

1.0 INTRODUCTION

1.1.1 This Servicing Strategy has been prepared by Cameron Rose Associates on behalf of Aldi Stores Ltd in order to provide details of servicing arrangements for the proposed development of an a 1,534sqm GFA food store on land bound by the A6 to the north, the A624 Foresters Way to the south east and Bowden Lane to the south west, in Chapel-en-le-Frith.

1.1.2 As an international food retailer with over 5,600 stores, Aldi have considerable experience of running efficient service delivery operations to their stores throughout the world.

1.1.3 Each potential new site is looked at on its merits and careful consideration is given to the access arrangements for customers, staff and deliveries by Aldi. Aldi are able to draw on considerable experience from their existing stores when considering new site layouts and access arrangements.

1.1.4 Section 2.0 of this report provides an overview of the scale of Aldi's operation and details the common attributes of each store that relate to deliveries and servicing.

1.1.5 Section 3.0 concentrates on Aldi's operations in the Middleton region. This represents the region in which the proposed stores are located. This chapter provides information about the fleet of vehicles delivering to the existing stores in the region.

1.1.6 Section 4.0 provides a detailed commentary on the servicing requirements at the proposed stores, including a swept path analysis of an articulated vehicle carrying out a standard delivery, which demonstrates the ready accessibility of the proposed service facilities.

1.1.7 This note is completed in Section 5.0, which draws conclusions on the sites service delivery operations.

2.0 DEVELOPMENT SITE

2.1 The Company

2.1.1 Aldi have over 5,600 stores across the world, of which more than 380 are located in the UK. Aldi continues to grow through a multi-million pound investment programme in people, stores and distribution facilities.

2.1.2 The scale of Aldi's international operation affords them significant buying power so they can buy at better rates. They also reduce their costs by cutting out gimmicks. The resultant savings are substantial and are passed on to customers as discounted prices.

2.2 The Aldi Store

2.2.1 An Aldi store is a modest scale supermarket, generally fulfilling a neighbourhood shopping role. Aldi is complementary to the existing pattern of trade within the local area.

2.2.2 The total range of products sold in an Aldi store is limited to approximately 850 lines. This compares with many retailers like Tesco and Sainsbury selling between 25,000 and 30,000 products. This has a significant impact on the frequency and type of delivery vehicles to each store.

2.2.3 A range of 60 seasonal fruit and vegetable items are delivered fresh to the store on a daily basis, sourced from local suppliers where possible. Around 15 products in Aldi's bread and morning goods range are managed and procured in the same way. Milk is also sourced locally.

2.2.4 Aldi have a policy of limited trading hours, which are generally as follows:

- Monday – Saturday 08:00 – 22:00
- Sunday 10:00 – 16:00

2.2.5 Main deliveries may occur whilst the store is opening, however, site constraints at some stores require deliveries to take place outside normal trading hours.

2.2.6 Between 25 and 30 staff are employed at each store, comprising a Store Manager, Assistant Store Manager and Store Assistants.

3.0 REGIONAL OPERATIONS

3.1 Aldi's Regional Logistics

- 3.1.1 Aldi's operations for the proposed store would be run from the Middleton regional distribution centre.
- 3.1.2 From the Middleton distribution centre a fleet of vehicles service all stores within the region. Each of these vehicles is a 16.5m fully articulated lorry with rear wheel steering and a maximum gross weight of 44 tonnes.
- 3.1.3 Delivery routes are planned to minimise distances travelled by each vehicle and maximise efficiency of goods per delivery. This practice is economically prudent for Aldi but also sustainable by virtue of reducing vehicle kilometres travelled.
- 3.1.4 Each vehicle will visit between one and six stores depending on the nature of the delivery and the geographical location of the stores. On average each store will have only one delivery by articulated lorry per day plus a smaller vehicle delivering locally sourced products. This compares with an average of six to 10 articulated lorries and up to a 20 subsidiary vehicles (including HGVs) per day usually associated with the larger supermarkets.
- 3.1.5 Each store manager will have an allotted time each day by which the main delivery will have taken place. Each driver is furnished with a mobile phone and is able to inform the distribution centre if any delay is likely. However, this is very rare and allocated delivery times are consistently met by the distribution teams.
- 3.1.6 Delivery practices are identical at each store. Goods delivery is a one-man function carried out by the driver. The vehicle is reversed down the delivery ramp to the loading bay which is fitted with a "dock leveller" to provide a flush ramp from the floor of the lorry to the floor of the storage area.

- 3.1.7 The driver gains access to the building by means of a "driver's door" located next to the loading bay. The driver opens the roller shutter door from within the building then unloads the goods directly into the storage area. The driver is then responsible for locking the shutter and the side door before leaving. Contact with the store manager is only required where site-specific special arrangements dictate.
- 3.1.8 At sites where entrance barriers are installed, the delivery vehicles are fitted with transponders, which activate the barriers automatically.

4.0 SITE SPECIFIC ARRANGEMENTS

4.1 Site Layout

- 4.1.1 Drawing 052-01/ATR-01 attached in **Appendix B** of the Transport Assessment (TA) illustrates the swept path of an articulated vehicle accessing and egressing the proposed site.

4.2 Site Location and Access

- 4.2.1 The site is located within the town of Chapel-en-le-Frith, approximately 800 metres north of the town centre. The site is located on land to the south of the A6 and adjacent to the Fallow Deer public house.
- 4.2.2 Surrounding land uses included the Fallow Deer public house located adjacent to the proposed development site, light industrial units/ office development located on Bowden Lane, Federal Mogul located to the west of the site off Hayfield Road and residential development to the south and south west. A full description of site location and access is contained in Sections 3.0 and 4.0 of the Transport Assessment.
- 4.2.3 The servicing arrangements at the proposed site have been designed to operate without detriment to the operation of the highway network or customer safety.
- ### **4.3 Aldi Site Specific Operational Requirements**
- There will normally be one Articulated HGV delivery per day;
 - The daily HGV delivery arrival journey will normally take place outside peak highway network hours;
 - The standard delivery period is ½ hour;
 - Vehicular access to the service yard will be through the car park. In addition, all manoeuvring will be supervised and assisted as necessary by the store manager; and
 - Any non-staff vehicles remaining anywhere in the car park once the store is closed will be warned/ fined and eventually removed.

4.4 Additional Safety Benefits

4.4.1 It should be noted that over recent years Aldi's service vehicles have benefited from operational safety improvements including:

- Rear Cameras;
- Audible Warning Systems; and
- Reversing Object Sensors.



APPENDIX F

TEMPO GROWTH FACTORS

TEMPRO GROWTH FACTORS - OPENING YEAR

Dataset Version: 62
Results Type: Trip ends by time period
Base Year: 2012
Future Year: 2015
Trip Purpose Group: All purposes
Time Period: Weekday AM peak period (0700 - 0959)
Trip End Type: Origin/ Destinations
Alternative Assumptions Applied: No

Level	Area	Local Growth Factor
Authority	High Peak	1.0173

Dataset Version: 62
Results Type: Trip ends by time period
Base Year: 2012
Future Year: 2015
Trip Purpose Group: All purposes
Time Period: Weekday PM peak period (1600 - 1859)
Trip End Type: Origin/ Destinations
Alternative Assumptions Applied: No

Level	Area	Local Growth Factor
Authority	High Peak	1.0188

Dataset Version: 62
Results Type: Trip ends by time period
Base Year: 2012
Future Year: 2015
Trip Purpose Group: All purposes
Time Period: Saturday (all times of the day)
Trip End Type: Origin/ Destinations
Alternative Assumptions Applied: No

Level	Area	Local Growth Factor
Authority	High Peak	1.0203



APPENDIX G

PERSONAL INJURY ACCIDENT DATA



APPENDIX H

TRICS DATA

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL
Category : C - DISCOUNT FOOD STORES

VEHICLESSelected regions and areas:**08 NORTH WEST**

GM	GREATER MANCHESTER	4 days
LC	LANCASHIRE	2 days
MS	MERSEYSIDE	1 days

Main parameter selection:

Parameter: Gross floor area
Range: 865 to 1360 (units: sqm)

Date Range: 01/01/95 to 20/06/07

Selected survey days:

Wednesday	1 days
Thursday	2 days
Friday	4 days

Selected survey types:

Manual count	7 days
Directional ATC Count	0 days

Selected Locations:

Edge of Town Centre	2
Suburban Area (PPS6 Out of Centre)	5

Selected Location Sub Categories:

Residential Zone	1
Built-Up Zone	3
High Street	1
No Sub Category	2

Optional parameter selection:Use Class:

A1	7 days
----	--------

Population within 1 mile:

15,001 to 20,000	1 days
20,001 to 25,000	3 days
25,001 to 50,000	3 days

Population within 5 miles:

100,001 to 125,000	1 days
125,001 to 250,000	2 days
250,001 to 500,000	3 days
500,001 or More	1 days

Car ownership within 5 miles:

0.6 to 1.0	7 days
------------	--------

Optional parameter selection (Cont.):

Petrol filling station:

Excluded from count or no filling station
Included in the survey count

7 days
0 days

Travel Plan:

Not Known
No

6 days
1 days

LIST OF SITES relevant to selection parameters

- | | | | |
|----------|---|---------------------------|---------------------------|
| 1 | GM-01-C-01 | NETTO, BOLTON | GREATER MANCHESTER |
| | A579 ST HELENS ROAD
DAUBHILL
BOLTON | | |
| | Total Gross floor area: | 1022 sqm | |
| | Survey date: FRIDAY | 14/03/97 | Survey Type: MANUAL |
| 2 | GM-01-C-02 | ALDI, NEAR OLDHAM | GREATER MANCHESTER |
| | GREENFIELD LANE
SHAW
NEAR OLDHAM | | |
| | Total Gross floor area: | 1011 sqm | |
| | Survey date: THURSDAY | 02/11/95 | Survey Type: MANUAL |
| 3 | GM-01-C-08 | ALDI, BURY | GREATER MANCHESTER |
| | B6222 BELL LANE | | |
| | BURY | | |
| | Total Gross floor area: | 1192 sqm | |
| | Survey date: THURSDAY | 24/10/96 | Survey Type: MANUAL |
| 4 | GM-01-C-09 | NETTO, MANCHESTER | GREATER MANCHESTER |
| | BEVENDON SQUARE
HIGHER BROUGHTON
MANCHESTER | | |
| | Total Gross floor area: | 1115 sqm | |
| | Survey date: FRIDAY | 17/03/95 | Survey Type: MANUAL |
| 5 | LC-01-C-04 | ALDI, BURNLEY | LANCASHIRE |
| | ACTIVE WAY | | |
| | BURNLEY | | |
| | Total Gross floor area: | 1200 sqm | |
| | Survey date: FRIDAY | 01/12/95 | Survey Type: MANUAL |
| 6 | LC-01-C-05 | KWIK SAVE, PRESTON | LANCASHIRE |
| | A6063 DEEPPDALE ROAD | | |
| | PRESTON | | |
| | Total Gross floor area: | 1360 sqm | |
| | Survey date: FRIDAY | 07/06/96 | Survey Type: MANUAL |
| 7 | MS-01-C-03 | ALDI, LIVERPOOL | MERSEYSIDE |
| | LAUREL ROAD
ELM PARK
LIVERPOOL | | |
| | Total Gross floor area: | 1165 sqm | |
| | Survey date: WEDNESDAY | 20/06/07 | Survey Type: MANUAL |

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES

VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 08:00	0	0	0.000	0	0	0.000	0	0	0.000
08:00 - 09:00	4	1187	0.737	4	1187	0.316	4	1187	1.053
09:00 - 10:00	7	1152	4.910	7	1152	3.087	7	1152	7.997
10:00 - 11:00	7	1152	5.840	7	1152	4.885	7	1152	10.725
11:00 - 12:00	7	1152	6.175	7	1152	6.485	7	1152	12.660
12:00 - 13:00	7	1152	6.311	7	1152	6.609	7	1152	12.920
13:00 - 14:00	7	1152	6.386	7	1152	5.245	7	1152	11.631
14:00 - 15:00	7	1152	6.782	7	1152	7.278	7	1152	14.060
15:00 - 16:00	7	1152	6.274	7	1152	6.187	7	1152	12.461
16:00 - 17:00	7	1152	6.410	7	1152	7.229	7	1152	13.639
17:00 - 18:00	7	1152	5.059	7	1152	6.125	7	1152	11.184
18:00 - 19:00	5	1172	4.128	5	1172	4.623	5	1172	8.751
19:00 - 20:00	5	1172	1.962	5	1172	3.037	5	1172	4.999
20:00 - 21:00	3	1194	0.335	3	1194	1.368	3	1194	1.703
21:00 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			61.309			62.474			123.783

Parameter summary

Trip rate parameter range selected: 865 - 1360 (units: sqm)
 Survey date range: 01/01/95 - 20/06/07
 Number of weekdays (Monday-Friday): 7
 Number of Saturdays: 0
 Number of Sundays: 0
 Optional parameters used in selection: NO
 Surveys manually removed from selection: 7

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL
Category : C - DISCOUNT FOOD STORES

VEHICLES

Selected regions and areas:

08 NORTH WEST

GM	GREATER MANCHESTER	4 days
LC	LANCASHIRE	2 days
MS	MERSEYSIDE	1 days

Main parameter selection:

Parameter: Gross floor area
Range: 865 to 1682 (units: sqm)

Date Range: 01/01/95 to 20/06/07

Selected survey days:

Wednesday	1 days
Thursday	2 days
Friday	4 days

Selected survey types:

Manual count	7 days
Directional ATC Count	0 days

Selected Locations:

Edge of Town Centre	2
Suburban Area (PPS6 Out of Centre)	5

Selected Location Sub Categories:

Residential Zone	1
Built-Up Zone	3
High Street	1
No Sub Category	2

RANK ORDER for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES

VEHICLES

Ranking Type: **TOTALS**

Time Range: 08:00-09:00

Under 6 Surveys Included, 15th/85th Percentile Not Highlighted

Rank	Site-Ref	Description	Area	GFA	Day	Date	Trip Rate (Sorted by Totals)			Travel Plan
							Arrivals	Departures	Totals	
1	GM-01-C-01	NETTO, BOLTON	GREATER MANCHESTER	1022	Fri	14/03/97	0.978	0.783	1.761	
2	LC-01-C-04	ALDI, BURNLEY	LANCASHIRE	1200	Fri	01/12/95	1.000	0.333	1.333	
3	MS-01-C-03	ALDI, LIVERPOOL	MERSEYSIDE	1165	Wed	20/06/07	0.773	0.172	0.945	
4	LC-01-C-05	KWIK SAVE, PRESTON	LANCASHIRE	1360	Fri	07/06/96	0.294	0.074	0.368	

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL
Category : C - DISCOUNT FOOD STORES

VEHICLESSelected regions and areas:**08 NORTH WEST**

GM	GREATER MANCHESTER	4 days
LC	LANCASHIRE	2 days
MS	MERSEYSIDE	1 days

Main parameter selection:

Parameter: Gross floor area
Range: 865 to 1682 (units: sqm)

Date Range: 01/01/95 to 20/06/07

Selected survey days:

Wednesday	1 days
Thursday	2 days
Friday	4 days

Selected survey types:

Manual count	7 days
Directional ATC Count	0 days

Selected Locations:

Edge of Town Centre	2
Suburban Area (PPS6 Out of Centre)	5

Selected Location Sub Categories:

Residential Zone	1
Built-Up Zone	3
High Street	1
No Sub Category	2

RANK ORDER for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES VEHICLES

Ranking Type: **TOTALS** Time Range: 16:00-17:00
 WARNING: Using 85th and 15th percentile highlighted trip rates in data sets of under
 20 surveys is not recommended by TRICS and may be misleading.
 15th Percentile = No. **6**
 85th Percentile = No. **2**

Median Values:
 Arrivals: 4,843
 Departures: 5,740
 Totals: 10,583

Rank	Site Ref	Description	Town/City	Area	GFA	Day	Date	Trip Rate (Sorted by Totals)		Travel
								Arrivals	Departures	Attn
1	LC-01-C-04	ALDI	BURNLEY	LANCASHIRE	1200	Fri	01/12/95	10,167	12,583	22,750
2	GM-01-C-01	NETTO	BOLTON	GREATER MANCHESTER	1022	Fri	14/03/97	10,176	9,002	19,178
3	GM-01-C-02	ALDI	NEAR OLDHAM	GREATER MANCHESTER	1011	Thu	02/11/95	8,210	10,089	18,299
4	GM-01-C-09	NETTO	MANCHESTER	GREATER MANCHESTER	1115	Fri	17/03/95	4,843	5,740	10,583
5	GM-01-C-08	ALDI	BURY	GREATER MANCHESTER	1192	Thu	24/10/96	4,614	5,621	10,235
6	LC-01-C-05	KWIK SAVE	PRESTON	LANCASHIRE	1360	Fri	07/06/96	4,926	4,926	9,852
7	NO-01-C-01	LIDL	SCUNTHORPE	NORTH LINCOLNSHIRE	1323	Wed	24/11/99	2,494	2,268	4,762

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

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

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL
Category : C - DISCOUNT FOOD STORES

VEHICLESSelected regions and areas:

03	SOUTH WEST	
	BR BRISTOL CITY	1 days
06	WEST MIDLANDS	
	HE HEREFORDSHIRE	1 days
08	NORTH WEST	
	GM GREATER MANCHESTER	4 days
	LC LANCASHIRE	2 days
09	NORTH	
	CB CUMBRIA	1 days
10	WALES	
	CP CAERPHILLY	1 days
	SW SWANSEA	1 days

Main parameter selection:

Parameter: Gross floor area
Range: 865 to 1360 (units: sqm)

Date Range: 01/01/95 to 20/06/07

Selected survey days:

Saturday 11 days

Selected survey types:

Manual count 11 days
Directional ATC Count 0 days

Selected Locations:

Edge of Town Centre 3
Suburban Area (PPS6 Out of Centre) 7
Edge of Town 1

Selected Location Sub Categories:

Industrial Zone 1
Residential Zone 2
Built-Up Zone 4
High Street 1
No Sub Category 3

Optional parameter selection:Use Class:

A1 11 days

Population within 1 mile:

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

Optional parameter selection (Cont.):

Population within 5 miles:

5,001 to 25,000	1 days
50,001 to 75,000	1 days
75,001 to 100,000	1 days
100,001 to 125,000	1 days
125,001 to 250,000	3 days
250,001 to 500,000	4 days

Car ownership within 5 miles:

0.6 to 1.0	10 days
1.1 to 1.5	1 days

Petrol filling station:

Excluded from count or no filling station	11 days
Included in the survey count	0 days

Travel Plan:

Not Known	6 days
No	5 days

LIST OF SITES relevant to selection parameters

1	BR-01-C-01	LIDL, BRISTOL		BRISTOL CITY
	LAWRENCE HILL			
	LAWRENCE HILL			
	BRISTOL			
	Total Gross floor area:	1007 sqm		
	Survey date: SATURDAY	17/05/03		Survey Type: MANUAL
2	CB-01-C-01	ALDI, CARLISLE		CUMBRIA
	KINGSTOWN ROAD			
	KINGSTOWN			
	CARLISLE			
	Total Gross floor area:	1216 sqm		
	Survey date: SATURDAY	07/09/02		Survey Type: MANUAL
3	CP-01-C-01	KWIK SAVE, RISCA		CAERPHILLY
	FIELDS ROAD			
	PONTYMINSTER			
	RISCA			
	Total Gross floor area:	900 sqm		
	Survey date: SATURDAY	03/09/05		Survey Type: MANUAL
4	GM-01-C-01	NETTO, BOLTON		GREATER MANCHESTER
	A579 ST HELENS ROAD			
	DAUBHILL			
	BOLTON			
	Total Gross floor area:	1022 sqm		
	Survey date: SATURDAY	22/03/97		Survey Type: MANUAL
5	GM-01-C-02	ALDI, NEAR OLDHAM		GREATER MANCHESTER
	GREENFIELD LANE			
	SHAW			
	NEAR OLDHAM			
	Total Gross floor area:	1011 sqm		
	Survey date: SATURDAY	28/10/95		Survey Type: MANUAL
6	GM-01-C-08	ALDI, BURY		GREATER MANCHESTER
	B6222 BELL LANE			
	BURY			
	Total Gross floor area:	1192 sqm		
	Survey date: SATURDAY	26/10/96		Survey Type: MANUAL
7	GM-01-C-09	NETTO, MANCHESTER		GREATER MANCHESTER
	BEVENDON SQUARE			
	HIGHER BROUGHTON			
	MANCHESTER			
	Total Gross floor area:	1115 sqm		
	Survey date: SATURDAY	18/03/95		Survey Type: MANUAL
8	HE-01-C-01	ALDI, HEREFORD		HEREFORDSHIRE
	EIGN STREET			
	HEREFORD			
	Total Gross floor area:	1219 sqm		
	Survey date: SATURDAY	04/03/06		Survey Type: MANUAL
9	LC-01-C-04	ALDI, BURNLEY		LANCASHIRE
	ACTIVE WAY			
	BURNLEY			
	Total Gross floor area:	1200 sqm		
	Survey date: SATURDAY	02/12/95		Survey Type: MANUAL
10	LC-01-C-05	KWIK SAVE, PRESTON		LANCASHIRE
	A6063 DEEPALE ROAD			
	PRESTON			
	Total Gross floor area:	1360 sqm		
	Survey date: SATURDAY	08/06/96		Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

11 SW-01-C-01 LIDL, SWANSEA

SWANSEA

PENTREGETHIN ROAD

PEN-LAN

SWANSEA

Total Gross floor area:

969 sqm

Survey date: SATURDAY

14/09/02

Survey Type: MANUAL

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES

VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 08:00	3	1147	0.261	3	1147	0.116	3	1147	0.377
08:00 - 09:00	9	1121	1.745	9	1121	0.932	9	1121	2.677
09:00 - 10:00	11	1110	5.176	11	1110	4.250	11	1110	9.426
10:00 - 11:00	11	1110	7.411	11	1110	6.150	11	1110	13.561
11:00 - 12:00	11	1110	8.304	11	1110	8.050	11	1110	16.354
12:00 - 13:00	11	1110	7.813	11	1110	7.829	11	1110	15.642
13:00 - 14:00	11	1110	8.099	11	1110	8.116	11	1110	16.215
14:00 - 15:00	11	1110	8.476	11	1110	8.296	11	1110	16.772
15:00 - 16:00	11	1110	7.256	11	1110	7.886	11	1110	15.142
16:00 - 17:00	11	1110	6.208	11	1110	7.223	11	1110	13.431
17:00 - 18:00	11	1110	3.268	11	1110	4.602	11	1110	7.870
18:00 - 19:00	7	1099	1.118	7	1099	1.742	7	1099	2.860
19:00 - 20:00	1	900	1.111	1	900	1.889	1	900	3.000
20:00 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:	66.246			67.081			133.327		

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL
Category : C - DISCOUNT FOOD STORES

VEHICLESSelected regions and areas:

03	SOUTH WEST	
	BR BRISTOL CITY	1 days
06	WEST MIDLANDS	
	HE HEREFORDSHIRE	1 days
08	NORTH WEST	
	GM GREATER MANCHESTER	4 days
	LC LANCASHIRE	2 days
09	NORTH	
	CB CUMBRIA	1 days
10	WALES	
	CP CAERPHILLY	1 days
	SW SWANSEA	1 days

Main parameter selection:

Parameter: Gross floor area
Range: 865 to 1682 (units: sqm)

Date Range: 01/01/95 to 20/06/07

Selected survey days:

Saturday 11 days

Selected survey types:

Manual count 11 days
Directional ATC Count 0 days

Selected Locations:

Edge of Town Centre	3
Suburban Area (PPS6 Out of Centre)	7
Edge of Town	1

Selected Location Sub Categories:

Industrial Zone	1
Residential Zone	2
Built-Up Zone	4
High Street	1
No Sub Category	3

RANK ORDER for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES VEHICLES

Ranking Type: **TOTALS** Time Range: 12:00-13:00

WARNING: Using 85th and 15th percentile highlighted trip rates in data sets of under 20 surveys is not recommended by TRICS and may be misleading.

15th Percentile = No. **9 (**)**

85th Percentile = No. **3 (**)**

Rank	Site-Ref	Description	Area	GFA	Day	Date	Trip Rate (Sorted by Totals)			Travel Plan
							Arrivals	Departures	Totals	
1	GM-01-C-02	ALDI, NEAR OLDHAM	GREATER MANCHESTER	1011	Sat	28/10/95	11.869	10.188	22.057	
2	GM-01-C-01	NETTO, BOLTON	GREATER MANCHESTER	1022	Sat	22/03/97	9.883	10.078	19.961	
3 **	LC-01-C-04	ALDI, BURNLEY	LANCASHIRE	1200	Sat	02/12/95	10.083	9.833	19.916	
4	CP-01-C-01	KWIK SAVE, RISCA	CAERPHILLY	900	Sat	03/09/05	9.222	9.778	19.000	
5	HE-01-C-01	ALDI, HEREFORD	HEREFORDSHIRE	1219	Sat	04/03/06	7.547	7.055	14.602	
6	SW-01-C-01	LIDL, SWANSEA	SWANSEA	969	Sat	14/09/02	7.224	6.295	13.519	
7	GM-01-C-09	NETTO, MANCHESTER	GREATER MANCHESTER	1115	Sat	18/03/95	6.547	6.726	13.273	
8	GM-01-C-08	ALDI, BURY	GREATER MANCHESTER	1192	Sat	26/10/96	6.544	6.544	13.088	
9 **	LC-01-C-05	KWIK SAVE, PRESTON	LANCASHIRE	1360	Sat	08/06/96	5.735	7.206	12.941	
10	BR-01-C-01	LIDL, BRISTOL	BRISTOL CITY	1007	Sat	17/05/03	6.455	6.455	12.910	
11	CB-01-C-01	ALDI, CARLISLE	CUMBRIA	1216	Sat	07/09/02	6.003	6.661	12.664	



APPENDIX I

MODEL OUTPUT DATA

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.2.316 (14 Feb 2013)
© Copyright TRL Limited, 2013.

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

The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: Foresters Way_Site Access.arb
Path: D:\Cameron Rose Associates\Projects\052_Aldi, Chapel en le Frith\ANALYSIS\Junctions 8
Report generation date: 01/08/2013 09:10:49

Summary of junction performance

	AM			
	Queue (Veh)	Delay (s)	RFC	LOS
Existing Layout - 2015 Base				
Stream B-C	0.00	0.00	0.00	A-
Stream B-A	0.00	0.00	0.00	A
Stream C-A	-	-	-	-
Stream C-B	0.00	0.00	0.00	A
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-

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

"D1 - 2015 Base, AM" model duration: 07:45 - 09:15
"D2 - 2015 Base, PM" model duration: 16:15 - 17:45
"D3 - 2015 Base, Saturday" model duration: 11:45 - 13:15
"D4 - 2015 Base plus Development - Average, AM" model duration: 07:45 - 09:15
"D5 - 2015 Base plus Development - Average, PM" model duration: 16:15 - 17:45
"D6 - 2015 Base plus Development - Average, Saturday" model duration: 11:45 - 13:15
"D7 - 2015 Base plus Development - 85th, AM" model duration: 07:45 - 09:15
"D8 - 2015 Base plus Development - 85th, PM" model duration: 16:15 - 17:45
"D9 - 2015 Base plus Development - 85th, Saturday" model duration: 11:45 - 13:15
"D10 - 2018 Base, AM" model duration: 07:45 - 09:15
"D11 - 2018 Base, PM" model duration: 16:15 - 17:45
"D12 - 2018 Base, Saturday" model duration: 11:45 - 13:15
"D13 - 2018 Base plus Development - Average, AM" model duration: 07:45 - 09:15
"D14 - 2018 Base plus Development - Average, PM" model duration: 16:15 - 17:45
"D15 - 2018 Base plus Development - Average, Saturday" model duration: 11:45 - 13:15
"D16 - 2018 Base plus Development - 85th, AM" model duration: 07:45 - 09:15
"D17 - 2018 Base plus Development - 85th, PM" model duration: 16:15 - 17:45
"D18 - 2018 Base plus Development - 85th, Saturday" model duration: 11:45 - 13:15

Run using Junctions 8.0.2.316 at 01/08/2013 09:09:38

File summary

File Description

Title	A824 Foresters Way Site Access
Location	Chapel-en-le-Frith
Site Number	
Date	17/07/2013
Version	
Status	
Identifier	
Client	Aldi Food Stores
Job number	052
Enumerator	Cheryl Barratt
Description	

Analysis Options

Vehicle Length (m)	5.75	Do Queue Variations		Residual Capacity		RFC Threshold	0.85	Average Delay Threshold (s)	36.00	Queue Threshold (PCU)	20.00
--------------------	------	---------------------	--	-------------------	--	---------------	------	-----------------------------	-------	-----------------------	-------

Units

Distance Units	m	Speed Units	mph	Traffic Units Input	PCU	Traffic Units Results	veh	Flow Units	per hour	Average Delay Units	s	Total Delay Units	-Min	Rate Of Delay Units	per Min
----------------	---	-------------	-----	---------------------	-----	-----------------------	-----	------------	----------	---------------------	---	-------------------	------	---------------------	---------

Existing Layout - 2015 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Layout			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2015 Base, AM	2015 Base	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
(Untitled)	T-Junction	Two-way	A,B,C	0.00	

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm Type
A	Foresters Way (w)		Major
B	Site Access		Minor
C	Foresters Way (e)		Major

Major Arm Geometry

Arm	Width of carfootway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	9.00		0.00	✓	3.00	70.00		

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

Minor Arm Geometry

Arm	Minor	Lane	Lane	Width	Width	Width	Estimate	Flare	Visibility	Visibility
-----	-------	------	------	-------	-------	-------	----------	-------	------------	------------

Arm	Type	Width (m)	Width (m)	at give-way (m)	at 5m (m)	at 10m (m)	at 15m (m)	at 20m (m)	Place Length	Length (PCU)	To Left (m)	To Right (m)
B	One lane plus flare			10.00	8.50	5.00	3.80	3.60	✓	2.00	40	20

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (veh/hr)	Slope for A-B	Slope for A-C	Slope for C-B
1	B-A	546.271	0.087	0.219	0.138
1	B-C	694.944	0.093	0.234	-
1	C-B	668.004	0.225	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments. Streams may be combined, in which case capacity will be adjusted. Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	489.00	100.000
B	ONE HOUR	✓	0.00	100.000
C	ONE HOUR	✓	300.00	100.000

Turning Proportions

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

	To	A	B	C
From	A	0.000	0.000	489.000
	B	0.000	0.000	0.000
	C	300.000	0.000	0.000

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

	To	A	B	C
From	A	0.00	0.00	1.00
	B	0.33	0.33	0.33
	C	1.00	0.00	0.00

Vehicle Mix

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

	To	A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

	To	A	B	C
From	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Stream	Max APC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	0.00	0.00	A
B-A	0.00	0.00	0.00	A
C-A				
C-B	0.00	0.00	0.00	A
A-B				
A-C				

Main Results for each time segment

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

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	APC	End Queue (Veh)	Delay (s)	LOS
B-C	0.00	0.00	0.00	608.76	0.000	0.00	0.000	A
B-A	0.00	0.00	0.00	434.70	0.000	0.00	0.000	A
C-A	225.86	225.86	0.00					
C-B	0.00	0.00	0.00	585.16		0.00	0.000	A
A-B	0.00	0.00	0.00					
A-C	368.14	368.14	0.00					

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

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	APC	End Queue (Veh)	Delay (s)	LOS
--------	-----------------------	---------------------	----------------------------	-------------------	-----	-----------------	-----------	-----

B-C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	A
B-A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	A
C-A	269.69	0.00	269.69	0.00	0.00	0.00	0.00	0.00	0.00	A
C-B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	A
A-B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	A
A-C	439.60	0.00	439.60	0.00	0.00	0.00	0.00	0.00	0.00	A

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

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	0.00	0.00	0.00	569.90	0.000	0.00	0.000	A
B-A	0.00	0.00	0.00	383.10	0.000	0.00	0.000	A
C-A	330.31	330.31	0.00	569.90	0.000	0.00	0.000	A
C-B	0.00	0.00	0.00	569.90	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	569.90	0.000	0.00	0.000	A
A-C	538.40	538.40	0.00	569.90	0.000	0.00	0.000	A

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

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	0.00	0.00	0.00	569.90	0.000	0.00	0.000	A
B-A	0.00	0.00	0.00	383.10	0.000	0.00	0.000	A
C-A	330.31	330.31	0.00	569.90	0.000	0.00	0.000	A
C-B	0.00	0.00	0.00	569.90	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	569.90	0.000	0.00	0.000	A
A-C	538.40	538.40	0.00	569.90	0.000	0.00	0.000	A

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

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	0.00	0.00	0.00	592.03	0.000	0.00	0.000	A
B-A	0.00	0.00	0.00	413.05	0.000	0.00	0.000	A
C-A	269.69	269.69	0.00	569.90	0.000	0.00	0.000	A
C-B	0.00	0.00	0.00	569.90	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	569.90	0.000	0.00	0.000	A
A-C	439.60	439.60	0.00	569.90	0.000	0.00	0.000	A

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

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	0.00	0.00	0.00	608.76	0.000	0.00	0.000	A
B-A	0.00	0.00	0.00	434.70	0.000	0.00	0.000	A
C-A	225.86	225.86	0.00	565.16	0.000	0.00	0.000	A
C-B	0.00	0.00	0.00	565.16	0.000	0.00	0.000	A
A-B	0.00	0.00	0.00	565.16	0.000	0.00	0.000	A
A-C	388.14	388.14	0.00	565.16	0.000	0.00	0.000	A

Existing Layout - 2015 Base, PM

Data Errors and Warnings
No errors or warnings

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Layout			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2015 Base PM	2015 Base PM	PM		ONE HOUR	16:15	17:45	90	15		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
(unfilled)	T-Junction	Two-way	A,B,C	7.42	A

Junction Network Options

Driving Side	Lighting
Left	Normal/Unknown

Arms

Arms

Arm	Name	Description	Arm Type
A	Foresters Way (w)		Major
B	Site Access		Minor
C	Foresters Way (e)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	9.00		0.00	✓	3.00	70.00		

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Estimate Flare Length (m)	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.50	5.00	3.80	2.00	40	20

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept	Slope	Slope	Slope
----------	--------	-----------	-------	-------	-------

		(Veh/hr)	for A-B	for A-C	for C-B
1	B-A	565.056	0.089	0.228	0.323
1	B-C	671.046	0.089	0.228	-
1	C-B	668.004	0.225	0.225	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	361.00	100.000
B	ONE HOUR	✓	24.00	100.000
C	ONE HOUR	✓	516.00	100.000

Turning Proportions

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

	To	A	B	C
From	A	0.000	14.000	347.000
	B	14.000	0.000	10.000
	C	496.000	20.000	0.000

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

	To	A	B	C
From	A	0.00	0.04	0.96
	B	0.58	0.00	0.42
	C	0.96	0.04	0.00

Vehicle Mix

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

	To	A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

	To	A	B	C
From	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.02	6.36	0.02	A
B-A	0.04	9.55	0.04	A
C-A				
C-B	0.04	6.47	0.04	A
A-B				
A-C				

Main Results for each time segment

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

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	7.53	7.48	0.00	607.44	0.012	0.01	6.000	A
B-A	10.54	10.44	0.00	447.02	0.024	0.02	8.244	A
C-A	373.41	373.41	0.00					
C-B	15.06	14.96	0.00	606.84	0.025	0.03	6.082	A
A-B	10.54	10.54	0.00					
A-C	261.24	261.24	0.00					

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

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	8.99	8.98	0.00	594.79	0.015	0.02	6.144	A
B-A	12.59	12.56	0.00	424.17	0.030	0.03	8.746	A
C-A	445.89	445.89	0.00					
C-B	17.98	17.96	0.00	594.97	0.030	0.03	6.238	A
A-B	12.59	12.59	0.00					
A-C	311.95	311.95	0.00					

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

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	11.01	10.99	0.00	577.39	0.019	0.02	6.355	A
B-A	15.41	15.37	0.00	392.49	0.039	0.04	9.544	A
C-A	546.11	546.11	0.00					
C-B	22.02	21.99	0.00	576.56	0.038	0.04	6.467	A
A-B	15.41	15.41	0.00					
A-C	382.05	382.05	0.00					

Driving Side	Lighting
Left	Normal/unknown

Stream	Total Demand (veh/hr)	Entry Flow (veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (veh/hr)	RFC	End Queue (veh)	Delay (s)	LOS
B-C	11.01	11.01	0.00	577.30	0.019	0.02	6.356	A
B-A	15.41	15.41	0.00	392.52	0.039	0.04	9.545	A
C-A	546.11	546.11	0.00					
C-B	22.02	22.02	0.00	578.56	0.038	0.04	6.467	A
A-B	15.41	15.41	0.00					
A-C	382.05	382.05	0.00					

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

Stream	Total Demand (veh/hr)	Entry Flow (veh/hr)	Pedestrian Demand (ped/hr)	Capacity (veh/hr)	RFC	End Queue (veh)	Delay (s)	LOS
B-C	8.99	9.01	0.00	594.63	0.015	0.02	6.146	A
B-A	12.59	12.62	0.00	424.24	0.030	0.03	8.748	A
C-A	445.88	445.89	0.00					
C-B	17.98	18.01	0.00	594.97	0.030	0.03	6.241	A
A-B	12.59	12.59	0.00					
A-C	311.95	311.95	0.00					

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

Stream	Total Demand (veh/hr)	Entry Flow (veh/hr)	Pedestrian Demand (ped/hr)	Capacity (veh/hr)	RFC	End Queue (veh)	Delay (s)	LOS
B-C	7.53	7.54	0.00	607.18	0.012	0.01	8.005	A
B-A	10.54	10.57	0.00	447.13	0.024	0.02	8.247	A
C-A	373.41	373.41	0.00					
C-B	15.06	15.08	0.00	606.94	0.025	0.03	6.083	A
A-B	10.54	10.54	0.00					
A-C	261.24	261.24	0.00					

Data Errors and Warnings

No errors or warnings

Analysis Set Details			
Name	Description	Locked	Network Flow Scaling Factor (%)
Existing Layout			100.000

Name	Scenario Name	Time Period Name	Description	Traffic Profile	Model Start Time (HH:MM)	Model Finish Time (HH:MM)	Model Time Period Length (min)	Time Segment (min)	Single Time Segment Only	Locked
2015 Base Saturday	2015 Base Saturday	Saturday		ONE HOUR	11:45	13:15	90	15		

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
(unified)	T-Junction	Two-way	A B C	7.22	A

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Vel/hr)	Slope for A-B	Slope for C-A	Slope for C-B
1	B-A	546.271	0.087	0.219	0.138
1	B-C	594.944	0.093	0.234	-
1	C-B	568.004	0.225	0.225	-

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.

Demand Set Data Options

Demand Set Data Profiles									
Vehicle Default, Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	PCU Factor for HV (PCU)	Default, Turning Proportions	Estimate, entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
	✓		✓	HV Percentages	2.00			✓	✓

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	9.00		0.00	✓	3.00	70.00		

Major Arm Geometry

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at glen- 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	8.50	5.00	3.80	3.60	✓	2.00	40	20

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	381.00	100.000
B	ONE HOUR	✓	20.00	100.000
C	ONE HOUR	✓	364.00	100.000

Turning Proportions

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

		To		
From		A	B	C
		A 0.000	12.000	369.000
From		A	B	C
		B 10.000	0.000	10.000
From		A	B	C
		C 351.000	13.000	0.000

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

		To		
From		A	B	C
		A 0.00	0.03	0.97
From		A	B	C
		B 0.50	0.00	0.50
From		A	B	C
		C 0.96	0.04	0.00

Vehicle Mix

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

		To		
From		A	B	C
		A 1.000	1.000	1.000
From		A	B	C
		B 1.000	1.000	1.000
From		A	B	C
		C 1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
From		A	B	C
		A 0.000	0.000	0.000
From		A	B	C
		B 0.000	0.000	0.000
From		A	B	C
		C 0.000	0.000	0.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.02	6.17	0.02	A
B-A	0.03	9.28	0.03	A
C-A				
C-B	0.02	6.44	0.03	A
A-B				

Main Results for each time segment

Main results: (11:45-12:00)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	7.53	7.48	0.00	626.41	0.012	0.01	5.816	A
B-A	7.53	7.46	0.00	445.33	0.017	0.02	8.220	A
C-A	264.25	264.25	0.00					
C-B	9.79	9.72	0.00	603.45	0.016	0.02	6.063	A
A-B	9.03	9.03	0.00					
A-C	277.80	277.80	0.00					

Main results: (12:00-12:15)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	8.99	8.98	0.00	612.87	0.015	0.01	5.960	A
B-A	8.99	8.97	0.00	425.82	0.021	0.02	8.636	A
C-A	315.54	315.54	0.00					
C-B	11.69	11.67	0.00	590.93	0.020	0.02	8.214	A
A-B	10.79	10.79	0.00					
A-C	331.72	331.72	0.00					

Main results: (12:15-12:30)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	11.01	10.99	0.00	594.29	0.019	0.02	6.171	A
B-A	11.01	10.98	0.00	398.73	0.028	0.03	9.204	A
C-A	386.46	386.46	0.00					
C-B	14.31	14.29	0.00	573.60	0.025	0.03	6.435	A
A-B	13.21	13.21	0.00					
A-C	406.28	406.28	0.00					

Main results: (12:30-12:45)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	11.01	11.01	0.00	594.22	0.019	0.02	6.171	A
B-A	11.01	11.01	0.00	398.76	0.028	0.03	9.283	A
C-A	386.46	386.46	0.00					
C-B	14.31	14.31	0.00	573.60	0.025	0.03	6.435	A
A-B	13.21	13.21	0.00					
A-C	406.28	406.28	0.00					

Main results: (12:45-13:00)

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	8.99	9.01	0.00	612.73	0.015	0.01	5.962	A
B-A	8.99	9.02	0.00	425.89	0.021	0.02	8.637	A
C-A	315.54	315.54	0.00					
C-B	11.69	11.71	0.00	590.93	0.020	0.02	8.214	A

From	A	B	C
A	0.000	4.000	488.000
B	1.000	0.000	4.000
C	300.000	7.000	0.000

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

From	To		
	A	B	C
A	0.00	0.01	0.99
B	0.20	0.00	0.80
C	0.98	0.02	0.00

Vehicle Mix

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

From	To		
	A	B	C
A	1.000	1.000	1.000
B	1.000	1.000	1.000
C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

From	To		
	A	B	C
A	0.000	0.000	0.000
B	0.000	0.000	0.000
C	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.01	6.18	0.01	A
B-A	0.00	10.19	0.00	B
C-A				
C-B	0.01	6.69	0.01	A
A-B				
A-C				

Main Results for each time segment

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

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	3.01	2.99	0.00	628.64	0.005	0.00	5.753	A
B-A	0.75	0.75	0.00	403.18	0.002	0.00	8.945	A
C-A	225.86	225.86	0.00					

C-B	5.27	5.23	0.00	584.65	0.009	0.01	6.212	A
A-B	3.01	3.01	0.00					
A-C	367.39	367.39	0.00					

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

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	3.60	3.59	0.00	611.24	0.006	0.01	5.923	A
B-A	0.90	0.90	0.00	382.72	0.002	0.00	9.428	A
C-A	269.69	269.69	0.00					
C-B	6.29	6.28	0.00	568.47	0.011	0.01	6.402	A
A-B	3.60	3.60	0.00					
A-C	438.70	438.70	0.00					

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

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	4.40	4.40	0.00	587.21	0.008	0.01	6.176	A
B-A	1.10	1.10	0.00	354.40	0.003	0.00	10.189	B
C-A	330.31	330.31	0.00					
C-B	7.71	7.68	0.00	546.10	0.014	0.01	6.685	A
A-B	4.40	4.40	0.00					
A-C	537.30	537.30	0.00					

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

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	4.40	4.40	0.00	587.20	0.008	0.01	6.176	A
B-A	1.10	1.10	0.00	354.41	0.003	0.00	10.188	B
C-A	330.31	330.31	0.00					
C-B	7.71	7.71	0.00	546.10	0.014	0.01	6.685	A
A-B	4.40	4.40	0.00					
A-C	537.30	537.30	0.00					

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

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	3.60	3.60	0.00	611.21	0.006	0.01	5.926	A
B-A	0.90	0.90	0.00	382.74	0.002	0.00	9.429	A
C-A	269.69	269.69	0.00					
C-B	6.29	6.30	0.00	568.47	0.011	0.01	6.403	A
A-B	3.60	3.60	0.00					
A-C	438.70	438.70	0.00					

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

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	3.01	3.02	0.00	628.59	0.005	0.00	5.754	A
B-A	0.75	0.75	0.00	403.22	0.002	0.00	8.944	A
C-A	225.86	225.86	0.00					
C-B	5.27	5.28	0.00	584.65	0.009	0.01	6.215	A
A-B	3.01	3.01	0.00					
A-C	367.39	367.39	0.00					

A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

The slopes and intercepts shown above do NOT include any corrections or adjustments. Streams may be combined, in which case capacity will be adjusted. Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Entry Flows

General Flows Data

Turning Proportions

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

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

Vehicle Mix

A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

The slopes and intercepts shown above do NOT include any corrections or adjustments. Streams may be combined, in which case capacity will be adjusted. Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Entry Flows

General Flows Data

Turning Proportions

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

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

Vehicle Mix

Pedestrian Crossings

Arm	Crossing Type
-----	---------------

		To		
		A	B	C
From	A	1,000	1,000	1,000
	B	1,000	1,000	1,000
	C	1,000	1,000	1,000

		To		
		A	B	C
From	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

Results Summary for whole modelled period

Stream	Max RPC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.15	7.08	0.18	A
B-A	0.17	12.82	0.21	B
C-A				
C-B	0.18	7.66	0.22	A
A-B				
A-C				

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

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	61.73	61.31	0.00	640.12	0.096	0.11	6.216	A
B-A	39.90	39.46	0.00	398.08	0.100	0.11	10.026	B
C-A	38.90	38.90	0.00					
C-B	70.77	70.24	0.00	603.28	0.117	0.13	67.46	A
A-B	29.36	29.36	0.00					
A-C	258.23	258.23	0.00					

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	73.72	73.81	0.00	622.94	0.118	0.13	6.551	A
B-A	47.85	47.51	0.00	373.35	0.128	0.14	11.043	B
C-A	440.50	440.50	0.00					
C-B	84.50	84.37	0.00	590.72	0.143	0.17	7.107	A
A-B	35.06	35.06	0.00					
A-C	308.35	308.35	0.00					

Stream	Total Demand	Entry Flow	Pedestrian Demand	Capacity	RFC	End Queue	Delay	LOS
--------	--------------	------------	-------------------	----------	-----	-----------	-------	-----

	(Veh/hr)	(Veh/hr)	(Ped/hr)	(Veh/hr)	(Veh/hr)	(Veh)	(s)
B-C	90.28	90.11	0.00	588.58	0.18	7.078	A
B-A	58.35	58.11	0.00	339.23	0.20	12.796	B
C-A	539.50	539.50	0.00	573.35	0.181	7.654	A
C-B	103.50	103.29	0.00		0.22		
A-B	42.94	42.94	0.00				
A-C	377.65	377.65	0.00				

Stream	Total Demand (veh/hr)	Entry Flow (veh/hr)	Pedestrian Demand (ped/hr)	Capacity (veh/hr)	RFC	End Queue (veh)	Delay (s)	LOS
B-C	90.28	90.28	0.00	598.42	0.151	0.18	7.083	A
B-A	58.35	58.35	0.00	339.19	0.172	0.21	12.818	B
C-A	539.50	539.50	0.00					
C-B	103.50	103.49	0.00	573.35	0.181	0.22	7.660	A
A-B	42.94	42.94	0.00					
A-C	377.65	377.65	0.00					

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	73.72	73.88	0.00	622.68	0.118	0.14	6.561	A
B-A	47.65	47.88	0.00	373.30	0.128	0.15	11.069	B
C-A	44.50	44.50	0.00					
C-B	84.50	84.71	0.00	590.72	0.143	0.17	7.116	A
A-B	35.06	35.06	0.00					
A-C	303.35	308.35	0.00					

Stream	Total Demand (Veh/hr)	Entry Flow (Veh/hr)	Pedestrian Demand (Ped/hr)	Capacity (Veh/hr)	RFC	End Queue (Veh)	Delay (s)	LOS
B-C	61.73	61.84	0.00	639.73	0.097	0.11	6.232	A
B-A	39.90	40.04	0.00	397.97	0.100	0.11	10.063	B
C-A	308.90	308.90	0.00					
C-B	70.77	70.91	0.00	603.29	0.117	0.13	6.763	A
A-B	29.36	29.36	0.00					
A-C	258.23	258.23	0.00					

Existing Layout - 2015 Base plus Development - Average, Saturday

Analysis Set Details

Name	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
Existing Layout			100.000	

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
------	---------------	------------------	-------------	----------------------	--------------------------	---------------------------	--------------------------------	---------------------------	--------------------------	--------

2015 Base plus Development - Average Saturday	2015 Base plus Development - Average Saturday	ONE HOUR	11:45	13:15	90	15
---	---	----------	-------	-------	----	----

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
(unfilled)	T-Junction	Two-way	A,B,C	8.37	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm Type
A	Foresters Way (W)		Major
B	Site Access		Minor
C	Foresters Way (E)		Major

Major Arm Geometry

Arm	Width of cartway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	9.00		0.00	✓	3.00	70.00		

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Right) (m)	Lane Width (Left) (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length (m)	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.50	5.00	3.80	3.60	✓	40	20

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (veh/hr)	Slope for A-B	Slope for A-C	Slope for C-B
1	B-A	518.838	0.082	0.206	0.131
1	B-C	729.842	0.097	0.246	-
1	C-B	668.004	0.225	0.225	-

The slopes and intercepts shown above do NOT include any corrections or adjustments. Streams may be combined, in which case capacity will be adjusted. Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

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

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	412.00	100.000
B	ONE HOUR	✓	140.00	100.000
C	ONE HOUR	✓	441.00	100.000

Turning Proportions

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

	To	A	B	C
From A	A	0.000	49.000	363.000
From B	B	45.000	0.000	95.000
From C	C	345.000	96.000	0.000

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

	To	A	B	C
From A	A	0.00	0.12	0.98
From B	B	0.32	0.00	0.68
From C	C	0.78	0.22	0.00

Vehicle Mix

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

	To	A	B	C
From A	A	1.000	1.000	1.000
From B	B	1.000	1.000	1.000
From C	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

	To	A	B	C
From A	A	0.000	0.000	0.000
From B	B	0.000	0.000	0.000
From C	C	0.000	0.000	0.000