Fauld Industrial Estate, Tutbury

Transport Assessment

RT103429-01

Mercer Major Partners LLP
May 2018

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Contents

1.0 INTRODUCTION

1.1 Preamble

1.1.1 WYG has been appointed by Mercer Major Partners LLP to produce a Transport Assessment (TA) report to support a planning application for a mix of B1/B2/B8 employment on land at Fauld Industrial Estate on Fauld Lane in Tutbury, Staffordshire. A site location plan is shown as **Figure 1**.

1.1.2 The local planning authority for the area is East Staffordshire Borough Council (ESBC) and Staffordshire County Council (SCC) is the local highway authority.

1.2 Methodology

1.2.1 The TA has been prepared in accordance with the National Planning Policy Framework and seeks to demonstrate that:

- The opportunities for sustainable transport modes have been taken up depending on the nature and location of the site, to reduce the need for major transport infrastructure;
- Safe and suitable access to the site can be achieved for all people; and
- Improvements can be undertaken within the transport network that cost effectively limits the significant impacts of the development.

1.2.2 This TA report aims to demonstrate that the proposed development will encourage travel by all modes of transport, particularly alternative modes to the private car. In terms of traffic impact by the private car; the report looks at the impact of development generated traffic at the Fauld Industrial Estate access junction with Fauld Lane.

1.3 Report Format

1.3.1 The structure of this report is as follows:

- Section 2 describes the existing site and highway network;
- Section 3 outlines the development proposals;
- Section 4 summarises the highway impact of the proposed development; and
- Section 5 summarises the report.

2.0 EXISTING CONDITIONS

2.1 Existing Site

2.1.1 The Fauld Industrial Estate is situated approximately 1 mile to the west of the village of Tutbury, with access to the existing estate being provided via a priority T-junction on Fauld Lane.

2.1.2 The existing industrial estate is a rural employment site on land that was formerly a military camp. The site has been developed for employment uses over a number of years and provides an important source of employment in the rural area.

2.2 Existing Highway Network

Fauld Lane

2.2.1 Fauld Lane is a single carriageway county highway that provides a link between Tutbury, to the east, and the settlements of Fauld and Coton in the Clay, to the west. In the vicinity of the existing industrial estate Fauld Lane is subject to the national speed limit and does not have footways or street lighting; although it should be noted that there is street lighting at the junction with the Fauld Industrial Estate. Fauld Lane has a carriageway width of approximately 6m in the vicinity of the site, with a 3m wide verge to the north of the carriageway and a 5m wide verge to the south of the carriageway.

2.2.2 The existing industrial estate junction with Fauld Lane is a priority T-junction with a ghost island right turn lane being provided on Fauld Lane, with coloured surfacing provided within the central hatching of the right turn lane to highlight the presence of the junction to highway users on Fauld Lane. Visibility at the junction accords with relevant design standards in terms of visibility splays out of the access road on to Fauld Lane and forward visibility along Fauld Lane through the junction.

2.3 Traffic Data

2.3.1 To establish traffic flows in the local area, a weekday peak period junction turning count was undertaken between 7.30am and 9.30am, and between 4pm and 6pm, on Wednesday 3 May 2017 at the Fauld Industrial Estate junction with Fauld Lane. The survey results are included as **Appendix A** and indicate that the weekday morning peak hour is 7.45am to 8.45am, with the weekday evening peak hour being between 4.30pm and 5.30pm.

2.3.2 The traffic survey indicates that traffic flows on Fauld Lane are moderate, with two-way flows of approximately 450 vehicles passing the industrial estate during the typical weekday peak hour.

2.3.3 A junction capacity assessment of the existing site access junction on Fauld Lane has been undertaken for the 2017 weekday morning and evening peak hours using the surveyed traffic flows. The capacity assessments have been undertaken using the PICADY element of the Junctions 9 software, which is the 'industry standard' traffic modelling computer software package used for assessing priority junctions.

2.3.4 For priority junctions, a Ratio of Flow to Capacity (RFC) value below 0.85 indicates that a junction operates within its theoretical capacity. Typically, junctions can satisfactorily operate with RFC values between 0.85 and 1.00, whilst an RFC value greater than 1.00 indicates that a junction operates above its capacity.

2.3.5 The 2017 junction capacity assessments are contained in full in **Appendix B** and the results are summarised below in **Table 1**.

Table 1 – 2017 Junction Capacity Assessment Results

Approach	AM Peak (7.45am to 8.45am)		PM Peak (4.30pm to 5.30pm)	
	Maximum RFC	Maximum Queue	Maximum RFC	Maximum Queue
Fauld Industrial Estate	0.030	1	0.094	1
Fauld Lane eastbound	0.030	1	0.009	1

2.3.6 The results indicate that the junction currently operates with ample spare capacity during the weekday peak hours with minimal queues and delays.

2.4 Accident Data

2.4.1 A review of the latest 5-year accident data (2013-2017) on the Crashmap website indicates that there have been no recorded injury accidents at the existing Industrial Estate access on Fauld Lane in the 5-year period. There has been only one recorded injury accident on the length of Fauld Lane between Fauld and Tutbury in the 5-year period; a slight injury accident in July 2016 approximately 300m to the west of the access junction to the Industrial Estate.

2.5 Sustainable Transport

2.5.1 The existing Industrial Estate is a rural employment site and therefore existing sustainable transport links/services are limited. The site is located approximately 1 mile to the west of Tutbury and the existing footway on the south side of Fauld Lane terminates some 550m to the east of the Industrial Estate access junction. The opportunities to promote walking to/from the site are therefore limited.

2.5.2 Fauld Lane is not identified as an advisory cycle route by SCC, although the Industrial Estate is within a 10-minute cycle time of Tutbury. It should be noted that Fauld Lane forms part of a suggested countywide cycle route, although the certainty and timing of the implementation of the route is unclear.

2.5.3 The nearest bus stops to the site are located on Redhill Lane and Park Lane in Tutbury. The stop on Park Lane is served by the Midland Classic 402 bus which routes along Fauld Lane between Uttoxeter and Burton upon Trent and operates at a frequency of every two hours, Monday to Saturday. The timetable for the 402 bus service is contained in **Appendix C**.

2.5.4 The nearest rail station to the site is Tutbury and Hatton station less than 2 miles to the north-east of the site and within a 15-minute cycle time. The station is served by hourly train services between Derby and Crewe and there are a small number of cycle parking spaces at the station (2 on each platform).

2.5.5 In order to promote travel to/from the proposed development by more sustainable modes a separate Travel Plan has been developed for the site (WYG report ref: RT103429-02) that contains sustainable travel measures/initiatives.

3.0 DEVELOPMENT PROPOSALS

3.1 Introduction

3.1.1 The proposed development site has a total area of approximately 2.86ha and a total of 5 individual employment units are proposed, providing a mix of B1, B2 and B8 uses and having a total Gross Floor Area (GFA) of 12,116sq.m. A development scheme layout with a schedule of development is shown in **Appendix D**.

3.2 Site Access

3.2.1 Vehicular access to the site is proposed via the existing priority T-junction access on Fauld Lane. This access junction was designed and constructed to modern design standards in terms of its layout, and the access road itself, although not forming part of the adopted public highway, has a tarmacadam surface, kerbs on either side of the carriageway and highway drainage.

3.2.2 The site access road has a general carriageway width of 7.3m with a 3.5m wide verge to the west and a 1.2m wide verge to the east. There are no footways along the site access road and no street lighting along the route.

3.3 Parking

3.3.1 Car parking within the proposed development will be provided in accordance with the guidance contained in the ESBC supplementary planning guidance document 'Parking Standards' which sets out the following maximum parking standards for the land uses proposed:

- B1 = 1 per 30sq.m for GFA above 240sq.m
- B2 & B8 = 1 per 50sq.m for GFA between 240sq.m and 1,000sq.m, or 1 per 80sq.m for GFA above 1,000sq.m

3.3.2 Car parking for disabled users will be provided at a minimum rate of 2 spaces per unit or 5% of the total capacity of the car parking area, whichever is the greater. Parking spaces for disabled users will also be located close to building entrances.

3.3.3 A minimum of 2 motorcycle parking spaces will be provided per unit and secure/sheltered cycle parking spaces will be provided at a minimum rate of 1 spacer per 300sq.m GFA to accord with ESBC guidance. The cycle parking spaces will be provided close to building entrances.

4.0 DEVELOPMENT TRAFFIC IMPACT

4.1 Assessment Year

4.1.1 A forecast year of 5 years post planning application; i.e. 2023, has been adopted for the purposes of the highway impact assessment.

4.1.2 In order to obtain future year traffic flows, National Transport Model (NTM) factors adjusted by local TEMPRO growth factors have been applied to the 2017 peak hour traffic flows to ascertain the 2022 traffic flows. The TEMPRO growth factors use the East Staffordshire 004 geographic area in TEMPRO. The resulting growth factors are displayed below.

- 2017 to 2023 AM = 1.0926
- 2017 to 2023 PM = 1.0953

4.1.3 The above growth factors have been applied to the 2017 surveyed traffic flows to produce 2023 background traffic flows.

4.2 Committed developments

4.2.1 There are two extant planning permissions on the existing industrial estate, although the scale of these are such that they are unlikely to generate significant increases in traffic flow to/from the existing estate. The details of the extant permissions are as follows:

- P/2016/00074 – 2no. General (B2) Industrial Units with total GFA of 315sq.m
- P/2016/00298 – 6no. Industrial Units (B1/B2/B8) with total GFA of 750sq.m

4.2.2 The planning applications for these developments do not include details of traffic generation and therefore the background traffic growth applied to the flows on Fauld Lane has also been applied to the flows into and out of the industrial estate at the site access junction on Fauld Lane to ensure a robust assessment.

4.2.3 The junction capacity assessments at the Fauld Industrial Estate access on Fauld Lane have been repeated using 2023 forecast year traffic flows (not including the proposed development). The relevant traffic flow diagrams and junction capacity assessments are contained in **Appendix E** with a summary of the results shown overleaf in **Table 2**.

Table 2 – 2023 Junction Capacity Assessment Results

Approach	AM Peak (7.45am to 8.45am)		PM Peak (4.30pm to 5.30pm)	
	Maximum RFC	Maximum Queue	Maximum RFC	Maximum Queue
Fauld Industrial Estate	0.033	1	0.105	1
Fauld Lane eastbound	0.034	1	0.011	1

4.2.4 It can be seen from the above that the existing site access junction on Fauld Lane would continue to operate with ample spare capacity in both weekday peak hours with minimal queues and delays in a future year of 2023 without the proposed development in place.

4.3 Trip Generation

4.3.1 Development trip generation has been estimated using the online version of the TRICS database. Development sites from the 'Industrial Estate' land use category were selected based on criteria of English (excluding London) sites in free standing (out of town) locations. This selection process resulted in a sample size of 2 sites with weekday surveys.

4.3.2 Full details of the relevant trip rates and the interrogation methodology are presented in **Appendix F** and the average vehicle trip rates for the weekday morning and evening peak hours are summarised in **Table 3**, below**,** together with the trip generation for a proposed scale of development of 2.86ha.

Table 3 – Proposed Development Vehicular Trip Rates & Trip Generation

	AM Peak (8am to 9am)			PM Peak (5pm to 6pm)		
	Arrival	Departure	2-Way	Arrival	Departure	2-Way
Trip Rates (per ha)	13.495	4.032	17.527	2.097	17.151	19.248
Trip Generation (2.86ha)	39	12	51	6	49	55

4.3.3 It can be seen from the above that the proposed development is predicted to generate in the region of 51-55 vehicle trips (two-way) during the typical weekday peak hour.

4.3.4 As a comparison, the trip rates and resulting trip generation from TRICS has been compared with trip rates and trip generation derived using the surveyed traffic flows at the existing Fauld Industrial Estate access junction. The existing industrial estate has a site area of approximately 11ha and therefore trip rates have been calculated using this figure.

4.3.5 The trip rate/trip generation comparison is also contained in **Appendix F** and it can be seen that the trip rates derived from TRICS are higher than those derived for the existing site. The TRICS trip rates have therefore been used in this TA to provide a robust assessment.

4.4 Trip Distribution / Assignment

4.4.1 Vehicle trips to/from the proposed development have been distributed onto the local highway network based on the turning proportions for the traffic survey undertaken at the industrial estate junction with Fauld Lane. This is broadly 70% to/from the east and 30% to/from the west.

4.5 Impact on Local Highway Network

4.5.1 The junction capacity assessments at the site access junction on Fauld Lane have been repeated for the 2023 forecast year and assuming completion of the full proposed development.

4.5.2 The full capacity assessment results are included as **Appendix G** and a summary of the results are shown below in **Table 4**.

Table 4 – 2023 With Development Junction Capacity Assessment Results

Approach	AM Peak (7.45am to 8.45am)		PM Peak (4.30pm to 5.30pm)	
	Maximum RFC	Maximum Queue	Maximum RFC	Maximum Queue
Fauld Industrial Estate	0.059	1	0.208	1
Fauld Lane eastbound	0.059	1	0.014	1

4.5.3 The results indicate that the Industrial Estate junction with Fauld Lane would continue to operate with spare capacity during the critical weekday peak hours. Queues and delays at the junction would be minimal even with the additional traffic generated by the proposed development.

4.5.4 In view of the above, it is considered that the cumulative impact of the proposed development on the local highway network would not be severe, in accordance with the National Planning Policy Framework document.

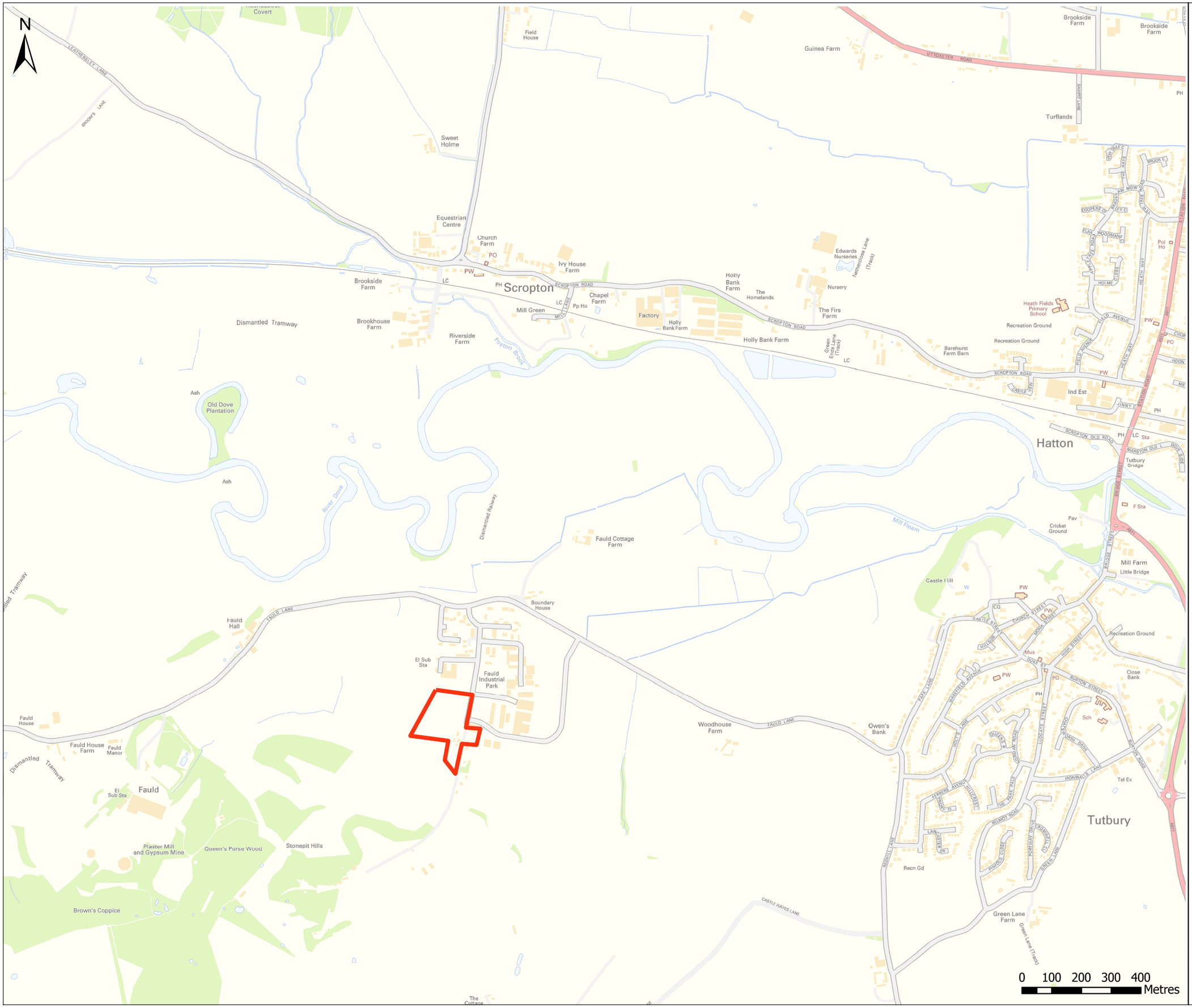
5.0 SUMMARY

5.1.1 This report assesses the transport impacts associated with the proposed development of approximately 2.86ha of land at the Fauld Industrial Estate near Tutbury in Staffordshire for a mix of B1, B2 and B8 employment use.

5.1.2 Vehicular access to the proposed development is proposed via an existing priority T-junction with ghost island right turn lane facility on Fauld Lane. The junction provides access to the existing Industrial Estate and has been designed and constructed to modern design standards.

5.1.3 The existing site is a rural employment site and therefore the opportunities for the promotion of travel to/from the site by more sustainable modes is more limited. A separate Travel Plan has been developed for the site (see WYG report ref: RT103429-02).

5.1.4 An assessment of the cumulative impact of development traffic on the local highway network has been undertaken; specifically, the impact upon the operation of the existing Industrial Estate access on Fauld Lane. The site access junction would operate with spare capacity during the weekday peak hours in a future assessment year of 2023 and it is therefore considered that the traffic impact of the proposed development can be accommodated on the local highway network.



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REV	DESCRIPTION	BY	CHK	APP	DATE

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Drawing Title:

Figure 1-Site Location Plan

Scale @ A3	Drawn	Date	Checked	Date	Approved	Date
NTS	AM	16/06/17	JIC	16/06/17	JIC	16/06/17

Project No.	Office	Type	Drawing No.	Revision
A103429	35	18	001	-

6.0 APPENDICES

APPENDIX A: TRAFFIC SURVEY DATA

Tutbury, Stafordshire
Classified Junction Count

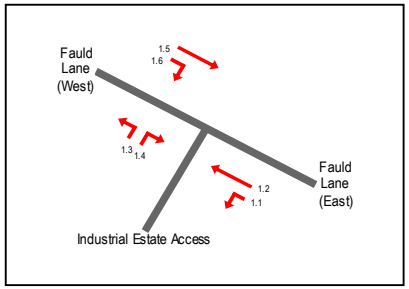
Site Plan

	Movement Number
	Number of Vehicles
	PCU Value

Network Peak Hour

07:45 - 08:45

1.5	169	179
1.6	18	19



1.2	190	195
1.1	46	46

Peak Hour

07:45 - 08:45

1.3	1.4
5	12
6	13

Network Peak Hour Generator
click on yellow cell to change Peak Hour parameters

Session:	Weekday AM Peak
Vehicle Class:	ALL
Start Time:	07:30
End Time:	09:30

Note: The site diagram is for reference purposes only and is not an exact representation of the site surveyed

Tutbury, Stafordshire
Classified Junction Count

Site 1 of 1
Fauld Lane (East)
Industrial Estate Access
Fauld Lane (West)

Lat/Long
lat 52.857800° lon -1.709998°

Date
Wednesday 03 May 2017

Weather
sunny
Temp: 15°C

0730 - 0930 (Weekday AM Peak)

	Movement 1.1: Left from Fauld Lane (East) to Industrial Estate Access								Original Data	
TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL
0730 - 0745	0	0	4	0	1	1	0	0	6	6.50
0745 - 0800	0	0	7	0	5	0	0	0	12	12.00
0800 - 0815	0	0	7	0	1	0	0	0	8	8.00
0815 - 0830	1	0	2	0	4	0	0	0	7	6.20
Hourly Total	**1**	**0**	**20**	**0**	**11**	**1**	**0**	**0**	33	32.70
Hourly Average	**0.25**	**0.00**	**5.00**	**0.00**	**2.75**	**0.25**	**0.00**	**0.00**	**8.25**	**8.18**
0830 - 0845	0	0	3	0	1	0	0	0	4	4.00
0845 - 0900	0	0	3	0	0	0	0	0	3	3.00
0900 - 0915	0	0	2	0	1	0	0	0	3	3.00
0915 - 0930	0	0	2	0	1	0	0	0	3	3.00
Hourly Total	**0**	**0**	**10**	**0**	**3**	**0**	**0**	**0**	13	13.00
Hourly Average	**0.00**	**0.00**	**2.50**	**0.00**	**0.75**	**0.00**	**0.00**	**0.00**	**3.25**	**3.25**

Session Total	**1**	**0**	**30**	**0**	**14**	**1**	**0**	**0**	46	45.70
Session Average	**0.13**	**0.00**	**3.75**	**0.00**	**1.75**	**0.13**	**0.00**	**0.00**	**5.75**	**5.71**

Date
Wednesday 03 May 2017

Weather
Cloudy
Temp: 12°C

1600 - 1800 (Weekday PM Peak)

	Movement 1.1: Left from Fauld Lane (East) to Industrial Estate Access								Original Data	
TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL
1600 - 1615	0	0	1	0	0	0	0	0	1	1.00
1615 - 1630	0	0	1	0	0	0	0	0	1	1.00
1630 - 1645	0	0	1	0	0	0	0	0	1	1.00
1645 - 1700	0	0	3	0	0	0	0	0	3	3.00
Hourly Total	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	6	6.00
Hourly Average	**0.00**	**0.00**	**1.50**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.50**	**1.50**
1700 - 1715	0	0	2	0	0	0	0	0	2	2.00
1715 - 1730	0	0	0	0	0	0	0	0	0	0.00
1730 - 1745	0	0	2	0	0	0	0	0	2	2.00
1745 - 1800	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	4	4.00
Hourly Average	**0.00**	**0.00**	**1.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.00**	**1.00**

Session Total	**0**	**0**	**10**	**0**	**0**	**0**	**0**	**0**	10	10.00
Session Average	**0.00**	**0.00**	**1.25**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.25**	**1.25**

Tutbury, Stafordshire
Classified Junction Count

Site 1 of 1
Fauld Lane (East)
Industrial Estate Access
Fauld Lane (West)

Lat/Long
lat 52.857800° lon -1.709998°

Date
Wednesday 03 May 2017

Weather
sunny
Temp: 15°C

0730 - 0930 (Weekday AM Peak)

	Movement 1.2: Northbound from Fauld Lane (East) to Fauld Lane (West)								Original Data	
TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL
0730 - 0745	0	1	16	0	4	1	1	0	23	24.20
0745 - 0800	1	0	30	0	4	0	0	2	37	38.20
0800 - 0815	0	0	19	1	5	0	0	0	25	25.00
0815 - 0830	0	0	9	1	2	1	0	0	13	13.50
Hourly Total	**1**	**1**	**74**	**2**	**15**	**2**	**1**	**2**	98	100.90
Hourly Average	**0.25**	**0.25**	**18.50**	**0.50**	**3.75**	**0.50**	**0.25**	**0.50**	**24.50**	**25.23**
0830 - 0845	0	1	27	0	5	0	0	0	33	32.40
0845 - 0900	0	0	25	0	0	1	1	0	27	28.80
0900 - 0915	0	0	14	0	5	1	0	0	20	20.50
0915 - 0930	0	0	10	0	2	0	0	0	12	12.00
Hourly Total	**0**	**1**	**76**	**0**	**12**	**2**	**1**	**0**	92	93.70
Hourly Average	**0.00**	**0.25**	**19.00**	**0.00**	**3.00**	**0.50**	**0.25**	**0.00**	**23.00**	**23.43**

Session Total	**1**	**2**	**150**	**2**	**27**	**4**	**2**	**2**	190	194.60
Session Average	**0.13**	**0.25**	**18.75**	**0.25**	**3.38**	**0.50**	**0.25**	**0.25**	**23.75**	**24.33**

Date
Wednesday 03 May 2017

Weather
Cloudy
Temp: 12°C

1600 - 1800 (Weekday PM Peak)

	Movement 1.2: Northbound from Fauld Lane (East) to Fauld Lane (West)								Original Data	
TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL
1600 - 1615	0	1	11	0	2	2	0	0	16	16.40
1615 - 1630	0	0	22	0	3	3	0	0	28	29.50
1630 - 1645	0	0	15	1	3	0	0	0	19	19.00
1645 - 1700	0	0	23	0	4	1	0	1	29	30.50
Hourly Total	**0**	**1**	**71**	**1**	**12**	**6**	**0**	**1**	92	95.40
Hourly Average	**0.00**	**0.25**	**17.75**	**0.25**	**3.00**	**1.50**	**0.00**	**0.25**	**23.00**	**23.85**
1700 - 1715	1	0	20	0	2	0	0	0	23	22.20
1715 - 1730	0	0	13	0	4	0	0	0	17	17.00
1730 - 1745	0	0	15	0	0	1	0	0	16	16.50
1745 - 1800	0	1	17	0	0	0	0	0	18	17.40
Hourly Total	**1**	**1**	**65**	**0**	**6**	**1**	**0**	**0**	74	73.10
Hourly Average	**0.25**	**0.25**	**16.25**	**0.00**	**1.50**	**0.25**	**0.00**	**0.00**	**18.50**	**18.28**

Session Total	**1**	**2**	**136**	**1**	**18**	**7**	**0**	**1**	166	168.50
Session Average	**0.13**	**0.25**	**17.00**	**0.13**	**2.25**	**0.88**	**0.00**	**0.13**	**20.75**	**21.06**

Tutbury, Stafordshire
Classified Junction Count

Site 1 of 1
Fauld Lane (East)
Industrial Estate Access
Fauld Lane (West)

Lat/Long
lat 52.857800° lon -1.709998°

Date
Wednesday 03 May 2017

Weather
sunny
Temp: 15°C

0730 - 0930 (Weekday AM Peak)

	Movement 1.3: Left from Industrial Estate Access to Fauld Lane (West)								Original Data	
TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL
0730 - 0745	0	0	0	0	0	0	0	0	0	0.00
0745 - 0800	0	0	0	0	0	0	0	0	0	0.00
0800 - 0815	0	0	0	0	0	1	0	0	1	1.50
0815 - 0830	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	2	2.50
Hourly Average	**0.00**	**0.00**	**0.25**	**0.00**	**0.00**	**0.25**	**0.00**	**0.00**	**0.50**	**0.63**
0830 - 0845	0	0	1	0	0	0	0	0	1	1.00
0845 - 0900	0	0	1	0	0	0	0	0	1	1.00
0900 - 0915	0	0	1	0	0	0	0	0	1	1.00
0915 - 0930	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	3	3.00
Hourly Average	**0.00**	**0.00**	**0.75**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.75**	**0.75**

Session Total	**0**	**0**	**4**	**0**	**0**	**1**	**0**	**0**	5	5.50
Session Average	**0.00**	**0.00**	**0.50**	**0.00**	**0.00**	**0.13**	**0.00**	**0.00**	**0.63**	**0.69**

Date
Wednesday 03 May 2017

Weather
Cloudy
Temp: 12°C

1600 - 1800 (Weekday PM Peak)

	Movement 1.3: Left from Industrial Estate Access to Fauld Lane (West)								Original Data	
TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL
1600 - 1615	0	0	3	0	0	0	0	0	3	3.00
1615 - 1630	0	0	1	0	0	0	0	0	1	1.00
1630 - 1645	0	0	3	0	0	1	0	0	4	4.50
1645 - 1700	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	**0**	**0**	**8**	**0**	**0**	**1**	**0**	**0**	9	9.50
Hourly Average	**0.00**	**0.00**	**2.00**	**0.00**	**0.00**	**0.25**	**0.00**	**0.00**	**2.25**	**2.38**
1700 - 1715	0	0	2	0	0	0	0	0	2	2.00
1715 - 1730	0	0	0	0	0	0	0	0	0	0.00
1730 - 1745	0	0	1	0	0	0	0	0	1	1.00
1745 - 1800	0	0	3	0	1	0	0	0	4	4.00
Hourly Total	**0**	**0**	**6**	**0**	**1**	**0**	**0**	**0**	7	7.00
Hourly Average	**0.00**	**0.00**	**1.50**	**0.00**	**0.25**	**0.00**	**0.00**	**0.00**	**1.75**	**1.75**

Session Total	**0**	**0**	**14**	**0**	**1**	**1**	**0**	**0**	16	16.50
Session Average	**0.00**	**0.00**	**1.75**	**0.00**	**0.13**	**0.13**	**0.00**	**0.00**	**2.00**	**2.06**

Tutbury, Stafordshire
Classified Junction Count

Site 1 of 1
Fauld Lane (East)
Industrial Estate Access
Fauld Lane (West)

Lat/Long
lat 52.857800° lon -1.709998°

Date
Wednesday 03 May 2017

Weather
sunny
Temp: 15°C

0730 - 0930 (Weekday AM Peak)

	Movement 1.4: Right from Industrial Estate Access to Fauld Lane (East)								Original Data	
TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL
0730 - 0745	0	0	0	0	0	0	0	0	0	0.00
0745 - 0800	0	0	2	0	0	0	0	0	2	2.00
0800 - 0815	0	0	0	0	0	1	0	0	1	1.50
0815 - 0830	0	0	1	0	1	0	0	0	2	2.00
Hourly Total	0	0	3	0	1	1	0	0	5	5.50
Hourly Average	0.00	0.00	0.75	0.00	0.25	0.25	0.00	0.00	1.25	1.38
0830 - 0845	0	0	0	0	2	0	0	0	2	2.00
0845 - 0900	0	0	1	0	1	0	0	0	2	2.00
0900 - 0915	0	0	1	0	0	1	0	0	2	2.50
0915 - 0930	0	0	1	0	0	0	0	0	1	1.00
Hourly Total	0	0	3	0	3	1	0	0	7	7.50
Hourly Average	0.00	0.00	0.75	0.00	0.75	0.25	0.00	0.00	1.75	1.88
Session Total	0	0	6	0	4	2	0	0	12	13.00
Session Average	0.00	0.00	0.75	0.00	0.50	0.25	0.00	0.00	1.50	1.63

Date
Wednesday 03 May 2017

Weather
Cloudy
Temp: 12°C

1600 - 1800 (Weekday PM Peak)

	Movement 1.4: Right from Industrial Estate Access to Fauld Lane (East)								Original Data	
TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL
1600 - 1615	0	0	6	0	1	0	0	0	7	7.00
1615 - 1630	0	0	1	0	0	2	0	0	3	4.00
1630 - 1645	0	0	5	1	0	0	0	0	6	6.00
1645 - 1700	0	0	2	0	1	0	0	0	3	3.00
Hourly Total	0	0	14	1	2	2	0	0	19	20.00
Hourly Average	0.00	0.00	3.50	0.25	0.50	0.50	0.00	0.00	4.75	5.00
1700 - 1715	2	0	8	0	1	0	0	0	11	9.40
1715 - 1730	0	0	5	0	1	0	0	0	6	6.00
1730 - 1745	0	0	3	0	0	0	0	0	3	3.00
1745 - 1800	0	0	3	0	1	0	0	0	4	4.00
Hourly Total	2	0	19	0	3	0	0	0	24	22.40
Hourly Average	0.50	0.00	4.75	0.00	0.75	0.00	0.00	0.00	6.00	5.60
Session Total	2	0	33	1	5	2	0	0	43	42.40
Session Average	0.25	0.00	4.13	0.13	0.63	0.25	0.00	0.00	5.38	5.30

Tutbury, Stafordshire
Classified Junction Count

Site 1 of 1
Fauld Lane (East)
Industrial Estate Access
Fauld Lane (West)

Lat/Long
lat 52.857800° lon -1.709998°

Date
Wednesday 03 May 2017

Weather
sunny
Temp: 15°C

0730 - 0930 (Weekday AM Peak)

	Movement 1.5: Southbound from Fauld Lane (West) to Fauld Lane (East)								Original Data	
TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL
0730 - 0745	0	0	16	0	1	2	1	1	21	24.30
0745 - 0800	0	0	18	0	1	1	1	1	22	24.80
0800 - 0815	0	0	18	0	4	2	0	0	24	25.00
0815 - 0830	0	0	19	0	3	0	0	0	22	22.00
Hourly Total	**0**	**0**	**71**	**0**	**9**	**5**	**2**	**2**	89	**96.10**
Hourly Average	**0.00**	**0.00**	**17.75**	**0.00**	**2.25**	**1.25**	**0.50**	**0.50**	**22.25**	**24.03**
0830 - 0845	0	0	21	0	3	0	0	0	24	24.00
0845 - 0900	0	0	14	0	2	0	0	0	16	16.00
0900 - 0915	0	1	16	0	5	3	1	0	26	28.20
0915 - 0930	0	0	11	0	1	2	0	0	14	15.00
Hourly Total	**0**	**1**	**62**	**0**	**11**	**5**	**1**	**0**	80	**83.20**
Hourly Average	**0.00**	**0.25**	**15.50**	**0.00**	**2.75**	**1.25**	**0.25**	**0.00**	**20.00**	**20.80**

Session Total	**0**	**1**	**133**	**0**	**20**	**10**	**3**	**2**	169	179.30
Session Average	**0.00**	**0.13**	**16.63**	**0.00**	**2.50**	**1.25**	**0.38**	**0.25**	**21.13**	**22.41**

Date
Wednesday 03 May 2017

Weather
Cloudy
Temp: 12°C

1600 - 1800 (Weekday PM Peak)

	Movement 1.5: Southbound from Fauld Lane (West) to Fauld Lane (East)								Original Data	
TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL
1600 - 1615	2	1	25	0	9	0	1	0	38	37.10
1615 - 1630	0	0	13	0	2	2	0	0	17	18.00
1630 - 1645	0	4	25	0	6	3	0	0	38	37.10
1645 - 1700	0	0	24	1	6	0	0	0	31	31.00
Hourly Total	**2**	**5**	**87**	**1**	**23**	**5**	**1**	**0**	124	**123.20**
Hourly Average	**0.50**	**1.25**	**21.75**	**0.25**	**5.75**	**1.25**	**0.25**	**0.00**	**31.00**	**30.80**
1700 - 1715	0	1	37	0	1	0	0	0	39	38.40
1715 - 1730	0	0	25	0	4	0	0	0	29	29.00
1730 - 1745	1	1	23	0	1	0	0	0	26	24.60
1745 - 1800	0	0	20	0	1	2	0	0	23	24.00
Hourly Total	**1**	**2**	**105**	**0**	**7**	**2**	**0**	**0**	117	**116.00**
Hourly Average	**0.25**	**0.50**	**26.25**	**0.00**	**1.75**	**0.50**	**0.00**	**0.00**	**29.25**	**29.00**

Session Total	**3**	**7**	**192**	**1**	**30**	**7**	**1**	**0**	241	239.20
Session Average	**0.38**	**0.88**	**24.00**	**0.13**	**3.75**	**0.88**	**0.13**	**0.00**	**30.13**	**29.90**

Tutbury, Stafordshire
Classified Junction Count

Site 1 of 1
Fauld Lane (East)
Industrial Estate Access
Fauld Lane (West)

Lat/Long
lat 52.857800° lon -1.709998°

Date
Wednesday 03 May 2017

Weather
sunny
Temp: 15°C

0730 - 0930 (Weekday AM Peak)

	Movement 1.6: Right from Fauld Lane (West) to Industrial Estate Access								Original Data	
TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL
0730 - 0745	0	0	0	0	0	0	0	0	0	0.00
0745 - 0800	0	0	2	0	1	0	0	0	3	3.00
0800 - 0815	0	0	1	0	0	0	0	0	1	1.00
0815 - 0830	0	0	2	0	3	0	0	0	5	5.00
Hourly Total	0	0	5	0	4	0	0	0	9	9.00
Hourly Average	0.00	0.00	1.25	0.00	1.00	0.00	0.00	0.00	2.25	2.25
0830 - 0845	0	0	0	0	0	0	0	0	0	0.00
0845 - 0900	0	0	5	0	0	1	0	0	6	6.50
0900 - 0915	0	0	2	0	0	1	0	0	3	3.50
0915 - 0930	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	7	0	0	2	0	0	9	10.00
Hourly Average	0.00	0.00	1.75	0.00	0.00	0.50	0.00	0.00	2.25	2.50

Session Total	0	0	12	0	4	2	0	0	18	19.00
Session Average	0.00	0.00	1.50	0.00	0.50	0.25	0.00	0.00	2.25	2.38

Date
Wednesday 03 May 2017

Weather
Cloudy
Temp: 12°C

1600 - 1800 (Weekday PM Peak)

	Movement 1.6: Right from Fauld Lane (West) to Industrial Estate Access								Original Data	
TIME	P/CYCLE	M/CYCLE	CAR	TAXI	LGV	OGV1	OGV2	BUS/COACH	TOTAL	PCU TOTAL
1600 - 1615	0	0	1	0	0	0	0	0	1	1.00
1615 - 1630	0	0	1	0	0	0	0	0	1	1.00
1630 - 1645	0	0	0	0	1	0	0	0	1	1.00
1645 - 1700	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	2	0	1	0	0	0	3	3.00
Hourly Average	0.00	0.00	0.50	0.00	0.25	0.00	0.00	0.00	0.75	0.75
1700 - 1715	0	0	1	0	0	0	0	0	1	1.00
1715 - 1730	0	0	1	0	0	0	0	0	1	1.00
1730 - 1745	0	0	1	0	0	0	0	0	1	1.00
1745 - 1800	0	0	0	0	0	0	0	0	0	0.00
Hourly Total	0	0	3	0	0	0	0	0	3	3.00
Hourly Average	0.00	0.00	0.75	0.00	0.00	0.00	0.00	0.00	0.75	0.75

Session Total	0	0	5	0	1	0	0	0	6	6.00
Session Average	0.00	0.00	0.63	0.00	0.13	0.00	0.00	0.00	0.75	0.75

APPENDIX B: 2017 JUNCTION CAPACITY ASSESSMENTS

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.0.0.4211 []

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

Filename: Fauld Lane Site Access junction.j9
Path: Z:\Projects\A103429 - Faulds Industrial Estate, Tutbury\calculations
Report generation date: 01/05/2018 14:22:02

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	2017 Surveyed Flows									
Stream B-C	0.0	5.95	0.01	A	308 % [Stream B-A]	0.0	6.10	0.03	A	238 % [Stream B-A]
Stream B-A	0.0	7.65	0.03	A		0.1	8.03	0.09	A	
Stream C-A										
Stream C-B	0.0	5.38	0.03	A		0.0	5.12	0.01	A	
Stream A-B										
Stream A-C										
	2023 Background Flows									
Stream B-C	0.0	5.99	0.01	A	273 % [Stream B-A]	0.0	6.18	0.03	A	208 % [Stream B-A]
Stream B-A	0.0	7.87	0.03	A		0.1	8.30	0.10	A	
Stream C-A										
Stream C-B	0.0	5.46	0.03	A		0.0	5.17	0.01	A	
Stream A-B										
Stream A-C										
	2023 and Proposed Development Flows									
Stream B-C	0.0	6.16	0.02	A	219 % [Stream B-A]	0.1	6.62	0.07	A	133 % [Stream B-A]
Stream B-A	0.1	8.23	0.06	A		0.3	9.42	0.21	A	
Stream C-A										
Stream C-B	0.1	5.70	0.06	A		0.0	5.20	0.01	A	
Stream A-B										
Stream A-C										

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	09/05/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	WYG"ariadni.michou
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
	✓	Delay	0.85	36.00	20.00

Demand Set Summary

Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
2017 Surveyed Flows	AM	ONE HOUR	07:30	09:00	15
2017 Surveyed Flows	PM	ONE HOUR	16:15	17:45	15
2023 Background Flows	AM	ONE HOUR	07:30	09:00	15
2023 Background Flows	PM	ONE HOUR	16:15	17:45	15
2023 and Proposed Development Flows	AM	ONE HOUR	07:30	09:00	15
2023 and Proposed Development Flows	PM	ONE HOUR	16:15	17:45	15

2017 Surveyed Flows, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Fauld Industrial Estate	T-Junction	Two-way	0.52	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	308	Stream B-A

Arms

Arms

Arm	Name	Description	Arm type
A	Fauld Lane (East)		Major
B	Site Access		Minor
C	Fauld Lane (West)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.00		✓	3.25	200.0		-

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

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	10.00	10.00	6.80	4.60	3.80	✓	2.00	48	45

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	590.172	0.107	0.272	0.171	0.388
1	B-C	678.387	0.104	0.263	-	-
1	C-B	768.611	0.298	0.298	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D1-1	2017 Surveyed Flows	AM	ONE HOUR	07:30	09:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	241.00	100.000
B		✓	19.00	100.000
C		✓	198.00	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0.000	46.000	195.000
	B	13.000	0.000	6.000
	C	179.000	19.000	0.000

Vehicle Mix

Heavy Vehicle proportion

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.01	5.95	0.0	A
B-A	0.03	7.65	0.0	A
C-A				
C-B	0.03	5.38	0.0	A
A-B				
A-C				

Main Results for each time segment

Main results: (07:30-07:45)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	4.52	633.19	0.007	4.49	0.0	5.725	A
B-A	9.79	517.98	0.019	9.71	0.0	7.083	A
C-A	134.76			134.76			
C-B	14.30	714.58	0.020	14.22	0.0	5.140	A
A-B	34.63			34.63			
A-C	146.81			146.81			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	5.39	624.30	0.009	5.39	0.0	5.816	A
B-A	11.69	503.97	0.023	11.67	0.0	7.312	A
C-A	160.92			160.92			
C-B	17.08	704.09	0.024	17.06	0.0	5.239	A
A-B	41.35			41.35			
A-C	175.30			175.30			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	6.61	612.06	0.011	6.60	0.0	5.945	A
B-A	14.31	484.58	0.030	14.29	0.0	7.654	A
C-A	197.08			197.08			
C-B	20.92	689.59	0.030	20.89	0.0	5.383	A
A-B	50.65			50.65			
A-C	214.70			214.70			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	6.61	612.03	0.011	6.61	0.0	5.945	A
B-A	14.31	484.59	0.030	14.31	0.0	7.654	A
C-A	197.08			197.08			
C-B	20.92	689.59	0.030	20.92	0.0	5.383	A
A-B	50.65			50.65			
A-C	214.70			214.70			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	5.39	624.25	0.009	5.40	0.0	5.819	A
B-A	11.69	503.98	0.023	11.71	0.0	7.312	A
C-A	160.92			160.92			
C-B	17.08	704.09	0.024	17.11	0.0	5.242	A
A-B	41.35			41.35			
A-C	175.30			175.30			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	4.52	633.09	0.007	4.52	0.0	5.729	A
B-A	9.79	517.99	0.019	9.81	0.0	7.086	A
C-A	134.76			134.76			
C-B	14.30	714.58	0.020	14.32	0.0	5.140	A
A-B	34.63			34.63			
A-C	146.81			146.81			

2017 Surveyed Flows, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Fauld Industrial Estate	T-Junction	Two-way	0.98	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D1-2	2017 Surveyed Flows	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	179.00	100.000
B		✓	59.00	100.000
C		✓	245.00	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0.000	10.000	169.000
	B	42.000	0.000	17.000
	C	239.000	6.000	0.000

Vehicle Mix

Heavy Vehicle proportion

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.03	6.10	0.0	A
B-A	0.09	8.03	0.1	A
C-A				
C-B	0.01	5.12	0.0	A
A-B				
A-C				

Main Results for each time segment

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	12.80	629.66	0.020	12.72	0.0	5.835	A
B-A	31.62	525.88	0.060	31.37	0.1	7.276	A
C-A	179.93			179.93			
C-B	4.52	728.48	0.006	4.49	0.0	4.972	A
A-B	7.53			7.53			
A-C	127.23			127.23			

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	15.28	620.89	0.025	15.26	0.0	5.943	A
B-A	37.76	512.64	0.074	37.70	0.1	7.579	A
C-A	214.86			214.86			
C-B	5.39	720.69	0.007	5.39	0.0	5.032	A
A-B	8.99			8.99			
A-C	151.93			151.93			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	18.72	608.80	0.031	18.69	0.0	6.100	A
B-A	46.24	494.30	0.094	46.15	0.1	8.031	A
C-A	263.14			263.14			
C-B	6.61	709.92	0.009	6.60	0.0	5.118	A
A-B	11.01			11.01			
A-C	186.07			186.07			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	18.72	608.75	0.031	18.72	0.0	6.100	A
B-A	46.24	494.31	0.094	46.24	0.1	8.034	A
C-A	263.14			263.14			
C-B	6.61	709.92	0.009	6.61	0.0	5.118	A
A-B	11.01			11.01			
A-C	186.07			186.07			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	15.28	620.80	0.025	15.31	0.0	5.947	A
B-A	37.76	512.67	0.074	37.85	0.1	7.582	A
C-A	214.86			214.86			
C-B	5.39	720.69	0.007	5.40	0.0	5.032	A
A-B	8.99			8.99			
A-C	151.93			151.93			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	12.80	629.48	0.020	12.82	0.0	5.837	A
B-A	31.62	525.93	0.060	31.68	0.1	7.283	A
C-A	179.93			179.93			
C-B	4.52	728.48	0.006	4.52	0.0	4.974	A
A-B	7.53			7.53			
A-C	127.23			127.23			

APPENDIX C: BUS TIMETABLES

401 402 403

Monday to Saturday

Burton, New Street, Bay 3
Burton, Railway Station
Queens Hospital
Beam Hill
Tutbury, Duke Street
Tutbury, Holts Lane
Tutbury, High Street
Hatton, Salt Box
Foston, A50
Sudbury, Vernon Arms
Doveridge, Marston Lane
Uttoxeter, Tesco
Dovegate Prison
Draycott in the Clay
Marchington, Bulls Head
Acorn Inn
Needwood, New Inn
Newborough, Church
Abbots Bromley, Butter Cross
Uttoxeter, Westlands Road
Uttoxeter, Bus Station

Burton upon Trent | Queen's Hospital | Beam Hill | Uttoxeter

from 1 April 2018

401	401	402A	401	403	401	402	401	403	401	402	401	403	401	402	401	403	401	402
0600	0700	0710	0835	0910	0940	1010	1040	1110	1140	1210	1240	1310	1340	1410	1440	1525	1540	1630
0603	0703	0713	0838	0913	0943	1013	1043	1113	1143	1213	1243	1313	1343	1413	1443	1528	1543	1633
0611	0711		0846	0921	0951	1021	1051	1121	1151	1221	1251	1321	1351	1421	1451	1536	1551	1641
0616	0716		0851	0926	0956	1026	1056	1126	1156	1226	1256	1326	1356	1426	1456	1541	1556	1646
0622	0722		0857		1002	1032	1102		1202	1232	1302		1402	1432	1502		1602	1652
0624	0724		0859		1004		1104		1204		1304		1404		1504		1604	
0629	0729		0904		1009		1109		1209		1309		1409		1509		1609	
0633	0733		0908		1013		1113		1213		1313		1413		1513		1613	
0639	0739		0913		1018		1118		1218		1318		1418		1518		1618	
0641	0741		0915		1020		1120		1220		1320		1420		1520		1620	
0646	0746		0920		1025		1125		1225		1325		1425		1525		1625	
0652	0752		0925		1030		1130		1230		1330		1430		1530		1630	
						1040				1240				1440				1700
		(0808)				1044				1244				1444				1704
		(0813)				1050				1250				1450				1710
		0723		0932				1132				1332				1547		
		0725		0935				1135				1335				1550		
		0731		0941				1141				1341				1556		
		0750		0948				1148				1348				1603		
				1000				1200				1400				1615		
0655	0755	0825	0930	1008	1038	1108	1138	1208	1238	1308	1338	1408	1438	1508	1538	1623	1638	1728

Monday to Friday only

Monday to Saturday

Burton, New Street, Bay 3
Burton, Railway Station
Queens Hospital
Beam Hill
Tutbury, Duke Street
Tutbury, Holts Lane
Tutbury, High Street
Hatton, Salt Box
Foston, A50
Sudbury, Vernon Arms
Doveridge, Marston Lane
Uttoxeter, Tesco
Dovegate Prison
Draycott in the Clay
Marchington, Bulls Head
Uttoxeter, Bus Station

401	401	402	401
1645	1735	1750	1835
1648	1738	1753	1838
1656	1746	1801	1844
1701	1751	1806	1849
1707	1757	1812	1854
1709	1759		1856
1714	1804		1859
1718	1808		1903
1723	1813		1908
1725	1815		1910
1730	1820		1917
1735	1825		
		1820	
		1824	
		1830	
1743	1833	1848	1922

Monday to Friday only

Routes 402 and 403 are supported by Staffordshire County Council

classic**day+** tickets can also be used on **D&G Bus** services including route 841 from Uttoxeter to Stafford

401 402 403

Monday to Saturday

Uttoxeter, Bus Station
Uttoxeter, Tesco
Uttoxeter, Railway Station
Marchington, Bulls Head
Draycott in the Clay
Dovegate Prison
Uttoxeter, Westlands Road
Abbots Bromley, Butter Cross
Newborough, Church
Needwood, New Inn
Acorn Inn
Doveridge, Marston Lane
Sudbury, Vernon Arms
Foston Village
Hatton, Salt Box
Tutbury, High Street
Tutbury, Holts Lane
Tutbury, Duke Street
Beam Hill
Queens Hospital
Burton, Railway Station
Burton, New Street

Uttoxeter | Beam Hill | Queen's Hospital | Burton upon Trent

401	402	401	401	401	403	402A	401	402	401	403	401	402	401	403	401	402	401	402A
	0710	0725	0755	0830	0858		0938	1008	1038	1108	1138	1208	1238	1308	1338	1408	1438	1515
					0900			1010		1110		1210		1310		1410		1517
					0902			1012		1112		1212		1312		1412		1519
	0722							1023				1223				1423		1530
	0729					0904		1029				1229				1429		1536
	0733							1033				1233				1433		
					0909					1117				1317				
					0918	0918				1126				1326				1555
					0926	0926				1134				1334				1603
					0931	0931				1139				1339				1608
					0933	0933				1141				1341				1610
		0732	0800	0837			0943		1043		1143		1243		1343		1443	
		0739	0805	0844			0950		1050		1150		1250		1350		1450	
		0744	0810	0849			0955		1055		1155		1255		1355		1455	
0634		0749	0814	0854			1000		1100		1200		1300		1400		1500	
0639		0754	0819	0859			1005		1105		1205		1305		1405		1505	
0642		0757	0822	0902			1008		1108		1208		1308		1408		1508	
0645	0742	0802	0827	0907			1012	1042	1112		1212	1242	1312		1412	1442	1512	
0650	0749	0810	0834	0914	0939	0939	1019	1049	1119	1149	1219	1249	1319	1349	1419	1449	1519	
0655	0754	0818	0839	0919	0944	0944	1024	1054	1124	1154	1224	1254	1324	1354	1424	1454	1524	
0700	0800	0825	0845	0925	0950	0950	1030	1100	1130	1200	1230	1300	1330	1400	1430	1500	1530	1618
0705	0805	0830	0850	0930	0955	0955	1035	1105	1135	1205	1235	1305	1335	1405	1435	1505	1535	1623

Monday to Saturday

Uttoxeter, Bus Station
Uttoxeter, Tesco
Uttoxeter, Railway Station
Marchington, Bulls Head
Draycott in the Clay
Newborough, Church
Abbots Bromley, Butter Cross
Newborough, Church
Needwood, New Inn
Acorn Inn
Doveridge, Marston Lane
Sudbury, Vernon Arms
Foston Village
Hatton, Salt Box
Tutbury, High Street
Tutbury, Holts Lane
Tutbury, Duke Street
Beam Hill
Queens Hospital
Burton, Railway Station
Burton, New Street

401	402A	401	401	402A	401	401
1545	1630	1645	1745	1750	1845	1925
	1632			1752		
	1634			1754		
	1645			1805		
	1651			1811		
	1701			1821		
	1710			1830		
	1718			1838		
	1723			1843		
	1725			1845		
1550		1650	1750		1850	1930
1557		1657	1757		1856	1936
1602		1702	1802		1859	1939
1607		1707	1807		1903	1943
1612		1712	1812		1908	1948
1615		1715	1815		1910	1950
1619		1719	1819		1912	1952
1627		1727	1827		1917	1957
1634		1734	1834		1922	2002
1640	1733	1740	1840	1858	1927	2007
1645	1738	1745	1845	1903	1931	2011

Monday to Friday only

Saturdays only

Route **402A** in Draycott in the Clay runs via the A515 to the Moreton Lane/Coton Lane island between Stubby Lane and Six Lane Ends on all journeys to serve The Roebuck and Post Office. It also now runs direct from Acorn Inn into Burton and no longer serves Horninglow.

DALES LINK

Dales Link is a brand new connecting bus service for residents in the Southern Derbyshire Dales to our routes 1, 401 and 402 for journeys to and from Burton or Uttoxeter with connections at Tutbury, Duke Street or the railway station at Hatton for journeys to Derby or Crewe.
This is a pre-book, door-to-door service run by Ashbourne Community Transport, commencing 25 September 2017 and operating on Mondays to Fridays.
Customers wishing to pre-book their journey should call **01335 300670**

ACT

APPENDIX D: ILLUSTRATIVE DEVELOPMENT LAYOUT

NOTES

N

D

Pond

Rhino Business Park

C

B

A

E

Classification 1.4 Store

Gate House

public footpath Tutbury 34

public footpath Hanbury 44

Development Boundary

Ownership Boundary

approx outline of underground bunker stores

403 25T 1.3

402 8T 1.3

401 1.4

405

406 25T 1.3

407 25T 1.3

Post & Mesh Fence Ht 2.2m

Post & Wire Fence Ht 1.3m

Post & Wire Fence Ht 1.7m

Security Fence Ht 2.4m

Tarmac

Trees

Containers

Eave

Rdge

Flat

Stone

Ramp

Stmp

Post

Mh

MH

Sp

Sv

St

Tw

Er

Gy

Lp

AX1 65.225

AX2 67.565

AX3 69.526

AX4 71.943

AX5 74.379

AX6 76.274

AX8 70.606

AX9 71.760

AX10 72.081

AX11 72.391

0m 25m 50m

SCHEDULE OF DEVELOPMENT

Unit	Use class	Ground Floor Area	First Floor Area	Parking
A	B1	836 sq m (9,000 sq ft)	836 sq m (9,000 sq ft)	36
B	B1,B2 & B8	1022 sq m (11,000 sq ft)		32
C	B1,B2 & B8	1486 sq m (16,000 sq ft)		37
D	B1,B2 & B8	2936 sq m (31,600 sq ft)		61
E	B8 (1.4 store)	5000 sq m (53,800 sq ft)		51

Site Area: 2.86Ha (7.08 Acres)

	REVISION	DATE	BY
F	public footpath location indicated	23/04/18	PDR
E	scheme layout updated	20/04/18	PDR
D	development site amended to suit LPA development zone boundary	23/01/17	PDR
C	unit B labelled as 1.4 store	05/01/17	PDR
B	unit F & G labelled as 1.4 store	05/01/17	PDR
A	layout updated to client comments	03/01/17	PDR

building design group

B | D | G

Bitterscote House,
Bonehill Road, Tamworth,
Staffordshire. B78 3HQ
t: (+44) 01827 60465
f: (+44) 01827 52301
e: mail@bdg.uk.com
www.bdg.uk.com

CLIENT
Mercer Major Partners LLP

PROJECT
Proposed Industrial Development
Fauld Industrial Estate
Fauld Lane
Tutbury

TITLE
Development Scheme Layout

SCALE @A1	1:500	DATE	14/12/16
DRAWN	PDR	CHECKED	
DRAWING NO.	2968 / 02	STATUS	REVISION F

APPENDIX E: 2023 BACKGROUND JUNCTION CAPACITY ASSESSMENTS

2023 Background Flows, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Fauld Industrial Estate	T-Junction	Two-way	0.53	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D2-1	2023 Background Flows	AM	ONE HOUR	07:30	09:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	263.00	100.000
B		✓	21.00	100.000
C		✓	217.00	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0.000	50.000	213.000
	B	14.000	0.000	7.000
	C	196.000	21.000	0.000

Vehicle Mix

Heavy Vehicle proportion

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.01	5.99	0.0	A
B-A	0.03	7.87	0.0	A
C-A				
C-B	0.03	5.46	0.0	A
A-B				
A-C				

Main Results for each time segment

Main results: (07:30-07:45)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	5.27	632.08	0.008	5.24	0.0	5.742	A
B-A	10.54	508.96	0.021	10.46	0.0	7.221	A
C-A	147.56			147.56			
C-B	15.81	709.65	0.022	15.72	0.0	5.188	A
A-B	37.64			37.64			
A-C	160.36			160.36			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	6.29	622.31	0.010	6.29	0.0	5.843	A
B-A	12.59	493.70	0.025	12.57	0.0	7.481	A
C-A	176.20			176.20			
C-B	18.88	698.20	0.027	18.86	0.0	5.298	A
A-B	44.95			44.95			
A-C	191.48			191.48			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	7.71	608.87	0.013	7.70	0.0	5.987	A
B-A	15.41	472.60	0.033	15.38	0.0	7.874	A
C-A	215.80			215.80			
C-B	23.12	682.38	0.034	23.09	0.0	5.460	A
A-B	55.05			55.05			
A-C	234.52			234.52			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	7.71	608.84	0.013	7.71	0.0	5.988	A
B-A	15.41	472.60	0.033	15.41	0.0	7.873	A
C-A	215.80			215.80			
C-B	23.12	682.38	0.034	23.12	0.0	5.460	A
A-B	55.05			55.05			
A-C	234.52			234.52			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	6.29	622.25	0.010	6.30	0.0	5.846	A
B-A	12.59	493.72	0.025	12.61	0.0	7.485	A
C-A	176.20			176.20			
C-B	18.88	698.20	0.027	18.91	0.0	5.299	A
A-B	44.95			44.95			
A-C	191.48			191.48			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	5.27	631.96	0.008	5.28	0.0	5.743	A
B-A	10.54	508.98	0.021	10.56	0.0	7.222	A
C-A	147.56			147.56			
C-B	15.81	709.65	0.022	15.83	0.0	5.188	A
A-B	37.64			37.64			
A-C	160.36			160.36			

2023 Background Flows, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Fauld Industrial Estate	T-Junction	Two-way	1.01	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D2-2	2023 Background Flows	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	196.00	100.000
B		✓	65.00	100.000
C		✓	269.00	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0.000	11.000	185.000
	B	46.000	0.000	19.000
	C	262.000	7.000	0.000

Vehicle Mix

Heavy Vehicle proportion

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.03	6.18	0.0	A
B-A	0.10	8.30	0.1	A
C-A				
C-B	0.01	5.17	0.0	A
A-B				
A-C				

Main Results for each time segment

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	14.30	626.15	0.023	14.21	0.0	5.883	A
B-A	34.63	518.70	0.067	34.35	0.1	7.430	A
C-A	197.25			197.25			
C-B	5.27	724.67	0.007	5.24	0.0	5.003	A
A-B	8.28			8.28			
A-C	139.28			139.28			

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	17.08	616.49	0.028	17.06	0.0	6.005	A
B-A	41.35	504.18	0.082	41.28	0.1	7.776	A
C-A	235.53			235.53			
C-B	6.29	716.14	0.009	6.29	0.0	5.071	A
A-B	9.89			9.89			
A-C	166.31			166.31			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	20.92	603.14	0.035	20.89	0.0	6.182	A
B-A	50.65	484.07	0.105	50.54	0.1	8.302	A
C-A	288.47			288.47			
C-B	7.71	704.35	0.011	7.70	0.0	5.167	A
A-B	12.11			12.11			
A-C	203.69			203.69			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	20.92	603.08	0.035	20.92	0.0	6.183	A
B-A	50.65	484.08	0.105	50.64	0.1	8.305	A
C-A	288.47			288.47			
C-B	7.71	704.35	0.011	7.71	0.0	5.167	A
A-B	12.11			12.11			
A-C	203.69			203.69			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	17.08	616.39	0.028	17.11	0.0	6.009	A
B-A	41.35	504.21	0.082	41.46	0.1	7.782	A
C-A	235.53			235.53			
C-B	6.29	716.14	0.009	6.30	0.0	5.073	A
A-B	9.89			9.89			
A-C	166.31			166.31			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	14.30	625.96	0.023	14.32	0.0	5.887	A
B-A	34.63	518.75	0.067	34.70	0.1	7.437	A
C-A	197.25			197.25			
C-B	5.27	724.67	0.007	5.28	0.0	5.005	A
A-B	8.28			8.28			
A-C	139.28			139.28			

APPENDIX F: TRICS DATA AND TRIP RATE COMPARISON

Calculation Reference: AUDIT-705102-170505-0527

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : D - INDUSTRIAL ESTATE
VEHICLES

Selected regions and areas:

03	SOUTH WEST		
	DC	DORSET	1 days
09	NORTH		
	NB	NORTHUMBERLAND	1 days

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

Secondary Filtering selection:

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

Parameter:	Site area
Actual Range:	2.60 to 16.00 (units: hect)
Range Selected by User:	0.35 to 52.00 (units: hect)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/09 to 15/09/16

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

Selected survey days:

Monday	1 days
Friday	1 days

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

Selected survey types:

Manual count	2 days
Directional ATC Count	0 days

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

Selected Locations:

Free Standing (PPS6 Out of Town)	2

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

Selected Location Sub Categories:

Out of Town	2

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

Secondary Filtering selection:

Use Class:

B1	1 days
B2	1 days

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

Population within 1 mile:

1,001 to 5,000	1 days
5,001 to 10,000	1 days

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

Population within 5 miles:

50,001 to 75,000	1 days
125,001 to 250,000	1 days

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

Car ownership within 5 miles:

0.6 to 1.0	1 days
1.1 to 1.5	1 days

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

Travel Plan:

No	2 days

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

PTAL Rating:

No PTAL Present	2 days

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

LIST OF SITES relevant to selection parameters

1 DC-02-D-20 INDUSTRIAL ESTATE DORSET
OLD BARN FARM ROAD
THREE LEGGED CROSS
NEAR BOURNEMOUTH
Free Standing (PPS6 Out of Town)
Out of Town
Total Site area: 16.00 hect
Survey date: MONDAY 24/03/14 Survey Type: MANUAL

2 NB-02-D-02 INDUSTRIAL ESTATE NORTHUMBERLAND
OLDSTONE ROAD
EAST CRAMLINGTON
NEAR CRAMLINGTON
Free Standing (PPS6 Out of Town)
Out of Town
Total Site area: 2.60 hect
Survey date: FRIDAY 16/11/12 Survey Type: MANUAL

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

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE
VEHICLES
Calculation factor: 1 hect
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	2	9.30	9.570	2	9.30	3.441	2	9.30	13.011
08:00 - 09:00	2	9.30	13.495	2	9.30	4.032	2	9.30	17.527
09:00 - 10:00	2	9.30	5.161	2	9.30	3.978	2	9.30	9.139
10:00 - 11:00	2	9.30	4.194	2	9.30	3.333	2	9.30	7.527
11:00 - 12:00	2	9.30	5.054	2	9.30	4.731	2	9.30	9.785
12:00 - 13:00	2	9.30	2.796	2	9.30	2.849	2	9.30	5.645
13:00 - 14:00	2	9.30	5.054	2	9.30	5.000	2	9.30	10.054
14:00 - 15:00	2	9.30	3.763	2	9.30	5.699	2	9.30	9.462
15:00 - 16:00	2	9.30	3.441	2	9.30	5.860	2	9.30	9.301
16:00 - 17:00	2	9.30	10.430	2	9.30	5.914	2	9.30	16.344
17:00 - 18:00	2	9.30	2.097	2	9.30	17.151	2	9.30	19.248
18:00 - 19:00	2	9.30	0.914	2	9.30	4.570	2	9.30	5.484
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			65.969			66.558			132.527

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

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

Parameter summary

Trip rate parameter range selected:	2.60 to 16.00 (units: hect)
Survey date date range:	01/01/09 - 15/09/16
Number of weekdays (Monday-Friday):	2
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

Fauld Industrial Estate - Trip Generation

TRICS - Industrial Estate

Peak Hour	Trip Rate (Ha)		Trip Generation (2.86ha)	
	In	Out	In	Out
8am to 9am	13.495	4.032	39	12
5pm to 6pm	2.097	17.151	6	49

Existing Industrial Estate (11ha)

Peak Hour	Trip Rate (Ha)		Trip Generation (2.86ha)	
	In	Out	In	Out
8am to 9am	5.909	1.727	17	5
5pm to 6pm	1.455	5.364	4	15

APPENDIX G: 2023 WITH DEVELOPMENT JUNCTION CAPACITY ASSESSMENTS

2023 and Proposed Development Flows, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Fauld Industrial Estate	T-Junction	Two-way	0.84	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D3-1	2023 and Proposed Development Flows	AM	ONE HOUR	07:30	09:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	299.00	100.000
B		✓	36.00	100.000
C		✓	232.00	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0.000	86.000	213.000
	B	25.000	0.000	11.000
	C	196.000	36.000	0.000

Vehicle Mix

Heavy Vehicle proportion

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.02	6.16	0.0	A
B-A	0.06	8.23	0.1	A
C-A				
C-B	0.06	5.70	0.1	A
A-B				
A-C				

Main Results for each time segment

Main results: (07:30-07:45)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	8.28	621.89	0.013	8.23	0.0	5.866	A
B-A	18.82	505.19	0.037	18.67	0.0	7.398	A
C-A	147.56			147.56			
C-B	27.10	701.58	0.039	26.94	0.0	5.334	A
A-B	64.75			64.75			
A-C	160.36			160.36			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	9.89	611.06	0.016	9.88	0.0	5.987	A
B-A	22.47	488.37	0.046	22.44	0.0	7.726	A
C-A	176.20			176.20			
C-B	32.36	688.56	0.047	32.33	0.0	5.485	A
A-B	77.31			77.31			
A-C	191.48			191.48			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	12.11	596.12	0.020	12.09	0.0	6.163	A
B-A	27.53	465.15	0.059	27.47	0.1	8.224	A
C-A	215.80			215.80			
C-B	39.64	670.57	0.059	39.58	0.1	5.705	A
A-B	94.69			94.69			
A-C	234.52			234.52			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	12.11	596.08	0.020	12.11	0.0	6.164	A
B-A	27.53	465.15	0.059	27.52	0.1	8.226	A
C-A	215.80			215.80			
C-B	39.64	670.57	0.059	39.64	0.1	5.705	A
A-B	94.69			94.69			
A-C	234.52			234.52			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	9.89	610.98	0.016	9.91	0.0	5.988	A
B-A	22.47	488.37	0.046	22.53	0.0	7.730	A
C-A	176.20			176.20			
C-B	32.36	688.56	0.047	32.42	0.0	5.488	A
A-B	77.31			77.31			
A-C	191.48			191.48			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	8.28	621.75	0.013	8.29	0.0	5.870	A
B-A	18.82	505.17	0.037	18.86	0.0	7.405	A
C-A	147.56			147.56			
C-B	27.10	701.58	0.039	27.14	0.0	5.339	A
A-B	64.75			64.75			
A-C	160.36			160.36			

2023 and Proposed Development Flows, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Fauld Industrial Estate	T-Junction	Two-way	1.92	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D3-2	2023 and Proposed Development Flows	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	202.00	100.000
B		✓	129.00	100.000
C		✓	271.00	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0.000	17.000	185.000
	B	91.000	0.000	38.000
	C	262.000	9.000	0.000

Vehicle Mix

Heavy Vehicle proportion

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.07	6.62	0.1	A
B-A	0.21	9.42	0.3	A
C-A				
C-B	0.01	5.20	0.0	A
A-B				
A-C				

Main Results for each time segment

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	28.61	615.50	0.046	28.41	0.0	6.130	A
B-A	68.51	517.32	0.132	67.91	0.2	8.000	A
C-A	197.25			197.25			
C-B	6.78	723.32	0.009	6.74	0.0	5.023	A
A-B	12.80			12.80			
A-C	139.28			139.28			

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	34.16	603.22	0.057	34.12	0.1	6.325	A
B-A	81.81	502.60	0.163	81.64	0.2	8.548	A
C-A	235.53			235.53			
C-B	8.09	714.53	0.011	8.08	0.0	5.095	A
A-B	15.28			15.28			
A-C	166.31			166.31			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	41.84	585.96	0.071	41.77	0.1	6.615	A
B-A	100.19	482.20	0.208	99.93	0.3	9.410	A
C-A	288.47			288.47			
C-B	9.91	702.38	0.014	9.90	0.0	5.198	A
A-B	18.72			18.72			
A-C	203.69			203.69			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	41.84	585.83	0.071	41.84	0.1	6.616	A
B-A	100.19	482.22	0.208	100.19	0.3	9.422	A
C-A	288.47			288.47			
C-B	9.91	702.38	0.014	9.91	0.0	5.198	A
A-B	18.72			18.72			
A-C	203.69			203.69			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	34.16	603.01	0.057	34.23	0.1	6.331	A
B-A	81.81	502.65	0.163	82.06	0.2	8.564	A
C-A	235.53			235.53			
C-B	8.09	714.53	0.011	8.10	0.0	5.095	A
A-B	15.28			15.28			
A-C	166.31			166.31			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	28.61	615.15	0.047	28.65	0.0	6.140	A
B-A	68.51	517.39	0.132	68.68	0.2	8.027	A
C-A	197.25			197.25			
C-B	6.78	723.32	0.009	6.78	0.0	5.025	A
A-B	12.80			12.80			
A-C	139.28			139.28			