Lower Thames Crossing

9.160 Asda roundabout construction impact assessment

Infrastructure Planning (Examination Procedure) Rules 2010

Volume 9

Lower Thames Crossing

9.160 Asda roundabout construction impact assessment

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1   Executive summary

1.1.1   This report provides further information on the nature of the traffic impacts at the Asda roundabout during the construction of the A122 Lower Thames Crossing (the Project), and demonstrates how the control plan would work to deliver appropriate controls to manage these impacts.

1.1.2   It has been produced in response to comments from Interested Parties both in writing and as set out at Issue Specific Hearing 10 and to support the Development Consent Order (DCO) Examination. It provides the required evidence that a robust approach has been applied to the development of controls to manage construction traffic impacts, both generally and specifically at Asda roundabout.

1.1.3   Local junction traffic modelling was undertaken to assess the traffic impacts during the morning and evening peaks periods. The Applicant has used a highly precautionary approach to preparing the baseline and forecast traffic flows.

1.1.4   The modelling results show that the Asda roundabout is forecast to have capacity constraints for parts of both the morning and evening peaks in the without Project (Do Minimum) scenario.

1.1.5   The construction of the Project will lead to increases in flows through Asda roundabout, in some phases this increase solely arises from construction vehicles associated with the project, in other scenarios, these increases occur as a result of construction impacts away from the roundabout, including the implementation of temporary traffic management. As a result, controls are likely to be required on traffic movements both during the morning and evening peaks, and careful design of the TTM will be required.

1.1.6   The Applicant has put in place a robust control plan, with measures to manage construction phase traffic impacts secured through the outline Traffic Management Plan for Construction [**REP6-048**] and the Framework Construction Travel Plan [**REP5-054**].

1.1.7   This report should be read in conjunction with the Project's Transport Assessment (TA) [**REP4-148** to **REP4-152**].

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2   Introduction

2.1   Purpose of document

2.1.1   At Deadline 6 the Applicant provided its submissions on construction impacts and management at Asda roundabout [**REP6-123**]. Within that report, the Applicant committed to undertaking further analysis of construction impacts at the Asda roundabout, setting out how operational controls would be implemented to mitigate any identified impacts.

The Applicant set out in Chapter 5 of the Applicant's submissions on construction impacts and management at Asda roundabout that it would provide a further consideration of how construction impacts would be managed at Asda roundabout, supported by further modelling information. This document considers the impacts at each phase, providing modelling results that show the performance of the roundabout, and indicating how the impacts would be managed, and how those management controls are secured.

2.1.2   The Applicant has set out an assessment of the construction phase impacts across the road network in the Transport Assessment [**REP4-150** and **REP4-152**] which included provision of an assessment of the changing flows and journey time impacts along the A1089 developed using LTAM. This showed impacts on journeys through Asda roundabout, associated with both the proposed TTM and with the construction traffic. This assessment expands on that, by providing information on a highly precautionary worst case scenario, developed using conservative assumptions, in order to show that the controls proposed within the DCO application are sufficient to address these impacts.

2.2   Work to date

Construction programme

2.2.1   The Project's construction programme is complex. The construction works would result in new, temporary vehicle movements as well as changes to existing traffic flows through the introduction of temporary traffic management (TTM) across the road network such as narrow lanes and traffic lights to control traffic through contraflows.

2.2.2   The main construction period has been assessed as running from early 2025 to late 2030 and has been divided into 11 phases as shown in Table 2.1.

Table 2.1 Construction phases

Phase	Start	End	Duration (months)
1	01/01/2025	31/08/2025	8
2	01/09/2025	28/02/2026	6
3	01/03/2026	31/05/2026	3
4	01/06/2026	31/10/2026	5
5	01/11/2026	31/03/2027	5
6	01/04/2027	31/08/2027	5

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Phase	Start	End	Duration (months)
7	01/09/2027	31/03/2028	7
8	01/04/2028	30/11/2028	8
9	01/12/2028	31/03/2029	4
10	01/04/2029	31/07/2029	4
11	01/08/2029	31/12/2030	17

2.2.3   The assumptions about the construction programme are set out in paragraph 8.1.7 of the Transport Assessment (TA) [**REP4-150**].

Construction traffic assessment

2.2.4   A precautionary and proportionate construction traffic assessment has been undertaken as presented within the Application Documents.

2.2.5   The Lower Thames Area Model (LTAM) has been used to assess the impact of construction works on the road network. Chapter 8 of the TA [**REP4-150**] summarises the forecast impact of the Project's construction programme in each phase. Further details are set out within TA Appendix E: Construction Traffic Assessment Supporting Information [**APP-534**].

2.2.6   The LTAM construction assessment found that the Project would result in some impacts across the road network, arising from both the increase in traffic from construction and the introduction of TTM measures on the existing road network.

2.2.7   The Applicant has secured controls for the development of more detailed construction plans with Contractors to reduce the impacts on the highway network within the outline Traffic Management Plan for Construction (oTMPfC) [**REP6-048**] as per Requirement 10 of the draft DCO (Schedule 2, Part 1) [**REP6-010**].

2.2.8   The Applicant has demonstrated through a localised worked example how the traffic related impacts of TTM can be worked through and minimised, as set out in Applicant's submissions on construction impacts and management at Asda roundabout [**REP6-123**].

2.2.9   The forecast impacts at the Asda roundabout would be substantially reduced through the detailed design process and it was demonstrated how this process is secured.

The Asda roundabout

2.2.10   The Applicant maintains the position that localised modelling of the construction traffic phases to validate the findings of the LTAM is premature given the complex nature of the construction scenario and the preliminary nature of the proposed TTM measures and works sequencing.

2.2.11   However, the Applicant acknowledges that Port of Tilbury London Limited (PoTLL) rely on the Asda roundabout and had raised concerns that access to the port could be impeded as a result of the Project during construction.

2.2.12   The Asda roundabout is shown in Plate 2.1.

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Plate 2.1 Asda roundabout
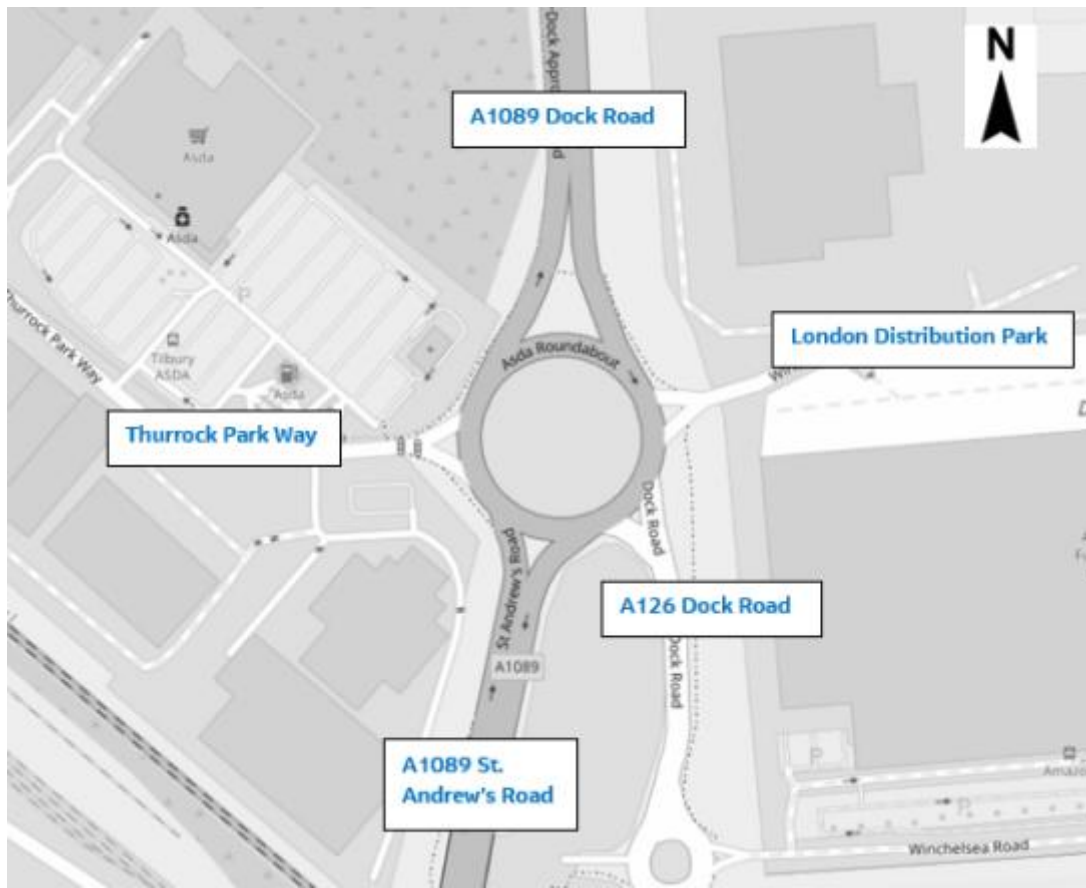
Source: OpenStreetMap

2.2.13   The Asda roundabout is the first at grade junction on the A1089 when travelling from the A13 to the Port of Tilbury / Tilbury2. It is the main entrance to an area predominantly made up of industrial activities, transport facilities, wholesale and trade retail warehouses as well as the Tilbury residential area.

2.2.14   The key characteristics of the junction are as follows:

    a. To the north, the A1089 is a dual carriageway road with a speed limit of 50mph northbound before the Marshfoot junction and 70mph southbound.

    b. To the south, four corridors act as road collectors. Clockwise from the east:

        i.   A 30mph unnamed street providing access to the LDP (which includes Amazon)

        ii. A126 Dock Road, a 30mph corridor leading to a roundabout providing access to Tilbury and a southern access to the LDP (including Amazon; it is used as their staff access)

        iii. The A1089 south, a 40mph dual carriageway corridor giving direct access to the Port of Tilbury/Tilbury2

        iv. Thurrock Park Way, a 30mph road giving access to Asda and the industrial and commercial estate to the west

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2.2.15   Plate 2.2 shows the location of the construction compounds and Utility Logistics
         Hubs near the Asda roundabout, with the location of the Asda roundabout
         indicated by a blue star. Some Project-related construction traffic, especially
         Heavy Goods Vehicles (HGVs), would use the A1089 and the Asda roundabout
         to access the construction compounds and Utility Logistics Hubs.

**Plate 2.2 Construction compounds and Utility Logistics Hubs in the vicinity of the
Asda roundabout**

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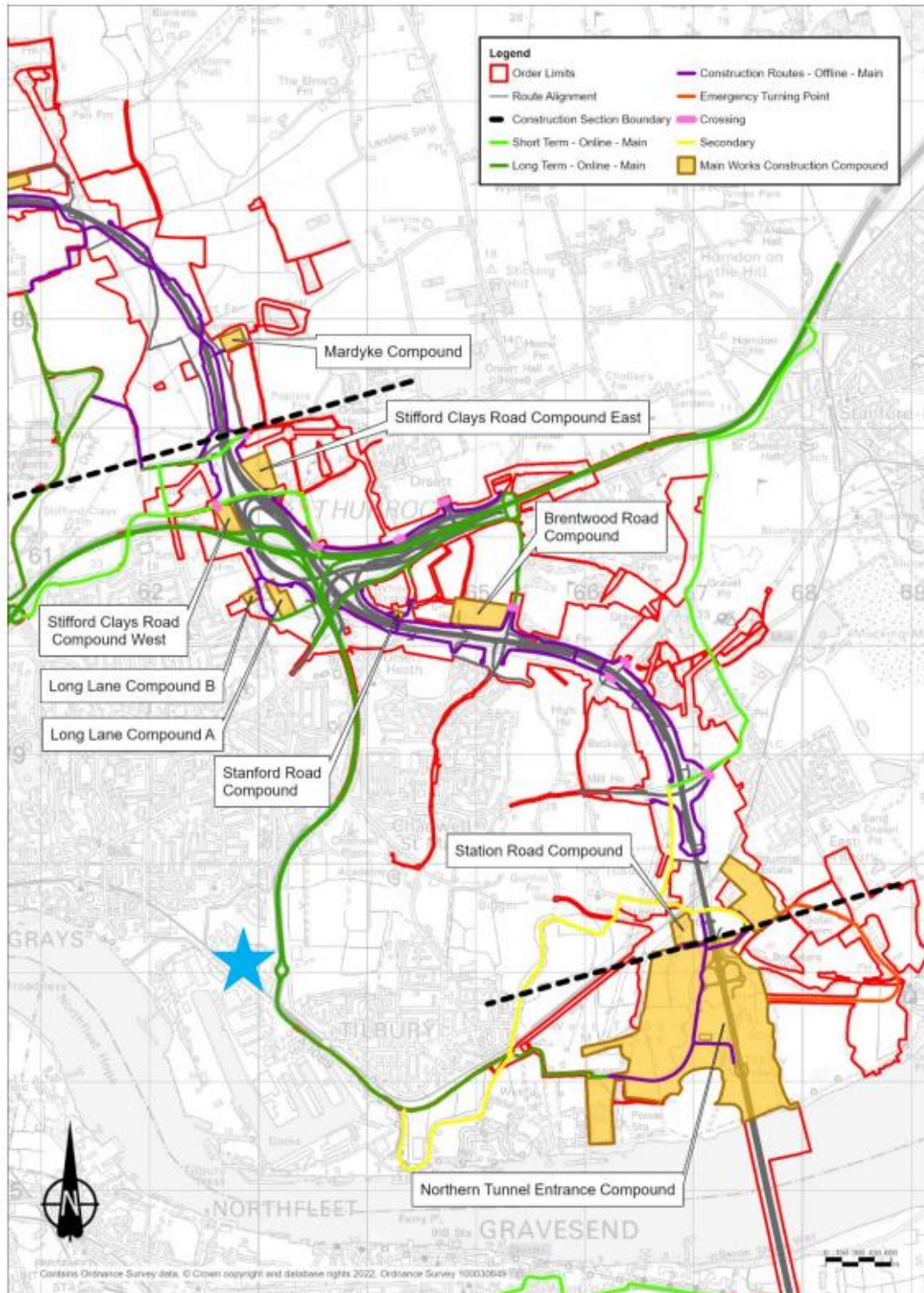
2.2.16   Paragraph 8.8.12 of the TA [**REP4-150**] refers to the impact at the Asda roundabout as a result of a combination of the proposed contraflow systems on Marshfoot Road / Chadwell Hill / Brentwood Road (RNTM05) and an increase in traffic on the A1089.

Localised traffic modelling

VISSIM modelling

2.2.17   Road traffic micro-simulation models, such as those built in PTV's VISSIM software, represent individual vehicles travelling within the road network. These provide realistic driver behaviour such as lane changing and overtaking.

2.2.18   The Applicant developed a VISSIM microsimulation model of the Asda roundabout during the critical construction traffic modelling phases and submitted a Localised Traffic Modelling report at Deadline 3 [**REP3-132**].

2.2.19   The critical construction traffic phases were determined to be phases 1 and 6. The proposed TTM measures would have the greatest impact in construction traffic phase 1, and the highest construction traffic flows through the Asda roundabout are forecast to occur in construction traffic phase 6.

2.2.20   The Applicant's work to date has identified that there are two factors affecting traffic flows at the Asda roundabout:

   a.   TTM measures across the local area, away from the roundabout, which cause traffic to re-assign

   b.   Project-related construction traffic

2.2.21   Following comments received on the VISSIM model, at Deadline 6 the Applicant submitted Applicant's submissions on construction impacts and management at Asda roundabout [**REP6-123**]. This included a summary of the construction traffic modelling, a detailed review of TTM measure RNTM05 and a review of a proposed mitigation scheme submitted by the PoTLL.

2.2.22   The Applicant set out that further models would be developed to provide greater clarity in relation to the impacts across the construction phase, and these are set out in this report.

2.3   Structure of this report

2.3.1   The remainder of this report is structured as follows:

   a.   Chapter 3 sets out the approach that has been taken to modelling the junction, describing the ARCADY local junction modelling software and outlines the methodology used for the assessment. It includes detail on the setup, forecasting and validation of the junction model

   b.   Chapter 4 considers the model findings, making reference to the full modelling results which are included as Appendix A, and sets out how controls would function to manage the impacts on Asda roundabout

   c.   Chapter 5 provides the conclusions

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3 Modelling approach and development

3.1 Introduction

3.1.1 The scope of the assessment was set out by the Applicant in the Applicant's submissions on construction impacts and management at Asda roundabout [**REP6-123**].

3.1.2 This assessment provides more clarity on the nature of the forecast impacts on the Asda roundabout during the Project's construction and provides confidence that the impacts can be managed through the operation controls provided by the Control Plan documents.

Use of ARCADY

3.1.3 An assessment of the operation of the Asda roundabout has been carried out using the TRL software Junctions 10 (ARCADY). This software is an industry standard for the analysis of roundabouts which has been used for 30 years. It was considered that ARCADY, in view of the characteristics of the site and local highway network, provides a robust analysis of roundabout capacity and delay under various forecast scenarios. ARCADY software has the advantage that it allows for the speedy analysis of the performance of a roundabout, so allowing for the testing of multiple construction phases. This is the same software package used by PoTTL in the 2017 Transport Assessment of Tilbury 2 and the Amazon/ London Distribution Park (LDP).

3.2 Base model setup

3.2.1 Table 3.1 provides a summary of the model setup for the Asda roundabout.

Table 3.1 Base model setup in ARCADY

Arms	A – Amazon UK Service Access Road B – Dock Road South C – A1089 St Andrew's Road D – Thurrock Park Way E – A1089 Dock Road North
Control type	Priority controlled
Software	ARCADY (Junctions 10)
Observed traffic count data	Manual Classified Count (MCC) and queue survey collected on 21 June 2017
Modelled hours	AM peak period: (07:00-08:00 and 08:00-09:00) PM peak period: (17:00-18:00)
Traffic Profile	ARCADY one hour profile type, including 15 minutes warm-up and run-down periods (derived from a default profile inbuilt to the software) either side of the central hour.
Geometric measurements	As set out in Section 3.4

3.2.2 The model was developed and validated for three time periods to capture the peak hours of the junction.

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3.3 Geometric parameters

3.3.1 Geometric parameters were measured from AutoCAD and checked against online mapping. Table 3.2 provides the geometric parameters used within the model.

Table 3.2 Geometric parameters

Geometric parameter	Arm					
	A	**B**	**C** *base*	**C** *forecast*	**D**	**E**
Approach road half width (m)	3.8	3.2	7.4	7.0	3.5	7.0
Entry width (m)	8.7	7.2	7.8	9.5	8.5	7.0
Effective flare length (m)	13.9	25.7	7.6	9.5	14.7	0.0
Entry radius (m)	46.0	20.0	37.0	47.0	53.0	138.0
Inscribed circle diameter (m)	112.0	112.0	112.0	112.0	112.0	112.0
Conflict (entry) angle (d)	20.0	23.5	30.0	37.0	24.5	18.5

3.3.2 These geometric parameters were applied across all scenarios reported on in this report, other than for arm C which was modified between 2019 and 2020.

3.4 Base year validation

3.4.1 Table 3.3 provides a summary of the capacity results for the base year.

Table 3.3 Capacity results – base year, 2017

Arm	07:00–08:00			08:00–09:00			17:00–18:00		
	Queue (PCUs)	Delay (secs)	RFC	Queue (PCUs)	Delay (secs)	RFC	Queue (PCUs)	Delay (secs)	RFC
A	0	5.7	0.07	0	6.2	0.08	0	4.0	0.18
B	1	6.0	0.43	1	7.7	0.53	1	4.6	0.37
C	1	6.0	0.42	1	6.4	0.46	2	5.5	0.55
D	1	4.5	0.31	1	5.0	0.38	3	11.5	0.73
E	6	13.3	0.85	6	12.0	0.83	2	5.8	0.63

3.4.2 The performance of the base year model has been compared against observed queue survey data undertaken by PoTLL (PoTLL, 2017) on the same day as the traffic counts.

3.4.3 The observed queue length data was recorded in two formats, with one at five-minute intervals to provide a snapshot every five minutes and the second format recording the maximum queue within the respective five-minute period. Table 3.4 presents the observed average queue for the interval data and the maximum data for each arm of the Asda roundabout in the three modelled peak hours alongside the predicted average queues from the base year model. ARCADY doesn't report a maximum queue length so the observed queue max

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column is not a validation criteria, nonetheless its inclusion in the table below
provides an indication of the level of variability in the queue lengths.

Table 3.4 Comparison of observed and model queues (PCU)

Arm	Observed average(PCU)	Observed queue max (PCU)	Model queues (PCU)
AM peak 07:00–08:00			
A	0.3	3.7	0
B	1.7	7.5	1
C	0.9	10.9	1
D	0.1	3.5	1
E	0.0	6.2	6
AM peak 08:00–09:00			
A	0.1	2.4	0
B	1.4	9.4	1
C	3.8	11.4	1
D	0.1	5.1	1
E	0.0	7.2	6
PM peak 17:00–18:00			
A	0.8	4.2	0
B	0.8	5.1	1
C	2.5	14.7	2
D	0.8	15.0	3
E	0.4	5.7	2

3.4.4   This shows that the model compares well against observed average queues
from the interval data, with modelled queues on most arms falling within 2 PCUs
of the observed interval queues except for arm E (A1089 Dock Road) in both
hours of the AM peak. The modelled queues on this arm are higher than the
observed interval queues and closer to the maximum queues, which indicates
the model is slightly underestimating the capacity of this approach in the AM
peak hours and, in practice, the operation of this approach is likely to be better
than the model predicts.

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3.5 Scenarios modelled

3.5.1 In addition to the base model (2017), a Do Minimum (DM) model representing the forecast year 2030 without the Project (or its construction), and a series of models representing each construction traffic phase of the Project, have been developed.

3.5.2 All 11 construction phases were selected for the construction assessment of the Asda roundabout as reported here. The modelled impacts of construction were based on outputs from the construction modelling in the LTAM.

3.5.3 The following models have been developed:

   a. A base model reflecting traffic conditions for each LTAM peak hour period (AM (07:00-08:00) and PM (17:00-18:00) in 2017 (as set out in Section 3.4)

   b. A forecast model reflecting traffic conditions for each peak period in the DM scenario (i.e. without the construction of the Project).

   c. A forecast model for each peak period representing each of the 11 construction traffic modelling phases

3.5.4 In the forecast models, the peak period covered AM 07:00-09:00 modelled in 20-minute time segments, and the PM peak hour 17:00-18:00 modelled as a single hour. The am peak period was modelled in 20 minute time segments as this enables the capture of the staff arrival patterns at Amazon/LDP and the resultant traffic impacts at the Asda roundabout. A warm-up period was also included in the AM peak (from 06:20-07:00) as a large number of Amazon staff arrive before 07:00. The use of a warm up period allowed for the modelling of any queues that might already be present on the network at the start of the 7am model time period. This was a consideration as many of the Amazon staff arrive between 6 and 7am in the morning.

3.5.5 An analysis of the inter-peak period was not undertaken because traffic flows on the network are lower during this time.

3.5.6 Table 3.5 provides a summary of the modelled scenarios.

Table 3.5 Modelled scenarios

Do Minimum (DM) (without Project or construction)	2017 Base AM1 07:00-08:00
	2017 Base AM2 08:00-09:00
	2017 Base PM 17:00-18:00
	2030 Future AM 07:00-09:00 (including warm up 06:20-07:00)
	2030 Future PM 17:00-18:00
Do Something (DS) (with Project construction traffic phases 1 to 11)	2030 Future AM 07:00-09:00 (including warm up 06:20-07:00)
	2030 Future PM 17:00-18:00

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3.6 Traffic flows

3.6.1 The Applicant's TA [**REP4-148 to REP4-152**] provides a summary of the methodology used to forecast future traffic flows associated with the Project using LTAM.

3.6.2 The Applicant has taken a highly precautionary approach to developing the base flows and forecasting the future flows at Asda roundabout. It is the Applicant's view that the discussion relating to the operation at Asda roundabout should be focussed on whether suitable controls are available to the Applicant, and whether these controls are appropriately secured in the Control Plan documents. To minimise discussion on the suitability of the modelling, the Applicant has therefore proposed both baseline and forecast traffic flows that are conservative in nature. The Applicant considers that the actual future flows are likely to be lower than the modelling forecasts, but that the modelling provides useful insights into how the functional operation of Asda roundabout can be maintained through construction.

3.6.3 Examples of the level of conservatism include:

   a. Conservative approaches taken within the LTAM modelling

      i. Placing construction workforce movements into the peak traffic periods, regardless of actual shift patterns

      ii. Limiting the effectiveness of construction workforce travel management plans in reducing traffic flows

      iii. Assuming HGV movements take place throughout the day, rather than avoiding peak periods

   b. Conservative approaches taken within this ARCADY modelling

      i. Use of baseline traffic flows proposed by Port of Tilbury London Limited and Thurrock Council rather than the 2016 LTAM baseline

      ii. Use of the higher range of the traffic flows from the Transport Assessment documentation submitted to support the development of the Amazon distribution facility, not accounting for their full estimate of trip reduction through implementation of their Travel Plan

Base flows – Use of PoTLL flows

3.6.4 In Appendix B of Thurrock Council's Comments on Applicant's submissions at Deadline 4 [**REP5-112**], Thurrock Council and PoTLL submitted a joint position statement which set out that the observed traffic counts used by the Applicant were unrepresentative of a "typical day" at the Asda roundabout.

3.6.5 In the Applicant's Response to Comments Made by Thurrock Council at D4 and D5 [**REP6-096**], the Applicant stated that it did not agree and that:

"analysis of TRIS data has shown that there is, as would be expected, some daily variation in traffic flow movements and that consideration of traffic flows over working days in 2017 and 2018 shows that the flows recorded by the

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*Applicant represent between 97% and 107% of the average depending on
count location and time period*".

3.6.6   However, in the Applicant's submissions on construction impacts and
management at Asda roundabout [**REP6-123**], the Applicant set out at
paragraph 5.2.9 that, for the modelling reported in this report:

*"In order to provide further confidence in the exercise and reduce areas of
disagreement, the Applicant proposes to use the observed traffic flows provided
by PoTLL".*

3.6.7   Traffic flow information has been extracted from the PoTLL TA for Tilbury2
(PoTLL, 2017). The PoTLL flows were obtained from an MCC survey collected
on 21 June 2017. The flows were disaggregated into car, Light Goods Vehicle
(LGV), Heavy Goods Vehicles (HGV), and Public Service Vehicle (PSV) vehicle
types. The flows provided the movement between each pair of arms at the
Asda roundabout. The data provided flows in 15-minute intervals throughout the
day and were aggregated to the time periods of 07:00-08:00, 08:00-09:00, and
17:00-18:00.

3.6.8   The traffic data used is considered to be 'neutral' or representative, avoiding
main and local holiday periods, local school holidays and half terms and other
abnormal traffic.

3.6.9   The flows were converted from vehicles to PCUs and aggregated across all
vehicle types for input into ARCADY. The observed traffic data as set out by
PoTLL was converted into PCUs to enable it to be input into ARCADY. The
Applicant has used a PCU factor of 1.0 for cars and LGVs, 2.18 for HGVs and
2.0 for PSVs (i.e. buses and coaches). The factor for HGVs was derived from
Transport for London (2021) guidance which advises a factor of 1.5 for Medium
Goods Vehicles (these are considered a subset of HGVs, considered equivalent
to OGV1) and 2.3 for HGVs (considered equivalent to OGV2, also a subset of
HGVs). The OGV1 and OGV2 PCU factors used are consistent with those used
in the PoTLL TA for Tilbury2 (PoTLL, 2017). Count data shows that 15% of
HGVs are OGV1 and 85% OGV2. This leads to a weighted average PCU factor
of 2.18.

Forecast year flows

3.6.10   The growth in traffic at the Asda roundabout was derived from the forecasts
developed within LTAM by comparing the 2030 DM forecast flows with the
2016 flows.

3.6.11   Special consideration was required for the treatment of traffic flows to and from
the Amazon/LDP site. The 2016 LTAM does not include this site as it was not
built until after 2016. The 2017 PoTLL traffic data includes the site, but only one
of its access points: the northern access directly off the Asda roundabout.
The southern access off A126 Dock Road was not built until after 2016.

3.6.12   Trips to and from the Amazon/LDP site were separated from the other trips.
For the 2017 PoTLL count, the traffic demand for the site was represented by all
trips to/from the eastern arm of the roundabout. From the 2030 LTAM, the
demand was identified by the actual flows on the northern and southern access
arms into the Amazon/LDP site.

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3.6.13   The non-Amazon part of the 2030 DM forecast traffic demand in ARCADY was determined by examining the differences in forecast traffic flows (for model zones) between the 2016 LTAM base year runs (N108R1) and the DM LTAM (CM49) models for the modelled hours of 07:00–08:00 in the AM peak and 17:00–18:00 in the PM peak.

3.6.14   The absolute differences in flows in LTAM between 2016 and 2030 was applied to the 2017 base year ARCADY matrices to develop the ARACDY 2030 DM matrices. This was undertaken on the basis of origin-destination matrices, applying a matrix of 'flow differences' to the 2017 base year matrix to create the future year matrices.

3.6.15   For 08:00–09:00, where the change in flows from 2016 to 2030 is not available from the LTAM, the existing base year flow profile in ARCADY (derived from count data) between 07:00 – 08:00 and 08:00 – 09:00 was used to factor the difference matrices from the LTAM 07:00–08:00 forecasts for use in preparing the ARCADY 08:00–09:00 matrices.

Amazon/London Distribution Park trip generation

3.6.16   The London Distribution Park (LDP), which is primarily occupied by Amazon, lies to the immediate east of the Asda roundabout.

3.6.17   The Amazon zones were excluded from the forecasting process described above. The flows travelling to/from the Amazon zones were taken directly from the LTAM actual flows for the 07:00–08:00 and 17:00–18:00 hours. The number of trips to/from Amazon in LTAM for these hours were derived from the information in Chapter 6 of the TA for the Amazon/ London Distribution Park (i-Transport LLP, 2015). The trips for the 08:00–09:00 hour used in the ARCADY model were taken directly from the LDP TA (i-Transport LLP, 2015).

3.6.18   It was noted from the LDP TA, and subsequent Addendum (i-Transport, 2016) that different levels of trip generation were calculated, based on varying degrees of model shift. For both LTAM and the ARCADY, the trip generation was based on the scenario with the highest trip generation by car (i.e. the scenario with the lowest mode shift). This will result in a worst case assessment.

3.6.19   The Amazon site operates with a large volume of shift work staff. Staff arrival and departure times are concentrated into a short duration during the shift change. Table 3.6 provides the shift stagger times taken from para 6.4.2 of the LDP TA (i-Transport LLP, 2015).

Table 3.6 Amazon shift times

Morning shift	Evening shift
Stagger 1: 06:45–18:00 (570 staff)	Stagger 1: 18:45–06:00 (570 staff)
Stagger 2: 07:30–18:30 (1,100 staff)	Stagger 2: 19:15–06:30 (1100 staff)

Source: LDP TA, para 6.4.2 (London Distribution Park LLP, 2015)

3.6.20   In LTAM staff are assumed to arrive and depart the Amazon site via the southern access which connects on to the Asda roundabout via the A126 Dock Road. HGVs are assumed to arrive and depart via the northern access which

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connects directly on to the Asda roundabout (via the arm labelled as 'London Distribution Park' in Plate 2.1).

3.6.21 Table 3.7 provides the traffic flows used for the Amazon site within the peak hours. For 07:00-08:00 and 17:00-18:00, the flows are taken from LTAM.

Table 3.7 Amazon traffic flows

Vehicle type	07:00–08:00		08:00–09:00		17:00–18:00	
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
HGVs, vehs	43	45	58	58	42	45
Cars, vehs)	737	0	108	0	0	100

3.6.22 The calculation of the future year demand matrices for ARCADY is summarised in the flowcharts shown in Plate 3.2 and Plate 3.3.

Factoring to 20-minute matrices

3.6.23 The TA for the Amazon site (i-Transport LLP, 2015) indicates that the traffic flow is not constant over the 07:00-08:00 period.

3.6.24 The traffic modelling reported in the Amazon TA was broken down into five-minute intervals, from which a profile of traffic flows can be established. On the A1089 Dock Road the data from the Amazon TA shows that traffic flows associated with Amazon fall dramatically after 07:20.

3.6.25 The traffic impacts expected in the 07:00-08:00 hour therefore will vary greatly throughout the hour. This is because the traffic generated by Amazon staff vehicles, which adds a significant amount of traffic to the Asda roundabout, falls to practically zero after 07:20. While the LTAM has trip demand for the site across the period 07:00-08:00, in reality all of the car trips in that hour will be compressed into the first 20 minutes. It should also be noted from paragraph 3.6.18 that the LTAM assumed a worst case level of trip generation, ignoring any travel plan and mode shift effects.

3.6.26 In order to establish the scale of impact more accurately in the 07:00-08:00 hour, modelling has been undertaken for three 20-minute time segments. As the demand profile follows a flat profile in the 08:00-09:00 period, the number of trips for this hour was divided into three equal 20-minute time segments so that ARCADY can pass queues forward into each modelled time period from the previous time segments. A warm-up period was also modelled (06:20-06:40 and 06:40-07:00) to ensure that any queues which could build up prior to 07:00 were included in the model.

3.6.27 For the 20-minute matrices within 07:00-08:00 for the 2030 DM scenario, the 07:00-08:00 demand was separated into Amazon/LDP and non-Amazon/LDP components. For the non-Amazon part of the demand, each 20-minute period was assumed to have one-third of the demand in the full hour. For the car trips to Amazon/LDP, the full demand from 07:00-08:00 was added to the 07:00-07:20 demand, and none to the periods after 07:20, consistent with the shift pattern established by the Amazon TA junction modelling. For HGV trips to Amazon/LDP, these are assumed to be independent of shift patterns and demand for each 20-minute period was assumed to be one-third of the demand

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for the full hour. The 20-minute matrices from 08:00-09:00 were all equally distributed because there was no specific peak within this period.

Table 3.8 below shows the traffic flows used for the Amazon site in each 20 minute period between 07:00–08:00.

Table 3.8 Amazon traffic flows (07:00–08:00)

Vehicle type	07:00–07:20		07:20–07:40		07:40–08:00	
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
HGVs, vehs	14	15	14	15	14	15
Cars, vehs	737	0	0	0	0	0

3.6.28   The purpose of the 06:20-06:40 and 06:40-07:00 models was to ensure that the assessment of impacts during the periods within 07:00-08:00 was robust. The impacts during 06:20-07:00 do not, of themselves, form part of the assessment.

3.6.29   Non-Amazon/LDP demand was assumed to be one-third of the demand for the full hour (i.e. 06:00-07:00). The demand for the full hour was calculated by factoring the non-Amazon demand from 07:00-08:00, using factors derived from the 2017 PoTLL count data (PoTLL, 2017) which established the relative demand across the two hours. The Amazon/LDP car demand over each 20-minute period was calculated by factoring the Amazon/LDP car demand from the 07:00-07:20 matrix. The factors were derived from flow profiles established by the Amazon TA junction modelling: Appendix J of the TA provides traffic flows from the scenario with and without the Amazon/LDP site for each five minute interval between 05.30 and 07.30. Total flows along the A1089 entry arm were extracted (all car trips to Amazon that use Asda roundabout arrive via this arm), and the flows from the 'without Amazon/LDP' scenario were subtracted from the flows from the 'with Amazon/LDP' scenario to leave a profile of Amazon traffic. This profile is illustrated below:

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Plate 3.1 Profile of Amazon/LDP flows on A1089 entry arm
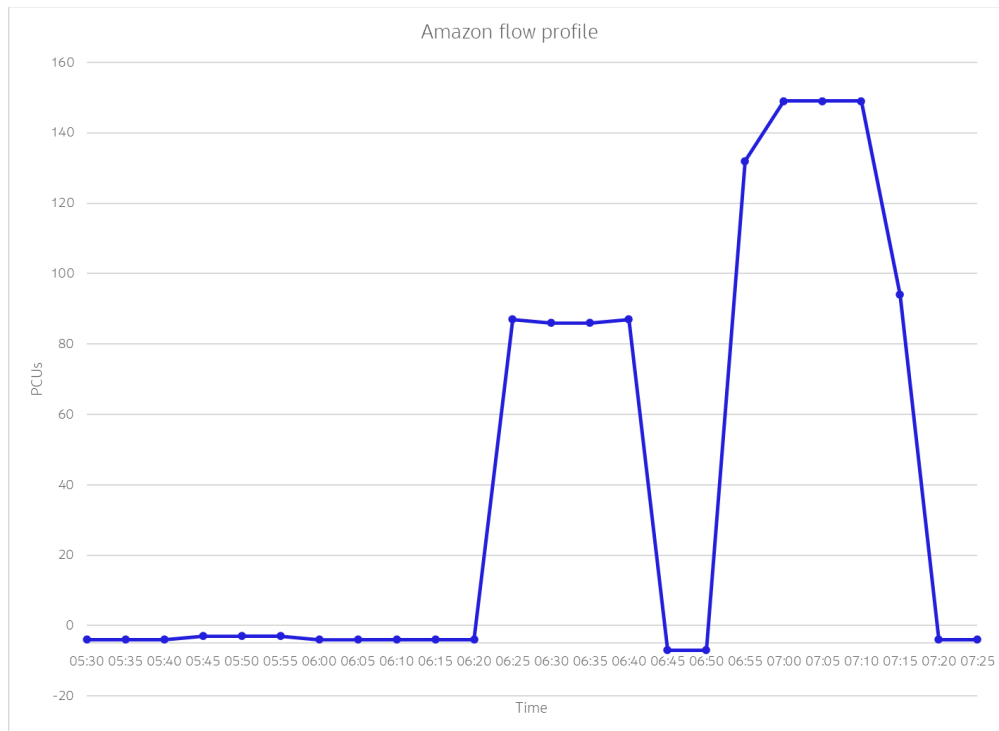
3.6.30   The Amazon/LDP HGV demand was based on the demand from the TA for the
whole hour (06:00-07:00), divided by three.

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Plate 3.2 Calculation of Future Year Demand Matrices for 07:00-08:00 and 17:00-18:00

Extract Cordon Matrices from 2016 and 2030 LTAM → Calculate difference matrices from 2016 to 2030 → Add difference matrices (absolute difference) to 2017 Arcady Matrices (excluding Amazon zone) → Add 2030 London Distribution Park trips (taken from LTAM actual flows based on TA) → Final 2030 Arcady Matrices for 07:00-08:00 and 17:00 – 18:00
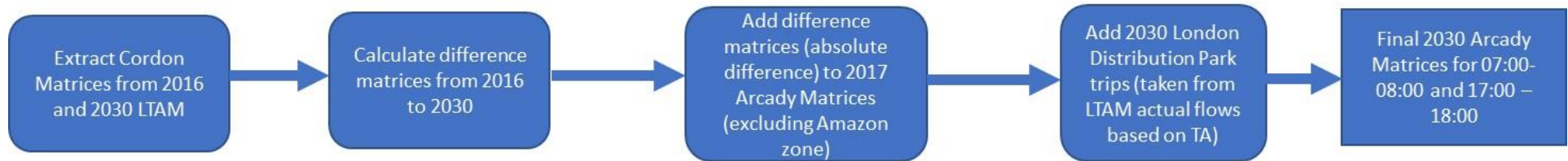
DRAFT

Plate 3.3 Calculation of Future Year Demand Matrices for 08:00-09:00

Take difference matrices from 1st hour (excluding Amazon/LDP zones) → Apply flow profile (factor) between 1st and 2nd hour from 2017 to LTAM difference matrices → Add difference matrices to 2017 (08:00 – 09:00) ARCADY Matrices (excluding Amazon/LDP zones) → Add Amazon/LDP trips for 08:00 – 09:00 (taken from TA) to Amazon/LDP zones → Final 2030 ARCADY Matrices for 08:00 – 09:00

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Construction phase traffic flows

3.6.31   The construction has two principal effects on traffic flows at the Asda roundabout:

1. Adding traffic flow from construction staff and delivery and earthworks lorries serving construction sites

2. Reassignment of all other traffic in response to construction traffic and TTM measures during construction

3.6.32   These two effects were modelled in the LTAM construction phase modelling. Due to the way the modelling was implemented, the two effects can be isolated from each other.

3.6.33   The construction period was separated into 11 phases, each of which was modelled.

3.6.34   The construction of the Project takes place at the same time as the Thurrock Flexible Generator Plant (TFGP) is being constructed. As set out in Section 8.2 of the Project's TA [**REP4-150**], the TFGP construction takes place in intervals, and so some Project construction phases also have TFGP construction ongoing, while other phases do not.

3.6.35   From the LTAM, for each construction phase, a set of cordon matrices around the Asda roundabout was extracted which separately included:

   a. The additional traffic and reassignment effects of TFGP (only for those phases in which TFGP construction is active)

   b. Project-related construction traffic

   c. The reassignment effect on all other traffic in response to Project-related construction traffic and TTM

3.6.36   The above items were extracted from the LTAM 07:00-08:00 and 17:00-18:00 models. HGV matrices were converted from PCUs to vehicles using the PCU factors within the LTAM.

3.6.37   For the ARCADY matrices for 07:00-08:00 and 17:00-18:00, the set of matrices extracted from the LTAM for each phase were added to the 2030 DM matrix. HGVs were converted from vehicles to PCUs using the same factor of 2.18 as used for the DM matrices.

3.6.38   For the ARCADY matrices for 08:00-09:00, the effects of TFGP and Project-related construction traffic (items a and b in the previous list) were assumed to be the same as for 07:00-08:00. In reality, these volumes will be lower than they are in 07:00-08:00, thus the methodology is likely to slightly overestimate the flows in this time period.

3.6.39   For the effects of reassignment in response to construction flows and traffic management, the LTAM matrices for 07:00-08:00 were factored in line with the change in flows from 07:00-08:00 to 08:00-09:00 as recorded in the 2017 traffic survey.

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3.6.40   For the construction phase scenarios, the 20-minute matrices for the period 07:00-08:00 were assumed to have one-third of the demand change (accruing from TFGP construction where relevant to the phase, construction flows, and reassignment of flows in response to construction) of the whole hour. The demand change was then added to the 2030 DM matrices. For the periods between 06:20-07:00, Project-related construction traffic was not added to the matrices.

3.6.41   The detailed model findings are provided in Appendix A.

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4 Operational controls

4.1.1 This chapter considers the model findings and sets out how operational controls would maintain functional operation of the Asda roundabout through the construction period.

4.2 Consideration of the Do Minimum results

4.2.1 The Do Minimum modelling represents the function of the Asda roundabout in a without Project scenario, based on forecast traffic flows in 2030, with modelling information provided in Section A.3 of Appendix A. As noted previously, a precautionary approach has been taken to forecasting traffic flows, and as such, it is likely that the operation of the roundabout would be better than forecast in the provided modelling work. Nevertheless, as acknowledged by the Applicant in previous submissions, as well as by Interested Parties, there are forecast to be periods when traffic flows at Asda roundabout are high, leading to queues and delays.

4.2.2 In the Do Minimum scenario, in 2030, there are forecast to be high flows during the morning peak, leading to queues and delays on the A1089 Dock Road approach to the Asda roundabout. This traffic arises as this is the peak time for people travelling to commercial developments in the local area, and particularly to the Amazon distribution centre located east of Asda roundabout and accessed directly from the roundabout and from the A126 Dock Road. The modelling shows that the traffic flows start to build in the run up to the 07:00 to 08:00 period, reducing towards the end of that period, while the resultant queues continue into the 08:00 to 09:00 period, through which they decline.

4.2.3 Although a highly cautious approach has been taken to modelling this period, this demonstrates that it is highly likely that there is limited spare capacity on the A1089 Dock Road approach to Asda roundabout at some points through this morning peak period. Once the traffic flows reduce, after the shift movements to the Amazon distribution centre, the queues reduce releasing capacity on the roundabout.

4.2.4 In the Do Minimum scenario, in 2030, there are forecast to be high flows in the 17:00 to 18:00 period. Higher flows of traffic joining Asda roundabout from Thurrock Park Way are also affected by higher flows across the roundabout. Thurrock Park Way services a number of logistics and commercial businesses, as well as the Asda Tilbury superstore and fuel station. Similarly to the morning peak period, this indicates that there are periods in the evening where there is limited spare capacity.

4.2.5 The Applicant has a number of operational controls that it can utilise to manage traffic flows associated with construction during these periods. Consideration of these controls will consider both:

    d. Controls on the movement of construction workforce

    e. Controls on the movement of HGVs associated with construction of the project

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Controls on the movement of the construction workforce

4.2.6　The Applicant has a number of measures that can be brought into use to reduce the volume of traffic associated with the construction workforce, and to manage the timing of that traffic.

4.2.7　Fundamentally, the timing of the construction workforce is driven by the construction shift patterns, with workers timing their journeys to arrive shortly in advance of the start of their shift. It is anticipated that there will be a variety of different shift patterns applying to the workforce, meaning that staff will be arriving throughout the day, rather than in a single shift. As set out in Section 6.4 of the Code of Construction Practice (Appendix 2.2 of the Environmental Statement) [**REP6-038**], the standard working hours will commence at 07:00, meaning that staff will be arriving on-site prior to the start of the 07:00 to 08:00 period. Staff arriving for this early start will be likely be leaving site prior to 17:00 and the start of the evening peak. The standard working hours finish at 19:00, after the evening peak and staff arriving on this shift would be arriving on-site to start work after the morning peak.

4.2.8　There will be further Project staff that arrive later than the 07:00 start. Many of these will be arriving after the 08:00 to 09:00 peak, starting on a later shift, however commonly some Project staff would be expected to arrive on-site between 08:00 and 09:00, and leave between 17:00 and 18:00. If necessary to reduce the construction impacts on the Asda roundabout, staff working hours can be scheduled to avoid peaks at Asda roundabout. The Applicant considers that this is provided for in the control plans through obligations in the Framework Control Travel Plan [**REP5-054**], which identifies that setting out planned working hours and shift patterns is a core element of the required Site Specific Travel Plans.

4.2.9　In addition to this ability to control timing, the Applicant has also set out a further series of measures in the Framework Control Travel Plan that can be utilised to reduce traffic movements associated with the construction workforce that would benefit the functioning of Asda roundabout, including:

　　a.　Reducing single-occupancy vehicle journeys

　　b.　Maximising the proportion of workers using public transport

　　c.　Encouraging workers to walk or cycle (where safe and practical)

　　d.　Reducing the need to travel for workers.

Controls on the movement of HGVs associated with construction of the project

4.2.10　The Applicant also has control on the movement of construction vehicles, which are set out in the outline Traffic Management Plan for Construction. Where Project-related construction traffic is forecast to have an impact on the operation of the junction, the Applicant is able to manage the volume of construction traffic arising from the Project works through careful scheduling of deliveries or, if necessary, placing a limit, or cap, on construction traffic at peak times, all of which would be managed through the Traffic Management Forum,

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utilising real time data from the monitoring system to inform appropriate controls. The Outline Traffic Management Plan for Construction (oTMPfC) [**REP6-048**] states at paragraph 2.4.8 that:

"Construction HGV movements to compounds would be controlled to avoid peak hours as far as reasonably practicable; this would be based on a number of monitoring factors including Temporary Traffic Management performance."

4.2.11   The controls could constitute a variety of different approaches including:

    a.   Timing deliveries to avoid peaks;

    b.   Holding vehicles on-site when real-time monitoring shows congestion.

4.2.12   The appropriate measures would be set out and secured in the Traffic Management Plan submitted for approval in accordance with Requirement 6 of the draft Development Consent Order [**REP6-010**].

4.3   Consideration of the Do Something Results

4.3.1   The Do Something modelling set out in Appendix A considers the morning and the evening peak, and broadly results in one or more of three outcomes across the eleven phases:

    a.   That the addition of Project-related construction traffic affects the operation of the roundabout

    b.   That the operation of the roundabout is affected by TTM measures (related to the Project's construction) elsewhere on the road network

    c.   That the Project's construction has no material impact on the operation of the roundabout

Morning peak

4.3.2   The modelling results show that the construction impact on Asda roundabout in the morning peak in Phase 1 comprises impacts on the A126 Dock Road (arm B) and A1089 Dock Road (arm E). The Applicant addressed the impacts arising from the TTM in Phase 1 in Chapter 4 of the Applicant's submission on construction impacts and management at Asda roundabout [**REP6-123**].

4.3.3   In the other construction phases in the morning peak, there is an impact on A1089 Dock Road (arm E), arising from construction traffic.

4.3.4   Noting the forecast delays and queues in both the Do Minimum and Do Something in the morning peak, the Applicant refers to the position set out above regarding the control measures that would be considered during the morning peak.

Evening peak

4.3.5   In the evening peak, there are increases in the impact in the Do Something scenario identified as follows:

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    d. In phase 1 worsening levels of service are identified on A126 Dock Road (arm B), A1089 St Andrew's Road (arm C) and A1089 Dock Road (arm E). The modelling demonstrates that these impacts arise from the TTM measures located elsewhere on the road network, and as stated previously, the Applicant addressed the impacts arising from the TTM in Phase 1 in Chapter 4 of the Applicant's submission on construction impacts and management at Asda roundabout [**REP6-123**].

    e. In phases 2, 3, 4, 5, 6, 7, 8, and 10, reductions in the level of service are identified on the A1089 Dock Road (Arm E).

        i. In phase 6, 7,8, and 10, the impacts arise from the construction traffic flows alone.

        ii. In phase 2, 3, 4, and 5, the removal of the construction traffic from the model still leaves a reduction in the level of service at the A1089 Dock Road (Arm E). This continued impact is the result of rerouting traffic, choosing to take this route due to construction impacts elsewhere on the network, either arising from traffic flows or arising from TTM located elsewhere on the road network.

4.3.6 In relation to the impacts arising from the TTM, the Applicant has already, within Chapter 4 of Applicant's submissions on construction impacts and management at Asda roundabout [**REP6-123**], demonstrated through a worked example relating to proposed TTM measures on the Brentwood Road how the traffic related impacts of TTM can be worked through and minimised. The oTMPfC states at paragraphs 2.4.23 and 4.4.4 that:

"The Contractor would support interventions and/or changes to traffic management measures required to ensure that disruption is kept to a minimum, at the time of planning, and would identify where continuous improvements need to be implemented."

and

"Where there is a need to install extended lengths of traffic management such as longitudinal trenches, the default length would be 300m sections. The exact length would be determined in the TMP taking into consideration local accessibility, traffic volumes, pedestrian movements and local safety considerations."

4.3.7 The Applicant is satisfied that the oTMPfC [**REP6-048**] secures a process for each section of the roadworks by requiring the Contractor to develop a Traffic Management Plan in collaboration with the relevant stakeholders and to implement the necessary controls such as avoiding work during peak hours where reasonably practicable, early engagement with relevant stakeholders, and early advance warning to road users. Following the Secretary of State's approval of the Traffic Management Plan, the Contractor would liaise with the relevant highway authority to obtain the permit to secure the necessary road space to deliver the works.

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4.4   Dynamic Management of impacts

4.4.1   The modelling demonstrates that the Asda roundabout presents a dynamic and changing environment through the day, and the controls that are needed to ensure that Asda roundabout functions through the day will need to be responsive. The Applicant is required to put in place a monitoring programme which will cover Asda roundabout and the approaches as well as other roads across the local road network.

4.4.2   Sections 2.4.22 to 2.4.24 of the oTMPfC set out how baseline monitoring will be put in place ahead of works commencing, and how this monitoring would "*inform interventions and/or changes to traffic management measures required to ensure that disruption is kept to a minimum*" both during the planning phase and allowing for continuous improvement. Through the references provided above, the Applicant has set out the obligation to provide a Traffic Management Plan that secures this dynamic management.

4.4.3   The Applicant intends to submit an update to the outline Traffic Management Plan for Construction at Deadline 7 which will provide further definition of localised junction modelling that would be undertaken to support the management of construction traffic. Asda roundabout would be included in this localised junction modelling, and this would support the development of construction traffic control measures.

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5   Conclusions

5.1.1   The Applicant has set out as assessment of the construction phase impacts across the road network in the Transport Assessment [**REP4-150** and **REP4-152**] which included provision of an assessment of the changing flows and journey time impacts along the A1089 developed using LTAM. This showed impacts on journeys through Asda roundabout, associated with both the proposed TTM and with the construction traffic. This assessment expands on that, by providing information on the worst case scale of the impacts, developed using precautionary assumptions, and provides an overview of how controls would be implemented to control these impacts.

5.1.2   In both the morning and evening peak, the results show that the Asda roundabout junction performance is likely to have limited capacity without the Project, and as such implementation of construction traffic management controls are likely to be required. These would be developed during the preparation of the Traffic Management Plan and informed on a dynamic basis by traffic monitoring throughout the construction phase.

5.1.3   In the Phase 1 in the morning and evening peak, and potentially phases 2, 3, 4, and 5 of the evening peaks, there are impacts arising from the implementation of TTM on local roads, away from the roundabout. The Applicant has provided at Deadline 6 information on how these would be managed using a worked example relating to proposed TTM measures on the Brentwood Road, and similar approaches would be applied to works undertaken during phases 2, 3, 4 and 5.

5.1.4   Where Project-related construction traffic is forecast to have an impact on the operation of the junction, the Applicant is able to manage the volume of construction traffic arising from the Project works. The Applicant maintains that operational controls developed during the detailed design stage would be sufficient to appropriately manage construction impacts and maintain functional operation of the Asda roundabout.

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Glossary

Term	Abbreviation	Explanation
A122		The new A122 trunk road to be constructed as part of the Lower Thames Crossing project, including links, as defined in Part 2, Schedule 5 (Classification of Roads) in the draft DCO (Application Document 3.1)
A122 Lower Thames Crossing	**Project**	A proposed new crossing of the Thames Estuary linking the county of Kent with the county of Essex, at or east of the existing Dartford Crossing.
Application Document		In the context of the Project, a document submitted to the Planning Inspectorate as part of the application for development consent.
Construction		Activity on and/or offsite required to implement the Project. The construction phase is considered to commence with the first activity on site (e.g. creation of site access), and ends with demobilisation.
Development Consent Order	**DCO**	Means of obtaining permission for developments categorised as Nationally Significant Infrastructure Projects (NSIP) under the Planning Act 2008.
Development Consent Order application	**DCO application**	The Project Application Documents, collectively known as the 'DCO application'.
Do Minimum	**DM**	A future year scenario in LTAM which includes changes to the road network and planned development that is forecast to go ahead, but not the Lower Thames Crossing.
Do Something	**DS**	A future year scenario in LTAM which includes changes to the road network and planned development that is forecast to go ahead, and the Lower Thames Crossing.
Heavy Goods Vehicle	**HGV**	A large, heavy motor vehicle used for transporting cargo. Former name of National Highways.
Highways England		Former name of National Highways.
Light Goods Vehicle	**LGV**	Vehicles meeting the Department for Transport VEH04 criteria.
London Distribution Park	**LDP**	An area, 70 acres (28ha), of land for industrial and logistics development 6.5 miles from the M25, adjacent to Port of Tilbury, London.
Lower Thames Area Model	**LTAM**	Transport model designed to forecast impacts of providing additional road based capacity across the River Thames at locations at or east of the existing Dartford Crossing.
National Highways		A UK government-owned company with responsibility for managing the motorways and major roads in England. Formerly known as Highways England.
Operation		Describes the operational phase of a completed development and is considered to commence at the end of the construction phase, after demobilisation.
Passenger Car Unit(s)	**PCU**	A metric to allow different vehicle types within traffic flows in a traffic model to be assessed in a consistent manner.
Port of Tilbury London Limited	**PoTLL**	n/a

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Term	Abbreviation	Explanation
Project road		The new A122 trunk road, the improved A2 trunk road, and the improved M25 and M2 special roads, as defined in Parts 1 and 2, Schedule 5 (Classification of Roads) in the draft DCO (Application Document 3.1).
Project route		The horizontal and vertical alignment taken by the Project road.
Secretary of State	**SoS**	The Secretary of State has overall responsibility for the policies of the Department for Transport.
The tunnel		Proposed 4.25km (2.5 miles) road tunnel beneath the River Thames, comprising two bores, one for northbound traffic and one for southbound traffic. Cross-passages connecting each bore would be provided for emergency incident response and tunnel user evacuation. Tunnel portal structures would accommodate service buildings for control operations, mechanical and electrical equipment, drainage and maintenance operations. Emergency access and vehicle turn-around facilities would also be provided at the tunnel portals.
Thurrock Flexible Generation Plant	**TFGP**	A flexible generation and storage power plant proposed by Thurrock Power Ltd on land to the north of Tilbury substation, Thurrock. Comprising a gas fired electricity generating station and a battery storage facility.
Utility Logistics Hub(s)	**ULH**	Temporary compounds required for specific utility works. They would receive, store and distribute the plant machinery and materials for specific utility works. They may include offices, welfare facilities, refuelling stations, security hubs, vehicle/wheel washing sites and parking areas similar in size to the main works satellite compounds.
VISSIM	**-**	Micro-simulation traffic modelling software

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Appendices

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Appendix A - Modelling Results

A.1 Introduction

A.1.1 This chapter sets out the capacity modelling findings for the base year, the DM and the construction scenario for each construction traffic phase.

A.1.2 The reported metrics are:

a. RFC (Ratio of Flow to Capacity)

b. Delay in seconds, rounded to the nearest tenth of a second

c. Queues in PCUs, rounded to the nearest whole PCU

d. Level of Service (LOS), a concept derived from the Highway Capacity Manual (2000) by the USA Transportation Research Board. It rates performance based upon average delay per vehicle on an A to F grading as follows:

   i. LOS A – 0 to 10 seconds;

   ii. LOS B – 10 to 15 seconds for unsignalized junctions;

   iii. LOS C – 15 to 25 seconds for unsignalized junctions;

   iv. LOS D – 25 to 35 seconds for unsignalized junctions;

   v. LOS E – 35 to 50 seconds for unsignalized junctions; and

   vi. LOS F – over 50 seconds for unsignalized junctions.

A.1.3 Each set of modelling results reflect the results from the worst part of the hour for each reported metric (so the queue, for example, is the maximum queue in the period).

A.1.4 A full set of model output reports are included in Appendix B.

A.2 Thresholds for further testing

A.2.1 Where appropriate, the Applicant has undertaken "test 1" as set out at paragraph 5.2.3 of Applicant's submissions on construction impacts and management at Asda roundabout [**REP6-123**]. That test removes the Project-related construction traffic from the flows.

A.2.2 The Applicant has applied two criteria to determine when this further test is required, this is where both:

a. An arm has an RFC greater than 0.85 in a construction traffic phase; and

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b. The LOS for that arm worsens between the DM and a construction traffic phase.

A.2.3   In the modelling results set out in the following sections, the need for this test is indicated by red text in the ARCADY results table within each construction traffic phase.

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A.3 Do Minimum (DM)

A.3.1   Table A.1 provides a summary of the capacity results for the DM, which
represents 2030 without the Project or its construction. These results
summarise the worst performance from any individual 20 minute period within
the given hour.

Table A.1 Capacity results – Do Minimum (DM), 2030

Arm	07:00-08:00				08:00–09:00				17:00–18:00			
	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS
A	0	11.0	0.12	B	0	10.8	0.15	B	0	10.3	0.13	B
B	2	10.9	0.62	B	3	14.1	0.71	B	1	7.9	0.58	A
C	3	8.1	0.59	A	3	9.6	0.65	A	3	7.9	0.68	A
D	1	5.6	0.34	A	1	7.6	0.50	A	18	65.6	0.98	F
E	637	919.8	1.78	F	236	454.8	0.89	F	15	29.2	0.94	D

A.3.2   The DM results show that, compared to the base year, junction performance
worsens in all three modelled time periods, but particularly so in the 07:00-08:00
hour where the operation of arm E –A1089 Dock Road – sees the RFC increase
from 0.85 to 1.78 and the forecast queue increases by around 630 PCUs.

A.3.3   The detailed 20-minute results (in Appendix A) show that a queue of 637
Passenger Car Units (PCU) builds up from 07:00-07:20 on the A1089 Dock
Road arm which then dissipates to 236 PCU thereafter. The results indicate that
the queuing is attributable to the staff shift changes at the Amazon site.

A.3.4   The longest queues in the period from 08:00-09:00 are for arm E, which shows
a maximum queue of 236 PCU. In reality, this is the queue at the beginning of
the time period. By the end of the third 20-minute time segment, the queue
reduces to 87 PCU.

A.3.5   In the PM, arm D (Thurrock Park Way) shows the lowest level of service with
the RFC being 0.98.

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A.4 Construction traffic phase 1

A.4.1   This section presents the ARCADY results for this construction traffic phase, a comparison of the results against those from the DM and further testing if required.

ARCADY results

A.4.2   Table A.2 provides a summary of the capacity results for the existing layout. These results summarise the lowest performance across each modelled hour. Full outputs are provided as Appendix B.

Table A.2 Capacity results – Construction traffic phase 1, 2030

Arm	AM peak 07:00–08:00				AM peak 08:00–09:00				PM peak 17:00–18:00			
	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS
A	0	11.0	0.12	B	0	10.9	0.15	B	0	11.3	0.14	B
B	5	22.7	0.83	C	13	56.6	**0.96**	**F**	5	22.1	**0.85**	**C**
C	3	9.5	0.63	A	4	12.0	0.70	B	13	30.8	**0.93**	**D**
D	1	6.4	0.37	A	1	9.2	0.55	A	20	92.9	1.01	F
E	656	967.4	1.81	F	313	566.0	0.92	F	59	90.0	**1.03**	**F**

Comparison between DM and construction traffic phase 1

A.4.3   A comparison exercise has been undertaken between the DM (with no construction) as reported in Section A.3 and construction traffic phase 1 to show how network operating conditions are forecast to change during construction.

A.4.4   The results identified in red in Table A.2 indicate where the comparison exercise has shown that the thresholds for further testing (see Section A.2) are exceeded.

A.4.5   As shown, arm B in the AM peak (08:00–09:00) and arms B, C and E in the PM peak (17:00-18:00) have been identified in this construction traffic phase as requiring further testing.

A.4.6   As such, the Applicant has undertaken further testing for the AM (08:00–09:00) and the PM peak and the results are shown in Table A.3.

Table A.3 Capacity results – Construction traffic phase 1 further test, 2030

Arm	AM peak 07:00–08:00				AM peak 08:00–09:00				PM peak 17:00–18:00			
	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS
A	-	-	-	-	0	10.9	0.15	B	0	11.3	0.14	B

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Arm	AM peak 07:00–08:00				AM peak 08:00–09:00				PM peak 17:00–18:00			
	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS
B	-	-	-	-	11	49.6	0.94	E	5	21.7	0.85	C
C	-	-	-	-	4	11.7	0.69	B	9	21.87	0.89	C
D	-	-	-	-	1	9.0	0.54	A	14	67.4	0.97	F
E	-	-	-	-	290	532.1	0.91	F	54	83.3	1.03	F

A.4.7   The further test shows that in the AM (08:00–09:00) peak, while removal of
Project-related construction traffic improves the operation of the junction, the
level of service for arm B remains worse than in the DM. In the PM peak, while
removal of Project-related construction traffic improves the operation of the
junction, the level of service for arms B, C and E remain worse than in the DM.

A.5   Construction traffic phase 2

A.5.1   This section presents the ARCADY results for this construction traffic phase,
a comparison of the results against those from the DM and further testing
if required.

ARCADY results

A.5.2   Table A.4 provides a summary of the capacity results for the existing layout.
These results summarise the lowest performance across each modelled hour.
Full outputs are provided as Appendix B.

Table A.4 Capacity results – Construction traffic phase 2, 2030

Arm	AM peak 07:00–08:00				AM peak 08:00–09:00				PM peak 17:00–18:00			
	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS
A	0	11.0	0.12	B	0	10.9	0.15	B	0	10.8	0.13	B
B	2	11.9	0.64	B	3	15.8	0.74	C	2	8.7	0.60	A
C	3	8.8	0.63	A	4	10.7	0.69	B	4	9.4	0.73	A
D	1	6.0	0.36	A	1	8.4	0.53	A	28	95.6	1.02	F
E	646	943.6	1.80	F	274	509.1	0.91	F	24	43.3	**0.97**	**E**

Comparison of DM and construction traffic phase 2

A.5.3   A comparison exercise has been undertaken between the DM (with no
construction) as reported in Section A.3 and construction traffic phase 2 to show
how network operating conditions are forecast to change during construction.

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A.5.4   The results identified in red in Table A.4 indicate where the comparison
          exercise has shown that the thresholds for further testing (see Section A.2) are
          exceeded.

A.5.5   As shown, arm E has been identified in the PM peak (17:00-18:00) in this
          construction traffic phase as requiring further testing.

A.5.6   As such, the Applicant has undertaken further testing for the PM peak and the
          results are shown in Table A.5.

Table A.5 Capacity results – Construction traffic phase 2 further test, 2030

Arm	AM peak 07:00–08:00				AM peak 08:00–09:00				PM peak 17:00–18:00			
	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS
A	-	-	-	-	-	-	-	-	0	10.6	0.13	B
B	-	-	-	-	-	-	-	-	2	8.4	0.60	A
C	-	-	-	-	-	-	-	-	3	8.8	0.71	A
D	-	-	-	-	-	-	-	-	25	85.5	1.01	F
E	-	-	-	-	-	-	-	-	19	35.8	0.96	E

A.5.7   The further test shows that removal of Project-related construction traffic
          improves the operation of the junction to close to the conditions shown in the
          DM. However, the level of service for arm E remains worse than in the DM.

A.6   Construction traffic phase 3

A.6.1   This section presents the ARCADY results for this construction traffic phase, a
          comparison of the results against those from the DM and further testing if
          required.

ARCADY results

5.1.5   Table A.6 provides a summary of the capacity results for the existing layout.
          These results summarise the lowest performance across each modelled hour.
          Full outputs are provided as Appendix B.

Table A.6 Capacity results – Construction traffic phase 3, 2030

Arm	AM peak 07:00–08:00				AM peak 08:00–09:00				PM peak 17:00–18:00			
	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS
A	0	11.0	0.12	B	0	10.9	0.15	B	0	11.1	0.14	B
B	2	12.3	0.66	B	3	16.4	0.75	C	2	9.2	0.62	A
C	3	9.3	0.65	A	4	11.5	0.71	B	3	9.3	0.73	A

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Arm	AM peak 07:00–08:00				AM peak 08:00–09:00				PM peak 17:00–18:00			
	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS
D	1	6.2	0.37	A	1	8.8	0.54	A	28	95.5	1.02	F
E	646	945.1	1.80	F	282	516.4	0.92	F	39	64.8	**1.01**	**F**

Comparison of DM and construction traffic phase 3

A.6.2   A comparison exercise has been undertaken between the DM (with no construction) as reported in Section A.3 and construction traffic phase 3 to show how network operating conditions are forecast to change during construction.

A.6.3   The results identified in red in Table A.6 indicate where the comparison exercise has shown that the thresholds for further testing (see Section A.2) are exceeded.

A.6.4   As shown, arm E has been identified in the PM peak (17:00-18:00) in construction traffic phase 3 as requiring further testing.

A.6.5   As such, the Applicant has undertaken further testing for the PM peak and the results are shown in Table A.7.

Table A.7 Capacity results – Construction traffic phase 3 further test, 2030

Arm	AM peak 07:00–08:00				AM peak 08:00–09:00				PM peak 17:00–18:00			
	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS
A	-	-	-	-	-	-	-	-	0	10.9	0.13	B
B	-	-	-	-	-	-	-	-	2	8.9	0.61	A
C	-	-	-	-	-	-	-	-	3	8.6	0.71	A
D	-	-	-	-	-	-	-	-	23	81.0	1.00	F
E	-	-	-	-	-	-	-	-	28	50.1	0.99	F

A.6.6   The further test shows that removal of Project-related construction traffic improves the operation of the junction to close to the conditions shown in the DM. However, the level of service for arm E remains worse than in the DM.

A.7   Construction traffic phase 4

A.7.1   This section presents the ARCADY results for this construction traffic phase, a comparison of the results against those from the DM and further testing if required.

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ARCADY results

A.7.2   Table A.8 provides a summary of the capacity results for the existing layout. These results summarise the lowest performance across each modelled hour. Full outputs are provided as Appendix B.

Table A.8 Capacity results – Construction traffic phase 4, 2030

Arm	AM peak 07:00–08:00				AM peak 08:00–09:00				PM peak 17:00–18:00			
	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS
A	0	11.0	0.12	B	0	10.9	0.15	B	0	11.1	0.14	B
B	2	11.7	0.64	B	3	15.5	0.74	C	2	9.1	0.61	A
C	3	8.9	0.64	A	4	10.9	0.70	B	3	8.6	0.71	A
D	1	6.0	0.37	A	1	8.5	0.53	A	22	79.4	1.00	F
E	644	939.0	1.79	F	271	501.9	0.91	F	38	63.8	**1.01**	**F**

Comparison of DM and construction phase 4

A.7.3   A comparison exercise has been undertaken between the DM (with no construction) as reported in Section A.3 and the construction traffic phase 4 to show how network operating conditions are forecast to change during construction.

A.7.4   The results identified in red in Table A.8 indicate where the comparison exercise has shown that the thresholds for further testing (see Section A.2) are exceeded.

A.7.5   As shown, arm E has been identified in the PM peak (17:00-18:00) in this construction traffic phase as requiring further testing.

A.7.6   As such, the Applicant has undertaken further testing for the PM peak and the results are shown in Table A.9.

Table A.9 Capacity results – Construction traffic phase 4 further test, 2030

Arm	AM peak 07:00–08:00				AM peak 08:00–09:00				PM peak 17:00–18:00			
	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS
A	-	-	-	-	-	-	-	-	0	10.9	0.13	B
B	-	-	-	-	-	-	-	-	2	8.8	0.61	A
C	-	-	-	-	-	-	-	-	3	8.0	0.69	A
D	-	-	-	-	-	-	-	-	19	67.1	0.98	F
E	-	-	-	-	-	-	-	-	27	48.6	0.98	E

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A.7.7   The further test shows that removal of Project-related construction traffic improves the operation of the junction to close to the conditions shown in the DM. However, the level of service for arm E remains worse than in the DM.

A.8   Construction traffic phase 5

A.8.1   This section presents the ARCADY results for this construction traffic phase, a comparison of the results against those from the DM and further testing if required.

ARCADY results

A.8.2   Table A.10 provides a summary of the capacity results for the existing layout. These results summarise the lowest performance across each modelled hour. Full outputs are provided as Appendix B.

Table A.10 Capacity results – Construction traffic phase 5, 2030

Arm	AM peak 07:00–08:00				AM peak 08:00–09:00				PM peak 17:00–18:00			
	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS
A	0	11.0	0.12	B	0	10.9	0.15	B	0	10.8	0.13	B
B	2	11.5	0.63	B	3	15.1	0.73	C	2	8.7	0.60	A
C	3	9.2	0.65	A	4	11.3	0.71	B	3	9.2	0.72	A
D	1	6.2	0.37	A	1	8.7	0.54	A	24	85.1	1.01	F
E	643	937.1	1.79	F	262	492.4	0.90	F	25	45.4	**0.98**	**E**

Comparison of DM construction traffic phase 5

A.8.3   A comparison exercise has been undertaken between the DM (with no construction) as reported in Section A.3 and construction traffic phase 5 to show how network operating conditions are forecast to change during construction.

A.8.4   The results identified in red in Table A.10 indicate where the comparison exercise has shown that the thresholds for further testing (see Section A.2) are exceeded.

A.8.5   As shown, arm E has been identified in the PM peak (17:00-18:00) in this construction traffic phase as requiring further testing.

A.8.6   As such, the Applicant has undertaken further testing for the PM peak and the results are shown in Table A.11.

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Table A.11 Capacity results – Construction traffic phase 5 further test, 2030

Arm	AM peak 07:00–08:00				AM peak 08:00–09:00				PM peak 17:00–18:00			
	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS
A	-	-	-	-	-	-	-	-	0	10.6	0.13	B
B	-	-	-	-	-	-	-	-	2	8.4	0.59	A
C	-	-	-	-	-	-	-	-	3	8.5	0.71	A
D	-	-	-	-	-	-	-	-	20	73.8	0.99	F
E	-	-	-	-	-	-	-	-	19	35.4	0.96	E

A.8.7 The further test shows that removal of Project-related construction traffic improves the operation of the junction to close to the conditions shown in the DM. However, the level of service for arm E remains worse than in the DM.

A.9 Construction traffic phase 6

A.9.1 This section presents the ARCADY results for this construction traffic phase, a comparison of the results against those from the DM and further testing if required.

ARCADY results

A.9.2 Table A.12 provides a summary of the capacity results for the existing layout. These results summarise the lowest performance across each modelled hour. Full outputs are provided as Appendix B.

Table A.12 Capacity results – Construction traffic phase 6, 2030

Arm	AM peak 07:00–08:00				AM peak 08:00–09:00				PM peak 17:00–18:00			
	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS
A	0	11.0	0.12	B	0	10.9	0.15	B	0	10.9	0.13	B
B	2	11.9	0.64	B	3	15.8	0.74	C	2	8.7	0.60	A
C	3	9.3	0.66	A	4	11.5	0.72	B	4	9.5	0.73	A
D	1	6.2	0.37	A	1	8.8	0.54	A	28	95.1	1.02	F
E	644	939.5	1.79	F	267	499.0	0.91	F	26	47.0	**0.98**	**E**

Comparison of DM construction traffic phase 6

A.9.3 A comparison exercise has been undertaken between the DM (with no construction) as reported in Section A.3 and construction traffic phase 6 to show how network operating conditions are forecast to change during construction.

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A.9.4   The results identified in red in Table A.12 indicate where the comparison
          exercise has shown that the thresholds for further testing (see Section A.2) are
          exceeded.

A.9.5   As shown, arm E has been identified in the PM peak (17:00-18:00) in this
          construction traffic phase as requiring further testing.

A.9.6   As such, the Applicant has undertaken further testing for the PM peak and the
          results are shown in Table A.13.

Table A.13 Capacity results – Construction traffic phase 6 further test, 2030

Arm	AM peak 07:00–08:00				AM peak 08:00–09:00				PM peak 17:00–18:00			
	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS
A	-	-	-	-	-	-	-	-	0	10.6	0.13	B
B	-	-	-	-	-	-	-	-	2	8.3	0.59	A
C	-	-	-	-	-	-	-	-	3	8.5	0.71	A
D	-	-	-	-	-	-	-	-	22	78.3	1.00	F
E	-	-	-	-	-	-	-	-	18	34.9	0.96	D

A.9.7   The further test shows that removal of Project-related construction traffic
          improves the operation of the junction to close to the conditions shown in
          the DM.

A.10   Construction traffic phase 7

A.10.1   This section presents the ARCADY results for this construction traffic phase, a
          comparison of the results against those from the DM and further testing if
          required.

ARCADY results

A.10.2   Table A.14 provides a summary of the capacity results for the existing layout.
          These results summarise the lowest performance across each modelled hour.
          Full outputs are provided as Appendix B.

Table A.14 Capacity results – Construction traffic phase 7, 2030

Arm	AM peak 07:00–08:00				AM peak 08:00–09:00				PM peak 17:00–18:00			
	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS
A	0	11.0	0.12	B	0	10.9	0.15	B	0	10.8	0.13	B
B	2	11.8	0.64	B	3	15.5	0.74	C	2	8.6	0.60	A

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Arm	AM peak 07:00–08:00				AM peak 08:00–09:00				PM peak 17:00–18:00			
	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS
C	3	9.2	0.65	A	4	11.4	0.71	B	3	9.3	0.73	A
D	1	6.1	0.37	A	1	8.8	0.54	A	27	91.5	1.02	F
E	643	938.0	1.79	F	267	497.0	0.91	F	25	45.6	**0.98**	**E**

Comparison of DM and construction traffic phase 7

A.10.3   A comparison exercise has been undertaken between the DM (with no construction) as reported in Section A.3 and construction traffic phase 7 to show how network operating conditions are forecast to change during construction.

A.10.4   The results identified in red in Table A.14 indicate where the comparison exercise has shown that the thresholds for further testing (see Section A.2) are exceeded.

A.10.5   As shown, arm E has been identified in the PM peak (17:00-18:00) in this construction traffic phase as requiring further testing.

A.10.6   As such, the Applicant has undertaken further testing for the PM peak and the results are shown in Table A.15.

Table A.15 Capacity results – Construction traffic phase 7 further test, 2030

Arm	AM peak 07:00–08:00				AM peak 08:00–09:00				PM peak 17:00–18:00			
	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS
A	-	-	-	-	-	-	-	-	0	10.6	0.13	B
B	-	-	-	-	-	-	-	-	1	8.3	0.59	A
C	-	-	-	-	-	-	-	-	3	8.5	0.70	A
D	-	-	-	-	-	-	-	-	22	77.5	1.00	F
E	-	-	-	-	-	-	-	-	18	34.7	0.96	D

A.10.7   The further test shows that removal of Project-related construction traffic improves the operation of the junction to close to the conditions shown in the DM.

A.11   Construction traffic phase 8

A.11.1   This section presents the ARCADY results for this construction traffic phase, a comparison of the results against those from the DM and further testing if required.

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ARCADY results

A.11.2   Table A.16 provides a summary of the capacity results for the existing layout.
These results summarise the lowest performance across each modelled hour.
Full outputs are provided as Appendix B.

Table A.16 Capacity results – Construction traffic phase 8, 2030

Arm	AM peak 07:00–08:00				AM peak 08:00–09:00				PM peak 17:00–18:00			
	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS
A	0	11.0	0.12	B	0	10.9	0.15	B	0	10.8	0.13	B
B	2	11.7	0.64	B	3	15.2	0.73	C	2	8.7	0.60	A
C	3	9.1	0.64	A	4	11.0	0.70	B	4	9.4	0.73	A
D	1	6.1	0.37	A	1	8.5	0.53	A	27	93.7	1.02	F
E	646	943.3	1.79	F	271	504.2	0.91	F	25	45.9	**0.98**	**E**

Comparison of DM and construction traffic phase 8

A.11.3   A comparison exercise has been undertaken between the DM (with no
construction) as reported in Section A.3 and the construction traffic phase 8
to show how network operating conditions are forecast to change during
construction.

A.11.4   The results identified in red in Table A.16 indicate where the comparison
exercise has shown that the thresholds for further testing (see Section A.2) are
exceeded.

A.11.5   As shown, arm E has been identified in the PM peak (17:00-18:00) in
construction traffic phase 8 as requiring further testing.

A.11.6   As such, the Applicant has undertaken further testing for the PM peak and the
results are shown in Table A.17.

Table A.17 Capacity results – Construction traffic phase 8 further test, 2030

Arm	AM peak 07:00–08:00				AM peak 08:00–09:00				PM peak 17:00–18:00			
	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS
A	-	-	-	-	-	-	-	-	0	10.6	0.13	B
B	-	-	-	-	-	-	-	-	1	8.3	0.59	A
C	-	-	-	-	-	-	-	-	3	8.5	0.70	A
D	-	-	-	-	-	-	-	-	22	77.5	1.00	F
E	-	-	-	-	-	-	-	-	18	34.3	0.95	D

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A.11.7   The further test shows that removal of Project-related construction traffic returns the operation of the junction to virtually the conditions shown in the DM.

A.12   Construction traffic phase 9

A.12.1   This section presents the ARCADY results for this construction traffic phase, a comparison of the results against those from the DM and further testing if required.

ARCADY results

A.12.2   Table A.18 provides a summary of the capacity results for the existing layout. These results summarise the lowest performance across each modelled hour. Full outputs are provided as Appendix B.

Table A.18 Capacity results – Construction traffic phase 9, 2030

Arm	AM peak 07:00–08:00				AM peak 08:00–09:00				PM peak 17:00–18:00			
	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS
A	0	11.0	0.12	B	0	10.8	0.15	B	0	10.5	0.13	B
B	2	11.9	0.65	B	3	15.4	0.74	C	2	8.4	0.60	A
C	3	9.0	0.65	A	4	11.1	0.71	B	3	8.5	0.70	A
D	1	6.1	0.37	A	1	8.7	0.54	A	22	77.9	1.00	F
E	631	908.2	1.77	F	217	425.5	0.89	F	19	34.9	0.96	D

Comparison of DM and construction traffic phase 9

A.12.3   A comparison exercise has been undertaken between the DM (with no construction) as reported in Section A.3 and construction traffic phase 9 to show how network operating conditions are forecast to change during construction.

A.12.4   The comparison exercise found that the thresholds for further testing are not exceeded on any arm during any time period for this construction traffic phase.

A.12.5   As such, the Applicant has not undertaken any further testing for this construction traffic phase.

A.13   Construction traffic phase 10

A.13.1   This section presents the ARCADY results for this construction traffic phase, a comparison of the results against those from the DM and further testing if required.

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ARCADY results

A.13.2　Table A.19 provides a summary of the capacity results for the existing layout. These results summarise the lowest performance across each modelled hour. Full outputs are provided as Appendix B.

Table A.19 Capacity results – Construction traffic phase 10, 2030

Arm	AM peak 07:00–08:00				AM peak 08:00–09:00				PM peak 17:00–18:00			
	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS
A	0	11.0	0.12	B	0	10.8	0.15	B	0	10.7	0.13	B
B	2	11.2	0.63	B	3	14.6	0.72	B	1	8.3	0.59	A
C	3	8.7	0.63	A	4	10.7	0.70	B	3	8.4	0.70	A
D	1	5.9	0.36	A	1	8.3	0.53	A	21	73.8	0.99	F
E	642	933.6	1.79	F	261	488.5	0.90	F	22	40.8	**0.97**	**E**

Comparison of DM and construction traffic phase 10

A.13.3　A comparison exercise has been undertaken between the DM (with no construction) as reported in Section A.3 and construction traffic phase 10 to show how network operating conditions are forecast to change during construction.

A.13.4　The results identified in red in Table A.19 indicate where the comparison exercise has shown that the thresholds for further testing (see Section A.2) are exceeded.

A.13.5　As shown, arm E has been identified in the PM peak (17:00-18:00) in this construction traffic phase as requiring further testing.

A.13.6　As such, the Applicant has undertaken further testing for the PM peak and the results are shown in Table A.20.

Table A.20 Capacity results – Construction traffic phase 10 further test, 2030

Arm	AM peak 07:00–08:00				AM peak 08:00–09:00				PM peak 17:00–18:00			
	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS
A	-	-	-	-	-	-	-	-	0	10.5	0.13	B
B	-	-	-	-	-	-	-	-	1	8.1	0.58	A
C	-	-	-	-	-	-	-	-	3	7.9	0.68	A
D	-	-	-	-	-	-	-	-	18	64.9	0.98	F
E	-	-	-	-	-	-	-	-	18	34.7	0.96	D

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A.13.7   The further test shows that removal of Project-related construction traffic returns the operation of the junction to virtually the conditions shown in the DM.

A.14   Construction traffic phase 11

A.14.1   This section presents the ARCADY results for this construction traffic phase, a comparison of the results against those from the DM and further testing if required.

ARCADY results

A.14.2   Table A.21 provides a summary of the capacity results for the existing layout. These results summarise the lowest performance across each modelled hour. Full outputs are provided as Appendix B.

Table A.21 Capacity results – Construction traffic phase 11, 2030

Arm	AM peak 07:00–08:00				AM peak 08:00–09:00				PM peak 17:00–18:00			
	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS	Queue (PCUs)	Delay (secs)	RFC	LOS
A	0	11.0	0.12	B	0	10.8	0.15	B	0	10.5	0.13	B
B	2	10.9	0.62	B	3	14.1	0.71	B	1	8.0	0.58	A
C	3	8.2	0.60	A	3	9.9	0.66	A	3	8.0	0.69	A
D	1	5.6	0.35	A	1	7.8	0.51	A	19	67.9	0.98	F
E	641	929.2	1.79	F	253	478.8	0.90	F	17	31.9	0.95	D

Comparison of DM and construction traffic phase 11

A.14.3   A comparison exercise has been undertaken between the DM (with no construction) as reported in Section A.3 and construction traffic phase 11 to show how network operating conditions are forecast to change during construction.

A.14.4   The comparison exercise found that the thresholds for further testing are not exceeded on any arm during any time period for this phase.

A.14.5   As such, the Applicant has not undertaken any further testing for this phase.

A.15   Summary

A.15.1   The comparison between the ARCADY results from the DM and each construction traffic phase is shown in Table A.22. This exercise highlighted that further testing was required in all construction traffic phases other than phases 9 and 11.

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Table A.22 Summary of comparison exercise

Time period	Construction traffic phase										
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
AM peak 07:00-08:00	-	-	-	-	-	-	-	-	-	-	-
AM peak 08:00-09:00	Arm B	-	-	-	-	-	-	-	-	-	-
PM peak 17:00-18:00	Arms B, C and E	Arm E	Arm E	Arm E	Arm E	Arm E	Arm E	Arm E	-	Arm E	-

A.15.2   As a result of the comparative exercise set out above, the Applicant conducted a further test for each construction traffic phase (other than phases 9 and 11) in the time period affected.

A.15.3   This further test removed Project-related construction traffic from the flows tested in ARCADY to examine whether the cause of the detriment to junction operation was this traffic, or the effects of traffic reassignment caused by TTM measures elsewhere on the network.

A.15.4   The results of this for each construction traffic phase were as follows:

a.   Phase 1 – junction performance improved but is still worse than the DM, suggesting that the performance of the junction is being affected by TTM measures. Chapter 4 of Applicant's submissions on construction impacts and management at Asda roundabout [**REP6-123**] sets out a worked example of how the Applicant can reduce the impacts of TTM measures during this phase.

b.   Phase 2 – junction performance improved so that forecast conditions were close to those shown in the DM, but the level of service on arm E remained worse than the DM. This indicates that the performance of the junction is being affected by non-Project-related traffic reassigning to avoid TTM measures related to the Project's construction.

c.   Phase 3 – junction performance improved so that forecast conditions were close to those shown in the DM, but the level of service on arm E remained worse than the DM. This indicates that the performance of the junction is being affected by non-Project-related traffic reassigning to avoid TTM measures related to the Project's construction.

d.   Phase 4 – junction performance improved so that forecast conditions were close to those shown in the DM, but the level of service on arm E remained worse than the DM. This indicates that the performance of the junction is

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being affected by non-Project-related traffic reassigning to avoid TTM measures related to the Project's construction.

e.   Phase 5 – junction performance improved so that forecast conditions were close to those shown in the DM, but the level of service on arm E remained worse than the DM. This indicates that the performance of the junction is being affected by non-Project-related traffic reassigning to avoid TTM measures related to the Project's construction.

f.   Phase 6 – junction performance improved to a level close to that shown in the DM, indicating that the performance of the junction during the PM peak in this phase is affected by Project-related construction traffic.

g.   Phase 7 – junction performance improved to a level close to that shown in the DM, indicating that the performance of the junction during the PM peak in this phase is affected by Project-related construction traffic.

h.   Phase 8 – junction performance improved to a level close to that shown in the DM, indicating that the performance of the junction during the PM peak in this phase is affected by Project-related construction traffic.

i.   Phase 9 – no further testing conducted.

j.   Phase 10 – junction performance improved to a level close to that shown in the DM, indicating that the performance of the junction during the PM peak in this phase is affected by Project-related construction traffic.

k.   Phase 11 – no further testing conducted.

A.15.5   It should be acknowledged that the performance of the junction in the AM from 07:00–07:20 is forecast to be poor in all future year scenarios modelled, including the DM. The Amazon staff traffic causes queuing in this time segment, which dissipates across the AM period (07:00-09:00).

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Appendix B ARCADY Model outputs

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Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.1.0.1820
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Filename: ASDA_BY_v2.j10
Path: C:\Users\fda76470\ARCADIS\Patel, Bhavesh - LTC ARCADY
Report generation date: 06/11/2023 17:50:20

»BY - 2017 2.43PCU, AM1
»BY - 2017 2.43PCU, AM2
»BY - 2017 2.43PCU, PM1
»BY - 2017 2.18PCU, AM1
»BY - 2017 2.18PCU, AM2
»BY - 2017 2.18PCU, PM1

Summary of junction performance

	AM1					AM2					PM1				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
BY - 2017 2.43PCU															
A - Amazon UK Service Access		0.1	6.36	0.08	A		0.2	7.00	0.09	A		0.2	4.18	0.19	A
B - Dock Road South		0.9	6.45	0.45	A		1.3	8.48	0.56	A		0.6	4.83	0.38	A
C - A1089 St Andrew's Road	D1	1.7	7.04	0.46	A	D2	1.8	7.59	0.50	A	D3	1.7	6.06	0.57	A
D - Thurrock Park Way		0.6	4.88	0.33	A		0.8	5.46	0.40	A		3.1	12.73	0.75	B
E - A1089 Dock Road North		8.5	17.09	0.88	C		7.6	15.37	0.86	C		2.5	6.48	0.66	A
BY - 2017 2.18PCU															
A - Amazon UK Service Access		0.1	5.67	0.07	A		0.1	6.19	0.08	A		0.2	4.00	0.18	A
B - Dock Road South		0.8	6.03	0.43	A		1.2	7.72	0.53	A		0.6	4.64	0.37	A
C - A1089 St Andrew's Road	D4	1.3	5.96	0.42	A	D5	1.4	6.41	0.45	A	D6	1.5	5.47	0.55	A
D - Thurrock Park Way		0.5	4.51	0.31	A		0.7	5.01	0.38	A		2.8	11.54	0.73	B
E - A1089 Dock Road North		6.4	13.26	0.85	B		5.7	11.96	0.83	B		2.1	5.76	0.63	A

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

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

File summary

File Description

Title	A1089_ASDA Roundabout
Location	Port of Tilbury
Site number	
Date	26/10/2023
Version	
Status	On-going
Identifier	
Client	Highways England
Jobnumber	
Enumerator	Rohini Kanthi 16688 [C1QVDH92]
Description	Existing Roundabout Layout

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D1	2017 2.43PCU	AM1	ONE HOUR	06:45	08:15	15	✓	✓
D2	2017 2.43PCU	AM2	ONE HOUR	07:45	09:15	15	✓	✓
D3	2017 2.43PCU	PM1	ONE HOUR	16:45	18:15	15	✓	✓
D4	2017 2.18PCU	AM1	ONE HOUR	06:45	08:15	15	✓	✓
D5	2017 2.18PCU	AM2	ONE HOUR	07:45	09:15	15	✓	✓
D6	2017 2.18PCU	PM1	ONE HOUR	16:45	18:15	15	✓	✓

Analysis Set Details

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

BY - 2017 2.43PCU, AM1

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D1 - 2017 2.43PCU, AM1	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	11.77	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	11.77	B

Arms

Arms

Arm	Name	Description	No give-way line
A	Amazon UK Service Access		
B	Dock Road South		
C	A1089 St Andrew's Road		
D	Thurrock Park Way		
E	A1089 Dock Road North		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A - Amazon UK Service Access	3.80	8.70	13.9	46.0	112.0	20.0		
B - Dock Road South	3.20	7.20	25.7	20.0	112.0	23.5		
C - A1089 St Andrew's Road	7.40	7.80	7.6	37.0	112.0	30.0		
D - Thurrock Park Way	3.50	8.50	14.7	53.0	112.0	24.5		
E - A1089 Dock Road North	7.00	7.00	0.0	138.0	112.0	18.5		

Geometry Notes

Arm	Notes
A - Amazon UK Service Access	
B - Dock Road South	
C - A1089 St Andrew's Road	Arm C has been rebuilt between 2019 and 2020 so for BY its different than for FY
D - Thurrock Park Way	
E - A1089 Dock Road North	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - Amazon UK Service Access	0.497	1964
B - Dock Road South	0.468	1819
C - A1089 St Andrew's Road	0.549	2399
D - Thurrock Park Way	0.482	1874
E - A1089 Dock Road North	0.547	2294

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D1	2017 2.43PCU	AM1	ONE HOUR	06:45	08:15	15	✓	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Amazon UK Service Access		ONE HOUR	✓	75	100.000
B - Dock Road South		ONE HOUR	✓	440	100.000
C - A1089 St Andrew's Road		ONE HOUR	✓	785	100.000
D - Thurrock Park Way		ONE HOUR	✓	379	100.000
E - A1089 Dock Road North		ONE HOUR	✓	1702	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	A - Amazon UK Service Access	3	2	14	4	52
	B - Dock Road South	6	0	25	86	323
From	C - A1089 St Andrew's Road	12	4	33	55	681
	D - Thurrock Park Way	53	33	114	10	169
	E - A1089 Dock Road North	260	234	818	390	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.43

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	A - Amazon UK Service Access	50	0	71	33	53
	B - Dock Road South	0	0	0	8	4
From	C - A1089 St Andrew's Road	67	0	65	8	78
	D - Thurrock Park Way	2	14	6	29	20
	E - A1089 Dock Road North	9	7	34	7	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.08	6.36	0.1	A	75	75
B - Dock Road South	0.45	6.45	0.9	A	440	440
C - A1089 St Andrew's Road	0.46	7.04	1.7	A	785	785
D - Thurrock Park Way	0.33	4.88	0.6	A	379	379
E - A1089 Dock Road North	0.88	17.09	8.5	C	1702	1702

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	67	17	1466	1236	0.055	67	299	0.1	0.1	5.373	A
B - Dock Road South	396	99	1289	1215	0.325	395	245	0.4	0.5	4.664	A
C - A1089 St Andrew's Road	705	176	784	1968	0.358	704	900	0.8	1.1	5.606	A
D - Thurrock Park Way	341	85	1000	1393	0.245	340	488	0.3	0.4	4.018	A
E - A1089 Dock Road North	1530	383	241	2163	0.707	1525	1100	1.8	3.0	7.076	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	83	21	1784	1078	0.077	82	365	0.1	0.1	6.306	A
B - Dock Road South	484	121	1568	1085	0.447	483	298	0.5	0.8	6.352	A
C - A1089 St Andrew's Road	864	216	956	1874	0.461	862	1095	1.1	1.7	6.992	A
D - Thurrock Park Way	417	104	1223	1285	0.325	417	595	0.4	0.6	4.865	A
E - A1089 Dock Road North	1874	468	295	2133	0.878	1854	1345	3.0	8.0	15.262	C

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	83	21	1800	1070	0.077	83	367	0.1	0.1	6.356	A
B - Dock Road South	484	121	1582	1078	0.449	484	300	0.8	0.9	6.447	A
C - A1089 St Andrew's Road	864	216	962	1871	0.462	864	1104	1.7	1.7	7.043	A
D - Thurrock Park Way	417	104	1226	1284	0.325	417	599	0.6	0.6	4.881	A
E - A1089 Dock Road North	1874	468	295	2133	0.879	1872	1349	8.0	8.5	17.093	C

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	67	17	1489	1225	0.055	68	304	0.1	0.1	5.430	A
B - Dock Road South	396	99	1308	1206	0.328	397	248	0.9	0.5	4.740	A
C - A1089 St Andrew's Road	705	176	792	1964	0.359	708	913	1.7	1.1	5.657	A
D - Thurrock Park Way	341	85	1005	1391	0.245	341	495	0.6	0.4	4.036	A
E - A1089 Dock Road North	1530	383	241	2162	0.708	1552	1105	8.5	3.1	7.689	A

BY - 2017 2.43PCU, AM2

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D2 - 2017 2.43PCU, AM2	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	11.13	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	11.13	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D2	2017 2.43PCU	AM2	ONE HOUR	07:45	09:15	15	✓	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Amazon UK Service Access		ONE HOUR	✓	77	100.000
B - Dock Road South		ONE HOUR	✓	514	100.000
C - A1089 St Andrew's Road		ONE HOUR	✓	800	100.000
D - Thurrock Park Way		ONE HOUR	✓	463	100.000
E - A1089 Dock Road North		ONE HOUR	✓	1680	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	1	4	21	10	41
	B - Dock Road South	3	0	24	135	352
	C - A1089 St Andrew's Road	5	11	24	76	684
	D - Thurrock Park Way	16	63	114	5	265
	E - A1089 Dock Road North	104	238	850	487	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.43

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	33	64	29	59
	B - Dock Road South	50	0	10	5	4
	C - A1089 St Andrew's Road	25	0	62	9	75
	D - Thurrock Park Way	7	3	7	0	17
	E - A1089 Dock Road North	23	4	40	6	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.09	7.00	0.2	A	77	77
B - Dock Road South	0.56	8.48	1.3	A	514	514
C - A1089 St Andrew's Road	0.50	7.59	1.8	A	800	800
D - Thurrock Park Way	0.40	5.46	0.8	A	463	463
E - A1089 Dock Road North	0.86	15.37	7.6	C	1680	1680

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	69	17	1607	1166	0.059	69	116	0.1	0.1	5.745	A
B - Dock Road South	462	116	1393	1167	0.396	461	283	0.5	0.7	5.439	A
C - A1089 St Andrew's Road	719	180	928	1889	0.381	718	926	0.8	1.1	5.782	A
D - Thurrock Park Way	416	104	1007	1390	0.300	416	639	0.4	0.5	4.312	A
E - A1089 Dock Road North	1510	378	217	2176	0.694	1506	1205	1.7	2.9	6.933	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	85	21	1957	992	0.085	85	141	0.1	0.2	6.941	A
B - Dock Road South	566	141	1697	1025	0.552	564	345	0.7	1.3	8.290	A
C - A1089 St Andrew's Road	881	220	1132	1777	0.496	878	1128	1.1	1.8	7.516	A
D - Thurrock Park Way	510	127	1231	1282	0.398	509	779	0.5	0.8	5.427	A
E - A1089 Dock Road North	1850	462	266	2149	0.861	1832	1474	2.9	7.2	14.043	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	85	21	1973	984	0.086	85	142	0.2	0.2	7.003	A
B - Dock Road South	566	141	1710	1018	0.556	566	348	1.3	1.3	8.485	A
C - A1089 St Andrew's Road	881	220	1139	1774	0.497	881	1137	1.8	1.8	7.592	A
D - Thurrock Park Way	510	127	1235	1280	0.398	510	785	0.8	0.8	5.456	A
E - A1089 Dock Road North	1850	462	266	2149	0.861	1848	1479	7.2	7.6	15.372	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	69	17	1630	1155	0.060	69	117	0.2	0.1	5.808	A
B - Dock Road South	462	116	1412	1158	0.399	464	287	1.3	0.7	5.561	A
C - A1089 St Andrew's Road	719	180	938	1884	0.382	722	938	1.8	1.2	5.849	A
D - Thurrock Park Way	416	104	1013	1387	0.300	417	647	0.8	0.5	4.338	A
E - A1089 Dock Road North	1510	378	218	2175	0.694	1529	1212	7.6	3.0	7.425	A

BY - 2017 2.43PCU, PM1

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D3 - 2017 2.43PCU, PM1	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	7.46	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.46	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D3	2017 2.43PCU	PM1	ONE HOUR	16:45	18:15	15	✓	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Amazon UK Service Access		ONE HOUR	✓	192	100.000
B - Dock Road South		ONE HOUR	✓	428	100.000
C - A1089 St Andrew's Road		ONE HOUR	✓	950	100.000
D - Thurrock Park Way		ONE HOUR	✓	823	100.000
E - A1089 Dock Road North		ONE HOUR	✓	1256	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	17	9	27	139
	B - Dock Road South	0	0	28	138	262
	C - A1089 St Andrew's Road	10	32	36	88	784
	D - Thurrock Park Way	2	162	72	5	582
	E - A1089 Dock Road North	40	371	460	383	2

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.43

Heavy Vehicle %

From		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	A - Amazon UK Service Access	0	0	33	0	5
	B - Dock Road South	0	0	4	5	0
	C - A1089 St Andrew's Road	29	0	55	8	23
	D - Thurrock Park Way	0	0	13	25	4
	E - A1089 Dock Road North	52	1	62	10	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.19	4.18	0.2	A	192	192
B - Dock Road South	0.38	4.83	0.6	A	428	428
C - A1089 St Andrew's Road	0.57	6.06	1.7	A	950	950
D - Thurrock Park Way	0.75	12.73	3.1	B	823	823
E - A1089 Dock Road North	0.66	6.48	2.5	A	1256	1256

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	173	43	1367	1285	0.134	172	47	0.1	0.2	3.452	A
B - Dock Road South	385	96	1017	1343	0.287	384	522	0.3	0.4	3.851	A
C - A1089 St Andrew's Road	854	214	858	1928	0.443	853	543	0.7	1.0	4.365	A
D - Thurrock Park Way	740	185	1136	1328	0.557	738	575	0.8	1.3	6.429	A
E - A1089 Dock Road North	1129	282	286	2138	0.528	1127	1587	1.0	1.4	4.607	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	211	53	1671	1134	0.186	211	57	0.2	0.2	4.162	A
B - Dock Road South	471	118	1244	1237	0.381	470	638	0.4	0.6	4.814	A
C - A1089 St Andrew's Road	1046	261	1050	1822	0.574	1043	664	1.0	1.7	6.006	A
D - Thurrock Park Way	906	227	1389	1205	0.752	899	704	1.3	3.0	12.160	B
E - A1089 Dock Road North	1383	346	349	2104	0.657	1379	1940	1.4	2.4	6.399	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	211	53	1677	1131	0.187	211	57	0.2	0.2	4.176	A
B - Dock Road South	471	118	1247	1235	0.382	471	641	0.6	0.6	4.835	A
C - A1089 St Andrew's Road	1046	261	1053	1821	0.574	1046	666	1.7	1.7	6.058	A
D - Thurrock Park Way	906	227	1393	1204	0.753	906	706	3.0	3.1	12.725	B
E - A1089 Dock Road North	1383	346	351	2102	0.658	1383	1947	2.4	2.5	6.478	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	173	43	1375	1281	0.135	173	47	0.2	0.2	3.470	A
B - Dock Road South	385	96	1022	1340	0.287	386	526	0.6	0.4	3.871	A
C - A1089 St Andrew's Road	854	214	862	1926	0.443	857	546	1.7	1.0	4.404	A
D - Thurrock Park Way	740	185	1140	1325	0.558	747	578	3.1	1.4	6.657	A
E - A1089 Dock Road North	1129	282	289	2136	0.529	1133	1598	2.5	1.5	4.666	A

BY - 2017 2.18PCU, AM1

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D4 - 2017 2.18PCU, AM1	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	9.50	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	9.50	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D4	2017 2.18PCU	AM1	ONE HOUR	06:45	08:15	15	✓	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Amazon UK Service Access		ONE HOUR	✓	71	100.000
B - Dock Road South		ONE HOUR	✓	437	100.000
C - A1089 St Andrew's Road		ONE HOUR	✓	718	100.000
D - Thurrock Park Way		ONE HOUR	✓	371	100.000
E - A1089 Dock Road North		ONE HOUR	✓	1644	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	3	2	13	4	49
	B - Dock Road South	6	0	25	85	321
	C - A1089 St Andrew's Road	11	4	30	54	619
	D - Thurrock Park Way	53	33	113	9	163
	E - A1089 Dock Road North	256	232	772	384	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	50	0	71	33	53
	B - Dock Road South	0	0	0	8	4
	C - A1089 St Andrew's Road	67	0	65	8	78
	D - Thurrock Park Way	2	14	6	29	20
	E - A1089 Dock Road North	9	7	34	7	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.07	5.67	0.1	A	71	71
B - Dock Road South	0.43	6.03	0.8	A	437	437
C - A1089 St Andrew's Road	0.42	5.96	1.3	A	718	718
D - Thurrock Park Way	0.31	4.51	0.5	A	371	371
E - A1089 Dock Road North	0.85	13.26	6.4	B	1644	1644

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	64	16	1414	1262	0.051	64	295	0.1	0.1	4.849	A
B - Dock Road South	393	98	1235	1241	0.317	392	243	0.3	0.5	4.463	A
C - A1089 St Andrew's Road	645	161	772	1975	0.327	645	855	0.6	0.9	4.869	A
D - Thurrock Park Way	334	83	936	1424	0.234	333	481	0.3	0.3	3.778	A
E - A1089 Dock Road North	1478	369	235	2166	0.682	1474	1034	1.6	2.6	6.294	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	78	20	1724	1108	0.071	78	360	0.1	0.1	5.641	A
B - Dock Road South	481	120	1505	1114	0.432	480	296	0.5	0.8	5.965	A
C - A1089 St Andrew's Road	791	198	943	1881	0.420	789	1042	0.9	1.3	5.916	A
D - Thurrock Park Way	408	102	1146	1323	0.309	408	586	0.3	0.5	4.500	A
E - A1089 Dock Road North	1810	453	288	2137	0.847	1796	1266	2.6	6.2	12.332	B

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	78	20	1735	1102	0.071	78	362	0.1	0.1	5.673	A
B - Dock Road South	481	120	1515	1109	0.434	481	298	0.8	0.8	6.030	A
C - A1089 St Andrew's Road	791	198	948	1879	0.421	790	1049	1.3	1.3	5.956	A
D - Thurrock Park Way	408	102	1148	1321	0.309	408	590	0.5	0.5	4.511	A
E - A1089 Dock Road North	1810	453	288	2137	0.847	1809	1268	6.2	6.4	13.261	B

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	64	16	1431	1254	0.051	64	298	0.1	0.1	4.886	A
B - Dock Road South	393	98	1249	1234	0.318	394	246	0.8	0.5	4.516	A
C - A1089 St Andrew's Road	645	161	779	1971	0.327	647	864	1.3	0.9	4.902	A
D - Thurrock Park Way	334	83	940	1422	0.235	334	486	0.5	0.4	3.792	A
E - A1089 Dock Road North	1478	369	236	2165	0.683	1493	1038	6.4	2.7	6.656	A

BY - 2017 2.18PCU, AM2

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D5 - 2017 2.18PCU, AM2	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	9.07	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	9.07	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D5	2017 2.18PCU	AM2	ONE HOUR	07:45	09:15	15	✓	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Amazon UK Service Access		ONE HOUR	✓	70	100.000
B - Dock Road South		ONE HOUR	✓	510	100.000
C - A1089 St Andrew's Road		ONE HOUR	✓	736	100.000
D - Thurrock Park Way		ONE HOUR	✓	453	100.000
E - A1089 Dock Road North		ONE HOUR	✓	1615	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	1	4	19	9	37
	B - Dock Road South	3	0	23	134	350
	C - A1089 St Andrew's Road	5	11	22	74	624
	D - Thurrock Park Way	16	63	113	5	256
	E - A1089 Dock Road North	99	236	797	482	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	33	64	29	59
	B - Dock Road South	50	0	10	5	4
	C - A1089 St Andrew's Road	25	0	62	9	75
	D - Thurrock Park Way	7	3	7	0	17
	E - A1089 Dock Road North	23	4	40	6	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.08	6.19	0.1	A	70	70
B - Dock Road South	0.53	7.72	1.2	A	510	510
C - A1089 St Andrew's Road	0.45	6.41	1.4	A	736	736
D - Thurrock Park Way	0.38	5.01	0.7	A	453	453
E - A1089 Dock Road North	0.83	11.96	5.7	B	1615	1615

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	63	16	1552	1194	0.053	63	111	0.1	0.1	5.155	A
B - Dock Road South	458	115	1333	1195	0.384	458	282	0.4	0.7	5.148	A
C - A1089 St Andrew's Road	662	165	917	1896	0.349	661	874	0.7	0.9	5.038	A
D - Thurrock Park Way	407	102	946	1419	0.287	407	631	0.3	0.5	4.044	A
E - A1089 Dock Road North	1452	363	215	2177	0.667	1448	1138	1.5	2.4	6.126	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	77	19	1893	1024	0.075	77	136	0.1	0.1	6.155	A
B - Dock Road South	562	140	1626	1058	0.531	559	344	0.7	1.2	7.593	A
C - A1089 St Andrew's Road	810	203	1119	1784	0.454	808	1066	0.9	1.4	6.367	A
D - Thurrock Park Way	499	125	1157	1317	0.379	498	771	0.5	0.7	4.993	A
E - A1089 Dock Road North	1778	445	263	2151	0.827	1766	1392	2.4	5.6	11.300	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	77	19	1904	1019	0.076	77	136	0.1	0.1	6.192	A
B - Dock Road South	562	140	1636	1053	0.533	561	346	1.2	1.2	7.725	A
C - A1089 St Andrew's Road	810	203	1125	1781	0.455	810	1072	1.4	1.4	6.412	A
D - Thurrock Park Way	499	125	1160	1316	0.379	499	775	0.7	0.7	5.012	A
E - A1089 Dock Road North	1778	445	263	2150	0.827	1777	1396	5.6	5.7	11.962	B

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	63	16	1568	1186	0.053	63	112	0.1	0.1	5.196	A
B - Dock Road South	458	115	1346	1188	0.386	461	284	1.2	0.7	5.234	A
C - A1089 St Andrew's Road	662	165	925	1891	0.350	664	882	1.4	0.9	5.082	A
D - Thurrock Park Way	407	102	951	1417	0.287	408	637	0.7	0.5	4.064	A
E - A1089 Dock Road North	1452	363	215	2177	0.667	1465	1144	5.7	2.5	6.410	A

BY - 2017 2.18PCU, PM1

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D6 - 2017 2.18PCU, PM1	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	6.79	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.79	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D6	2017 2.18PCU	PM1	ONE HOUR	16:45	18:15	15	✓	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Amazon UK Service Access		ONE HOUR	✓	190	100.000
B - Dock Road South		ONE HOUR	✓	427	100.000
C - A1089 St Andrew's Road		ONE HOUR	✓	911	100.000
D - Thurrock Park Way		ONE HOUR	✓	816	100.000
E - A1089 Dock Road North		ONE HOUR	✓	1207	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	17	8	27	138
	B - Dock Road South	0	0	28	137	262
	C - A1089 St Andrew's Road	9	32	33	86	751
	D - Thurrock Park Way	2	162	70	5	577
	E - A1089 Dock Road North	37	370	423	375	2

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	33	0	5
	B - Dock Road South	0	0	4	5	0
	C - A1089 St Andrew's Road	29	0	55	8	23
	D - Thurrock Park Way	0	0	13	25	4
	E - A1089 Dock Road North	52	1	62	10	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.18	4.00	0.2	A	190	190
B - Dock Road South	0.37	4.64	0.6	A	427	427
C - A1089 St Andrew's Road	0.55	5.47	1.5	A	911	911
D - Thurrock Park Way	0.73	11.54	2.8	B	816	816
E - A1089 Dock Road North	0.63	5.76	2.1	A	1207	1207

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	171	43	1321	1308	0.131	171	43	0.1	0.2	3.339	A
B - Dock Road South	384	96	970	1364	0.281	383	521	0.3	0.4	3.745	A
C - A1089 St Andrew's Road	819	205	849	1933	0.424	818	504	0.6	0.9	4.038	A
D - Thurrock Park Way	734	183	1102	1344	0.546	732	566	0.8	1.2	6.137	A
E - A1089 Dock Road North	1085	271	281	2141	0.507	1084	1553	0.9	1.3	4.229	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	209	52	1616	1162	0.180	209	53	0.2	0.2	3.985	A
B - Dock Road South	470	118	1187	1263	0.372	469	637	0.4	0.6	4.627	A
C - A1089 St Andrew's Road	1003	251	1039	1828	0.549	1001	617	0.9	1.5	5.428	A
D - Thurrock Park Way	898	225	1348	1225	0.733	892	692	1.2	2.8	11.122	B
E - A1089 Dock Road North	1329	332	343	2107	0.631	1326	1898	1.3	2.1	5.707	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	209	52	1621	1159	0.180	209	53	0.2	0.2	3.997	A
B - Dock Road South	470	118	1190	1262	0.373	470	640	0.6	0.6	4.644	A
C - A1089 St Andrew's Road	1003	251	1042	1827	0.549	1003	619	1.5	1.5	5.465	A
D - Thurrock Park Way	898	225	1351	1224	0.734	898	694	2.8	2.8	11.544	B
E - A1089 Dock Road North	1329	332	345	2106	0.631	1329	1905	2.1	2.1	5.762	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	171	43	1328	1304	0.131	171	43	0.2	0.2	3.351	A
B - Dock Road South	384	96	975	1362	0.282	385	525	0.6	0.4	3.765	A
C - A1089 St Andrew's Road	819	205	852	1931	0.424	821	507	1.5	0.9	4.068	A
D - Thurrock Park Way	734	183	1106	1342	0.547	740	568	2.8	1.3	6.319	A
E - A1089 Dock Road North	1085	271	283	2139	0.507	1088	1562	2.1	1.3	4.273	A

Junctions 10

ARCADY 10 - Roundabout Module

Version: 10.1.0.1820
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Filename: ASDA_FY_2030DM_v3.j10
Path: C:\Users\fda76470\ARCADIS\Patel, Bhavesh - LTC ARCADY
Report generation date: 09/11/2023 14:43:12

»FY - 2030 DM, AM 2hr
»FY - 2030 DM, PM

Summary of junction performance

	AM 2hr					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
					FY - 2030 DM					
A - Amazon UK Service Access	D4	0.4	10.98	0.15	B	D6	0.3	10.35	0.13	B
B - Dock Road South		2.5	14.13	0.71	B		1.4	7.92	0.58	A
C - A1089 St Andrew's Road		3.1	9.64	0.65	A		2.7	7.89	0.68	A
D - Thurrock Park Way		1.1	7.64	0.50	A		18.0	65.56	0.98	F
E - A1089 Dock Road North		637.1	919.77	1.78	F		15.1	29.20	0.94	D

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

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

File summary

File Description

Title	A1089_ASDA Roundabout
Location	Port of Tilbury
Site number	
Date	26/10/2023
Version	
Status	On-going
Identifier	
Client	Highways England
Jobnumber	
Enumerator	Rohini Kanthi 16688 [C1QVDH92]
Description	Existing Roundabout Layout

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Results for central hour only	Run automatically
D4	2030 DM	AM 2hr	DIRECT	06:20	09:00	160	20		✓
D6	2030 DM	PM	ONE HOUR	16:45	18:15		15	✓	✓

Analysis Set Details

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

FY - 2030 DM, AM 2hr

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Pedestrian Crossing	D - Thurrock Park Way - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Demand Sets	D4 - 2030 DM, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	467.76	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	467.76	F

Arms

Arms

Arm	Name	Description	No give-way line
A	Amazon UK Service Access		
B	Dock Road South		
C	A1089 St Andrew's Road		
D	Thurrock Park Way		
E	A1089 Dock Road North		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A - Amazon UK Service Access	3.80	8.70	13.9	46.0	112.0	20.0		
B - Dock Road South	3.20	7.20	25.7	20.0	112.0	23.5		
C - A1089 St Andrew's Road	7.00	9.50	9.5	47.0	112.0	37.0		
D - Thurrock Park Way	3.50	8.50	14.7	53.0	112.0	24.5		
E - A1089 Dock Road North	7.00	7.00	0.0	138.0	112.0	18.5		

Geometry Notes

Arm	Notes
A - Amazon UK Service Access	
B - Dock Road South	
C - A1089 St Andrew's Road	Arm C has been rebuilt between 2019 and 2020 so for BY its different than for FY
D - Thurrock Park Way	
E - A1089 Dock Road North	

Pelican/Puffin Crossings

Arm	Space between crossing and junc. entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
D - Thurrock Park Way	9.00	3.00	2.90	1.00	6.00	10.00	40.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - Amazon UK Service Access	0.497	1964
B - Dock Road South	0.468	1819
C - A1089 St Andrew's Road	0.565	2542
D - Thurrock Park Way	0.482	1874
E - A1089 Dock Road North	0.547	2294

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D4	2030 DM	AM 2hr	DIRECT	06:20	09:00	160	20	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - Amazon UK Service Access		DIRECT	✓	100.000
B - Dock Road South		DIRECT	✓	100.000
C - A1089 St Andrew's Road		DIRECT	✓	100.000
D - Thurrock Park Way		DIRECT	✓	100.000
E - A1089 Dock Road North		DIRECT	✓	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	0.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

06:20 - 06:40

From \ To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
A - Amazon UK Service Access	0	0	0	0	98
B - Dock Road South	2	0	25	31	308
C - A1089 St Andrew's Road	0	12	27	30	963
D - Thurrock Park Way	0	21	96	1	190
E - A1089 Dock Road North	94	1174	859	236	4

Demand (PCU/hr)

06:40 - 07:00

From \ To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
A - Amazon UK Service Access	0	0	0	0	98
B - Dock Road South	2	0	25	31	308
C - A1089 St Andrew's Road	0	12	27	30	963
D - Thurrock Park Way	0	21	96	1	190
E - A1089 Dock Road North	94	970	859	236	4

Demand (PCU/hr)

07:00 - 07:20

From \ To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
A - Amazon UK Service Access	0	0	0	0	100
B - Dock Road South	0	0	25	85	438
C - A1089 St Andrew's Road	0	4	30	54	1024
D - Thurrock Park Way	0	33	112	9	227
E - A1089 Dock Road North	109	2449	925	421	0

Demand (PCU/hr)

07:20 - 07:40

From \ To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
A - Amazon UK Service Access	0	0	0	0	100
B - Dock Road South	0	0	25	85	438
C - A1089 St Andrew's Road	0	4	30	54	1024
D - Thurrock Park Way	0	33	112	9	227
E - A1089 Dock Road North	109	238	925	421	0

Demand (PCU/hr)

07:40 - 08:00

From \ To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
A - Amazon UK Service Access	0	0	0	0	100
B - Dock Road South	0	0	25	85	438
C - A1089 St Andrew's Road	0	4	30	54	1024
D - Thurrock Park Way	0	33	112	9	227
E - A1089 Dock Road North	109	238	925	421	0

Demand (PCU/hr)

08:00 -

To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

08:20	From	A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	494
		C - A1089 St Andrew's Road	0	11	23	74	1054
		D - Thurrock Park Way	0	63	113	5	346
		E - A1089 Dock Road North	126	347	944	520	1

Demand (PCU/hr)

08:20 - 08:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	494
		C - A1089 St Andrew's Road	0	11	23	74	1054
		D - Thurrock Park Way	0	63	113	5	346
		E - A1089 Dock Road North	126	347	944	520	1

Demand (PCU/hr)

08:40 - 09:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	494
		C - A1089 St Andrew's Road	0	11	23	74	1054
		D - Thurrock Park Way	0	63	113	5	346
		E - A1089 Dock Road North	126	347	944	520	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

06:20 - 06:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

06:40 - 07:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

07:00 - 07:20			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	64	8	67
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	1	39	6	1

Heavy Vehicle %

07:20 - 07:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	64	8	67
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	7	39	6	1

Heavy Vehicle %

07:40 - 08:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	100	100	100	100

		100	0	0	8	3
	B - Dock Road South	100	0	0	8	3
From	C - A1089 St Andrew's Road	100	0	64	8	67
	D - Thurrock Park Way	100	14	6	29	13
	E - A1089 Dock Road North	100	7	39	6	1

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
08:00 - 08:20	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	10	5	3
From	C - A1089 St Andrew's Road	0	0	60	9	63
	D - Thurrock Park Way	0	3	7	0	12
	E - A1089 Dock Road North	100	2	47	5	0

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
08:20 - 08:40	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	10	5	3
From	C - A1089 St Andrew's Road	0	0	60	9	63
	D - Thurrock Park Way	0	3	7	0	12
	E - A1089 Dock Road North	100	2	47	5	0

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
08:40 - 09:00	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	10	5	3
From	C - A1089 St Andrew's Road	0	0	60	9	63
	D - Thurrock Park Way	0	3	7	0	12
	E - A1089 Dock Road North	100	2	47	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.15	10.98	0.4	B	109	291
B - Dock Road South	0.71	14.13	2.5	B	541	1443
C - A1089 St Andrew's Road	0.65	9.64	3.1	A	1111	2962
D - Thurrock Park Way	0.50	7.64	1.1	A	418	1113
E - A1089 Dock Road North	1.78	919.77	637.1	F	2204	5878

Main Results for each time segment

06:20 - 06:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2239		852	0.115	97	88	0.0	0.3	10.383	B
B - Dock Road South	366	122	1228		1244	0.294	365	1109	0.0	0.4	4.237	A
C - A1089 St Andrew's Road	1032	344	658		2170	0.476	1027	934	0.0	1.5	5.399	A
D - Thurrock Park Way	308	103	1407	0.00	1197	0.257	307	278	0.0	0.4	5.183	A
E - A1089 Dock Road North	2367	789	158		2208	1.072	2169	1556	0.0	66.1	63.554	F

06:40 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2226		859	0.114	98	95	0.3	0.3	10.317	B
B - Dock Road South	366	122	1312		1205	0.304	366	1012	0.4	0.5	4.448	A
C - A1089 St Andrew's Road	1032	344	678		2159	0.478	1032	1000	1.5	1.6	5.496	A
D - Thurrock Park Way	308	103	1414	0.00	1194	0.258	308	296	0.4	0.4	5.216	A
E - A1089 Dock Road North	2163	721	159		2207	0.980	2162	1563	66.1	66.3	108.879	F

07:00 - 07:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2315		814	0.123	100	64	0.3	0.3	10.984	B
B - Dock Road South	548	183	1039		1332	0.411	547	1376	0.5	0.7	4.774	A
C - A1089 St Andrew's Road	1112	371	868		2052	0.542	1111	718	1.6	2.0	6.613	A
D - Thurrock Park Way	381	127	1594	0.00	1107	0.344	381	384	0.4	0.6	5.613	A
E - A1089 Dock Road North	3904	1301	188		2192	1.781	2192	1787	66.3	637.1	585.027	F

07:20 - 07:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2296		824	0.121	100	71	0.3	0.3	10.844	B
B - Dock Road South	548	183	1122		1293	0.424	548	1274	0.7	0.8	5.034	A
C - A1089 St Andrew's Road	1112	371	904		2031	0.547	1112	766	2.0	2.1	6.777	A
D - Thurrock Park Way	381	127	1596	0.00	1106	0.344	381	421	0.6	0.6	5.622	A
E - A1089 Dock Road North	1693	564	188		2192	0.773	2179	1789	637.1	475.2	919.766	F

07:40 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2233		855	0.117	100	141	0.3	0.3	10.392	B
B - Dock Road South	548	183	1989		888	0.617	545	344	0.8	1.6	10.873	B
C - A1089 St Andrew's Road	1112	371	1173		1879	0.592	1111	1361	2.1	2.5	8.095	A
D - Thurrock Park Way	381	127	1593	0.00	1107	0.344	381	691	0.6	0.6	5.611	A
E - A1089 Dock Road North	1693	564	188		2192	0.773	2186	1786	475.2	311.1	648.898	F

08:00 - 08:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2238		853	0.148	126	140	0.3	0.4	10.792	B
B - Dock Road South	651	217	1938		911	0.714	648	425	1.6	2.5	14.132	B
C - A1089 St Andrew's Road	1162	387	1319		1797	0.647	1160	1268	2.5	3.0	9.413	A
D - Thurrock Park Way	527	176	1705	0.00	1053	0.500	525	774	0.6	1.1	7.572	A
E - A1089 Dock Road North	1938	646	215		2177	0.890	2163	2016	311.1	235.9	454.805	F

08:20 - 08:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2239		852	0.148	126	141	0.4	0.4	10.808	B
B - Dock Road South	651	217	1904		928	0.702	651	462	2.5	2.5	13.583	B
C - A1089 St Andrew's Road	1162	387	1341		1785	0.651	1162	1214	3.0	3.1	9.645	A
D - Thurrock Park Way	527	176	1709	0.00	1051	0.501	527	794	1.1	1.1	7.641	A
E - A1089 Dock Road North	1938	646	215		2177	0.890	2165	2021	235.9	160.3	330.394	F

08:40 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2234		855	0.147	126	140	0.4	0.4	10.769	B
B - Dock Road South	651	217	1899		930	0.700	651	461	2.5	2.5	13.489	B
C - A1089 St Andrew's Road	1162	387	1340		1785	0.651	1162	1211	3.1	3.1	9.639	A
D - Thurrock Park Way	527	176	1709	0.00	1051	0.501	527	792	1.1	1.1	7.642	A
E - A1089 Dock Road North	1938	646	215		2177	0.890	2159	2021	160.3	86.5	207.609	F

FY - 2030 DM, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D4 - 2030 DM, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.
Warning	Demand Sets	D6 - 2030 DM, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	28.10	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	28.10	D

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D6	2030 DM	PM	ONE HOUR	16:45	18:15	15	✓	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Amazon UK Service Access		ONE HOUR	✓	100	100.000
B - Dock Road South		ONE HOUR	✓	571	100.000
C - A1089 St Andrew's Road		ONE HOUR	✓	1155	100.000
D - Thurrock Park Way		ONE HOUR	✓	925	100.000
E - A1089 Dock Road North		ONE HOUR	✓	1805	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	50.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	28	137	406
	C - A1089 St Andrew's Road	0	32	33	86	1004
	D - Thurrock Park Way	0	162	70	5	688
	E - A1089 Dock Road North	92	501	764	446	2

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	100	100	100	100
	B - Dock Road South	100	0	4	5	0

C - A1089 St Andrew's Road	100	0	54	8	27
D - Thurrock Park Way	100	0	13	25	3
E - A1089 Dock Road North	100	1	38	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.13	10.35	0.3	B	100	100
B - Dock Road South	0.58	7.92	1.4	A	571	571
C - A1089 St Andrew's Road	0.68	7.89	2.7	A	1155	1155
D - Thurrock Park Way	0.98	65.56	18.0	F	925	925
E - A1089 Dock Road North	0.94	29.20	15.1	D	1805	1805

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1804		1068	0.084	90	82	0.1	0.2	8.018	A
B - Dock Road South	513	128	1272		1224	0.420	512	622	0.5	0.7	5.136	A
C - A1089 St Andrew's Road	1038	260	982		1987	0.523	1036	801	0.9	1.4	4.892	A
D - Thurrock Park Way	832	208	1415	50.00	1172	0.709	827	604	1.3	2.4	10.686	B
E - A1089 Dock Road North	1623	406	270		2147	0.756	1616	1972	2.0	3.7	8.206	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2171		886	0.124	110	99	0.2	0.3	10.108	B
B - Dock Road South	629	157	1534		1101	0.571	626	747	0.7	1.3	7.671	A
C - A1089 St Andrew's Road	1272	318	1194		1867	0.681	1267	966	1.4	2.7	7.690	A
D - Thurrock Park Way	1018	255	1729	50.00	1042	0.978	975	732	2.4	13.4	41.185	E
E - A1089 Dock Road North	1987	497	321		2119	0.938	1950	2383	3.7	13.0	22.315	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2206		869	0.127	110	101	0.3	0.3	10.346	B
B - Dock Road South	629	157	1556		1090	0.577	629	760	1.3	1.4	7.917	A
C - A1089 St Andrew's Road	1272	318	1204		1862	0.683	1271	980	2.7	2.7	7.888	A
D - Thurrock Park Way	1018	255	1736	50.00	1038	0.981	1000	740	13.4	18.0	65.561	F
E - A1089 Dock Road North	1987	497	328		2115	0.940	1979	2408	13.0	15.1	29.199	D

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1870		1036	0.087	90	85	0.3	0.2	8.307	A
B - Dock Road South	513	128	1312		1205	0.426	516	648	1.4	0.8	5.328	A
C - A1089 St Andrew's Road	1038	260	999		1978	0.525	1044	828	2.7	1.4	5.018	A
D - Thurrock Park Way	832	208	1425	50.00	1188	0.700	894	618	18.0	2.5	15.282	C
E - A1089 Dock Road North	1623	406	288		2137	0.759	1667	2031	15.1	4.0	10.200	B

Junctions 10
ARCADY 10 - Roundabout Module
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Filename: ASDA_FY_Construction_Combined AM.j10
Path: C:\Users\bpa76880.000\OneDrive - ARCADIS\LTC ARCADY
Report generation date: 09/11/2023 18:51:40

»FY - Construction P1, AM 2hr
»FY - Construction P1, PM
»FY - Construction P2, AM 2hr
»FY - Construction P2, PM
»FY - Construction P3, AM 2hr
»FY - Construction P3, PM
»FY - Construction P4, AM 2hr
»FY - Construction P4, PM
»FY - Construction P5, AM 2hr
»FY - Construction P5, PM
»FY - Construction P6, AM 2hr
»FY - Construction P6, PM
»FY - Construction P7, AM 2hr
»FY - Construction P7, PM
»FY - Construction P8, AM 2hr
»FY - Construction P8, PM
»FY - Construction P9, AM 2hr
»FY - Construction P9, PM
»FY - Construction P10, AM 2hr
»FY - Construction P10, PM
»FY - Construction P11, AM 2hr
»FY - Construction P11, PM

Summary of junction performance

	AM 2hr					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
FY - Construction P1										
A - Amazon UK Service Access	D1	0.4	11.03	0.15	B	D3	0.3	11.27	0.14	B
B - Dock Road South		12.8	56.62	0.96	F		5.2	22.10	0.85	C
C - A1089 St Andrew's Road		3.8	11.97	0.70	B		12.8	30.79	0.93	D
D - Thurrock Park Way		1.3	9.24	0.55	A		20.1	92.90	1.01	F
E - A1089 Dock Road North		655.8	967.39	1.81	F		58.9	90.05	1.03	F
FY - Construction P2										
A - Amazon UK Service Access	D4	0.4	11.03	0.15	B	D6	0.3	10.78	0.13	B
B - Dock Road South		2.8	15.79	0.74	C		1.5	8.66	0.60	A
C - A1089 St Andrew's Road		3.6	10.71	0.69	B		3.5	9.38	0.73	A
D - Thurrock Park Way		1.2	8.35	0.53	A		27.9	95.59	1.02	F
E - A1089 Dock Road North		645.6	943.59	1.80	F		23.6	43.26	0.97	E
FY - Construction P3										
A - Amazon UK Service Access	D7	0.4	11.04	0.15	B	D9	0.3	11.11	0.13	B
B - Dock Road South		3.0	16.42	0.75	C		1.6	9.16	0.62	A
C - A1089 St Andrew's Road		4.0	11.54	0.71	B		3.4	9.29	0.73	A
D - Thurrock Park Way		1.3	8.79	0.54	A		27.9	95.55	1.02	F
E - A1089 Dock Road North		646.1	945.07	1.80	F		38.9	64.81	1.01	F
FY - Construction P4										
A - Amazon UK Service Access	D10	0.4	11.01	0.15	B	D12	0.3	11.08	0.13	B
B - Dock Road South		2.8	15.47	0.74	C		1.6	9.07	0.61	A
C - A1089 St Andrew's Road		3.7	10.94	0.70	B		3.1	8.62	0.71	A
D - Thurrock Park Way		1.3	8.49	0.53	A		22.4	79.37	1.00	F
E - A1089 Dock Road North		644.3	939.02	1.79	F		38.3	63.83	1.01	F
FY - Construction P5										
A - Amazon UK Service Access	D13	0.4	11.03	0.15	B	D15	0.3	10.83	0.13	B
B - Dock Road South		2.7	15.10	0.73	C		1.5	8.71	0.60	A
C - A1089 St Andrew's Road		4.0	11.33	0.71	B		3.4	9.20	0.72	A
D - Thurrock Park Way		1.3	8.72	0.54	A		24.2	85.09	1.01	F

E - A1089 Dock Road North		642.8	937.14	1.79	F		25.0	45.42	0.98	E
FY - Construction P6										
A - Amazon UK Service Access		0.4	11.03	0.15	B		0.3	10.86	0.13	B
B - Dock Road South		2.8	15.76	0.74	C		1.5	8.71	0.60	A
C - A1089 St Andrew's Road	D16	4.1	11.55	0.72	B	D18	3.5	9.47	0.73	A
D - Thurrock Park Way		1.3	8.80	0.54	A		27.7	95.11	1.02	F
E - A1089 Dock Road North		643.8	939.55	1.79	F		26.1	47.02	0.98	E
FY - Construction P7										
A - Amazon UK Service Access		0.4	11.03	0.15	B		0.3	10.83	0.13	B
B - Dock Road South		2.8	15.54	0.74	C		1.5	8.62	0.60	A
C - A1089 St Andrew's Road	D19	4.0	11.43	0.71	B	D21	3.4	9.26	0.73	A
D - Thurrock Park Way		1.3	8.80	0.54	A		26.5	91.51	1.02	F
E - A1089 Dock Road North		643.1	937.95	1.79	F		25.2	45.62	0.98	E
FY - Construction P8										
A - Amazon UK Service Access		0.4	11.01	0.15	B		0.3	10.84	0.13	B
B - Dock Road South		2.7	15.23	0.73	C		1.5	8.66	0.60	A
C - A1089 St Andrew's Road	D22	3.8	11.03	0.70	B	D24	3.5	9.42	0.73	A
D - Thurrock Park Way		1.2	8.47	0.53	A		27.3	93.74	1.02	F
E - A1089 Dock Road North		646.0	943.28	1.79	F		25.3	45.88	0.98	E
FY - Construction P9										
A - Amazon UK Service Access		0.4	11.01	0.15	B		0.3	10.55	0.13	B
B - Dock Road South		2.8	15.35	0.74	C		1.5	8.42	0.60	A
C - A1089 St Andrew's Road	D25	3.9	11.13	0.71	B	D27	3.0	8.49	0.70	A
D - Thurrock Park Way		1.3	8.72	0.54	A		22.0	77.87	1.00	F
E - A1089 Dock Road North		631.3	908.24	1.77	F		18.5	34.93	0.96	D
FY - Construction P10										
A - Amazon UK Service Access		0.4	11.00	0.15	B		0.3	10.71	0.13	B
B - Dock Road South		2.6	14.64	0.72	B		1.4	8.35	0.59	A
C - A1089 St Andrew's Road	D28	3.7	10.74	0.70	B	D30	3.0	8.36	0.70	A
D - Thurrock Park Way		1.2	8.34	0.52	A		20.6	73.76	0.99	F
E - A1089 Dock Road North		642.2	933.62	1.79	F		22.1	40.78	0.97	E
FY - Construction P11										
A - Amazon UK Service Access		0.4	10.98	0.15	B		0.3	10.45	0.13	B
B - Dock Road South		2.5	14.13	0.71	B		1.4	8.03	0.58	A
C - A1089 St Andrew's Road	D31	3.2	9.86	0.66	A	D33	2.8	7.96	0.69	A
D - Thurrock Park Way		1.1	7.75	0.51	A		18.8	67.85	0.98	F
E - A1089 Dock Road North		641.0	929.18	1.79	F		16.7	31.93	0.95	D

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

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

File summary

File Description

Title	A1089_ASDA Roundabout
Location	Port of Tilbury
Site number	
Date	26/10/2023
Version	
Status	On-going
Identifier	
Client	Highways England
Jobnumber	
Enumerator	Rohini Kanthi 16688 [C1QVDH92]
Description	Existing Roundabout Layout

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Results for central hour only	Run automatically
D1	Construction P1	AM 2hr	DIRECT	06:20	09:00	160	20		✓
D3	Construction P1	PM	ONE HOUR	16:45	18:15		15	✓	✓
D4	Construction P2	AM 2hr	DIRECT	06:20	09:00	160	20		✓

D6	Construction P2	PM	ONE HOUR	16:45	18:15		15	✓	✓
D7	Construction P3	AM 2hr	DIRECT	06:20	09:00	160	20		✓
D9	Construction P3	PM	ONE HOUR	16:45	18:15		15	✓	✓
D10	Construction P4	AM 2hr	DIRECT	06:20	09:00	160	20		✓
D12	Construction P4	PM	ONE HOUR	16:45	18:15		15	✓	✓
D13	Construction P5	AM 2hr	DIRECT	06:20	09:00	160	20		✓
D15	Construction P5	PM	ONE HOUR	16:45	18:15		15	✓	✓
D16	Construction P6	AM 2hr	DIRECT	06:20	09:00	160	20		✓
D18	Construction P6	PM	ONE HOUR	16:45	18:15		15	✓	✓
D19	Construction P7	AM 2hr	DIRECT	06:20	09:00	160	20		✓
D21	Construction P7	PM	ONE HOUR	16:45	18:15		15	✓	✓
D22	Construction P8	AM 2hr	DIRECT	06:20	09:00	160	20		✓
D24	Construction P8	PM	ONE HOUR	16:45	18:15		15	✓	✓
D25	Construction P9	AM 2hr	DIRECT	06:20	09:00	160	20		✓
D27	Construction P9	PM	ONE HOUR	16:45	18:15		15	✓	✓
D28	Construction P10	AM 2hr	DIRECT	06:20	09:00	160	20		✓
D30	Construction P10	PM	ONE HOUR	16:45	18:15		15	✓	✓
D31	Construction P11	AM 2hr	DIRECT	06:20	09:00	160	20		✓
D33	Construction P11	PM	ONE HOUR	16:45	18:15		15	✓	✓

Analysis Set Details

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

FY - Construction P1, AM 2hr

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Pedestrian Crossing	D - Thurrock Park Way - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Demand Sets	D1 - Construction P1, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	488.36	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	488.36	F

Arms

Arms

Arm	Name	Description	No give-way line
A	Amazon UK Service Access		
B	Dock Road South		
C	A1089 St Andrew's Road		
D	Thurrock Park Way		
E	A1089 Dock Road North		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A - Amazon UK Service Access	3.80	8.70	13.9	46.0	112.0	20.0		
B - Dock Road South	3.20	7.20	25.7	20.0	112.0	23.5		
C - A1089 St Andrew's Road	7.00	9.50	9.5	47.0	112.0	37.0		
D - Thurrock Park Way	3.50	8.50	14.7	53.0	112.0	24.5		
E - A1089 Dock Road North	7.00	7.00	0.0	138.0	112.0	18.5		

Geometry Notes

Arm	Notes
A - Amazon UK Service Access	
B - Dock Road South	
C - A1089 St Andrew's Road	Arm C has been rebuilt between 2019 and 2020 so for BY its different than for FY
D - Thurrock Park Way	
E - A1089 Dock Road North	

Pelican/Puffin Crossings

Arm	Space between crossing and junc. entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
D - Thurrock Park Way	9.00	3.00	2.90	1.00	6.00	10.00	40.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - Amazon UK Service Access	0.497	1964
B - Dock Road South	0.468	1819
C - A1089 St Andrew's Road	0.565	2542
D - Thurrock Park Way	0.482	1874
E - A1089 Dock Road North	0.547	2294

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	Construction P1	AM 2hr	DIRECT	06:20	09:00	160	20	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - Amazon UK Service Access		DIRECT	✓	100.000
B - Dock Road South		DIRECT	✓	100.000
C - A1089 St Andrew's Road		DIRECT	✓	100.000
D - Thurrock Park Way		DIRECT	✓	100.000
E - A1089 Dock Road North		DIRECT	✓	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	0.00
E - A1089 Dock Road North		

Origin-Destination Data

06:20 - 06:40

Demand (PCU/hr)

From \ To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
A - Amazon UK Service Access	0	0	0	0	98
B - Dock Road South	2	0	25	31	308
C - A1089 St Andrew's Road	0	12	27	30	963
D - Thurrock Park Way	0	21	96	1	190
E - A1089 Dock Road North	94	1174	859	236	4

06:40 - 07:00

Demand (PCU/hr)

From \ To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
A - Amazon UK Service Access	0	0	0	0	98
B - Dock Road South	2	0	25	31	308
C - A1089 St Andrew's Road	0	12	27	30	963
D - Thurrock Park Way	0	21	96	1	190
E - A1089 Dock Road North	94	970	859	236	4

07:00 - 07:20

Demand (PCU/hr)

From \ To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
A - Amazon UK Service Access	0	0	0	0	100
B - Dock Road South	0	0	25	85	612
C - A1089 St Andrew's Road	0	4	40	54	1022
D - Thurrock Park Way	0	33	113	9	224
E - A1089 Dock Road North	109	2428	990	427	0

07:20 - 07:40

Demand (PCU/hr)

From \ To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
A - Amazon UK Service Access	0	0	0	0	100
B - Dock Road South	0	0	25	85	612
C - A1089 St Andrew's Road	0	4	40	54	1022
D - Thurrock Park Way	0	33	113	9	224
E - A1089 Dock Road North	109	217	990	427	0

07:40 - 08:00

Demand (PCU/hr)

From \ To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
A - Amazon UK Service Access	0	0	0	0	100
B - Dock Road South	0	0	25	85	612
C - A1089 St Andrew's Road	0	4	40	54	1022
D - Thurrock Park Way	0	33	113	9	224
E - A1089 Dock Road North	109	217	990	427	0

Demand (PCU/hr)

	A - Amazon UK	B - Dock	C - A1089 St	D - Thurrock	E - A1089 Dock

08:00 - 08:20	From		Service Access	Road South	Andrew's Road	Park Way	Road North
		A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	695
		C - A1089 St Andrew's Road	0	11	32	74	1048
		D - Thurrock Park Way	0	63	113	5	339
		E - A1089 Dock Road North	126	338	1005	530	1

Demand (PCU/hr)

08:20 - 08:40	From		To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	695
		C - A1089 St Andrew's Road	0	11	32	74	1048
		D - Thurrock Park Way	0	63	113	5	339
		E - A1089 Dock Road North	126	338	1005	530	1

Demand (PCU/hr)

08:40 - 09:00	From		To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	695
		C - A1089 St Andrew's Road	0	11	32	74	1048
		D - Thurrock Park Way	0	63	113	5	339
		E - A1089 Dock Road North	126	338	1005	530	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

06:20 - 06:40	From		To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

06:40 - 07:00	From		To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

07:00 - 07:20	From		To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	2
		C - A1089 St Andrew's Road	100	0	71	8	71
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	1	38	6	1

Heavy Vehicle %

07:20 - 07:40	From		To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	2
		C - A1089 St Andrew's Road	100	0	71	8	71
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	8	38	6	1

Heavy Vehicle %

07:40 -			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

08:00		A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	2
	From	C - A1089 St Andrew's Road	100	0	71	8	71
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	8	38	6	1

Heavy Vehicle %

08:00 - 08:20			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	100
	From	B - Dock Road South	0	0	9	5	2
		C - A1089 St Andrew's Road	0	0	69	9	66
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	45	5	0

Heavy Vehicle %

08:20 - 08:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	100
	From	B - Dock Road South	0	0	9	5	2
		C - A1089 St Andrew's Road	0	0	69	9	66
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	45	5	0

Heavy Vehicle %

08:40 - 09:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	100
	From	B - Dock Road South	0	0	9	5	2
		C - A1089 St Andrew's Road	0	0	69	9	66
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	45	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.15	11.03	0.4	B	109	291
B - Dock Road South	0.96	56.62	12.8	F	682	1818
C - A1089 St Andrew's Road	0.70	11.97	3.8	B	1115	2973
D - Thurrock Park Way	0.55	9.24	1.3	A	414	1104
E - A1089 Dock Road North	1.81	967.39	655.8	F	2246	5990

Main Results for each time segment

06:20 - 06:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2239		852	0.115	97	88	0.0	0.3	10.383	B
B - Dock Road South	366	122	1228		1244	0.294	365	1109	0.0	0.4	4.237	A
C - A1089 St Andrew's Road	1032	344	658		2170	0.476	1027	934	0.0	1.5	5.399	A
D - Thurrock Park Way	308	103	1407	0.00	1197	0.257	307	278	0.0	0.4	5.183	A
E - A1089 Dock Road North	2367	789	158		2208	1.072	2169	1556	0.0	66.1	63.554	F

06:40 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2226		859	0.114	98	95	0.3	0.3	10.317	B
B - Dock Road South	366	122	1312		1205	0.304	366	1012	0.4	0.5	4.448	A
C - A1089 St Andrew's Road	1032	344	678		2159	0.478	1032	1000	1.5	1.6	5.496	A
D - Thurrock Park Way	308	103	1414	0.00	1194	0.258	308	296	0.4	0.4	5.216	A
E - A1089 Dock Road North	2163	721	159		2207	0.980	2162	1563	66.1	66.3	108.901	F

07:00 - 07:20

Arm	Total Demand	Junction Arrivals	Circulating flow	Pedestrian demand	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side)	Start queue	End queue	Delay (s)	Unsignalised level of

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2321		811	0.123	100	63	0.3	0.3	11.028	B
B - Dock Road South	722	241	1075		1316	0.549	720	1346	0.5	1.2	6.200	A
C - A1089 St Andrew's Road	1120	373	1040		1954	0.573	1118	754	1.6	2.3	7.612	A
D - Thurrock Park Way	379	126	1774	0.00	1020	0.372	378	384	0.4	0.7	6.346	A
E - A1089 Dock Road North	3954	1318	199		2186	1.809	2186	1954	66.3	655.8	601.048	F

07:20 - 07:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2305		819	0.122	100	67	0.3	0.3	10.910	B
B - Dock Road South	722	241	1135		1288	0.561	722	1271	1.2	1.3	6.552	A
C - A1089 St Andrew's Road	1120	373	1069		1938	0.578	1120	788	2.3	2.4	7.802	A
D - Thurrock Park Way	379	126	1778	0.00	1018	0.372	379	411	0.7	0.7	6.373	A
E - A1089 Dock Road North	1743	581	199		2186	0.798	2173	1958	655.8	512.3	967.386	F

07:40 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2243		850	0.118	100	136	0.3	0.3	10.459	B
B - Dock Road South	722	241	2034		866	0.833	712	308	1.3	4.6	22.719	C
C - A1089 St Andrew's Road	1120	373	1330		1791	0.626	1118	1416	2.4	2.9	9.481	A
D - Thurrock Park Way	379	126	1768	0.00	1023	0.370	379	681	0.7	0.7	6.328	A
E - A1089 Dock Road North	1743	581	199		2186	0.798	2180	1948	512.3	366.7	726.954	F

08:00 - 08:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2248		848	0.149	126	136	0.3	0.4	10.865	B
B - Dock Road South	852	284	1984		890	0.957	830	390	4.6	12.0	48.626	E
C - A1089 St Andrew's Road	1165	388	1489		1701	0.685	1163	1325	2.9	3.6	11.330	B
D - Thurrock Park Way	520	173	1893	0.00	963	0.540	518	759	0.7	1.3	8.972	A
E - A1089 Dock Road North	2000	667	223		2172	0.921	2160	2188	366.7	313.4	565.988	F

08:20 - 08:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2251		846	0.149	126	136	0.4	0.4	10.893	B
B - Dock Road South	852	284	1937		912	0.934	850	440	12.0	12.5	55.754	F
C - A1089 St Andrew's Road	1165	388	1533		1676	0.695	1164	1255	3.6	3.8	11.943	B
D - Thurrock Park Way	520	173	1911	0.00	954	0.545	520	786	1.3	1.3	9.226	A
E - A1089 Dock Road North	2000	667	224		2172	0.921	2163	2207	313.4	259.1	476.789	F

08:40 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2249		847	0.149	126	136	0.4	0.4	10.880	B
B - Dock Road South	852	284	1936		913	0.934	851	439	12.5	12.8	56.617	F
C - A1089 St Andrew's Road	1165	388	1533		1676	0.695	1165	1254	3.8	3.8	11.970	B
D - Thurrock Park Way	520	173	1912	0.00	954	0.545	520	786	1.3	1.3	9.239	A
E - A1089 Dock Road North	2000	667	224		2172	0.921	2161	2208	259.1	205.4	387.394	F

FY - Construction P1, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D1 - Construction P1, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.
Warning	Demand Sets	D3 - Construction P1, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	60.91	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	60.91	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D3	Construction P1	PM	ONE HOUR	16:45	18:15	15	✓	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Amazon UK Service Access		ONE HOUR	✓	100	100.000
B - Dock Road South		ONE HOUR	✓	808	100.000
C - A1089 St Andrew's Road		ONE HOUR	✓	1454	100.000
D - Thurrock Park Way		ONE HOUR	✓	695	100.000
E - A1089 Dock Road North		ONE HOUR	✓	1986	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	50.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	28	137	643
	C - A1089 St Andrew's Road	0	32	42	86	1294
	D - Thurrock Park Way	0	162	70	5	458
	E - A1089 Dock Road North	92	558	887	447	2

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

	A - Amazon UK Service Access	0	100	100	100	100
	B - Dock Road South	100	0	4	5	0
From	**C - A1089 St Andrew's Road**	100	0	61	8	21
	D - Thurrock Park Way	100	0	13	25	5
	E - A1089 Dock Road North	100	1	33	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.14	11.27	0.3	B	100	100
B - Dock Road South	0.85	22.10	5.2	C	808	808
C - A1089 St Andrew's Road	0.93	30.79	12.8	D	1454	1454
D - Thurrock Park Way	1.01	92.90	20.1	F	695	695
E - A1089 Dock Road North	1.03	90.05	58.9	F	1986	1986

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1969		986	0.091	90	82	0.2	0.2	8.752	A
B - Dock Road South	726	182	1387		1169	0.621	724	672	0.9	1.6	8.112	A
C - A1089 St Andrew's Road	1307	327	1194		1868	0.700	1302	917	1.5	2.8	7.819	A
D - Thurrock Park Way	625	156	1892	50.00	946	0.660	621	603	1.0	2.0	11.545	B
E - A1089 Dock Road North	1785	446	278		2142	0.833	1773	2235	2.6	5.6	11.433	B

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2294		825	0.133	110	96	0.2	0.3	10.966	B
B - Dock Road South	890	222	1621		1060	0.839	877	783	1.6	4.7	18.807	C
C - A1089 St Andrew's Road	1601	400	1428		1735	0.923	1568	1070	2.8	10.9	23.290	C
D - Thurrock Park Way	765	191	2286	50.00	774	0.989	722	711	2.0	12.9	51.810	F
E - A1089 Dock Road North	2187	547	326		2116	1.033	2064	2681	5.6	36.4	46.521	E

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2331		806	0.137	110	97	0.3	0.3	11.273	B
B - Dock Road South	890	222	1646		1048	0.849	888	796	4.7	5.2	22.100	C
C - A1089 St Andrew's Road	1601	400	1446		1725	0.928	1593	1087	10.9	12.8	30.793	D
D - Thurrock Park Way	765	191	2318	50.00	758	1.009	736	722	12.9	20.1	92.904	F
E - A1089 Dock Road North	2187	547	332		2113	1.035	2096	2722	36.4	58.9	90.048	F

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	2205		869	0.103	90	92	0.3	0.3	10.085	B
B - Dock Road South	726	182	1544		1096	0.663	739	752	5.2	2.1	10.532	B
C - A1089 St Andrew's Road	1307	327	1259		1831	0.714	1346	1024	12.8	3.2	9.891	A
D - Thurrock Park Way	625	156	1946	50.00	937	0.667	696	658	20.1	2.2	20.439	C
E - A1089 Dock Road North	1785	446	306		2127	0.839	1992	2337	58.9	7.4	48.501	E

FY - Construction P2, AM 2hr

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Pedestrian Crossing	D - Thurrock Park Way - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Demand Sets	D1 - Construction P1, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	475.30	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	475.30	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D4	Construction P2	AM 2hr	DIRECT	06:20	09:00	160	20	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - Amazon UK Service Access		DIRECT	✓	100.000
B - Dock Road South		DIRECT	✓	100.000
C - A1089 St Andrew's Road		DIRECT	✓	100.000
D - Thurrock Park Way		DIRECT	✓	100.000
E - A1089 Dock Road North		DIRECT	✓	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	0.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

06:20 - 06:40		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	98
		B - Dock Road South	2	0	25	31	308
		C - A1089 St Andrew's Road	0	12	27	30	963
		D - Thurrock Park Way	0	21	96	1	190
		E - A1089 Dock Road North	94	1174	859	236	4

Demand (PCU/hr)

06:40 - 07:00		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	98
		B - Dock Road South	2	0	25	31	308
		C - A1089 St Andrew's Road	0	12	27	30	963
		D - Thurrock Park Way	0	21	96	1	190
		E - A1089 Dock Road North	94	970	859	236	4

Demand (PCU/hr)

	To					

Demand (PCU/hr) _(07:00 - 07:20)_

07:00 - 07:20	From		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	448
		C - A1089 St Andrew's Road	0	4	42	54	1082
		D - Thurrock Park Way	0	33	112	9	235
		E - A1089 Dock Road North	109	2423	975	416	0

Demand (PCU/hr)

			To				
07:20 - 07:40	From		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	448
		C - A1089 St Andrew's Road	0	4	42	54	1082
		D - Thurrock Park Way	0	33	112	9	235
		E - A1089 Dock Road North	109	212	975	416	0

Demand (PCU/hr)

			To				
07:40 - 08:00	From		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	448
		C - A1089 St Andrew's Road	0	4	42	54	1082
		D - Thurrock Park Way	0	33	112	9	235
		E - A1089 Dock Road North	109	212	975	416	0

Demand (PCU/hr)

			To				
08:00 - 08:20	From		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	505
		C - A1089 St Andrew's Road	0	11	34	74	1113
		D - Thurrock Park Way	0	63	113	5	354
		E - A1089 Dock Road North	126	336	993	513	2

Demand (PCU/hr)

			To				
08:20 - 08:40	From		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	505
		C - A1089 St Andrew's Road	0	11	34	74	1113
		D - Thurrock Park Way	0	63	113	5	354
		E - A1089 Dock Road North	126	336	993	513	2

Demand (PCU/hr)

			To				
08:40 - 09:00	From		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	505
		C - A1089 St Andrew's Road	0	11	34	74	1113
		D - Thurrock Park Way	0	63	113	5	354
		E - A1089 Dock Road North	126	336	993	513	2

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

			To				
06:20 - 06:40	From		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

06:40 - 07:00	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

07:00 - 07:20			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	72	8	66
		D - Thurrock Park Way	100	14	6	29	12
		E - A1089 Dock Road North	100	1	41	6	1

Heavy Vehicle %

07:20 - 07:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	72	8	66
		D - Thurrock Park Way	100	14	6	29	12
		E - A1089 Dock Road North	100	8	41	6	1

Heavy Vehicle %

07:40 - 08:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	72	8	66
		D - Thurrock Park Way	100	14	6	29	12
		E - A1089 Dock Road North	100	8	41	6	1

Heavy Vehicle %

08:00 - 08:20			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	9	5	3
		C - A1089 St Andrew's Road	0	0	71	9	61
		D - Thurrock Park Way	0	3	7	0	11
		E - A1089 Dock Road North	100	3	49	5	0

Heavy Vehicle %

08:20 - 08:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	9	5	3
		C - A1089 St Andrew's Road	0	0	71	9	61
		D - Thurrock Park Way	0	3	7	0	11
		E - A1089 Dock Road North	100	3	49	5	0

Heavy Vehicle %

08:40 - 09:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	9	5	3
		C - A1089 St Andrew's Road	0	0	71	9	61
		D - Thurrock Park Way	0	3	7	0	11
		E - A1089 Dock Road North	100	3	49	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.15	11.03	0.4	B	109	291
B - Dock Road South	0.74	15.79	2.8	C	549	1464
C - A1089 St Andrew's Road	0.69	10.71	3.6	B	1163	3102
D - Thurrock Park Way	0.53	8.35	1.2	A	424	1129
E - A1089 Dock Road North	1.80	943.59	645.6	F	2223	5929

Main Results for each time segment

06:20 - 06:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2239		852	0.115	97	88	0.0	0.3	10.383	B
B - Dock Road South	366	122	1228		1244	0.294	365	1109	0.0	0.4	4.237	A
C - A1089 St Andrew's Road	1032	344	658		2170	0.476	1027	934	0.0	1.5	5.399	A
D - Thurrock Park Way	308	103	1407	0.00	1197	0.257	307	278	0.0	0.4	5.183	A
E - A1089 Dock Road North	2367	789	158		2208	1.072	2169	1556	0.0	66.1	63.554	F

06:40 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2226		859	0.114	98	95	0.3	0.3	10.317	B
B - Dock Road South	366	122	1312		1205	0.304	366	1012	0.4	0.5	4.448	A
C - A1089 St Andrew's Road	1032	344	678		2159	0.478	1032	1000	1.5	1.6	5.496	A
D - Thurrock Park Way	308	103	1414	0.00	1194	0.258	308	296	0.4	0.4	5.216	A
E - A1089 Dock Road North	2163	721	159		2207	0.980	2162	1563	66.1	66.3	108.919	F

07:00 - 07:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2321		811	0.123	100	64	0.3	0.3	11.028	B
B - Dock Road South	558	186	1068		1319	0.423	557	1353	0.5	0.8	4.919	A
C - A1089 St Andrew's Road	1182	394	874		2048	0.577	1180	751	1.6	2.3	7.138	A
D - Thurrock Park Way	389	130	1674	0.00	1069	0.364	388	380	0.4	0.6	5.957	A
E - A1089 Dock Road North	3923	1308	200		2185	1.795	2185	1862	66.3	645.6	593.961	F

07:20 - 07:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2303		820	0.122	100	69	0.3	0.3	10.894	B
B - Dock Road South	558	186	1140		1285	0.434	558	1262	0.8	0.8	5.161	A
C - A1089 St Andrew's Road	1182	394	904		2031	0.582	1182	794	2.3	2.4	7.318	A
D - Thurrock Park Way	389	130	1676	0.00	1067	0.364	389	410	0.6	0.6	5.974	A
E - A1089 Dock Road North	1712	571	200		2185	0.784	2172	1865	645.6	492.4	943.593	F

07:40 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2240		851	0.117	100	139	0.3	0.3	10.446	B
B - Dock Road South	558	186	2034		867	0.644	555	307	0.8	1.8	11.912	B
C - A1089 St Andrew's Road	1182	394	1169		1882	0.628	1181	1420	2.4	2.9	8.844	A
D - Thurrock Park Way	389	130	1672	0.00	1069	0.364	389	677	0.6	0.6	5.958	A
E - A1089 Dock Road North	1712	571	200		2185	0.784	2179	1861	492.4	336.7	686.146	F

08:00 - 08:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2245		849	0.148	126	138	0.3	0.4	10.847	B
B - Dock Road South	662	221	1977		893	0.741	659	394	1.8	2.8	15.787	C
C - A1089 St Andrew's Road	1232	411	1312		1801	0.684	1230	1323	2.9	3.5	10.408	B
D - Thurrock Park Way	535	178	1786	0.00	1014	0.527	533	756	0.6	1.2	8.250	A
E - A1089 Dock Road North	1970	657	225		2171	0.907	2158	2094	336.7	274.2	509.091	F

08:20 - 08:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2248		848	0.149	126	138	0.4	0.4	10.875	B
B - Dock Road South	662	221	1932		914	0.724	662	442	2.8	2.8	14.902	B
C - A1089 St Andrew's Road	1232	411	1335		1788	0.689	1232	1259	3.5	3.6	10.710	B
D - Thurrock Park Way	535	178	1791	0.00	1012	0.529	535	776	1.2	1.2	8.348	A
E - A1089 Dock Road North	1970	657	226		2171	0.908	2160	2100	274.2	210.7	404.683	F

08:40 - 09:00

Arm	Total Demand	Junction Arrivals	Circulating flow	Pedestrian demand	Capacity	RFC	Throughput	Throughput (exit side)	Start queue	End queue	Delay	Unsignalised level of

	(PCU/hr)	(PCU)	(PCU/hr)	(Ped/hr)	(PCU/hr)		(PCU/hr)	(PCU/hr)	(PCU)	(PCU)	(s)	service
A - Amazon UK Service Access	126	42	2245		849	0.148	126	138	0.4	0.4	10.854	B
B - Dock Road South	662	221	1929		916	0.723	662	442	2.8	2.8	14.823	B
C - A1089 St Andrew's Road	1232	411	1334		1789	0.689	1232	1257	3.6	3.6	10.710	B
D - Thurrock Park Way	535	178	1791	0.00	1012	0.529	535	775	1.2	1.2	8.351	A
E - A1089 Dock Road North	1970	657	226		2171	0.908	2157	2100	210.7	148.3	300.541	F

FY - Construction P2, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D1 - Construction P1, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.
Warning	Demand Sets	D6 - Construction P2, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	39.70	E

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	39.70	E

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D6	Construction P2	PM	ONE HOUR	16:45	18:15	15	✓	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Amazon UK Service Access		ONE HOUR	✓	100	100.000
B - Dock Road South		ONE HOUR	✓	581	100.000
C - A1089 St Andrew's Road		ONE HOUR	✓	1228	100.000
D - Thurrock Park Way		ONE HOUR	✓	922	100.000
E - A1089 Dock Road North		ONE HOUR	✓	1867	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	50.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	28	137	416
	C - A1089 St Andrew's Road	0	32	42	86	1068
	D - Thurrock Park Way	0	162	70	5	685
	E - A1089 Dock Road North	92	507	814	452	2

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

	A - Amazon UK Service Access	0	100	100	100	100
	B - Dock Road South	100	0	4	5	0
From	**C - A1089 St Andrew's Road**	100	0	62	8	28
	D - Thurrock Park Way	100	0	13	25	3
	E - A1089 Dock Road North	100	1	38	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.13	10.78	0.3	B	100	100
B - Dock Road South	0.60	8.66	1.5	A	581	581
C - A1089 St Andrew's Road	0.73	9.38	3.5	A	1228	1228
D - Thurrock Park Way	1.02	95.59	27.9	F	922	922
E - A1089 Dock Road North	0.97	43.26	23.6	E	1867	1867

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1866		1037	0.087	90	82	0.1	0.2	8.279	A
B - Dock Road South	522	131	1329		1197	0.436	521	627	0.5	0.8	5.403	A
C - A1089 St Andrew's Road	1104	276	996		1979	0.558	1102	854	1.0	1.6	5.359	A
D - Thurrock Park Way	829	207	1489	50.00	1144	0.725	824	609	1.4	2.6	11.505	B
E - A1089 Dock Road North	1678	420	278		2142	0.783	1670	2035	2.2	4.2	9.210	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2226		859	0.128	110	98	0.2	0.3	10.472	B
B - Dock Road South	640	160	1591		1074	0.596	637	745	0.8	1.5	8.309	A
C - A1089 St Andrew's Road	1352	338	1207		1860	0.727	1345	1020	1.6	3.4	9.033	A
D - Thurrock Park Way	1015	254	1819	50.00	999	1.017	953	733	2.6	18.2	52.640	F
E - A1089 Dock Road North	2056	514	326		2116	0.971	1999	2446	4.2	18.5	28.936	D

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2267		838	0.131	110	100	0.3	0.3	10.779	B
B - Dock Road South	640	160	1618		1061	0.603	639	759	1.5	1.5	8.657	A
C - A1089 St Andrew's Road	1352	338	1219		1854	0.729	1352	1038	3.4	3.5	9.379	A
D - Thurrock Park Way	1015	254	1827	50.00	995	1.021	976	743	18.2	27.9	95.593	F
E - A1089 Dock Road North	2056	514	332		2113	0.973	2035	2471	18.5	23.6	43.261	E

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1973		984	0.091	90	86	0.3	0.2	8.782	A
B - Dock Road South	522	131	1395		1166	0.448	525	668	1.5	0.8	5.730	A
C - A1089 St Andrew's Road	1104	276	1021		1965	0.562	1111	898	3.5	1.7	5.566	A
D - Thurrock Park Way	829	207	1501	50.00	1151	0.720	929	631	27.9	2.8	24.343	C
E - A1089 Dock Road North	1678	420	306		2127	0.789	1754	2125	23.6	4.9	13.988	B

FY - Construction P3, AM 2hr

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Pedestrian Crossing	D - Thurrock Park Way - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Demand Sets	D1 - Construction P1, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	473.87	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	473.87	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D7	Construction P3	AM 2hr	DIRECT	06:20	09:00	160	20	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - Amazon UK Service Access		DIRECT	✓	100.000
B - Dock Road South		DIRECT	✓	100.000
C - A1089 St Andrew's Road		DIRECT	✓	100.000
D - Thurrock Park Way		DIRECT	✓	100.000
E - A1089 Dock Road North		DIRECT	✓	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	0.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

06:20 - 06:40		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	A - Amazon UK Service Access	0	0	0	0	98
From	B - Dock Road South	2	0	25	31	308
	C - A1089 St Andrew's Road	0	12	27	30	963
	D - Thurrock Park Way	0	21	96	1	190
	E - A1089 Dock Road North	94	1174	859	236	4

Demand (PCU/hr)

06:40 - 07:00		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	A - Amazon UK Service Access	0	0	0	0	98
From	B - Dock Road South	2	0	25	31	308
	C - A1089 St Andrew's Road	0	12	27	30	963
	D - Thurrock Park Way	0	21	96	1	190
	E - A1089 Dock Road North	94	970	859	236	4

Demand (PCU/hr)

		To				

07:00 - 07:20			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	456
		C - A1089 St Andrew's Road	0	4	43	54	1116
		D - Thurrock Park Way	0	33	112	9	234
		E - A1089 Dock Road North	108	2420	975	421	0

Demand (PCU/hr)

07:20 - 07:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	456
		C - A1089 St Andrew's Road	0	4	43	54	1116
		D - Thurrock Park Way	0	33	112	9	234
		E - A1089 Dock Road North	108	209	975	421	0

Demand (PCU/hr)

07:40 - 08:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	456
		C - A1089 St Andrew's Road	0	4	43	54	1116
		D - Thurrock Park Way	0	33	112	9	234
		E - A1089 Dock Road North	108	209	975	421	0

Demand (PCU/hr)

08:00 - 08:20			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	511
		C - A1089 St Andrew's Road	0	11	35	74	1147
		D - Thurrock Park Way	0	63	113	5	354
		E - A1089 Dock Road North	125	334	997	521	10

Demand (PCU/hr)

08:20 - 08:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	511
		C - A1089 St Andrew's Road	0	11	35	74	1147
		D - Thurrock Park Way	0	63	113	5	354
		E - A1089 Dock Road North	125	334	997	521	10

Demand (PCU/hr)

08:40 - 09:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	511
		C - A1089 St Andrew's Road	0	11	35	74	1147
		D - Thurrock Park Way	0	63	113	5	354
		E - A1089 Dock Road North	125	334	997	521	10

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

06:20 - 06:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

06:40 - 07:00	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

07:00 - 07:20			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	73	8	63
		D - Thurrock Park Way	100	14	6	29	12
		E - A1089 Dock Road North	100	1	42	6	0

Heavy Vehicle %

07:20 - 07:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	73	8	63
		D - Thurrock Park Way	100	14	6	29	12
		E - A1089 Dock Road North	100	8	42	6	0

Heavy Vehicle %

07:40 - 08:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	73	8	63
		D - Thurrock Park Way	100	14	6	29	12
		E - A1089 Dock Road North	100	8	42	6	0

Heavy Vehicle %

08:00 - 08:20			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	9	5	3
		C - A1089 St Andrew's Road	0	0	72	9	59
		D - Thurrock Park Way	0	3	7	0	11
		E - A1089 Dock Road North	100	3	50	5	0

Heavy Vehicle %

08:20 - 08:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	9	5	3
		C - A1089 St Andrew's Road	0	0	72	9	59
		D - Thurrock Park Way	0	3	7	0	11
		E - A1089 Dock Road North	100	3	50	5	0

Heavy Vehicle %

08:40 - 09:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	9	5	3
		C - A1089 St Andrew's Road	0	0	72	9	59
		D - Thurrock Park Way	0	3	7	0	11
		E - A1089 Dock Road North	100	3	50	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.15	11.04	0.4	B	109	291
B - Dock Road South	0.75	16.42	3.0	C	554	1478
C - A1089 St Andrew's Road	0.71	11.54	4.0	B	1190	3172
D - Thurrock Park Way	0.54	8.79	1.3	A	423	1128
E - A1089 Dock Road North	1.80	945.07	646.1	F	2230	5947

Main Results for each time segment

06:20 - 06:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2239		852	0.115	97	88	0.0	0.3	10.383	B
B - Dock Road South	366	122	1228		1244	0.294	365	1109	0.0	0.4	4.237	A
C - A1089 St Andrew's Road	1032	344	658		2170	0.476	1027	934	0.0	1.5	5.399	A
D - Thurrock Park Way	308	103	1407	0.00	1197	0.257	307	278	0.0	0.4	5.183	A
E - A1089 Dock Road North	2367	789	158		2208	1.072	2169	1556	0.0	66.1	63.554	F

06:40 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2226		859	0.114	98	95	0.3	0.3	10.317	B
B - Dock Road South	366	122	1312		1205	0.304	366	1012	0.4	0.5	4.448	A
C - A1089 St Andrew's Road	1032	344	678		2159	0.478	1032	1000	1.5	1.6	5.496	A
D - Thurrock Park Way	308	103	1414	0.00	1194	0.258	308	296	0.4	0.4	5.216	A
E - A1089 Dock Road North	2163	721	159		2207	0.980	2162	1563	66.1	66.3	108.923	F

07:00 - 07:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2322		811	0.123	100	63	0.3	0.3	11.036	B
B - Dock Road South	566	189	1071		1317	0.430	565	1351	0.5	0.8	4.981	A
C - A1089 St Andrew's Road	1217	406	884		2043	0.596	1214	752	1.6	2.5	7.356	A
D - Thurrock Park Way	388	129	1716	0.00	1048	0.370	387	382	0.4	0.7	6.130	A
E - A1089 Dock Road North	3924	1308	201		2185	1.796	2185	1903	66.3	646.1	594.642	F

07:20 - 07:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2304		820	0.122	100	68	0.3	0.3	10.901	B
B - Dock Road South	566	189	1143		1284	0.441	566	1261	0.8	0.8	5.227	A
C - A1089 St Andrew's Road	1217	406	915		2025	0.601	1217	794	2.5	2.5	7.561	A
D - Thurrock Park Way	388	129	1719	0.00	1047	0.371	388	413	0.7	0.7	6.152	A
E - A1089 Dock Road North	1713	571	201		2184	0.784	2171	1906	646.1	493.5	945.068	F

07:40 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2242		851	0.118	100	137	0.3	0.3	10.456	B
B - Dock Road South	566	189	2039		864	0.655	563	303	0.8	1.9	12.315	B
C - A1089 St Andrew's Road	1217	406	1182		1874	0.649	1215	1420	2.5	3.1	9.253	A
D - Thurrock Park Way	388	129	1715	0.00	1049	0.370	388	683	0.7	0.7	6.134	A
E - A1089 Dock Road North	1713	571	201		2184	0.784	2179	1902	493.5	338.3	688.224	F

08:00 - 08:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2248		848	0.149	126	136	0.3	0.4	10.864	B
B - Dock Road South	668	223	1984		890	0.751	665	389	1.9	3.0	16.416	C
C - A1089 St Andrew's Road	1267	422	1327		1792	0.707	1265	1321	3.1	3.8	11.124	B
D - Thurrock Park Way	535	178	1831	0.00	993	0.539	533	761	0.7	1.3	8.636	A
E - A1089 Dock Road North	1987	662	226		2171	0.915	2157	2138	338.3	281.6	516.380	F

08:20 - 08:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2251		846	0.149	126	136	0.4	0.4	10.898	B
B - Dock Road South	668	223	1940		911	0.734	668	437	3.0	2.9	15.509	C
C - A1089 St Andrew's Road	1267	422	1353		1778	0.713	1267	1255	3.8	4.0	11.528	B
D - Thurrock Park Way	535	178	1841	0.00	988	0.541	535	779	1.3	1.3	8.787	A
E - A1089 Dock Road North	1987	662	227		2170	0.916	2160	2149	281.6	223.9	421.709	F

08:40 - 09:00

Arm	Total Demand	Junction Arrivals	Circulating flow	Pedestrian demand	Capacity	RFC	Throughput	Throughput (exit side)	Start queue	End queue	Delay	Unsignalised level of

	(PCU/hr)	(PCU)	(PCU/hr)	(Ped/hr)	(PCU/hr)		(PCU/hr)	(PCU/hr)	(PCU)	(PCU)	(s)	service
A - Amazon UK Service Access	126	42	2249		847	0.149	126	136	0.4	0.4	10.880	B
B - Dock Road South	668	223	1938		911	0.733	668	437	2.9	2.9	15.438	C
C - A1089 St Andrew's Road	1267	422	1353		1778	0.713	1267	1254	4.0	4.0	11.536	B
D - Thurrock Park Way	535	178	1841	0.00	988	0.542	535	779	1.3	1.3	8.792	A
E - A1089 Dock Road North	1987	662	227		2170	0.916	2158	2149	223.9	167.0	326.880	F

FY - Construction P3, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D1 - Construction P1, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.
Warning	Demand Sets	D9 - Construction P3, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	48.55	E

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	48.55	E

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D9	Construction P3	PM	ONE HOUR	16:45	18:15	15	✓	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Amazon UK Service Access		ONE HOUR	✓	100	100.000
B - Dock Road South		ONE HOUR	✓	579	100.000
C - A1089 St Andrew's Road		ONE HOUR	✓	1228	100.000
D - Thurrock Park Way		ONE HOUR	✓	923	100.000
E - A1089 Dock Road North		ONE HOUR	✓	1930	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	50.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	28	137	414
	C - A1089 St Andrew's Road	0	32	43	86	1067
	D - Thurrock Park Way	0	162	70	5	686
	E - A1089 Dock Road North	92	504	880	452	2

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

	A - Amazon UK Service Access	0	100	100	100	100
	B - Dock Road South	100	0	4	5	0
From	C - A1089 St Andrew's Road	100	0	62	8	28
	D - Thurrock Park Way	100	0	13	25	3
	E - A1089 Dock Road North	100	1	35	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.13	11.11	0.3	B	100	100
B - Dock Road South	0.62	9.16	1.6	A	579	579
C - A1089 St Andrew's Road	0.73	9.29	3.4	A	1228	1228
D - Thurrock Park Way	1.02	95.55	27.9	F	923	923
E - A1089 Dock Road North	1.01	64.81	38.9	F	1930	1930

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1922		1010	0.089	90	82	0.1	0.2	8.529	A
B - Dock Road South	521	130	1388		1169	0.445	519	624	0.5	0.8	5.618	A
C - A1089 St Andrew's Road	1104	276	994		1980	0.557	1102	913	1.0	1.6	5.352	A
D - Thurrock Park Way	830	207	1487	50.00	1145	0.725	825	609	1.4	2.6	11.505	B
E - A1089 Dock Road North	1735	434	279		2142	0.810	1725	2033	2.4	4.9	10.324	B

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2268		838	0.131	110	97	0.2	0.3	10.771	B
B - Dock Road South	637	159	1643		1050	0.607	635	735	0.8	1.5	8.745	A
C - A1089 St Andrew's Road	1352	338	1198		1865	0.725	1345	1079	1.6	3.3	8.950	A
D - Thurrock Park Way	1016	254	1817	50.00	1000	1.017	954	727	2.6	18.2	52.615	F
E - A1089 Dock Road North	2125	531	327		2116	1.004	2038	2443	4.9	26.7	37.473	E

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2311		817	0.135	110	99	0.3	0.3	11.108	B
B - Dock Road South	637	159	1672		1036	0.615	637	749	1.5	1.6	9.156	A
C - A1089 St Andrew's Road	1352	338	1210		1858	0.728	1352	1099	3.3	3.4	9.289	A
D - Thurrock Park Way	1016	254	1825	50.00	996	1.021	978	737	18.2	27.9	95.547	F
E - A1089 Dock Road North	2125	531	334		2112	1.006	2076	2469	26.7	38.9	64.812	F

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	2085		929	0.097	90	89	0.3	0.2	9.365	A
B - Dock Road South	521	130	1495		1119	0.465	523	680	1.6	0.9	6.167	A
C - A1089 St Andrew's Road	1104	276	1033		1959	0.564	1111	986	3.4	1.7	5.604	A
D - Thurrock Park Way	830	207	1499	50.00	1152	0.720	930	644	27.9	2.8	24.352	C
E - A1089 Dock Road North	1735	434	307		2127	0.816	1867	2123	38.9	5.9	23.956	C

FY - Construction P4, AM 2hr

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Pedestrian Crossing	D - Thurrock Park Way - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Demand Sets	D1 - Construction P1, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	472.17	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	472.17	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D10	Construction P4	AM 2hr	DIRECT	06:20	09:00	160	20	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - Amazon UK Service Access		DIRECT	✓	100.000
B - Dock Road South		DIRECT	✓	100.000
C - A1089 St Andrew's Road		DIRECT	✓	100.000
D - Thurrock Park Way		DIRECT	✓	100.000
E - A1089 Dock Road North		DIRECT	✓	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	0.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

06:20 - 06:40

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	98
	B - Dock Road South	2	0	25	31	308
	C - A1089 St Andrew's Road	0	12	27	30	963
	D - Thurrock Park Way	0	21	96	1	190
	E - A1089 Dock Road North	94	1174	859	236	4

Demand (PCU/hr)

06:40 - 07:00

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	98
	B - Dock Road South	2	0	25	31	308
	C - A1089 St Andrew's Road	0	12	27	30	963
	D - Thurrock Park Way	0	21	96	1	190
	E - A1089 Dock Road North	94	970	859	236	4

Demand (PCU/hr)

		To				

07:00 - 07:20	From		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	448
		C - A1089 St Andrew's Road	0	4	35	54	1102
		D - Thurrock Park Way	0	33	112	9	235
		E - A1089 Dock Road North	108	2431	962	422	0

Demand (PCU/hr)

07:20 - 07:40	From	To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	448
		C - A1089 St Andrew's Road	0	4	35	54	1102
		D - Thurrock Park Way	0	33	112	9	235
		E - A1089 Dock Road North	108	220	962	422	0

Demand (PCU/hr)

07:40 - 08:00	From	To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	448
		C - A1089 St Andrew's Road	0	4	35	54	1102
		D - Thurrock Park Way	0	33	112	9	235
		E - A1089 Dock Road North	108	220	962	422	0

Demand (PCU/hr)

08:00 - 08:20	From	To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	505
		C - A1089 St Andrew's Road	0	11	27	74	1133
		D - Thurrock Park Way	0	63	113	5	355
		E - A1089 Dock Road North	125	342	983	521	3

Demand (PCU/hr)

08:20 - 08:40	From	To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	505
		C - A1089 St Andrew's Road	0	11	27	74	1133
		D - Thurrock Park Way	0	63	113	5	355
		E - A1089 Dock Road North	125	342	983	521	3

Demand (PCU/hr)

08:40 - 09:00	From	To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	505
		C - A1089 St Andrew's Road	0	11	27	74	1133
		D - Thurrock Park Way	0	63	113	5	355
		E - A1089 Dock Road North	125	342	983	521	3

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

06:20 - 06:40	From	To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

		To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

06:40 - 07:00	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

07:00 - 07:20			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	68	8	63
		D - Thurrock Park Way	100	14	6	29	12
		E - A1089 Dock Road North	100	1	42	6	0

Heavy Vehicle %

07:20 - 07:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	68	8	63
		D - Thurrock Park Way	100	14	6	29	12
		E - A1089 Dock Road North	100	8	42	6	0

Heavy Vehicle %

07:40 - 08:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	68	8	63
		D - Thurrock Park Way	100	14	6	29	12
		E - A1089 Dock Road North	100	8	42	6	0

Heavy Vehicle %

08:00 - 08:20			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	10	5	3
		C - A1089 St Andrew's Road	0	0	65	9	59
		D - Thurrock Park Way	0	3	7	0	11
		E - A1089 Dock Road North	100	3	50	5	0

Heavy Vehicle %

08:20 - 08:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	10	5	3
		C - A1089 St Andrew's Road	0	0	65	9	59
		D - Thurrock Park Way	0	3	7	0	11
		E - A1089 Dock Road North	100	3	50	5	0

Heavy Vehicle %

08:40 - 09:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	10	5	3
		C - A1089 St Andrew's Road	0	0	65	9	59
		D - Thurrock Park Way	0	3	7	0	11
		E - A1089 Dock Road North	100	3	50	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.15	11.01	0.4	B	109	291
B - Dock Road South	0.74	15.47	2.8	C	549	1464
C - A1089 St Andrew's Road	0.70	10.94	3.7	B	1173	3128
D - Thurrock Park Way	0.53	8.49	1.3	A	424	1130
E - A1089 Dock Road North	1.79	939.02	644.3	F	2225	5933

Main Results for each time segment

06:20 - 06:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2239		852	0.115	97	88	0.0	0.3	10.383	B
B - Dock Road South	366	122	1228		1244	0.294	365	1109	0.0	0.4	4.237	A
C - A1089 St Andrew's Road	1032	344	658		2170	0.476	1027	934	0.0	1.5	5.399	A
D - Thurrock Park Way	308	103	1407	0.00	1197	0.257	307	278	0.0	0.4	5.183	A
E - A1089 Dock Road North	2367	789	158		2208	1.072	2169	1556	0.0	66.1	63.554	F

06:40 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2226		859	0.114	98	95	0.3	0.3	10.317	B
B - Dock Road South	366	122	1312		1205	0.304	366	1012	0.4	0.5	4.448	A
C - A1089 St Andrew's Road	1032	344	678		2159	0.478	1032	1000	1.5	1.6	5.496	A
D - Thurrock Park Way	308	103	1414	0.00	1194	0.258	308	296	0.4	0.4	5.216	A
E - A1089 Dock Road North	2163	721	159		2207	0.980	2162	1563	66.1	66.3	108.912	F

07:00 - 07:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2318		813	0.123	100	63	0.3	0.3	11.007	B
B - Dock Road South	558	186	1059		1323	0.422	557	1359	0.5	0.8	4.892	A
C - A1089 St Andrew's Road	1195	398	877		2047	0.584	1193	739	1.6	2.3	7.128	A
D - Thurrock Park Way	389	130	1686	0.00	1062	0.366	388	383	0.4	0.6	6.012	A
E - A1089 Dock Road North	3923	1308	193		2189	1.792	2189	1882	66.3	644.3	592.114	F

07:20 - 07:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2300		822	0.122	100	68	0.3	0.3	10.868	B
B - Dock Road South	558	186	1134		1288	0.433	558	1266	0.8	0.8	5.139	A
C - A1089 St Andrew's Road	1195	398	910		2028	0.589	1195	782	2.3	2.4	7.320	A
D - Thurrock Park Way	389	130	1689	0.00	1061	0.367	389	416	0.6	0.6	6.029	A
E - A1089 Dock Road North	1712	571	193		2189	0.782	2175	1885	644.3	490.0	939.022	F

07:40 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2238		853	0.117	100	138	0.3	0.3	10.428	B
B - Dock Road South	558	186	2021		873	0.639	555	318	0.8	1.8	11.696	B
C - A1089 St Andrew's Road	1195	398	1177		1877	0.637	1193	1398	2.4	2.9	8.905	A
D - Thurrock Park Way	389	130	1685	0.00	1063	0.366	389	686	0.6	0.6	6.014	A
E - A1089 Dock Road North	1712	571	193		2189	0.782	2183	1881	490.0	333.0	679.744	F

08:00 - 08:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2243		850	0.148	126	137	0.3	0.4	10.832	B
B - Dock Road South	662	221	1966		899	0.737	659	403	1.8	2.8	15.466	C
C - A1089 St Andrew's Road	1245	415	1322		1796	0.693	1243	1303	2.9	3.6	10.608	B
D - Thurrock Park Way	536	179	1800	0.00	1008	0.532	534	765	0.6	1.2	8.380	A
E - A1089 Dock Road North	1974	658	218		2175	0.908	2161	2115	333.0	270.5	501.928	F

08:20 - 08:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2246		849	0.148	126	137	0.4	0.4	10.859	B
B - Dock Road South	662	221	1923		919	0.721	662	449	2.8	2.7	14.664	B
C - A1089 St Andrew's Road	1245	415	1345		1783	0.698	1245	1241	3.6	3.7	10.933	B
D - Thurrock Park Way	536	179	1805	0.00	1005	0.533	536	784	1.2	1.3	8.487	A
E - A1089 Dock Road North	1974	658	219		2175	0.908	2164	2122	270.5	207.2	397.975	F

08:40 - 09:00

Arm	Total Demand	Junction Arrivals	Circulating flow	Pedestrian demand	Capacity	RFC	Throughput	Throughput (exit side)	Start queue	End queue	Delay	Unsignalised level of

	(PCU/hr)	(PCU)	(PCU/hr)	(Ped/hr)	(PCU/hr)		(PCU/hr)	(PCU/hr)	(PCU)	(PCU)	(s)	service
A - Amazon UK Service Access	126	42	2243		850	0.148	126	137	0.4	0.4	10.837	B
B - Dock Road South	662	221	1921		920	0.720	662	448	2.7	2.7	14.588	B
C - A1089 St Andrew's Road	1245	415	1344		1783	0.698	1245	1239	3.7	3.7	10.936	B
D - Thurrock Park Way	536	179	1805	0.00	1005	0.533	536	783	1.3	1.3	8.490	A
E - A1089 Dock Road North	1974	658	219		2175	0.908	2161	2122	207.2	144.9	294.239	F

FY - Construction P4, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D1 - Construction P1, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.
Warning	Demand Sets	D12 - Construction P4, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	45.11	E

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	45.11	E

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D12	Construction P4	PM	ONE HOUR	16:45	18:15	15	✓	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Amazon UK Service Access		ONE HOUR	✓	100	100.000
B - Dock Road South		ONE HOUR	✓	578	100.000
C - A1089 St Andrew's Road		ONE HOUR	✓	1192	100.000
D - Thurrock Park Way		ONE HOUR	✓	922	100.000
E - A1089 Dock Road North		ONE HOUR	✓	1931	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	50.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	28	137	413
	C - A1089 St Andrew's Road	0	32	35	86	1039
	D - Thurrock Park Way	0	162	70	5	685
	E - A1089 Dock Road North	92	504	878	454	3

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

	A - Amazon UK Service Access	0	100	100	100	100
	B - Dock Road South	100	0	4	5	0
From	**C - A1089 St Andrew's Road**	100	0	56	8	28
	D - Thurrock Park Way	100	0	13	25	3
	E - A1089 Dock Road North	100	1	34	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.13	11.08	0.3	B	100	100
B - Dock Road South	0.61	9.07	1.6	A	578	578
C - A1089 St Andrew's Road	0.71	8.62	3.1	A	1192	1192
D - Thurrock Park Way	1.00	79.37	22.4	F	922	922
E - A1089 Dock Road North	1.01	63.83	38.3	F	1931	1931

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1916		1013	0.089	90	82	0.1	0.2	8.501	A
B - Dock Road South	520	130	1381		1172	0.443	518	624	0.5	0.8	5.585	A
C - A1089 St Andrew's Road	1072	268	996		1979	0.541	1069	904	1.0	1.5	5.154	A
D - Thurrock Park Way	829	207	1455	50.00	1157	0.717	824	610	1.4	2.5	11.089	B
E - A1089 Dock Road North	1736	434	272		2146	0.809	1726	2007	2.4	4.9	10.218	B

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2264		840	0.131	110	97	0.2	0.3	10.742	B
B - Dock Road South	636	159	1637		1053	0.605	634	737	0.8	1.5	8.667	A
C - A1089 St Andrew's Road	1312	328	1201		1864	0.704	1306	1070	1.5	3.0	8.345	A
D - Thurrock Park Way	1015	254	1778	50.00	1018	0.997	963	729	2.5	15.6	46.598	E
E - A1089 Dock Road North	2126	532	321		2119	1.003	2040	2420	4.9	26.4	37.043	E

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2307		818	0.135	110	99	0.3	0.3	11.080	B
B - Dock Road South	636	159	1666		1039	0.613	636	751	1.5	1.6	9.068	A
C - A1089 St Andrew's Road	1312	328	1213		1857	0.707	1312	1089	3.0	3.1	8.617	A
D - Thurrock Park Way	1015	254	1785	50.00	1015	1.000	988	739	15.6	22.4	79.372	F
E - A1089 Dock Road North	2126	532	328		2115	1.005	2078	2445	26.4	38.3	63.830	F

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	2071		936	0.096	90	89	0.3	0.2	9.288	A
B - Dock Road South	520	130	1486		1123	0.463	522	675	1.6	0.9	6.112	A
C - A1089 St Andrew's Road	1072	268	1034		1958	0.547	1078	974	3.1	1.6	5.377	A
D - Thurrock Park Way	829	207	1466	50.00	1168	0.709	908	645	22.4	2.7	18.662	C
E - A1089 Dock Road North	1736	434	294		2134	0.814	1866	2080	38.3	5.8	22.989	C

FY - Construction P5, AM 2hr

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Pedestrian Crossing	D - Thurrock Park Way - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Demand Sets	D1 - Construction P1, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	468.19	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	468.19	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D13	Construction P5	AM 2hr	DIRECT	06:20	09:00	160	20	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - Amazon UK Service Access		DIRECT	✓	100.000
B - Dock Road South		DIRECT	✓	100.000
C - A1089 St Andrew's Road		DIRECT	✓	100.000
D - Thurrock Park Way		DIRECT	✓	100.000
E - A1089 Dock Road North		DIRECT	✓	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	0.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

06:20 - 06:40		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	98
	B - Dock Road South	2	0	25	31	308
	C - A1089 St Andrew's Road	0	12	27	30	963
	D - Thurrock Park Way	0	21	96	1	190
	E - A1089 Dock Road North	94	1174	859	236	4

Demand (PCU/hr)

06:40 - 07:00		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	98
	B - Dock Road South	2	0	25	31	308
	C - A1089 St Andrew's Road	0	12	27	30	963
	D - Thurrock Park Way	0	21	96	1	190
	E - A1089 Dock Road North	94	970	859	236	4

Demand (PCU/hr)

		To	

07:00 - 07:20

Demand (PCU/hr)

		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	25	85	442
	C - A1089 St Andrew's Road	0	4	43	54	1128
	D - Thurrock Park Way	0	33	112	9	236
	E - A1089 Dock Road North	108	2430	964	412	0

Demand (PCU/hr)

07:20 - 07:40

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	25	85	442
	C - A1089 St Andrew's Road	0	4	43	54	1128
	D - Thurrock Park Way	0	33	112	9	236
	E - A1089 Dock Road North	108	219	964	412	0

Demand (PCU/hr)

07:40 - 08:00

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	25	85	442
	C - A1089 St Andrew's Road	0	4	43	54	1128
	D - Thurrock Park Way	0	33	112	9	236
	E - A1089 Dock Road North	108	219	964	412	0

Demand (PCU/hr)

08:00 - 08:20

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	126
	B - Dock Road South	0	0	23	134	497
	C - A1089 St Andrew's Road	0	11	35	74	1161
	D - Thurrock Park Way	0	63	113	5	355
	E - A1089 Dock Road North	125	338	987	508	1

Demand (PCU/hr)

08:20 - 08:40

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	126
	B - Dock Road South	0	0	23	134	497
	C - A1089 St Andrew's Road	0	11	35	74	1161
	D - Thurrock Park Way	0	63	113	5	355
	E - A1089 Dock Road North	125	338	987	508	1

Demand (PCU/hr)

08:40 - 09:00

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	126
	B - Dock Road South	0	0	23	134	497
	C - A1089 St Andrew's Road	0	11	35	74	1161
	D - Thurrock Park Way	0	63	113	5	355
	E - A1089 Dock Road North	125	338	987	508	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

06:20 - 06:40

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	100	0	4	11	2
	C - A1089 St Andrew's Road	0	0	55	12	65
	D - Thurrock Park Way	0	0	20	0	30
	E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

06:40 - 07:00	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

07:00 - 07:20			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	73	8	62
		D - Thurrock Park Way	100	14	6	29	12
		E - A1089 Dock Road North	100	1	43	6	5

Heavy Vehicle %

07:20 - 07:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	73	8	62
		D - Thurrock Park Way	100	14	6	29	12
		E - A1089 Dock Road North	100	8	43	6	5

Heavy Vehicle %

07:40 - 08:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	73	8	62
		D - Thurrock Park Way	100	14	6	29	12
		E - A1089 Dock Road North	100	8	43	6	5

Heavy Vehicle %

08:00 - 08:20			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	9	5	3
		C - A1089 St Andrew's Road	0	0	72	9	57
		D - Thurrock Park Way	0	3	7	0	11
		E - A1089 Dock Road North	100	3	51	5	0

Heavy Vehicle %

08:20 - 08:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	9	5	3
		C - A1089 St Andrew's Road	0	0	72	9	57
		D - Thurrock Park Way	0	3	7	0	11
		E - A1089 Dock Road North	100	3	51	5	0

Heavy Vehicle %

08:40 - 09:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	9	5	3
		C - A1089 St Andrew's Road	0	0	72	9	57
		D - Thurrock Park Way	0	3	7	0	11
		E - A1089 Dock Road North	100	3	51	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.15	11.03	0.4	B	109	291
B - Dock Road South	0.73	15.10	2.7	C	544	1450
C - A1089 St Andrew's Road	0.71	11.33	4.0	B	1199	3198
D - Thurrock Park Way	0.54	8.72	1.3	A	424	1131
E - A1089 Dock Road North	1.79	937.14	642.8	F	2216	5909

Main Results for each time segment

06:20 - 06:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2239		852	0.115	97	88	0.0	0.3	10.383	B
B - Dock Road South	366	122	1228		1244	0.294	365	1109	0.0	0.4	4.237	A
C - A1089 St Andrew's Road	1032	344	658		2170	0.476	1027	934	0.0	1.5	5.399	A
D - Thurrock Park Way	308	103	1407	0.00	1197	0.257	307	278	0.0	0.4	5.183	A
E - A1089 Dock Road North	2367	789	158		2208	1.072	2169	1556	0.0	66.1	63.554	F

06:40 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2226		859	0.114	98	95	0.3	0.3	10.317	B
B - Dock Road South	366	122	1312		1205	0.304	366	1012	0.4	0.5	4.448	A
C - A1089 St Andrew's Road	1032	344	678		2159	0.478	1032	1000	1.5	1.6	5.496	A
D - Thurrock Park Way	308	103	1414	0.00	1194	0.258	308	296	0.4	0.4	5.216	A
E - A1089 Dock Road North	2163	721	159		2207	0.980	2162	1563	66.1	66.3	108.928	F

07:00 - 07:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2322		811	0.123	100	63	0.3	0.3	11.035	B
B - Dock Road South	552	184	1063		1321	0.418	551	1359	0.5	0.7	4.868	A
C - A1089 St Andrew's Road	1229	410	866		2053	0.599	1226	748	1.6	2.5	7.330	A
D - Thurrock Park Way	390	130	1714	0.00	1049	0.372	389	378	0.4	0.7	6.140	A
E - A1089 Dock Road North	3914	1305	201		2185	1.792	2185	1903	66.3	642.8	592.244	F

07:20 - 07:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2303		820	0.122	100	69	0.3	0.3	10.896	B
B - Dock Road South	552	184	1138		1286	0.429	552	1265	0.7	0.8	5.110	A
C - A1089 St Andrew's Road	1229	410	898		2035	0.604	1229	792	2.5	2.5	7.537	A
D - Thurrock Park Way	390	130	1717	0.00	1048	0.372	390	410	0.7	0.7	6.162	A
E - A1089 Dock Road North	1703	568	201		2184	0.780	2171	1906	642.8	486.9	937.144	F

07:40 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2241		851	0.118	100	138	0.3	0.3	10.452	B
B - Dock Road South	552	184	2024		871	0.634	549	317	0.8	1.8	11.546	B
C - A1089 St Andrew's Road	1229	410	1160		1887	0.651	1227	1413	2.5	3.1	9.193	A
D - Thurrock Park Way	390	130	1713	0.00	1049	0.372	390	675	0.7	0.7	6.146	A
E - A1089 Dock Road North	1703	568	201		2184	0.780	2178	1902	486.9	328.4	674.795	F

08:00 - 08:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2246		849	0.148	126	137	0.3	0.4	10.854	B
B - Dock Road South	654	218	1969		897	0.729	651	403	1.8	2.7	15.097	C
C - A1089 St Andrew's Road	1281	427	1302		1807	0.709	1279	1319	3.1	3.8	10.986	B
D - Thurrock Park Way	536	179	1826	0.00	995	0.539	534	754	0.7	1.3	8.611	A
E - A1089 Dock Road North	1959	653	226		2171	0.903	2157	2134	328.4	262.4	492.399	F

08:20 - 08:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2249		847	0.149	126	138	0.4	0.4	10.878	B
B - Dock Road South	654	218	1928		916	0.714	654	447	2.7	2.6	14.340	B
C - A1089 St Andrew's Road	1281	427	1323		1795	0.714	1281	1259	3.8	4.0	11.325	B
D - Thurrock Park Way	536	179	1831	0.00	993	0.540	536	773	1.3	1.3	8.718	A
E - A1089 Dock Road North	1959	653	227		2170	0.903	2159	2140	262.4	195.6	382.517	F

08:40 - 09:00

Arm	Total Demand	Junction Arrivals	Circulating flow	Pedestrian demand	Capacity	RFC	Throughput	Throughput (exit side)	Start queue	End queue	Delay	Unsignalised level of

	(PCU/hr)	(PCU)	(PCU/hr)	(Ped/hr)	(PCU/hr)		(PCU/hr)	(PCU/hr)	(PCU)	(PCU)	(s)	service
A - Amazon UK Service Access	126	42	2245		849	0.148	126	138	0.4	0.4	10.852	B
B - Dock Road South	654	218	1925		918	0.713	654	446	2.6	2.6	14.257	B
C - A1089 St Andrew's Road	1281	427	1322		1795	0.714	1281	1257	4.0	4.0	11.328	B
D - Thurrock Park Way	536	179	1831	0.00	993	0.540	536	772	1.3	1.3	8.721	A
E - A1089 Dock Road North	1959	653	227		2170	0.903	2156	2140	195.6	130.1	273.117	F

FY - Construction P5, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D1 - Construction P1, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.
Warning	Demand Sets	D15 - Construction P5, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	38.49	E

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	38.49	E

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D15	Construction P5	PM	ONE HOUR	16:45	18:15	15	✓	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Amazon UK Service Access		ONE HOUR	✓	100	100.000
B - Dock Road South		ONE HOUR	✓	577	100.000
C - A1089 St Andrew's Road		ONE HOUR	✓	1220	100.000
D - Thurrock Park Way		ONE HOUR	✓	916	100.000
E - A1089 Dock Road North		ONE HOUR	✓	1873	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	50.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	28	137	412
	C - A1089 St Andrew's Road	0	32	43	86	1059
	D - Thurrock Park Way	0	162	70	5	679
	E - A1089 Dock Road North	92	500	824	455	2

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

	A - Amazon UK Service Access	0	100	100	100	100
	B - Dock Road South	100	0	4	5	0
From	C - A1089 St Andrew's Road	100	0	62	8	28
	D - Thurrock Park Way	100	0	13	25	3
	E - A1089 Dock Road North	100	1	38	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.13	10.83	0.3	B	100	100
B - Dock Road South	0.60	8.71	1.5	A	577	577
C - A1089 St Andrew's Road	0.72	9.20	3.4	A	1220	1220
D - Thurrock Park Way	1.01	85.09	24.2	F	916	916
E - A1089 Dock Road North	0.98	45.42	25.0	E	1873	1873

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1872		1034	0.087	90	82	0.1	0.2	8.306	A
B - Dock Road South	519	130	1341		1191	0.436	518	621	0.5	0.8	5.421	A
C - A1089 St Andrew's Road	1097	274	995		1980	0.554	1094	863	1.0	1.6	5.312	A
D - Thurrock Park Way	823	206	1478	50.00	1147	0.718	819	612	1.4	2.5	11.238	B
E - A1089 Dock Road North	1684	421	279		2142	0.786	1676	2018	2.3	4.3	9.331	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2233		855	0.129	110	98	0.2	0.3	10.518	B
B - Dock Road South	635	159	1604		1068	0.595	633	738	0.8	1.5	8.295	A
C - A1089 St Andrew's Road	1343	336	1205		1861	0.722	1337	1031	1.6	3.3	8.874	A
D - Thurrock Park Way	1009	252	1806	50.00	1005	1.004	953	736	2.5	16.4	48.783	E
E - A1089 Dock Road North	2062	516	329		2115	0.975	2002	2430	4.3	19.3	29.854	D

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2275		834	0.132	110	100	0.3	0.3	10.834	B
B - Dock Road South	635	159	1632		1055	0.602	635	753	1.5	1.5	8.705	A
C - A1089 St Andrew's Road	1343	336	1217		1854	0.724	1343	1050	3.3	3.4	9.203	A
D - Thurrock Park Way	1009	252	1814	50.00	1001	1.008	978	746	16.4	24.2	85.088	F
E - A1089 Dock Road North	2062	516	335		2111	0.977	2039	2456	19.3	25.0	45.419	E

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1981		980	0.092	90	87	0.3	0.2	8.821	A
B - Dock Road South	519	130	1410		1159	0.448	521	661	1.5	0.8	5.761	A
C - A1089 St Andrew's Road	1097	274	1022		1965	0.558	1104	910	3.4	1.7	5.516	A
D - Thurrock Park Way	823	206	1490	50.00	1157	0.712	909	635	24.2	2.7	20.313	C
E - A1089 Dock Road North	1684	421	303		2129	0.791	1764	2096	25.0	4.9	14.577	B

FY - Construction P6, AM 2hr

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Pedestrian Crossing	D - Thurrock Park Way - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Demand Sets	D1 - Construction P1, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	469.08	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	469.08	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D16	Construction P6	AM 2hr	DIRECT	06:20	09:00	160	20	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - Amazon UK Service Access		DIRECT	✓	100.000
B - Dock Road South		DIRECT	✓	100.000
C - A1089 St Andrew's Road		DIRECT	✓	100.000
D - Thurrock Park Way		DIRECT	✓	100.000
E - A1089 Dock Road North		DIRECT	✓	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	0.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

06:20 - 06:40

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	98
	B - Dock Road South	2	0	25	31	308
	C - A1089 St Andrew's Road	0	12	27	30	963
	D - Thurrock Park Way	0	21	96	1	190
	E - A1089 Dock Road North	94	1174	859	236	4

Demand (PCU/hr)

06:40 - 07:00

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	98
	B - Dock Road South	2	0	25	31	308
	C - A1089 St Andrew's Road	0	12	27	30	963
	D - Thurrock Park Way	0	21	96	1	190
	E - A1089 Dock Road North	94	970	859	236	4

Demand (PCU/hr)

		To				

07:00 - 07:20	From		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	448
		C - A1089 St Andrew's Road	0	4	43	54	1134
		D - Thurrock Park Way	0	33	112	9	235
		E - A1089 Dock Road North	108	2424	973	412	0

Demand (PCU/hr)

07:20 - 07:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	448
		C - A1089 St Andrew's Road	0	4	43	54	1134
		D - Thurrock Park Way	0	33	112	9	235
		E - A1089 Dock Road North	108	213	973	412	0

Demand (PCU/hr)

07:40 - 08:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	448
		C - A1089 St Andrew's Road	0	4	43	54	1134
		D - Thurrock Park Way	0	33	112	9	235
		E - A1089 Dock Road North	108	213	973	412	0

Demand (PCU/hr)

08:00 - 08:20			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	505
		C - A1089 St Andrew's Road	0	11	35	74	1164
		D - Thurrock Park Way	0	63	113	5	354
		E - A1089 Dock Road North	125	336	995	508	1

Demand (PCU/hr)

08:20 - 08:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	505
		C - A1089 St Andrew's Road	0	11	35	74	1164
		D - Thurrock Park Way	0	63	113	5	354
		E - A1089 Dock Road North	125	336	995	508	1

Demand (PCU/hr)

08:40 - 09:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	505
		C - A1089 St Andrew's Road	0	11	35	74	1164
		D - Thurrock Park Way	0	63	113	5	354
		E - A1089 Dock Road North	125	336	995	508	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

06:20 - 06:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

06:40 - 07:00	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

07:00 - 07:20			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	73	8	62
		D - Thurrock Park Way	100	14	6	29	12
		E - A1089 Dock Road North	100	1	43	6	1

Heavy Vehicle %

07:20 - 07:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	73	8	62
		D - Thurrock Park Way	100	14	6	29	12
		E - A1089 Dock Road North	100	8	43	6	1

Heavy Vehicle %

07:40 - 08:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	73	8	62
		D - Thurrock Park Way	100	14	6	29	12
		E - A1089 Dock Road North	100	8	43	6	1

Heavy Vehicle %

08:00 - 08:20			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	9	5	3
		C - A1089 St Andrew's Road	0	0	72	9	58
		D - Thurrock Park Way	0	3	7	0	11
		E - A1089 Dock Road North	100	3	51	5	0

Heavy Vehicle %

08:20 - 08:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	9	5	3
		C - A1089 St Andrew's Road	0	0	72	9	58
		D - Thurrock Park Way	0	3	7	0	11
		E - A1089 Dock Road North	100	3	51	5	0

Heavy Vehicle %

08:40 - 09:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	9	5	3
		C - A1089 St Andrew's Road	0	0	72	9	58
		D - Thurrock Park Way	0	3	7	0	11
		E - A1089 Dock Road North	100	3	51	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.15	11.03	0.4	B	109	291
B - Dock Road South	0.74	15.76	2.8	C	549	1464
C - A1089 St Andrew's Road	0.72	11.55	4.1	B	1203	3207
D - Thurrock Park Way	0.54	8.80	1.3	A	424	1129
E - A1089 Dock Road North	1.79	939.55	643.8	F	2219	5918

Main Results for each time segment

06:20 - 06:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2239		852	0.115	97	88	0.0	0.3	10.383	B
B - Dock Road South	366	122	1228		1244	0.294	365	1109	0.0	0.4	4.237	A
C - A1089 St Andrew's Road	1032	344	658		2170	0.476	1027	934	0.0	1.5	5.399	A
D - Thurrock Park Way	308	103	1407	0.00	1197	0.257	307	278	0.0	0.4	5.183	A
E - A1089 Dock Road North	2367	789	158		2208	1.072	2169	1556	0.0	66.1	63.554	F

06:40 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2226		859	0.114	98	95	0.3	0.3	10.317	B
B - Dock Road South	366	122	1312		1205	0.304	366	1012	0.4	0.5	4.448	A
C - A1089 St Andrew's Road	1032	344	678		2159	0.478	1032	1000	1.5	1.6	5.496	A
D - Thurrock Park Way	308	103	1414	0.00	1194	0.258	308	296	0.4	0.4	5.216	A
E - A1089 Dock Road North	2163	721	159		2207	0.980	2162	1563	66.1	66.3	108.930	F

07:00 - 07:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2322		811	0.123	100	63	0.3	0.3	11.035	B
B - Dock Road South	558	186	1067		1319	0.423	557	1355	0.5	0.8	4.916	A
C - A1089 St Andrew's Road	1235	412	872		2049	0.603	1232	752	1.6	2.5	7.411	A
D - Thurrock Park Way	389	130	1726	0.00	1043	0.373	388	378	0.4	0.7	6.184	A
E - A1089 Dock Road North	3917	1306	201		2185	1.793	2185	1914	66.3	643.8	593.042	F

07:20 - 07:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2303		820	0.122	100	68	0.3	0.3	10.898	B
B - Dock Road South	558	186	1141		1285	0.434	558	1262	0.8	0.8	5.164	A
C - A1089 St Andrew's Road	1235	412	903		2032	0.608	1235	796	2.5	2.6	7.623	A
D - Thurrock Park Way	389	130	1729	0.00	1042	0.373	389	409	0.7	0.7	6.207	A
E - A1089 Dock Road North	1706	569	201		2184	0.781	2171	1917	643.8	488.9	939.547	F

07:40 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2242		851	0.118	100	138	0.3	0.3	10.452	B
B - Dock Road South	558	186	2033		867	0.643	555	309	0.8	1.8	11.894	B
C - A1089 St Andrew's Road	1235	412	1165		1884	0.656	1233	1422	2.6	3.1	9.317	A
D - Thurrock Park Way	389	130	1725	0.00	1044	0.373	389	674	0.7	0.7	6.190	A
E - A1089 Dock Road North	1706	569	201		2184	0.781	2179	1913	488.9	331.4	678.855	F

08:00 - 08:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2246		848	0.149	126	137	0.3	0.4	10.856	B
B - Dock Road South	662	221	1976		894	0.741	659	397	1.8	2.8	15.757	C
C - A1089 St Andrew's Road	1284	428	1308		1803	0.712	1282	1327	3.1	3.9	11.190	B
D - Thurrock Park Way	535	178	1837	0.00	990	0.541	533	753	0.7	1.3	8.690	A
E - A1089 Dock Road North	1965	655	226		2171	0.905	2157	2144	331.4	267.4	498.989	F

08:20 - 08:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2249		847	0.149	126	137	0.4	0.4	10.882	B
B - Dock Road South	662	221	1932		914	0.724	662	443	2.8	2.8	14.900	B
C - A1089 St Andrew's Road	1284	428	1330		1791	0.717	1284	1264	3.9	4.0	11.544	B
D - Thurrock Park Way	535	178	1842	0.00	987	0.542	535	771	1.3	1.3	8.800	A
E - A1089 Dock Road North	1965	655	227		2170	0.905	2160	2150	267.4	202.5	392.368	F

08:40 - 09:00

Arm	Total Demand	Junction Arrivals	Circulating flow	Pedestrian demand	Capacity	RFC	Throughput	Throughput (exit side)	Start queue	End queue	Delay	Unsignalised level of

	(PCU/hr)	(PCU)	(PCU/hr)	(Ped/hr)	(PCU/hr)		(PCU/hr)	(PCU/hr)	(PCU)	(PCU)	(s)	service
A - Amazon UK Service Access	126	42	2246		849	0.148	126	137	0.4	0.4	10.858	B
B - Dock Road South	662	221	1929		916	0.723	662	443	2.8	2.8	14.817	B
C - A1089 St Andrew's Road	1284	428	1329		1792	0.717	1284	1263	4.0	4.1	11.548	B
D - Thurrock Park Way	535	178	1842	0.00	987	0.542	535	770	1.3	1.3	8.804	A
E - A1089 Dock Road North	1965	655	227		2170	0.905	2156	2150	202.5	138.8	286.048	F

FY - Construction P6, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D1 - Construction P1, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.
Warning	Demand Sets	D18 - Construction P6, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	41.16	E

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	41.16	E

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D18	Construction P6	PM	ONE HOUR	16:45	18:15	15	✓	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Amazon UK Service Access		ONE HOUR	✓	100	100.000
B - Dock Road South		ONE HOUR	✓	577	100.000
C - A1089 St Andrew's Road		ONE HOUR	✓	1231	100.000
D - Thurrock Park Way		ONE HOUR	✓	922	100.000
E - A1089 Dock Road North		ONE HOUR	✓	1879	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	50.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	28	137	412
	C - A1089 St Andrew's Road	0	32	43	86	1070
	D - Thurrock Park Way	0	162	70	5	685
	E - A1089 Dock Road North	92	504	828	453	2

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

	A - Amazon UK Service Access	0	100	100	100	100
	B - Dock Road South	100	0	4	5	0
From	C - A1089 St Andrew's Road	100	0	62	8	29
	D - Thurrock Park Way	100	0	13	25	3
	E - A1089 Dock Road North	100	1	39	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.13	10.86	0.3	B	100	100
B - Dock Road South	0.60	8.71	1.5	A	577	577
C - A1089 St Andrew's Road	0.73	9.47	3.5	A	1231	1231
D - Thurrock Park Way	1.02	95.11	27.7	F	922	922
E - A1089 Dock Road North	0.98	47.02	26.1	E	1879	1879

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1878		1032	0.087	90	82	0.1	0.2	8.329	A
B - Dock Road South	519	130	1343		1190	0.436	518	624	0.5	0.8	5.428	A
C - A1089 St Andrew's Road	1107	277	994		1981	0.559	1104	867	1.1	1.6	5.408	A
D - Thurrock Park Way	829	207	1488	50.00	1144	0.724	824	610	1.4	2.6	11.495	B
E - A1089 Dock Road North	1689	422	279		2142	0.789	1681	2033	2.3	4.4	9.458	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2235		854	0.129	110	98	0.2	0.3	10.538	B
B - Dock Road South	635	159	1604		1068	0.595	633	741	0.8	1.5	8.297	A
C - A1089 St Andrew's Road	1355	339	1203		1863	0.728	1348	1034	1.6	3.4	9.113	A
D - Thurrock Park Way	1015	254	1818	50.00	999	1.016	953	733	2.6	18.1	52.457	F
E - A1089 Dock Road North	2069	517	327		2115	0.978	2007	2444	4.4	19.9	30.558	D

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2278		833	0.132	110	100	0.3	0.3	10.857	B
B - Dock Road South	635	159	1633		1054	0.602	635	755	1.5	1.5	8.710	A
C - A1089 St Andrew's Road	1355	339	1215		1856	0.730	1355	1053	3.4	3.5	9.467	A
D - Thurrock Park Way	1015	254	1826	50.00	995	1.020	977	744	18.1	27.7	95.109	F
E - A1089 Dock Road North	2069	517	334		2112	0.980	2044	2469	19.9	26.1	47.023	E

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1993		974	0.092	90	87	0.3	0.2	8.883	A
B - Dock Road South	519	130	1416		1156	0.449	521	668	1.5	0.8	5.784	A
C - A1089 St Andrew's Road	1107	277	1021		1965	0.563	1114	916	3.5	1.7	5.626	A
D - Thurrock Park Way	829	207	1500	50.00	1152	0.720	928	634	27.7	2.8	24.148	C
E - A1089 Dock Road North	1689	422	307		2127	0.794	1773	2122	26.1	5.1	15.257	C

FY - Construction P7, AM 2hr

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Pedestrian Crossing	D - Thurrock Park Way - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Demand Sets	D1 - Construction P1, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	469.27	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	469.27	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D19	Construction P7	AM 2hr	DIRECT	06:20	09:00	160	20	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - Amazon UK Service Access		DIRECT	✓	100.000
B - Dock Road South		DIRECT	✓	100.000
C - A1089 St Andrew's Road		DIRECT	✓	100.000
D - Thurrock Park Way		DIRECT	✓	100.000
E - A1089 Dock Road North		DIRECT	✓	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	0.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

06:20 - 06:40		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	98
		B - Dock Road South	2	0	25	31	308
		C - A1089 St Andrew's Road	0	12	27	30	963
		D - Thurrock Park Way	0	21	96	1	190
		E - A1089 Dock Road North	94	1174	859	236	4

Demand (PCU/hr)

06:40 - 07:00		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	98
		B - Dock Road South	2	0	25	31	308
		C - A1089 St Andrew's Road	0	12	27	30	963
		D - Thurrock Park Way	0	21	96	1	190
		E - A1089 Dock Road North	94	970	859	236	4

Demand (PCU/hr)

		To

07:00 - 07:20	From		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	446
		C - A1089 St Andrew's Road	0	4	43	54	1123
		D - Thurrock Park Way	0	33	112	9	235
		E - A1089 Dock Road North	108	2426	968	413	0

Demand (PCU/hr)

07:20 - 07:40			To				
	From		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	446
		C - A1089 St Andrew's Road	0	4	43	54	1123
		D - Thurrock Park Way	0	33	112	9	235
		E - A1089 Dock Road North	108	215	968	413	0

Demand (PCU/hr)

07:40 - 08:00			To				
	From		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	446
		C - A1089 St Andrew's Road	0	4	43	54	1123
		D - Thurrock Park Way	0	33	112	9	235
		E - A1089 Dock Road North	108	215	968	413	0

Demand (PCU/hr)

08:00 - 08:20			To				
	From		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	502
		C - A1089 St Andrew's Road	0	11	35	74	1155
		D - Thurrock Park Way	0	63	113	5	355
		E - A1089 Dock Road North	125	336	990	509	10

Demand (PCU/hr)

08:20 - 08:40			To				
	From		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	502
		C - A1089 St Andrew's Road	0	11	35	74	1155
		D - Thurrock Park Way	0	63	113	5	355
		E - A1089 Dock Road North	125	336	990	509	10

Demand (PCU/hr)

08:40 - 09:00			To				
	From		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	502
		C - A1089 St Andrew's Road	0	11	35	74	1155
		D - Thurrock Park Way	0	63	113	5	355
		E - A1089 Dock Road North	125	336	990	509	10

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

06:20 - 06:40			To				
	From		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

		A - Amazon UK Service Access	0	0	0	0	100
06:40 - 07:00	From	B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
07:00 - 07:20		A - Amazon UK Service Access	0	100	100	100	100
	From	B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	73	8	63
		D - Thurrock Park Way	100	14	6	29	12
		E - A1089 Dock Road North	100	1	43	6	1

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
07:20 - 07:40		A - Amazon UK Service Access	0	100	100	100	100
	From	B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	73	8	63
		D - Thurrock Park Way	100	14	6	29	12
		E - A1089 Dock Road North	100	8	43	6	1

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
07:40 - 08:00		A - Amazon UK Service Access	0	100	100	100	100
	From	B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	73	8	63
		D - Thurrock Park Way	100	14	6	29	12
		E - A1089 Dock Road North	100	8	43	6	1

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
08:00 - 08:20		A - Amazon UK Service Access	0	0	0	0	100
	From	B - Dock Road South	0	0	9	5	3
		C - A1089 St Andrew's Road	0	0	72	9	58
		D - Thurrock Park Way	0	3	7	0	11
		E - A1089 Dock Road North	100	3	51	5	0

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
08:20 - 08:40		A - Amazon UK Service Access	0	0	0	0	100
	From	B - Dock Road South	0	0	9	5	3
		C - A1089 St Andrew's Road	0	0	72	9	58
		D - Thurrock Park Way	0	3	7	0	11
		E - A1089 Dock Road North	100	3	51	5	0

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
08:40 - 09:00		A - Amazon UK Service Access	0	0	0	0	100
	From	B - Dock Road South	0	0	9	5	3
		C - A1089 St Andrew's Road	0	0	72	9	58
		D - Thurrock Park Way	0	3	7	0	11
		E - A1089 Dock Road North	100	3	51	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.15	11.03	0.4	B	109	291
B - Dock Road South	0.74	15.54	2.8	C	547	1459
C - A1089 St Andrew's Road	0.71	11.43	4.0	B	1195	3187
D - Thurrock Park Way	0.54	8.80	1.3	A	424	1130
E - A1089 Dock Road North	1.79	937.95	643.1	F	2220	5921

Main Results for each time segment

06:20 - 06:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2239		852	0.115	97	88	0.0	0.3	10.383	B
B - Dock Road South	366	122	1228		1244	0.294	365	1109	0.0	0.4	4.237	A
C - A1089 St Andrew's Road	1032	344	658		2170	0.476	1027	934	0.0	1.5	5.399	A
D - Thurrock Park Way	308	103	1407	0.00	1197	0.257	307	278	0.0	0.4	5.183	A
E - A1089 Dock Road North	2367	789	158		2208	1.072	2169	1556	0.0	66.1	63.554	F

06:40 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2226		859	0.114	98	95	0.3	0.3	10.317	B
B - Dock Road South	366	122	1312		1205	0.304	366	1012	0.4	0.5	4.448	A
C - A1089 St Andrew's Road	1032	344	678		2159	0.478	1032	1000	1.5	1.6	5.496	A
D - Thurrock Park Way	308	103	1414	0.00	1194	0.258	308	296	0.4	0.4	5.216	A
E - A1089 Dock Road North	2163	721	159		2207	0.980	2162	1563	66.1	66.3	108.928	F

07:00 - 07:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2322		811	0.123	100	63	0.3	0.3	11.035	B
B - Dock Road South	556	185	1065		1320	0.421	555	1357	0.5	0.8	4.898	A
C - A1089 St Andrew's Road	1224	408	871		2050	0.597	1221	750	1.6	2.5	7.351	A
D - Thurrock Park Way	389	130	1713	0.00	1049	0.371	388	379	0.4	0.7	6.126	A
E - A1089 Dock Road North	3915	1305	201		2185	1.792	2185	1901	66.3	643.1	592.514	F

07:20 - 07:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2303		820	0.122	100	69	0.3	0.3	10.897	B
B - Dock Road South	556	185	1140		1285	0.433	556	1263	0.8	0.8	5.146	A
C - A1089 St Andrew's Road	1224	408	902		2033	0.602	1224	794	2.5	2.5	7.559	A
D - Thurrock Park Way	389	130	1716	0.00	1048	0.371	389	410	0.7	0.7	6.148	A
E - A1089 Dock Road North	1704	568	201		2184	0.780	2171	1904	643.1	487.6	937.953	F

07:40 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2241		851	0.118	100	138	0.3	0.3	10.453	B
B - Dock Road South	556	185	2030		869	0.640	553	312	0.8	1.8	11.771	B
C - A1089 St Andrew's Road	1224	408	1165		1884	0.650	1222	1417	2.5	3.1	9.218	A
D - Thurrock Park Way	389	130	1712	0.00	1050	0.370	389	675	0.7	0.7	6.131	A
E - A1089 Dock Road North	1704	568	201		2184	0.780	2178	1900	487.6	329.4	676.027	F

08:00 - 08:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2247		848	0.149	126	137	0.3	0.4	10.856	B
B - Dock Road South	659	220	1975		894	0.737	656	398	1.8	2.8	15.543	C
C - A1089 St Andrew's Road	1275	425	1311		1801	0.708	1273	1319	3.1	3.8	11.038	B
D - Thurrock Park Way	536	179	1831	0.00	993	0.540	534	753	0.7	1.3	8.649	A
E - A1089 Dock Road North	1970	657	226		2171	0.908	2157	2138	329.4	267.1	496.977	F

08:20 - 08:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2249		847	0.149	126	137	0.4	0.4	10.885	B
B - Dock Road South	659	220	1933		914	0.721	659	442	2.8	2.7	14.759	B
C - A1089 St Andrew's Road	1275	425	1336		1787	0.713	1275	1256	3.8	4.0	11.419	B
D - Thurrock Park Way	536	179	1840	0.00	989	0.542	536	771	1.3	1.3	8.798	A
E - A1089 Dock Road North	1970	657	227		2170	0.908	2160	2149	267.1	203.9	393.241	F

08:40 - 09:00

Arm	Total Demand	Junction Arrivals	Circulating flow	Pedestrian demand	Capacity	RFC	Throughput	Throughput (exit side)	Start queue	End queue	Delay	Unsignalised level of

	(PCU/hr)	(PCU)	(PCU/hr)	(Ped/hr)	(PCU/hr)		(PCU/hr)	(PCU/hr)	(PCU)	(PCU)	(s)	service
A - Amazon UK Service Access	126	42	2246		848	0.149	126	137	0.4	0.4	10.862	B
B - Dock Road South	659	220	1931		915	0.720	659	442	2.7	2.7	14.679	B
C - A1089 St Andrew's Road	1275	425	1335		1788	0.713	1275	1255	4.0	4.0	11.426	B
D - Thurrock Park Way	536	179	1840	0.00	988	0.542	536	770	1.3	1.3	8.803	A
E - A1089 Dock Road North	1970	657	227		2170	0.908	2156	2149	203.9	141.8	289.628	F

FY - Construction P7, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D1 - Construction P1, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.
Warning	Demand Sets	D21 - Construction P7, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	39.88	E

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	39.88	E

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D21	Construction P7	PM	ONE HOUR	16:45	18:15	15	✓	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Amazon UK Service Access		ONE HOUR	✓	100	100.000
B - Dock Road South		ONE HOUR	✓	575	100.000
C - A1089 St Andrew's Road		ONE HOUR	✓	1225	100.000
D - Thurrock Park Way		ONE HOUR	✓	922	100.000
E - A1089 Dock Road North		ONE HOUR	✓	1874	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	50.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	28	137	410
	C - A1089 St Andrew's Road	0	32	43	86	1064
	D - Thurrock Park Way	0	162	70	5	685
	E - A1089 Dock Road North	92	504	823	453	2

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

	A - Amazon UK Service Access	0	100	100	100	100
	B - Dock Road South	100	0	4	5	0
From	C - A1089 St Andrew's Road	100	0	62	8	28
	D - Thurrock Park Way	100	0	13	25	3
	E - A1089 Dock Road North	100	1	39	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.13	10.83	0.3	B	100	100
B - Dock Road South	0.60	8.62	1.5	A	575	575
C - A1089 St Andrew's Road	0.73	9.26	3.4	A	1225	1225
D - Thurrock Park Way	1.02	91.51	26.5	F	922	922
E - A1089 Dock Road North	0.98	45.62	25.2	E	1874	1874

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1873		1034	0.087	90	82	0.1	0.2	8.310	A
B - Dock Road South	517	129	1338		1192	0.434	516	624	0.5	0.8	5.390	A
C - A1089 St Andrew's Road	1101	275	992		1982	0.556	1099	862	1.0	1.6	5.328	A
D - Thurrock Park Way	829	207	1481	50.00	1147	0.723	824	610	1.4	2.6	11.406	B
E - A1089 Dock Road North	1685	421	279		2142	0.787	1676	2026	2.3	4.3	9.369	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2232		855	0.129	110	98	0.2	0.3	10.516	B
B - Dock Road South	633	158	1600		1070	0.592	630	742	0.8	1.4	8.275	A
C - A1089 St Andrew's Road	1349	337	1201		1864	0.724	1342	1030	1.6	3.3	8.922	A
D - Thurrock Park Way	1015	254	1809	50.00	1003	1.012	955	734	2.6	17.6	51.139	F
E - A1089 Dock Road North	2063	516	328		2115	0.975	2003	2437	4.3	19.4	29.967	D

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2274		835	0.132	110	100	0.3	0.3	10.832	B
B - Dock Road South	633	158	1628		1056	0.599	633	756	1.4	1.5	8.624	A
C - A1089 St Andrew's Road	1349	337	1213		1857	0.726	1348	1049	3.3	3.4	9.256	A
D - Thurrock Park Way	1015	254	1817	50.00	999	1.016	979	744	17.6	26.5	91.511	F
E - A1089 Dock Road North	2063	516	334		2112	0.977	2040	2462	19.4	25.2	45.624	E

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1984		979	0.092	90	87	0.3	0.2	8.838	A
B - Dock Road South	517	129	1408		1160	0.446	520	666	1.5	0.8	5.737	A
C - A1089 St Andrew's Road	1101	275	1018		1967	0.560	1108	910	3.4	1.7	5.533	A
D - Thurrock Park Way	829	207	1493	50.00	1155	0.717	924	633	26.5	2.8	22.700	C
E - A1089 Dock Road North	1685	421	305		2127	0.792	1765	2111	25.2	5.0	14.732	B

FY - Construction P8, AM 2hr

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Pedestrian Crossing	D - Thurrock Park Way - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Demand Sets	D1 - Construction P1, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	473.49	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	473.49	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D22	Construction P8	AM 2hr	DIRECT	06:20	09:00	160	20	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - Amazon UK Service Access		DIRECT	✓	100.000
B - Dock Road South		DIRECT	✓	100.000
C - A1089 St Andrew's Road		DIRECT	✓	100.000
D - Thurrock Park Way		DIRECT	✓	100.000
E - A1089 Dock Road North		DIRECT	✓	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	0.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

06:20 - 06:40		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From A - Amazon UK Service Access	0	0	0	0	98
	B - Dock Road South	2	0	25	31	308
	C - A1089 St Andrew's Road	0	12	27	30	963
	D - Thurrock Park Way	0	21	96	1	190
	E - A1089 Dock Road North	94	1174	859	236	4

Demand (PCU/hr)

06:40 - 07:00		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From A - Amazon UK Service Access	0	0	0	0	98
	B - Dock Road South	2	0	25	31	308
	C - A1089 St Andrew's Road	0	12	27	30	963
	D - Thurrock Park Way	0	21	96	1	190
	E - A1089 Dock Road North	94	970	859	236	4

Demand (PCU/hr)

		To				

07:00 - 07:20			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	441
		C - A1089 St Andrew's Road	0	4	43	54	1108
		D - Thurrock Park Way	0	33	112	9	234
		E - A1089 Dock Road North	108	2422	975	413	0

Demand (PCU/hr)

07:20 - 07:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	441
		C - A1089 St Andrew's Road	0	4	43	54	1108
		D - Thurrock Park Way	0	33	112	9	234
		E - A1089 Dock Road North	108	211	975	413	0

Demand (PCU/hr)

07:40 - 08:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	441
		C - A1089 St Andrew's Road	0	4	43	54	1108
		D - Thurrock Park Way	0	33	112	9	234
		E - A1089 Dock Road North	108	211	975	413	0

Demand (PCU/hr)

08:00 - 08:20			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	495
		C - A1089 St Andrew's Road	0	11	35	74	1139
		D - Thurrock Park Way	0	63	113	5	353
		E - A1089 Dock Road North	125	335	997	509	1

Demand (PCU/hr)

08:20 - 08:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	495
		C - A1089 St Andrew's Road	0	11	35	74	1139
		D - Thurrock Park Way	0	63	113	5	353
		E - A1089 Dock Road North	125	335	997	509	1

Demand (PCU/hr)

08:40 - 09:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	495
		C - A1089 St Andrew's Road	0	11	35	74	1139
		D - Thurrock Park Way	0	63	113	5	353
		E - A1089 Dock Road North	125	335	997	509	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

06:20 - 06:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

06:40 - 07:00	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	73	8	65
		D - Thurrock Park Way	100	14	6	29	12
		E - A1089 Dock Road North	100	8	43	6	1

Heavy Vehicle %

			To				
07:00 - 07:20			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	73	8	65
		D - Thurrock Park Way	100	14	6	29	12
		E - A1089 Dock Road North	100	1	43	6	1

Heavy Vehicle %

			To				
07:20 - 07:40			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	73	8	65
		D - Thurrock Park Way	100	14	6	29	12
		E - A1089 Dock Road North	100	8	43	6	1

Heavy Vehicle %

			To				
07:40 - 08:00			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	73	8	65
		D - Thurrock Park Way	100	14	6	29	12
		E - A1089 Dock Road North	100	8	43	6	1

Heavy Vehicle %

			To				
08:00 - 08:20			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	9	5	3
		C - A1089 St Andrew's Road	0	0	72	9	60
		D - Thurrock Park Way	0	3	7	0	11
		E - A1089 Dock Road North	100	3	51	5	0

Heavy Vehicle %

			To				
08:20 - 08:40			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	9	5	3
		C - A1089 St Andrew's Road	0	0	72	9	60
		D - Thurrock Park Way	0	3	7	0	11
		E - A1089 Dock Road North	100	3	51	5	0

Heavy Vehicle %

			To				
08:40 - 09:00			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	9	5	3
		C - A1089 St Andrew's Road	0	0	72	9	60
		D - Thurrock Park Way	0	3	7	0	11
		E - A1089 Dock Road North	100	3	51	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.15	11.01	0.4	B	109	291
B - Dock Road South	0.73	15.23	2.7	C	543	1447
C - A1089 St Andrew's Road	0.70	11.03	3.8	B	1184	3156
D - Thurrock Park Way	0.53	8.47	1.2	A	423	1127
E - A1089 Dock Road North	1.79	943.28	646.0	F	2220	5921

Main Results for each time segment

06:20 - 06:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2239		852	0.115	97	88	0.0	0.3	10.383	B
B - Dock Road South	366	122	1228		1244	0.294	365	1109	0.0	0.4	4.237	A
C - A1089 St Andrew's Road	1032	344	658		2170	0.476	1027	934	0.0	1.5	5.399	A
D - Thurrock Park Way	308	103	1407	0.00	1197	0.257	307	278	0.0	0.4	5.183	A
E - A1089 Dock Road North	2367	789	158		2208	1.072	2169	1556	0.0	66.1	63.729	F

06:40 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2224		860	0.114	98	95	0.3	0.3	10.305	B
B - Dock Road South	366	122	1311		1205	0.304	366	1011	0.4	0.5	4.463	A
C - A1089 St Andrew's Road	1032	344	678		2159	0.478	1032	999	1.5	1.6	5.502	A
D - Thurrock Park Way	308	103	1414	0.00	1194	0.258	308	296	0.4	0.4	4.559	A
E - A1089 Dock Road North	2163	721	159		2207	0.980	2160	1563	66.1	67.0	111.357	F

07:00 - 07:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2318		813	0.123	100	63	0.3	0.3	11.008	B
B - Dock Road South	551	184	1067		1319	0.418	550	1351	0.5	0.7	4.874	A
C - A1089 St Andrew's Road	1209	403	865		2053	0.589	1206	752	1.6	2.4	7.283	A
D - Thurrock Park Way	388	129	1693	0.00	1059	0.366	387	378	0.4	0.6	6.028	A
E - A1089 Dock Road North	3918	1306	201		2185	1.793	2181	1880	67.0	646.0	594.919	F

07:20 - 07:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2304		820	0.122	100	68	0.3	0.3	10.902	B
B - Dock Road South	551	184	1140		1285	0.429	551	1264	0.7	0.8	5.111	A
C - A1089 St Andrew's Road	1209	403	896		2036	0.594	1209	795	2.4	2.5	7.475	A
D - Thurrock Park Way	388	129	1696	0.00	1058	0.367	388	409	0.6	0.6	6.050	A
E - A1089 Dock Road North	1707	569	201		2184	0.781	2171	1883	646.0	491.3	943.281	F

07:40 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2242		851	0.118	100	138	0.3	0.3	10.452	B
B - Dock Road South	551	184	2035		866	0.636	548	306	0.8	1.8	11.692	B
C - A1089 St Andrew's Road	1209	403	1159		1887	0.641	1207	1424	2.5	3.0	9.077	A
D - Thurrock Park Way	388	129	1692	0.00	1060	0.366	388	675	0.6	0.6	6.035	A
E - A1089 Dock Road North	1707	569	201		2184	0.781	2179	1879	491.3	334.2	683.203	F

08:00 - 08:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2247		848	0.149	126	137	0.3	0.4	10.857	B
B - Dock Road South	652	217	1978		893	0.730	649	394	1.8	2.7	15.228	C
C - A1089 St Andrew's Road	1259	420	1299		1808	0.696	1257	1329	3.0	3.7	10.713	B
D - Thurrock Park Way	534	178	1803	0.00	1006	0.531	532	753	0.6	1.2	8.370	A
E - A1089 Dock Road North	1967	656	226		2171	0.906	2157	2108	334.2	270.8	504.185	F

08:20 - 08:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2249		847	0.149	126	137	0.4	0.4	10.884	B
B - Dock Road South	652	217	1934		914	0.714	652	442	2.7	2.7	14.380	B
C - A1089 St Andrew's Road	1259	420	1320		1796	0.701	1259	1266	3.7	3.8	11.023	B
D - Thurrock Park Way	534	178	1807	0.00	1004	0.532	534	772	1.2	1.2	8.466	A
E - A1089 Dock Road North	1967	656	227		2170	0.906	2160	2114	270.8	206.6	398.600	F

08:40 - 09:00

Arm	Total Demand	Junction Arrivals	Circulating flow	Pedestrian demand	Capacity	RFC	Throughput	Throughput (exit side)	Start queue	End queue	Delay	Unsignalised level of

	(PCU/hr)	(PCU)	(PCU/hr)	(Ped/hr)	(PCU/hr)		(PCU/hr)	(PCU/hr)	(PCU)	(PCU)	(s)	service
A - Amazon UK Service Access	126	42	2246		848	0.149	126	137	0.4	0.4	10.861	B
B - Dock Road South	652	217	1931		915	0.713	652	441	2.7	2.6	14.301	B
C - A1089 St Andrew's Road	1259	420	1319		1797	0.701	1259	1264	3.8	3.8	11.025	B
D - Thurrock Park Way	534	178	1807	0.00	1004	0.532	534	771	1.2	1.2	8.469	A
E - A1089 Dock Road North	1967	656	227		2170	0.906	2156	2114	206.6	143.5	293.255	F

FY - Construction P8, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D1 - Construction P1, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.
Warning	Demand Sets	D24 - Construction P8, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	40.43	E

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	40.43	E

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D24	Construction P8	PM	ONE HOUR	16:45	18:15	15	✓	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Amazon UK Service Access		ONE HOUR	✓	100	100.000
B - Dock Road South		ONE HOUR	✓	575	100.000
C - A1089 St Andrew's Road		ONE HOUR	✓	1230	100.000
D - Thurrock Park Way		ONE HOUR	✓	922	100.000
E - A1089 Dock Road North		ONE HOUR	✓	1875	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	50.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	28	137	410
	C - A1089 St Andrew's Road	0	32	43	86	1069
	D - Thurrock Park Way	0	162	70	5	685
	E - A1089 Dock Road North	92	501	828	452	2

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

	A - Amazon UK Service Access	0	100	100	100	100
	B - Dock Road South	100	0	4	5	0
From	C - A1089 St Andrew's Road	100	0	62	8	29
	D - Thurrock Park Way	100	0	13	25	3
	E - A1089 Dock Road North	100	1	39	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.13	10.84	0.3	B	100	100
B - Dock Road South	0.60	8.66	1.5	A	575	575
C - A1089 St Andrew's Road	0.73	9.42	3.5	A	1230	1230
D - Thurrock Park Way	1.02	93.74	27.3	F	922	922
E - A1089 Dock Road North	0.98	45.88	25.3	E	1875	1875

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1874		1033	0.087	90	82	0.1	0.2	8.313	A
B - Dock Road South	517	129	1342		1191	0.434	516	622	0.5	0.8	5.410	A
C - A1089 St Andrew's Road	1106	276	991		1982	0.558	1103	867	1.1	1.6	5.393	A
D - Thurrock Park Way	829	207	1486	50.00	1145	0.724	824	609	1.4	2.6	11.461	B
E - A1089 Dock Road North	1686	421	279		2142	0.787	1677	2030	2.3	4.4	9.394	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2233		855	0.129	110	98	0.2	0.3	10.519	B
B - Dock Road South	633	158	1604		1068	0.593	630	738	0.8	1.4	8.309	A
C - A1089 St Andrew's Road	1354	339	1200		1864	0.726	1347	1035	1.6	3.4	9.068	A
D - Thurrock Park Way	1015	254	1814	50.00	1001	1.014	954	733	2.6	17.9	51.958	F
E - A1089 Dock Road North	2064	516	327		2115	0.976	2004	2441	4.4	19.5	30.082	D

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2275		834	0.132	110	100	0.3	0.3	10.835	B
B - Dock Road South	633	158	1633		1055	0.600	633	752	1.4	1.5	8.663	A
C - A1089 St Andrew's Road	1354	339	1212		1858	0.729	1354	1054	3.4	3.5	9.416	A
D - Thurrock Park Way	1015	254	1823	50.00	997	1.019	978	743	17.9	27.3	93.741	F
E - A1089 Dock Road North	2064	516	334		2112	0.978	2041	2467	19.5	25.3	45.883	E

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1986		978	0.092	90	87	0.3	0.2	8.849	A
B - Dock Road South	517	129	1413		1157	0.447	520	664	1.5	0.8	5.755	A
C - A1089 St Andrew's Road	1106	276	1017		1967	0.562	1113	915	3.5	1.7	5.604	A
D - Thurrock Park Way	829	207	1498	50.00	1153	0.719	927	633	27.3	2.8	23.585	C
E - A1089 Dock Road North	1686	421	306		2127	0.792	1767	2118	25.3	5.0	14.853	B

FY - Construction P9, AM 2hr

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Pedestrian Crossing	D - Thurrock Park Way - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Demand Sets	D1 - Construction P1, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	451.86	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	451.86	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D25	Construction P9	AM 2hr	DIRECT	06:20	09:00	160	20	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - Amazon UK Service Access		DIRECT	✓	100.000
B - Dock Road South		DIRECT	✓	100.000
C - A1089 St Andrew's Road		DIRECT	✓	100.000
D - Thurrock Park Way		DIRECT	✓	100.000
E - A1089 Dock Road North		DIRECT	✓	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	0.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

06:20 - 06:40		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	A - Amazon UK Service Access	0	0	0	0	98
From	B - Dock Road South	2	0	25	31	308
	C - A1089 St Andrew's Road	0	12	27	30	963
	D - Thurrock Park Way	0	21	96	1	190
	E - A1089 Dock Road North	94	1174	859	236	4

Demand (PCU/hr)

06:40 - 07:00		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	A - Amazon UK Service Access	0	0	0	0	98
From	B - Dock Road South	2	0	25	31	308
	C - A1089 St Andrew's Road	0	12	27	30	963
	D - Thurrock Park Way	0	21	96	1	190
	E - A1089 Dock Road North	94	970	859	236	4

Demand (PCU/hr)

		To

07:00 - 07:20

		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	25	85	455
	C - A1089 St Andrew's Road	0	4	35	54	1123
	D - Thurrock Park Way	0	33	112	9	231
	E - A1089 Dock Road North	107	2426	947	404	0

Demand (PCU/hr)

07:20 - 07:40

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	25	85	455
	C - A1089 St Andrew's Road	0	4	35	54	1123
	D - Thurrock Park Way	0	33	112	9	231
	E - A1089 Dock Road North	107	215	947	404	0

Demand (PCU/hr)

07:40 - 08:00

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	25	85	455
	C - A1089 St Andrew's Road	0	4	35	54	1123
	D - Thurrock Park Way	0	33	112	9	231
	E - A1089 Dock Road North	107	215	947	404	0

Demand (PCU/hr)

08:00 - 08:20

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	126
	B - Dock Road South	0	0	23	134	508
	C - A1089 St Andrew's Road	0	11	27	74	1160
	D - Thurrock Park Way	0	63	113	5	351
	E - A1089 Dock Road North	123	340	968	496	1

Demand (PCU/hr)

08:20 - 08:40

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	126
	B - Dock Road South	0	0	23	134	508
	C - A1089 St Andrew's Road	0	11	27	74	1160
	D - Thurrock Park Way	0	63	113	5	351
	E - A1089 Dock Road North	123	340	968	496	1

Demand (PCU/hr)

08:40 - 09:00

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	126
	B - Dock Road South	0	0	23	134	508
	C - A1089 St Andrew's Road	0	11	27	74	1160
	D - Thurrock Park Way	0	63	113	5	351
	E - A1089 Dock Road North	123	340	968	496	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

06:20 - 06:40

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	100	0	4	11	2
	C - A1089 St Andrew's Road	0	0	55	12	65
	D - Thurrock Park Way	0	0	20	0	30
	E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
06:40 - 07:00	From					
	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	100	0	4	11	2
	C - A1089 St Andrew's Road	0	0	55	12	65
	D - Thurrock Park Way	0	0	20	0	30
	E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

			To			
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
07:00 - 07:20	From					
	A - Amazon UK Service Access	0	100	100	100	100
	B - Dock Road South	100	0	0	8	3
	C - A1089 St Andrew's Road	100	0	67	8	60
	D - Thurrock Park Way	100	14	6	29	12
	E - A1089 Dock Road North	100	1	42	6	1

Heavy Vehicle %

			To			
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
07:20 - 07:40	From					
	A - Amazon UK Service Access	0	100	100	100	100
	B - Dock Road South	100	0	0	8	3
	C - A1089 St Andrew's Road	100	0	67	8	60
	D - Thurrock Park Way	100	14	6	29	12
	E - A1089 Dock Road North	100	8	42	6	1

Heavy Vehicle %

			To			
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
07:40 - 08:00	From					
	A - Amazon UK Service Access	0	100	100	100	100
	B - Dock Road South	100	0	0	8	3
	C - A1089 St Andrew's Road	100	0	67	8	60
	D - Thurrock Park Way	100	14	6	29	12
	E - A1089 Dock Road North	100	8	42	6	1

Heavy Vehicle %

			To			
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
08:00 - 08:20	From					
	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	10	5	3
	C - A1089 St Andrew's Road	0	0	65	9	56
	D - Thurrock Park Way	0	3	7	0	12
	E - A1089 Dock Road North	100	3	49	5	0

Heavy Vehicle %

			To			
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
08:20 - 08:40	From					
	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	10	5	3
	C - A1089 St Andrew's Road	0	0	65	9	56
	D - Thurrock Park Way	0	3	7	0	12
	E - A1089 Dock Road North	100	3	49	5	0

Heavy Vehicle %

			To			
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
08:40 - 09:00	From					
	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	10	5	3
	C - A1089 St Andrew's Road	0	0	65	9	56
	D - Thurrock Park Way	0	3	7	0	12
	E - A1089 Dock Road North	100	3	49	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.15	11.01	0.4	B	109	291
B - Dock Road South	0.74	15.35	2.8	C	553	1474
C - A1089 St Andrew's Road	0.71	11.13	3.9	B	1191	3176
D - Thurrock Park Way	0.54	8.72	1.3	A	421	1122
E - A1089 Dock Road North	1.77	908.24	631.3	F	2193	5848

Main Results for each time segment

06:20 - 06:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2239		852	0.115	97	88	0.0	0.3	10.383	B
B - Dock Road South	366	122	1228		1244	0.294	365	1109	0.0	0.4	4.237	A
C - A1089 St Andrew's Road	1032	344	658		2170	0.476	1027	934	0.0	1.5	5.399	A
D - Thurrock Park Way	308	103	1407	0.00	1197	0.257	307	278	0.0	0.4	5.183	A
E - A1089 Dock Road North	2367	789	158		2208	1.072	2169	1556	0.0	66.1	63.554	F

06:40 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2226		859	0.114	98	95	0.3	0.3	10.317	B
B - Dock Road South	366	122	1312		1205	0.304	366	1012	0.4	0.5	4.448	A
C - A1089 St Andrew's Road	1032	344	678		2159	0.478	1032	1000	1.5	1.6	5.496	A
D - Thurrock Park Way	308	103	1414	0.00	1194	0.258	308	296	0.4	0.4	5.216	A
E - A1089 Dock Road North	2163	721	159		2207	0.980	2162	1563	66.1	66.3	108.910	F

07:00 - 07:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2318		813	0.123	100	63	0.3	0.3	11.007	B
B - Dock Road South	565	188	1049		1328	0.426	564	1369	0.5	0.8	4.907	A
C - A1089 St Andrew's Road	1216	405	877		2047	0.594	1213	736	1.6	2.4	7.172	A
D - Thurrock Park Way	385	128	1714	0.00	1049	0.367	384	376	0.4	0.6	6.097	A
E - A1089 Dock Road North	3884	1295	193		2189	1.774	2189	1906	66.3	631.3	582.207	F

07:20 - 07:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2297		824	0.121	100	70	0.3	0.3	10.845	B
B - Dock Road South	565	188	1141		1285	0.440	565	1256	0.8	0.8	5.209	A
C - A1089 St Andrew's Road	1216	405	913		2026	0.600	1216	792	2.4	2.5	7.395	A
D - Thurrock Park Way	385	128	1717	0.00	1048	0.367	385	412	0.6	0.7	6.114	A
E - A1089 Dock Road North	1673	558	193		2189	0.764	2174	1909	631.3	464.5	908.238	F

07:40 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2236		854	0.117	100	140	0.3	0.3	10.413	B
B - Dock Road South	565	188	2018		874	0.647	562	317	0.8	1.9	11.907	B
C - A1089 St Andrew's Road	1216	405	1173		1879	0.647	1214	1407	2.5	3.0	8.989	A
D - Thurrock Park Way	385	128	1713	0.00	1050	0.367	385	675	0.7	0.7	6.098	A
E - A1089 Dock Road North	1673	558	193		2189	0.764	2183	1905	464.5	294.6	626.856	F

08:00 - 08:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2241		851	0.148	126	138	0.3	0.4	10.816	B
B - Dock Road South	665	222	1955		904	0.736	662	412	1.9	2.8	15.351	C
C - A1089 St Andrew's Road	1272	424	1313		1801	0.706	1270	1304	3.0	3.8	10.837	B
D - Thurrock Park Way	532	177	1828	0.00	994	0.535	530	754	0.7	1.3	8.612	A
E - A1089 Dock Road North	1928	643	218		2175	0.886	2161	2140	294.6	217.1	425.480	F

08:20 - 08:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2243		850	0.148	126	138	0.4	0.4	10.833	B
B - Dock Road South	665	222	1913		923	0.720	665	455	2.8	2.7	14.577	B
C - A1089 St Andrew's Road	1272	424	1330		1791	0.710	1272	1248	3.8	3.9	11.132	B
D - Thurrock Park Way	532	177	1833	0.00	992	0.536	532	769	1.3	1.3	8.717	A
E - A1089 Dock Road North	1928	643	219		2175	0.887	2162	2146	217.1	139.2	297.832	F

08:40 - 09:00

Arm	Total Demand	Junction Arrivals	Circulating flow	Pedestrian demand	Capacity	RFC	Throughput	Throughput (exit side)	Start queue	End queue	Delay	Unsignalised level of

	(PCU/hr)	(PCU)	(PCU/hr)	(Ped/hr)	(PCU/hr)		(PCU/hr)	(PCU/hr)	(PCU)	(PCU)	(s)	service
A - Amazon UK Service Access	126	42	2236		854	0.148	126	137	0.4	0.4	10.783	B
B - Dock Road South	665	222	1908		926	0.718	665	454	2.7	2.7	14.429	B
C - A1089 St Andrew's Road	1272	424	1328		1792	0.710	1272	1245	3.9	3.9	11.123	B
D - Thurrock Park Way	532	177	1833	0.00	992	0.536	532	767	1.3	1.3	8.721	A
E - A1089 Dock Road North	1928	643	219		2175	0.887	2154	2146	139.2	63.8	172.168	F

FY - Construction P9, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D1 - Construction P1, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.
Warning	Demand Sets	D27 - Construction P9, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	32.89	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	32.89	D

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D27	Construction P9	PM	ONE HOUR	16:45	18:15	15	✓	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Amazon UK Service Access		ONE HOUR	✓	100	100.000
B - Dock Road South		ONE HOUR	✓	581	100.000
C - A1089 St Andrew's Road		ONE HOUR	✓	1182	100.000
D - Thurrock Park Way		ONE HOUR	✓	924	100.000
E - A1089 Dock Road North		ONE HOUR	✓	1835	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	50.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	28	137	416
	C - A1089 St Andrew's Road	0	32	35	86	1029
	D - Thurrock Park Way	0	162	70	5	687
	E - A1089 Dock Road North	92	497	795	449	2

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

	A - Amazon UK Service Access	0	100	100	100	100
	B - Dock Road South	100	0	4	5	0
From	C - A1089 St Andrew's Road	100	0	55	8	28
	D - Thurrock Park Way	100	0	13	25	3
	E - A1089 Dock Road North	100	1	38	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.13	10.55	0.3	B	100	100
B - Dock Road South	0.60	8.42	1.5	A	581	581
C - A1089 St Andrew's Road	0.70	8.49	3.0	A	1182	1182
D - Thurrock Park Way	1.00	77.87	22.0	F	924	924
E - A1089 Dock Road North	0.96	34.93	18.5	D	1835	1835

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1832		1054	0.085	90	82	0.1	0.2	8.134	A
B - Dock Road South	522	131	1303		1209	0.432	521	618	0.5	0.8	5.311	A
C - A1089 St Andrew's Road	1063	266	994		1981	0.537	1061	831	1.0	1.5	5.098	A
D - Thurrock Park Way	831	208	1448	50.00	1160	0.716	826	606	1.4	2.5	11.048	B
E - A1089 Dock Road North	1650	412	272		2146	0.769	1642	2002	2.1	3.9	8.658	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2197		873	0.126	110	99	0.2	0.3	10.277	B
B - Dock Road South	640	160	1567		1085	0.590	637	739	0.8	1.4	8.112	A
C - A1089 St Andrew's Road	1301	325	1207		1860	0.699	1296	998	1.5	3.0	8.236	A
D - Thurrock Park Way	1017	254	1769	50.00	1022	0.995	966	733	2.5	15.4	46.023	E
E - A1089 Dock Road North	2020	505	321		2119	0.954	1975	2414	3.9	15.3	25.165	D

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2235		854	0.129	110	101	0.3	0.3	10.547	B
B - Dock Road South	640	160	1592		1073	0.596	640	753	1.4	1.5	8.420	A
C - A1089 St Andrew's Road	1301	325	1218		1854	0.702	1301	1014	3.0	3.0	8.488	A
D - Thurrock Park Way	1017	254	1777	50.00	1019	0.998	991	742	15.4	22.0	77.875	F
E - A1089 Dock Road North	2020	505	328		2115	0.955	2008	2440	15.3	18.5	34.926	D

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1914		1014	0.089	90	86	0.3	0.2	8.504	A
B - Dock Road South	522	131	1354		1185	0.441	525	650	1.5	0.8	5.563	A
C - A1089 St Andrew's Road	1063	266	1014		1969	0.540	1068	865	3.0	1.5	5.251	A
D - Thurrock Park Way	831	208	1459	50.00	1172	0.709	908	624	22.0	2.7	18.257	C
E - A1089 Dock Road North	1650	412	293		2134	0.773	1706	2073	18.5	4.4	11.581	B

FY - Construction P10, AM 2hr

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Pedestrian Crossing	D - Thurrock Park Way - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Demand Sets	D1 - Construction P1, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	469.97	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	469.97	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D28	Construction P10	AM 2hr	DIRECT	06:20	09:00	160	20	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - Amazon UK Service Access		DIRECT	✓	100.000
B - Dock Road South		DIRECT	✓	100.000
C - A1089 St Andrew's Road		DIRECT	✓	100.000
D - Thurrock Park Way		DIRECT	✓	100.000
E - A1089 Dock Road North		DIRECT	✓	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	0.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

06:20 - 06:40

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	98
	B - Dock Road South	2	0	25	31	308
	C - A1089 St Andrew's Road	0	12	27	30	963
	D - Thurrock Park Way	0	21	96	1	190
	E - A1089 Dock Road North	94	1174	859	236	4

Demand (PCU/hr)

06:40 - 07:00

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	98
	B - Dock Road South	2	0	25	31	308
	C - A1089 St Andrew's Road	0	12	27	30	963
	D - Thurrock Park Way	0	21	96	1	190
	E - A1089 Dock Road North	94	970	859	236	4

Demand (PCU/hr)

		To				

			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
07:00 - 07:20	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	438
		C - A1089 St Andrew's Road	0	4	34	54	1101
		D - Thurrock Park Way	0	33	112	9	229
		E - A1089 Dock Road North	109	2434	955	419	0

Demand (PCU/hr)

			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
07:20 - 07:40	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	438
		C - A1089 St Andrew's Road	0	4	34	54	1101
		D - Thurrock Park Way	0	33	112	9	229
		E - A1089 Dock Road North	109	223	955	419	0

Demand (PCU/hr)

			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
07:40 - 08:00	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	438
		C - A1089 St Andrew's Road	0	4	34	54	1101
		D - Thurrock Park Way	0	33	112	9	229
		E - A1089 Dock Road North	109	223	955	419	0

Demand (PCU/hr)

			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
08:00 - 08:20	From	A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	494
		C - A1089 St Andrew's Road	0	11	27	74	1135
		D - Thurrock Park Way	0	63	113	5	349
		E - A1089 Dock Road North	126	344	976	517	1

Demand (PCU/hr)

			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
08:20 - 08:40	From	A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	494
		C - A1089 St Andrew's Road	0	11	27	74	1135
		D - Thurrock Park Way	0	63	113	5	349
		E - A1089 Dock Road North	126	344	976	517	1

Demand (PCU/hr)

			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
08:40 - 09:00	From	A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	494
		C - A1089 St Andrew's Road	0	11	27	74	1135
		D - Thurrock Park Way	0	63	113	5	349
		E - A1089 Dock Road North	126	344	976	517	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
06:20 - 06:40	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

06:40 - 07:00	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

07:00 - 07:20			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	67	8	62
		D - Thurrock Park Way	100	14	6	29	12
		E - A1089 Dock Road North	100	1	42	6	1

Heavy Vehicle %

07:20 - 07:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	67	8	62
		D - Thurrock Park Way	100	14	6	29	12
		E - A1089 Dock Road North	100	8	42	6	1

Heavy Vehicle %

07:40 - 08:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	67	8	62
		D - Thurrock Park Way	100	14	6	29	12
		E - A1089 Dock Road North	100	8	42	6	1

Heavy Vehicle %

08:00 - 08:20			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	10	5	3
		C - A1089 St Andrew's Road	0	0	65	9	58
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	50	5	0

Heavy Vehicle %

08:20 - 08:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	10	5	3
		C - A1089 St Andrew's Road	0	0	65	9	58
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	50	5	0

Heavy Vehicle %

08:40 - 09:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	10	5	3
		C - A1089 St Andrew's Road	0	0	65	9	58
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	50	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.15	11.00	0.4	B	109	291
B - Dock Road South	0.72	14.64	2.6	B	541	1443
C - A1089 St Andrew's Road	0.70	10.74	3.7	B	1173	3128
D - Thurrock Park Way	0.52	8.34	1.2	A	419	1118
E - A1089 Dock Road North	1.79	933.62	642.2	F	2219	5917

Main Results for each time segment

06:20 - 06:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2239		852	0.115	97	88	0.0	0.3	10.383	B
B - Dock Road South	366	122	1228		1244	0.294	365	1109	0.0	0.4	4.237	A
C - A1089 St Andrew's Road	1032	344	658		2170	0.476	1027	934	0.0	1.5	5.399	A
D - Thurrock Park Way	308	103	1407	0.00	1197	0.257	307	278	0.0	0.4	5.183	A
E - A1089 Dock Road North	2367	789	158		2208	1.072	2169	1556	0.0	66.1	63.554	F

06:40 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2226		859	0.114	98	95	0.3	0.3	10.317	B
B - Dock Road South	366	122	1312		1205	0.304	366	1012	0.4	0.5	4.448	A
C - A1089 St Andrew's Road	1032	344	678		2159	0.478	1032	1000	1.5	1.6	5.496	A
D - Thurrock Park Way	308	103	1414	0.00	1194	0.258	308	296	0.4	0.4	5.216	A
E - A1089 Dock Road North	2163	721	159		2207	0.980	2162	1563	66.1	66.3	108.910	F

07:00 - 07:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2317		813	0.123	100	64	0.3	0.3	10.999	B
B - Dock Road South	548	183	1054		1325	0.413	547	1363	0.5	0.7	4.817	A
C - A1089 St Andrew's Road	1193	398	866		2053	0.581	1191	735	1.6	2.3	7.018	A
D - Thurrock Park Way	383	128	1675	0.00	1068	0.359	382	382	0.4	0.6	5.908	A
E - A1089 Dock Road North	3917	1306	192		2190	1.789	2190	1865	66.3	642.2	590.307	F

07:20 - 07:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2298		823	0.122	100	70	0.3	0.3	10.855	B
B - Dock Road South	548	183	1131		1289	0.425	548	1267	0.7	0.8	5.062	A
C - A1089 St Andrew's Road	1193	398	899		2034	0.586	1193	780	2.3	2.4	7.206	A
D - Thurrock Park Way	383	128	1677	0.00	1067	0.359	383	415	0.6	0.6	5.924	A
E - A1089 Dock Road North	1706	569	192		2189	0.779	2175	1868	642.2	485.7	933.623	F

07:40 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2236		854	0.117	100	140	0.3	0.3	10.413	B
B - Dock Road South	548	183	2013		876	0.625	545	322	0.8	1.7	11.243	B
C - A1089 St Andrew's Road	1193	398	1166		1884	0.633	1192	1393	2.4	2.9	8.741	A
D - Thurrock Park Way	383	128	1673	0.00	1069	0.358	383	684	0.6	0.6	5.910	A
E - A1089 Dock Road North	1706	569	192		2189	0.779	2183	1864	485.7	326.6	670.804	F

08:00 - 08:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2241		851	0.148	126	138	0.3	0.4	10.818	B
B - Dock Road South	651	217	1958		902	0.722	648	409	1.7	2.6	14.637	B
C - A1089 St Andrew's Road	1247	416	1308		1803	0.692	1245	1298	2.9	3.6	10.439	B
D - Thurrock Park Way	530	177	1790	0.00	1013	0.523	528	764	0.6	1.2	8.248	A
E - A1089 Dock Road North	1964	655	218		2175	0.903	2161	2099	326.6	260.8	488.547	F

08:20 - 08:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2244		850	0.148	126	139	0.4	0.4	10.843	B
B - Dock Road South	651	217	1917		921	0.707	651	453	2.6	2.6	13.907	B
C - A1089 St Andrew's Road	1247	416	1330		1791	0.696	1247	1238	3.6	3.7	10.740	B
D - Thurrock Park Way	530	177	1794	0.00	1011	0.524	530	783	1.2	1.2	8.340	A
E - A1089 Dock Road North	1964	655	219		2175	0.903	2164	2105	260.8	194.2	379.262	F

08:40 - 09:00

Arm	Total Demand	Junction Arrivals	Circulating flow	Pedestrian demand	Capacity	RFC	Throughput	Throughput (exit side)	Start queue	End queue	Delay	Unsignalised level of

	(PCU/hr)	(PCU)	(PCU/hr)	(Ped/hr)	(PCU/hr)		(PCU/hr)	(PCU/hr)	(PCU)	(PCU)	(s)	service
A - Amazon UK Service Access	126	42	2240		851	0.148	126	139	0.4	0.4	10.817	B
B - Dock Road South	651	217	1914		923	0.706	651	452	2.6	2.5	13.834	B
C - A1089 St Andrew's Road	1247	416	1329		1792	0.696	1247	1236	3.7	3.7	10.741	B
D - Thurrock Park Way	530	177	1794	0.00	1010	0.525	530	782	1.2	1.2	8.343	A
E - A1089 Dock Road North	1964	655	219		2175	0.903	2160	2105	194.2	128.9	270.452	F

FY - Construction P10, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D1 - Construction P1, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.
Warning	Demand Sets	D30 - Construction P10, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	34.45	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	34.45	D

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D30	Construction P10	PM	ONE HOUR	16:45	18:15	15	✓	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Amazon UK Service Access		ONE HOUR	✓	100	100.000
B - Dock Road South		ONE HOUR	✓	571	100.000
C - A1089 St Andrew's Road		ONE HOUR	✓	1181	100.000
D - Thurrock Park Way		ONE HOUR	✓	924	100.000
E - A1089 Dock Road North		ONE HOUR	✓	1860	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	50.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	28	137	406
	C - A1089 St Andrew's Road	0	32	35	86	1028
	D - Thurrock Park Way	0	162	70	5	687
	E - A1089 Dock Road North	92	505	813	448	2

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

	A - Amazon UK Service Access	0	100	100	100	100
	B - Dock Road South	100	0	4	5	0
From	C - A1089 St Andrew's Road	100	0	55	8	28
	D - Thurrock Park Way	100	0	13	25	3
	E - A1089 Dock Road North	100	1	37	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.13	10.71	0.3	B	100	100
B - Dock Road South	0.59	8.35	1.4	A	571	571
C - A1089 St Andrew's Road	0.70	8.36	3.0	A	1181	1181
D - Thurrock Park Way	0.99	73.76	20.6	F	924	924
E - A1089 Dock Road North	0.97	40.78	22.1	E	1860	1860

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1854		1043	0.086	90	82	0.1	0.2	8.227	A
B - Dock Road South	513	128	1318		1202	0.427	512	625	0.5	0.7	5.297	A
C - A1089 St Andrew's Road	1062	265	984		1986	0.535	1060	847	1.0	1.5	5.061	A
D - Thurrock Park Way	831	208	1438	50.00	1163	0.714	826	605	1.3	2.5	10.931	B
E - A1089 Dock Road North	1672	418	272		2146	0.779	1664	1992	2.2	4.1	9.014	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2217		863	0.128	110	99	0.2	0.3	10.412	B
B - Dock Road South	629	157	1581		1079	0.583	626	746	0.7	1.4	8.033	A
C - A1089 St Andrew's Road	1300	325	1193		1868	0.696	1295	1014	1.5	2.9	8.113	A
D - Thurrock Park Way	1017	254	1757	50.00	1028	0.989	968	730	2.5	14.7	44.432	E
E - A1089 Dock Road North	2048	512	322		2118	0.967	1994	2404	4.1	17.6	27.819	D

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2258		843	0.131	110	100	0.3	0.3	10.712	B
B - Dock Road South	629	157	1608		1066	0.590	628	761	1.4	1.4	8.348	A
C - A1089 St Andrew's Road	1300	325	1204		1862	0.698	1300	1032	2.9	3.0	8.357	A
D - Thurrock Park Way	1017	254	1764	50.00	1025	0.993	994	740	14.7	20.6	73.756	F
E - A1089 Dock Road North	2048	512	329		2115	0.968	2030	2430	17.6	22.1	40.782	E

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1948		997	0.090	90	86	0.3	0.2	8.661	A
B - Dock Road South	513	128	1378		1174	0.437	516	660	1.4	0.8	5.579	A
C - A1089 St Andrew's Road	1062	265	1007		1973	0.538	1067	887	3.0	1.5	5.223	A
D - Thurrock Park Way	831	208	1449	50.00	1177	0.706	903	626	20.6	2.6	17.168	C
E - A1089 Dock Road North	1672	418	292		2135	0.783	1742	2059	22.1	4.7	13.046	B

FY - Construction P11, AM 2hr

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Pedestrian Crossing	D - Thurrock Park Way - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Demand Sets	D1 - Construction P1, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	472.63	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	472.63	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D31	Construction P11	AM 2hr	DIRECT	06:20	09:00	160	20	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - Amazon UK Service Access		DIRECT	✓	100.000
B - Dock Road South		DIRECT	✓	100.000
C - A1089 St Andrew's Road		DIRECT	✓	100.000
D - Thurrock Park Way		DIRECT	✓	100.000
E - A1089 Dock Road North		DIRECT	✓	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	0.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

06:20 - 06:40

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	98
	B - Dock Road South	2	0	25	31	308
	C - A1089 St Andrew's Road	0	12	27	30	963
	D - Thurrock Park Way	0	21	96	1	190
	E - A1089 Dock Road North	94	1174	859	236	4

Demand (PCU/hr)

06:40 - 07:00

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	98
	B - Dock Road South	2	0	25	31	308
	C - A1089 St Andrew's Road	0	12	27	30	963
	D - Thurrock Park Way	0	21	96	1	190
	E - A1089 Dock Road North	94	970	859	236	4

Demand (PCU/hr)

		To				

07:00 - 07:20	From		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	436
		C - A1089 St Andrew's Road	0	4	31	54	1037
		D - Thurrock Park Way	0	33	112	9	228
		E - A1089 Dock Road North	110	2446	932	427	0

Demand (PCU/hr)

07:20 - 07:40			To				
	From		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	436
		C - A1089 St Andrew's Road	0	4	31	54	1037
		D - Thurrock Park Way	0	33	112	9	228
		E - A1089 Dock Road North	110	235	932	427	0

Demand (PCU/hr)

07:40 - 08:00			To				
	From		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	436
		C - A1089 St Andrew's Road	0	4	31	54	1037
		D - Thurrock Park Way	0	33	112	9	228
		E - A1089 Dock Road North	110	235	932	427	0

Demand (PCU/hr)

08:00 - 08:20			To				
	From		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	491
		C - A1089 St Andrew's Road	0	11	24	74	1069
		D - Thurrock Park Way	0	63	113	5	347
		E - A1089 Dock Road North	127	348	951	529	1

Demand (PCU/hr)

08:20 - 08:40			To				
	From		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	491
		C - A1089 St Andrew's Road	0	11	24	74	1069
		D - Thurrock Park Way	0	63	113	5	347
		E - A1089 Dock Road North	127	348	951	529	1

Demand (PCU/hr)

08:40 - 09:00			To				
	From		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	491
		C - A1089 St Andrew's Road	0	11	24	74	1069
		D - Thurrock Park Way	0	63	113	5	347
		E - A1089 Dock Road North	127	348	951	529	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

06:20 - 06:40			To				
	From		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

06:40 - 07:00	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

07:00 - 07:20			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	64	8	66
		D - Thurrock Park Way	100	14	6	29	12
		E - A1089 Dock Road North	100	1	40	6	1

Heavy Vehicle %

07:20 - 07:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	64	8	66
		D - Thurrock Park Way	100	14	6	29	12
		E - A1089 Dock Road North	100	7	40	6	1

Heavy Vehicle %

07:40 - 08:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	64	8	66
		D - Thurrock Park Way	100	14	6	29	12
		E - A1089 Dock Road North	100	7	40	6	1

Heavy Vehicle %

08:00 - 08:20			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	10	5	3
		C - A1089 St Andrew's Road	0	0	61	9	62
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	48	5	0

Heavy Vehicle %

08:20 - 08:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	10	5	3
		C - A1089 St Andrew's Road	0	0	61	9	62
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	48	5	0

Heavy Vehicle %

08:40 - 09:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	10	5	3
		C - A1089 St Andrew's Road	0	0	61	9	62
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	48	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.15	10.98	0.4	B	109	291
B - Dock Road South	0.71	14.13	2.5	B	539	1438
C - A1089 St Andrew's Road	0.66	9.86	3.2	A	1122	2992
D - Thurrock Park Way	0.51	7.75	1.1	A	418	1115
E - A1089 Dock Road North	1.79	929.18	641.0	F	2215	5907

Main Results for each time segment

06:20 - 06:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2239		852	0.115	97	88	0.0	0.3	10.383	B
B - Dock Road South	366	122	1228		1244	0.294	365	1109	0.0	0.4	4.237	A
C - A1089 St Andrew's Road	1032	344	658		2170	0.476	1027	934	0.0	1.5	5.399	A
D - Thurrock Park Way	308	103	1407	0.00	1197	0.257	307	278	0.0	0.4	5.183	A
E - A1089 Dock Road North	2367	789	158		2208	1.072	2169	1556	0.0	66.1	63.554	F

06:40 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2226		859	0.114	98	95	0.3	0.3	10.317	B
B - Dock Road South	366	122	1312		1205	0.304	366	1012	0.4	0.5	4.448	A
C - A1089 St Andrew's Road	1032	344	678		2159	0.478	1032	1000	1.5	1.6	5.496	A
D - Thurrock Park Way	308	103	1414	0.00	1194	0.258	308	296	0.4	0.4	5.216	A
E - A1089 Dock Road North	2163	721	159		2207	0.980	2162	1563	66.1	66.3	108.888	F

07:00 - 07:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2315		814	0.123	100	65	0.3	0.3	10.984	B
B - Dock Road South	546	182	1044		1330	0.411	545	1371	0.5	0.7	4.777	A
C - A1089 St Andrew's Road	1126	375	868		2051	0.549	1124	721	1.6	2.1	6.676	A
D - Thurrock Park Way	382	127	1606	0.00	1101	0.347	382	387	0.4	0.6	5.632	A
E - A1089 Dock Road North	3915	1305	189		2191	1.787	2191	1799	66.3	641.0	588.312	F

07:20 - 07:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2297		823	0.121	100	71	0.3	0.3	10.848	B
B - Dock Road South	546	182	1123		1293	0.422	546	1274	0.7	0.8	5.023	A
C - A1089 St Andrew's Road	1126	375	904		2032	0.554	1126	766	2.1	2.1	6.841	A
D - Thurrock Park Way	382	127	1608	0.00	1100	0.347	382	422	0.6	0.6	5.642	A
E - A1089 Dock Road North	1704	568	189		2191	0.778	2178	1801	641.0	482.8	929.184	F

07:40 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2233		855	0.117	100	141	0.3	0.3	10.393	B
B - Dock Road South	546	182	1995		885	0.617	543	338	0.8	1.6	10.900	B
C - A1089 St Andrew's Road	1126	375	1175		1878	0.599	1125	1363	2.1	2.5	8.211	A
D - Thurrock Park Way	382	127	1605	0.00	1102	0.347	382	695	0.6	0.6	5.630	A
E - A1089 Dock Road North	1704	568	189		2191	0.778	2185	1798	482.8	322.5	664.773	F

08:00 - 08:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2239		852	0.148	126	140	0.3	0.4	10.800	B
B - Dock Road South	648	216	1945		908	0.713	645	420	1.6	2.5	14.134	B
C - A1089 St Andrew's Road	1178	393	1320		1797	0.656	1176	1270	2.5	3.1	9.609	A
D - Thurrock Park Way	528	176	1718	0.00	1047	0.504	526	778	0.6	1.1	7.676	A
E - A1089 Dock Road North	1956	652	216		2176	0.899	2163	2029	322.5	253.3	478.771	F

08:20 - 08:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2241		851	0.148	126	141	0.4	0.4	10.818	B
B - Dock Road South	648	216	1907		926	0.700	648	459	2.5	2.5	13.529	B
C - A1089 St Andrew's Road	1178	393	1343		1784	0.660	1178	1213	3.1	3.2	9.861	A
D - Thurrock Park Way	528	176	1722	0.00	1045	0.505	528	799	1.1	1.1	7.748	A
E - A1089 Dock Road North	1956	652	216		2176	0.899	2165	2034	253.3	183.6	364.010	F

08:40 - 09:00

Arm	Total Demand	Junction Arrivals	Circulating flow	Pedestrian demand	Capacity	RFC	Throughput	Throughput (exit side)	Start queue	End queue	Delay	Unsignalised level of

	(PCU/hr)	(PCU)	(PCU/hr)	(Ped/hr)	(PCU/hr)		(PCU/hr)	(PCU/hr)	(PCU)	(PCU)	(s)	service
A - Amazon UK Service Access	126	42	2237		853	0.148	126	140	0.4	0.4	10.789	B
B - Dock Road South	648	216	1904		927	0.699	648	458	2.5	2.5	13.453	B
C - A1089 St Andrew's Road	1178	393	1342		1784	0.660	1178	1211	3.2	3.2	9.858	A
D - Thurrock Park Way	528	176	1722	0.00	1045	0.505	528	797	1.1	1.1	7.751	A
E - A1089 Dock Road North	1956	652	216		2176	0.899	2161	2034	183.6	115.3	250.316	F

FY - Construction P11, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D1 - Construction P1, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.
Warning	Demand Sets	D33 - Construction P11, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	29.67	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	29.67	D

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D33	Construction P11	PM	ONE HOUR	16:45	18:15	15	✓	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Amazon UK Service Access		ONE HOUR	✓	100	100.000
B - Dock Road South		ONE HOUR	✓	571	100.000
C - A1089 St Andrew's Road		ONE HOUR	✓	1160	100.000
D - Thurrock Park Way		ONE HOUR	✓	926	100.000
E - A1089 Dock Road North		ONE HOUR	✓	1820	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	50.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	28	137	406
	C - A1089 St Andrew's Road	0	32	34	86	1008
	D - Thurrock Park Way	0	162	70	5	689
	E - A1089 Dock Road North	92	503	777	446	2

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

	A - Amazon UK Service Access	0	100	100	100	100
	B - Dock Road South	100	0	4	5	0
From	C - A1089 St Andrew's Road	100	0	54	8	27
	D - Thurrock Park Way	100	0	13	25	3
	E - A1089 Dock Road North	100	1	38	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.13	10.45	0.3	B	100	100
B - Dock Road South	0.58	8.03	1.4	A	571	571
C - A1089 St Andrew's Road	0.69	7.96	2.8	A	1160	1160
D - Thurrock Park Way	0.98	67.85	18.8	F	926	926
E - A1089 Dock Road North	0.95	31.93	16.7	D	1820	1820

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1818		1061	0.085	90	82	0.1	0.2	8.075	A
B - Dock Road South	513	128	1284		1218	0.422	512	624	0.5	0.7	5.176	A
C - A1089 St Andrew's Road	1043	261	982		1987	0.525	1041	814	0.9	1.4	4.917	A
D - Thurrock Park Way	832	208	1419	50.00	1171	0.711	828	604	1.3	2.5	10.757	B
E - A1089 Dock Road North	1636	409	271		2146	0.762	1629	1976	2.1	3.8	8.421	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2185		879	0.125	110	99	0.2	0.3	10.196	B
B - Dock Road South	629	157	1547		1095	0.574	626	748	0.7	1.3	7.765	A
C - A1089 St Andrew's Road	1277	319	1194		1868	0.684	1272	979	1.4	2.7	7.754	A
D - Thurrock Park Way	1020	255	1735	50.00	1039	0.981	974	731	2.5	13.8	42.098	E
E - A1089 Dock Road North	2004	501	322		2118	0.946	1962	2387	3.8	14.1	23.705	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2221		861	0.128	110	101	0.3	0.3	10.451	B
B - Dock Road South	629	157	1570		1084	0.580	629	761	1.3	1.4	8.029	A
C - A1089 St Andrew's Road	1277	319	1204		1862	0.686	1277	995	2.7	2.8	7.961	A
D - Thurrock Park Way	1020	255	1741	50.00	1036	0.984	1000	739	13.8	18.8	67.854	F
E - A1089 Dock Road North	2004	501	328		2115	0.948	1994	2412	14.1	16.7	31.933	D

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1890		1025	0.088	90	85	0.3	0.2	8.396	A
B - Dock Road South	513	128	1329		1197	0.429	516	652	1.4	0.8	5.390	A
C - A1089 St Andrew's Road	1043	261	1001		1977	0.528	1048	844	2.8	1.5	5.047	A
D - Thurrock Park Way	832	208	1429	50.00	1186	0.702	897	620	18.8	2.6	15.788	C
E - A1089 Dock Road North	1636	409	289		2136	0.766	1686	2037	16.7	4.2	10.809	B

Junctions 10
ARCADY 10 - Roundabout Module
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Filename: ASDA_FY_No_Construction_Combined_AM.j10
Path: C:\Users\fda76470\OneDrive - ARCADIS\LTC ARCADY
Report generation date: 09/11/2023 15:55:32

»FY - P1 No Construction, AM 2hr
»FY - P1 No Construction, PM
»FY - P2 No Construction, AM 2hr
»FY - P2 No Construction, PM
»FY - P3 No Construction, AM 2hr
»FY - P3 No Construction, PM
»FY - P4 No Construction, AM 2hr
»FY - P4 No Construction, PM
»FY - P5 No Construction, AM 2hr
»FY - P5 No Construction, PM
»FY - P6 No Construction, AM 2hr
»FY - P6 No Construction, PM
»FY - P7 No Construction, AM 2hr
»FY - P7 No Construction, PM
»FY - P8 No Construction, AM 2hr
»FY - P8 No Construction, PM
»FY - P9 No Construction, AM 2hr
»FY - P9 No Construction, PM
»FY - P10 No Construction, AM 2hr
»FY - P10 No Construction, PM
»FY - P11 No Construction, AM 2hr
»FY - P11 No Construction, PM

Summary of junction performance

		AM 2hr					PM			
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
			FY - P1 No Construction							
A - Amazon UK Service Access		0.4	11.02	0.15	B		0.3	11.26	0.14	B
B - Dock Road South		11.2	49.59	0.94	E		5.1	21.73	0.85	C
C - A1089 St Andrew's Road	D1	3.7	11.72	0.69	B	D3	8.8	21.77	0.89	C
D - Thurrock Park Way		1.3	8.99	0.54	A		13.8	67.40	0.97	F
E - A1089 Dock Road North		649.7	952.55	1.80	F		53.5	83.29	1.03	F
			FY - P2 No Construction							
A - Amazon UK Service Access		0.4	11.01	0.15	B		0.3	10.59	0.13	B
B - Dock Road South		2.7	15.04	0.73	C		1.5	8.43	0.60	A
C - A1089 St Andrew's Road	D4	3.3	10.08	0.67	B	D6	3.2	8.80	0.71	A
D - Thurrock Park Way		1.1	7.88	0.51	A		24.5	85.52	1.01	F
E - A1089 Dock Road North		630.2	906.09	1.77	F		19.0	35.84	0.96	E
			FY - P3 No Construction							
A - Amazon UK Service Access		0.4	11.01	0.15	B		0.3	10.92	0.13	B
B - Dock Road South		2.8	15.36	0.74	C		1.5	8.88	0.61	A
C - A1089 St Andrew's Road	D7	3.3	10.24	0.67	B	D9	3.1	8.55	0.71	A
D - Thurrock Park Way		1.2	7.97	0.51	A		23.0	80.99	1.00	F
E - A1089 Dock Road North		625.9	895.85	1.77	F		28.2	50.10	0.99	F
			FY - P4 No Construction							
A - Amazon UK Service Access		0.4	10.98	0.15	B		0.3	10.88	0.13	B
B - Dock Road South		2.6	14.50	0.72	B		1.5	8.77	0.60	A
C - A1089 St Andrew's Road	D10	3.1	9.81	0.66	A	D12	2.8	7.97	0.69	A
D - Thurrock Park Way		1.1	7.72	0.50	A		18.5	67.15	0.98	F
E - A1089 Dock Road North		623.5	888.33	1.76	F		27.3	48.60	0.98	E
			FY - P5 No Construction							
A - Amazon UK Service Access		0.4	11.01	0.15	B		0.3	10.59	0.13	B
B - Dock Road South		2.5	14.27	0.72	B		1.5	8.40	0.59	A
C - A1089 St Andrew's Road	D13	3.3	10.06	0.67	B	D15	3.1	8.53	0.71	A
D - Thurrock Park Way		1.1	7.87	0.51	A		20.4	73.78	0.99	F

Arm										
E - A1089 Dock Road North		623.6	890.33	1.76	F		18.7	35.44	0.96	E
FY - P6 No Construction										
A - Amazon UK Service Access		0.4	11.01	0.15	B		0.3	10.57	0.13	B
B - Dock Road South		2.6	14.69	0.72	B		1.5	8.34	0.59	A
C - A1089 St Andrew's Road	D16	3.2	9.96	0.66	A	D18	3.1	8.52	0.71	A
D - Thurrock Park Way		1.1	7.82	0.51	A		22.1	78.28	1.00	F
E - A1089 Dock Road North		620.9	884.05	1.76	F		18.4	34.90	0.96	D
FY - P7 No Construction										
A - Amazon UK Service Access		0.4	11.01	0.15	B		0.3	10.56	0.13	B
B - Dock Road South		2.6	14.56	0.72	B		1.4	8.30	0.59	A
C - A1089 St Andrew's Road	D19	3.3	10.11	0.67	B	D21	3.0	8.50	0.70	A
D - Thurrock Park Way		1.2	7.94	0.51	A		21.8	77.51	1.00	F
E - A1089 Dock Road North		622.2	887.14	1.76	F		18.3	34.71	0.95	D
FY - P8 No Construction										
A - Amazon UK Service Access		0.4	11.01	0.15	B		0.3	10.55	0.13	B
B - Dock Road South		2.5	14.24	0.71	B		1.4	8.30	0.59	A
C - A1089 St Andrew's Road	D22	3.2	9.92	0.66	A	D24	3.0	8.50	0.70	A
D - Thurrock Park Way		1.1	7.76	0.51	A		21.8	77.51	1.00	F
E - A1089 Dock Road North		622.2	887.17	1.76	F		18.1	34.30	0.95	D
FY - P9 No Construction										
A - Amazon UK Service Access		0.4	10.98	0.15	B		0.3	10.35	0.13	B
B - Dock Road South		2.6	14.57	0.72	B		1.4	8.18	0.59	A
C - A1089 St Andrew's Road	D25	3.3	10.02	0.67	B	D27	2.8	7.96	0.69	A
D - Thurrock Park Way		1.2	8.00	0.51	A		18.8	68.19	0.98	F
E - A1089 Dock Road North		613.8	865.47	1.75	F		15.2	29.30	0.94	D
FY - P10 No Construction										
A - Amazon UK Service Access		0.4	10.98	0.15	B		0.3	10.55	0.13	B
B - Dock Road South		2.5	14.01	0.71	B		1.4	8.14	0.58	A
C - A1089 St Andrew's Road	D28	3.2	9.86	0.66	A	D30	2.7	7.88	0.68	A
D - Thurrock Park Way		1.1	7.80	0.51	A		17.8	64.91	0.98	F
E - A1089 Dock Road North		625.1	892.26	1.76	F		18.3	34.73	0.96	D
FY - P11 No Construction										
A - Amazon UK Service Access		0.4	10.98	0.15	B		0.3	10.43	0.13	B
B - Dock Road South		2.5	14.04	0.71	B		1.4	8.00	0.58	A
C - A1089 St Andrew's Road	D31	3.1	9.73	0.66	A	D33	2.7	7.89	0.68	A
D - Thurrock Park Way		1.1	7.67	0.50	A		18.3	66.21	0.98	F
E - A1089 Dock Road North		637.8	921.36	1.78	F		16.3	31.22	0.95	D

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

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

File summary

File Description

Title	A1089_ASDA Roundabout
Location	Port of Tilbury
Site number	
Date	26/10/2023
Version	
Status	On-going
Identifier	
Client	Highways England
Jobnumber	
Enumerator	Rohini Kanthi 16688 [C1QVDH92]
Description	Existing Roundabout Layout

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Results for central hour only	Run automatically
D1	P1 No Construction	AM 2hr	DIRECT	06:20	09:00	160	20		✓
D3	P1 No Construction	PM	ONE HOUR	16:45	18:15		15	✓	✓
D4	P2 No Construction	AM 2hr	DIRECT	06:20	09:00	160	20		✓

ID	Name								
D6	P2 No Construction	PM	ONE HOUR	16:45	18:15		15	✓	✓
D7	P3 No Construction	AM 2hr	DIRECT	06:20	09:00	160	20		✓
D9	P3 No Construction	PM	ONE HOUR	16:45	18:15		15	✓	✓
D10	P4 No Construction	AM 2hr	DIRECT	06:20	09:00	160	20		✓
D12	P4 No Construction	PM	ONE HOUR	16:45	18:15		15	✓	✓
D13	P5 No Construction	AM 2hr	DIRECT	06:20	09:00	160	20		✓
D15	P5 No Construction	PM	ONE HOUR	16:45	18:15		15	✓	✓
D16	P6 No Construction	AM 2hr	DIRECT	06:20	09:00	160	20		✓
D18	P6 No Construction	PM	ONE HOUR	16:45	18:15		15	✓	✓
D19	P7 No Construction	AM 2hr	DIRECT	06:20	09:00	160	20		✓
D21	P7 No Construction	PM	ONE HOUR	16:45	18:15		15	✓	✓
D22	P8 No Construction	AM 2hr	DIRECT	06:20	09:00	160	20		✓
D24	P8 No Construction	PM	ONE HOUR	16:45	18:15		15	✓	✓
D25	P9 No Construction	AM 2hr	DIRECT	06:20	09:00	160	20		✓
D27	P9 No Construction	PM	ONE HOUR	16:45	18:15		15	✓	✓
D28	P10 No Construction	AM 2hr	DIRECT	06:20	09:00	160	20		✓
D30	P10 No Construction	PM	ONE HOUR	16:45	18:15		15	✓	✓
D31	P11 No Construction	AM 2hr	DIRECT	06:20	09:00	160	20		✓
D33	P11 No Construction	PM	ONE HOUR	16:45	18:15		15	✓	✓

Analysis Set Details

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

FY - P1 No Construction, AM 2hr

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Pedestrian Crossing	D - Thurrock Park Way - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Demand Sets	D1 - P1 No Construction, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	480.18	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	480.18	F

Arms

Arms

Arm	Name	Description	No give-way line
A	Amazon UK Service Access		
B	Dock Road South		
C	A1089 St Andrew's Road		
D	Thurrock Park Way		
E	A1089 Dock Road North		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A - Amazon UK Service Access	3.80	8.70	13.9	46.0	112.0	20.0		
B - Dock Road South	3.20	7.20	25.7	20.0	112.0	23.5		
C - A1089 St Andrew's Road	7.00	9.50	9.5	47.0	112.0	37.0		
D - Thurrock Park Way	3.50	8.50	14.7	53.0	112.0	24.5		
E - A1089 Dock Road North	7.00	7.00	0.0	138.0	112.0	18.5		

Geometry Notes

Arm	Notes
A - Amazon UK Service Access	
B - Dock Road South	
C - A1089 St Andrew's Road	Arm C has been rebuilt between 2019 and 2020 so for BY its different than for FY
D - Thurrock Park Way	
E - A1089 Dock Road North	

Pelican/Puffin Crossings

Arm	Space between crossing and junc. entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
D - Thurrock Park Way	9.00	3.00	2.90	1.00	6.00	10.00	40.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - Amazon UK Service Access	0.497	1964
B - Dock Road South	0.468	1819
C - A1089 St Andrew's Road	0.565	2542
D - Thurrock Park Way	0.482	1874
E - A1089 Dock Road North	0.547	2294

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	P1 No Construction	AM 2hr	DIRECT	06:20	09:00	160	20	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - Amazon UK Service Access		DIRECT	✓	100.000
B - Dock Road South		DIRECT	✓	100.000
C - A1089 St Andrew's Road		DIRECT	✓	100.000
D - Thurrock Park Way		DIRECT	✓	100.000
E - A1089 Dock Road North		DIRECT	✓	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	0.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

06:20 - 06:40

From \ To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
A - Amazon UK Service Access	0	0	0	0	98
B - Dock Road South	2	0	25	31	308
C - A1089 St Andrew's Road	0	12	27	30	963
D - Thurrock Park Way	0	21	96	1	190
E - A1089 Dock Road North	94	1174	859	236	4

Demand (PCU/hr)

06:40 - 07:00

From \ To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
A - Amazon UK Service Access	0	0	0	0	98
B - Dock Road South	2	0	25	31	308
C - A1089 St Andrew's Road	0	12	27	30	963
D - Thurrock Park Way	0	21	96	1	190
E - A1089 Dock Road North	94	970	859	236	4

Demand (PCU/hr)

07:00 - 07:20

From \ To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
A - Amazon UK Service Access	0	0	0	0	100
B - Dock Road South	0	0	25	85	605
C - A1089 St Andrew's Road	0	4	38	54	1014
D - Thurrock Park Way	0	33	113	9	220
E - A1089 Dock Road North	109	2428	973	427	0

Demand (PCU/hr)

07:20 - 07:40

From \ To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
A - Amazon UK Service Access	0	0	0	0	100
B - Dock Road South	0	0	25	85	605
C - A1089 St Andrew's Road	0	4	38	54	1014
D - Thurrock Park Way	0	33	113	9	220
E - A1089 Dock Road North	109	217	973	427	0

Demand (PCU/hr)

07:40 - 08:00

From \ To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
A - Amazon UK Service Access	0	0	0	0	100
B - Dock Road South	0	0	25	85	605
C - A1089 St Andrew's Road	0	4	38	54	1014
D - Thurrock Park Way	0	33	113	9	220
E - A1089 Dock Road North	109	217	973	427	0

Demand (PCU/hr)

	To				
	A - Amazon UK	B - Dock	C - A1089 St	D - Thurrock	E - A1089 Dock

			Service Access	Road South	Andrew's Road	Park Way	Road North
08:00 - 08:20	From	A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	687
		C - A1089 St Andrew's Road	0	11	31	74	1040
		D - Thurrock Park Way	0	63	113	5	335
		E - A1089 Dock Road North	126	338	988	530	1

Demand (PCU/hr)

			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
08:20 - 08:40	From	A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	687
		C - A1089 St Andrew's Road	0	11	31	74	1040
		D - Thurrock Park Way	0	63	113	5	335
		E - A1089 Dock Road North	126	338	988	530	1

Demand (PCU/hr)

			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
08:40 - 09:00	From	A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	687
		C - A1089 St Andrew's Road	0	11	31	74	1040
		D - Thurrock Park Way	0	63	113	5	335
		E - A1089 Dock Road North	126	338	988	530	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
06:20 - 06:40	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
06:40 - 07:00	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
07:00 - 07:20	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	2
		C - A1089 St Andrew's Road	100	0	70	8	70
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	1	37	6	1

Heavy Vehicle %

			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
07:20 - 07:40	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	2
		C - A1089 St Andrew's Road	100	0	70	8	70
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	8	37	6	1

Heavy Vehicle %

			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
07:40 -							

08:00							
		A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	2
	From	C - A1089 St Andrew's Road	100	0	70	8	70
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	8	37	6	1

Heavy Vehicle %

08:00 - 08:20			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	100
	From	B - Dock Road South	0	0	9	5	2
		C - A1089 St Andrew's Road	0	0	68	9	66
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	45	5	0

Heavy Vehicle %

08:20 - 08:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	100
	From	B - Dock Road South	0	0	9	5	2
		C - A1089 St Andrew's Road	0	0	68	9	66
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	45	5	0

Heavy Vehicle %

08:40 - 09:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	100
	From	B - Dock Road South	0	0	9	5	2
		C - A1089 St Andrew's Road	0	0	68	9	66
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	45	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.15	11.02	0.4	B	109	291
B - Dock Road South	0.94	49.59	11.2	E	676	1803
C - A1089 St Andrew's Road	0.69	11.72	3.7	B	1108	2954
D - Thurrock Park Way	0.54	8.99	1.3	A	411	1096
E - A1089 Dock Road North	1.80	952.55	649.7	F	2234	5956

Main Results for each time segment

06:20 - 06:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2239		852	0.115	97	88	0.0	0.3	10.383	B
B - Dock Road South	366	122	1228		1244	0.294	365	1109	0.0	0.4	4.237	A
C - A1089 St Andrew's Road	1032	344	658		2170	0.476	1027	934	0.0	1.5	5.399	A
D - Thurrock Park Way	308	103	1407	0.00	1197	0.257	307	278	0.0	0.4	5.183	A
E - A1089 Dock Road North	2367	789	158		2208	1.072	2169	1556	0.0	66.1	63.554	F

06:40 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2226		859	0.114	98	95	0.3	0.3	10.317	B
B - Dock Road South	366	122	1312		1205	0.304	366	1012	0.4	0.5	4.448	A
C - A1089 St Andrew's Road	1032	344	678		2159	0.478	1032	1000	1.5	1.6	5.496	A
D - Thurrock Park Way	308	103	1414	0.00	1194	0.258	308	296	0.4	0.4	5.216	A
E - A1089 Dock Road North	2163	721	159		2207	0.980	2162	1563	66.1	66.3	108.888	F

07:00 - 07:20

Arm	Total Demand	Junction Arrivals	Circulating flow	Pedestrian demand	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side)	Start queue	End queue	Delay (s)	Unsignalised level of

Arm	(PCU/hr)	(PCU)	(PCU/hr)	(Ped/hr)				(PCU/hr)	(PCU)	(PCU)		service
A - Amazon UK Service Access	100	33	2320		812	0.123	100	64	0.3	0.3	11.019	B
B - Dock Road South	715	238	1068		1319	0.542	713	1352	0.5	1.2	6.096	A
C - A1089 St Andrew's Road	1110	370	1034		1958	0.567	1108	746	1.6	2.3	7.450	A
D - Thurrock Park Way	375	125	1757	0.00	1028	0.365	374	385	0.4	0.6	6.230	A
E - A1089 Dock Road North	3937	1312	197		2187	1.800	2187	1935	66.3	649.7	595.956	F

07:20 - 07:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2303		821	0.122	100	68	0.3	0.3	10.890	B
B - Dock Road South	715	238	1135		1287	0.555	715	1267	1.2	1.3	6.477	A
C - A1089 St Andrew's Road	1110	370	1066		1940	0.572	1110	784	2.3	2.3	7.644	A
D - Thurrock Park Way	375	125	1761	0.00	1027	0.365	375	415	0.6	0.6	6.253	A
E - A1089 Dock Road North	1726	575	197		2187	0.789	2174	1939	649.7	500.5	952.549	F

07:40 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2240		852	0.117	100	138	0.3	0.3	10.444	B
B - Dock Road South	715	238	2029		869	0.823	706	311	1.3	4.3	21.642	C
C - A1089 St Andrew's Road	1110	370	1330		1791	0.620	1109	1405	2.3	2.8	9.279	A
D - Thurrock Park Way	375	125	1752	0.00	1031	0.364	375	686	0.6	0.6	6.215	A
E - A1089 Dock Road North	1726	575	197		2187	0.789	2181	1930	500.5	348.8	702.543	F

08:00 - 08:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2245		849	0.148	126	137	0.3	0.4	10.846	B
B - Dock Road South	844	281	1976		894	0.944	825	395	4.3	10.7	44.390	E
C - A1089 St Andrew's Road	1156	385	1490		1700	0.680	1154	1311	2.8	3.5	11.150	B
D - Thurrock Park Way	516	172	1878	0.00	970	0.532	514	766	0.6	1.2	8.759	A
E - A1089 Dock Road North	1983	661	222		2173	0.913	2160	2170	348.8	290.0	532.085	F

08:20 - 08:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2248		848	0.149	126	137	0.4	0.4	10.876	B
B - Dock Road South	844	281	1932		915	0.923	843	443	10.7	11.0	49.273	E
C - A1089 St Andrew's Road	1156	385	1530		1678	0.689	1155	1245	3.5	3.7	11.703	B
D - Thurrock Park Way	516	172	1895	0.00	962	0.536	516	791	1.2	1.3	8.979	A
E - A1089 Dock Road North	1983	661	223		2172	0.913	2163	2188	290.0	230.1	433.349	F

08:40 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2246		849	0.148	126	137	0.4	0.4	10.859	B
B - Dock Road South	844	281	1930		915	0.922	843	442	11.0	11.2	49.589	E
C - A1089 St Andrew's Road	1156	385	1530		1678	0.689	1156	1243	3.7	3.7	11.720	B
D - Thurrock Park Way	516	172	1896	0.00	962	0.537	516	790	1.3	1.3	8.990	A
E - A1089 Dock Road North	1983	661	223		2172	0.913	2160	2189	230.1	171.0	334.922	F

FY - P1 No Construction, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D1 - P1 No Construction, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.
Warning	Demand Sets	D3 - P1 No Construction, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	52.37	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	52.37	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D3	P1 No Construction	PM	ONE HOUR	16:45	18:15	15	✓	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Amazon UK Service Access		ONE HOUR	✓	100	100.000
B - Dock Road South		ONE HOUR	✓	808	100.000
C - A1089 St Andrew's Road		ONE HOUR	✓	1390	100.000
D - Thurrock Park Way		ONE HOUR	✓	695	100.000
E - A1089 Dock Road North		ONE HOUR	✓	1971	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	50.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	28	137	643
	C - A1089 St Andrew's Road	0	32	41	86	1231
	D - Thurrock Park Way	0	162	70	5	458
	E - A1089 Dock Road North	92	556	879	442	2

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

From						
	A - Amazon UK Service Access	0	100	100	100	100
	B - Dock Road South	100	0	4	5	0
	C - A1089 St Andrew's Road	100	0	61	8	22
	D - Thurrock Park Way	100	0	13	25	5
	E - A1089 Dock Road North	100	1	32	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.14	11.26	0.3	B	100	100
B - Dock Road South	0.85	21.73	5.1	C	808	808
C - A1089 St Andrew's Road	0.89	21.77	8.8	C	1390	1390
D - Thurrock Park Way	0.97	67.40	13.8	F	695	695
E - A1089 Dock Road North	1.03	83.29	53.5	F	1971	1971

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1956		993	0.091	90	82	0.2	0.2	8.687	A
B - Dock Road South	726	182	1375		1175	0.618	724	670	0.9	1.6	8.013	A
C - A1089 St Andrew's Road	1250	312	1189		1870	0.668	1245	910	1.4	2.5	7.151	A
D - Thurrock Park Way	625	156	1835	50.00	968	0.645	621	599	1.0	1.9	10.835	B
E - A1089 Dock Road North	1772	443	277		2143	0.827	1761	2180	2.6	5.4	11.032	B

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2290		827	0.133	110	96	0.2	0.3	10.935	B
B - Dock Road South	890	222	1614		1063	0.837	878	786	1.6	4.6	18.517	C
C - A1089 St Andrew's Road	1530	383	1425		1737	0.881	1509	1066	2.5	7.9	18.214	C
D - Thurrock Park Way	765	191	2225	50.00	803	0.953	733	709	1.9	10.0	42.308	E
E - A1089 Dock Road North	2170	543	329		2114	1.026	2057	2629	5.4	33.7	44.039	E

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2329		807	0.136	110	98	0.3	0.3	11.256	B
B - Dock Road South	890	222	1640		1051	0.846	888	800	4.6	5.1	21.732	C
C - A1089 St Andrew's Road	1530	383	1443		1727	0.886	1527	1084	7.9	8.8	21.772	C
D - Thurrock Park Way	765	191	2251	50.00	790	0.968	750	719	10.0	13.8	67.398	F
E - A1089 Dock Road North	2170	543	336		2111	1.028	2091	2665	33.7	53.5	83.286	F

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	2164		890	0.101	90	91	0.3	0.2	9.825	A
B - Dock Road South	726	182	1515		1109	0.655	739	739	5.1	2.0	10.136	B
C - A1089 St Andrew's Road	1250	312	1250		1836	0.681	1274	1005	8.8	2.7	8.326	A
D - Thurrock Park Way	625	156	1875	50.00	971	0.643	672	648	13.8	2.0	14.648	B
E - A1089 Dock Road North	1772	443	296		2132	0.831	1959	2251	53.5	6.7	39.458	E

FY - P2 No Construction, AM 2hr

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Pedestrian Crossing	D - Thurrock Park Way - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Demand Sets	D1 - P1 No Construction, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	457.42	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	457.42	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D4	P2 No Construction	AM 2hr	DIRECT	06:20	09:00	160	20	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - Amazon UK Service Access		DIRECT	✓	100.000
B - Dock Road South		DIRECT	✓	100.000
C - A1089 St Andrew's Road		DIRECT	✓	100.000
D - Thurrock Park Way		DIRECT	✓	100.000
E - A1089 Dock Road North		DIRECT	✓	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	0.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

06:20 - 06:40

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	98
	B - Dock Road South	2	0	25	31	308
	C - A1089 St Andrew's Road	0	12	27	30	963
	D - Thurrock Park Way	0	21	96	1	190
	E - A1089 Dock Road North	94	1174	859	236	4

Demand (PCU/hr)

06:40 - 07:00

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	98
	B - Dock Road South	2	0	25	31	308
	C - A1089 St Andrew's Road	0	12	27	30	963
	D - Thurrock Park Way	0	21	96	1	190
	E - A1089 Dock Road North	94	970	859	236	4

Demand (PCU/hr)

	To

		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
07:00 - 07:20	**From**					
	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	25	85	445
	C - A1089 St Andrew's Road	0	4	38	54	1038
	D - Thurrock Park Way	0	33	112	9	227
	E - A1089 Dock Road North	109	2423	931	416	0

Demand (PCU/hr)

			To			
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
07:20 - 07:40	**From**					
	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	25	85	445
	C - A1089 St Andrew's Road	0	4	38	54	1038
	D - Thurrock Park Way	0	33	112	9	227
	E - A1089 Dock Road North	109	212	931	416	0

Demand (PCU/hr)

			To			
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
07:40 - 08:00	**From**					
	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	25	85	445
	C - A1089 St Andrew's Road	0	4	38	54	1038
	D - Thurrock Park Way	0	33	112	9	227
	E - A1089 Dock Road North	109	212	931	416	0

Demand (PCU/hr)

			To			
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
08:00 - 08:20	**From**					
	A - Amazon UK Service Access	0	0	0	0	126
	B - Dock Road South	0	0	23	134	502
	C - A1089 St Andrew's Road	0	11	31	74	1070
	D - Thurrock Park Way	0	63	113	5	346
	E - A1089 Dock Road North	126	336	950	513	2

Demand (PCU/hr)

			To			
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
08:20 - 08:40	**From**					
	A - Amazon UK Service Access	0	0	0	0	126
	B - Dock Road South	0	0	23	134	502
	C - A1089 St Andrew's Road	0	11	31	74	1070
	D - Thurrock Park Way	0	63	113	5	346
	E - A1089 Dock Road North	126	336	950	513	2

Demand (PCU/hr)

			To			
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
08:40 - 09:00	**From**					
	A - Amazon UK Service Access	0	0	0	0	126
	B - Dock Road South	0	0	23	134	502
	C - A1089 St Andrew's Road	0	11	31	74	1070
	D - Thurrock Park Way	0	63	113	5	346
	E - A1089 Dock Road North	126	336	950	513	2

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

			To			
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
06:20 - 06:40	**From**					
	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	100	0	4	11	2
	C - A1089 St Andrew's Road	0	0	55	12	65
	D - Thurrock Park Way	0	0	20	0	30
	E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

			To			
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

06:40 - 07:00 — From

	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
A - Amazon UK Service Access	0	0	0	0	100
B - Dock Road South	100	0	4	11	2
C - A1089 St Andrew's Road	0	0	55	12	65
D - Thurrock Park Way	0	0	20	0	30
E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

07:00 - 07:20 — From

		To			
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	100	100	100	100
	B - Dock Road South	100	0	0	8	3
	C - A1089 St Andrew's Road	100	0	70	8	67
	D - Thurrock Park Way	100	14	6	29	13
	E - A1089 Dock Road North	100	1	39	6	1

Heavy Vehicle %

07:20 - 07:40 — From

		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	A - Amazon UK Service Access	0	100	100	100	100
	B - Dock Road South	100	0	0	8	3
	C - A1089 St Andrew's Road	100	0	70	8	67
	D - Thurrock Park Way	100	14	6	29	13
	E - A1089 Dock Road North	100	8	39	6	1

Heavy Vehicle %

07:40 - 08:00 — From

		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	A - Amazon UK Service Access	0	100	100	100	100
	B - Dock Road South	100	0	0	8	3
	C - A1089 St Andrew's Road	100	0	70	8	67
	D - Thurrock Park Way	100	14	6	29	13
	E - A1089 Dock Road North	100	8	39	6	1

Heavy Vehicle %

08:00 - 08:20 — From

		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	9	5	3
	C - A1089 St Andrew's Road	0	0	68	9	63
	D - Thurrock Park Way	0	3	7	0	12
	E - A1089 Dock Road North	100	3	47	5	0

Heavy Vehicle %

08:20 - 08:40 — From

		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	9	5	3
	C - A1089 St Andrew's Road	0	0	68	9	63
	D - Thurrock Park Way	0	3	7	0	12
	E - A1089 Dock Road North	100	3	47	5	0

Heavy Vehicle %

08:40 - 09:00 — From

		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	9	5	3
	C - A1089 St Andrew's Road	0	0	68	9	63
	D - Thurrock Park Way	0	3	7	0	12
	E - A1089 Dock Road North	100	3	47	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.15	11.01	0.4	B	109	291
B - Dock Road South	0.73	15.04	2.7	C	547	1458
C - A1089 St Andrew's Road	0.67	10.08	3.3	B	1128	3008
D - Thurrock Park Way	0.51	7.88	1.1	A	418	1113
E - A1089 Dock Road North	1.77	906.09	630.2	F	2191	5842

Main Results for each time segment

06:20 - 06:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2239		852	0.115	97	88	0.0	0.3	10.383	B
B - Dock Road South	366	122	1228		1244	0.294	365	1109	0.0	0.4	4.237	A
C - A1089 St Andrew's Road	1032	344	658		2170	0.476	1027	934	0.0	1.5	5.399	A
D - Thurrock Park Way	308	103	1407	0.00	1197	0.257	307	278	0.0	0.4	5.183	A
E - A1089 Dock Road North	2367	789	158		2208	1.072	2169	1556	0.0	66.1	63.554	F

06:40 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2226		859	0.114	98	95	0.3	0.3	10.317	B
B - Dock Road South	366	122	1312		1205	0.304	366	1012	0.4	0.5	4.448	A
C - A1089 St Andrew's Road	1032	344	678		2159	0.478	1032	1000	1.5	1.6	5.496	A
D - Thurrock Park Way	308	103	1414	0.00	1194	0.258	308	296	0.4	0.4	5.216	A
E - A1089 Dock Road North	2163	721	159		2207	0.980	2162	1563	66.1	66.3	108.892	F

07:00 - 07:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2319		813	0.123	100	65	0.3	0.3	11.009	B
B - Dock Road South	555	185	1050		1327	0.418	554	1368	0.5	0.7	4.849	A
C - A1089 St Andrew's Road	1134	378	873		2049	0.554	1132	731	1.6	2.1	6.800	A
D - Thurrock Park Way	381	127	1623	0.00	1093	0.349	381	383	0.4	0.6	5.722	A
E - A1089 Dock Road North	3879	1293	196		2187	1.773	2187	1808	66.3	630.2	581.156	F

07:20 - 07:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2296		824	0.121	100	72	0.3	0.3	10.845	B
B - Dock Road South	555	185	1143		1284	0.432	555	1254	0.7	0.8	5.145	A
C - A1089 St Andrew's Road	1134	378	912		2027	0.559	1134	786	2.1	2.2	6.988	A
D - Thurrock Park Way	381	127	1625	0.00	1092	0.349	381	421	0.6	0.6	5.733	A
E - A1089 Dock Road North	1668	556	196		2187	0.763	2172	1810	630.2	462.3	906.087	F

07:40 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2234		854	0.117	100	143	0.3	0.3	10.403	B
B - Dock Road South	555	185	2020		873	0.636	552	314	0.8	1.8	11.586	B
C - A1089 St Andrew's Road	1134	378	1180		1875	0.605	1133	1392	2.2	2.6	8.391	A
D - Thurrock Park Way	381	127	1621	0.00	1094	0.348	381	691	0.6	0.6	5.720	A
E - A1089 Dock Road North	1668	556	196		2187	0.763	2181	1806	462.3	291.2	623.124	F

08:00 - 08:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2239		852	0.148	126	141	0.3	0.4	10.804	B
B - Dock Road South	659	220	1957		903	0.730	656	409	1.8	2.7	15.036	C
C - A1089 St Andrew's Road	1186	395	1325		1794	0.661	1184	1288	2.6	3.2	9.852	A
D - Thurrock Park Way	527	176	1738	0.00	1038	0.508	525	772	0.6	1.1	7.801	A
E - A1089 Dock Road North	1927	642	223		2173	0.887	2158	2041	291.2	214.2	421.329	F

08:20 - 08:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2241		851	0.148	126	141	0.4	0.4	10.822	B
B - Dock Road South	659	220	1917		922	0.715	659	450	2.7	2.7	14.316	B
C - A1089 St Andrew's Road	1186	395	1344		1783	0.665	1186	1232	3.2	3.3	10.080	B
D - Thurrock Park Way	527	176	1742	0.00	1036	0.509	527	788	1.1	1.1	7.880	A
E - A1089 Dock Road North	1927	642	223		2172	0.887	2159	2046	214.2	136.8	293.804	F

08:40 - 09:00

Arm	Total Demand	Junction Arrivals	Circulating flow	Pedestrian demand	Capacity	RFC	Throughput	Throughput (exit side)	Start queue	End queue	Delay	Unsignalised level of

	(PCU/hr)	(PCU)	(PCU/hr)	(Ped/hr)	(PCU/hr)		(PCU/hr)	(PCU/hr)	(PCU)	(PCU)	(s)	service
A - Amazon UK Service Access	126	42	2234		855	0.147	126	141	0.4	0.4	10.771	B
B - Dock Road South	659	220	1911		924	0.713	659	449	2.7	2.6	14.172	B
C - A1089 St Andrew's Road	1186	395	1342		1784	0.665	1186	1228	3.3	3.3	10.069	B
D - Thurrock Park Way	527	176	1742	0.00	1035	0.509	527	786	1.1	1.1	7.883	A
E - A1089 Dock Road North	1927	642	223		2172	0.887	2152	2046	136.8	61.8	168.755	F

FY - P2 No Construction, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D1 - P1 No Construction, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.
Warning	Demand Sets	D6 - P2 No Construction, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	34.72	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	34.72	D

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D6	P2 No Construction	PM	ONE HOUR	16:45	18:15	15	✓	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Amazon UK Service Access		ONE HOUR	✓	100	100.000
B - Dock Road South		ONE HOUR	✓	581	100.000
C - A1089 St Andrew's Road		ONE HOUR	✓	1205	100.000
D - Thurrock Park Way		ONE HOUR	✓	922	100.000
E - A1089 Dock Road North		ONE HOUR	✓	1837	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	50.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	28	137	416
	C - A1089 St Andrew's Road	0	32	41	86	1046
	D - Thurrock Park Way	0	162	70	5	685
	E - A1089 Dock Road North	92	503	795	445	2

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

	A - Amazon UK Service Access	0	100	100	100	100
	B - Dock Road South	100	0	4	5	0
From	**C - A1089 St Andrew's Road**	100	0	61	8	27
	D - Thurrock Park Way	100	0	13	25	3
	E - A1089 Dock Road North	100	1	37	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.13	10.59	0.3	B	100	100
B - Dock Road South	0.60	8.43	1.5	A	581	581
C - A1089 St Andrew's Road	0.71	8.80	3.2	A	1205	1205
D - Thurrock Park Way	1.01	85.52	24.5	F	922	922
E - A1089 Dock Road North	0.96	35.84	19.0	E	1837	1837

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1839		1051	0.086	90	82	0.1	0.2	8.163	A
B - Dock Road South	522	131	1305		1208	0.432	521	624	0.5	0.8	5.317	A
C - A1089 St Andrew's Road	1083	271	990		1983	0.546	1081	836	1.0	1.5	5.174	A
D - Thurrock Park Way	829	207	1469	50.00	1151	0.720	824	603	1.4	2.6	11.250	B
E - A1089 Dock Road North	1651	413	277		2143	0.771	1644	2015	2.1	4.0	8.706	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2203		870	0.127	110	99	0.2	0.3	10.320	B
B - Dock Road South	640	160	1568		1085	0.590	637	745	0.8	1.4	8.121	A
C - A1089 St Andrew's Road	1327	332	1202		1863	0.712	1320	1004	1.5	3.1	8.520	A
D - Thurrock Park Way	1015	254	1794	50.00	1010	1.005	959	728	2.6	16.6	48.930	E
E - A1089 Dock Road North	2023	506	326		2116	0.956	1976	2427	4.0	15.6	25.585	D

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2242		851	0.129	110	101	0.3	0.3	10.595	B
B - Dock Road South	640	160	1594		1073	0.596	640	758	1.4	1.5	8.432	A
C - A1089 St Andrew's Road	1327	332	1213		1857	0.714	1326	1020	3.1	3.2	8.804	A
D - Thurrock Park Way	1015	254	1802	50.00	1007	1.008	984	738	16.6	24.5	85.519	F
E - A1089 Dock Road North	2023	506	333		2112	0.958	2009	2452	15.6	19.0	35.843	E

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1925		1008	0.089	90	86	0.3	0.2	8.558	A
B - Dock Road South	522	131	1358		1183	0.441	525	658	1.5	0.8	5.576	A
C - A1089 St Andrew's Road	1083	271	1011		1971	0.550	1090	872	3.2	1.6	5.344	A
D - Thurrock Park Way	829	207	1480	50.00	1162	0.713	916	621	24.5	2.7	20.543	C
E - A1089 Dock Road North	1651	413	301		2130	0.775	1710	2094	19.0	4.4	11.827	B

FY - P3 No Construction, AM 2hr

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Pedestrian Crossing	D - Thurrock Park Way - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Demand Sets	D1 - P1 No Construction, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	451.69	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	451.69	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D7	P3 No Construction	AM 2hr	DIRECT	06:20	09:00	160	20	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - Amazon UK Service Access		DIRECT	✓	100.000
B - Dock Road South		DIRECT	✓	100.000
C - A1089 St Andrew's Road		DIRECT	✓	100.000
D - Thurrock Park Way		DIRECT	✓	100.000
E - A1089 Dock Road North		DIRECT	✓	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	0.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

06:20 - 06:40

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	98
	B - Dock Road South	2	0	25	31	308
	C - A1089 St Andrew's Road	0	12	27	30	963
	D - Thurrock Park Way	0	21	96	1	190
	E - A1089 Dock Road North	94	1174	859	236	4

Demand (PCU/hr)

06:40 - 07:00

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	98
	B - Dock Road South	2	0	25	31	308
	C - A1089 St Andrew's Road	0	12	27	30	963
	D - Thurrock Park Way	0	21	96	1	190
	E - A1089 Dock Road North	94	970	859	236	4

Demand (PCU/hr)

	To

Demand (PCU/hr)

07:00 - 07:20			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	452
		C - A1089 St Andrew's Road	0	4	38	54	1036
		D - Thurrock Park Way	0	33	112	9	227
		E - A1089 Dock Road North	108	2420	917	421	0

Demand (PCU/hr)

07:20 - 07:40			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
					To		
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	452
		C - A1089 St Andrew's Road	0	4	38	54	1036
		D - Thurrock Park Way	0	33	112	9	227
		E - A1089 Dock Road North	108	209	917	421	0

Demand (PCU/hr)

07:40 - 08:00			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
					To		
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	452
		C - A1089 St Andrew's Road	0	4	38	54	1036
		D - Thurrock Park Way	0	33	112	9	227
		E - A1089 Dock Road North	108	209	917	421	0

Demand (PCU/hr)

08:00 - 08:20			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
					To		
	From	A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	507
		C - A1089 St Andrew's Road	0	11	31	74	1067
		D - Thurrock Park Way	0	63	113	5	346
		E - A1089 Dock Road North	125	334	938	521	10

Demand (PCU/hr)

08:20 - 08:40			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
					To		
	From	A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	507
		C - A1089 St Andrew's Road	0	11	31	74	1067
		D - Thurrock Park Way	0	63	113	5	346
		E - A1089 Dock Road North	125	334	938	521	10

Demand (PCU/hr)

08:40 - 09:00			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
					To		
	From	A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	507
		C - A1089 St Andrew's Road	0	11	31	74	1067
		D - Thurrock Park Way	0	63	113	5	346
		E - A1089 Dock Road North	125	334	938	521	10

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

06:20 - 06:40			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
					To		
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
					To		

06:40 - 07:00		A - Amazon UK Service Access	0	0	0	0	100
	From	B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

			To				
07:00 - 07:20			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	70	8	68
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	1	40	6	0

Heavy Vehicle %

			To				
07:20 - 07:40			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	70	8	68
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	8	40	6	0

Heavy Vehicle %

			To				
07:40 - 08:00			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	70	8	68
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	8	40	6	0

Heavy Vehicle %

			To				
08:00 - 08:20			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	9	5	3
		C - A1089 St Andrew's Road	0	0	68	9	63
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	48	5	0

Heavy Vehicle %

			To				
08:20 - 08:40			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	9	5	3
		C - A1089 St Andrew's Road	0	0	68	9	63
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	48	5	0

Heavy Vehicle %

			To				
08:40 - 09:00			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	9	5	3
		C - A1089 St Andrew's Road	0	0	68	9	63
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	48	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.15	11.01	0.4	B	109	291
B - Dock Road South	0.74	15.36	2.8	C	551	1470
C - A1089 St Andrew's Road	0.67	10.24	3.3	B	1126	3003
D - Thurrock Park Way	0.51	7.97	1.2	A	418	1113
E - A1089 Dock Road North	1.77	895.85	625.9	F	2186	5830

Main Results for each time segment

06:20 - 06:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2239		852	0.115	97	88	0.0	0.3	10.383	B
B - Dock Road South	366	122	1228		1244	0.294	365	1109	0.0	0.4	4.237	A
C - A1089 St Andrew's Road	1032	344	658		2170	0.476	1027	934	0.0	1.5	5.399	A
D - Thurrock Park Way	308	103	1407	0.00	1197	0.257	307	278	0.0	0.4	5.183	A
E - A1089 Dock Road North	2367	789	158		2208	1.072	2169	1556	0.0	66.1	63.554	F

06:40 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2226		859	0.114	98	95	0.3	0.3	10.317	B
B - Dock Road South	366	122	1312		1205	0.304	366	1012	0.4	0.5	4.448	A
C - A1089 St Andrew's Road	1032	344	678		2159	0.478	1032	1000	1.5	1.6	5.496	A
D - Thurrock Park Way	308	103	1414	0.00	1194	0.258	308	296	0.4	0.4	5.216	A
E - A1089 Dock Road North	2163	721	159		2207	0.980	2162	1563	66.1	66.3	108.894	F

07:00 - 07:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2319		812	0.123	100	64	0.3	0.3	11.012	B
B - Dock Road South	562	187	1048		1328	0.423	561	1371	0.5	0.8	4.885	A
C - A1089 St Andrew's Road	1132	377	884		2043	0.554	1130	725	1.6	2.1	6.868	A
D - Thurrock Park Way	381	127	1628	0.00	1090	0.349	381	386	0.4	0.6	5.741	A
E - A1089 Dock Road North	3866	1289	196		2187	1.767	2187	1813	66.3	625.9	577.951	F

07:20 - 07:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2296		824	0.121	100	72	0.3	0.3	10.842	B
B - Dock Road South	562	187	1146		1282	0.438	562	1249	0.8	0.8	5.207	A
C - A1089 St Andrew's Road	1132	377	925		2019	0.561	1132	783	2.1	2.2	7.072	A
D - Thurrock Park Way	381	127	1630	0.00	1090	0.350	381	427	0.6	0.6	5.752	A
E - A1089 Dock Road North	1655	552	196		2187	0.757	2171	1815	625.9	453.8	895.852	F

07:40 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2235		854	0.117	100	142	0.3	0.3	10.405	B
B - Dock Road South	562	187	2022		872	0.644	559	312	0.8	1.8	11.862	B
C - A1089 St Andrew's Road	1132	377	1198		1865	0.607	1131	1383	2.2	2.6	8.529	A
D - Thurrock Park Way	381	127	1626	0.00	1091	0.349	381	702	0.6	0.6	5.739	A
E - A1089 Dock Road North	1655	552	196		2187	0.757	2181	1811	453.8	278.5	605.395	F

08:00 - 08:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2240		852	0.148	126	140	0.3	0.4	10.807	B
B - Dock Road South	664	221	1957		902	0.736	661	408	1.8	2.8	15.363	C
C - A1089 St Andrew's Road	1183	394	1346		1782	0.664	1181	1273	2.6	3.2	9.990	A
D - Thurrock Park Way	527	176	1745	0.00	1034	0.510	525	782	0.6	1.1	7.856	A
E - A1089 Dock Road North	1928	643	223		2173	0.887	2158	2048	278.5	201.9	400.244	F

08:20 - 08:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2242		851	0.148	126	140	0.4	0.4	10.825	B
B - Dock Road South	664	221	1920		920	0.722	664	448	2.8	2.7	14.675	B
C - A1089 St Andrew's Road	1183	394	1367		1770	0.668	1183	1217	3.2	3.3	10.244	B
D - Thurrock Park Way	527	176	1753	0.00	1030	0.512	527	796	1.1	1.2	7.963	A
E - A1089 Dock Road North	1928	643	223		2172	0.887	2159	2057	201.9	125.1	273.972	F

08:40 - 09:00

Arm	Total Demand	Junction Arrivals	Circulating flow	Pedestrian demand	Capacity	RFC	Throughput	Throughput (exit side)	Start queue	End queue	Delay	Unsignalised level of

	(PCU/hr)	(PCU)	(PCU/hr)	(Ped/hr)	(PCU/hr)		(PCU/hr)	(PCU/hr)	(PCU)	(PCU)	(s)	service
A - Amazon UK Service Access	126	42	2234		855	0.147	126	139	0.4	0.4	10.767	B
B - Dock Road South	664	221	1913		923	0.719	664	446	2.7	2.7	14.502	B
C - A1089 St Andrew's Road	1183	394	1364		1771	0.668	1183	1213	3.3	3.3	10.229	B
D - Thurrock Park Way	527	176	1753	0.00	1030	0.512	527	794	1.2	1.2	7.965	A
E - A1089 Dock Road North	1928	643	223		2172	0.887	2150	2057	125.1	51.1	150.523	F

FY - P3 No Construction, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D1 - P1 No Construction, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.
Warning	Demand Sets	D9 - P3 No Construction, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	39.67	E

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	39.67	E

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D9	P3 No Construction	PM	ONE HOUR	16:45	18:15	15	✓	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Amazon UK Service Access		ONE HOUR	✓	100	100.000
B - Dock Road South		ONE HOUR	✓	579	100.000
C - A1089 St Andrew's Road		ONE HOUR	✓	1194	100.000
D - Thurrock Park Way		ONE HOUR	✓	923	100.000
E - A1089 Dock Road North		ONE HOUR	✓	1890	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	50.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	28	137	414
	C - A1089 St Andrew's Road	0	32	41	86	1035
	D - Thurrock Park Way	0	162	70	5	686
	E - A1089 Dock Road North	92	500	851	445	2

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

	A - Amazon UK Service Access	0	100	100	100	100
	B - Dock Road South	100	0	4	5	0
From	C - A1089 St Andrew's Road	100	0	61	8	27
	D - Thurrock Park Way	100	0	13	25	3
	E - A1089 Dock Road North	100	1	34	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.13	10.92	0.3	B	100	100
B - Dock Road South	0.61	8.88	1.5	A	579	579
C - A1089 St Andrew's Road	0.71	8.55	3.1	A	1194	1194
D - Thurrock Park Way	1.00	80.99	23.0	F	923	923
E - A1089 Dock Road North	0.99	50.10	28.2	F	1890	1890

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1885		1028	0.087	90	82	0.1	0.2	8.364	A
B - Dock Road South	521	130	1354		1185	0.439	519	621	0.5	0.8	5.486	A
C - A1089 St Andrew's Road	1073	268	988		1984	0.541	1071	886	1.0	1.5	5.112	A
D - Thurrock Park Way	830	207	1457	50.00	1156	0.718	825	603	1.4	2.5	11.131	B
E - A1089 Dock Road North	1699	425	277		2143	0.793	1690	2005	2.3	4.4	9.511	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2244		850	0.130	110	98	0.2	0.3	10.595	B
B - Dock Road South	637	159	1616		1062	0.600	635	737	0.8	1.5	8.497	A
C - A1089 St Andrew's Road	1315	329	1195		1867	0.704	1309	1056	1.5	3.0	8.288	A
D - Thurrock Park Way	1016	254	1780	50.00	1017	0.999	963	724	2.5	15.9	47.215	E
E - A1089 Dock Road North	2081	520	327		2115	0.984	2014	2416	4.4	21.1	31.704	D

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2286		829	0.133	110	100	0.3	0.3	10.922	B
B - Dock Road South	637	159	1645		1049	0.608	637	752	1.5	1.5	8.884	A
C - A1089 St Andrew's Road	1315	329	1207		1860	0.707	1314	1075	3.0	3.1	8.555	A
D - Thurrock Park Way	1016	254	1788	50.00	1014	1.003	988	734	15.9	23.0	80.987	F
E - A1089 Dock Road North	2081	520	334		2112	0.985	2052	2441	21.1	28.2	50.095	F

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	2004		969	0.093	90	87	0.3	0.2	8.938	A
B - Dock Road South	521	130	1432		1148	0.453	523	663	1.5	0.9	5.872	A
C - A1089 St Andrew's Road	1073	268	1017		1968	0.546	1079	938	3.1	1.6	5.300	A
D - Thurrock Park Way	830	207	1468	50.00	1167	0.711	911	628	23.0	2.7	19.142	C
E - A1089 Dock Road North	1699	425	300		2130	0.798	1792	2079	28.2	5.1	16.115	C

FY - P4 No Construction, AM 2hr

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Pedestrian Crossing	D - Thurrock Park Way - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Demand Sets	D1 - P1 No Construction, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	449.08	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	449.08	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D10	P4 No Construction	AM 2hr	DIRECT	06:20	09:00	160	20	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - Amazon UK Service Access		DIRECT	✓	100.000
B - Dock Road South		DIRECT	✓	100.000
C - A1089 St Andrew's Road		DIRECT	✓	100.000
D - Thurrock Park Way		DIRECT	✓	100.000
E - A1089 Dock Road North		DIRECT	✓	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	0.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

06:20 - 06:40

From \ To		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	A - Amazon UK Service Access	0	0	0	0	98
	B - Dock Road South	2	0	25	31	308
	C - A1089 St Andrew's Road	0	12	27	30	963
	D - Thurrock Park Way	0	21	96	1	190
	E - A1089 Dock Road North	94	1174	859	236	4

Demand (PCU/hr)

06:40 - 07:00

From \ To		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	A - Amazon UK Service Access	0	0	0	0	98
	B - Dock Road South	2	0	25	31	308
	C - A1089 St Andrew's Road	0	12	27	30	963
	D - Thurrock Park Way	0	21	96	1	190
	E - A1089 Dock Road North	94	970	859	236	4

Demand (PCU/hr)

	To

07:00 - 07:20

From		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	25	85	445
	C - A1089 St Andrew's Road	0	4	30	54	1024
	D - Thurrock Park Way	0	33	112	9	227
	E - A1089 Dock Road North	108	2431	902	422	0

Demand (PCU/hr)

07:20 - 07:40

			To			
From		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	25	85	445
	C - A1089 St Andrew's Road	0	4	30	54	1024
	D - Thurrock Park Way	0	33	112	9	227
	E - A1089 Dock Road North	108	220	902	422	0

Demand (PCU/hr)

07:40 - 08:00

			To			
From		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	25	85	445
	C - A1089 St Andrew's Road	0	4	30	54	1024
	D - Thurrock Park Way	0	33	112	9	227
	E - A1089 Dock Road North	108	220	902	422	0

Demand (PCU/hr)

08:00 - 08:20

			To			
From		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	A - Amazon UK Service Access	0	0	0	0	126
	B - Dock Road South	0	0	23	134	501
	C - A1089 St Andrew's Road	0	11	23	74	1055
	D - Thurrock Park Way	0	63	113	5	346
	E - A1089 Dock Road North	125	342	924	521	3

Demand (PCU/hr)

08:20 - 08:40

			To			
From		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	A - Amazon UK Service Access	0	0	0	0	126
	B - Dock Road South	0	0	23	134	501
	C - A1089 St Andrew's Road	0	11	23	74	1055
	D - Thurrock Park Way	0	63	113	5	346
	E - A1089 Dock Road North	125	342	924	521	3

Demand (PCU/hr)

08:40 - 09:00

			To			
From		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	A - Amazon UK Service Access	0	0	0	0	126
	B - Dock Road South	0	0	23	134	501
	C - A1089 St Andrew's Road	0	11	23	74	1055
	D - Thurrock Park Way	0	63	113	5	346
	E - A1089 Dock Road North	125	342	924	521	3

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

06:20 - 06:40

			To			
From		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	100	0	4	11	2
	C - A1089 St Andrew's Road	0	0	55	12	65
	D - Thurrock Park Way	0	0	20	0	30
	E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

			To			
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

06:40 - 07:00	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

07:00 - 07:20			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	64	8	67
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	1	40	6	0

Heavy Vehicle %

07:20 - 07:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	64	8	67
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	8	40	6	0

Heavy Vehicle %

07:40 - 08:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	64	8	67
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	8	40	6	0

Heavy Vehicle %

08:00 - 08:20			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	10	5	3
		C - A1089 St Andrew's Road	0	0	60	9	63
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	48	5	0

Heavy Vehicle %

08:20 - 08:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	10	5	3
		C - A1089 St Andrew's Road	0	0	60	9	63
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	48	5	0

Heavy Vehicle %

08:40 - 09:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	10	5	3
		C - A1089 St Andrew's Road	0	0	60	9	63
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	48	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.15	10.98	0.4	B	109	291
B - Dock Road South	0.72	14.50	2.6	B	546	1457
C - A1089 St Andrew's Road	0.66	9.81	3.1	A	1111	2963
D - Thurrock Park Way	0.50	7.72	1.1	A	418	1113
E - A1089 Dock Road North	1.76	888.33	623.5	F	2180	5814

Main Results for each time segment

06:20 - 06:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2239		852	0.115	97	88	0.0	0.3	10.383	B
B - Dock Road South	366	122	1228		1244	0.294	365	1109	0.0	0.4	4.237	A
C - A1089 St Andrew's Road	1032	344	658		2170	0.476	1027	934	0.0	1.5	5.399	A
D - Thurrock Park Way	308	103	1407	0.00	1197	0.257	307	278	0.0	0.4	5.183	A
E - A1089 Dock Road North	2367	789	158		2208	1.072	2169	1556	0.0	66.1	63.554	F

06:40 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2226		859	0.114	98	95	0.3	0.3	10.317	B
B - Dock Road South	366	122	1312		1205	0.304	366	1012	0.4	0.5	4.448	A
C - A1089 St Andrew's Road	1032	344	678		2159	0.478	1032	1000	1.5	1.6	5.496	A
D - Thurrock Park Way	308	103	1414	0.00	1194	0.258	308	296	0.4	0.4	5.216	A
E - A1089 Dock Road North	2163	721	159		2207	0.980	2162	1563	66.1	66.3	108.881	F

07:00 - 07:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2315		814	0.123	100	64	0.3	0.3	10.983	B
B - Dock Road South	555	185	1035		1334	0.416	554	1380	0.5	0.7	4.804	A
C - A1089 St Andrew's Road	1112	371	878		2046	0.543	1111	711	1.6	2.0	6.652	A
D - Thurrock Park Way	381	127	1601	0.00	1103	0.345	381	387	0.4	0.6	5.639	A
E - A1089 Dock Road North	3863	1288	188		2192	1.763	2192	1794	66.3	623.5	574.906	F

07:20 - 07:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2291		826	0.121	100	72	0.3	0.3	10.806	B
B - Dock Road South	555	185	1137		1287	0.431	555	1255	0.7	0.8	5.125	A
C - A1089 St Andrew's Road	1112	371	921		2022	0.550	1112	770	2.0	2.1	6.847	A
D - Thurrock Park Way	381	127	1603	0.00	1103	0.346	381	430	0.6	0.6	5.649	A
E - A1089 Dock Road North	1652	551	188		2192	0.754	2175	1796	623.5	449.0	888.326	F

07:40 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2230		856	0.117	100	143	0.3	0.3	10.374	B
B - Dock Road South	555	185	2002		881	0.630	552	328	0.8	1.7	11.301	B
C - A1089 St Andrew's Road	1112	371	1195		1867	0.596	1111	1360	2.1	2.5	8.223	A
D - Thurrock Park Way	381	127	1600	0.00	1104	0.345	381	706	0.6	0.6	5.637	A
E - A1089 Dock Road North	1652	551	188		2192	0.754	2185	1793	449.0	271.2	594.371	F

08:00 - 08:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2235		854	0.148	126	141	0.3	0.4	10.773	B
B - Dock Road South	658	219	1938		911	0.722	655	423	1.7	2.6	14.505	B
C - A1089 St Andrew's Road	1163	388	1340		1785	0.651	1161	1254	2.5	3.1	9.606	A
D - Thurrock Park Way	527	176	1715	0.00	1049	0.503	525	787	0.6	1.1	7.638	A
E - A1089 Dock Road North	1915	638	215		2177	0.880	2162	2026	271.2	188.9	382.831	F

08:20 - 08:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2236		854	0.148	126	141	0.4	0.4	10.783	B
B - Dock Road South	658	219	1902		929	0.709	658	460	2.6	2.6	13.896	B
C - A1089 St Andrew's Road	1163	388	1358		1775	0.655	1163	1202	3.1	3.1	9.808	A
D - Thurrock Park Way	527	176	1719	0.00	1047	0.504	527	801	1.1	1.1	7.713	A
E - A1089 Dock Road North	1915	638	215		2177	0.880	2162	2031	188.9	106.6	247.633	F

08:40 - 09:00

Arm	Total Demand	Junction Arrivals	Circulating flow	Pedestrian demand	Capacity	RFC	Throughput	Throughput (exit side)	Start queue	End queue	Delay	Unsignalised level of

	(PCU/hr)	(PCU)	(PCU/hr)	(Ped/hr)	(PCU/hr)		(PCU/hr)	(PCU/hr)	(PCU)	(PCU)	(s)	service
A - Amazon UK Service Access	126	42	2225		859	0.147	126	140	0.4	0.4	10.708	B
B - Dock Road South	658	219	1893		933	0.706	658	458	2.6	2.5	13.696	B
C - A1089 St Andrew's Road	1163	388	1355		1777	0.654	1163	1197	3.1	3.1	9.788	A
D - Thurrock Park Way	527	176	1719	0.00	1046	0.504	527	798	1.1	1.1	7.716	A
E - A1089 Dock Road North	1915	638	215		2177	0.880	2151	2031	106.6	28.1	117.310	F

FY - P4 No Construction, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D1 - P1 No Construction, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.
Warning	Demand Sets	D12 - P4 No Construction, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	36.39	E

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	36.39	E

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D12	P4 No Construction	PM	ONE HOUR	16:45	18:15	15	✓	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Amazon UK Service Access		ONE HOUR	✓	100	100.000
B - Dock Road South		ONE HOUR	✓	578	100.000
C - A1089 St Andrew's Road		ONE HOUR	✓	1158	100.000
D - Thurrock Park Way		ONE HOUR	✓	922	100.000
E - A1089 Dock Road North		ONE HOUR	✓	1889	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	50.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	28	137	413
	C - A1089 St Andrew's Road	0	32	33	86	1007
	D - Thurrock Park Way	0	162	70	5	685
	E - A1089 Dock Road North	92	500	848	446	3

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

	A - Amazon UK Service Access	0	100	100	100	100
	B - Dock Road South	100	0	4	5	0
From	C - A1089 St Andrew's Road	100	0	54	8	27
	D - Thurrock Park Way	100	0	13	25	3
	E - A1089 Dock Road North	100	1	33	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.13	10.88	0.3	B	100	100
B - Dock Road South	0.60	8.77	1.5	A	578	578
C - A1089 St Andrew's Road	0.69	7.97	2.8	A	1158	1158
D - Thurrock Park Way	0.98	67.15	18.5	F	922	922
E - A1089 Dock Road North	0.98	48.60	27.3	E	1889	1889

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1878		1032	0.087	90	82	0.1	0.2	8.329	A
B - Dock Road South	520	130	1346		1188	0.437	519	621	0.5	0.8	5.448	A
C - A1089 St Andrew's Road	1041	260	989		1983	0.525	1039	876	0.9	1.4	4.926	A
D - Thurrock Park Way	829	207	1425	50.00	1168	0.710	824	603	1.3	2.4	10.734	B
E - A1089 Dock Road North	1698	425	270		2147	0.791	1690	1979	2.3	4.4	9.384	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2238		853	0.129	110	98	0.2	0.3	10.554	B
B - Dock Road South	636	159	1608		1066	0.597	634	739	0.8	1.5	8.405	A
C - A1089 St Andrew's Road	1275	319	1197		1866	0.683	1270	1045	1.4	2.7	7.748	A
D - Thurrock Park Way	1015	254	1741	50.00	1036	0.980	971	726	2.4	13.6	41.829	E
E - A1089 Dock Road North	2080	520	321		2119	0.982	2015	2391	4.4	20.6	31.054	D

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2280		832	0.132	110	100	0.3	0.3	10.877	B
B - Dock Road South	636	159	1637		1052	0.605	636	754	1.5	1.5	8.774	A
C - A1089 St Andrew's Road	1275	319	1209		1859	0.686	1275	1064	2.7	2.8	7.967	A
D - Thurrock Park Way	1015	254	1748	50.00	1033	0.983	996	736	13.6	18.5	67.146	F
E - A1089 Dock Road North	2080	520	327		2115	0.983	2053	2416	20.6	27.3	48.597	E

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1988		977	0.092	90	87	0.3	0.2	8.858	A
B - Dock Road South	520	130	1420		1154	0.450	522	659	1.5	0.8	5.812	A
C - A1089 St Andrew's Road	1041	260	1017		1968	0.529	1046	925	2.8	1.5	5.086	A
D - Thurrock Park Way	829	207	1435	50.00	1183	0.700	893	628	18.5	2.5	15.605	C
E - A1089 Dock Road North	1698	425	288		2137	0.795	1787	2039	27.3	5.0	15.389	C

FY - P5 No Construction, AM 2hr

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Pedestrian Crossing	D - Thurrock Park Way - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Demand Sets	D1 - P1 No Construction, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	447.87	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	447.87	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D13	P5 No Construction	AM 2hr	DIRECT	06:20	09:00	160	20	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - Amazon UK Service Access		DIRECT	✓	100.000
B - Dock Road South		DIRECT	✓	100.000
C - A1089 St Andrew's Road		DIRECT	✓	100.000
D - Thurrock Park Way		DIRECT	✓	100.000
E - A1089 Dock Road North		DIRECT	✓	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	0.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

06:20 - 06:40

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	98
	B - Dock Road South	2	0	25	31	308
	C - A1089 St Andrew's Road	0	12	27	30	963
	D - Thurrock Park Way	0	21	96	1	190
	E - A1089 Dock Road North	94	1174	859	236	4

Demand (PCU/hr)

06:40 - 07:00

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	98
	B - Dock Road South	2	0	25	31	308
	C - A1089 St Andrew's Road	0	12	27	30	963
	D - Thurrock Park Way	0	21	96	1	190
	E - A1089 Dock Road North	94	970	859	236	4

Demand (PCU/hr)

	To				

07:00 - 07:20

From	To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	25	85	438
	C - A1089 St Andrew's Road	0	4	38	54	1044
	D - Thurrock Park Way	0	33	112	9	227
	E - A1089 Dock Road North	108	2430	909	412	0

Demand (PCU/hr)

07:20 - 07:40

From	To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	25	85	438
	C - A1089 St Andrew's Road	0	4	38	54	1044
	D - Thurrock Park Way	0	33	112	9	227
	E - A1089 Dock Road North	108	219	909	412	0

Demand (PCU/hr)

07:40 - 08:00

From	To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	25	85	438
	C - A1089 St Andrew's Road	0	4	38	54	1044
	D - Thurrock Park Way	0	33	112	9	227
	E - A1089 Dock Road North	108	219	909	412	0

Demand (PCU/hr)

08:00 - 08:20

From	To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	A - Amazon UK Service Access	0	0	0	0	126
	B - Dock Road South	0	0	23	134	494
	C - A1089 St Andrew's Road	0	11	31	74	1077
	D - Thurrock Park Way	0	63	113	5	346
	E - A1089 Dock Road North	125	338	931	508	1

Demand (PCU/hr)

08:20 - 08:40

From	To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	A - Amazon UK Service Access	0	0	0	0	126
	B - Dock Road South	0	0	23	134	494
	C - A1089 St Andrew's Road	0	11	31	74	1077
	D - Thurrock Park Way	0	63	113	5	346
	E - A1089 Dock Road North	125	338	931	508	1

Demand (PCU/hr)

08:40 - 09:00

From	To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	A - Amazon UK Service Access	0	0	0	0	126
	B - Dock Road South	0	0	23	134	494
	C - A1089 St Andrew's Road	0	11	31	74	1077
	D - Thurrock Park Way	0	63	113	5	346
	E - A1089 Dock Road North	125	338	931	508	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

06:20 - 06:40

From	To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	100	0	4	11	2
	C - A1089 St Andrew's Road	0	0	55	12	65
	D - Thurrock Park Way	0	0	20	0	30
	E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

	To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

		To				
06:40 - 07:00	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
07:00 - 07:20	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	70	8	67
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	1	41	6	5

Heavy Vehicle %

			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
07:20 - 07:40	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	70	8	67
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	8	41	6	5

Heavy Vehicle %

			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
07:40 - 08:00	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	70	8	67
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	8	41	6	5

Heavy Vehicle %

			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
08:00 - 08:20	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	9	5	3
		C - A1089 St Andrew's Road	0	0	68	9	62
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	49	5	0

Heavy Vehicle %

			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
08:20 - 08:40	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	9	5	3
		C - A1089 St Andrew's Road	0	0	68	9	62
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	49	5	0

Heavy Vehicle %

			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
08:40 - 09:00	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	9	5	3
		C - A1089 St Andrew's Road	0	0	68	9	62
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	49	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.15	11.01	0.4	B	109	291
B - Dock Road South	0.72	14.27	2.5	B	541	1443
C - A1089 St Andrew's Road	0.67	10.06	3.3	B	1133	3021
D - Thurrock Park Way	0.51	7.87	1.1	A	418	1113
E - A1089 Dock Road North	1.76	890.33	623.6	F	2174	5798

Main Results for each time segment

06:20 - 06:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2239		852	0.115	97	88	0.0	0.3	10.383	B
B - Dock Road South	366	122	1228		1244	0.294	365	1109	0.0	0.4	4.237	A
C - A1089 St Andrew's Road	1032	344	658		2170	0.476	1027	934	0.0	1.5	5.399	A
D - Thurrock Park Way	308	103	1407	0.00	1197	0.257	307	278	0.0	0.4	5.183	A
E - A1089 Dock Road North	2367	789	158		2208	1.072	2169	1556	0.0	66.1	63.554	F

06:40 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2226		859	0.114	98	95	0.3	0.3	10.317	B
B - Dock Road South	366	122	1312		1205	0.304	366	1012	0.4	0.5	4.448	A
C - A1089 St Andrew's Road	1032	344	678		2159	0.478	1032	1000	1.5	1.6	5.496	A
D - Thurrock Park Way	308	103	1414	0.00	1194	0.258	308	296	0.4	0.4	5.216	A
E - A1089 Dock Road North	2163	721	159		2207	0.980	2162	1563	66.1	66.3	108.897	F

07:00 - 07:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2319		813	0.123	100	64	0.3	0.3	11.011	B
B - Dock Road South	548	183	1040		1332	0.412	547	1378	0.5	0.7	4.778	A
C - A1089 St Andrew's Road	1140	380	865		2053	0.555	1138	722	1.6	2.1	6.813	A
D - Thurrock Park Way	381	127	1622	0.00	1093	0.349	381	382	0.4	0.6	5.718	A
E - A1089 Dock Road North	3859	1286	196		2187	1.764	2187	1807	66.3	623.6	576.324	F

07:20 - 07:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2295		824	0.121	100	72	0.3	0.3	10.837	B
B - Dock Road South	548	183	1140		1285	0.426	548	1255	0.7	0.8	5.089	A
C - A1089 St Andrew's Road	1140	380	907		2030	0.562	1140	781	2.1	2.2	7.014	A
D - Thurrock Park Way	381	127	1624	0.00	1093	0.349	381	423	0.6	0.6	5.729	A
E - A1089 Dock Road North	1648	549	196		2187	0.753	2171	1809	623.6	449.2	890.332	F

07:40 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2234		855	0.117	100	143	0.3	0.3	10.401	B
B - Dock Road South	548	183	2007		879	0.623	545	327	0.8	1.7	11.145	B
C - A1089 St Andrew's Road	1140	380	1175		1879	0.607	1139	1378	2.2	2.6	8.423	A
D - Thurrock Park Way	381	127	1621	0.00	1094	0.348	381	693	0.6	0.6	5.717	A
E - A1089 Dock Road North	1648	549	196		2187	0.753	2181	1806	449.2	271.6	596.023	F

08:00 - 08:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2239		852	0.148	126	142	0.3	0.4	10.797	B
B - Dock Road South	651	217	1944		909	0.716	648	420	1.7	2.5	14.266	B
C - A1089 St Andrew's Road	1193	398	1319		1797	0.664	1191	1273	2.6	3.2	9.854	A
D - Thurrock Park Way	527	176	1736	0.00	1038	0.508	525	774	0.6	1.1	7.790	A
E - A1089 Dock Road North	1903	634	223		2173	0.876	2158	2039	271.6	186.7	382.073	F

08:20 - 08:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2239		852	0.148	126	142	0.4	0.4	10.804	B
B - Dock Road South	651	217	1907		926	0.703	651	457	2.5	2.5	13.673	B
C - A1089 St Andrew's Road	1193	398	1336		1787	0.667	1193	1222	3.2	3.3	10.064	B
D - Thurrock Park Way	527	176	1740	0.00	1037	0.508	527	789	1.1	1.1	7.865	A
E - A1089 Dock Road North	1903	634	223		2172	0.876	2157	2044	186.7	101.9	242.497	F

08:40 - 09:00

Arm	Total Demand	Junction Arrivals	Circulating flow	Pedestrian demand	Capacity	RFC	Throughput	Throughput (exit side)	Start queue	End queue	Delay	Unsignalised level of

	(PCU/hr)	(PCU)	(PCU/hr)	(Ped/hr)	(PCU/hr)		(PCU/hr)	(PCU/hr)	(PCU)	(PCU)	(s)	service
A - Amazon UK Service Access	126	42	2227		858	0.147	126	141	0.4	0.4	10.721	B
B - Dock Road South	651	217	1898		930	0.700	651	455	2.5	2.5	13.459	B
C - A1089 St Andrew's Road	1193	398	1333		1789	0.667	1193	1216	3.3	3.3	10.042	B
D - Thurrock Park Way	527	176	1740	0.00	1036	0.508	527	786	1.1	1.1	7.867	A
E - A1089 Dock Road North	1903	634	223		2172	0.876	2145	2044	101.9	21.3	108.640	F

FY - P5 No Construction, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D1 - P1 No Construction, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.
Warning	Demand Sets	D15 - P5 No Construction, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	32.19	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	32.19	D

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D15	P5 No Construction	PM	ONE HOUR	16:45	18:15	15	✓	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Amazon UK Service Access		ONE HOUR	✓	100	100.000
B - Dock Road South		ONE HOUR	✓	577	100.000
C - A1089 St Andrew's Road		ONE HOUR	✓	1191	100.000
D - Thurrock Park Way		ONE HOUR	✓	916	100.000
E - A1089 Dock Road North		ONE HOUR	✓	1834	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	50.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	28	137	412
	C - A1089 St Andrew's Road	0	32	41	86	1032
	D - Thurrock Park Way	0	162	70	5	679
	E - A1089 Dock Road North	92	495	799	446	2

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

	A - Amazon UK Service Access	0	100	100	100	100
	B - Dock Road South	100	0	4	5	0
From	C - A1089 St Andrew's Road	100	0	61	8	27
	D - Thurrock Park Way	100	0	13	25	3
	E - A1089 Dock Road North	100	1	37	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.13	10.59	0.3	B	100	100
B - Dock Road South	0.59	8.40	1.5	A	577	577
C - A1089 St Andrew's Road	0.71	8.53	3.1	A	1191	1191
D - Thurrock Park Way	0.99	73.78	20.4	F	916	916
E - A1089 Dock Road North	0.96	35.44	18.7	E	1834	1834

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1837		1052	0.085	90	82	0.1	0.2	8.152	A
B - Dock Road South	519	130	1310		1206	0.430	518	617	0.5	0.8	5.307	A
C - A1089 St Andrew's Road	1071	268	988		1984	0.540	1069	840	1.0	1.5	5.095	A
D - Thurrock Park Way	823	206	1453	50.00	1156	0.712	819	604	1.3	2.5	10.928	B
E - A1089 Dock Road North	1649	412	277		2143	0.769	1641	1994	2.1	3.9	8.673	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2203		870	0.127	110	99	0.2	0.3	10.314	B
B - Dock Road South	635	159	1575		1082	0.587	633	737	0.8	1.4	8.098	A
C - A1089 St Andrew's Road	1311	328	1199		1865	0.703	1305	1009	1.5	3.0	8.269	A
D - Thurrock Park Way	1009	252	1775	50.00	1020	0.989	960	730	2.5	14.6	44.481	E
E - A1089 Dock Road North	2019	505	328		2115	0.955	1973	2406	3.9	15.5	25.398	D

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2241		851	0.129	110	101	0.3	0.3	10.588	B
B - Dock Road South	635	159	1600		1070	0.594	635	751	1.4	1.5	8.405	A
C - A1089 St Andrew's Road	1311	328	1210		1859	0.706	1311	1025	3.0	3.1	8.527	A
D - Thurrock Park Way	1009	252	1782	50.00	1016	0.992	985	739	14.6	20.4	73.778	F
E - A1089 Dock Road North	2019	505	335		2111	0.957	2006	2432	15.5	18.7	35.439	E

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1918		1012	0.089	90	86	0.3	0.2	8.524	A
B - Dock Road South	519	130	1361		1182	0.439	521	648	1.5	0.8	5.559	A
C - A1089 St Andrew's Road	1071	268	1008		1973	0.543	1077	874	3.1	1.6	5.251	A
D - Thurrock Park Way	823	206	1463	50.00	1170	0.704	895	621	20.4	2.6	17.082	C
E - A1089 Dock Road North	1649	412	298		2132	0.773	1706	2061	18.7	4.4	11.653	B

FY - P6 No Construction, AM 2hr

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Pedestrian Crossing	D - Thurrock Park Way - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Demand Sets	D1 - P1 No Construction, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	444.80	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	444.80	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D16	P6 No Construction	AM 2hr	DIRECT	06:20	09:00	160	20	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - Amazon UK Service Access		DIRECT	✓	100.000
B - Dock Road South		DIRECT	✓	100.000
C - A1089 St Andrew's Road		DIRECT	✓	100.000
D - Thurrock Park Way		DIRECT	✓	100.000
E - A1089 Dock Road North		DIRECT	✓	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	0.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

06:20 - 06:40

From \ To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
A - Amazon UK Service Access	0	0	0	0	98
B - Dock Road South	2	0	25	31	308
C - A1089 St Andrew's Road	0	12	27	30	963
D - Thurrock Park Way	0	21	96	1	190
E - A1089 Dock Road North	94	1174	859	236	4

Demand (PCU/hr)

06:40 - 07:00

From \ To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
A - Amazon UK Service Access	0	0	0	0	98
B - Dock Road South	2	0	25	31	308
C - A1089 St Andrew's Road	0	12	27	30	963
D - Thurrock Park Way	0	21	96	1	190
E - A1089 Dock Road North	94	970	859	236	4

Demand (PCU/hr)

	To

07:00 - 07:20			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	444
		C - A1089 St Andrew's Road	0	4	38	54	1033
		D - Thurrock Park Way	0	33	112	9	227
		E - A1089 Dock Road North	108	2424	907	412	0

Demand (PCU/hr)

07:20 - 07:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	444
		C - A1089 St Andrew's Road	0	4	38	54	1033
		D - Thurrock Park Way	0	33	112	9	227
		E - A1089 Dock Road North	108	213	907	412	0

Demand (PCU/hr)

07:40 - 08:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	444
		C - A1089 St Andrew's Road	0	4	38	54	1033
		D - Thurrock Park Way	0	33	112	9	227
		E - A1089 Dock Road North	108	213	907	412	0

Demand (PCU/hr)

08:00 - 08:20			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	501
		C - A1089 St Andrew's Road	0	11	31	74	1063
		D - Thurrock Park Way	0	63	113	5	346
		E - A1089 Dock Road North	125	336	930	508	1

Demand (PCU/hr)

08:20 - 08:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	501
		C - A1089 St Andrew's Road	0	11	31	74	1063
		D - Thurrock Park Way	0	63	113	5	346
		E - A1089 Dock Road North	125	336	930	508	1

Demand (PCU/hr)

08:40 - 09:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	501
		C - A1089 St Andrew's Road	0	11	31	74	1063
		D - Thurrock Park Way	0	63	113	5	346
		E - A1089 Dock Road North	125	336	930	508	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

06:20 - 06:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

06:40 - 07:00	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

			To			
07:00 - 07:20			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	70	8	68
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	1	41	6	1

Heavy Vehicle %

			To			
07:20 - 07:40			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	70	8	68
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	8	41	6	1

Heavy Vehicle %

			To			
07:40 - 08:00			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	70	8	68
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	8	41	6	1

Heavy Vehicle %

			To			
08:00 - 08:20			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	9	5	3
		C - A1089 St Andrew's Road	0	0	68	9	63
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	49	5	0

Heavy Vehicle %

			To			
08:20 - 08:40			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	9	5	3
		C - A1089 St Andrew's Road	0	0	68	9	63
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	49	5	0

Heavy Vehicle %

			To			
08:40 - 09:00			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	9	5	3
		C - A1089 St Andrew's Road	0	0	68	9	63
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	49	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.15	11.01	0.4	B	109	291
B - Dock Road South	0.72	14.69	2.6	B	546	1456
C - A1089 St Andrew's Road	0.66	9.96	3.2	A	1124	2996
D - Thurrock Park Way	0.51	7.82	1.1	A	418	1113
E - A1089 Dock Road North	1.76	884.05	620.9	F	2170	5787

Main Results for each time segment

06:20 - 06:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2239		852	0.115	97	88	0.0	0.3	10.383	B
B - Dock Road South	366	122	1228		1244	0.294	365	1109	0.0	0.4	4.237	A
C - A1089 St Andrew's Road	1032	344	658		2170	0.476	1027	934	0.0	1.5	5.399	A
D - Thurrock Park Way	308	103	1407	0.00	1197	0.257	307	278	0.0	0.4	5.183	A
E - A1089 Dock Road North	2367	789	158		2208	1.072	2169	1556	0.0	66.1	63.554	F

06:40 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2226		859	0.114	98	95	0.3	0.3	10.317	B
B - Dock Road South	366	122	1312		1205	0.304	366	1012	0.4	0.5	4.448	A
C - A1089 St Andrew's Road	1032	344	678		2159	0.478	1032	1000	1.5	1.6	5.496	A
D - Thurrock Park Way	308	103	1414	0.00	1194	0.258	308	296	0.4	0.4	5.216	A
E - A1089 Dock Road North	2163	721	159		2207	0.980	2162	1563	66.1	66.3	108.897	F

07:00 - 07:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2319		813	0.123	100	64	0.3	0.3	11.010	B
B - Dock Road South	554	185	1041		1332	0.416	553	1378	0.5	0.7	4.816	A
C - A1089 St Andrew's Road	1129	376	872		2050	0.551	1127	722	1.6	2.1	6.798	A
D - Thurrock Park Way	381	127	1617	0.00	1096	0.348	381	382	0.4	0.6	5.699	A
E - A1089 Dock Road North	3851	1284	196		2187	1.761	2187	1802	66.3	620.9	574.285	F

07:20 - 07:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2294		825	0.121	100	73	0.3	0.3	10.829	B
B - Dock Road South	554	185	1145		1283	0.432	554	1249	0.7	0.8	5.146	A
C - A1089 St Andrew's Road	1129	376	915		2025	0.557	1129	784	2.1	2.2	7.001	A
D - Thurrock Park Way	381	127	1619	0.00	1095	0.348	381	425	0.6	0.6	5.709	A
E - A1089 Dock Road North	1640	547	196		2187	0.750	2171	1804	620.9	443.9	884.046	F

07:40 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2233		855	0.117	100	144	0.3	0.3	10.395	B
B - Dock Road South	554	185	2013		877	0.632	551	320	0.8	1.7	11.432	B
C - A1089 St Andrew's Road	1129	376	1183		1874	0.603	1128	1381	2.2	2.6	8.401	A
D - Thurrock Park Way	381	127	1616	0.00	1096	0.347	381	695	0.6	0.6	5.697	A
E - A1089 Dock Road North	1640	547	196		2187	0.750	2181	1801	443.9	263.7	585.228	F

08:00 - 08:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2238		853	0.148	126	142	0.3	0.4	10.792	B
B - Dock Road South	658	219	1946		908	0.725	655	418	1.7	2.6	14.687	B
C - A1089 St Andrew's Road	1179	393	1328		1792	0.658	1177	1273	2.6	3.2	9.765	A
D - Thurrock Park Way	527	176	1729	0.00	1042	0.506	525	776	0.6	1.1	7.741	A
E - A1089 Dock Road North	1900	633	223		2173	0.875	2157	2032	263.7	178.0	368.297	F

08:20 - 08:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2238		853	0.148	126	142	0.4	0.4	10.797	B
B - Dock Road South	658	219	1908		925	0.711	658	455	2.6	2.6	14.053	B
C - A1089 St Andrew's Road	1179	393	1344		1783	0.661	1179	1223	3.2	3.2	9.959	A
D - Thurrock Park Way	527	176	1733	0.00	1040	0.507	527	790	1.1	1.1	7.813	A
E - A1089 Dock Road North	1900	633	223		2172	0.875	2157	2037	178.0	92.4	227.540	F

08:40 - 09:00

Arm	Total Demand	Junction Arrivals	Circulating flow	Pedestrian demand	Capacity	RFC	Throughput	Throughput (exit side)	Start queue	End queue	Delay	Unsignalised level of

	(PCU/hr)	(PCU)	(PCU/hr)	(Ped/hr)	(PCU/hr)		(PCU/hr)	(PCU/hr)	(PCU)	(PCU)	(s)	service
A - Amazon UK Service Access	126	42	2220		862	0.146	126	141	0.4	0.4	10.668	B
B - Dock Road South	658	219	1894		932	0.706	658	452	2.6	2.6	13.714	B
C - A1089 St Andrew's Road	1179	393	1339		1786	0.660	1179	1213	3.2	3.2	9.920	A
D - Thurrock Park Way	527	176	1733	0.00	1040	0.507	527	784	1.1	1.1	7.816	A
E - A1089 Dock Road North	1900	633	223		2172	0.875	2137	2037	92.4	13.3	93.952	F

FY - P6 No Construction, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D1 - P1 No Construction, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.
Warning	Demand Sets	D18 - P6 No Construction, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	32.91	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	32.91	D

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D18	P6 No Construction	PM	ONE HOUR	16:45	18:15	15	✓	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Amazon UK Service Access		ONE HOUR	✓	100	100.000
B - Dock Road South		ONE HOUR	✓	577	100.000
C - A1089 St Andrew's Road		ONE HOUR	✓	1191	100.000
D - Thurrock Park Way		ONE HOUR	✓	922	100.000
E - A1089 Dock Road North		ONE HOUR	✓	1832	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	50.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	28	137	412
	C - A1089 St Andrew's Road	0	32	41	86	1032
	D - Thurrock Park Way	0	162	70	5	685
	E - A1089 Dock Road North	92	500	793	445	2

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

	A - Amazon UK Service Access	0	100	100	100	100
	B - Dock Road South	100	0	4	5	0
From	C - A1089 St Andrew's Road	100	0	61	8	27
	D - Thurrock Park Way	100	0	13	25	3
	E - A1089 Dock Road North	100	1	37	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.13	10.57	0.3	B	100	100
B - Dock Road South	0.59	8.34	1.5	A	577	577
C - A1089 St Andrew's Road	0.71	8.52	3.1	A	1191	1191
D - Thurrock Park Way	1.00	78.28	22.1	F	922	922
E - A1089 Dock Road North	0.96	34.90	18.4	D	1832	1832

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1835		1053	0.085	90	82	0.1	0.2	8.145	A
B - Dock Road South	519	130	1303		1209	0.429	518	621	0.5	0.8	5.284	A
C - A1089 St Andrew's Road	1071	268	987		1985	0.539	1069	834	1.0	1.5	5.093	A
D - Thurrock Park Way	829	207	1453	50.00	1158	0.716	824	603	1.4	2.5	11.058	B
E - A1089 Dock Road North	1647	412	277		2143	0.769	1640	1999	2.1	3.9	8.634	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2200		871	0.126	110	99	0.2	0.3	10.299	B
B - Dock Road South	635	159	1567		1085	0.586	633	742	0.8	1.4	8.038	A
C - A1089 St Andrew's Road	1311	328	1198		1865	0.703	1305	1002	1.5	3.0	8.261	A
D - Thurrock Park Way	1015	254	1775	50.00	1020	0.995	963	729	2.5	15.4	46.190	E
E - A1089 Dock Road North	2017	504	328		2115	0.954	1972	2411	3.9	15.3	25.142	D

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2238		852	0.129	110	101	0.3	0.3	10.570	B
B - Dock Road South	635	159	1592		1073	0.592	635	756	1.4	1.5	8.336	A
C - A1089 St Andrew's Road	1311	328	1209		1859	0.705	1311	1019	3.0	3.1	8.518	A
D - Thurrock Park Way	1015	254	1782	50.00	1016	0.999	989	738	15.4	22.1	78.276	F
E - A1089 Dock Road North	2017	504	334		2111	0.955	2004	2436	15.3	18.4	34.904	D

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1917		1012	0.089	90	86	0.3	0.2	8.517	A
B - Dock Road South	519	130	1354		1185	0.438	521	653	1.5	0.8	5.532	A
C - A1089 St Andrew's Road	1071	268	1007		1973	0.543	1077	868	3.1	1.6	5.249	A
D - Thurrock Park Way	829	207	1463	50.00	1170	0.709	906	620	22.1	2.7	18.339	C
E - A1089 Dock Road North	1647	412	299		2131	0.773	1703	2071	18.4	4.4	11.547	B

FY - P7 No Construction, AM 2hr

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Pedestrian Crossing	D - Thurrock Park Way - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Demand Sets	D1 - P1 No Construction, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	446.42	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	446.42	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D19	P7 No Construction	AM 2hr	DIRECT	06:20	09:00	160	20	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - Amazon UK Service Access		DIRECT	✓	100.000
B - Dock Road South		DIRECT	✓	100.000
C - A1089 St Andrew's Road		DIRECT	✓	100.000
D - Thurrock Park Way		DIRECT	✓	100.000
E - A1089 Dock Road North		DIRECT	✓	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	0.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

06:20 - 06:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	98
		B - Dock Road South	2	0	25	31	308
		C - A1089 St Andrew's Road	0	12	27	30	963
		D - Thurrock Park Way	0	21	96	1	190
		E - A1089 Dock Road North	94	1174	859	236	4

Demand (PCU/hr)

06:40 - 07:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	98
		B - Dock Road South	2	0	25	31	308
		C - A1089 St Andrew's Road	0	12	27	30	963
		D - Thurrock Park Way	0	21	96	1	190
		E - A1089 Dock Road North	94	970	859	236	4

Demand (PCU/hr)

		To	

Demand (PCU/hr)

07:00 - 07:20			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	442
		C - A1089 St Andrew's Road	0	4	38	54	1041
		D - Thurrock Park Way	0	33	112	9	227
		E - A1089 Dock Road North	108	2426	909	412	0

Demand (PCU/hr)

					To		
07:20 - 07:40			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	442
		C - A1089 St Andrew's Road	0	4	38	54	1041
		D - Thurrock Park Way	0	33	112	9	227
		E - A1089 Dock Road North	108	215	909	412	0

Demand (PCU/hr)

					To		
07:40 - 08:00			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	442
		C - A1089 St Andrew's Road	0	4	38	54	1041
		D - Thurrock Park Way	0	33	112	9	227
		E - A1089 Dock Road North	108	215	909	412	0

Demand (PCU/hr)

					To		
08:00 - 08:20			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	498
		C - A1089 St Andrew's Road	0	11	31	74	1073
		D - Thurrock Park Way	0	63	113	5	346
		E - A1089 Dock Road North	125	336	931	508	10

Demand (PCU/hr)

					To		
08:20 - 08:40			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	498
		C - A1089 St Andrew's Road	0	11	31	74	1073
		D - Thurrock Park Way	0	63	113	5	346
		E - A1089 Dock Road North	125	336	931	508	10

Demand (PCU/hr)

					To		
08:40 - 09:00			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	498
		C - A1089 St Andrew's Road	0	11	31	74	1073
		D - Thurrock Park Way	0	63	113	5	346
		E - A1089 Dock Road North	125	336	931	508	10

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

					To		
06:20 - 06:40			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

					To		
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

06:40 - 07:00	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

07:00 - 07:20			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	70	8	67
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	1	40	6	1

Heavy Vehicle %

07:20 - 07:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	70	8	67
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	8	40	6	1

Heavy Vehicle %

07:40 - 08:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	70	8	67
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	8	40	6	1

Heavy Vehicle %

08:00 - 08:20			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	9	5	3
		C - A1089 St Andrew's Road	0	0	68	9	62
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	49	5	0

Heavy Vehicle %

08:20 - 08:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	9	5	3
		C - A1089 St Andrew's Road	0	0	68	9	62
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	49	5	0

Heavy Vehicle %

08:40 - 09:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	9	5	3
		C - A1089 St Andrew's Road	0	0	68	9	62
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	49	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.15	11.01	0.4	B	109	291
B - Dock Road South	0.72	14.56	2.6	B	544	1451
C - A1089 St Andrew's Road	0.67	10.11	3.3	B	1130	3014
D - Thurrock Park Way	0.51	7.94	1.2	A	418	1113
E - A1089 Dock Road North	1.76	887.14	622.2	F	2175	5801

Main Results for each time segment

06:20 - 06:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2239		852	0.115	97	88	0.0	0.3	10.383	B
B - Dock Road South	366	122	1228		1244	0.294	365	1109	0.0	0.4	4.237	A
C - A1089 St Andrew's Road	1032	344	658		2170	0.476	1027	934	0.0	1.5	5.399	A
D - Thurrock Park Way	308	103	1407	0.00	1197	0.257	307	278	0.0	0.4	5.183	A
E - A1089 Dock Road North	2367	789	158		2208	1.072	2169	1556	0.0	66.1	63.554	F

06:40 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2226		859	0.114	98	95	0.3	0.3	10.317	B
B - Dock Road South	366	122	1312		1205	0.304	366	1012	0.4	0.5	4.448	A
C - A1089 St Andrew's Road	1032	344	678		2159	0.478	1032	1000	1.5	1.6	5.496	A
D - Thurrock Park Way	308	103	1414	0.00	1194	0.258	308	296	0.4	0.4	5.216	A
E - A1089 Dock Road North	2163	721	159		2207	0.980	2162	1563	66.1	66.3	108.892	F

07:00 - 07:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2319		813	0.123	100	64	0.3	0.3	11.011	B
B - Dock Road South	552	184	1041		1331	0.415	551	1377	0.5	0.7	4.804	A
C - A1089 St Andrew's Road	1137	379	870		2051	0.554	1135	723	1.6	2.1	6.808	A
D - Thurrock Park Way	381	127	1623	0.00	1093	0.349	381	382	0.4	0.6	5.722	A
E - A1089 Dock Road North	3855	1285	196		2187	1.762	2187	1808	66.3	622.2	575.119	F

07:20 - 07:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2295		824	0.121	100	72	0.3	0.3	10.834	B
B - Dock Road South	552	184	1143		1284	0.430	552	1252	0.7	0.8	5.126	A
C - A1089 St Andrew's Road	1137	379	912		2027	0.561	1137	783	2.1	2.2	7.011	A
D - Thurrock Park Way	381	127	1625	0.00	1092	0.349	381	424	0.6	0.6	5.733	A
E - A1089 Dock Road North	1644	548	196		2187	0.752	2171	1810	622.2	446.5	887.143	F

07:40 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2233		855	0.117	100	143	0.3	0.3	10.396	B
B - Dock Road South	552	184	2011		877	0.629	549	322	0.8	1.7	11.341	B
C - A1089 St Andrew's Road	1137	379	1180		1876	0.606	1136	1381	2.2	2.6	8.422	A
D - Thurrock Park Way	381	127	1622	0.00	1094	0.348	381	694	0.6	0.6	5.720	A
E - A1089 Dock Road North	1644	548	196		2187	0.752	2181	1807	446.5	267.6	590.794	F

08:00 - 08:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2238		853	0.148	126	141	0.3	0.4	10.794	B
B - Dock Road South	655	218	1947		907	0.722	652	417	1.7	2.6	14.561	B
C - A1089 St Andrew's Road	1189	396	1329		1792	0.664	1187	1271	2.6	3.2	9.875	A
D - Thurrock Park Way	527	176	1743	0.00	1035	0.509	525	773	0.6	1.1	7.837	A
E - A1089 Dock Road North	1910	637	223		2173	0.879	2157	2045	267.6	185.3	377.945	F

08:20 - 08:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2239		852	0.148	126	141	0.4	0.4	10.807	B
B - Dock Road South	655	218	1912		924	0.709	655	453	2.6	2.6	13.973	B
C - A1089 St Andrew's Road	1189	396	1348		1781	0.668	1189	1218	3.2	3.3	10.110	B
D - Thurrock Park Way	527	176	1750	0.00	1032	0.511	527	787	1.1	1.2	7.941	A
E - A1089 Dock Road North	1910	637	223		2172	0.879	2157	2054	185.3	102.9	242.120	F

08:40 - 09:00

Arm	Total Demand	Junction Arrivals	Circulating flow	Pedestrian demand	Capacity	RFC	Throughput	Throughput (exit side)	Start queue	End queue	Delay	Unsignalised level of

	(PCU/hr)	(PCU)	(PCU/hr)	(Ped/hr)	(PCU/hr)		(PCU/hr)	(PCU/hr)	(PCU)	(PCU)	(s)	service
A - Amazon UK Service Access	126	42	2228		858	0.147	126	140	0.4	0.4	10.724	B
B - Dock Road South	655	218	1902		928	0.706	655	451	2.6	2.5	13.757	B
C - A1089 St Andrew's Road	1189	396	1345		1782	0.667	1189	1213	3.3	3.3	10.087	B
D - Thurrock Park Way	527	176	1750	0.00	1032	0.511	527	784	1.2	1.2	7.943	A
E - A1089 Dock Road North	1910	637	223		2172	0.879	2145	2054	102.9	24.5	111.823	F

FY - P7 No Construction, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D1 - P1 No Construction, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.
Warning	Demand Sets	D21 - P7 No Construction, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	32.68	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	32.68	D

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D21	P7 No Construction	PM	ONE HOUR	16:45	18:15	15	✓	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Amazon UK Service Access		ONE HOUR	✓	100	100.000
B - Dock Road South		ONE HOUR	✓	575	100.000
C - A1089 St Andrew's Road		ONE HOUR	✓	1191	100.000
D - Thurrock Park Way		ONE HOUR	✓	922	100.000
E - A1089 Dock Road North		ONE HOUR	✓	1831	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	50.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	28	137	410
	C - A1089 St Andrew's Road	0	32	41	86	1032
	D - Thurrock Park Way	0	162	70	5	685
	E - A1089 Dock Road North	92	499	793	445	2

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

	A - Amazon UK Service Access	0	100	100	100	100
	B - Dock Road South	100	0	4	5	0
From	C - A1089 St Andrew's Road	100	0	61	8	27
	D - Thurrock Park Way	100	0	13	25	3
	E - A1089 Dock Road North	100	1	37	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.13	10.56	0.3	B	100	100
B - Dock Road South	0.59	8.30	1.4	A	575	575
C - A1089 St Andrew's Road	0.70	8.50	3.0	A	1191	1191
D - Thurrock Park Way	1.00	77.51	21.8	F	922	922
E - A1089 Dock Road North	0.95	34.71	18.3	D	1831	1831

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1834		1053	0.085	90	82	0.1	0.2	8.141	A
B - Dock Road South	517	129	1303		1209	0.428	516	620	0.5	0.8	5.271	A
C - A1089 St Andrew's Road	1071	268	985		1986	0.539	1069	834	1.0	1.5	5.087	A
D - Thurrock Park Way	829	207	1451	50.00	1158	0.716	824	603	1.4	2.5	11.035	B
E - A1089 Dock Road North	1646	412	277		2143	0.768	1639	1998	2.1	3.9	8.621	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2200		872	0.126	110	99	0.2	0.3	10.294	B
B - Dock Road South	633	158	1568		1085	0.584	631	742	0.8	1.4	8.002	A
C - A1089 St Andrew's Road	1311	328	1196		1867	0.703	1305	1002	1.5	3.0	8.245	A
D - Thurrock Park Way	1015	254	1773	50.00	1021	0.994	964	729	2.5	15.3	45.897	E
E - A1089 Dock Road North	2016	504	328		2115	0.953	1971	2409	3.9	15.2	25.050	D

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2237		853	0.129	110	101	0.3	0.3	10.564	B
B - Dock Road South	633	158	1593		1073	0.590	633	755	1.4	1.4	8.298	A
C - A1089 St Andrew's Road	1311	328	1207		1860	0.705	1311	1019	3.0	3.0	8.500	A
D - Thurrock Park Way	1015	254	1780	50.00	1017	0.998	989	738	15.3	21.8	77.508	F
E - A1089 Dock Road North	2016	504	335		2111	0.955	2004	2434	15.2	18.3	34.709	D

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1915		1013	0.089	90	86	0.3	0.2	8.508	A
B - Dock Road South	517	129	1354		1185	0.436	519	652	1.4	0.8	5.515	A
C - A1089 St Andrew's Road	1071	268	1005		1974	0.542	1077	868	3.0	1.6	5.241	A
D - Thurrock Park Way	829	207	1461	50.00	1171	0.708	906	620	21.8	2.6	18.128	C
E - A1089 Dock Road North	1646	412	299		2131	0.772	1702	2068	18.3	4.3	11.498	B

FY - P8 No Construction, AM 2hr

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Pedestrian Crossing	D - Thurrock Park Way - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Demand Sets	D1 - P1 No Construction, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	447.03	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	447.03	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D22	P8 No Construction	AM 2hr	DIRECT	06:20	09:00	160	20	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - Amazon UK Service Access		DIRECT	✓	100.000
B - Dock Road South		DIRECT	✓	100.000
C - A1089 St Andrew's Road		DIRECT	✓	100.000
D - Thurrock Park Way		DIRECT	✓	100.000
E - A1089 Dock Road North		DIRECT	✓	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	0.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

06:20 - 06:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	98
		B - Dock Road South	2	0	25	31	308
		C - A1089 St Andrew's Road	0	12	27	30	963
		D - Thurrock Park Way	0	21	96	1	190
		E - A1089 Dock Road North	94	1174	859	236	4

Demand (PCU/hr)

06:40 - 07:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	98
		B - Dock Road South	2	0	25	31	308
		C - A1089 St Andrew's Road	0	12	27	30	963
		D - Thurrock Park Way	0	21	96	1	190
		E - A1089 Dock Road North	94	970	859	236	4

Demand (PCU/hr)

		To	

07:00 - 07:20 | From

		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	25	85	437
	C - A1089 St Andrew's Road	0	4	38	54	1035
	D - Thurrock Park Way	0	33	112	9	227
	E - A1089 Dock Road North	108	2422	912	413	0

Demand (PCU/hr)

07:20 - 07:40 | From

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	25	85	437
	C - A1089 St Andrew's Road	0	4	38	54	1035
	D - Thurrock Park Way	0	33	112	9	227
	E - A1089 Dock Road North	108	211	912	413	0

Demand (PCU/hr)

07:40 - 08:00 | From

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	25	85	437
	C - A1089 St Andrew's Road	0	4	38	54	1035
	D - Thurrock Park Way	0	33	112	9	227
	E - A1089 Dock Road North	108	211	912	413	0

Demand (PCU/hr)

08:00 - 08:20 | From

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	126
	B - Dock Road South	0	0	23	134	491
	C - A1089 St Andrew's Road	0	11	31	74	1066
	D - Thurrock Park Way	0	63	113	5	346
	E - A1089 Dock Road North	125	335	934	509	1

Demand (PCU/hr)

08:20 - 08:40 | From

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	126
	B - Dock Road South	0	0	23	134	491
	C - A1089 St Andrew's Road	0	11	31	74	1066
	D - Thurrock Park Way	0	63	113	5	346
	E - A1089 Dock Road North	125	335	934	509	1

Demand (PCU/hr)

08:40 - 09:00 | From

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	126
	B - Dock Road South	0	0	23	134	491
	C - A1089 St Andrew's Road	0	11	31	74	1066
	D - Thurrock Park Way	0	63	113	5	346
	E - A1089 Dock Road North	125	335	934	509	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

06:20 - 06:40 | From

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	100	0	4	11	2
	C - A1089 St Andrew's Road	0	0	55	12	65
	D - Thurrock Park Way	0	0	20	0	30
	E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

06:40 - 07:00	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

07:00 - 07:20			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	70	8	68
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	1	40	6	1

Heavy Vehicle %

07:20 - 07:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	70	8	68
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	8	40	6	1

Heavy Vehicle %

07:40 - 08:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	70	8	68
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	8	40	6	1

Heavy Vehicle %

08:00 - 08:20			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	9	5	3
		C - A1089 St Andrew's Road	0	0	68	9	63
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	48	5	0

Heavy Vehicle %

08:20 - 08:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	9	5	3
		C - A1089 St Andrew's Road	0	0	68	9	63
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	48	5	0

Heavy Vehicle %

08:40 - 09:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	9	5	3
		C - A1089 St Andrew's Road	0	0	68	9	63
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	48	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.15	11.01	0.4	B	109	291
B - Dock Road South	0.71	14.24	2.5	B	540	1439
C - A1089 St Andrew's Road	0.66	9.92	3.2	A	1125	3001
D - Thurrock Park Way	0.51	7.76	1.1	A	418	1113
E - A1089 Dock Road North	1.76	887.17	622.2	F	2173	5795

Main Results for each time segment

06:20 - 06:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2239		852	0.115	97	88	0.0	0.3	10.383	B
B - Dock Road South	366	122	1228		1244	0.294	365	1109	0.0	0.4	4.237	A
C - A1089 St Andrew's Road	1032	344	658		2170	0.476	1027	934	0.0	1.5	5.399	A
D - Thurrock Park Way	308	103	1407	0.00	1197	0.257	307	278	0.0	0.4	5.183	A
E - A1089 Dock Road North	2367	789	158		2208	1.072	2169	1556	0.0	66.1	63.554	F

06:40 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2226		859	0.114	98	95	0.3	0.3	10.317	B
B - Dock Road South	366	122	1312		1205	0.304	366	1012	0.4	0.5	4.448	A
C - A1089 St Andrew's Road	1032	344	678		2159	0.478	1032	1000	1.5	1.6	5.496	A
D - Thurrock Park Way	308	103	1414	0.00	1194	0.258	308	296	0.4	0.4	5.216	A
E - A1089 Dock Road North	2163	721	159		2207	0.980	2162	1563	66.1	66.3	108.892	F

07:00 - 07:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2319		813	0.123	100	64	0.3	0.3	11.011	B
B - Dock Road South	547	182	1043		1330	0.411	546	1375	0.5	0.7	4.780	A
C - A1089 St Andrew's Road	1131	377	865		2053	0.551	1129	724	1.6	2.1	6.785	A
D - Thurrock Park Way	381	127	1612	0.00	1098	0.347	381	382	0.4	0.6	5.680	A
E - A1089 Dock Road North	3855	1285	196		2187	1.762	2187	1797	66.3	622.2	575.140	F

07:20 - 07:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2295		824	0.121	100	72	0.3	0.3	10.832	B
B - Dock Road South	547	182	1146		1282	0.427	547	1249	0.7	0.8	5.100	A
C - A1089 St Andrew's Road	1131	377	907		2030	0.557	1131	785	2.1	2.2	6.985	A
D - Thurrock Park Way	381	127	1614	0.00	1097	0.347	381	424	0.6	0.6	5.690	A
E - A1089 Dock Road North	1644	548	196		2187	0.752	2171	1799	622.2	446.6	887.168	F

07:40 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2233		855	0.117	100	143	0.3	0.3	10.396	B
B - Dock Road South	547	182	2017		875	0.625	544	317	0.8	1.7	11.259	B
C - A1089 St Andrew's Road	1131	377	1176		1878	0.602	1130	1385	2.2	2.6	8.380	A
D - Thurrock Park Way	381	127	1611	0.00	1099	0.347	381	695	0.6	0.6	5.678	A
E - A1089 Dock Road North	1644	548	196		2187	0.752	2181	1796	446.6	267.6	590.669	F

08:00 - 08:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2238		853	0.148	126	142	0.3	0.4	10.795	B
B - Dock Road South	648	216	1949		906	0.715	646	415	1.7	2.5	14.244	B
C - A1089 St Andrew's Road	1182	394	1318		1798	0.658	1180	1277	2.6	3.1	9.724	A
D - Thurrock Park Way	527	176	1722	0.00	1045	0.504	525	776	0.6	1.1	7.692	A
E - A1089 Dock Road North	1904	635	223		2173	0.876	2157	2025	267.6	183.2	375.964	F

08:20 - 08:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2238		852	0.148	126	142	0.4	0.4	10.802	B
B - Dock Road South	648	216	1911		924	0.701	648	454	2.5	2.5	13.608	B
C - A1089 St Andrew's Road	1182	394	1334		1789	0.661	1182	1225	3.1	3.2	9.917	A
D - Thurrock Park Way	527	176	1726	0.00	1043	0.505	527	790	1.1	1.1	7.762	A
E - A1089 Dock Road North	1904	635	223		2172	0.876	2157	2030	183.2	98.8	237.063	F

08:40 - 09:00

Arm	Total Demand	Junction Arrivals	Circulating flow	Pedestrian demand	Capacity	RFC	Throughput	Throughput (exit side)	Start queue	End queue	Delay	Unsignalised level of

	(PCU/hr)	(PCU)	(PCU/hr)	(Ped/hr)	(PCU/hr)		(PCU/hr)	(PCU/hr)	(PCU)	(PCU)	(s)	service
A - Amazon UK Service Access	126	42	2226		858	0.147	126	141	0.4	0.4	10.716	B
B - Dock Road South	648	216	1901		929	0.698	648	451	2.5	2.4	13.385	B
C - A1089 St Andrew's Road	1182	394	1330		1791	0.660	1182	1219	3.2	3.2	9.893	A
D - Thurrock Park Way	527	176	1726	0.00	1043	0.505	527	786	1.1	1.1	7.765	A
E - A1089 Dock Road North	1904	635	223		2172	0.876	2144	2030	98.8	18.8	104.255	F

FY - P8 No Construction, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D1 - P1 No Construction, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.
Warning	Demand Sets	D24 - P8 No Construction, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	32.52	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	32.52	D

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D24	P8 No Construction	PM	ONE HOUR	16:45	18:15	15	✓	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Amazon UK Service Access		ONE HOUR	✓	100	100.000
B - Dock Road South		ONE HOUR	✓	575	100.000
C - A1089 St Andrew's Road		ONE HOUR	✓	1191	100.000
D - Thurrock Park Way		ONE HOUR	✓	922	100.000
E - A1089 Dock Road North		ONE HOUR	✓	1829	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	50.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

From		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	28	137	410
	C - A1089 St Andrew's Road	0	32	41	86	1032
	D - Thurrock Park Way	0	162	70	5	685
	E - A1089 Dock Road North	92	497	793	445	2

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

	A - Amazon UK Service Access	0	100	100	100	100
	B - Dock Road South	100	0	4	5	0
From	C - A1089 St Andrew's Road	100	0	61	8	27
	D - Thurrock Park Way	100	0	13	25	3
	E - A1089 Dock Road North	100	1	37	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.13	10.55	0.3	B	100	100
B - Dock Road South	0.59	8.30	1.4	A	575	575
C - A1089 St Andrew's Road	0.70	8.50	3.0	A	1191	1191
D - Thurrock Park Way	1.00	77.51	21.8	F	922	922
E - A1089 Dock Road North	0.95	34.30	18.1	D	1829	1829

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1832		1054	0.085	90	82	0.1	0.2	8.134	A
B - Dock Road South	517	129	1303		1209	0.428	516	618	0.5	0.8	5.271	A
C - A1089 St Andrew's Road	1071	268	985		1986	0.539	1069	834	1.0	1.5	5.087	A
D - Thurrock Park Way	829	207	1451	50.00	1158	0.716	824	603	1.4	2.5	11.035	B
E - A1089 Dock Road North	1644	411	277		2143	0.767	1637	1998	2.1	3.9	8.594	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2198		873	0.126	110	99	0.2	0.3	10.283	B
B - Dock Road South	633	158	1568		1085	0.584	631	740	0.8	1.4	8.005	A
C - A1089 St Andrew's Road	1311	328	1196		1867	0.703	1305	1003	1.5	3.0	8.246	A
D - Thurrock Park Way	1015	254	1773	50.00	1021	0.994	964	729	2.5	15.3	45.895	E
E - A1089 Dock Road North	2014	503	328		2115	0.952	1969	2409	3.9	15.0	24.855	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2236		854	0.129	110	101	0.3	0.3	10.551	B
B - Dock Road South	633	158	1593		1073	0.590	633	753	1.4	1.4	8.300	A
C - A1089 St Andrew's Road	1311	328	1207		1860	0.705	1311	1019	3.0	3.0	8.500	A
D - Thurrock Park Way	1015	254	1780	50.00	1017	0.998	989	738	15.3	21.8	77.507	F
E - A1089 Dock Road North	2014	503	335		2111	0.954	2002	2434	15.0	18.1	34.297	D

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1912		1014	0.089	90	85	0.3	0.2	8.498	A
B - Dock Road South	517	129	1353		1185	0.436	519	650	1.4	0.8	5.511	A
C - A1089 St Andrew's Road	1071	268	1005		1975	0.542	1077	868	3.0	1.6	5.242	A
D - Thurrock Park Way	829	207	1461	50.00	1171	0.708	906	620	21.8	2.6	18.126	C
E - A1089 Dock Road North	1644	411	299		2131	0.772	1699	2068	18.1	4.3	11.400	B

FY - P9 No Construction, AM 2hr

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Pedestrian Crossing	D - Thurrock Park Way - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Demand Sets	D1 - P1 No Construction, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	432.54	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	432.54	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D25	P9 No Construction	AM 2hr	DIRECT	06:20	09:00	160	20	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - Amazon UK Service Access		DIRECT	✓	100.000
B - Dock Road South		DIRECT	✓	100.000
C - A1089 St Andrew's Road		DIRECT	✓	100.000
D - Thurrock Park Way		DIRECT	✓	100.000
E - A1089 Dock Road North		DIRECT	✓	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	0.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

06:20 - 06:40

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	98
	B - Dock Road South	2	0	25	31	308
	C - A1089 St Andrew's Road	0	12	27	30	963
	D - Thurrock Park Way	0	21	96	1	190
	E - A1089 Dock Road North	94	1174	859	236	4

Demand (PCU/hr)

06:40 - 07:00

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	98
	B - Dock Road South	2	0	25	31	308
	C - A1089 St Andrew's Road	0	12	27	30	963
	D - Thurrock Park Way	0	21	96	1	190
	E - A1089 Dock Road North	94	970	859	236	4

Demand (PCU/hr)

	To

Demand (PCU/hr)

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
07:00 - 07:20	From					
	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	25	85	452
	C - A1089 St Andrew's Road	0	4	30	54	1053
	D - Thurrock Park Way	0	33	112	9	227
	E - A1089 Dock Road North	107	2426	897	404	0

Demand (PCU/hr)

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
07:20 - 07:40	From					
	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	25	85	452
	C - A1089 St Andrew's Road	0	4	30	54	1053
	D - Thurrock Park Way	0	33	112	9	227
	E - A1089 Dock Road North	107	215	897	404	0

Demand (PCU/hr)

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
07:40 - 08:00	From					
	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	25	85	452
	C - A1089 St Andrew's Road	0	4	30	54	1053
	D - Thurrock Park Way	0	33	112	9	227
	E - A1089 Dock Road North	107	215	897	404	0

Demand (PCU/hr)

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
08:00 - 08:20	From					
	A - Amazon UK Service Access	0	0	0	0	126
	B - Dock Road South	0	0	23	134	506
	C - A1089 St Andrew's Road	0	11	23	74	1090
	D - Thurrock Park Way	0	63	113	5	346
	E - A1089 Dock Road North	123	340	918	496	1

Demand (PCU/hr)

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
08:20 - 08:40	From					
	A - Amazon UK Service Access	0	0	0	0	126
	B - Dock Road South	0	0	23	134	506
	C - A1089 St Andrew's Road	0	11	23	74	1090
	D - Thurrock Park Way	0	63	113	5	346
	E - A1089 Dock Road North	123	340	918	496	1

Demand (PCU/hr)

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
08:40 - 09:00	From					
	A - Amazon UK Service Access	0	0	0	0	126
	B - Dock Road South	0	0	23	134	506
	C - A1089 St Andrew's Road	0	11	23	74	1090
	D - Thurrock Park Way	0	63	113	5	346
	E - A1089 Dock Road North	123	340	918	496	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
06:20 - 06:40	From					
	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	100	0	4	11	2
	C - A1089 St Andrew's Road	0	0	55	12	65
	D - Thurrock Park Way	0	0	20	0	30
	E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

06:40 - 07:00	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

07:00 - 07:20			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	64	8	64
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	1	39	6	1

Heavy Vehicle %

07:20 - 07:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	64	8	64
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	8	39	6	1

Heavy Vehicle %

07:40 - 08:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	64	8	64
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	8	39	6	1

Heavy Vehicle %

08:00 - 08:20			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	10	5	3
		C - A1089 St Andrew's Road	0	0	60	9	59
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	47	5	0

Heavy Vehicle %

08:20 - 08:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	10	5	3
		C - A1089 St Andrew's Road	0	0	60	9	59
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	47	5	0

Heavy Vehicle %

08:40 - 09:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	10	5	3
		C - A1089 St Andrew's Road	0	0	60	9	59
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	47	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.15	10.98	0.4	B	109	291
B - Dock Road South	0.72	14.57	2.6	B	551	1469
C - A1089 St Andrew's Road	0.67	10.02	3.3	B	1135	3027
D - Thurrock Park Way	0.51	8.00	1.2	A	418	1113
E - A1089 Dock Road North	1.75	865.47	613.8	F	2156	5748

Main Results for each time segment

06:20 - 06:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2239		852	0.115	97	88	0.0	0.3	10.383	B
B - Dock Road South	366	122	1228		1244	0.294	365	1109	0.0	0.4	4.237	A
C - A1089 St Andrew's Road	1032	344	658		2170	0.476	1027	934	0.0	1.5	5.399	A
D - Thurrock Park Way	308	103	1407	0.00	1197	0.257	307	278	0.0	0.4	5.183	A
E - A1089 Dock Road North	2367	789	158		2208	1.072	2169	1556	0.0	66.1	63.554	F

06:40 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2226		859	0.114	98	95	0.3	0.3	10.317	B
B - Dock Road South	366	122	1312		1205	0.304	366	1012	0.4	0.5	4.448	A
C - A1089 St Andrew's Road	1032	344	678		2159	0.478	1032	1000	1.5	1.6	5.496	A
D - Thurrock Park Way	308	103	1414	0.00	1194	0.258	308	296	0.4	0.4	5.216	A
E - A1089 Dock Road North	2163	721	159		2207	0.980	2162	1563	66.1	66.3	108.875	F

07:00 - 07:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2315		814	0.123	100	64	0.3	0.3	10.984	B
B - Dock Road South	562	187	1028		1338	0.420	561	1387	0.5	0.8	4.828	A
C - A1089 St Andrew's Road	1141	380	877		2047	0.558	1139	712	1.6	2.1	6.742	A
D - Thurrock Park Way	381	127	1637	0.00	1086	0.351	381	379	0.4	0.6	5.776	A
E - A1089 Dock Road North	3834	1278	188		2192	1.749	2192	1830	66.3	613.8	567.325	F

07:20 - 07:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2289		827	0.121	100	73	0.3	0.3	10.790	B
B - Dock Road South	562	187	1143		1284	0.438	562	1246	0.8	0.8	5.195	A
C - A1089 St Andrew's Road	1141	380	923		2021	0.565	1141	782	2.1	2.2	6.961	A
D - Thurrock Park Way	381	127	1639	0.00	1085	0.351	381	425	0.6	0.6	5.787	A
E - A1089 Dock Road North	1623	541	188		2192	0.741	2174	1832	613.8	430.0	865.469	F

07:40 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2229		857	0.117	100	144	0.3	0.3	10.364	B
B - Dock Road South	562	187	2002		881	0.638	559	326	0.8	1.8	11.535	B
C - A1089 St Andrew's Road	1141	380	1187		1872	0.610	1140	1374	2.2	2.6	8.356	A
D - Thurrock Park Way	381	127	1635	0.00	1087	0.351	381	691	0.6	0.6	5.775	A
E - A1089 Dock Road North	1623	541	188		2192	0.741	2185	1828	430.0	242.7	555.374	F

08:00 - 08:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2233		855	0.147	126	142	0.3	0.4	10.760	B
B - Dock Road South	663	221	1930		915	0.724	660	430	1.8	2.6	14.569	B
C - A1089 St Andrew's Road	1198	399	1329		1792	0.669	1196	1262	2.6	3.2	9.833	A
D - Thurrock Park Way	527	176	1753	0.00	1030	0.512	525	772	0.6	1.2	7.915	A
E - A1089 Dock Road North	1878	626	215		2177	0.863	2161	2064	242.7	148.4	325.949	F

08:20 - 08:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2232		856	0.147	126	141	0.4	0.4	10.752	B
B - Dock Road South	663	221	1893		933	0.711	663	465	2.6	2.6	13.938	B
C - A1089 St Andrew's Road	1198	399	1342		1784	0.672	1198	1214	3.2	3.3	10.017	B
D - Thurrock Park Way	527	176	1757	0.00	1028	0.512	527	783	1.2	1.2	7.993	A
E - A1089 Dock Road North	1878	626	215		2177	0.863	2158	2069	148.4	55.1	172.694	F

08:40 - 09:00

Arm	Total Demand	Junction Arrivals	Circulating flow	Pedestrian demand	Capacity	RFC	Throughput	Throughput (exit side)	Start queue	End queue	Delay	Unsignalised level of

	(PCU/hr)	(PCU)	(PCU/hr)	(Ped/hr)	(PCU/hr)		(PCU/hr)	(PCU/hr)	(PCU)	(PCU)	(s)	service
A - Amazon UK Service Access	126	42	2098		922	0.137	126	132	0.4	0.3	9.861	A
B - Dock Road South	663	221	1786		983	0.675	664	439	2.6	2.2	11.830	B
C - A1089 St Andrew's Road	1198	399	1306		1805	0.664	1198	1144	3.3	3.3	9.692	A
D - Thurrock Park Way	527	176	1758	0.00	1028	0.513	527	746	1.2	1.2	8.003	A
E - A1089 Dock Road North	1878	626	215		2177	0.863	2015	2070	55.1	9.3	41.793	E

FY - P9 No Construction, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D1 - P1 No Construction, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.
Warning	Demand Sets	D27 - P9 No Construction, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	28.67	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	28.67	D

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D27	P9 No Construction	PM	ONE HOUR	16:45	18:15	15	✓	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Amazon UK Service Access		ONE HOUR	✓	100	100.000
B - Dock Road South		ONE HOUR	✓	581	100.000
C - A1089 St Andrew's Road		ONE HOUR	✓	1155	100.000
D - Thurrock Park Way		ONE HOUR	✓	924	100.000
E - A1089 Dock Road North		ONE HOUR	✓	1806	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	50.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	28	137	416
	C - A1089 St Andrew's Road	0	32	33	86	1004
	D - Thurrock Park Way	0	162	70	5	687
	E - A1089 Dock Road North	92	494	773	445	2

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

	A - Amazon UK Service Access	0	100	100	100	100
	B - Dock Road South	100	0	4	5	0
From	C - A1089 St Andrew's Road	100	0	54	8	27
	D - Thurrock Park Way	100	0	13	25	3
	E - A1089 Dock Road North	100	1	37	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.13	10.35	0.3	B	100	100
B - Dock Road South	0.59	8.18	1.4	A	581	581
C - A1089 St Andrew's Road	0.69	7.96	2.8	A	1155	1155
D - Thurrock Park Way	0.98	68.19	18.8	F	924	924
E - A1089 Dock Road North	0.94	29.30	15.2	D	1806	1806

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1805		1068	0.084	90	82	0.1	0.2	8.021	A
B - Dock Road South	522	131	1279		1220	0.428	521	616	0.5	0.8	5.223	A
C - A1089 St Andrew's Road	1038	260	991		1983	0.524	1036	809	0.9	1.4	4.916	A
D - Thurrock Park Way	831	208	1424	50.00	1169	0.711	826	603	1.3	2.5	10.767	B
E - A1089 Dock Road North	1624	406	270		2147	0.756	1617	1980	2.0	3.7	8.207	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2172		885	0.124	110	99	0.2	0.3	10.111	B
B - Dock Road South	640	160	1543		1097	0.583	637	739	0.8	1.4	7.912	A
C - A1089 St Andrew's Road	1272	318	1204		1862	0.683	1266	975	1.4	2.7	7.759	A
D - Thurrock Park Way	1017	254	1740	50.00	1036	0.982	972	730	2.5	13.8	42.244	E
E - A1089 Dock Road North	1988	497	321		2119	0.938	1951	2392	3.7	13.1	22.359	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2207		868	0.127	110	101	0.3	0.3	10.350	B
B - Dock Road South	640	160	1565		1086	0.589	640	752	1.4	1.4	8.179	A
C - A1089 St Andrew's Road	1272	318	1214		1856	0.685	1271	990	2.7	2.8	7.964	A
D - Thurrock Park Way	1017	254	1747	50.00	1033	0.985	997	739	13.8	18.8	68.188	F
E - A1089 Dock Road North	1988	497	327		2115	0.940	1980	2417	13.1	15.2	29.299	D

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1872		1035	0.087	90	85	0.3	0.2	8.314	A
B - Dock Road South	522	131	1320		1201	0.435	525	642	1.4	0.8	5.427	A
C - A1089 St Andrew's Road	1038	260	1008		1973	0.526	1044	837	2.8	1.5	5.044	A
D - Thurrock Park Way	831	208	1434	50.00	1184	0.702	896	617	18.8	2.6	15.845	C
E - A1089 Dock Road North	1624	406	289		2137	0.760	1668	2041	15.2	4.0	10.227	B

FY - P10 No Construction, AM 2hr

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Pedestrian Crossing	D - Thurrock Park Way - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Demand Sets	D1 - P1 No Construction, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	450.24	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	450.24	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D28	P10 No Construction	AM 2hr	DIRECT	06:20	09:00	160	20	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - Amazon UK Service Access		DIRECT	✓	100.000
B - Dock Road South		DIRECT	✓	100.000
C - A1089 St Andrew's Road		DIRECT	✓	100.000
D - Thurrock Park Way		DIRECT	✓	100.000
E - A1089 Dock Road North		DIRECT	✓	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	0.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

06:20 - 06:40

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	98
	B - Dock Road South	2	0	25	31	308
	C - A1089 St Andrew's Road	0	12	27	30	963
	D - Thurrock Park Way	0	21	96	1	190
	E - A1089 Dock Road North	94	1174	859	236	4

Demand (PCU/hr)

06:40 - 07:00

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	98
	B - Dock Road South	2	0	25	31	308
	C - A1089 St Andrew's Road	0	12	27	30	963
	D - Thurrock Park Way	0	21	96	1	190
	E - A1089 Dock Road North	94	970	859	236	4

Demand (PCU/hr)

	To	

Demand (PCU/hr) *(07:00 - 07:20)*

07:00 - 07:20	From		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	437
		C - A1089 St Andrew's Road	0	4	30	54	1042
		D - Thurrock Park Way	0	33	112	9	227
		E - A1089 Dock Road North	109	2434	906	419	0

Demand (PCU/hr)

07:20 - 07:40	From	To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	437
		C - A1089 St Andrew's Road	0	4	30	54	1042
		D - Thurrock Park Way	0	33	112	9	227
		E - A1089 Dock Road North	109	223	906	419	0

Demand (PCU/hr)

07:40 - 08:00	From	To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	437
		C - A1089 St Andrew's Road	0	4	30	54	1042
		D - Thurrock Park Way	0	33	112	9	227
		E - A1089 Dock Road North	109	223	906	419	0

Demand (PCU/hr)

08:00 - 08:20	From	To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	493
		C - A1089 St Andrew's Road	0	11	23	74	1077
		D - Thurrock Park Way	0	63	113	5	346
		E - A1089 Dock Road North	126	344	927	516	1

Demand (PCU/hr)

08:20 - 08:40	From	To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	493
		C - A1089 St Andrew's Road	0	11	23	74	1077
		D - Thurrock Park Way	0	63	113	5	346
		E - A1089 Dock Road North	126	344	927	516	1

Demand (PCU/hr)

08:40 - 09:00	From	To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	493
		C - A1089 St Andrew's Road	0	11	23	74	1077
		D - Thurrock Park Way	0	63	113	5	346
		E - A1089 Dock Road North	126	344	927	516	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

06:20 - 06:40	From	To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
		A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

		To	A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

06:40 - 07:00	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

07:00 - 07:20			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	64	8	65
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	1	40	6	1

Heavy Vehicle %

07:20 - 07:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	64	8	65
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	8	40	6	1

Heavy Vehicle %

07:40 - 08:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	64	8	65
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	8	40	6	1

Heavy Vehicle %

08:00 - 08:20			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	10	5	3
		C - A1089 St Andrew's Road	0	0	60	9	60
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	48	5	0

Heavy Vehicle %

08:20 - 08:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	10	5	3
		C - A1089 St Andrew's Road	0	0	60	9	60
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	48	5	0

Heavy Vehicle %

08:40 - 09:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	10	5	3
		C - A1089 St Andrew's Road	0	0	60	9	60
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	48	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.15	10.98	0.4	B	109	291
B - Dock Road South	0.71	14.01	2.5	B	540	1441
C - A1089 St Andrew's Road	0.66	9.86	3.2	A	1126	3003
D - Thurrock Park Way	0.51	7.80	1.1	A	418	1113
E - A1089 Dock Road North	1.76	892.26	625.1	F	2182	5818

Main Results for each time segment

06:20 - 06:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2239		852	0.115	97	88	0.0	0.3	10.383	B
B - Dock Road South	366	122	1228		1244	0.294	365	1109	0.0	0.4	4.237	A
C - A1089 St Andrew's Road	1032	344	658		2170	0.476	1027	934	0.0	1.5	5.399	A
D - Thurrock Park Way	308	103	1407	0.00	1197	0.257	307	278	0.0	0.4	5.183	A
E - A1089 Dock Road North	2367	789	158		2208	1.072	2169	1556	0.0	66.1	63.554	F

06:40 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2226		859	0.114	98	95	0.3	0.3	10.317	B
B - Dock Road South	366	122	1312		1205	0.304	366	1012	0.4	0.5	4.448	A
C - A1089 St Andrew's Road	1032	344	678		2159	0.478	1032	1000	1.5	1.6	5.496	A
D - Thurrock Park Way	308	103	1414	0.00	1194	0.258	308	296	0.4	0.4	5.216	A
E - A1089 Dock Road North	2163	721	159		2207	0.980	2162	1563	66.1	66.3	108.881	F

07:00 - 07:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2315		815	0.123	100	65	0.3	0.3	10.980	B
B - Dock Road South	547	182	1034		1335	0.410	546	1380	0.5	0.7	4.755	A
C - A1089 St Andrew's Road	1130	377	868		2052	0.551	1128	713	1.6	2.1	6.664	A
D - Thurrock Park Way	381	127	1611	0.00	1098	0.347	381	385	0.4	0.6	5.676	A
E - A1089 Dock Road North	3868	1289	188		2192	1.765	2192	1804	66.3	625.1	576.207	F

07:20 - 07:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2291		826	0.121	100	73	0.3	0.3	10.807	B
B - Dock Road South	547	182	1134		1288	0.425	547	1258	0.7	0.8	5.061	A
C - A1089 St Andrew's Road	1130	377	910		2028	0.557	1130	770	2.1	2.1	6.858	A
D - Thurrock Park Way	381	127	1613	0.00	1098	0.347	381	427	0.6	0.6	5.686	A
E - A1089 Dock Road North	1657	552	188		2192	0.756	2176	1806	625.1	452.2	892.261	F

07:40 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2229		857	0.117	100	144	0.3	0.3	10.369	B
B - Dock Road South	547	182	1998		883	0.619	544	331	0.8	1.7	10.986	B
C - A1089 St Andrew's Road	1130	377	1181		1875	0.603	1129	1362	2.1	2.6	8.243	A
D - Thurrock Park Way	381	127	1610	0.00	1099	0.347	381	700	0.6	0.6	5.675	A
E - A1089 Dock Road North	1657	552	188		2192	0.756	2185	1803	452.2	276.2	601.140	F

08:00 - 08:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2234		854	0.147	126	142	0.3	0.4	10.766	B
B - Dock Road South	650	217	1935		913	0.712	648	425	1.7	2.5	14.013	B
C - A1089 St Andrew's Road	1185	395	1325		1794	0.661	1183	1258	2.6	3.1	9.650	A
D - Thurrock Park Way	527	176	1727	0.00	1043	0.505	525	781	0.6	1.1	7.727	A
E - A1089 Dock Road North	1914	638	215		2177	0.879	2162	2038	276.2	193.4	390.697	F

08:20 - 08:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2235		854	0.148	126	142	0.4	0.4	10.776	B
B - Dock Road South	650	217	1898		930	0.699	650	463	2.5	2.5	13.420	B
C - A1089 St Andrew's Road	1185	395	1342		1784	0.664	1185	1206	3.1	3.2	9.855	A
D - Thurrock Park Way	527	176	1731	0.00	1041	0.506	527	796	1.1	1.1	7.798	A
E - A1089 Dock Road North	1914	638	215		2177	0.879	2162	2043	193.4	110.7	254.707	F

08:40 - 09:00

Arm	Total Demand	Junction Arrivals	Circulating flow	Pedestrian demand	Capacity	RFC	Throughput	Throughput (exit side)	Start queue	End queue	Delay	Unsignalised level of

	(PCU/hr)	(PCU)	(PCU/hr)	(Ped/hr)	(PCU/hr)		(PCU/hr)	(PCU/hr)	(PCU)	(PCU)	(s)	service
A - Amazon UK Service Access	126	42	2225		859	0.147	126	142	0.4	0.4	10.703	B
B - Dock Road South	650	217	1890		934	0.696	650	461	2.5	2.4	13.242	B
C - A1089 St Andrew's Road	1185	395	1339		1786	0.664	1185	1201	3.2	3.2	9.836	A
D - Thurrock Park Way	527	176	1731	0.00	1041	0.506	527	793	1.1	1.1	7.801	A
E - A1089 Dock Road North	1914	638	215		2177	0.879	2151	2043	110.7	31.5	123.268	F

FY - P10 No Construction, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D1 - P1 No Construction, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.
Warning	Demand Sets	D30 - P10 No Construction, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	30.21	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	30.21	D

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D30	P10 No Construction	PM	ONE HOUR	16:45	18:15	15	✓	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Amazon UK Service Access		ONE HOUR	✓	100	100.000
B - Dock Road South		ONE HOUR	✓	571	100.000
C - A1089 St Andrew's Road		ONE HOUR	✓	1155	100.000
D - Thurrock Park Way		ONE HOUR	✓	924	100.000
E - A1089 Dock Road North		ONE HOUR	✓	1835	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	50.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	28	137	406
	C - A1089 St Andrew's Road	0	32	33	86	1004
	D - Thurrock Park Way	0	162	70	5	687
	E - A1089 Dock Road North	92	504	791	446	2

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

	A - Amazon UK Service Access	0	100	100	100	100
	B - Dock Road South	100	0	4	5	0
From	C - A1089 St Andrew's Road	100	0	54	8	27
	D - Thurrock Park Way	100	0	13	25	3
	E - A1089 Dock Road North	100	1	36	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.13	10.55	0.3	B	100	100
B - Dock Road South	0.58	8.14	1.4	A	571	571
C - A1089 St Andrew's Road	0.68	7.88	2.7	A	1155	1155
D - Thurrock Park Way	0.98	64.91	17.8	F	924	924
E - A1089 Dock Road North	0.96	34.73	18.3	D	1835	1835

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1830		1055	0.085	90	82	0.1	0.2	8.127	A
B - Dock Road South	513	128	1295		1212	0.423	512	625	0.5	0.7	5.216	A
C - A1089 St Andrew's Road	1038	260	982		1987	0.523	1036	825	0.9	1.4	4.892	A
D - Thurrock Park Way	831	208	1415	50.00	1172	0.709	826	604	1.3	2.4	10.666	B
E - A1089 Dock Road North	1650	412	270		2147	0.768	1642	1971	2.1	3.9	8.583	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2197		873	0.126	110	99	0.2	0.3	10.278	B
B - Dock Road South	629	157	1558		1089	0.577	626	748	0.7	1.4	7.856	A
C - A1089 St Andrew's Road	1272	318	1193		1868	0.681	1267	992	1.4	2.7	7.679	A
D - Thurrock Park Way	1017	254	1729	50.00	1042	0.977	974	730	2.4	13.3	40.922	E
E - A1089 Dock Road North	2020	505	321		2119	0.954	1975	2382	3.9	15.2	25.029	D

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2235		854	0.129	110	101	0.3	0.3	10.547	B
B - Dock Road South	629	157	1583		1078	0.583	629	762	1.4	1.4	8.137	A
C - A1089 St Andrew's Road	1272	318	1203		1862	0.683	1271	1008	2.7	2.7	7.881	A
D - Thurrock Park Way	1017	254	1736	50.00	1038	0.980	999	739	13.3	17.8	64.907	F
E - A1089 Dock Road North	2020	505	328		2115	0.955	2008	2407	15.2	18.3	34.726	D

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1908		1017	0.088	90	86	0.3	0.2	8.475	A
B - Dock Road South	513	128	1344		1189	0.432	516	654	1.4	0.8	5.447	A
C - A1089 St Andrew's Road	1038	260	1002		1976	0.525	1043	858	2.7	1.5	5.024	A
D - Thurrock Park Way	831	208	1425	50.00	1188	0.699	892	621	17.8	2.5	15.140	C
E - A1089 Dock Road North	1650	412	287		2137	0.772	1706	2029	18.3	4.3	11.396	B

FY - P11 No Construction, AM 2hr

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Pedestrian Crossing	D - Thurrock Park Way - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Demand Sets	D1 - P1 No Construction, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	468.77	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	468.77	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D31	P11 No Construction	AM 2hr	DIRECT	06:20	09:00	160	20	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - Amazon UK Service Access		DIRECT	✓	100.000
B - Dock Road South		DIRECT	✓	100.000
C - A1089 St Andrew's Road		DIRECT	✓	100.000
D - Thurrock Park Way		DIRECT	✓	100.000
E - A1089 Dock Road North		DIRECT	✓	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	0.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

06:20 - 06:40

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	98
	B - Dock Road South	2	0	25	31	308
	C - A1089 St Andrew's Road	0	12	27	30	963
	D - Thurrock Park Way	0	21	96	1	190
	E - A1089 Dock Road North	94	1174	859	236	4

Demand (PCU/hr)

06:40 - 07:00

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	98
	B - Dock Road South	2	0	25	31	308
	C - A1089 St Andrew's Road	0	12	27	30	963
	D - Thurrock Park Way	0	21	96	1	190
	E - A1089 Dock Road North	94	970	859	236	4

Demand (PCU/hr)

	To	

07:00 - 07:20			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	435
		C - A1089 St Andrew's Road	0	4	30	54	1029
		D - Thurrock Park Way	0	33	112	9	227
		E - A1089 Dock Road North	110	2445	924	427	0

Demand (PCU/hr)

07:20 - 07:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	435
		C - A1089 St Andrew's Road	0	4	30	54	1029
		D - Thurrock Park Way	0	33	112	9	227
		E - A1089 Dock Road North	110	234	924	427	0

Demand (PCU/hr)

07:40 - 08:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	25	85	435
		C - A1089 St Andrew's Road	0	4	30	54	1029
		D - Thurrock Park Way	0	33	112	9	227
		E - A1089 Dock Road North	110	234	924	427	0

Demand (PCU/hr)

08:00 - 08:20			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	491
		C - A1089 St Andrew's Road	0	11	23	74	1061
		D - Thurrock Park Way	0	63	113	5	346
		E - A1089 Dock Road North	127	348	943	528	1

Demand (PCU/hr)

08:20 - 08:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	491
		C - A1089 St Andrew's Road	0	11	23	74	1061
		D - Thurrock Park Way	0	63	113	5	346
		E - A1089 Dock Road North	127	348	943	528	1

Demand (PCU/hr)

08:40 - 09:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	126
		B - Dock Road South	0	0	23	134	491
		C - A1089 St Andrew's Road	0	11	23	74	1061
		D - Thurrock Park Way	0	63	113	5	346
		E - A1089 Dock Road North	127	348	943	528	1

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

06:20 - 06:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

06:40 - 07:00	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	100	0	4	11	2
		C - A1089 St Andrew's Road	0	0	55	12	65
		D - Thurrock Park Way	0	0	20	0	30
		E - A1089 Dock Road North	100	1	43	6	100

Heavy Vehicle %

07:00 - 07:20			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	64	8	67
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	1	39	6	1

Heavy Vehicle %

07:20 - 07:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	64	8	67
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	7	39	6	1

Heavy Vehicle %

07:40 - 08:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	100	100	100	100
		B - Dock Road South	100	0	0	8	3
		C - A1089 St Andrew's Road	100	0	64	8	67
		D - Thurrock Park Way	100	14	6	29	13
		E - A1089 Dock Road North	100	7	39	6	1

Heavy Vehicle %

08:00 - 08:20			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	10	5	3
		C - A1089 St Andrew's Road	0	0	60	9	62
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	47	5	0

Heavy Vehicle %

08:20 - 08:40			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	10	5	3
		C - A1089 St Andrew's Road	0	0	60	9	62
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	47	5	0

Heavy Vehicle %

08:40 - 09:00			To				
			A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
	From	A - Amazon UK Service Access	0	0	0	0	100
		B - Dock Road South	0	0	10	5	3
		C - A1089 St Andrew's Road	0	0	60	9	62
		D - Thurrock Park Way	0	3	7	0	12
		E - A1089 Dock Road North	100	3	47	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.15	10.98	0.4	B	109	291
B - Dock Road South	0.71	14.04	2.5	B	539	1437
C - A1089 St Andrew's Road	0.66	9.73	3.1	A	1115	2974
D - Thurrock Park Way	0.50	7.67	1.1	A	418	1113
E - A1089 Dock Road North	1.78	921.36	637.8	F	2208	5889

Main Results for each time segment

06:20 - 06:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2239		852	0.115	97	88	0.0	0.3	10.383	B
B - Dock Road South	366	122	1228		1244	0.294	365	1109	0.0	0.4	4.237	A
C - A1089 St Andrew's Road	1032	344	658		2170	0.476	1027	934	0.0	1.5	5.399	A
D - Thurrock Park Way	308	103	1407	0.00	1197	0.257	307	278	0.0	0.4	5.183	A
E - A1089 Dock Road North	2367	789	158		2208	1.072	2169	1556	0.0	66.1	63.554	F

06:40 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	98	33	2226		859	0.114	98	95	0.3	0.3	10.317	B
B - Dock Road South	366	122	1312		1205	0.304	366	1012	0.4	0.5	4.448	A
C - A1089 St Andrew's Road	1032	344	678		2159	0.478	1032	1000	1.5	1.6	5.496	A
D - Thurrock Park Way	308	103	1414	0.00	1194	0.258	308	296	0.4	0.4	5.216	A
E - A1089 Dock Road North	2163	721	159		2207	0.980	2162	1563	66.1	66.3	108.879	F

07:00 - 07:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2315		815	0.123	100	65	0.3	0.3	10.980	B
B - Dock Road South	545	182	1041		1331	0.409	544	1374	0.5	0.7	4.762	A
C - A1089 St Andrew's Road	1117	372	868		2052	0.544	1116	717	1.6	2.0	6.649	A
D - Thurrock Park Way	381	127	1596	0.00	1106	0.345	381	387	0.4	0.6	5.620	A
E - A1089 Dock Road North	3906	1302	188		2192	1.782	2192	1789	66.3	637.8	585.538	F

07:20 - 07:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2296		824	0.121	100	71	0.3	0.3	10.840	B
B - Dock Road South	545	182	1124		1292	0.422	545	1271	0.7	0.8	5.020	A
C - A1089 St Andrew's Road	1117	372	905		2031	0.550	1117	764	2.0	2.1	6.817	A
D - Thurrock Park Way	381	127	1598	0.00	1105	0.345	381	424	0.6	0.6	5.630	A
E - A1089 Dock Road North	1695	565	188		2192	0.773	2179	1791	637.8	476.6	921.361	F

07:40 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	100	33	2232		856	0.117	100	142	0.3	0.3	10.384	B
B - Dock Road South	545	182	1993		886	0.615	542	339	0.8	1.6	10.846	B
C - A1089 St Andrew's Road	1117	372	1177		1877	0.595	1116	1358	2.1	2.5	8.172	A
D - Thurrock Park Way	381	127	1595	0.00	1106	0.344	381	698	0.6	0.6	5.619	A
E - A1089 Dock Road North	1695	565	188		2192	0.773	2186	1788	476.6	313.0	651.736	F

08:00 - 08:20

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2237		853	0.148	126	141	0.3	0.4	10.789	B
B - Dock Road South	648	216	1941		910	0.712	645	422	1.6	2.5	14.042	B
C - A1089 St Andrew's Road	1169	390	1323		1795	0.651	1167	1264	2.5	3.0	9.494	A
D - Thurrock Park Way	527	176	1709	0.00	1051	0.501	525	781	0.6	1.1	7.600	A
E - A1089 Dock Road North	1947	649	215		2177	0.894	2164	2020	313.0	240.8	460.561	F

08:20 - 08:40

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	126	42	2239		852	0.148	126	141	0.4	0.4	10.806	B
B - Dock Road South	648	216	1904		928	0.699	648	461	2.5	2.5	13.449	B
C - A1089 St Andrew's Road	1169	390	1344		1783	0.656	1169	1208	3.0	3.1	9.729	A
D - Thurrock Park Way	527	176	1713	0.00	1050	0.502	527	800	1.1	1.1	7.669	A
E - A1089 Dock Road North	1947	649	215		2177	0.894	2165	2025	240.8	168.1	340.798	F

08:40 - 09:00

Arm	Total Demand	Junction Arrivals	Circulating flow	Pedestrian demand	Capacity	RFC	Throughput	Throughput (exit side)	Start queue	End queue	Delay	Unsignalised level of

	(PCU/hr)	(PCU)	(PCU/hr)	(Ped/hr)	(PCU/hr)		(PCU/hr)	(PCU/hr)	(PCU)	(PCU)	(s)	service
A - Amazon UK Service Access	126	42	2234		855	0.147	126	141	0.4	0.4	10.771	B
B - Dock Road South	648	216	1900		929	0.697	648	460	2.5	2.4	13.363	B
C - A1089 St Andrew's Road	1169	390	1343		1783	0.655	1169	1205	3.1	3.1	9.722	A
D - Thurrock Park Way	527	176	1713	0.00	1049	0.502	527	799	1.1	1.1	7.670	A
E - A1089 Dock Road North	1947	649	215		2177	0.894	2160	2025	168.1	97.0	222.559	F

FY - P11 No Construction, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Demand Sets	D1 - P1 No Construction, AM 2hr	Demand Sets have different time segment lengths. Use caution if using Demand Set relationships.
Warning	Demand Sets	D33 - P11 No Construction, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D, E	29.05	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	29.05	D

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D33	P11 No Construction	PM	ONE HOUR	16:45	18:15	15	✓	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Amazon UK Service Access		ONE HOUR	✓	100	100.000
B - Dock Road South		ONE HOUR	✓	571	100.000
C - A1089 St Andrew's Road		ONE HOUR	✓	1155	100.000
D - Thurrock Park Way		ONE HOUR	✓	926	100.000
E - A1089 Dock Road North		ONE HOUR	✓	1817	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
A - Amazon UK Service Access		
B - Dock Road South		
C - A1089 St Andrew's Road		
D - Thurrock Park Way	FLAT	50.00
E - A1089 Dock Road North		

Origin-Destination Data

Demand (PCU/hr)

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North
From	A - Amazon UK Service Access	0	0	0	0	100
	B - Dock Road South	0	0	28	137	406
	C - A1089 St Andrew's Road	0	32	33	86	1004
	D - Thurrock Park Way	0	162	70	5	689
	E - A1089 Dock Road North	92	503	774	446	2

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.18

Heavy Vehicle %

		To				
		A - Amazon UK Service Access	B - Dock Road South	C - A1089 St Andrew's Road	D - Thurrock Park Way	E - A1089 Dock Road North

From	A - Amazon UK Service Access	0	100	100	100	100
	B - Dock Road South	100	0	4	5	0
	C - A1089 St Andrew's Road	100	0	54	8	27
	D - Thurrock Park Way	100	0	13	25	3
	E - A1089 Dock Road North	100	1	37	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A - Amazon UK Service Access	0.13	10.43	0.3	B	100	100
B - Dock Road South	0.58	8.00	1.4	A	571	571
C - A1089 St Andrew's Road	0.68	7.89	2.7	A	1155	1155
D - Thurrock Park Way	0.98	66.21	18.3	F	926	926
E - A1089 Dock Road North	0.95	31.22	16.3	D	1817	1817

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1815		1063	0.085	90	82	0.1	0.2	8.061	A
B - Dock Road South	513	128	1280		1219	0.421	512	624	0.5	0.7	5.164	A
C - A1089 St Andrew's Road	1038	260	982		1987	0.523	1036	810	0.9	1.4	4.892	A
D - Thurrock Park Way	832	208	1415	50.00	1173	0.710	828	604	1.3	2.4	10.708	B
E - A1089 Dock Road North	1633	408	270		2147	0.761	1627	1973	2.0	3.7	8.347	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2182		881	0.125	110	99	0.2	0.3	10.175	B
B - Dock Road South	629	157	1543		1096	0.573	626	748	0.7	1.3	7.739	A
C - A1089 St Andrew's Road	1272	318	1194		1868	0.681	1267	976	1.4	2.7	7.685	A
D - Thurrock Park Way	1020	255	1729	50.00	1042	0.979	975	731	2.4	13.5	41.439	E
E - A1089 Dock Road North	2001	500	321		2119	0.944	1960	2384	3.7	13.8	23.332	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	110	28	2218		863	0.128	110	101	0.3	0.3	10.426	B
B - Dock Road South	629	157	1566		1086	0.579	629	761	1.3	1.4	7.996	A
C - A1089 St Andrew's Road	1272	318	1204		1862	0.683	1271	991	2.7	2.7	7.886	A
D - Thurrock Park Way	1020	255	1736	50.00	1038	0.982	1001	740	13.5	18.3	66.207	F
E - A1089 Dock Road North	2001	500	328		2115	0.946	1991	2409	13.8	16.3	31.217	D

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A - Amazon UK Service Access	90	22	1885		1028	0.087	90	85	0.3	0.2	8.373	A
B - Dock Road South	513	128	1324		1199	0.428	516	651	1.4	0.8	5.372	A
C - A1089 St Andrew's Road	1038	260	1000		1977	0.525	1044	839	2.7	1.4	5.019	A
D - Thurrock Park Way	832	208	1425	50.00	1188	0.701	895	619	18.3	2.5	15.428	C
E - A1089 Dock Road North	1633	408	288		2137	0.764	1682	2032	16.3	4.1	10.621	B

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