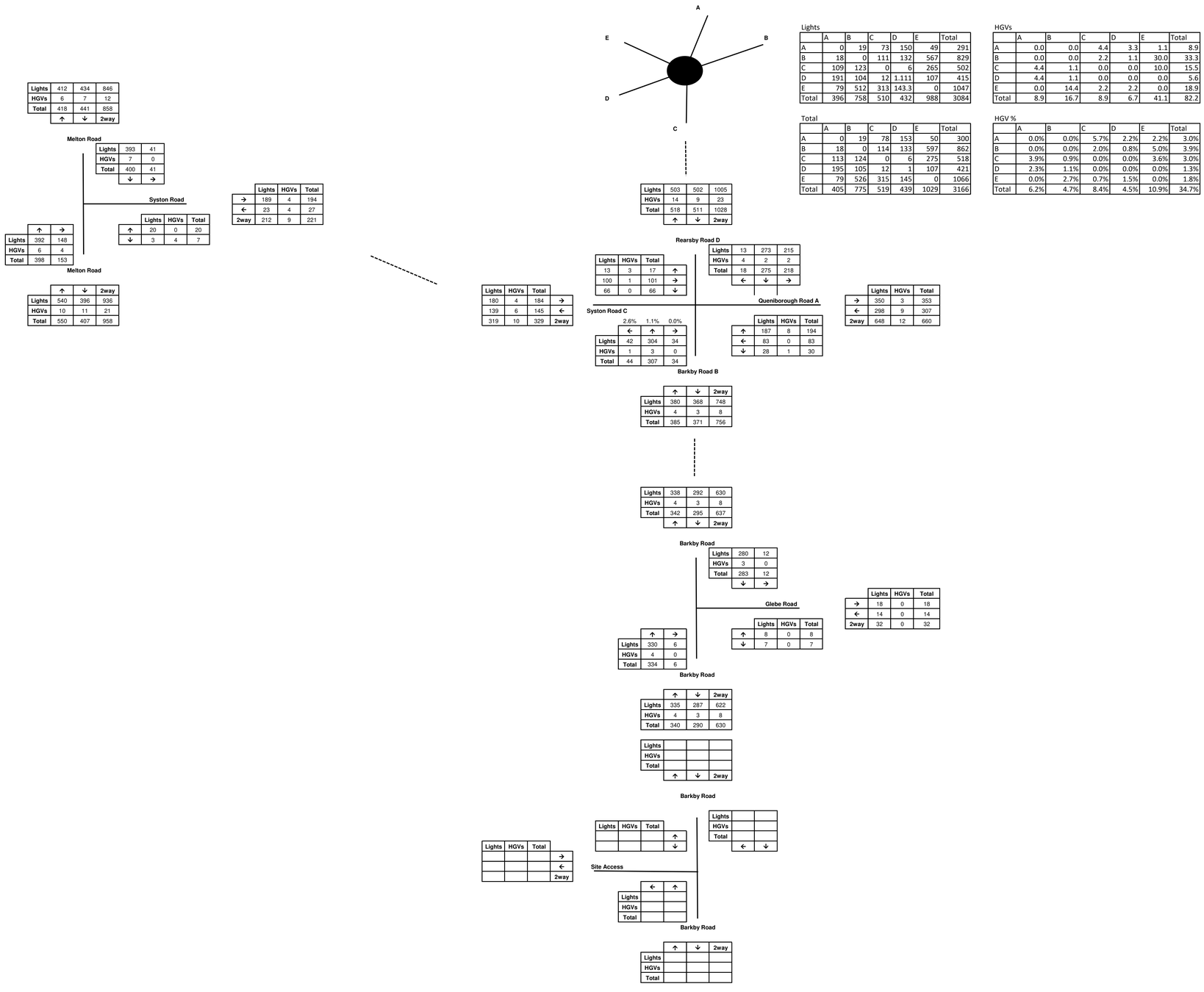
	Lights	HGVs	Total
			↑
			↓

	Lights	HGVs	Total
Lights			
HGVs			
Total			
	←	↓	

	Lights	HGVs	Total
			→
			←
			2way

	←	↑
Lights		
HGVs		
Total		

	↑	↓	2way
Lights			
HGVs			
Total			



Lights	A	B	C	D	E	Total
A	0	19	73	150	49	291
B	18	0	111	132	567	829
C	109	123	0	6	265	502
D	191	104	12	1.111	107	415
E	79	512	313	143.3	0	1047
Total	396	758	510	432	988	3084

HGVs	A	B	C	D	E	Total
A	0.0	0.0	4.4	3.3	1.1	8.9
B	0.0	0.0	2.2	1.1	30.0	33.3
C	4.4	1.1	0.0	0.0	10.0	15.5
D	4.4	1.1	0.0	0.0	0.0	5.6
E	0.0	14.4	2.2	2.2	0.0	18.9
Total	8.9	16.7	8.9	6.7	41.1	82.2

Total	A	B	C	D	E	Total
A	0	19	78	153	50	300
B	18	0	114	133	597	862
C	113	124	0	6	275	518
D	195	105	12	1	107	421
E	79	526	315	145	0	1066
Total	405	775	519	439	1029	3166

HGV %	A	B	C	D	E	Total
A	0.0%	0.0%	5.7%	2.2%	2.2%	3.0%
B	0.0%	0.0%	2.0%	0.8%	5.0%	3.9%
C	3.9%	0.9%	0.0%	0.0%	3.6%	3.0%
D	2.3%	1.1%	0.0%	0.0%	0.0%	1.3%
E	0.0%	2.7%	0.7%	1.5%	0.0%	1.8%
Total	6.2%	4.7%	8.4%	4.5%	10.9%	34.7%

	↑	↓	2way
Lights	412	434	846
HGVs	6	7	12
Total	418	441	858

	↑	↓	2way
Lights	540	396	936
HGVs	10	11	21
Total	550	407	958

	Lights	HGVs	Total
→	189	4	194
←	23	4	27
2way	212	9	221

	Lights	HGVs	Total
→	350	3	353
←	298	9	307
2way	648	12	660

	Lights	HGVs	Total
→	18	0	18
←	14	0	14
2way	32	0	32

	↑	↓	2way
Lights	503	502	1005
HGVs	14	9	23
Total	518	511	1028

	↑	↓	2way
Lights	380	368	748
HGVs	4	3	8
Total	385	371	756

	↑	↓	2way
Lights	338	292	630
HGVs	4	3	8
Total	342	295	637

	↑	↓	2way
Lights	335	287	622
HGVs	4	3	8
Total	340	290	630

	↑	↓	2way
Lights			
HGVs			
Total			

	↑	↓	2way
Lights			
HGVs			
Total			

	←	↑	→
Lights	42	304	34
HGVs	1	3	0
Total	44	307	34

	←	↑	→
Lights	330	6	
HGVs	4	0	
Total	334	6	

	←	↑	→
Lights			
HGVs			
Total			

	←	↑	→
Lights			
HGVs			
Total			

	↑	↓	→
Lights	393	41	
HGVs	7	0	
Total	400	41	

	↑	↓	→
Lights	280	12	
HGVs	3	0	
Total	283	12	

	↑	↓	→
Lights	13	273	215
HGVs	4	2	2
Total	18	275	218

	↑	↓	→
Lights	187	8	194
HGVs	83	0	83
Total	28	1	30

	↑	↓	→
Lights	8	0	8
HGVs	7	0	7
Total			

	↑	↓	→
Lights	20	0	20
HGVs	3	4	7
Total			

	↑	↓	→
Lights	392	148	
HGVs	6	4	
Total	398	153	

	↑	↓	→
Lights			
HGVs			
Total			

	↑	↓	→
Lights			
HGVs			
Total			

	↑	↓	→
Lights			
HGVs			
Total			

	Lights	HGVs	Total
→			
←			
2way			

	Lights	HGVs	Total
→	180	4	184
←	139	6	145
2way	319	10	329

	Lights	HGVs	Total
↑	13	3	17
→	100	1	101
↓	66	0	66

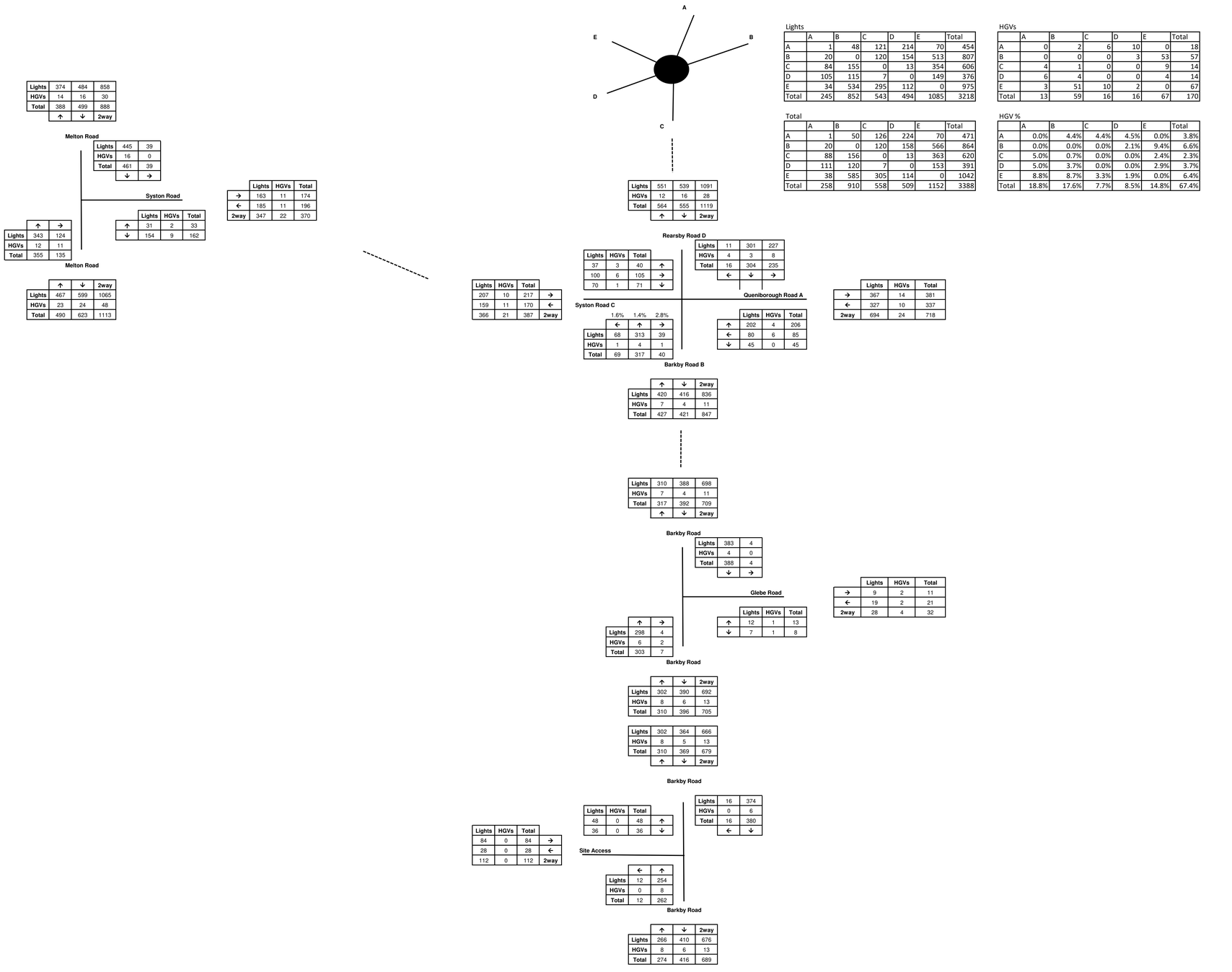
	Lights	HGVs	Total
↑			
↓			

	Lights	HGVs	Total
←			
↑			
→			

	Lights	HGVs	Total
←			
↑			

	Lights	HGVs	Total
↑			
↓			

	Lights	HGVs	Total
←			
↓			



Lights

	A	B	C	D	E	Total
A	1	48	121	214	70	454
B	20	0	120	154	513	807
C	84	155	0	13	354	606
D	105	115	7	0	149	376
E	34	534	295	112	0	975
Total	245	852	543	494	1085	3218

HGVs

	A	B	C	D	E	Total
A	0	2	6	10	0	18
B	0	0	0	3	53	57
C	4	1	0	0	9	14
D	6	4	0	0	4	14
E	3	51	10	2	0	67
Total	13	59	16	16	67	170

Total

	A	B	C	D	E	Total
A	1	50	126	224	70	471
B	20	0	120	158	566	864
C	88	156	0	13	363	620
D	111	120	7	0	153	391
E	38	585	305	114	0	1042
Total	258	910	558	509	1152	3388

HGV %

	A	B	C	D	E	Total
A	0.0%	4.4%	4.4%	4.5%	0.0%	3.8%
B	0.0%	0.0%	0.0%	2.1%	9.4%	6.6%
C	5.0%	0.7%	0.0%	0.0%	2.4%	2.3%
D	5.0%	3.7%	0.0%	0.0%	2.9%	3.7%
E	8.8%	8.7%	3.3%	1.9%	0.0%	6.4%
Total	18.8%	17.6%	7.7%	8.5%	14.8%	67.4%

Lights	374	484	858
HGVs	14	16	30
Total	388	499	888
	↑	↓	2way

Lights	445	39	
HGVs	16	0	
Total	461	39	
	↓	→	

	Lights	HGVs	Total
→	163	11	174
←	185	11	196
2way	347	22	370

	↑	→	
Lights	343	124	
HGVs	12	11	
Total	355	135	

	↑	↓	2way
Lights	467	599	1065
HGVs	23	24	48
Total	490	623	1113

Lights	551	539	1091
HGVs	12	16	28
Total	564	555	1119
	↑	↓	2way

	Lights	HGVs	Total
↑	31	2	33
↓	154	9	162

	Lights	HGVs	Total
37	3	40	↑
100	6	105	→
70	1	71	↓

Lights	11	301	227
HGVs	4	3	8
Total	16	304	235
	←	↓	→

	Lights	HGVs	Total
207	10	217	→
159	11	170	←
366	21	387	2way

	Lights	HGVs	Total
→	367	14	381
←	327	10	337
2way	694	24	718

	1.6%	1.4%	2.8%
	←	↑	→
Lights	68	313	39
HGVs	1	4	1
Total	69	317	40

↑	202	4	206
←	80	6	85
↓	45	0	45

	↑	↓	2way
Lights	420	416	836
HGVs	7	4	11
Total	427	421	847

Lights	310	388	698
HGVs	7	4	11
Total	317	392	709
	↑	↓	2way

Lights	383	4	
HGVs	4	0	
Total	388	4	
	↓	→	

	Lights	HGVs	Total
→	9	2	11
←	19	2	21
2way	28	4	32

	↑	→	
Lights	298	4	
HGVs	6	2	
Total	303	7	

↑	12	1	13
↓	7	1	8

	↑	↓	2way
Lights	302	390	692
HGVs	8	6	13
Total	310	396	705

Lights	302	364	666
HGVs	8	5	13
Total	310	369	679
	↑	↓	2way

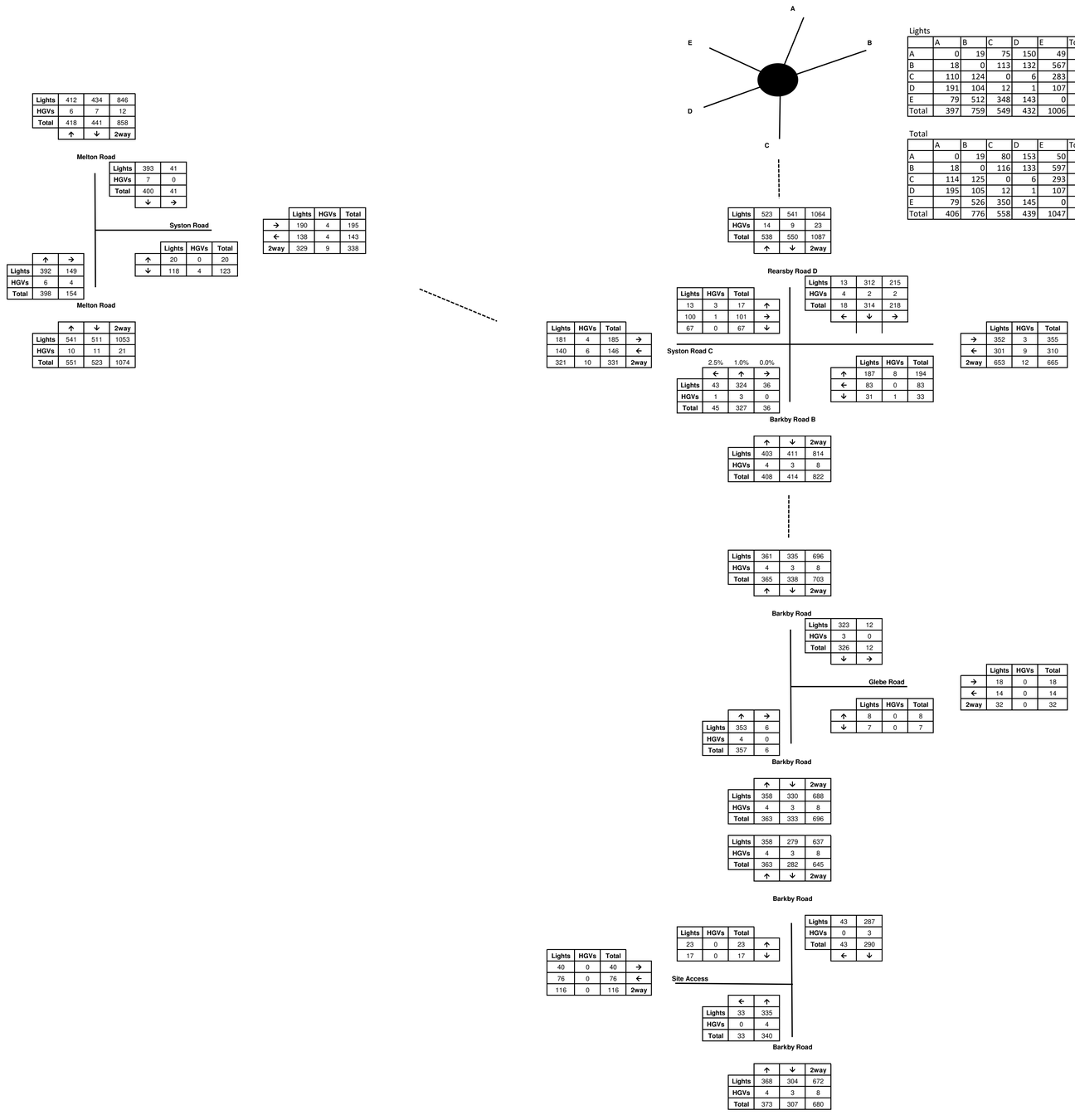
	Lights	HGVs	Total
84	0	84	→
28	0	28	←
112	0	112	2way

	Lights	HGVs	Total
48	0	48	↑
36	0	36	↓

Lights	16	374	
HGVs	0	6	
Total	16	380	
	←	↓	

	←	↑	
Lights	12	254	
HGVs	0	8	
Total	12	262	

	↑	↓	2way
Lights	266	410	676
HGVs	8	6	13
Total	274	416	689



Lights

	A	B	C	D	E	Total
A	0	19	75	150	49	293
B	18	0	113	132	567	831
C	110	124	0	6	283	522
D	191	104	12	1	107	415
E	79	512	348	143	0	1082
Total	397	759	549	432	1006	3143

HGVs

	A	B	C	D	E	Total
A	0	0	4	3	1	8.9
B	0	0	2	1	30	33.3
C	4	1	0	0	10	15.5
D	4	1	0	0	0	5.6
E	0	14	2	2	0	18.9
Total	8.9	16.7	8.9	6.7	41.1	82.2

Total

	A	B	C	D	E	Total
A	0	19	80	153	50	302
B	18	0	116	133	597	864
C	114	125	0	6	293	538
D	195	105	12	1	107	421
E	79	526	350	145	0	1101
Total	406	776	558	439	1047	3225

HGV %

	A	B	C	D	E	Total
A	0.0%	0.0%	5.6%	2.2%	2.2%	2.9%
B	0.0%	0.0%	1.9%	0.8%	5.0%	3.9%
C	3.9%	0.9%	0.0%	0.0%	3.4%	2.9%
D	2.3%	1.1%	0.0%	0.0%	0.0%	1.3%
E	0.0%	2.7%	0.6%	1.5%	0.0%	1.7%
Total	6.2%	4.7%	8.1%	4.5%	10.7%	34.2%

Lights	412	434	846
HGVs	6	7	12
Total	418	441	858
	↑	↓	2way

	Lights	HGVs	Total
→	190	4	195
←	138	4	143
2way	329	9	338

	Lights	HGVs	Total
↑	20	0	20
↓	118	4	123

	↑	→
Lights	392	149
HGVs	6	4
Total	398	154

	Lights	HGVs	Total
↑	393	7	400
→	41	0	41

	↑	↓	2way
Lights	541	511	1053
HGVs	10	11	21
Total	551	523	1074

	Lights	HGVs	Total
Lights	523	541	1064
HGVs	14	9	23
Total	538	550	1087
	↑	↓	2way

	Lights	HGVs	Total
Lights	181	4	185
HGVs	140	6	146
Total	321	10	331
	→	←	2way

	Lights	HGVs	Total
Lights	13	312	215
HGVs	4	2	2
Total	18	314	218
	←	↓	→

	Lights	HGVs	Total
Lights	13	3	17
HGVs	100	1	101
Total	67	0	67
	↑	→	↓

	Lights	HGVs	Total
→	352	3	355
←	301	9	310
2way	653	12	665

	2.5%	1.0%	0.0%
	←	↑	→
Lights	43	324	36
HGVs	1	3	0
Total	45	327	36

	Lights	HGVs	Total
↑	187	8	194
←	83	0	83
↓	31	1	33

	↑	↓	2way
Lights	403	411	814
HGVs	4	3	8
Total	408	414	822

	Lights	HGVs	Total
Lights	361	335	696
HGVs	4	3	8
Total	365	338	703
	↑	↓	2way

	Lights	HGVs	Total
Lights	323	3	326
HGVs	12	0	12
Total	12	0	12
	↓	→	

	Lights	HGVs	Total
→	18	0	18
←	14	0	14
2way	32	0	32

	↑	→
Lights	353	6
HGVs	4	0
Total	357	6

	Lights	HGVs	Total
↑	8	0	8
↓	7	0	7

	↑	↓	2way
Lights	358	330	688
HGVs	4	3	8
Total	363	333	696

	Lights	HGVs	Total
Lights	358	279	637
HGVs	4	3	8
Total	363	282	645
	↑	↓	2way

	Lights	HGVs	Total
Lights	43	0	43
HGVs	287	3	290
Total	43	290	
	←	↓	

	Lights	HGVs	Total
Lights	23	0	23
HGVs	17	0	17
Total	↑	↓	

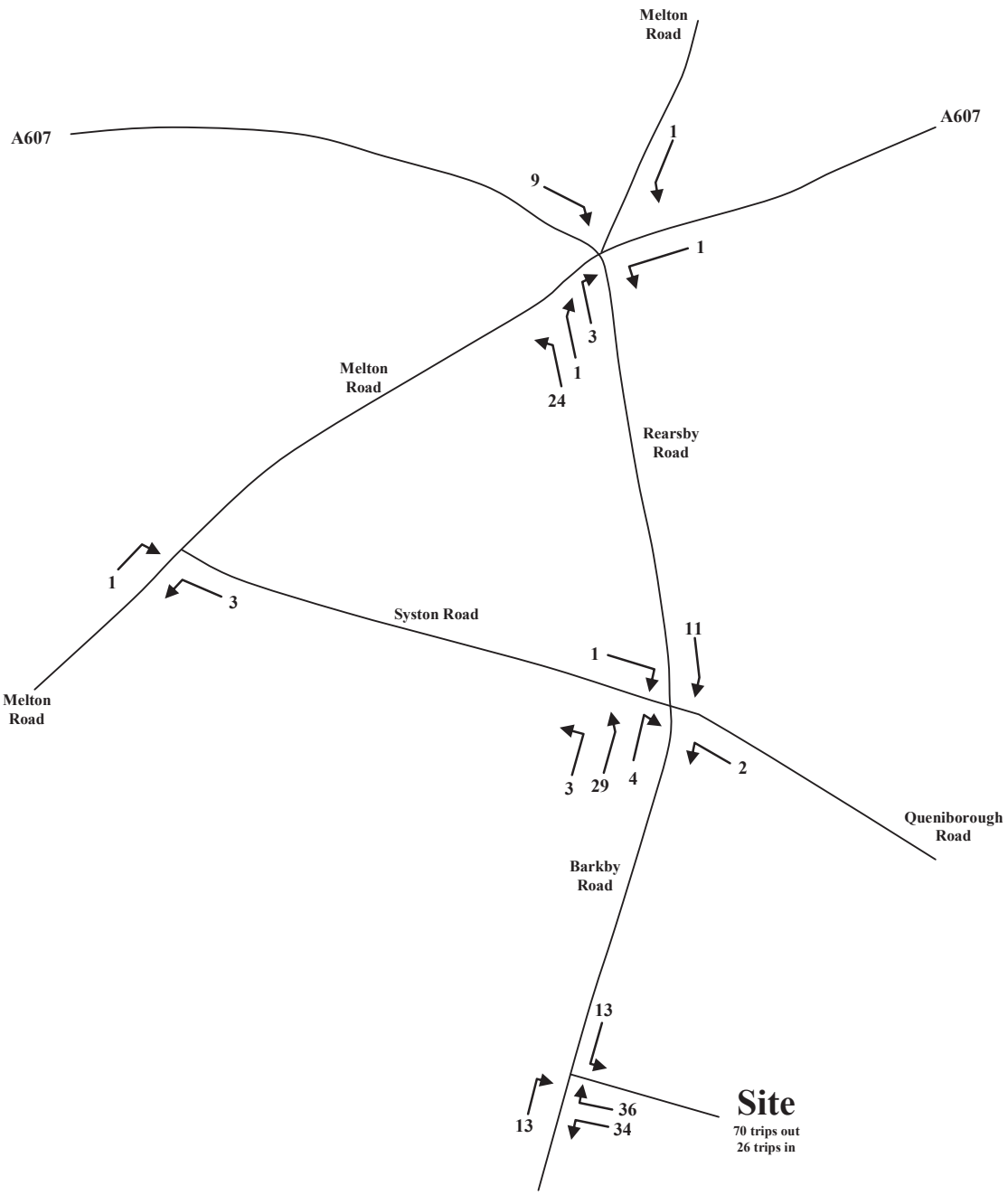
	Lights	HGVs	Total
Lights	40	0	40
HGVs	76	0	76
Total	116	0	116
	→	←	2way

	←	↑
Lights	33	335
HGVs	0	4
Total	33	340

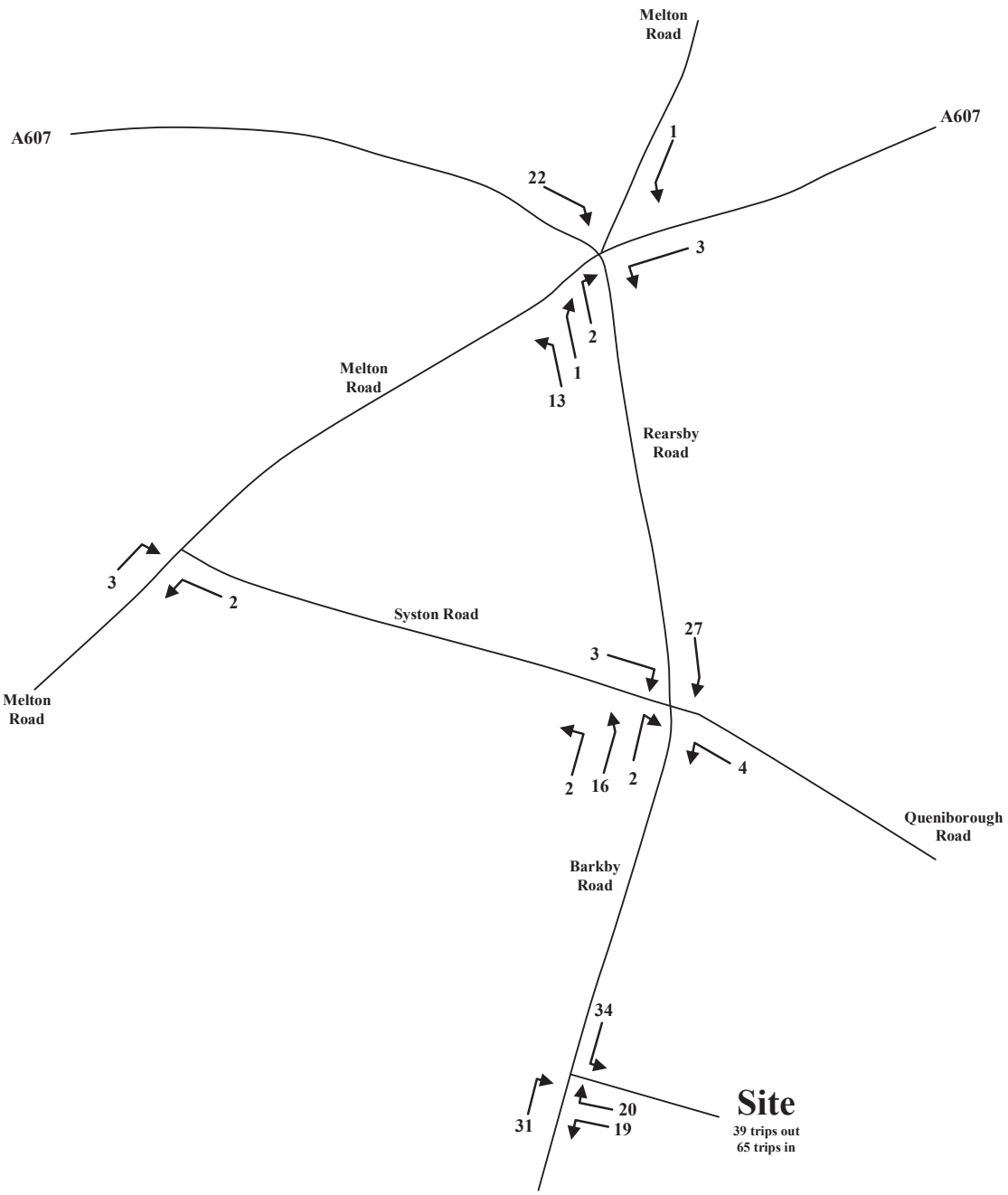
	↑	↓	2way
Lights	368	304	672
HGVs	4	3	8
Total	373	307	680

APPENDIX H

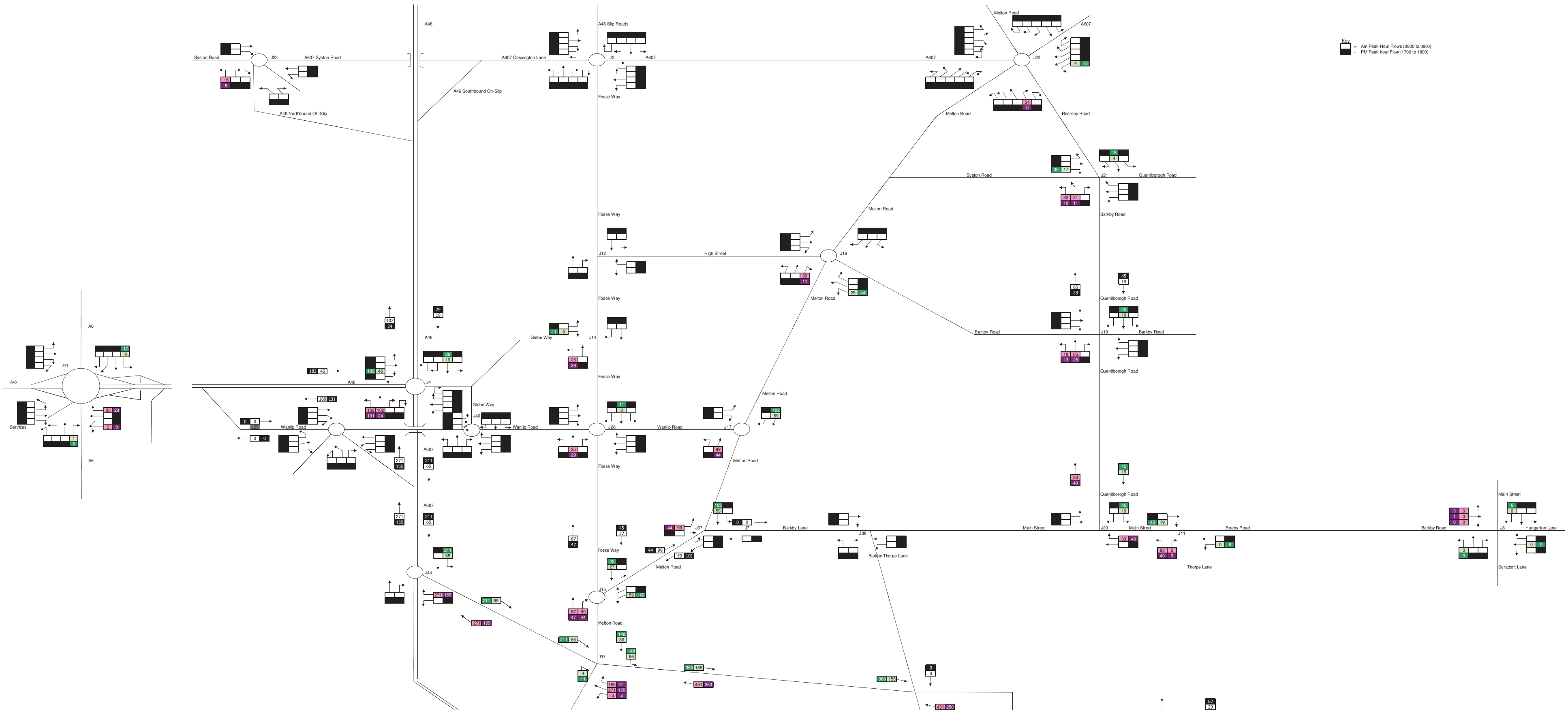
COMMITTED DEVELOPMENT TRAFFIC FLOWS

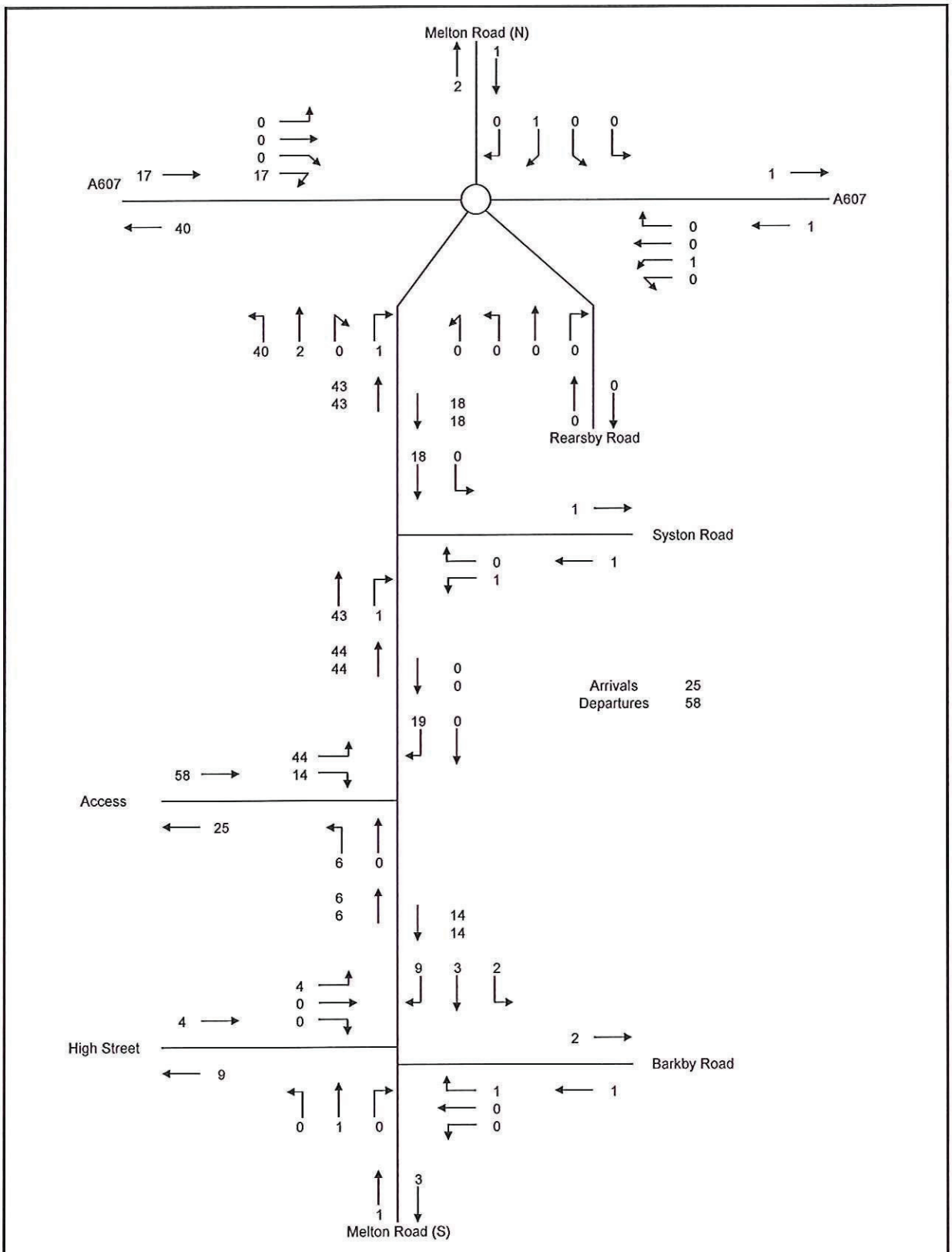


STIRLINGMAYNARD Transportation Consultants Woolstone Centre 1-2 Mill Lane Woolstone Milton Keynes MK15 0AJ	Drawing: AM Proposed Development Flows		Figure No: 12
	Project: Barkby Road, Queniborough	Drawn: HC	Checked: NW
	Client: Gladman Developments	Scale: NTS	Date: Mar 2014



STIRLINGMAYNARD Transportation Consultants Woolstone Centre 1-2 Mill Lane Woolstone Milton Keynes MK15 0AJ	Drawing: PM Proposed Development Flows		Figure No: 13
	Project: Barkby Road, Queniborough	Drawn: HC	Checked: NW
	Client: Gladman Developments	Scale: NTS	Date: Mar 2014

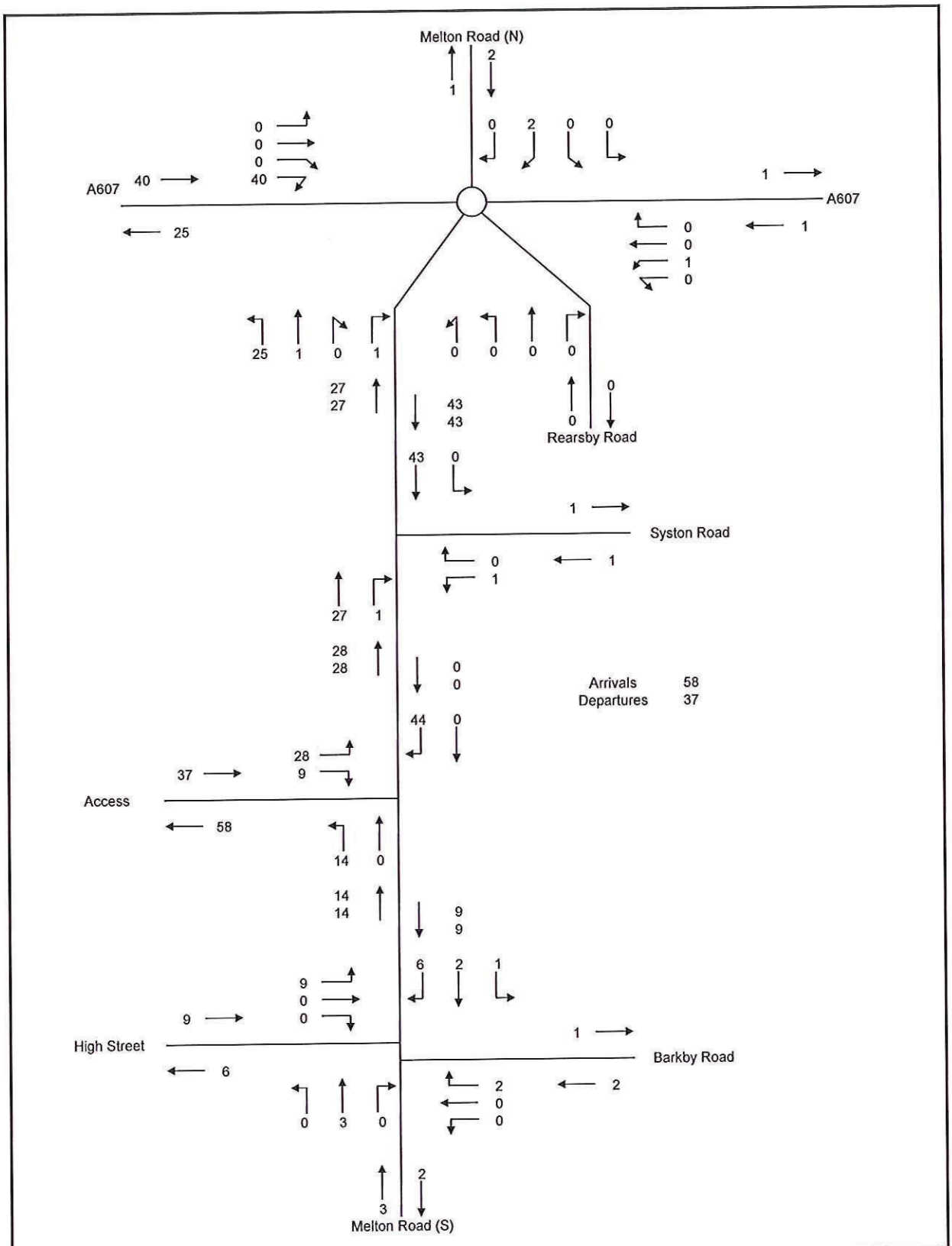

Key
= Am Peak Hour Flows (0800 to 0900)
= PM Peak hour Flow (1700 to 1800)
Syston Road
J23
A607 Syston Road
A46 Northbound Off-Slip
A46
A46 Southbound On-Slip
A607 Cossington Lane
J2
A607
A46 Slip Roads
Fosse Way
Melton Road
A607
J22
Rearsby Road
Syston Road
J21
Queniborough Road
Barkby Road
J12
High Street
J16
J14
Glebe Way
J4
J40
Wanlip Road
J26
J17
J19
A6
J41
Services
A607
J44
J15
J43
J37
J7
Barkby Lane
J38
Barkby Thorpe Lane
Main Street
J20
J11
Beeby Road
Thorpe Lane
J8
Hungarton Lane
Scraptoft Lane



WSP

Syston, Leicestershire
Developemnt Traffic

AM Peak Hour (08:00-09:00)
All Vehicles



WSP

Syston, Leicestershire
Development Traffic

PM Peak Hour (17:00 - 18:00)
All Vehicles

APPENDIX I

PROPOSED SITE ACCESS – PICADY OUTPUT

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.6.541 [19821,26/11/2015]

For sales and distribution information, program advice and maintenance, contact TRL:
Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk

Filename: Site access PICADY (v2).arc8
Path: C:\Users\ADC\Documents
Report generation date: 17/06/2021 18:02:00

Summary of junction performance

	AM			PM		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
	Traffic Flows - 2026 WD					
Stream B-C	0.09	6.11	0.08	0.04	6.01	0.04
Stream B-A	0.09	8.51	0.09	0.04	8.49	0.04
Stream C-A	-	-	-	-	-	-
Stream C-B	0.03	6.32	0.03	0.09	7.02	0.08
Stream A-B	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-

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

"D1 - 2026 WD, AM " model duration: 07:45 - 09:15
"D2 - 2026 WD, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.6.541 at 17/06/2021 18:01:59

File summary

Title	Site access
Location	Queniborough
Site Number	
Date	09/01/2018
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	ADC1659
Enumerator	ADCteam
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Traffic Flows - 2026 WD, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor Arm Geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Traffic Flows	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2026 WD, AM	2026 WD	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	Site access	T-Junction	Two-way	A,B,C		7.01	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	Barkby Road S		Major
B	B	Site access		Minor
C	C	Barkby Road N		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	6.00		0.00		2.20	161.00		

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)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				8.90	2.90	2.80	2.80	2.80	✓	1.00	80	161

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	637.467	0.116	0.293	0.185	0.419
1	B-C	744.171	0.114	0.288	-	-
1	C-B	667.200	0.259	0.259	-	-

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 Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	274.00	100.000
B	ONE HOUR	✓	84.00	100.000
C	ONE HOUR	✓	396.00	100.000

Turning Proportions

Turning Counts / Proportions (Veh/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	12.000	262.000
	B	36.000	0.000	48.000
	C	380.000	16.000	0.000

Turning Proportions (Veh) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.04	0.96
	B	0.43	0.00	0.57
	C	0.96	0.04	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.031
	B	1.000	1.000	1.000
	C	1.016	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	3.1
	B	0.0	0.0	0.0
	C	1.6	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
B-C	0.08	6.11	0.09	A	44.05	66.07	6.43	5.84	0.07	6.43	5.84
B-A	0.09	8.51	0.09	A	33.03	49.55	6.51	7.88	0.07	6.51	7.88
C-A	-	-	-	-	348.69	523.04	-	-	-	-	-
C-B	0.03	6.32	0.03	A	14.68	22.02	2.25	6.13	0.02	2.25	6.13
A-B	-	-	-	-	11.01	16.52	-	-	-	-	-
A-C	-	-	-	-	240.42	360.62	-	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-C	36.14	9.03	35.91	0.00	675.44	0.054	0.00	0.06	5.628	A
B-A	27.10	6.78	26.88	0.00	517.95	0.052	0.00	0.05	7.327	A
C-A	286.08	71.52	286.08	0.00	-	-	-	-	-	-
C-B	12.05	3.01	11.97	0.00	612.29	0.020	0.00	0.02	5.996	A
A-B	9.03	2.26	9.03	0.00	-	-	-	-	-	-
A-C	197.25	49.31	197.25	0.00	-	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-C	43.15	10.79	43.10	0.00	661.63	0.065	0.06	0.07	5.820	A
B-A	32.36	8.09	32.30	0.00	494.66	0.065	0.05	0.07	7.785	A
C-A	341.61	85.40	341.61	0.00	-	-	-	-	-	-
C-B	14.38	3.60	14.37	0.00	601.64	0.024	0.02	0.02	6.129	A
A-B	10.79	2.70	10.79	0.00	-	-	-	-	-	-
A-C	235.53	58.88	235.53	0.00	-	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-C	52.85	13.21	52.77	0.00	642.29	0.082	0.07	0.09	6.106	A
B-A	39.64	9.91	39.54	0.00	462.46	0.086	0.07	0.09	8.510	A
C-A	418.39	104.60	418.39	0.00	-	-	-	-	-	-
C-B	17.62	4.40	17.59	0.00	586.90	0.030	0.02	0.03	6.322	A
A-B	13.21	3.30	13.21	0.00	-	-	-	-	-	-
A-C	288.47	72.12	288.47	0.00	-	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-C	52.85	13.21	52.85	0.00	642.26	0.082	0.09	0.09	6.107	A
B-A	39.64	9.91	39.63	0.00	462.45	0.086	0.09	0.09	8.514	A
C-A	418.39	104.60	418.39	0.00	-	-	-	-	-	-
C-B	17.62	4.40	17.62	0.00	586.90	0.030	0.03	0.03	6.322	A
A-B	13.21	3.30	13.21	0.00	-	-	-	-	-	-
A-C	288.47	72.12	288.47	0.00	-	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-C	43.15	10.79	43.23	0.00	661.58	0.065	0.09	0.07	5.822	A
B-A	32.36	8.09	32.45	0.00	494.64	0.065	0.09	0.07	7.791	A
C-A	341.61	85.40	341.61	0.00	-	-	-	-	-	-
C-B	14.38	3.60	14.41	0.00	601.64	0.024	0.03	0.02	6.130	A
A-B	10.79	2.70	10.79	0.00	-	-	-	-	-	-
A-C	235.53	58.88	235.53	0.00	-	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-C	36.14	9.03	36.19	0.00	675.34	0.054	0.07	0.06	5.632	A
B-A	27.10	6.78	27.16	0.00	517.90	0.052	0.07	0.06	7.338	A
C-A	286.08	71.52	286.08	0.00	-	-	-	-	-	-
C-B	12.05	3.01	12.06	0.00	612.29	0.020	0.02	0.02	5.997	A
A-B	9.03	2.26	9.03	0.00	-	-	-	-	-	-
A-C	197.25	49.31	197.25	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.82	0.05	5.628	A	A
B-A	0.79	0.05	7.327	A	A
C-A	-	-	-	-	-
C-B	0.29	0.02	5.996	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (08:00-08:15)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	1.02	0.07	5.820	A	A
B-A	1.02	0.07	7.785	A	A
C-A	-	-	-	-	-
C-B	0.36	0.02	6.129	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (08:15-08:30)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	1.31	0.09	6.106	A	A
B-A	1.36	0.09	8.510	A	A
C-A	-	-	-	-	-
C-B	0.45	0.03	6.322	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (08:30-08:45)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	1.34	0.09	6.107	A	A
B-A	1.40	0.09	8.514	A	A
C-A	-	-	-	-	-
C-B	0.46	0.03	6.322	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (08:45-09:00)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	1.07	0.07	5.822	A	A
B-A	1.09	0.07	7.791	A	A
C-A	-	-	-	-	-
C-B	0.38	0.03	6.130	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (09:00-09:15)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.87	0.06	5.632	A	A
B-A	0.85	0.06	7.338	A	A
C-A	-	-	-	-	-
C-B	0.31	0.02	5.997	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Traffic Flows - 2026 WD, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor Arm Geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Traffic Flows	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2026 WD, PM	2026 WD	PM		ONE HOUR	16:45	18:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	Site access	T-Junction	Two-way	A,B,C		7.04	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	Barkby Road S		Major
B	B	Site access		Minor
C	C	Barkby Road N		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	6.00		0.00		2.20	161.00		

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)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				8.90	2.90	2.80	2.80	2.80	✓	1.00	80	161

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	637.467	0.116	0.293	0.185	0.419
1	B-C	744.171	0.114	0.288	-	-
1	C-B	667.200	0.259	0.259	-	-

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 Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	373.00	100.000
B	ONE HOUR	✓	40.00	100.000
C	ONE HOUR	✓	333.00	100.000

Turning Proportions

Turning Counts / Proportions (Veh/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	33.000	340.000
	B	17.000	0.000	23.000
	C	290.000	43.000	0.000

Turning Proportions (Veh) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.09	0.91
	B	0.43	0.00	0.58
	C	0.87	0.13	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.012
	B	1.000	1.000	1.000
	C	1.010	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	1.2
	B	0.0	0.0	0.0
	C	1.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
B-C	0.04	6.01	0.04	A	21.11	31.66	3.04	5.77	0.03	3.04	5.77
B-A	0.04	8.49	0.04	A	15.60	23.40	3.07	7.87	0.03	3.07	7.87
C-A	-	-	-	-	266.11	399.16	-	-	-	-	-
C-B	0.08	7.02	0.09	A	39.46	59.19	6.59	6.68	0.07	6.59	6.68
A-B	-	-	-	-	30.28	45.42	-	-	-	-	-
A-C	-	-	-	-	311.99	467.98	-	-	-	-	-

Main Results for each time segment

Main results: (16:45-17:00)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-C	17.32	4.33	17.21	0.00	662.41	0.026	0.00	0.03	5.580	A
B-A	12.80	3.20	12.70	0.00	504.27	0.025	0.00	0.03	7.321	A
C-A	218.33	54.58	218.33	0.00	-	-	-	-	-	-
C-B	32.37	8.09	32.14	0.00	593.81	0.055	0.00	0.06	6.406	A
A-B	24.84	6.21	24.84	0.00	-	-	-	-	-	-
A-C	255.97	63.99	255.97	0.00	-	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-C	20.68	5.17	20.65	0.00	646.34	0.032	0.03	0.03	5.753	A
B-A	15.28	3.82	15.26	0.00	478.31	0.032	0.03	0.03	7.774	A
C-A	260.70	65.18	260.70	0.00	-	-	-	-	-	-
C-B	38.66	9.66	38.60	0.00	579.57	0.067	0.06	0.07	6.654	A
A-B	29.67	7.42	29.67	0.00	-	-	-	-	-	-
A-C	305.65	76.41	305.65	0.00	-	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-C	25.32	6.33	25.29	0.00	624.03	0.041	0.03	0.04	6.012	A
B-A	18.72	4.68	18.67	0.00	442.53	0.042	0.03	0.04	8.492	A
C-A	319.30	79.82	319.30	0.00	-	-	-	-	-	-
C-B	47.34	11.84	47.26	0.00	559.87	0.085	0.07	0.09	7.023	A
A-B	36.33	9.08	36.33	0.00	-	-	-	-	-	-
A-C	374.35	93.59	374.35	0.00	-	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-C	25.32	6.33	25.32	0.00	624.01	0.041	0.04	0.04	6.012	A
B-A	18.72	4.68	18.72	0.00	442.49	0.042	0.04	0.04	8.494	A
C-A	319.30	79.82	319.30	0.00	-	-	-	-	-	-
C-B	47.34	11.84	47.34	0.00	559.87	0.085	0.09	0.09	7.023	A
A-B	36.33	9.08	36.33	0.00	-	-	-	-	-	-
A-C	374.35	93.59	374.35	0.00	-	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-C	20.68	5.17	20.71	0.00	646.31	0.032	0.04	0.03	5.756	A
B-A	15.28	3.82	15.33	0.00	478.25	0.032	0.04	0.03	7.777	A
C-A	260.70	65.18	260.70	0.00	-	-	-	-	-	-
C-B	38.66	9.66	38.74	0.00	579.57	0.067	0.09	0.07	6.656	A
A-B	29.67	7.42	29.67	0.00	-	-	-	-	-	-
A-C	305.65	76.41	305.65	0.00	-	-	-	-	-	-

Main results: (18:00-18:15)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-C	17.32	4.33	17.34	0.00	662.36	0.026	0.03	0.03	5.580	A
B-A	12.80	3.20	12.83	0.00	504.15	0.025	0.03	0.03	7.326	A
C-A	218.33	54.58	218.33	0.00	-	-	-	-	-	-
C-B	32.37	8.09	32.43	0.00	593.81	0.055	0.07	0.06	6.412	A
A-B	24.84	6.21	24.84	0.00	-	-	-	-	-	-
A-C	255.97	63.99	255.97	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (16:45-17:00)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.39	0.03	5.580	A	A
B-A	0.38	0.03	7.321	A	A
C-A	-	-	-	-	-
C-B	0.83	0.06	6.406	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (17:00-17:15)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.48	0.03	5.753	A	A
B-A	0.48	0.03	7.774	A	A
C-A	-	-	-	-	-
C-B	1.04	0.07	6.654	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (17:15-17:30)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.62	0.04	6.012	A	A
B-A	0.64	0.04	8.492	A	A
C-A	-	-	-	-	-
C-B	1.35	0.09	7.023	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (17:30-17:45)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.63	0.04	6.012	A	A
B-A	0.66	0.04	8.494	A	A
C-A	-	-	-	-	-
C-B	1.38	0.09	7.023	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (17:45-18:00)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.51	0.03	5.756	A	A
B-A	0.51	0.03	7.777	A	A
C-A	-	-	-	-	-
C-B	1.10	0.07	6.656	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (18:00-18:15)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.41	0.03	5.580	A	A
B-A	0.40	0.03	7.326	A	A
C-A	-	-	-	-	-
C-B	0.89	0.06	6.412	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

APPENDIX J

QUENIBOROUGH CROSSROADS – PICADY OUTPUT

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.6.541 [19821,26/11/2015]

For sales and distribution information, program advice and maintenance, contact TRL:
Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk

Filename: Crossroad junction - existing layout (v2).arc8
Path: C:\Users\ADC\Documents
Report generation date: 17/06/2021 18:36:24

Summary of junction performance

	AM			PM		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
	Traffic Flows - 2026 with development					
Stream B-CD	5.69	76.02	0.90	2.78	41.11	0.76
Stream B-AD	4.35	92.59	0.87	2.25	45.47	0.71
Stream A-BCD	0.71	9.90	0.41	0.63	9.55	0.38
Stream A-B	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-
Stream D-AB	29.89	231.55	1.13	23.02	185.68	1.08
Stream D-BC	12.73	283.14	1.09	10.94	234.89	1.05
Stream C-ABD	0.18	7.76	0.15	0.16	7.45	0.14
Stream C-D	-	-	-	-	-	-
Stream C-A	-	-	-	-	-	-
	Traffic Flows - 2026 without development					
Stream B-CD	2.00	29.92	0.68	1.84	28.54	0.66
Stream B-AD	1.55	35.64	0.62	1.53	31.44	0.62
Stream A-BCD	0.70	9.85	0.41	0.63	9.55	0.38
Stream A-B	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-
Stream D-AB	23.09	185.03	1.08	10.52	96.70	0.97
Stream D-BC	10.32	239.76	1.05	6.00	142.57	0.95
Stream C-ABD	0.18	7.72	0.15	0.16	7.43	0.13
Stream C-D	-	-	-	-	-	-
Stream C-A	-	-	-	-	-	-

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

"D1 - 2026 without development, AM " model duration: 07:45 - 09:15
"D2 - 2026 without development, PM" model duration: 16:45 - 18:15
"D3 - 2026 with development, AM" model duration: 07:45 - 09:15
"D4 - 2026 with development, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.6.541 at 17/06/2021 18:36:20

File summary

Title	Rearsby Rd-Queniborough Rd-Barkby Rd-Syston Rd PICADY
Location	Queniborough
Site Number	
Date	21/12/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	ADC1659
Enumerator	ADCteam
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Traffic Flows - 2026 without development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor Arm Geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Minor arm flare	Arm D - Minor Arm Geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Traffic Flows	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship
2026 without development, AM	2026 without development	AM		ONE HOUR	07:45	09:15	90	15				✓	

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	Rearsby Rd-Queniborough Rd-Barkby Rd-Syston Rd crossroads	Crossroads	Two-way	A,B,C,D		102.21	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	Queniborough Road		Major
B	B	Barkby Road		Minor
C	C	Syston Road		Major
D	D	Rearsby Road		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	6.20		0.00		2.20	150.00	✓	1.00
C	6.20		0.00		2.20	150.00	✓	1.00

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	3.90	3.10	3.10	3.10	✓	1.00	21	52
D	One lane plus flare				10.00	3.80	3.20	3.00	3.00	✓	1.00	49	22

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
1	A-D	660.830	-	-	-	-	-	-	0.254	0.363	0.254	-	-	-
1	B-A	542.557	0.098	0.248	0.248	-	-	-	0.156	0.354	-	0.248	0.248	0.124
1	B-C	788.161	0.120	0.303	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	611.983	0.110	0.279	0.279	-	-	-	0.176	0.399	0.176	-	-	-
1	B-D, offside lane	542.557	0.098	0.248	0.248	-	-	-	0.156	0.354	0.156	-	-	-
1	C-B	660.830	0.254	0.254	0.363	-	-	-	-	-	-	-	-	-
1	D-A	765.493	-	-	-	-	-	-	0.294	-	0.116	-	-	-
1	D-B, nearside lane	605.206	0.174	0.174	0.395	-	-	-	0.276	0.276	0.109	-	-	-
1	D-B, offside lane	534.530	0.153	0.153	0.348	-	-	-	0.244	0.244	0.097	-	-	-
1	D-C	534.530	-	0.153	0.348	0.122	0.244	0.244	0.244	0.244	0.097	-	-	-

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 Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	336.00	100.000
B	ONE HOUR	✓	378.00	100.000
C	ONE HOUR	✓	215.00	100.000
D	ONE HOUR	✓	541.00	100.000

Turning Proportions

Turning Counts / Proportions (Veh/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	44.000	86.000	206.000
	B	37.000	0.000	67.000	274.000
	C	105.000	70.000	0.000	40.000
	D	235.000	290.000	16.000	0.000

Turning Proportions (Veh) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.13	0.26	0.61
	B	0.10	0.00	0.18	0.72
	C	0.49	0.33	0.00	0.19
	D	0.43	0.54	0.03	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.071	1.019
	B	1.027	1.000	1.015	1.015
	C	1.057	1.014	1.000	1.075
	D	1.034	1.010	1.250	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	7.1	1.9
	B	2.7	0.0	1.5	1.5
	C	5.7	1.4	0.0	7.5
	D	3.4	1.0	25.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
B-CD	0.68	29.92	2.00	D	203.76	305.64	91.70	18.00	1.02	91.72	18.00
B-AD	0.62	35.64	1.55	E	143.10	214.65	75.69	21.16	0.84	75.71	21.16
A-BCD	0.41	9.85	0.70	A	202.64	303.96	46.46	9.17	0.52	46.47	9.17
A-B	-	-	-	-	35.77	53.65	-	-	-	-	-
A-C	-	-	-	-	69.91	104.87	-	-	-	-	-
D-AB	1.08	185.03	23.09	F	357.64	536.45	712.68	79.71	7.92	712.79	79.72
D-BC	1.05	239.76	10.32	F	138.80	208.19	347.63	100.18	3.86	347.66	100.19
C-ABD	0.15	7.72	0.18	A	66.29	99.43	12.37	7.46	0.14	12.37	7.46
C-D	-	-	-	-	36.14	54.21	-	-	-	-	-
C-A	-	-	-	-	94.86	142.29	-	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	162.03	40.51	160.13	0.00	497.25	0.326	0.00	0.47	10.621	B
B-AD	122.55	30.64	120.80	0.00	397.61	0.308	0.00	0.44	12.928	B
A-BCD	161.78	40.44	160.35	0.00	617.23	0.262	0.00	0.36	7.856	A
A-B	30.86	7.72	30.86	0.00	-	-	-	-	-	-
A-C	60.32	15.08	60.32	0.00	-	-	-	-	-	-
D-AB	290.59	72.65	285.94	0.00	532.11	0.546	0.00	1.16	14.371	B
D-BC	116.71	29.18	114.75	0.00	349.55	0.334	0.00	0.49	15.211	C
C-ABD	53.67	13.42	53.25	0.00	576.44	0.093	0.00	0.10	6.877	A
C-D	29.85	7.46	29.85	0.00	-	-	-	-	-	-
C-A	78.35	19.59	78.35	0.00	-	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	197.14	49.28	196.04	0.00	453.06	0.435	0.47	0.75	13.945	B
B-AD	142.67	35.67	141.82	0.00	355.66	0.401	0.44	0.65	16.764	C
A-BCD	196.91	49.23	196.43	0.00	615.06	0.320	0.36	0.48	8.589	A
A-B	35.59	8.90	35.59	0.00	-	-	-	-	-	-
A-C	69.56	17.39	69.56	0.00	-	-	-	-	-	-
D-AB	348.79	87.20	343.91	0.00	482.28	0.723	1.16	2.38	25.151	D
D-BC	137.55	34.39	135.68	0.00	273.55	0.503	0.49	0.96	25.755	D
C-ABD	64.67	16.17	64.56	0.00	563.18	0.115	0.10	0.13	7.216	A
C-D	35.48	8.87	35.48	0.00	-	-	-	-	-	-
C-A	93.13	23.28	93.13	0.00	-	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	249.63	62.41	245.48	0.00	378.43	0.660	0.75	1.79	26.295	D
B-AD	166.56	41.64	163.60	0.00	277.30	0.601	0.65	1.39	30.878	D
A-BCD	249.22	62.30	248.35	0.00	614.75	0.405	0.48	0.69	9.801	A
A-B	40.86	10.22	40.86	0.00	-	-	-	-	-	-
A-C	79.87	19.97	79.87	0.00	-	-	-	-	-	-
D-AB	431.01	107.75	387.34	0.00	409.82	1.052	2.38	13.30	94.945	F
D-BC	164.64	41.16	140.06	0.00	156.72	1.051	0.96	7.10	140.850	F
C-ABD	80.53	20.13	80.35	0.00	546.81	0.147	0.13	0.18	7.712	A
C-D	43.09	10.77	43.09	0.00	-	-	-	-	-	-
C-A	113.10	28.28	113.10	0.00	-	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	251.92	62.98	251.09	0.00	369.94	0.681	1.79	2.00	29.922	D
B-AD	164.26	41.07	163.62	0.00	263.51	0.623	1.39	1.55	35.640	E
A-BCD	249.22	62.30	249.19	0.00	614.92	0.405	0.69	0.70	9.848	A
A-B	40.86	10.21	40.86	0.00	-	-	-	-	-	-
A-C	79.86	19.97	79.86	0.00	-	-	-	-	-	-
D-AB	432.96	108.24	393.80	0.00	400.42	1.081	13.30	23.09	185.028	F
D-BC	162.69	40.67	149.84	0.00	157.40	1.034	7.10	10.31	239.761	F
C-ABD	80.53	20.13	80.53	0.00	546.70	0.147	0.18	0.18	7.722	A
C-D	43.09	10.77	43.09	0.00	-	-	-	-	-	-
C-A	113.10	28.28	113.10	0.00	-	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	199.25	49.81	203.90	0.00	444.37	0.448	2.00	0.84	15.244	C
B-AD	140.56	35.14	143.82	0.00	338.43	0.415	1.55	0.73	18.790	C
A-BCD	196.91	49.23	197.75	0.00	615.38	0.320	0.70	0.49	8.645	A
A-B	35.59	8.90	35.59	0.00	-	-	-	-	-	-
A-C	69.56	17.39	69.56	0.00	-	-	-	-	-	-
D-AB	350.98	87.74	413.63	0.00	429.36	0.817	23.09	7.43	145.046	F
D-BC	135.37	33.84	154.91	0.00	171.05	0.791	10.31	5.43	188.044	F
C-ABD	64.67	16.17	64.84	0.00	563.05	0.115	0.18	0.13	7.231	A
C-D	35.48	8.87	35.48	0.00	-	-	-	-	-	-
C-A	93.13	23.28	93.13	0.00	-	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	162.59	40.65	163.93	0.00	493.59	0.329	0.84	0.50	10.965	B
B-AD	121.99	30.50	123.08	0.00	391.42	0.312	0.73	0.46	13.469	B
A-BCD	161.78	40.45	162.28	0.00	617.22	0.262	0.49	0.37	7.927	A
A-B	30.86	7.71	30.86	0.00	-	-	-	-	-	-
A-C	60.32	15.08	60.32	0.00	-	-	-	-	-	-
D-AB	291.48	72.87	315.64	0.00	510.36	0.571	7.43	1.39	20.594	C
D-BC	115.81	28.95	135.25	0.00	325.15	0.356	5.43	0.57	20.825	C
C-ABD	53.67	13.42	53.78	0.00	575.87	0.093	0.13	0.10	6.900	A
C-D	29.85	7.46	29.85	0.00	-	-	-	-	-	-
C-A	78.35	19.59	78.35	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	6.75	0.45	10.621	B	B
B-AD	6.16	0.41	12.928	B	B
A-BCD	5.31	0.35	7.856	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	16.01	1.07	14.371	B	B
D-BC	6.84	0.46	15.211	C	B
C-ABD	1.53	0.10	6.877	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:00-08:15)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	10.70	0.71	13.945	B	B
B-AD	9.27	0.62	16.764	C	B
A-BCD	7.17	0.48	8.589	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	31.84	2.12	25.151	D	C
D-BC	13.17	0.88	25.755	D	C
C-ABD	1.96	0.13	7.216	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:15-08:30)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	23.90	1.59	26.295	D	C
B-AD	18.66	1.24	30.878	D	C
A-BCD	10.40	0.69	9.801	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	128.93	8.60	94.945	F	F
D-BC	68.51	4.57	140.850	F	F
C-ABD	2.64	0.18	7.712	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:30-08:45)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	28.88	1.93	29.922	D	C
B-AD	22.40	1.49	35.640	E	D
A-BCD	10.63	0.71	9.848	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	274.52	18.30	185.028	F	F
D-BC	131.57	8.77	239.761	F	F
C-ABD	2.66	0.18	7.722	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:45-09:00)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	13.62	0.91	15.244	C	B
B-AD	11.93	0.80	18.790	C	B
A-BCD	7.43	0.50	8.645	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	232.34	15.49	145.046	F	F
D-BC	113.91	7.59	188.044	F	F
C-ABD	2.00	0.13	7.231	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (09:00-09:15)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	7.85	0.52	10.965	B	B
B-AD	7.28	0.49	13.469	B	B
A-BCD	5.53	0.37	7.927	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	29.08	1.94	20.594	C	C
D-BC	13.54	0.90	20.825	C	C
C-ABD	1.57	0.10	6.900	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Traffic Flows - 2026 without development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor Arm Geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Minor arm flare	Arm D - Minor Arm Geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Traffic Flows	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship
2026 without development, PM	2026 without development	PM		ONE HOUR	16:45	18:15	90	15				✓	

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	Rearsby Rd-Queniborough Rd-Barkby Rd-Syston Rd crossroads	Crossroads	Two-way	A,B,C,D		59.95	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	Queniborough Road		Major
B	B	Barkby Road		Minor
C	C	Syston Road		Major
D	D	Rearsby Road		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	6.20		0.00		2.20	150.00	✓	1.00
C	6.20		0.00		2.20	150.00	✓	1.00

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	3.90	3.10	3.10	3.10	✓	1.00	21	52
D	One lane plus flare				10.00	3.80	3.20	3.00	3.00	✓	1.00	49	22

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
1	A-D	660.830	-	-	-	-	-	-	0.254	0.363	0.254	-	-	-
1	B-A	542.557	0.098	0.248	0.248	-	-	-	0.156	0.354	-	0.248	0.248	0.124
1	B-C	788.161	0.120	0.303	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	611.983	0.110	0.279	0.279	-	-	-	0.176	0.399	0.176	-	-	-
1	B-D, offside lane	542.557	0.098	0.248	0.248	-	-	-	0.156	0.354	0.156	-	-	-
1	C-B	660.830	0.254	0.254	0.363	-	-	-	-	-	-	-	-	-
1	D-A	765.493	-	-	-	-	-	-	0.294	-	0.116	-	-	-
1	D-B, nearside lane	605.206	0.174	0.174	0.395	-	-	-	0.276	0.276	0.109	-	-	-
1	D-B, offside lane	534.530	0.153	0.153	0.348	-	-	-	0.244	0.244	0.097	-	-	-
1	D-C	534.530	-	0.153	0.348	0.122	0.244	0.244	0.244	0.244	0.097	-	-	-

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 Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	307.00	100.000
B	ONE HOUR	✓	385.00	100.000
C	ONE HOUR	✓	184.00	100.000
D	ONE HOUR	✓	511.00	100.000

Turning Proportions

Turning Counts / Proportions (Veh/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	30.000	83.000	194.000
	B	34.000	0.000	44.000	307.000
	C	101.000	66.000	0.000	17.000
	D	218.000	275.000	18.000	0.000

Turning Proportions (Veh) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.10	0.27	0.63
	B	0.09	0.00	0.11	0.80
	C	0.55	0.36	0.00	0.09
	D	0.43	0.54	0.04	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.038	1.000	1.040
	B	1.000	1.000	1.026	1.011
	C	1.011	1.000	1.000	1.200
	D	1.010	1.008	1.250	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	3.8	0.0	4.0
	B	0.0	0.0	2.6	1.1
	C	1.1	0.0	0.0	20.0
	D	1.0	0.8	25.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
B-CD	0.66	28.54	1.84	D	196.45	294.68	87.53	17.82	0.97	87.54	17.82
B-AD	0.62	31.44	1.53	D	156.83	235.25	77.33	19.72	0.86	77.35	19.73
A-BCD	0.38	9.55	0.63	A	188.85	283.27	42.33	8.97	0.47	42.33	8.97
A-B	-	-	-	-	24.65	36.98	-	-	-	-	-
A-C	-	-	-	-	68.21	102.31	-	-	-	-	-
D-AB	0.97	96.70	10.52	F	335.06	502.60	324.03	38.68	3.60	324.09	38.69
D-BC	0.95	142.57	6.00	F	133.84	200.76	165.70	49.52	1.84	165.72	49.53
C-ABD	0.13	7.43	0.16	A	61.93	92.89	11.10	7.17	0.12	11.10	7.17
C-D	-	-	-	-	15.40	23.10	-	-	-	-	-
C-A	-	-	-	-	91.51	137.27	-	-	-	-	-

Main Results for each time segment

Main results: (16:45-17:00)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	156.84	39.21	154.97	0.00	485.48	0.323	0.00	0.47	10.833	B
B-AD	133.01	33.25	131.16	0.00	415.35	0.320	0.00	0.46	12.590	B
A-BCD	151.45	37.86	150.12	0.00	610.06	0.248	0.00	0.33	7.806	A
A-B	21.15	5.29	21.15	0.00	-	-	-	-	-	-
A-C	58.52	14.63	58.52	0.00	-	-	-	-	-	-
D-AB	272.36	68.09	268.56	0.00	551.26	0.494	0.00	0.95	12.574	B
D-BC	112.35	28.09	110.63	0.00	368.15	0.305	0.00	0.43	13.891	B
C-ABD	50.33	12.58	49.96	0.00	588.93	0.085	0.00	0.09	6.675	A
C-D	12.71	3.18	12.71	0.00	-	-	-	-	-	-
C-A	75.49	18.87	75.49	0.00	-	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	190.63	47.66	189.56	0.00	442.74	0.431	0.47	0.74	14.159	B
B-AD	155.47	38.87	154.59	0.00	376.49	0.413	0.46	0.68	16.156	C
A-BCD	183.78	45.94	183.35	0.00	608.64	0.302	0.33	0.44	8.460	A
A-B	24.48	6.12	24.48	0.00	-	-	-	-	-	-
A-C	67.73	16.93	67.73	0.00	-	-	-	-	-	-
D-AB	327.08	81.77	324.01	0.00	507.15	0.645	0.95	1.72	19.332	C
D-BC	132.30	33.08	131.10	0.00	306.55	0.432	0.43	0.73	20.368	C
C-ABD	60.49	15.12	60.39	0.00	575.85	0.105	0.09	0.12	6.983	A
C-D	15.12	3.78	15.12	0.00	-	-	-	-	-	-
C-A	89.81	22.45	89.81	0.00	-	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	240.65	60.16	236.79	0.00	371.77	0.647	0.74	1.70	25.966	D
B-AD	183.25	45.81	180.31	0.00	303.30	0.604	0.68	1.42	28.605	D
A-BCD	231.31	57.83	230.57	0.00	608.70	0.380	0.44	0.62	9.510	A
A-B	28.33	7.08	28.33	0.00	-	-	-	-	-	-
A-C	78.37	19.59	78.37	0.00	-	-	-	-	-	-
D-AB	404.41	101.10	382.46	0.00	429.31	0.942	1.72	7.21	59.795	F
D-BC	158.21	39.55	145.78	0.00	180.68	0.876	0.73	3.84	84.482	F
C-ABD	74.95	18.74	74.80	0.00	559.31	0.134	0.12	0.16	7.427	A
C-D	18.39	4.60	18.39	0.00	-	-	-	-	-	-
C-A	109.25	27.31	109.25	0.00	-	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	241.79	60.45	241.24	0.00	366.28	0.660	1.70	1.84	28.544	D
B-AD	182.10	45.53	181.67	0.00	295.31	0.617	1.42	1.53	31.441	D
A-BCD	231.32	57.83	231.29	0.00	608.46	0.380	0.62	0.63	9.548	A
A-B	28.33	7.08	28.33	0.00	-	-	-	-	-	-
A-C	78.37	19.59	78.37	0.00	-	-	-	-	-	-
D-AB	405.52	101.38	392.28	0.00	417.67	0.971	7.21	10.52	96.703	F
D-BC	157.11	39.28	148.49	0.00	165.84	0.947	3.84	5.99	142.573	F
C-ABD	74.96	18.74	74.95	0.00	559.15	0.134	0.16	0.16	7.434	A
C-D	18.39	4.60	18.39	0.00	-	-	-	-	-	-
C-A	109.24	27.31	109.24	0.00	-	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	191.67	47.92	195.81	0.00	437.11	0.439	1.84	0.80	15.158	C
B-AD	154.43	38.61	157.55	0.00	368.01	0.420	1.53	0.75	17.344	C
A-BCD	183.78	45.94	184.49	0.00	608.20	0.302	0.63	0.45	8.509	A
A-B	24.48	6.12	24.48	0.00	-	-	-	-	-	-
A-C	67.73	16.93	67.73	0.00	-	-	-	-	-	-
D-AB	328.44	82.11	360.96	0.00	479.01	0.686	10.52	2.38	36.854	E
D-BC	130.94	32.74	150.80	0.00	266.44	0.491	5.99	1.03	35.766	E
C-ABD	60.49	15.12	60.64	0.00	575.63	0.105	0.16	0.12	6.996	A
C-D	15.12	3.78	15.12	0.00	-	-	-	-	-	-
C-A	89.81	22.45	89.81	0.00	-	-	-	-	-	-

Main results: (18:00-18:15)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	157.12	39.28	158.37	0.00	482.58	0.326	0.80	0.49	11.144	B
B-AD	132.73	33.18	133.77	0.00	412.64	0.322	0.75	0.48	12.958	B
A-BCD	151.46	37.86	151.90	0.00	609.76	0.248	0.45	0.34	7.870	A
A-B	21.15	5.29	21.15	0.00	-	-	-	-	-	-
A-C	58.52	14.63	58.52	0.00	-	-	-	-	-	-
D-AB	272.57	68.14	278.02	0.00	546.86	0.498	2.38	1.02	13.648	B
D-BC	112.14	28.03	114.41	0.00	362.06	0.310	1.03	0.46	14.673	B
C-ABD	50.33	12.58	50.43	0.00	588.35	0.086	0.12	0.10	6.693	A
C-D	12.71	3.18	12.71	0.00	-	-	-	-	-	-
C-A	75.49	18.87	75.49	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (16:45-17:00)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	6.66	0.44	10.833	B	B
B-AD	6.52	0.43	12.590	B	B
A-BCD	4.93	0.33	7.806	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	13.25	0.88	12.574	B	B
D-BC	6.04	0.40	13.891	B	B
C-ABD	1.39	0.09	6.675	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:00-17:15)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	10.50	0.70	14.159	B	B
B-AD	9.75	0.65	16.156	C	B
A-BCD	6.58	0.44	8.460	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	23.67	1.58	19.332	C	B
D-BC	10.27	0.68	20.368	C	C
C-ABD	1.77	0.12	6.983	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:15-17:30)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	22.82	1.52	25.966	D	C
B-AD	19.13	1.28	28.605	D	C
A-BCD	9.35	0.62	9.510	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	79.10	5.27	59.795	F	E
D-BC	42.36	2.82	84.482	F	F
C-ABD	2.35	0.16	7.427	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:30-17:45)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	26.82	1.79	28.544	D	C
B-AD	22.29	1.49	31.441	D	C
A-BCD	9.54	0.64	9.548	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	135.25	9.02	96.703	F	F
D-BC	75.50	5.03	142.573	F	F
C-ABD	2.37	0.16	7.434	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:45-18:00)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	13.02	0.87	15.158	C	B
B-AD	12.04	0.80	17.344	C	B
A-BCD	6.80	0.45	8.509	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	56.16	3.74	36.854	E	D
D-BC	24.12	1.61	35.766	E	D
C-ABD	1.80	0.12	6.996	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (18:00-18:15)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	7.71	0.51	11.144	B	B
B-AD	7.60	0.51	12.958	B	B
A-BCD	5.13	0.34	7.870	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	16.59	1.11	13.648	B	B
D-BC	7.36	0.49	14.673	B	B
C-ABD	1.43	0.10	6.693	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Traffic Flows - 2026 with development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor Arm Geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Minor arm flare	Arm D - Minor Arm Geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Traffic Flows	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship
2026 with development, AM	2026 with development	AM		ONE HOUR	07:45	09:15	90	15				✓	

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	Rearsby Rd-Queniborough Rd-Barkby Rd-Syston Rd crossroads	Crossroads	Two-way	A,B,C,D		137.40	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	Queniborough Road		Major
B	B	Barkby Road		Minor
C	C	Syston Road		Major
D	D	Rearsby Road		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	6.20		0.00		2.20	150.00	✓	1.00
C	6.20		0.00		2.20	150.00	✓	1.00

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	3.90	3.10	3.10	3.10	✓	1.00	21	52
D	One lane plus flare				10.00	3.80	3.20	3.00	3.00	✓	1.00	49	22

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
1	A-D	660.830	-	-	-	-	-	-	0.254	0.363	0.254	-	-	-
1	B-A	542.557	0.098	0.248	0.248	-	-	-	0.156	0.354	-	0.248	0.248	0.124
1	B-C	788.161	0.120	0.303	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	611.983	0.110	0.279	0.279	-	-	-	0.176	0.399	0.176	-	-	-
1	B-D, offside lane	542.557	0.098	0.248	0.248	-	-	-	0.156	0.354	0.156	-	-	-
1	C-B	660.830	0.254	0.254	0.363	-	-	-	-	-	-	-	-	-
1	D-A	765.493	-	-	-	-	-	-	0.294	-	0.116	-	-	-
1	D-B, nearside lane	605.206	0.174	0.174	0.395	-	-	-	0.276	0.276	0.109	-	-	-
1	D-B, offside lane	534.530	0.153	0.153	0.348	-	-	-	0.244	0.244	0.097	-	-	-
1	D-C	534.530	-	0.153	0.348	0.122	0.244	0.244	0.244	0.244	0.097	-	-	-

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 Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	337.00	100.000
B	ONE HOUR	✓	426.00	100.000
C	ONE HOUR	✓	216.00	100.000
D	ONE HOUR	✓	555.00	100.000

Turning Proportions

Turning Counts / Proportions (Veh/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	45.000	86.000	206.000
	B	40.000	0.000	69.000	317.000
	C	105.000	71.000	0.000	40.000
	D	235.000	304.000	16.000	0.000

Turning Proportions (Veh) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.13	0.26	0.61
	B	0.09	0.00	0.16	0.74
	C	0.49	0.33	0.00	0.19
	D	0.42	0.55	0.03	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.065	1.022
	B	1.028	1.000	1.016	1.014
	C	1.053	1.016	1.000	1.083
	D	1.033	1.011	1.286	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	6.5	2.2
	B	2.8	0.0	1.6	1.4
	C	5.3	1.6	0.0	8.3
	D	3.3	1.1	28.6	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
B-CD	0.90	76.02	5.69	F	230.55	345.82	178.89	31.04	1.99	178.92	31.04
B-AD	0.87	92.59	4.35	F	160.36	240.53	140.77	35.11	1.56	140.80	35.12
A-BCD	0.41	9.90	0.71	A	202.88	304.32	46.77	9.22	0.52	46.78	9.22
A-B	-	-	-	-	36.53	54.80	-	-	-	-	-
A-C	-	-	-	-	69.82	104.73	-	-	-	-	-
D-AB	1.13	231.55	29.89	F	365.42	548.13	984.75	107.79	10.94	984.92	107.81
D-BC	1.09	283.14	12.73	F	143.86	215.79	440.77	122.56	4.90	440.84	122.57
C-ABD	0.15	7.76	0.18	A	67.28	100.93	12.61	7.50	0.14	12.61	7.50
C-D	-	-	-	-	36.12	54.17	-	-	-	-	-
C-A	-	-	-	-	94.81	142.21	-	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	181.94	45.49	179.55	0.00	479.95	0.379	0.00	0.60	11.892	B
B-AD	138.77	34.69	136.62	0.00	390.58	0.355	0.00	0.54	14.061	B
A-BCD	161.90	40.48	160.46	0.00	615.49	0.263	0.00	0.36	7.888	A
A-B	31.54	7.88	31.54	0.00	-	-	-	-	-	-
A-C	60.27	15.07	60.27	0.00	-	-	-	-	-	-
D-AB	296.33	74.08	291.33	0.00	524.24	0.565	0.00	1.25	15.153	C
D-BC	121.50	30.38	119.36	0.00	341.99	0.355	0.00	0.54	16.024	C
C-ABD	54.46	13.61	54.04	0.00	575.22	0.095	0.00	0.10	6.897	A
C-D	29.84	7.46	29.84	0.00	-	-	-	-	-	-
C-A	78.32	19.58	78.32	0.00	-	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	221.96	55.49	220.21	0.00	428.35	0.518	0.60	1.04	17.149	C
B-AD	161.00	40.25	159.70	0.00	340.16	0.473	0.54	0.86	19.800	C
A-BCD	197.12	49.28	196.64	0.00	613.45	0.321	0.36	0.48	8.627	A
A-B	36.36	9.09	36.36	0.00	-	-	-	-	-	-
A-C	69.48	17.37	69.48	0.00	-	-	-	-	-	-
D-AB	355.92	88.98	349.89	0.00	470.72	0.756	1.25	2.76	28.450	D
D-BC	143.01	35.75	140.60	0.00	260.09	0.550	0.54	1.14	29.532	D
C-ABD	65.63	16.41	65.52	0.00	562.02	0.117	0.10	0.13	7.247	A
C-D	35.46	8.87	35.46	0.00	-	-	-	-	-	-
C-A	93.09	23.27	93.09	0.00	-	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	282.52	70.63	271.48	0.00	338.44	0.835	1.04	3.80	47.684	E
B-AD	186.52	46.63	178.64	0.00	237.65	0.785	0.86	2.83	55.098	F
A-BCD	249.61	62.40	248.74	0.00	613.34	0.407	0.48	0.70	9.850	A
A-B	41.71	10.43	41.71	0.00	-	-	-	-	-	-
A-C	79.72	19.93	79.72	0.00	-	-	-	-	-	-
D-AB	440.43	110.11	385.80	0.00	402.54	1.094	2.76	16.42	112.258	F
D-BC	170.64	42.66	142.27	0.00	156.21	1.092	1.14	8.23	156.967	F
C-ABD	81.76	20.44	81.58	0.00	545.74	0.150	0.13	0.18	7.751	A
C-D	43.05	10.76	43.05	0.00	-	-	-	-	-	-
C-A	113.01	28.25	113.01	0.00	-	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	286.92	71.73	279.37	0.00	318.80	0.900	3.80	5.69	76.018	F
B-AD	182.11	45.53	176.03	0.00	208.71	0.873	2.83	4.35	92.589	F
A-BCD	249.62	62.40	249.59	0.00	613.44	0.407	0.70	0.71	9.897	A
A-B	41.71	10.43	41.71	0.00	-	-	-	-	-	-
A-C	79.71	19.93	79.71	0.00	-	-	-	-	-	-
D-AB	443.06	110.77	389.17	0.00	393.00	1.127	16.42	29.89	231.548	F
D-BC	168.00	42.00	150.06	0.00	155.23	1.082	8.23	12.72	283.136	F
C-ABD	81.76	20.44	81.76	0.00	545.62	0.150	0.18	0.18	7.761	A
C-D	43.05	10.76	43.05	0.00	-	-	-	-	-	-
C-A	113.01	28.25	113.01	0.00	-	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	226.75	56.69	244.09	0.00	403.45	0.562	5.69	1.35	24.758	C
B-AD	156.22	39.05	169.20	0.00	305.08	0.512	4.35	1.11	28.692	D
A-BCD	197.13	49.28	197.97	0.00	613.66	0.321	0.71	0.50	8.686	A
A-B	36.35	9.09	36.35	0.00	-	-	-	-	-	-
A-C	69.48	17.37	69.48	0.00	-	-	-	-	-	-
D-AB	359.04	89.76	408.22	0.00	421.87	0.851	29.89	17.59	212.349	F
D-BC	139.89	34.97	159.24	0.00	168.15	0.832	12.72	7.88	245.649	F
C-ABD	65.64	16.41	65.81	0.00	561.86	0.117	0.18	0.14	7.262	A
C-D	35.46	8.87	35.46	0.00	-	-	-	-	-	-
C-A	93.08	23.27	93.08	0.00	-	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	183.20	45.80	186.03	0.00	473.58	0.387	1.35	0.64	12.636	B
B-AD	137.51	34.38	139.61	0.00	378.64	0.363	1.11	0.58	15.191	C
A-BCD	161.91	40.48	162.41	0.00	615.43	0.263	0.50	0.37	7.960	A
A-B	31.54	7.88	31.54	0.00	-	-	-	-	-	-
A-C	60.27	15.07	60.27	0.00	-	-	-	-	-	-
D-AB	297.72	74.43	361.34	0.00	487.13	0.611	17.59	1.69	41.863	E
D-BC	120.11	30.03	148.46	0.00	279.27	0.430	7.88	0.79	33.145	D
C-ABD	54.46	13.61	54.57	0.00	574.64	0.095	0.14	0.11	6.924	A
C-D	29.84	7.46	29.84	0.00	-	-	-	-	-	-
C-A	78.32	19.58	78.32	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	8.43	0.56	11.892	B	B
B-AD	7.54	0.50	14.061	B	B
A-BCD	5.33	0.36	7.888	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	17.15	1.14	15.153	C	B
D-BC	7.47	0.50	16.024	C	B
C-ABD	1.56	0.10	6.897	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:00-08:15)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	14.54	0.97	17.149	C	B
B-AD	12.16	0.81	19.800	C	B
A-BCD	7.21	0.48	8.627	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	36.17	2.41	28.450	D	C
D-BC	15.45	1.03	29.532	D	C
C-ABD	2.00	0.13	7.247	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:15-08:30)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	45.44	3.03	47.684	E	D
B-AD	34.39	2.29	55.098	F	E
A-BCD	10.48	0.70	9.850	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	153.72	10.25	112.258	F	F
D-BC	77.77	5.18	156.967	F	F
C-ABD	2.69	0.18	7.751	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:30-08:45)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	73.74	4.92	76.018	F	E
B-AD	56.12	3.74	92.589	F	F
A-BCD	10.71	0.71	9.897	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	348.39	23.23	231.548	F	F
D-BC	158.01	10.53	283.136	F	F
C-ABD	2.72	0.18	7.761	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:45-09:00)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	26.46	1.76	24.758	C	C
B-AD	21.23	1.42	28.692	D	C
A-BCD	7.48	0.50	8.686	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	356.13	23.74	212.349	F	F
D-BC	157.41	10.49	245.649	F	F
C-ABD	2.04	0.14	7.262	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (09:00-09:15)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	10.28	0.69	12.636	B	B
B-AD	9.33	0.62	15.191	C	B
A-BCD	5.56	0.37	7.960	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	73.24	4.88	41.863	E	D
D-BC	24.50	1.63	33.145	D	C
C-ABD	1.60	0.11	6.924	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Traffic Flows - 2026 with development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor Arm Geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Minor arm flare	Arm D - Minor Arm Geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Traffic Flows	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship
2026 with development, PM	2026 with development	PM		ONE HOUR	16:45	18:15	90	15				✓	

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	Rearsby Rd-Queniborough Rd-Barkby Rd-Syston Rd crossroads	Crossroads	Two-way	A,B,C,D		105.59	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	Queniborough Road		Major
B	B	Barkby Road		Minor
C	C	Syston Road		Major
D	D	Rearsby Road		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	6.20		0.00		2.20	150.00	✓	1.00
C	6.20		0.00		2.20	150.00	✓	1.00

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	3.90	3.10	3.10	3.10	✓	1.00	21	52
D	One lane plus flare				10.00	3.80	3.20	3.00	3.00	✓	1.00	49	22

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
1	A-D	660.830	-	-	-	-	-	-	0.254	0.363	0.254	-	-	-
1	B-A	542.557	0.098	0.248	0.248	-	-	-	0.156	0.354	-	0.248	0.248	0.124
1	B-C	788.161	0.120	0.303	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	611.983	0.110	0.279	0.279	-	-	-	0.176	0.399	0.176	-	-	-
1	B-D, offside lane	542.557	0.098	0.248	0.248	-	-	-	0.156	0.354	0.156	-	-	-
1	C-B	660.830	0.254	0.254	0.363	-	-	-	-	-	-	-	-	-
1	D-A	765.493	-	-	-	-	-	-	0.294	-	0.116	-	-	-
1	D-B, nearside lane	605.206	0.174	0.174	0.395	-	-	-	0.276	0.276	0.109	-	-	-
1	D-B, offside lane	534.530	0.153	0.153	0.348	-	-	-	0.244	0.244	0.097	-	-	-
1	D-C	534.530	-	0.153	0.348	0.122	0.244	0.244	0.244	0.244	0.097	-	-	-

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 Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	308.00	100.000
B	ONE HOUR	✓	408.00	100.000
C	ONE HOUR	✓	185.00	100.000
D	ONE HOUR	✓	550.00	100.000

Turning Proportions

Turning Counts / Proportions (Veh/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	31.000	83.000	194.000
	B	36.000	0.000	45.000	327.000
	C	101.000	67.000	0.000	17.000
	D	218.000	314.000	18.000	0.000

Turning Proportions (Veh) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.10	0.27	0.63
	B	0.09	0.00	0.11	0.80
	C	0.55	0.36	0.00	0.09
	D	0.40	0.57	0.03	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.034	1.000	1.040
	B	1.000	1.000	1.025	1.010
	C	1.011	1.000	1.000	1.200
	D	1.010	1.007	1.250	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	3.4	0.0	4.0
	B	0.0	0.0	2.5	1.0
	C	1.1	0.0	0.0	20.0
	D	1.0	0.7	25.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
B-CD	0.76	41.11	2.78	E	209.61	314.41	114.70	21.89	1.27	114.71	21.89
B-AD	0.71	45.47	2.25	E	164.78	247.17	98.74	23.97	1.10	98.76	23.97
A-BCD	0.38	9.55	0.63	A	188.96	283.44	42.39	8.97	0.47	42.39	8.97
A-B	-	-	-	-	25.47	38.21	-	-	-	-	-
A-C	-	-	-	-	68.20	102.30	-	-	-	-	-
D-AB	1.08	185.68	23.02	F	354.91	532.37	712.67	80.32	7.92	712.78	80.33
D-BC	1.05	234.89	10.94	F	149.78	224.67	368.20	98.33	4.09	368.24	98.34
C-ABD	0.14	7.45	0.16	A	62.89	94.33	11.30	7.19	0.13	11.30	7.19
C-D	-	-	-	-	15.40	23.10	-	-	-	-	-
C-A	-	-	-	-	91.48	137.21	-	-	-	-	-

Main Results for each time segment

Main results: (16:45-17:00)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	166.36	41.59	164.27	0.00	478.35	0.348	0.00	0.52	11.389	B
B-AD	140.80	35.20	138.76	0.00	410.21	0.343	0.00	0.51	13.168	B
A-BCD	151.51	37.88	150.17	0.00	609.94	0.248	0.00	0.33	7.809	A
A-B	21.86	5.46	21.86	0.00	-	-	-	-	-	-
A-C	58.52	14.63	58.52	0.00	-	-	-	-	-	-
D-AB	287.77	71.94	283.23	0.00	532.48	0.540	0.00	1.14	14.202	B
D-BC	126.29	31.57	124.17	0.00	358.49	0.352	0.00	0.53	15.232	C
C-ABD	51.10	12.78	50.72	0.00	588.84	0.087	0.00	0.10	6.686	A
C-D	12.70	3.18	12.70	0.00	-	-	-	-	-	-
C-A	75.47	18.87	75.47	0.00	-	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	202.64	50.66	201.30	0.00	431.85	0.469	0.52	0.86	15.523	C
B-AD	164.14	41.04	163.05	0.00	366.81	0.448	0.51	0.78	17.571	C
A-BCD	183.87	45.97	183.44	0.00	608.53	0.302	0.33	0.44	8.464	A
A-B	25.29	6.32	25.29	0.00	-	-	-	-	-	-
A-C	67.72	16.93	67.72	0.00	-	-	-	-	-	-
D-AB	345.81	86.45	340.99	0.00	480.79	0.719	1.14	2.34	24.911	C
D-BC	148.63	37.16	146.60	0.00	284.16	0.523	0.53	1.04	25.784	D
C-ABD	61.42	15.36	61.32	0.00	575.76	0.107	0.10	0.12	6.997	A
C-D	15.11	3.78	15.11	0.00	-	-	-	-	-	-
C-A	89.78	22.44	89.78	0.00	-	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	256.95	64.24	250.95	0.00	353.00	0.728	0.86	2.36	33.501	D
B-AD	192.27	48.07	187.74	0.00	281.52	0.683	0.78	1.92	36.749	E
A-BCD	231.49	57.87	230.75	0.00	608.64	0.380	0.44	0.63	9.516	A
A-B	29.27	7.32	29.27	0.00	-	-	-	-	-	-
A-C	78.36	19.59	78.36	0.00	-	-	-	-	-	-
D-AB	428.13	107.03	384.44	0.00	406.86	1.052	2.34	13.26	95.191	F
D-BC	177.43	44.36	151.78	0.00	168.87	1.051	1.04	7.45	136.426	F
C-ABD	76.13	19.03	75.97	0.00	559.23	0.136	0.12	0.16	7.446	A
C-D	18.38	4.59	18.38	0.00	-	-	-	-	-	-
C-A	109.18	27.30	109.18	0.00	-	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	259.56	64.89	257.85	0.00	342.69	0.757	2.36	2.78	41.109	E
B-AD	189.66	47.41	188.32	0.00	265.32	0.715	1.92	2.25	45.473	E
A-BCD	231.50	57.87	231.47	0.00	608.39	0.381	0.63	0.63	9.555	A
A-B	29.26	7.32	29.26	0.00	-	-	-	-	-	-
A-C	78.35	19.59	78.35	0.00	-	-	-	-	-	-
D-AB	430.46	107.62	391.44	0.00	398.04	1.081	13.26	23.02	185.682	F
D-BC	175.10	43.78	161.16	0.00	168.68	1.038	7.45	10.94	234.893	F
C-ABD	76.13	19.03	76.13	0.00	559.08	0.136	0.16	0.16	7.453	A
C-D	18.38	4.59	18.38	0.00	-	-	-	-	-	-
C-A	109.18	27.30	109.18	0.00	-	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	205.13	51.28	212.33	0.00	420.95	0.487	2.78	0.98	17.801	C
B-AD	161.66	40.41	167.06	0.00	348.50	0.464	2.25	0.90	20.381	C
A-BCD	183.87	45.97	184.59	0.00	608.07	0.302	0.63	0.45	8.512	A
A-B	25.29	6.32	25.29	0.00	-	-	-	-	-	-
A-C	67.72	16.93	67.72	0.00	-	-	-	-	-	-
D-AB	348.46	87.11	409.71	0.00	425.09	0.820	23.02	7.71	147.274	F
D-BC	145.98	36.50	167.01	0.00	183.07	0.797	10.94	5.68	185.333	F
C-ABD	61.43	15.36	61.58	0.00	575.54	0.107	0.16	0.12	7.007	A
C-D	15.11	3.78	15.11	0.00	-	-	-	-	-	-
C-A	89.78	22.44	89.78	0.00	-	-	-	-	-	-

Main results: (18:00-18:15)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	167.00	41.75	168.72	0.00	474.26	0.352	0.98	0.55	11.847	B
B-AD	140.16	35.04	141.59	0.00	404.09	0.347	0.90	0.54	13.788	B
A-BCD	151.51	37.88	151.95	0.00	609.63	0.249	0.45	0.34	7.871	A
A-B	21.85	5.46	21.85	0.00	-	-	-	-	-	-
A-C	58.51	14.63	58.51	0.00	-	-	-	-	-	-
D-AB	288.83	72.21	314.18	0.00	509.24	0.567	7.71	1.37	20.672	C
D-BC	125.24	31.31	145.46	0.00	333.34	0.376	5.68	0.62	21.146	C
C-ABD	51.11	12.78	51.21	0.00	588.25	0.087	0.12	0.10	6.704	A
C-D	12.70	3.18	12.70	0.00	-	-	-	-	-	-
C-A	75.47	18.87	75.47	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (16:45-17:00)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	7.40	0.49	11.389	B	B
B-AD	7.19	0.48	13.168	B	B
A-BCD	4.93	0.33	7.809	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	15.68	1.05	14.202	B	B
D-BC	7.40	0.49	15.232	C	B
C-ABD	1.41	0.09	6.686	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:00-17:15)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	12.14	0.81	15.523	C	B
B-AD	11.11	0.74	17.571	C	B
A-BCD	6.59	0.44	8.464	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	31.30	2.09	24.911	C	C
D-BC	14.23	0.95	25.784	D	C
C-ABD	1.80	0.12	6.997	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:15-17:30)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	30.42	2.03	33.501	D	C
B-AD	24.95	1.66	36.749	E	D
A-BCD	9.37	0.62	9.516	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	128.38	8.56	95.191	F	F
D-BC	71.93	4.80	136.426	F	F
C-ABD	2.39	0.16	7.446	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:30-17:45)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	39.43	2.63	41.109	E	D
B-AD	31.92	2.13	45.473	E	D
A-BCD	9.56	0.64	9.555	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	273.67	18.24	185.682	F	F
D-BC	138.88	9.26	234.893	F	F
C-ABD	2.41	0.16	7.453	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:45-18:00)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	16.56	1.10	17.801	C	B
B-AD	14.98	1.00	20.381	C	C
A-BCD	6.81	0.45	8.512	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	234.40	15.63	147.274	F	F
D-BC	120.91	8.06	185.333	F	F
C-ABD	1.83	0.12	7.007	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (18:00-18:15)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	8.74	0.58	11.847	B	B
B-AD	8.59	0.57	13.788	B	B
A-BCD	5.13	0.34	7.871	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	29.25	1.95	20.672	C	C
D-BC	14.75	0.98	21.146	C	C
C-ABD	1.45	0.10	6.704	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.6.541 [19821,26/11/2015]

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Filename: Crossroad junction - proposed layout (v2).arc8
Path: C:\Users\ADC\Documents
Report generation date: 17/06/2021 19:04:38

Summary of junction performance

	AM			PM		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
	Traffic Flows - 2026 with development					
Stream B-CD	5.61	75.21	0.90	2.76	40.79	0.76
Stream B-AD	4.29	91.24	0.87	2.23	44.99	0.71
Stream A-BCD	0.71	9.90	0.41	0.63	9.55	0.38
Stream A-B	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-
Stream D-AB	26.22	203.75	1.10	18.38	151.14	1.04
Stream D-BC	11.49	257.32	1.08	9.29	196.87	1.03
Stream C-ABD	0.18	7.76	0.15	0.16	7.46	0.14
Stream C-D	-	-	-	-	-	-
Stream C-A	-	-	-	-	-	-
	Traffic Flows - 2026 without development					
Stream B-CD	1.99	29.80	0.68	1.83	28.43	0.66
Stream B-AD	1.54	35.42	0.62	1.52	31.25	0.62
Stream A-BCD	0.70	9.85	0.41	0.63	9.55	0.38
Stream A-B	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-
Stream D-AB	20.02	162.42	1.06	8.48	80.48	0.93
Stream D-BC	9.32	214.84	1.04	4.80	112.72	0.92
Stream C-ABD	0.18	7.72	0.15	0.16	7.43	0.13
Stream C-D	-	-	-	-	-	-
Stream C-A	-	-	-	-	-	-

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

"D1 - 2026 without development, AM " model duration: 07:45 - 09:15
"D2 - 2026 without development, PM" model duration: 16:45 - 18:15
"D3 - 2026 with development, AM" model duration: 07:45 - 09:15
"D4 - 2026 with development, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.6.541 at 17/06/2021 19:04:33

File summary

Title	Rearsby Rd-Queniborough Rd-Barkby Rd-Syston Rd PICADY
Location	Queniborough
Site Number	
Date	21/12/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	ADC1659
Enumerator	ADCteam
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Traffic Flows - 2026 without development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor Arm Geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Traffic Flows	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship
2026 without development, AM	2026 without development	AM		ONE HOUR	07:45	09:15	90	15				✓	

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	Rearsby Rd-Queniborough Rd-Barkby Rd-Syston Rd crossroads	Crossroads	Two-way	A,B,C,D		91.72	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	Queniborough Road		Major
B	B	Barkby Road		Minor
C	C	Syston Road		Major
D	D	Rearsby Road		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	6.20		0.00		2.20	150.00	✓	1.00
C	6.20		0.00		2.20	150.00	✓	1.00

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	3.90	3.10	3.10	3.10	✓	1.00	21	52
D	One lane plus flare				10.00	6.00	6.00	6.00	6.00		5.00	49	22

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
1	A-D	660.830	-	-	-	-	-	-	0.254	0.363	0.254	-	-	-
1	B-A	542.557	0.098	0.248	0.248	-	-	-	0.156	0.354	-	0.248	0.248	0.124
1	B-C	788.161	0.120	0.303	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	611.983	0.110	0.279	0.279	-	-	-	0.176	0.399	0.176	-	-	-
1	B-D, offside lane	542.557	0.098	0.248	0.248	-	-	-	0.156	0.354	0.156	-	-	-
1	C-B	660.830	0.254	0.254	0.363	-	-	-	-	-	-	-	-	-
1	D-A	663.328	-	-	-	-	-	-	0.255	-	0.101	-	-	-
1	D-B, nearside lane	524.433	0.151	0.151	0.342	-	-	-	0.239	0.239	0.095	-	-	-
1	D-B, offside lane	524.433	0.151	0.151	0.342	-	-	-	0.239	0.239	0.095	-	-	-
1	D-C	524.433	-	0.151	0.342	0.120	0.239	0.239	0.239	0.239	0.095	-	-	-

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 Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	336.00	100.000
B	ONE HOUR	✓	378.00	100.000
C	ONE HOUR	✓	215.00	100.000
D	ONE HOUR	✓	541.00	100.000

Turning Proportions

Turning Counts / Proportions (Veh/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	44.000	86.000	206.000
	B	37.000	0.000	67.000	274.000
	C	105.000	70.000	0.000	40.000
	D	235.000	290.000	16.000	0.000

Turning Proportions (Veh) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.13	0.26	0.61
	B	0.10	0.00	0.18	0.72
	C	0.49	0.33	0.00	0.19
	D	0.43	0.54	0.03	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.071	1.019
	B	1.027	1.000	1.015	1.015
	C	1.057	1.014	1.000	1.075
	D	1.034	1.010	1.250	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	7.1	1.9
	B	2.7	0.0	1.5	1.5
	C	5.7	1.4	0.0	7.5
	D	3.4	1.0	25.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
B-CD	0.68	29.80	1.99	D	203.67	305.51	91.54	17.98	1.02	91.56	17.98
B-AD	0.62	35.42	1.54	E	143.19	214.78	75.51	21.09	0.84	75.52	21.10
A-BCD	0.41	9.85	0.70	A	202.64	303.96	46.46	9.17	0.52	46.47	9.17
A-B	-	-	-	-	35.77	53.65	-	-	-	-	-
A-C	-	-	-	-	69.91	104.87	-	-	-	-	-
D-AB	1.06	162.42	20.02	F	357.66	536.48	625.75	69.98	6.95	625.92	70.00
D-BC	1.04	214.84	9.32	F	138.77	208.16	276.99	79.84	3.08	277.01	79.84
C-ABD	0.15	7.72	0.18	A	66.29	99.43	12.37	7.46	0.14	12.37	7.46
C-D	-	-	-	-	36.14	54.21	-	-	-	-	-
C-A	-	-	-	-	94.86	142.29	-	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	162.03	40.51	160.13	0.00	497.25	0.326	0.00	0.47	10.621	B
B-AD	122.55	30.64	120.80	0.00	397.61	0.308	0.00	0.44	12.928	B
A-BCD	161.78	40.44	160.35	0.00	617.23	0.262	0.00	0.36	7.856	A
A-B	30.86	7.72	30.86	0.00	-	-	-	-	-	-
A-C	60.32	15.08	60.32	0.00	-	-	-	-	-	-
D-AB	290.67	72.67	284.84	0.00	480.35	0.605	0.00	1.46	17.927	C
D-BC	116.62	29.16	114.95	0.00	389.82	0.299	0.00	0.42	13.021	B
C-ABD	53.67	13.42	53.25	0.00	576.44	0.093	0.00	0.10	6.877	A
C-D	29.85	7.46	29.85	0.00	-	-	-	-	-	-
C-A	78.35	19.59	78.35	0.00	-	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	197.15	49.29	196.05	0.00	453.03	0.435	0.47	0.75	13.947	B
B-AD	142.66	35.67	141.81	0.00	355.57	0.401	0.44	0.65	16.772	C
A-BCD	196.91	49.23	196.43	0.00	615.06	0.320	0.36	0.48	8.589	A
A-B	35.59	8.90	35.59	0.00	-	-	-	-	-	-
A-C	69.56	17.39	69.56	0.00	-	-	-	-	-	-
D-AB	348.92	87.23	343.22	0.00	455.57	0.766	1.46	2.88	30.537	D
D-BC	137.43	34.36	136.44	0.00	337.41	0.407	0.42	0.67	17.818	C
C-ABD	64.67	16.17	64.56	0.00	563.18	0.115	0.10	0.13	7.216	A
C-D	35.48	8.87	35.48	0.00	-	-	-	-	-	-
C-A	93.13	23.28	93.13	0.00	-	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	249.65	62.41	245.50	0.00	378.38	0.660	0.75	1.79	26.307	D
B-AD	166.53	41.63	163.58	0.00	277.19	0.601	0.65	1.39	30.902	D
A-BCD	249.22	62.30	248.35	0.00	614.75	0.405	0.48	0.69	9.801	A
A-B	40.86	10.22	40.86	0.00	-	-	-	-	-	-
A-C	79.87	19.97	79.87	0.00	-	-	-	-	-	-
D-AB	431.17	107.79	394.47	0.00	419.32	1.028	2.88	12.05	89.475	F
D-BC	164.49	41.12	140.00	0.00	158.32	1.039	0.67	6.79	132.176	F
C-ABD	80.53	20.13	80.35	0.00	546.81	0.147	0.13	0.18	7.712	A
C-D	43.09	10.77	43.09	0.00	-	-	-	-	-	-
C-A	113.10	28.28	113.10	0.00	-	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	251.75	62.94	250.95	0.00	370.33	0.680	1.79	1.99	29.802	D
B-AD	164.44	41.11	163.83	0.00	264.39	0.622	1.39	1.54	35.417	E
A-BCD	249.22	62.30	249.19	0.00	614.92	0.405	0.69	0.70	9.846	A
A-B	40.86	10.21	40.86	0.00	-	-	-	-	-	-
A-C	79.86	19.97	79.86	0.00	-	-	-	-	-	-
D-AB	433.15	108.29	401.29	0.00	410.25	1.056	12.05	20.02	162.419	F
D-BC	162.50	40.63	152.38	0.00	161.64	1.005	6.79	9.32	214.843	F
C-ABD	80.53	20.13	80.53	0.00	546.70	0.147	0.18	0.18	7.724	A
C-D	43.09	10.77	43.09	0.00	-	-	-	-	-	-
C-A	113.10	28.28	113.10	0.00	-	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	199.02	49.75	203.64	0.00	444.95	0.447	1.99	0.83	15.189	C
B-AD	140.80	35.20	144.05	0.00	340.30	0.414	1.54	0.73	18.631	C
A-BCD	196.91	49.23	197.75	0.00	615.38	0.320	0.70	0.49	8.646	A
A-B	35.59	8.90	35.59	0.00	-	-	-	-	-	-
A-C	69.56	17.39	69.56	0.00	-	-	-	-	-	-
D-AB	350.94	87.74	409.95	0.00	440.89	0.796	20.02	5.27	112.471	F
D-BC	135.41	33.85	163.06	0.00	203.67	0.665	9.32	2.41	106.406	F
C-ABD	64.67	16.17	64.84	0.00	563.05	0.115	0.18	0.13	7.233	A
C-D	35.48	8.87	35.48	0.00	-	-	-	-	-	-
C-A	93.13	23.28	93.13	0.00	-	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	162.45	40.61	163.78	0.00	493.94	0.329	0.83	0.50	10.948	B
B-AD	122.13	30.53	123.21	0.00	393.20	0.311	0.73	0.46	13.386	B
A-BCD	161.78	40.45	162.28	0.00	617.22	0.262	0.49	0.37	7.925	A
A-B	30.86	7.71	30.86	0.00	-	-	-	-	-	-
A-C	60.32	15.08	60.32	0.00	-	-	-	-	-	-
D-AB	291.09	72.77	305.53	0.00	476.45	0.611	5.27	1.66	22.614	C
D-BC	116.20	29.05	124.05	0.00	383.82	0.303	2.41	0.44	14.260	B
C-ABD	53.67	13.42	53.78	0.00	575.87	0.093	0.13	0.10	6.897	A
C-D	29.85	7.46	29.85	0.00	-	-	-	-	-	-
C-A	78.35	19.59	78.35	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	6.75	0.45	10.621	B	B
B-AD	6.16	0.41	12.928	B	B
A-BCD	5.31	0.35	7.856	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	19.66	1.31	17.927	C	B
D-BC	5.90	0.39	13.021	B	B
C-ABD	1.53	0.10	6.877	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:00-08:15)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	10.70	0.71	13.947	B	B
B-AD	9.27	0.62	16.772	C	B
A-BCD	7.17	0.48	8.589	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	37.88	2.53	30.537	D	C
D-BC	9.43	0.63	17.818	C	B
C-ABD	1.96	0.13	7.216	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:15-08:30)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	23.91	1.59	26.307	D	C
B-AD	18.67	1.24	30.902	D	C
A-BCD	10.40	0.69	9.801	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	122.09	8.14	89.475	F	F
D-BC	65.11	4.34	132.176	F	F
C-ABD	2.64	0.18	7.712	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:30-08:45)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	28.79	1.92	29.802	D	C
B-AD	22.33	1.49	35.417	E	D
A-BCD	10.63	0.71	9.846	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	242.33	16.16	162.419	F	F
D-BC	121.67	8.11	214.843	F	F
C-ABD	2.66	0.18	7.724	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:45-09:00)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	13.56	0.90	15.189	C	B
B-AD	11.84	0.79	18.631	C	B
A-BCD	7.43	0.50	8.646	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	173.80	11.59	112.471	F	F
D-BC	67.03	4.47	106.406	F	F
C-ABD	2.00	0.13	7.233	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (09:00-09:15)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	7.83	0.52	10.948	B	B
B-AD	7.24	0.48	13.386	B	B
A-BCD	5.53	0.37	7.925	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	30.02	2.00	22.614	C	C
D-BC	7.75	0.52	14.260	B	B
C-ABD	1.57	0.10	6.897	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Traffic Flows - 2026 without development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor Arm Geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Traffic Flows	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship
2026 without development, PM	2026 without development	PM		ONE HOUR	16:45	18:15	90	15				✓	

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	Rearsby Rd-Queniborough Rd-Barkby Rd-Syston Rd crossroads	Crossroads	Two-way	A,B,C,D		51.08	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	Queniborough Road		Major
B	B	Barkby Road		Minor
C	C	Syston Road		Major
D	D	Rearsby Road		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	6.20		0.00		2.20	150.00	✓	1.00
C	6.20		0.00		2.20	150.00	✓	1.00

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	3.90	3.10	3.10	3.10	✓	1.00	21	52
D	One lane plus flare				10.00	6.00	6.00	6.00	6.00		5.00	49	22

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
1	A-D	660.830	-	-	-	-	-	-	0.254	0.363	0.254	-	-	-
1	B-A	542.557	0.098	0.248	0.248	-	-	-	0.156	0.354	-	0.248	0.248	0.124
1	B-C	788.161	0.120	0.303	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	611.983	0.110	0.279	0.279	-	-	-	0.176	0.399	0.176	-	-	-
1	B-D, offside lane	542.557	0.098	0.248	0.248	-	-	-	0.156	0.354	0.156	-	-	-
1	C-B	660.830	0.254	0.254	0.363	-	-	-	-	-	-	-	-	-
1	D-A	663.328	-	-	-	-	-	-	0.255	-	0.101	-	-	-
1	D-B, nearside lane	524.433	0.151	0.151	0.342	-	-	-	0.239	0.239	0.095	-	-	-
1	D-B, offside lane	524.433	0.151	0.151	0.342	-	-	-	0.239	0.239	0.095	-	-	-
1	D-C	524.433	-	0.151	0.342	0.120	0.239	0.239	0.239	0.239	0.095	-	-	-

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 Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	307.00	100.000
B	ONE HOUR	✓	385.00	100.000
C	ONE HOUR	✓	184.00	100.000
D	ONE HOUR	✓	511.00	100.000

Turning Proportions

Turning Counts / Proportions (Veh/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	30.000	83.000	194.000
	B	34.000	0.000	44.000	307.000
	C	101.000	66.000	0.000	17.000
	D	218.000	275.000	18.000	0.000

Turning Proportions (Veh) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.10	0.27	0.63
	B	0.09	0.00	0.11	0.80
	C	0.55	0.36	0.00	0.09
	D	0.43	0.54	0.04	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.038	1.000	1.040
	B	1.000	1.000	1.026	1.011
	C	1.011	1.000	1.000	1.200
	D	1.010	1.008	1.250	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	3.8	0.0	4.0
	B	0.0	0.0	2.6	1.1
	C	1.1	0.0	0.0	20.0
	D	1.0	0.8	25.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
B-CD	0.66	28.43	1.83	D	196.40	294.60	87.42	17.81	0.97	87.44	17.81
B-AD	0.62	31.25	1.52	D	156.89	235.33	77.22	19.69	0.86	77.24	19.69
A-BCD	0.38	9.55	0.63	A	188.85	283.27	42.33	8.97	0.47	42.33	8.97
A-B	-	-	-	-	24.65	36.98	-	-	-	-	-
A-C	-	-	-	-	68.21	102.31	-	-	-	-	-
D-AB	0.93	80.48	8.48	F	335.06	502.59	311.73	37.21	3.46	311.83	37.23
D-BC	0.92	112.72	4.80	F	133.84	200.76	113.66	33.97	1.26	113.67	33.97
C-ABD	0.13	7.43	0.16	A	61.93	92.89	11.10	7.17	0.12	11.10	7.17
C-D	-	-	-	-	15.40	23.10	-	-	-	-	-
C-A	-	-	-	-	91.51	137.27	-	-	-	-	-

Main Results for each time segment

Main results: (16:45-17:00)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	156.84	39.21	154.97	0.00	485.48	0.323	0.00	0.47	10.833	B
B-AD	133.01	33.25	131.16	0.00	415.35	0.320	0.00	0.46	12.590	B
A-BCD	151.45	37.86	150.12	0.00	610.06	0.248	0.00	0.33	7.806	A
A-B	21.15	5.29	21.15	0.00	-	-	-	-	-	-
A-C	58.52	14.63	58.52	0.00	-	-	-	-	-	-
D-AB	272.45	68.11	267.71	0.00	493.62	0.552	0.00	1.19	15.631	C
D-BC	112.25	28.06	110.72	0.00	398.84	0.281	0.00	0.38	12.431	B
C-ABD	50.33	12.58	49.96	0.00	588.93	0.085	0.00	0.09	6.675	A
C-D	12.71	3.18	12.71	0.00	-	-	-	-	-	-
C-A	75.49	18.87	75.49	0.00	-	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	190.64	47.66	189.57	0.00	442.72	0.431	0.47	0.74	14.160	B
B-AD	155.47	38.87	154.58	0.00	376.43	0.413	0.46	0.68	16.162	C
A-BCD	183.78	45.94	183.35	0.00	608.64	0.302	0.33	0.44	8.460	A
A-B	24.48	6.12	24.48	0.00	-	-	-	-	-	-
A-C	67.73	16.93	67.73	0.00	-	-	-	-	-	-
D-AB	327.21	81.80	323.50	0.00	470.44	0.696	1.18	2.11	23.887	C
D-BC	132.17	33.04	131.47	0.00	362.78	0.364	0.38	0.56	15.510	C
C-ABD	60.49	15.12	60.39	0.00	575.85	0.105	0.09	0.12	6.983	A
C-D	15.12	3.78	15.12	0.00	-	-	-	-	-	-
C-A	89.81	22.45	89.81	0.00	-	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	240.67	60.17	236.81	0.00	371.73	0.647	0.74	1.70	25.973	D
B-AD	183.23	45.81	180.29	0.00	303.21	0.604	0.68	1.42	28.620	D
A-BCD	231.31	57.83	230.57	0.00	608.70	0.380	0.44	0.62	9.510	A
A-B	28.33	7.08	28.33	0.00	-	-	-	-	-	-
A-C	78.37	19.59	78.37	0.00	-	-	-	-	-	-
D-AB	404.61	101.15	386.29	0.00	436.54	0.927	2.11	6.69	57.403	F
D-BC	158.01	39.50	152.24	0.00	225.19	0.702	0.56	2.00	46.206	E
C-ABD	74.95	18.74	74.80	0.00	559.31	0.134	0.12	0.16	7.427	A
C-D	18.39	4.60	18.39	0.00	-	-	-	-	-	-
C-A	109.25	27.31	109.25	0.00	-	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	241.59	60.40	241.07	0.00	366.65	0.659	1.70	1.83	28.432	D
B-AD	182.31	45.58	181.90	0.00	296.29	0.615	1.42	1.52	31.247	D
A-BCD	231.32	57.83	231.29	0.00	608.46	0.380	0.62	0.63	9.547	A
A-B	28.33	7.08	28.33	0.00	-	-	-	-	-	-
A-C	78.37	19.59	78.37	0.00	-	-	-	-	-	-
D-AB	405.18	101.29	398.03	0.00	433.59	0.934	6.69	8.48	80.476	F
D-BC	157.44	39.36	146.26	0.00	170.64	0.923	2.00	4.80	112.717	F
C-ABD	74.96	18.74	74.95	0.00	559.15	0.134	0.16	0.16	7.434	A
C-D	18.39	4.60	18.39	0.00	-	-	-	-	-	-
C-A	109.24	27.31	109.24	0.00	-	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	191.53	47.88	195.65	0.00	437.41	0.438	1.83	0.80	15.127	C
B-AD	154.58	38.65	157.68	0.00	369.12	0.419	1.52	0.74	17.260	C
A-BCD	183.78	45.94	184.49	0.00	608.20	0.302	0.63	0.45	8.509	A
A-B	24.48	6.12	24.48	0.00	-	-	-	-	-	-
A-C	67.73	16.93	67.73	0.00	-	-	-	-	-	-
D-AB	328.32	82.08	351.53	0.00	463.46	0.708	8.48	2.68	36.971	E
D-BC	131.06	32.76	147.71	0.00	343.82	0.381	4.80	0.64	19.840	C
C-ABD	60.49	15.12	60.64	0.00	575.63	0.105	0.16	0.12	6.993	A
C-D	15.12	3.78	15.12	0.00	-	-	-	-	-	-
C-A	89.81	22.45	89.81	0.00	-	-	-	-	-	-

Main results: (18:00-18:15)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	157.12	39.28	158.36	0.00	482.59	0.326	0.80	0.49	11.146	B
B-AD	132.73	33.18	133.76	0.00	412.67	0.322	0.74	0.48	12.953	B
A-BCD	151.46	37.86	151.90	0.00	609.76	0.248	0.45	0.34	7.870	A
A-B	21.15	5.29	21.15	0.00	-	-	-	-	-	-
A-C	58.52	14.63	58.52	0.00	-	-	-	-	-	-
D-AB	272.60	68.15	278.14	0.00	492.19	0.554	2.68	1.29	17.224	C
D-BC	112.11	28.03	113.05	0.00	396.62	0.283	0.64	0.40	12.743	B
C-ABD	50.33	12.58	50.43	0.00	588.35	0.086	0.12	0.10	6.696	A
C-D	12.71	3.18	12.71	0.00	-	-	-	-	-	-
C-A	75.49	18.87	75.49	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (16:45-17:00)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	6.66	0.44	10.833	B	B
B-AD	6.52	0.43	12.590	B	B
A-BCD	4.93	0.33	7.806	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	16.25	1.08	15.631	C	B
D-BC	5.44	0.36	12.431	B	B
C-ABD	1.39	0.09	6.675	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:00-17:15)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	10.50	0.70	14.160	B	B
B-AD	9.75	0.65	16.162	C	B
A-BCD	6.58	0.44	8.460	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	28.69	1.91	23.887	C	C
D-BC	8.00	0.53	15.510	C	B
C-ABD	1.77	0.12	6.983	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:15-17:30)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	22.82	1.52	25.973	D	C
B-AD	19.14	1.28	28.620	D	C
A-BCD	9.35	0.62	9.510	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	76.16	5.08	57.403	F	E
D-BC	25.11	1.67	46.206	E	D
C-ABD	2.35	0.16	7.427	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:30-17:45)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	26.75	1.78	28.432	D	C
B-AD	22.23	1.48	31.247	D	C
A-BCD	9.54	0.64	9.547	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	115.29	7.69	80.476	F	F
D-BC	55.27	3.68	112.717	F	F
C-ABD	2.37	0.16	7.434	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:45-18:00)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	12.98	0.87	15.127	C	B
B-AD	11.99	0.80	17.260	C	B
A-BCD	6.80	0.45	8.509	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	54.28	3.62	36.971	E	D
D-BC	13.50	0.90	19.840	C	B
C-ABD	1.80	0.12	6.993	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (18:00-18:15)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	7.71	0.51	11.146	B	B
B-AD	7.60	0.51	12.953	B	B
A-BCD	5.13	0.34	7.870	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	21.06	1.40	17.224	C	B
D-BC	6.31	0.42	12.743	B	B
C-ABD	1.43	0.10	6.696	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Traffic Flows - 2026 with development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor Arm Geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Traffic Flows	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship
2026 with development, AM	2026 with development	AM		ONE HOUR	07:45	09:15	90	15				✓	

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	Rearsby Rd-Queniborough Rd-Barkby Rd-Syston Rd crossroads	Crossroads	Two-way	A,B,C,D		125.14	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	Queniborough Road		Major
B	B	Barkby Road		Minor
C	C	Syston Road		Major
D	D	Rearsby Road		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	6.20		0.00		2.20	150.00	✓	1.00
C	6.20		0.00		2.20	150.00	✓	1.00

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	3.90	3.10	3.10	3.10	✓	1.00	21	52
D	One lane plus flare				10.00	6.00	6.00	6.00	6.00		5.00	49	22

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
1	A-D	660.830	-	-	-	-	-	-	0.254	0.363	0.254	-	-	-
1	B-A	542.557	0.098	0.248	0.248	-	-	-	0.156	0.354	-	0.248	0.248	0.124
1	B-C	788.161	0.120	0.303	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	611.983	0.110	0.279	0.279	-	-	-	0.176	0.399	0.176	-	-	-
1	B-D, offside lane	542.557	0.098	0.248	0.248	-	-	-	0.156	0.354	0.156	-	-	-
1	C-B	660.830	0.254	0.254	0.363	-	-	-	-	-	-	-	-	-
1	D-A	663.328	-	-	-	-	-	-	0.255	-	0.101	-	-	-
1	D-B, nearside lane	524.433	0.151	0.151	0.342	-	-	-	0.239	0.239	0.095	-	-	-
1	D-B, offside lane	524.433	0.151	0.151	0.342	-	-	-	0.239	0.239	0.095	-	-	-
1	D-C	524.433	-	0.151	0.342	0.120	0.239	0.239	0.239	0.239	0.095	-	-	-

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 Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	337.00	100.000
B	ONE HOUR	✓	426.00	100.000
C	ONE HOUR	✓	216.00	100.000
D	ONE HOUR	✓	555.00	100.000

Turning Proportions

Turning Counts / Proportions (Veh/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	45.000	86.000	206.000
	B	40.000	0.000	69.000	317.000
	C	105.000	71.000	0.000	40.000
	D	235.000	304.000	16.000	0.000

Turning Proportions (Veh) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.13	0.26	0.61
	B	0.09	0.00	0.16	0.74
	C	0.49	0.33	0.00	0.19
	D	0.42	0.55	0.03	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.065	1.022
	B	1.028	1.000	1.016	1.014
	C	1.053	1.016	1.000	1.083
	D	1.033	1.011	1.286	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	6.5	2.2
	B	2.8	0.0	1.6	1.4
	C	5.3	1.6	0.0	8.3
	D	3.3	1.1	28.6	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
B-CD	0.90	75.21	5.61	F	230.38	345.57	177.77	30.86	1.98	177.79	30.87
B-AD	0.87	91.24	4.29	F	160.52	240.79	139.80	34.84	1.55	139.83	34.84
A-BCD	0.41	9.90	0.71	A	202.88	304.32	46.77	9.22	0.52	46.78	9.22
A-B	-	-	-	-	36.53	54.80	-	-	-	-	-
A-C	-	-	-	-	69.82	104.73	-	-	-	-	-
D-AB	1.10	203.75	26.22	F	365.47	548.21	854.21	93.49	9.49	854.44	93.52
D-BC	1.08	257.32	11.49	F	143.81	215.71	381.64	106.16	4.24	381.66	106.16
C-ABD	0.15	7.76	0.18	A	67.28	100.93	12.61	7.50	0.14	12.61	7.50
C-D	-	-	-	-	36.12	54.17	-	-	-	-	-
C-A	-	-	-	-	94.81	142.21	-	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	181.94	45.49	179.55	0.00	479.95	0.379	0.00	0.60	11.892	B
B-AD	138.77	34.69	136.62	0.00	390.58	0.355	0.00	0.54	14.061	B
A-BCD	161.90	40.48	160.46	0.00	615.49	0.263	0.00	0.36	7.888	A
A-B	31.54	7.88	31.54	0.00	-	-	-	-	-	-
A-C	60.27	15.07	60.27	0.00	-	-	-	-	-	-
D-AB	296.42	74.11	290.18	0.00	475.95	0.623	0.00	1.56	18.806	C
D-BC	121.41	30.35	119.61	0.00	385.61	0.315	0.00	0.45	13.446	B
C-ABD	54.46	13.61	54.04	0.00	575.22	0.095	0.00	0.10	6.897	A
C-D	29.84	7.46	29.84	0.00	-	-	-	-	-	-
C-A	78.32	19.58	78.32	0.00	-	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	221.97	55.49	220.22	0.00	428.32	0.518	0.60	1.04	17.152	C
B-AD	160.99	40.25	159.68	0.00	340.07	0.473	0.54	0.86	19.806	C
A-BCD	197.12	49.28	196.64	0.00	613.45	0.321	0.36	0.48	8.627	A
A-B	36.36	9.09	36.36	0.00	-	-	-	-	-	-
A-C	69.48	17.37	69.48	0.00	-	-	-	-	-	-
D-AB	356.06	89.01	349.35	0.00	450.30	0.791	1.56	3.24	33.549	D
D-BC	142.88	35.72	141.67	0.00	325.88	0.438	0.45	0.75	19.406	C
C-ABD	65.63	16.41	65.52	0.00	562.02	0.117	0.10	0.13	7.247	A
C-D	35.46	8.87	35.46	0.00	-	-	-	-	-	-
C-A	93.09	23.27	93.09	0.00	-	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	282.53	70.63	271.48	0.00	338.41	0.835	1.04	3.80	47.707	E
B-AD	186.50	46.63	178.62	0.00	237.59	0.785	0.86	2.84	55.132	F
A-BCD	249.61	62.40	248.74	0.00	613.34	0.407	0.48	0.70	9.850	A
A-B	41.71	10.43	41.71	0.00	-	-	-	-	-	-
A-C	79.72	19.93	79.72	0.00	-	-	-	-	-	-
D-AB	440.58	110.15	394.34	0.00	413.12	1.066	3.24	14.80	104.690	F
D-BC	170.48	42.62	142.26	0.00	158.04	1.079	0.75	7.81	145.413	F
C-ABD	81.76	20.44	81.58	0.00	545.74	0.150	0.13	0.18	7.751	A
C-D	43.05	10.76	43.05	0.00	-	-	-	-	-	-
C-A	113.01	28.25	113.01	0.00	-	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	286.60	71.65	279.36	0.00	319.47	0.897	3.80	5.61	75.208	F
B-AD	182.43	45.61	176.60	0.00	209.99	0.869	2.84	4.29	91.243	F
A-BCD	249.62	62.40	249.59	0.00	613.44	0.407	0.70	0.71	9.897	A
A-B	41.71	10.43	41.71	0.00	-	-	-	-	-	-
A-C	79.71	19.93	79.71	0.00	-	-	-	-	-	-
D-AB	443.25	110.81	397.55	0.00	402.76	1.101	14.80	26.22	203.751	F
D-BC	167.82	41.95	153.12	0.00	159.57	1.052	7.81	11.48	257.324	F
C-ABD	81.76	20.44	81.76	0.00	545.62	0.150	0.18	0.18	7.761	A
C-D	43.05	10.76	43.05	0.00	-	-	-	-	-	-
C-A	113.01	28.25	113.01	0.00	-	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	226.31	56.58	243.41	0.00	404.71	0.559	5.61	1.33	24.409	C
B-AD	156.66	39.16	169.45	0.00	307.78	0.509	4.29	1.09	28.125	D
A-BCD	197.13	49.28	197.97	0.00	613.66	0.321	0.71	0.50	8.684	A
A-B	36.35	9.09	36.35	0.00	-	-	-	-	-	-
A-C	69.48	17.37	69.48	0.00	-	-	-	-	-	-
D-AB	358.95	89.74	416.53	0.00	432.40	0.830	26.22	11.83	171.404	F
D-BC	139.98	34.99	160.64	0.00	173.30	0.808	11.48	6.32	207.816	F
C-ABD	65.64	16.41	65.81	0.00	561.86	0.117	0.18	0.14	7.265	A
C-D	35.46	8.87	35.46	0.00	-	-	-	-	-	-
C-A	93.08	23.27	93.08	0.00	-	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	182.93	45.73	185.70	0.00	474.24	0.386	1.33	0.64	12.590	B
B-AD	137.79	34.45	139.84	0.00	381.33	0.361	1.09	0.58	15.033	C
A-BCD	161.91	40.48	162.41	0.00	615.43	0.263	0.50	0.37	7.960	A
A-B	31.54	7.88	31.54	0.00	-	-	-	-	-	-
A-C	60.27	15.07	60.27	0.00	-	-	-	-	-	-
D-AB	297.57	74.39	337.30	0.00	466.44	0.638	11.83	1.90	35.078	E
D-BC	120.26	30.07	143.53	0.00	366.34	0.328	6.32	0.50	17.826	C
C-ABD	54.46	13.61	54.57	0.00	574.64	0.095	0.14	0.11	6.924	A
C-D	29.84	7.46	29.84	0.00	-	-	-	-	-	-
C-A	78.32	19.58	78.32	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	8.43	0.56	11.892	B	B
B-AD	7.54	0.50	14.061	B	B
A-BCD	5.33	0.36	7.888	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	20.95	1.40	18.806	C	B
D-BC	6.33	0.42	13.446	B	B
C-ABD	1.56	0.10	6.897	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:00-08:15)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	14.55	0.97	17.152	C	B
B-AD	12.16	0.81	19.806	C	B
A-BCD	7.21	0.48	8.627	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	41.93	2.80	33.549	D	C
D-BC	10.60	0.71	19.406	C	B
C-ABD	2.00	0.13	7.247	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:15-08:30)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	45.46	3.03	47.707	E	D
B-AD	34.41	2.29	55.132	F	E
A-BCD	10.48	0.70	9.850	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	144.46	9.63	104.690	F	F
D-BC	73.09	4.87	145.413	F	F
C-ABD	2.69	0.18	7.751	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:30-08:45)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	73.08	4.87	75.208	F	E
B-AD	55.59	3.71	91.243	F	F
A-BCD	10.71	0.71	9.897	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	308.99	20.60	203.751	F	F
D-BC	145.57	9.70	257.324	F	F
C-ABD	2.72	0.18	7.761	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:45-09:00)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	26.03	1.74	24.409	C	C
B-AD	20.85	1.39	28.125	D	C
A-BCD	7.48	0.50	8.684	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	285.37	19.02	171.404	F	F
D-BC	132.80	8.85	207.816	F	F
C-ABD	2.04	0.14	7.265	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (09:00-09:15)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	10.22	0.68	12.590	B	B
B-AD	9.24	0.62	15.033	C	B
A-BCD	5.56	0.37	7.960	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	52.55	3.50	35.078	E	D
D-BC	13.12	0.87	17.826	C	B
C-ABD	1.60	0.11	6.924	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Traffic Flows - 2026 with development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor Arm Geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Traffic Flows	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship
2026 with development, PM	2026 with development	PM		ONE HOUR	16:45	18:15	90	15				✓	

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	Rearsby Rd-Queniborough Rd-Barkby Rd-Syston Rd crossroads	Crossroads	Two-way	A,B,C,D		89.60	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	Queniborough Road		Major
B	B	Barkby Road		Minor
C	C	Syston Road		Major
D	D	Rearsby Road		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	6.20		0.00		2.20	150.00	✓	1.00
C	6.20		0.00		2.20	150.00	✓	1.00

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	3.90	3.10	3.10	3.10	✓	1.00	21	52
D	One lane plus flare				10.00	6.00	6.00	6.00	6.00		5.00	49	22

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
1	A-D	660.830	-	-	-	-	-	-	0.254	0.363	0.254	-	-	-
1	B-A	542.557	0.098	0.248	0.248	-	-	-	0.156	0.354	-	0.248	0.248	0.124
1	B-C	788.161	0.120	0.303	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	611.983	0.110	0.279	0.279	-	-	-	0.176	0.399	0.176	-	-	-
1	B-D, offside lane	542.557	0.098	0.248	0.248	-	-	-	0.156	0.354	0.156	-	-	-
1	C-B	660.830	0.254	0.254	0.363	-	-	-	-	-	-	-	-	-
1	D-A	663.328	-	-	-	-	-	-	0.255	-	0.101	-	-	-
1	D-B, nearside lane	524.433	0.151	0.151	0.342	-	-	-	0.239	0.239	0.095	-	-	-
1	D-B, offside lane	524.433	0.151	0.151	0.342	-	-	-	0.239	0.239	0.095	-	-	-
1	D-C	524.433	-	0.151	0.342	0.120	0.239	0.239	0.239	0.239	0.095	-	-	-

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 Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	308.00	100.000
B	ONE HOUR	✓	408.00	100.000
C	ONE HOUR	✓	185.00	100.000
D	ONE HOUR	✓	550.00	100.000

Turning Proportions

Turning Counts / Proportions (Veh/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	31.000	83.000	194.000
	B	36.000	0.000	45.000	327.000
	C	101.000	67.000	0.000	17.000
	D	218.000	314.000	18.000	0.000

Turning Proportions (Veh) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.10	0.27	0.63
	B	0.09	0.00	0.11	0.80
	C	0.55	0.36	0.00	0.09
	D	0.40	0.57	0.03	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.034	1.000	1.040
	B	1.000	1.000	1.025	1.010
	C	1.011	1.000	1.000	1.200
	D	1.010	1.007	1.250	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	3.4	0.0	4.0
	B	0.0	0.0	2.5	1.0
	C	1.1	0.0	0.0	20.0
	D	1.0	0.7	25.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
B-CD	0.76	40.79	2.76	E	209.46	314.19	114.29	21.83	1.27	114.31	21.83
B-AD	0.71	44.99	2.23	E	164.93	247.39	98.35	23.85	1.09	98.37	23.86
A-BCD	0.38	9.55	0.63	A	188.96	283.44	42.39	8.97	0.47	42.39	8.97
A-B	-	-	-	-	25.47	38.21	-	-	-	-	-
A-C	-	-	-	-	68.20	102.30	-	-	-	-	-
D-AB	1.04	151.14	18.38	F	354.87	532.31	571.87	64.46	6.35	572.03	64.48
D-BC	1.03	196.87	9.29	F	149.82	224.73	261.85	69.91	2.91	261.87	69.92
C-ABD	0.14	7.46	0.16	A	62.89	94.33	11.30	7.19	0.13	11.30	7.19
C-D	-	-	-	-	15.40	23.10	-	-	-	-	-
C-A	-	-	-	-	91.48	137.21	-	-	-	-	-

Main Results for each time segment

Main results: (16:45-17:00)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	166.36	41.59	164.27	0.00	478.35	0.348	0.00	0.52	11.389	B
B-AD	140.80	35.20	138.76	0.00	410.21	0.343	0.00	0.51	13.168	B
A-BCD	151.51	37.88	150.17	0.00	609.94	0.248	0.00	0.33	7.809	A
A-B	21.86	5.46	21.86	0.00	-	-	-	-	-	-
A-C	58.52	14.63	58.52	0.00	-	-	-	-	-	-
D-AB	287.88	71.97	282.25	0.00	482.74	0.596	0.00	1.41	17.507	C
D-BC	126.19	31.55	124.37	0.00	398.29	0.317	0.00	0.45	13.059	B
C-ABD	51.10	12.78	50.72	0.00	588.84	0.087	0.00	0.10	6.686	A
C-D	12.70	3.18	12.70	0.00	-	-	-	-	-	-
C-A	75.47	18.87	75.47	0.00	-	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	202.65	50.66	201.31	0.00	431.83	0.469	0.52	0.86	15.525	C
B-AD	164.14	41.03	163.04	0.00	366.74	0.448	0.51	0.78	17.576	C
A-BCD	183.87	45.97	183.44	0.00	608.53	0.302	0.33	0.44	8.464	A
A-B	25.29	6.32	25.29	0.00	-	-	-	-	-	-
A-C	67.72	16.93	67.72	0.00	-	-	-	-	-	-
D-AB	345.96	86.49	340.60	0.00	457.92	0.756	1.41	2.75	29.368	D
D-BC	148.48	37.12	147.45	0.00	350.80	0.423	0.45	0.71	17.607	C
C-ABD	61.42	15.36	61.32	0.00	575.76	0.107	0.10	0.12	6.997	A
C-D	15.11	3.78	15.11	0.00	-	-	-	-	-	-
C-A	89.78	22.44	89.78	0.00	-	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	256.96	64.24	250.96	0.00	352.98	0.728	0.86	2.36	33.509	D
B-AD	192.26	48.06	187.73	0.00	281.48	0.683	0.78	1.92	36.761	E
A-BCD	231.49	57.87	230.75	0.00	608.64	0.380	0.44	0.63	9.516	A
A-B	29.27	7.32	29.27	0.00	-	-	-	-	-	-
A-C	78.36	19.59	78.36	0.00	-	-	-	-	-	-
D-AB	428.31	107.08	394.28	0.00	421.49	1.016	2.75	11.25	84.812	F
D-BC	177.25	44.31	152.84	0.00	172.79	1.026	0.71	6.81	122.999	F
C-ABD	76.13	19.03	75.97	0.00	559.23	0.136	0.12	0.16	7.446	A
C-D	18.38	4.59	18.38	0.00	-	-	-	-	-	-
C-A	109.18	27.30	109.18	0.00	-	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	259.24	64.81	257.64	0.00	343.26	0.755	2.36	2.76	40.788	E
B-AD	189.97	47.49	188.72	0.00	266.66	0.712	1.92	2.23	44.989	E
A-BCD	231.50	57.87	231.47	0.00	608.39	0.381	0.63	0.63	9.555	A
A-B	29.26	7.32	29.26	0.00	-	-	-	-	-	-
A-C	78.35	19.59	78.35	0.00	-	-	-	-	-	-
D-AB	430.58	107.65	402.09	0.00	412.60	1.044	11.25	18.38	151.140	F
D-BC	174.98	43.75	165.09	0.00	175.44	0.997	6.81	9.28	196.875	F
C-ABD	76.13	19.03	76.13	0.00	559.08	0.136	0.16	0.16	7.456	A
C-D	18.38	4.59	18.38	0.00	-	-	-	-	-	-
C-A	109.18	27.30	109.18	0.00	-	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	204.74	51.18	211.87	0.00	421.77	0.485	2.76	0.98	17.685	C
B-AD	162.05	40.51	167.41	0.00	351.04	0.462	2.23	0.89	20.127	C
A-BCD	183.87	45.97	184.59	0.00	608.07	0.302	0.63	0.45	8.513	A
A-B	25.29	6.32	25.29	0.00	-	-	-	-	-	-
A-C	67.72	16.93	67.72	0.00	-	-	-	-	-	-
D-AB	348.27	87.07	402.98	0.00	443.32	0.786	18.38	4.70	98.108	F
D-BC	146.17	36.54	176.66	0.00	245.08	0.596	9.28	1.66	67.491	F
C-ABD	61.43	15.36	61.58	0.00	575.54	0.107	0.16	0.12	7.007	A
C-D	15.11	3.78	15.11	0.00	-	-	-	-	-	-
C-A	89.78	22.44	89.78	0.00	-	-	-	-	-	-

Main results: (18:00-18:15)

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
B-CD	166.80	41.70	168.50	0.00	474.68	0.351	0.98	0.55	11.819	B
B-AD	140.36	35.09	141.77	0.00	406.16	0.346	0.89	0.54	13.685	B
A-BCD	151.51	37.88	151.95	0.00	609.63	0.249	0.45	0.34	7.871	A
A-B	21.85	5.46	21.85	0.00	-	-	-	-	-	-
A-C	58.51	14.63	58.51	0.00	-	-	-	-	-	-
D-AB	288.22	72.06	300.69	0.00	479.85	0.601	4.70	1.58	21.330	C
D-BC	125.85	31.46	130.57	0.00	393.50	0.320	1.66	0.48	13.930	B
C-ABD	51.11	12.78	51.21	0.00	588.25	0.087	0.12	0.10	6.704	A
C-D	12.70	3.18	12.70	0.00	-	-	-	-	-	-
C-A	75.47	18.87	75.47	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (16:45-17:00)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	7.40	0.49	11.389	B	B
B-AD	7.19	0.48	13.168	B	B
A-BCD	4.93	0.33	7.809	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	19.05	1.27	17.507	C	B
D-BC	6.40	0.43	13.059	B	B
C-ABD	1.41	0.09	6.686	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:00-17:15)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	12.15	0.81	15.525	C	B
B-AD	11.11	0.74	17.576	C	B
A-BCD	6.59	0.44	8.464	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	36.31	2.42	29.368	D	C
D-BC	10.07	0.67	17.607	C	B
C-ABD	1.80	0.12	6.997	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:15-17:30)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	30.43	2.03	33.509	D	C
B-AD	24.96	1.66	36.761	E	D
A-BCD	9.37	0.62	9.516	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	115.36	7.69	84.812	F	F
D-BC	66.03	4.40	122.999	F	F
C-ABD	2.39	0.16	7.446	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:30-17:45)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	39.19	2.61	40.788	E	D
B-AD	31.73	2.12	44.989	E	D
A-BCD	9.56	0.64	9.555	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	224.15	14.94	151.140	F	F
D-BC	121.64	8.11	196.875	F	F
C-ABD	2.41	0.16	7.456	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:45-18:00)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	16.41	1.09	17.685	C	B
B-AD	14.82	0.99	20.127	C	C
A-BCD	6.81	0.45	8.513	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	149.08	9.94	98.108	F	F
D-BC	49.67	3.31	67.491	F	E
C-ABD	1.83	0.12	7.007	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (18:00-18:15)

Stream	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-CD	8.71	0.58	11.819	B	B
B-AD	8.53	0.57	13.685	B	B
A-BCD	5.13	0.34	7.871	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	27.93	1.86	21.330	C	C
D-BC	7.92	0.53	13.930	B	B
C-ABD	1.45	0.10	6.704	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

APPENDIX K

QUENIBOROUGH ROUNDABOUT – ARCADY OUTPUT

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]

Filename: Queniborough Roundabout (v2).arc8
Path: C:\Users\ADC\Documents
Report generation date: 17/06/2021 19:22:29

Summary of junction performance

	AM			PM		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
	Traffic Flows - 2026 with development					
Arm 1	1.15	8.06	0.54	0.49	5.31	0.33
Arm 2	1.45	5.55	0.59	1.29	4.90	0.56
Arm 3	2.99	16.28	0.76	1.67	10.31	0.63
Arm 4	0.49	4.11	0.33	0.50	3.87	0.33
Arm 5	1.99	6.32	0.67	2.19	6.59	0.69
	Traffic Flows - 2026 without development					
Arm 1	1.13	7.91	0.53	0.47	5.15	0.32
Arm 2	1.43	5.47	0.59	1.24	4.74	0.56
Arm 3	2.33	13.52	0.71	1.52	9.72	0.61
Arm 4	0.48	3.99	0.32	0.49	3.82	0.33
Arm 5	1.92	6.16	0.66	1.98	6.15	0.67

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

"D1 - 2026 without development, AM " model duration: 07:45 - 09:15
"D2 - 2026 without development, PM" model duration: 16:45 - 18:15
"D3 - 2026 with development, AM" model duration: 07:45 - 09:15
"D4 - 2026 with development, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.6.541 at 17/06/2021 19:22:27

File summary

Title	Queniborough roundabout
Location	Queniborough
Site Number	
Date	09/01/2018
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	ADC1659
Enumerator	ADCteam
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Traffic Flows - 2026 without development, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Traffic Flows	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship
2026 without development, AM	2026 without development	AM		ONE HOUR	07:45	09:15	90	15				✓	

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	Queniborough roundabout	Roundabout	1,2,3,4,5				7.22	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Melton Road N	
2	2	A607 E	
3	3	Rearsby Road	
4	4	Melton Road S	
5	5	A607 W	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00
5	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.65	6.70	30.00	20.00	72.00	40.00	
2	3.65	10.20	30.00	50.00	73.00	40.00	
3	3.20	6.50	18.00	25.00	71.00	40.00	
4	3.40	10.40	25.00	25.00	72.00	25.00	
5	3.65	9.30	30.00	35.00	73.00	40.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.495	1740.674
2		(calculated)	(calculated)	0.578	2262.117
3		(calculated)	(calculated)	0.474	1559.922
4		(calculated)	(calculated)	0.582	2207.170
5		(calculated)	(calculated)	0.558	2144.260

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	470.00	100.000
2	ONE HOUR	✓	863.00	100.000
3	ONE HOUR	✓	577.00	100.000
4	ONE HOUR	✓	391.00	100.000
5	ONE HOUR	✓	1030.00	100.000

Turning Proportions

Turning Counts / Proportions (Veh/hr) - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	1.000	50.000	125.000	224.000	70.000
	2	20.000	0.000	119.000	158.000	566.000
	3	85.000	154.000	0.000	13.000	325.000
	4	111.000	120.000	7.000	0.000	153.000
	5	38.000	585.000	293.000	114.000	0.000

Turning Proportions (Veh) - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	0.00	0.11	0.27	0.48	0.15
	2	0.02	0.00	0.14	0.18	0.66
	3	0.15	0.27	0.00	0.02	0.56
	4	0.28	0.31	0.02	0.00	0.39
	5	0.04	0.57	0.28	0.11	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	1.000	1.044	1.044	1.045	1.000
	2	1.000	1.000	1.000	1.021	1.094
	3	1.052	1.007	1.000	1.000	1.027
	4	1.050	1.037	1.000	1.000	1.029
	5	1.088	1.087	1.034	1.019	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	0.0	4.4	4.4	4.5	0.0
	2	0.0	0.0	0.0	2.1	9.4
	3	5.2	0.7	0.0	0.0	2.7
	4	5.0	3.7	0.0	0.0	2.9
	5	8.8	8.7	3.4	1.9	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
1	0.53	7.91	1.13	A	431.28	646.92	64.13	5.95	0.71	64.14	5.95
2	0.59	5.47	1.43	A	791.91	1187.86	84.51	4.27	0.94	84.52	4.27
3	0.71	13.52	2.33	B	529.46	794.20	117.26	8.86	1.30	117.28	8.86
4	0.32	3.99	0.48	A	358.79	538.18	30.27	3.38	0.34	30.27	3.38
5	0.66	6.16	1.92	A	945.15	1417.72	111.34	4.71	1.24	111.35	4.71

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	353.84	88.46	352.17	191.17	954.54	0.00	1197.07	691.50	0.296	0.00	0.42	4.251	A
2	649.71	162.43	647.41	681.51	625.20	0.00	1772.43	1436.40	0.367	0.00	0.58	3.193	A
3	434.39	108.60	431.80	407.93	864.68	0.00	1098.83	621.73	0.395	0.00	0.65	5.377	A
4	294.36	73.59	293.46	381.60	914.89	0.00	1586.69	1123.06	0.186	0.00	0.23	2.782	A
5	775.44	193.86	772.47	835.11	373.24	0.00	1812.60	1484.41	0.428	0.00	0.74	3.451	A

Main results: (08:00-08:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	422.52	105.63	421.73	228.85	1142.58	0.00	1102.48	691.50	0.383	0.42	0.62	5.280	A
2	775.82	193.96	774.80	815.81	748.50	0.00	1703.27	1436.40	0.455	0.58	0.83	3.873	A
3	518.71	129.68	517.19	488.30	1034.99	0.00	1015.43	621.73	0.511	0.65	1.03	7.204	A
4	351.50	87.88	351.17	456.83	1095.35	0.00	1479.80	1123.06	0.238	0.23	0.31	3.189	A
5	925.95	231.49	924.59	999.69	446.83	0.00	1772.79	1484.41	0.522	0.74	1.08	4.237	A

Main results: (08:15-08:30)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	517.48	129.37	515.49	279.66	1396.91	0.00	974.53	691.50	0.531	0.62	1.11	7.808	A
2	950.18	237.55	947.83	997.23	915.17	0.00	1609.79	1436.40	0.590	0.83	1.42	5.418	A
3	635.29	158.82	630.32	597.16	1265.84	0.00	902.39	621.73	0.704	1.03	2.27	13.001	B
4	430.50	107.62	429.85	558.57	1337.59	0.00	1336.27	1123.06	0.322	0.31	0.47	3.969	A
5	1134.06	283.51	1130.78	1221.64	545.79	0.00	1719.26	1484.41	0.660	1.08	1.90	6.083	A

Main results: (08:30-08:45)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	517.48	129.37	517.42	280.72	1401.45	0.00	972.26	691.50	0.532	1.11	1.13	7.912	A
2	950.18	237.55	950.13	1000.71	918.17	0.00	1608.11	1436.40	0.591	1.42	1.43	5.471	A
3	635.29	158.82	635.04	598.91	1269.39	0.00	900.66	621.73	0.705	2.27	2.33	13.520	B
4	430.50	107.62	430.49	560.37	1344.06	0.00	1332.50	1123.06	0.323	0.47	0.48	3.990	A
5	1134.06	283.51	1133.97	1226.35	548.20	0.00	1717.97	1484.41	0.660	1.90	1.92	6.162	A

Main results: (08:45-09:00)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	422.52	105.63	424.50	230.35	1149.10	0.00	1099.22	691.50	0.384	1.13	0.63	5.350	A
2	775.82	193.96	778.17	820.78	752.82	0.00	1700.84	1436.40	0.456	1.43	0.85	3.912	A
3	518.71	129.68	523.77	490.84	1040.16	0.00	1012.91	621.73	0.512	2.33	1.07	7.432	A
4	351.50	87.88	352.14	459.43	1104.49	0.00	1474.46	1123.06	0.238	0.48	0.31	3.211	A
5	925.95	231.49	929.21	1006.41	450.24	0.00	1770.96	1484.41	0.523	1.92	1.11	4.294	A

Main results: (09:00-09:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	353.84	88.46	354.67	192.39	960.28	0.00	1194.18	691.50	0.296	0.63	0.42	4.293	A
2	649.71	162.43	650.76	685.77	629.18	0.00	1770.19	1436.40	0.367	0.85	0.58	3.220	A
3	434.39	108.60	436.01	410.32	869.62	0.00	1096.42	621.73	0.396	1.07	0.66	5.463	A
4	294.36	73.59	294.71	383.98	921.65	0.00	1582.72	1123.06	0.186	0.31	0.23	2.797	A
5	775.44	193.86	776.85	840.53	375.82	0.00	1811.20	1484.41	0.428	1.11	0.75	3.484	A

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	6.09	0.41	4.251	A	A
2	8.44	0.56	3.193	A	A
3	9.37	0.62	5.377	A	A
4	3.35	0.22	2.782	A	A
5	10.85	0.72	3.451	A	A

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	9.01	0.60	5.280	A	A
2	12.18	0.81	3.873	A	A
3	14.85	0.99	7.204	A	A
4	4.58	0.31	3.189	A	A
5	15.84	1.06	4.237	A	A

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	15.97	1.06	7.808	A	A
2	20.54	1.37	5.418	A	A
3	31.33	2.09	13.001	B	B
4	6.94	0.46	3.969	A	A
5	27.27	1.82	6.083	A	A

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	16.81	1.12	7.912	A	A
2	21.42	1.43	5.471	A	A
3	34.62	2.31	13.520	B	B
4	7.11	0.47	3.990	A	A
5	28.71	1.91	6.162	A	A

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	9.75	0.65	5.350	A	A
2	13.02	0.87	3.912	A	A
3	16.84	1.12	7.432	A	A
4	4.80	0.32	3.211	A	A
5	17.12	1.14	4.294	A	A

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	6.50	0.43	4.293	A	A
2	8.91	0.59	3.220	A	A
3	10.24	0.68	5.463	A	A
4	3.49	0.23	2.797	A	A
5	11.55	0.77	3.484	A	A

Traffic Flows - 2026 without development, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Traffic Flows	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship
2026 without development, PM	2026 without development	PM		ONE HOUR	16:45	18:15	90	15				✓	

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	Queniborough roundabout	Roundabout	1,2,3,4,5				5.95	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Melton Road N	
2	2	A607 E	
3	3	Rearsby Road	
4	4	Melton Road S	
5	5	A607 W	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00
5	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.65	6.70	30.00	20.00	72.00	40.00	
2	3.65	10.20	30.00	50.00	73.00	40.00	
3	3.20	6.50	18.00	25.00	71.00	40.00	
4	3.40	10.40	25.00	25.00	72.00	25.00	
5	3.65	9.30	30.00	35.00	73.00	40.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.495	1740.674
2		(calculated)	(calculated)	0.578	2262.117
3		(calculated)	(calculated)	0.474	1559.922
4		(calculated)	(calculated)	0.582	2207.170
5		(calculated)	(calculated)	0.558	2144.260

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	300.00	100.000
2	ONE HOUR	✓	862.00	100.000
3	ONE HOUR	✓	518.00	100.000
4	ONE HOUR	✓	420.00	100.000
5	ONE HOUR	✓	1065.00	100.000

Turning Proportions

Turning Counts / Proportions (Veh/hr) - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	0.000	19.000	78.000	153.000	50.000
	2	18.000	0.000	114.000	133.000	597.000
	3	113.000	124.000	0.000	6.000	275.000
	4	195.000	105.000	12.000	1.000	107.000
	5	79.000	526.000	315.000	145.000	0.000

Turning Proportions (Veh) - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	0.00	0.06	0.26	0.51	0.17
	2	0.02	0.00	0.13	0.15	0.69
	3	0.22	0.24	0.00	0.01	0.53
	4	0.46	0.25	0.03	0.00	0.25
	5	0.07	0.49	0.30	0.14	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	1.000	1.000	1.057	1.022	1.022
	2	1.000	1.000	1.020	1.008	1.050
	3	1.039	1.009	1.000	1.000	1.036
	4	1.023	1.011	1.000	1.000	1.000
	5	1.000	1.027	1.007	1.015	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	0.0	0.0	5.7	2.2	2.2
	2	0.0	0.0	2.0	0.8	5.0
	3	3.9	0.9	0.0	0.0	3.6
	4	2.3	1.1	0.0	0.0	0.0
	5	0.0	2.7	0.7	1.5	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
1	0.32	5.15	0.47	A	275.28	412.93	29.78	4.33	0.33	29.78	4.33
2	0.56	4.74	1.24	A	790.98	1186.48	75.52	3.82	0.84	75.53	3.82
3	0.61	9.72	1.52	A	475.33	712.99	84.06	7.07	0.93	84.07	7.07
4	0.33	3.82	0.49	A	385.40	578.10	31.30	3.25	0.35	31.30	3.25
5	0.67	6.15	1.98	A	977.26	1465.89	113.63	4.65	1.26	113.64	4.65

Main Results for each time segment

Main results: (16:45-17:00)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	225.86	56.46	224.97	303.74	920.97	0.00	1239.86	802.36	0.182	0.00	0.22	3.543	A
2	648.96	162.24	646.82	580.43	565.50	0.00	1857.74	1372.98	0.349	0.00	0.53	2.968	A
3	389.98	97.49	387.87	389.31	823.01	0.00	1123.39	595.37	0.347	0.00	0.53	4.881	A
4	316.20	79.05	315.25	328.53	882.35	0.00	1651.21	1161.41	0.191	0.00	0.24	2.693	A
5	801.79	200.45	798.80	771.70	425.91	0.00	1869.17	1455.26	0.429	0.00	0.75	3.353	A

Main results: (17:00-17:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	269.69	67.42	269.36	363.58	1102.30	0.00	1151.14	802.36	0.234	0.22	0.30	4.082	A
2	774.92	193.73	774.04	694.76	676.91	0.00	1794.60	1372.98	0.432	0.53	0.75	3.524	A
3	465.67	116.42	464.61	465.94	985.00	0.00	1046.35	595.37	0.445	0.53	0.79	6.177	A
4	377.57	94.39	377.23	393.24	1056.37	0.00	1547.34	1161.41	0.244	0.24	0.32	3.076	A
5	957.41	239.35	956.01	923.73	509.86	0.00	1822.19	1455.26	0.525	0.75	1.10	4.149	A

Main results: (17:15-17:30)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	330.31	82.58	329.65	444.69	1347.99	0.00	1030.94	802.36	0.320	0.30	0.47	5.129	A
2	949.08	237.27	947.16	849.60	828.04	0.00	1708.94	1372.98	0.555	0.75	1.23	4.715	A
3	570.33	142.58	567.51	569.97	1205.23	0.00	941.60	595.37	0.606	0.79	1.50	9.552	A
4	462.43	115.61	461.77	481.11	1291.64	0.00	1406.89	1161.41	0.329	0.32	0.49	3.807	A
5	1172.58	293.15	1169.12	1129.85	623.56	0.00	1758.57	1455.26	0.667	1.10	1.96	6.070	A

Main results: (17:30-17:45)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	330.31	82.58	330.29	445.88	1351.95	0.00	1029.00	802.36	0.321	0.47	0.47	5.151	A
2	949.08	237.27	949.04	852.12	830.12	0.00	1707.76	1372.98	0.556	1.23	1.24	4.744	A
3	570.33	142.58	570.24	571.40	1207.78	0.00	940.39	595.37	0.606	1.50	1.52	9.720	A
4	462.43	115.61	462.42	482.22	1295.78	0.00	1404.42	1161.41	0.329	0.49	0.49	3.820	A
5	1172.58	293.15	1172.50	1132.87	625.33	0.00	1757.58	1455.26	0.667	1.96	1.98	6.150	A

Main results: (17:45-18:00)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	269.69	67.42	270.34	365.30	1108.01	0.00	1148.35	802.36	0.235	0.47	0.31	4.102	A
2	774.92	193.73	776.83	698.40	679.95	0.00	1792.87	1372.98	0.432	1.24	0.77	3.548	A
3	465.67	116.42	468.49	468.03	988.75	0.00	1044.57	595.37	0.446	1.52	0.81	6.281	A
4	377.57	94.39	378.23	394.88	1062.36	0.00	1543.77	1161.41	0.245	0.49	0.33	3.089	A
5	957.41	239.35	960.87	928.14	512.44	0.00	1820.75	1455.26	0.526	1.98	1.12	4.202	A

Main results: (18:00-18:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	225.86	56.46	226.19	305.43	926.21	0.00	1237.30	802.36	0.183	0.31	0.22	3.560	A
2	648.96	162.24	649.86	583.80	568.60	0.00	1855.98	1372.98	0.350	0.77	0.54	2.986	A
3	389.98	97.49	391.09	391.38	827.09	0.00	1121.45	595.37	0.348	0.81	0.54	4.936	A
4	316.20	79.05	316.55	330.27	887.91	0.00	1647.90	1161.41	0.192	0.33	0.24	2.704	A
5	801.79	200.45	803.24	776.04	428.40	0.00	1867.77	1455.26	0.429	1.12	0.76	3.388	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	3.26	0.22	3.543	A	A
2	7.84	0.52	2.968	A	A
3	7.67	0.51	4.881	A	A
4	3.48	0.23	2.693	A	A
5	10.91	0.73	3.353	A	A

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.48	0.30	4.082	A	A
2	11.10	0.74	3.524	A	A
3	11.53	0.77	6.177	A	A
4	4.75	0.32	3.076	A	A
5	16.04	1.07	4.149	A	A

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	6.85	0.46	5.129	A	A
2	17.96	1.20	4.715	A	A
3	21.24	1.42	9.552	A	A
4	7.16	0.48	3.807	A	A
5	28.12	1.87	6.070	A	A

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.04	0.47	5.151	A	A
2	18.60	1.24	4.744	A	A
3	22.66	1.51	9.720	A	A
4	7.32	0.49	3.820	A	A
5	29.63	1.98	6.150	A	A

Queueing Delay results: (17:45-18:00)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.73	0.32	4.102	A	A
2	11.77	0.78	3.548	A	A
3	12.68	0.85	6.281	A	A
4	4.96	0.33	3.089	A	A
5	17.32	1.15	4.202	A	A

Queueing Delay results: (18:00-18:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	3.42	0.23	3.560	A	A
2	8.25	0.55	2.986	A	A
3	8.27	0.55	4.936	A	A
4	3.62	0.24	2.704	A	A
5	11.60	0.77	3.388	A	A

Traffic Flows - 2026 with development, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Traffic Flows	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship
2026 with development, AM	2026 with development	AM		ONE HOUR	07:45	09:15	90	15				✓	

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	Queniborough roundabout	Roundabout	1,2,3,4,5				7.88	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Melton Road N	
2	2	A607 E	
3	3	Rearsby Road	
4	4	Melton Road S	
5	5	A607 W	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00
5	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.65	6.70	30.00	20.00	72.00	40.00	
2	3.65	10.20	30.00	50.00	73.00	40.00	
3	3.20	6.50	18.00	25.00	71.00	40.00	
4	3.40	10.40	25.00	25.00	72.00	25.00	
5	3.65	9.30	30.00	35.00	73.00	40.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.495	1740.674
2		(calculated)	(calculated)	0.578	2262.117
3		(calculated)	(calculated)	0.474	1559.922
4		(calculated)	(calculated)	0.582	2207.170
5		(calculated)	(calculated)	0.558	2144.260

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	471.00	100.000
2	ONE HOUR	✓	864.00	100.000
3	ONE HOUR	✓	620.00	100.000
4	ONE HOUR	✓	391.00	100.000
5	ONE HOUR	✓	1042.00	100.000

Turning Proportions

Turning Counts / Proportions (Veh/hr) - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	1.000	50.000	126.000	224.000	70.000
	2	20.000	0.000	120.000	158.000	566.000
	3	88.000	156.000	0.000	13.000	363.000
	4	111.000	120.000	7.000	0.000	153.000
	5	38.000	585.000	305.000	114.000	0.000

Turning Proportions (Veh) - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	0.00	0.11	0.27	0.48	0.15
	2	0.02	0.00	0.14	0.18	0.66
	3	0.14	0.25	0.00	0.02	0.59
	4	0.28	0.31	0.02	0.00	0.39
	5	0.04	0.56	0.29	0.11	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	1.000	1.044	1.044	1.045	1.000
	2	1.000	1.000	1.000	1.021	1.094
	3	1.050	1.007	1.000	1.000	1.024
	4	1.050	1.037	1.000	1.000	1.029
	5	1.088	1.087	1.033	1.019	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	0.0	4.4	4.4	4.5	0.0
	2	0.0	0.0	0.0	2.1	9.4
	3	5.0	0.7	0.0	0.0	2.4
	4	5.0	3.7	0.0	0.0	2.9
	5	8.8	8.7	3.3	1.9	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
1	0.54	8.06	1.15	A	432.20	648.30	65.14	6.03	0.72	65.14	6.03
2	0.59	5.55	1.45	A	792.82	1189.23	85.45	4.31	0.95	85.45	4.31
3	0.76	16.28	2.99	C	568.92	853.38	142.35	10.01	1.58	142.36	10.01
4	0.33	4.11	0.49	A	358.79	538.18	30.97	3.45	0.34	30.97	3.45
5	0.67	6.32	1.99	A	956.16	1434.24	114.73	4.80	1.27	114.74	4.80

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	354.59	88.65	352.91	193.39	964.97	0.00	1192.04	692.20	0.297	0.00	0.42	4.281	A
2	650.46	162.62	648.15	682.95	634.93	0.00	1767.20	1428.99	0.368	0.00	0.58	3.210	A
3	466.77	116.69	463.86	418.41	864.66	0.00	1100.81	627.52	0.424	0.00	0.73	5.626	A
4	294.36	73.59	293.44	381.59	946.93	0.00	1568.74	1123.73	0.188	0.00	0.23	2.822	A
5	784.47	196.12	781.44	863.45	376.92	0.00	1811.76	1490.93	0.433	0.00	0.76	3.484	A

Main results: (08:00-08:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	423.42	105.86	422.61	231.50	1155.05	0.00	1096.46	692.20	0.386	0.42	0.62	5.335	A
2	776.72	194.18	775.68	817.52	760.13	0.00	1696.99	1428.99	0.458	0.58	0.84	3.903	A
3	557.37	139.34	555.52	500.85	1034.97	0.00	1017.26	627.52	0.548	0.73	1.19	7.764	A
4	351.50	87.88	351.16	456.81	1133.68	0.00	1458.33	1123.73	0.241	0.23	0.32	3.251	A
5	936.74	234.18	935.33	1033.61	451.22	0.00	1771.56	1490.93	0.529	0.76	1.11	4.298	A

Main results: (08:15-08:30)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	518.58	129.65	516.54	282.72	1411.78	0.00	967.37	692.20	0.536	0.62	1.13	7.949	A
2	951.28	237.82	948.87	998.97	929.35	0.00	1602.12	1428.99	0.594	0.84	1.44	5.491	A
3	682.63	170.66	675.85	612.47	1265.75	0.00	904.05	627.52	0.755	1.19	2.89	15.337	C
4	430.50	107.62	429.82	558.49	1383.11	0.00	1310.79	1123.73	0.328	0.32	0.49	4.086	A
5	1147.26	286.82	1143.83	1262.25	550.67	0.00	1717.75	1490.93	0.668	1.11	1.97	6.235	A

Main results: (08:30-08:45)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	518.58	129.65	518.52	283.99	1416.81	0.00	964.86	692.20	0.537	1.13	1.15	8.063	A
2	951.28	237.82	951.23	1002.86	932.47	0.00	1600.36	1428.99	0.594	1.44	1.45	5.545	A
3	682.63	170.66	682.20	614.32	1269.39	0.00	902.27	627.52	0.757	2.89	2.99	16.276	C
4	430.50	107.62	430.48	560.36	1391.21	0.00	1306.07	1123.73	0.330	0.49	0.49	4.111	A
5	1147.26	286.82	1147.17	1268.08	553.63	0.00	1716.16	1490.93	0.669	1.97	1.99	6.324	A

Main results: (08:45-09:00)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	423.42	105.86	425.46	233.31	1162.28	0.00	1092.86	692.20	0.387	1.15	0.64	5.409	A
2	776.72	194.18	779.12	823.09	764.65	0.00	1694.46	1428.99	0.458	1.45	0.85	3.944	A
3	557.37	139.34	564.38	503.53	1040.25	0.00	1014.68	627.52	0.549	2.99	1.24	8.114	A
4	351.50	87.88	352.17	459.51	1145.11	0.00	1451.68	1123.73	0.242	0.49	0.32	3.275	A
5	936.74	234.18	940.17	1041.87	455.41	0.00	1769.30	1490.93	0.529	1.99	1.14	4.359	A

Main results: (09:00-09:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	354.59	88.65	355.44	194.70	970.94	0.00	1189.04	692.20	0.298	0.64	0.43	4.322	A
2	650.46	162.62	651.53	687.37	639.01	0.00	1764.91	1428.99	0.369	0.85	0.59	3.238	A
3	466.77	116.69	468.75	420.90	869.64	0.00	1098.37	627.52	0.425	1.24	0.75	5.737	A
4	294.36	73.59	294.72	384.00	954.39	0.00	1564.37	1123.73	0.188	0.32	0.23	2.835	A
5	784.47	196.12	785.94	869.41	379.70	0.00	1810.26	1490.93	0.433	1.14	0.77	3.521	A

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	6.14	0.41	4.281	A	A
2	8.49	0.57	3.210	A	A
3	10.52	0.70	5.626	A	A
4	3.39	0.23	2.822	A	A
5	11.08	0.74	3.484	A	A

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	9.11	0.61	5.335	A	A
2	12.29	0.82	3.903	A	A
3	17.12	1.14	7.764	A	A
4	4.67	0.31	3.251	A	A
5	16.24	1.08	4.298	A	A

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	16.28	1.09	7.949	A	A
2	20.82	1.39	5.491	A	A
3	39.02	2.60	15.337	C	B
4	7.14	0.48	4.086	A	A
5	28.23	1.88	6.235	A	A

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	17.16	1.14	8.063	A	A
2	21.73	1.45	5.545	A	A
3	44.28	2.95	16.276	C	B
4	7.32	0.49	4.111	A	A
5	29.78	1.99	6.324	A	A

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	9.89	0.66	5.409	A	A
2	13.14	0.88	3.944	A	A
3	19.84	1.32	8.114	A	A
4	4.90	0.33	3.275	A	A
5	17.60	1.17	4.359	A	A

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	6.56	0.44	4.322	A	A
2	8.97	0.60	3.238	A	A
3	11.58	0.77	5.737	A	A
4	3.54	0.24	2.835	A	A
5	11.80	0.79	3.521	A	A

Traffic Flows - 2026 with development, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Traffic Flows	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship
2026 with development, PM	2026 with development	PM		ONE HOUR	16:45	18:15	90	15				✓	

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	Queniborough roundabout	Roundabout	1,2,3,4,5				6.28	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Melton Road N	
2	2	A607 E	
3	3	Rearsby Road	
4	4	Melton Road S	
5	5	A607 W	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00
5	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.65	6.70	30.00	20.00	72.00	40.00	
2	3.65	10.20	30.00	50.00	73.00	40.00	
3	3.20	6.50	18.00	25.00	71.00	40.00	
4	3.40	10.40	25.00	25.00	72.00	25.00	
5	3.65	9.30	30.00	35.00	73.00	40.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.495	1740.674
2		(calculated)	(calculated)	0.578	2262.117
3		(calculated)	(calculated)	0.474	1559.922
4		(calculated)	(calculated)	0.582	2207.170
5		(calculated)	(calculated)	0.558	2144.260

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (Veh/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	302.00	100.000
2	ONE HOUR	✓	864.00	100.000
3	ONE HOUR	✓	538.00	100.000
4	ONE HOUR	✓	420.00	100.000
5	ONE HOUR	✓	1100.00	100.000

Turning Proportions

Turning Counts / Proportions (Veh/hr) - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	0.000	19.000	80.000	153.000	50.000
	2	18.000	0.000	116.000	133.000	597.000
	3	114.000	125.000	0.000	6.000	293.000
	4	195.000	105.000	12.000	1.000	107.000
	5	79.000	526.000	350.000	145.000	0.000

Turning Proportions (Veh) - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	0.00	0.06	0.26	0.51	0.17
	2	0.02	0.00	0.13	0.15	0.69
	3	0.21	0.23	0.00	0.01	0.54
	4	0.46	0.25	0.03	0.00	0.25
	5	0.07	0.48	0.32	0.13	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	1.000	1.000	1.056	1.022	1.022
	2	1.000	1.000	1.019	1.008	1.050
	3	1.039	1.009	1.000	1.000	1.034
	4	1.023	1.011	1.000	1.000	1.000
	5	1.000	1.027	1.006	1.015	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To				
		1	2	3	4	5
From	1	0.0	0.0	5.6	2.2	2.2
	2	0.0	0.0	1.9	0.8	5.0
	3	3.9	0.9	0.0	0.0	3.4
	4	2.3	1.1	0.0	0.0	0.0
	5	0.0	2.7	0.6	1.5	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
1	0.33	5.31	0.49	A	277.12	415.68	30.69	4.43	0.34	30.69	4.43
2	0.56	4.90	1.29	A	792.82	1189.23	77.56	3.91	0.86	77.57	3.91
3	0.63	10.31	1.67	B	493.68	740.52	90.92	7.37	1.01	90.93	7.37
4	0.33	3.87	0.50	A	385.40	578.10	31.62	3.28	0.35	31.62	3.28
5	0.69	6.59	2.19	A	1009.38	1514.06	123.17	4.88	1.37	123.18	4.88

Main Results for each time segment

Main results: (16:45-17:00)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	227.36	56.84	226.46	304.47	947.89	0.00	1226.93	800.71	0.185	0.00	0.23	3.595	A
2	650.47	162.62	648.29	581.14	593.21	0.00	1842.64	1358.91	0.353	0.00	0.54	3.009	A
3	405.04	101.26	402.80	418.53	822.98	0.00	1124.38	608.04	0.360	0.00	0.56	4.974	A
4	316.20	79.05	315.25	328.51	897.26	0.00	1642.60	1162.24	0.193	0.00	0.24	2.711	A
5	828.14	207.03	824.98	785.13	427.38	0.00	1869.54	1457.32	0.443	0.00	0.79	3.437	A

Main results: (17:00-17:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	271.49	67.87	271.15	364.45	1134.52	0.00	1135.68	800.71	0.239	0.23	0.31	4.162	A
2	776.72	194.18	775.80	695.60	710.07	0.00	1776.46	1358.91	0.437	0.54	0.77	3.594	A
3	483.65	120.91	482.50	500.92	984.96	0.00	1047.27	608.04	0.462	0.56	0.85	6.361	A
4	377.57	94.39	377.22	393.22	1074.23	0.00	1537.02	1162.24	0.246	0.24	0.32	3.104	A
5	988.87	247.22	987.34	939.82	511.63	0.00	1822.36	1457.32	0.543	0.79	1.17	4.303	A

Main results: (17:15-17:30)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	332.51	83.13	331.82	445.70	1387.09	0.00	1012.17	800.71	0.329	0.31	0.49	5.285	A
2	951.28	237.82	949.26	850.45	868.46	0.00	1686.75	1358.91	0.564	0.77	1.28	4.867	A
3	592.35	148.09	589.17	612.64	1205.08	0.00	942.48	608.04	0.629	0.85	1.64	10.098	B
4	462.43	115.61	461.75	481.03	1313.21	0.00	1394.43	1162.24	0.332	0.32	0.49	3.857	A
5	1211.12	302.78	1207.16	1149.35	625.62	0.00	1758.54	1457.32	0.689	1.17	2.16	6.483	A

Main results: (17:30-17:45)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	332.51	83.13	332.50	446.98	1391.56	0.00	1009.99	800.71	0.329	0.49	0.49	5.313	A
2	951.28	237.82	951.24	853.21	870.85	0.00	1685.40	1358.91	0.564	1.28	1.29	4.903	A
3	592.35	148.09	592.24	614.33	1207.77	0.00	941.20	608.04	0.629	1.64	1.67	10.306	B
4	462.43	115.61	462.42	482.22	1317.79	0.00	1391.72	1162.24	0.332	0.49	0.50	3.873	A
5	1211.12	302.78	1211.01	1152.67	627.52	0.00	1757.47	1457.32	0.689	2.16	2.19	6.585	A

Main results: (17:45-18:00)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	271.49	67.87	272.18	366.30	1140.92	0.00	1132.55	800.71	0.240	0.49	0.32	4.187	A
2	776.72	194.18	778.73	699.55	713.53	0.00	1774.50	1358.91	0.438	1.29	0.78	3.621	A
3	483.65	120.91	486.85	503.36	988.91	0.00	1045.39	608.04	0.463	1.67	0.87	6.480	A
4	377.57	94.39	378.24	394.97	1080.78	0.00	1533.12	1162.24	0.246	0.50	0.33	3.118	A
5	988.87	247.22	992.83	944.65	514.38	0.00	1820.82	1457.32	0.543	2.19	1.20	4.368	A

Main results: (18:00-18:15)

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Entry Flow (Veh/hr)	Exit Flow (Veh/hr)	Circulating Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	Saturation Capacity (Veh/hr)	RFC	Start Queue (Veh)	End Queue (Veh)	Delay (s)	LOS
1	227.36	56.84	227.71	306.21	953.47	0.00	1224.20	800.71	0.186	0.32	0.23	3.615	A
2	650.47	162.62	651.40	584.61	596.57	0.00	1840.74	1358.91	0.353	0.78	0.55	3.028	A
3	405.04	101.26	406.25	420.83	827.14	0.00	1122.40	608.04	0.361	0.87	0.57	5.034	A
4	316.20	79.05	316.55	330.30	903.08	0.00	1639.13	1162.24	0.193	0.33	0.24	2.724	A
5	828.14	207.03	829.73	789.70	429.95	0.00	1868.10	1457.32	0.443	1.20	0.80	3.474	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	3.32	0.22	3.595	A	A
2	7.97	0.53	3.009	A	A
3	8.11	0.54	4.974	A	A
4	3.50	0.23	2.711	A	A
5	11.54	0.77	3.437	A	A

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.60	0.31	4.162	A	A
2	11.34	0.76	3.594	A	A
3	12.31	0.82	6.361	A	A
4	4.79	0.32	3.104	A	A
5	17.15	1.14	4.303	A	A

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.10	0.47	5.285	A	A
2	18.56	1.24	4.867	A	A
3	23.21	1.55	10.098	B	B
4	7.25	0.48	3.857	A	A
5	30.87	2.06	6.483	A	A

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.31	0.49	5.313	A	A
2	19.26	1.28	4.903	A	A
3	24.91	1.66	10.306	B	B
4	7.42	0.49	3.873	A	A
5	32.70	2.18	6.585	A	A

Queueing Delay results: (17:45-18:00)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.86	0.32	4.187	A	A
2	12.05	0.80	3.621	A	A
3	13.61	0.91	6.480	A	A
4	5.01	0.33	3.118	A	A
5	18.62	1.24	4.368	A	A

Queueing Delay results: (18:00-18:15)

Arm	Queueing Total Delay (Veh-min)	Queueing Rate Of Delay (Veh-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	3.49	0.23	3.615	A	A
2	8.38	0.56	3.028	A	A
3	8.77	0.58	5.034	A	A
4	3.65	0.24	2.724	A	A
5	12.30	0.82	3.474	A	A