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Transportation
Highways Development and Control
Regeneration Portfolio
Municipal Buildings
Dale Street
Liverpool
L2 2DH

20 July 2011

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Our ref : 6087/IEL/TLH/002

Dear Miss Tong

Land off Goodlass Road, Speke, Liverpool, LS24
Planning Application 11F/0780

I refer to the above planning application referenced 11F/0780 to erect 7 no. B8 units and 9 no. B2 units with associated parking and landscaping.

Sanderson Associates have prepared a Transport Assessment in support of the application referenced 6087/RIG/002/01 March 2011.

Planning application consultation comments have been received from Highways Development Control to the Transport Assessment dated 1 June 2011.

This letter addresses the issues raised by Highways and we would be grateful if you would accept this additional information in response to the comments raised.

1. Car Parking Standards

It is noted that Highways agree that the proposed number of parking spaces for the development is in keeping with SPD standards.

It is accepted that a planning condition can be applied to the consent which requires details of disabled parking provision, secure and covered motorcycle provision, and cycle parking provision to be provided for the Highway Authority's approval prior to the occupation of the units.

2. Traffic Counts

The traffic count used within the Transport Assessment was undertaken at the Speke Hall Road / Goodlass Road / Edwards Lane junction on Wednesday 9 May 2007.

A new traffic survey was commissioned from Road Data Services at the junction which was undertaken on Thursday 16 June 2011. The date of the survey was agreed with the Highway Authority in advance. The results of the survey have been checked and varied by

the survey company and the traffic flows appeared normal with nothing out of the ordinary observed.

A summary and comparison of the 2007 and 2011 survey data for the network peak hour periods can be found at Appendix A to the rear of this letter.

As can be seen from the data, the flows along both Edward's Lane and Goodlass Road have remained relatively consistent, albeit a slight increase on Goodlass Road and a slight decrease on Edward's Lane. With respect to Speke Hall Road, there is a noticeable difference between the flows observed in 2007 and those observed recently in 2011.

The tidal flow present in 2007 showed a dominant south to north flow in the AM and a north to south flow in the PM which is reserved in the 2011 flows. There has been a general decrease in the 2011 through flows from the 2007, with particular reference to the southbound AM flow, which has decreased by some 570 vehicles.

It is also the case that the Dylan Harvey Office units on Goodlass Road have been built and partly occupied and this was not the case in 2007.

The reduction in traffic flows follows the lines identified within the Transport Assessment with the exception of the southbound decrease which is very significant and you will appreciate is why we have requested confirmation from the survey company of that day's observation.

It is understood that the Highway Authority have accepted the 2011 traffic survey.

3. Committee Development

Details of development trips for committed development identified by Highways have been obtained from the Highways Authority.

Details of the trip information can be found at Appendix B to the rear of this letter.

It is noted that the trips generated by the Asda do not need to be added to the assessment flows as these will already be counted within the June 2011 background traffic flows as the development is now operational.

The specific location of each committed development has been considered in assigning traffic flows onto the highway network. It is understood that only the Former Tea Factory development is served directly from Speke Hall Road and that the remaining committed developments identified by the Council are located south of the A561. As such and in accordance with this information the following sets out the percentage assignment of the each committed development onto Speke Hall Road:-

Traffic Assignment

Liverpool International Business Park	25%
Former Tea Factory site	50%
Plot H1C Leeward Drive	25%
Blue Lands South	25%

The committed development traffic distribution along Speke Hall Road is identified on the summary contained at Appendix C to the rear of this letter.

4. TRICS Assessment

The development has been assessed for worst case B1 use for units C1-C4 and D1-D3 with the remaining business units A1-A5 and B1-B4 assessed using B2 development use.

The floor area for the various uses is as follows:-

B1 (Units C1-C4 and D1-D3) = 1,352 sqm GFA

B2 (Units A1-A5 and B1-B4) = 3,321 sqm GFA

The TRICS database version 2011 (b) V6.8.1 has been used to predict development trip generations for the Business Park development (B1 use class) and Industrial Estate (B2 use class). Multimodal surveys have been used with selection criteria chosen which reflects the development proposals. Details of the TRICS data can be found at Appendix D to the rear of this report and summarised:-

B1 Business Park

	Trip Rate per 100sqm			Trips for 1,352 sqm		
	Inbound	Outbound	Two-way	Inbound	Outbound	Two-way
08.00-09.00	1.760	0.235	1.995	24	3	27
17.00-18.00	0.194	1.317	1.511	3	18	20

B2 Industrial Estate

	Trip Rate per 100sqm			Trips for 3,321 sqm		
	Inbound	Outbound	Two-way	Inbound	Outbound	Two-way
08.00-09.00	0.860	0.399	1.259	29	13	42
17.00-18.00	0.209	0.685	0.894	7	23	30

Summary Development Flows

B1 + B2	Inbound	Outbound	Two-way
08.00-09.00	53	16	69
17.00-18.00	10	41	50

The development traffic flows have been assigned with a 50/50 split onto Speke Hall Road at the Goodlass Road junction.

5. Capacity Assessment

At the time of the June 2011 traffic survey the Liverpool Business Centre development located opposite the application site on Goodlass Road is thought to be approximately 20% occupied. To increase the robustness of the assessment, traffic generations from the full development have been estimated using trip rates for B1 use identified in Section 4 above. A summary of peak hour traffic generations is as follows for the total floor area of 4,872 sqm GFA.

Liverpool Business Centre 4,872 sqm	Inbound	Outbound	Two-way
08.00-09.00			
Trip Rate	1.760	0.235	1.995
Trips	86	11	97
17.00-18.00			
Trip Rate	0.194	1.317	1.511
Trips	9	64	74

These traffic flows have been assigned with a 50/50 split at the Goodlass Road / Speke Hall Road Junction.

This is extremely robust as an element of double counting has occurred because 20% of traffic from Liverpool Business Centre is already included within the June 2011 traffic surveys. Therefore, a total of 120% of this development has been assessed.

The June 2011 traffic survey has been growthed to 2016 (5 years network traffic growth) using NTEM 5.4 from TEMPRO 6.2 Table AF08 for Liverpool Main. The growth factors are:-

AM Peak Hour 2011 – 2016 = 1.0996

PM Peak Hour 2011 – 2016 = 1.0984

Figure 1 at Appendix E shows the 2011 and 2016 base traffic flows plus committed development traffic flows and proposed development traffic including Liverpool Business Centre traffic.

The capacity of the Speke Hall Road / Goodlass Road / Edwards Lane junction has been reassessed using PICADY. Assessments have been undertaken at 2011 and 2016 using committed development and development traffic as detailed in Appendix E. The PICADY results can be found at Appendix F and summarised:-

Arm A = Speke Hall Road North
 Arm B = Edwards Lane
 Arm C = Speke Hall Road South
 Arm D = Goodlass Road

	AM Peak Hour 08.00-09.00		PM Peak Hour 17.00-18.00	
	Max RFC	Max Queue	Max RFC	Max Queue
2011				
B-ACD	0.103	0.11	0.122	0.14
A-D	0.257	0.34	0.040	0.04
D-AB	0.102	0.11	0.246	0.32
D-BC	0.294	0.40	0.446	0.78
C-B	0.135	0.16	0.037	0.04
2016				
B-ACD	0.128	0.15	0.150	0.17
A-D	0.280	0.39	0.044	0.05
D-AB	0.119	0.13	0.273	0.37
D-BC	0.373	0.57	0.525	1.06
C-B	0.153	0.18	0.028	0.03

The junction assessment results show that there are no predicted capacity problems at 2011 or 2016 with all ratio's of flow to capacity remaining well below the theoretical limit of 0.85 RFC.

6. Accident Data Record

Personal Injury Accident Statistics have been obtained from 20/20 Liverpool for the past 5 year period.

The accident data is contained at Appendix G to the rear of this letter.

The data shows that there has been 5 slight accidents in the vicinity of the Speke Hall Road / Goodlass Road / Edwards Lane Junction between 13/4/2005 and 12/04/2010. No serious or fatal accidents have occurred.

A summary of the Accident statistics is as follows

Slight Accidents	From 13/04 2005	2006	2007	2008	2009	To 12/04 2010	Total
Right Turn	3	0	0	0	0	0	3
Vehicle Reversing	0	0	1	0	0	0	1
Cyclists on footway	0	1		0	0	0	1
Total	0	1		0	0	0	1
	3	1	1	0	0	0	5

The analysis shows that there has not been any significant accident history in the vicinity of the junction and no accidents have been recorded from 2007.

The traffic surveys undertaken in 2007 and 2011 have shown that traffic flows on Speke Hall Road have reduced significantly in recent times. It is therefore anticipated that the comparatively modest traffic increases on Goodlass Road and Speke Hall Road, as a result of the development, should not detrimentally affect the accident history of the junction.

7. Summary

This additional information supplements Transport Assessment reference 6087/RIG/002/011 submitted in support of planning application referenced 11F/0780 and addresses Highway Development Control planning application consultation comments.

A robust and comprehensive re-assessment of the development traffic impact has been undertaken including:-

- Updated traffic survey (June 2011)
- Development traffic generations for B1 and B2 land use classifications.
- Committed Development traffic identified by the Highway Authority.
- Traffic generations from a fully occupied Liverpool Business Centre.
- Junction modelling at 2011 and 2016 using 5 years network traffic growth.

The re-assessment of the Speke Hall Road / Goodlass Road / Edwards Lane Junction, modelled as detailed above, has shown that the development will not have any detrimental impact on junction capacity or queuing.

Personal Injury Accident records for the past 5 years has shown that there isn't an accident history problem at the Speke Hall Road / Goodlass Road / Edward's Lane Junction and the development is not predicted to have a detrimental affect on the junctions accident record.

There are no further highway reasons why the development should not proceed.

The views of the Highway Authority are sought on this additional information.

I look forward to your response.

Yours sincerely

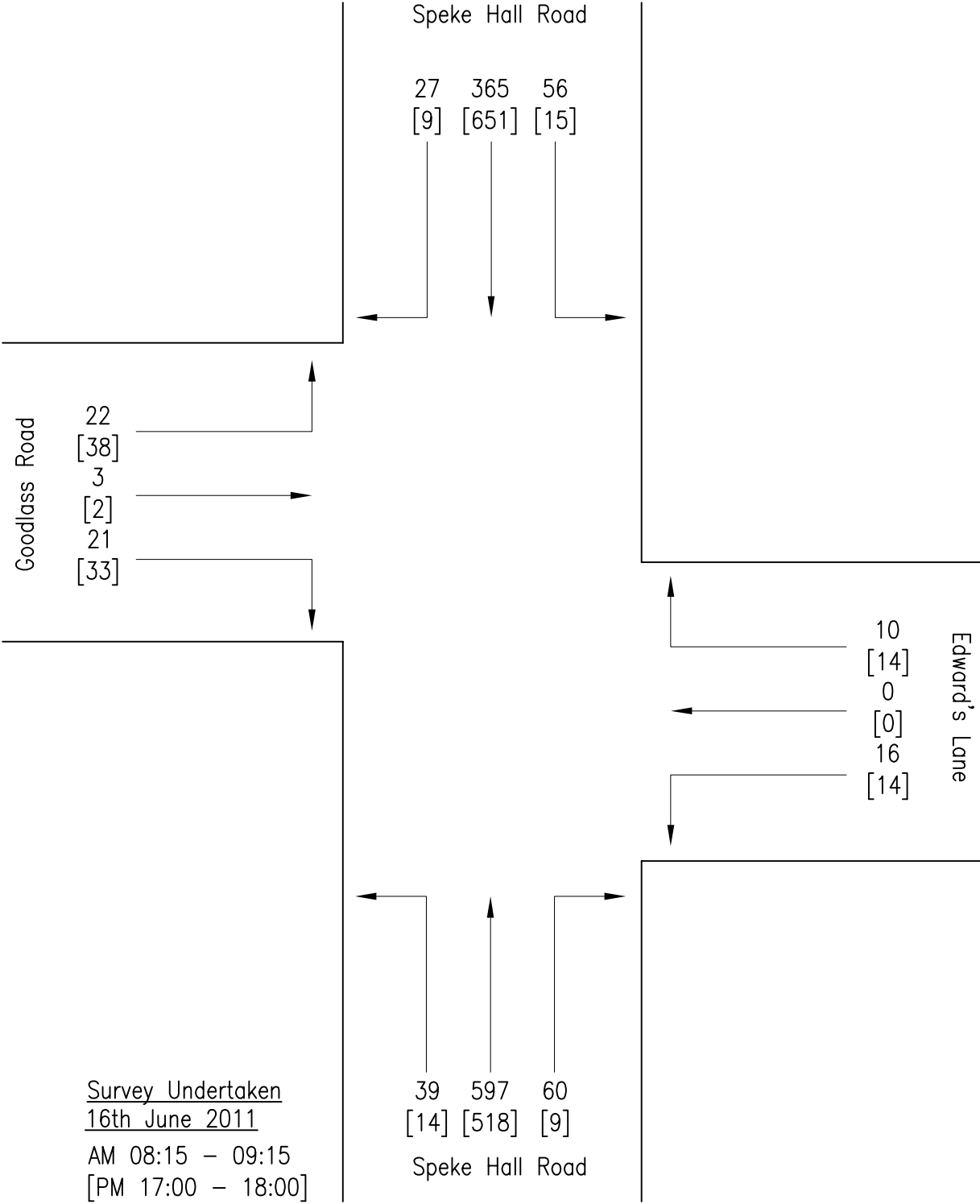
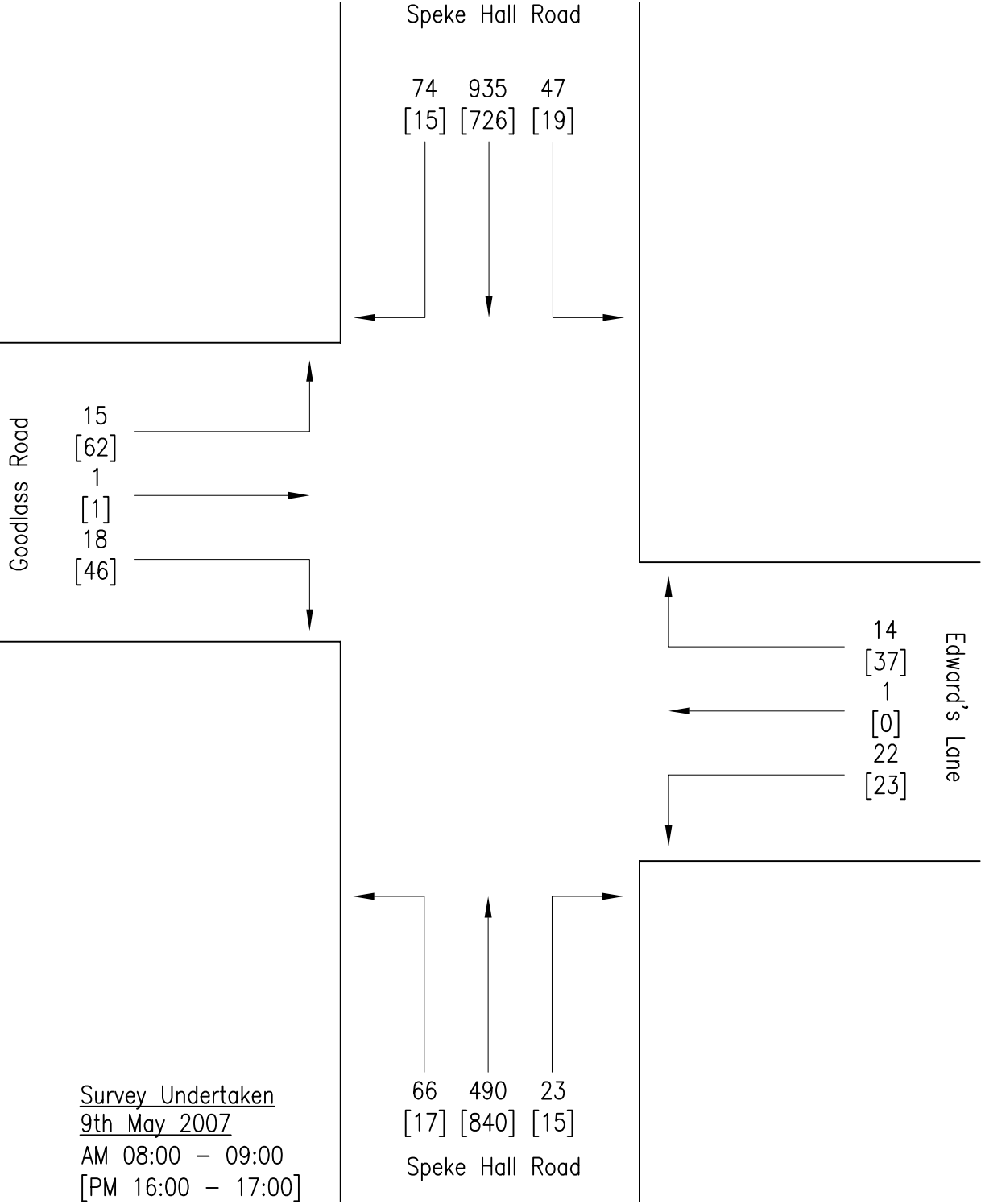


Ian Ladbroke, MIHE MCIHT
Principal Engineer

Copy to: C. Heath Barnfield Construction

APPENDIX A

Peak Hour Traffic Survey Data



APPENDIX B

Development Trips for Committed Development (in vehicle numbers)

Application number	Site address	Development description	Method of attaining trips
09RM/1787	Cell 4B, Liverpool International Business Park – 14,189m ² of commercial office space	To erect office development comprising 6 x 3 storey blocks and 1 x 3-4 storey block; layout car park and new access point (Details of development following grant of Outline planning permission number 01O/1843)	TRICS
09O/0430	Former Tea Factory site on Speke Hall Road	To erect mixed use development comprising industrial/warehouse units, (class B2/B8) offices (class B1) 2 no. restaurant units (class A3) and hotel (Outline Application)	Transport Assessment
08F/2831	Asda Hunts Cross	To carry out internal alterations to shopping mall in connection with increasing retail floor-space of existing ASDA store, carry out external alterations to building and realign car park	Transport Assessment
09F/1431	Plot H1C, Leeward Drive, Estuary Business Park	To erect 4 storey office development with associated car parking and landscaping	Transport Statement
07RM/2659	Blue Lands South on Speke Hall Avenue	To erect B1, B2, and B8 land-uses: Hotel, Car Showroom, and Nursery	Transport Assessment

Table 17 Committed Developments in the Local Area

Time	Arrivals	Departures
08:00 – 09:00	283	313
17:00 – 18:00	20	269

Table 18 Trip Rates for 09RM/1787

Time	Arrivals	Departures
08:00 – 09:00	127	25
17:00 – 18:00	124	37
13:00 – 14:00	57	36

Table 19 Development Trip Rates for Former Tea Factory Site

Time	Arrivals	Departures
16:00 – 17:00	23	25
13:00 – 14:00	6	8

Table 20 Development Trip Rates for Asda Hunts Cross

Time	Arrivals	Departures
08:00 – 09:00	150	14
17:00 – 18:00	13	127

Table 21 Development Trip Rates for Leeward Drive

Time	Arrivals	Departures
08:00 – 09:00	176	136
17:00 – 18:00	128	143
13:00 – 14:00	68	85

Table 22 Development Trip Rates for Blue Lands South

* The trips generated by the ASDA do not need to be added to the assessment flows as these will already be accounted for within the background traffic flows as the development is now operational.

APPENDIX C

Committed Development

Trips

L'Pool Int Business Park	Arr	Dep
08:00 - 09:00	283	313
17:00 - 18:00	20	269

Former Tea Factory	Arr	Dep
08:00 - 09:00	127	25
17:00 - 18:00	124	37

Plot H1C Leeward Drive	Arr	Dep
08:00 - 09:00	150	14
17:00 - 18:00	13	127

Blue Lands South	Arr	Dep
08:00 - 09:00	176	136
17:00 - 18:00	128	143

Distributed along Speke Hall Road

25%	Arr	Dep
08:00 - 09:00	71	78
17:00 - 18:00	5	67

50%	Arr	Dep
08:00 - 09:00	64	13
17:00 - 18:00	62	19

25%	Arr	Dep
08:00 - 09:00	38	4
17:00 - 18:00	3	32

25%	Arr	Dep
08:00 - 09:00	44	34
17:00 - 18:00	32	36

Total	Arr	Dep
08:00 - 09:00	216	128
17:00 - 18:00	102	153

APPENDIX D

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : B - BUSINESS PARK
MULTI-MODAL VEHICLES

Selected regions and areas:

03	SOUTH WEST	
	DC DORSET	1 days
	WL WILTSHIRE	1 days
04	EAST ANGLIA	
	SF SUFFOLK	1 days
05	EAST MIDLANDS	
	NT NOTTINGHAMSHIRE	1 days
06	WEST MIDLANDS	
	SH SHROPSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NO NORTH LINCOLNSHIRE	1 days
10	WALES	
	CF CARDIFF	1 days

Filtering Stage 2 selection:

Parameter: Gross floor area
Range: 1300 to 2600 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/03 to 16/06/09

Selected survey days:

Monday	1 days
Tuesday	1 days
Wednesday	1 days
Thursday	3 days
Friday	1 days

Selected survey types:

Manual count	7 days
Directional ATC Count	0 days

Selected Locations:

Suburban Area (PPS6 Out of Centre)	4
Edge of Town	3

Selected Location Sub Categories:

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

LIST OF SITES relevant to selection parameters

- | | | | |
|---|------------------------------------|-------------------------------|--------------------|
| 1 | CF-02-B-02 | BUSINESS/TECH. UNITS, CARDIFF | CARDIFF |
| | CRICKHOWELL ROAD | | |
| | ST MELLONS | | |
| | CARDIFF | | |
| | Suburban Area (PPS6 Out of Centre) | | |
| | No Sub Category | | |
| | Total Gross floor area: | 2587 sqm | |
| 2 | DC-02-B-01 | BUSINESS PARK, POOLE | DORSET |
| | COMMERCIAL ROAD | | |
| | POOLE | | |
| | Suburban Area (PPS6 Out of Centre) | | |
| | Built-Up Zone | | |
| | Total Gross floor area: | 1570 sqm | |
| 3 | NO-02-B-02 | BUSINESS PARK, SCUNTHORPE | NORTH LINCOLNSHIRE |
| | DONCASTER ROAD | | |
| | SCUNTHORPE | | |
| | Edge of Town | | |
| | Residential Zone | | |
| | Total Gross floor area: | 1574 sqm | |
| 4 | NT-02-B-01 | BUSINESS PARK, NOTTINGHAM | NOTTINGHAMSHIRE |
| | PARK LANE | | |
| | NOTTINGHAM | | |
| | Suburban Area (PPS6 Out of Centre) | | |
| | No Sub Category | | |
| | Total Gross floor area: | 2321 sqm | |
| 5 | SF-02-B-01 | BUSINESS PK, BURY ST EDMUNDS | SUFFOLK |
| | KEMPSON WAY | | |
| | BURY ST EDMUNDS | | |
| | Edge of Town | | |
| | Industrial Zone | | |
| | Total Gross floor area: | 2480 sqm | |
| 6 | SH-02-B-03 | BUSINESS CENTRE, TELFORD | SHROPSHIRE |
| | CASTLE STREET | | |
| | HADLEY | | |
| | TELFORD | | |
| | Suburban Area (PPS6 Out of Centre) | | |
| | No Sub Category | | |
| | Total Gross floor area: | 1300 sqm | |
| 7 | WL-02-B-01 | BUSINESS PK, WOOTTON BASSETT | WILTSHIRE |
| | HIGH STREET | | |
| | COPED HALL | | |
| | WOOTTON BASSETT | | |
| | Edge of Town | | |
| | Residential Zone | | |
| | Total Gross floor area: | 2600 sqm | |

TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK

MULTI-MODAL 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 - 00:30	0	0	0.000	0	0	0.000	0	0	0.000
00:30 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 01:30	0	0	0.000	0	0	0.000	0	0	0.000
01:30 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 02:30	0	0	0.000	0	0	0.000	0	0	0.000
02:30 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 03:30	0	0	0.000	0	0	0.000	0	0	0.000
03:30 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 04:30	0	0	0.000	0	0	0.000	0	0	0.000
04:30 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 05:30	0	0	0.000	0	0	0.000	0	0	0.000
05:30 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 06:30	0	0	0.000	0	0	0.000	0	0	0.000
06:30 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 07:30	7	2062	0.090	7	2062	0.035	7	2062	0.125
07:30 - 08:00	7	2062	0.360	7	2062	0.069	7	2062	0.429
08:00 - 08:30	7	2062	0.520	7	2062	0.076	7	2062	0.596
08:30 - 09:00	7	2062	1.240	7	2062	0.159	7	2062	1.399
09:00 - 09:30	7	2062	0.721	7	2062	0.159	7	2062	0.880
09:30 - 10:00	7	2062	0.340	7	2062	0.152	7	2062	0.492
10:00 - 10:30	7	2062	0.312	7	2062	0.229	7	2062	0.541
10:30 - 11:00	7	2062	0.180	7	2062	0.243	7	2062	0.423
11:00 - 11:30	7	2062	0.243	7	2062	0.326	7	2062	0.569
11:30 - 12:00	7	2062	0.249	7	2062	0.367	7	2062	0.616
12:00 - 12:30	7	2062	0.277	7	2062	0.547	7	2062	0.824
12:30 - 13:00	7	2062	0.326	7	2062	0.263	7	2062	0.589
13:00 - 13:30	7	2062	0.402	7	2062	0.305	7	2062	0.707
13:30 - 14:00	7	2062	0.388	7	2062	0.291	7	2062	0.679
14:00 - 14:30	7	2062	0.236	7	2062	0.180	7	2062	0.416
14:30 - 15:00	7	2062	0.194	7	2062	0.215	7	2062	0.409
15:00 - 15:30	7	2062	0.270	7	2062	0.312	7	2062	0.582
15:30 - 16:00	7	2062	0.215	7	2062	0.326	7	2062	0.541
16:00 - 16:30	7	2062	0.194	7	2062	0.492	7	2062	0.686
16:30 - 17:00	7	2062	0.125	7	2062	0.547	7	2062	0.672
17:00 - 17:30	7	2062	0.139	7	2062	0.728	7	2062	0.867
17:30 - 18:00	7	2062	0.055	7	2062	0.589	7	2062	0.644
18:00 - 18:30	7	2062	0.055	7	2062	0.284	7	2062	0.339
18:30 - 19:00	7	2062	0.042	7	2062	0.146	7	2062	0.188
19:00 - 19:30	0	0	0.000	0	0	0.000	0	0	0.000
19:30 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 20:30	0	0	0.000	0	0	0.000	0	0	0.000
20:30 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 21:30	0	0	0.000	0	0	0.000	0	0	0.000
21:30 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 22:30	0	0	0.000	0	0	0.000	0	0	0.000
22:30 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 23:30	0	0	0.000	0	0	0.000	0	0	0.000
23:30 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			7.173			7.040			14.213

Parameter summary

Trip rate parameter range selected:	1300 - 2600 (units: sqm)
Survey date date range:	01/01/03 - 16/06/09
Number of weekdays (Monday-Friday):	7
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK

MULTI-MODAL CYCLISTS

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 - 00:30	0	0	0.000	0	0	0.000	0	0	0.000
00:30 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 01:30	0	0	0.000	0	0	0.000	0	0	0.000
01:30 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 02:30	0	0	0.000	0	0	0.000	0	0	0.000
02:30 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 03:30	0	0	0.000	0	0	0.000	0	0	0.000
03:30 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 04:30	0	0	0.000	0	0	0.000	0	0	0.000
04:30 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 05:30	0	0	0.000	0	0	0.000	0	0	0.000
05:30 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 06:30	0	0	0.000	0	0	0.000	0	0	0.000
06:30 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 07:30	7	2062	0.000	7	2062	0.000	7	2062	0.000
07:30 - 08:00	7	2062	0.000	7	2062	0.007	7	2062	0.007
08:00 - 08:30	7	2062	0.007	7	2062	0.000	7	2062	0.007
08:30 - 09:00	7	2062	0.014	7	2062	0.000	7	2062	0.014
09:00 - 09:30	7	2062	0.007	7	2062	0.000	7	2062	0.007
09:30 - 10:00	7	2062	0.000	7	2062	0.000	7	2062	0.000
10:00 - 10:30	7	2062	0.000	7	2062	0.000	7	2062	0.000
10:30 - 11:00	7	2062	0.000	7	2062	0.000	7	2062	0.000
11:00 - 11:30	7	2062	0.000	7	2062	0.000	7	2062	0.000
11:30 - 12:00	7	2062	0.000	7	2062	0.000	7	2062	0.000
12:00 - 12:30	7	2062	0.000	7	2062	0.007	7	2062	0.007
12:30 - 13:00	7	2062	0.007	7	2062	0.000	7	2062	0.007
13:00 - 13:30	7	2062	0.014	7	2062	0.000	7	2062	0.014
13:30 - 14:00	7	2062	0.000	7	2062	0.000	7	2062	0.000
14:00 - 14:30	7	2062	0.000	7	2062	0.007	7	2062	0.007
14:30 - 15:00	7	2062	0.000	7	2062	0.000	7	2062	0.000
15:00 - 15:30	7	2062	0.000	7	2062	0.000	7	2062	0.000
15:30 - 16:00	7	2062	0.000	7	2062	0.007	7	2062	0.007
16:00 - 16:30	7	2062	0.007	7	2062	0.000	7	2062	0.007
16:30 - 17:00	7	2062	0.000	7	2062	0.000	7	2062	0.000
17:00 - 17:30	7	2062	0.000	7	2062	0.007	7	2062	0.007
17:30 - 18:00	7	2062	0.000	7	2062	0.007	7	2062	0.007
18:00 - 18:30	7	2062	0.000	7	2062	0.007	7	2062	0.007
18:30 - 19:00	7	2062	0.000	7	2062	0.000	7	2062	0.000
19:00 - 19:30	0	0	0.000	0	0	0.000	0	0	0.000
19:30 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 20:30	0	0	0.000	0	0	0.000	0	0	0.000
20:30 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 21:30	0	0	0.000	0	0	0.000	0	0	0.000
21:30 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 22:30	0	0	0.000	0	0	0.000	0	0	0.000
22:30 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 23:30	0	0	0.000	0	0	0.000	0	0	0.000
23:30 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			0.056			0.049			0.105

Parameter summary

Trip rate parameter range selected:	1300 - 2600 (units: sqm)
Survey date date range:	01/01/03 - 16/06/09
Number of weekdays (Monday-Friday):	7
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK

MULTI-MODAL VEHICLE OCCUPANTS

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 - 00:30	0	0	0.000	0	0	0.000	0	0	0.000
00:30 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 01:30	0	0	0.000	0	0	0.000	0	0	0.000
01:30 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 02:30	0	0	0.000	0	0	0.000	0	0	0.000
02:30 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 03:30	0	0	0.000	0	0	0.000	0	0	0.000
03:30 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 04:30	0	0	0.000	0	0	0.000	0	0	0.000
04:30 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 05:30	0	0	0.000	0	0	0.000	0	0	0.000
05:30 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 06:30	0	0	0.000	0	0	0.000	0	0	0.000
06:30 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 07:30	7	2062	0.097	7	2062	0.035	7	2062	0.132
07:30 - 08:00	7	2062	0.381	7	2062	0.062	7	2062	0.443
08:00 - 08:30	7	2062	0.568	7	2062	0.076	7	2062	0.644
08:30 - 09:00	7	2062	1.330	7	2062	0.125	7	2062	1.455
09:00 - 09:30	7	2062	0.783	7	2062	0.166	7	2062	0.949
09:30 - 10:00	7	2062	0.402	7	2062	0.166	7	2062	0.568
10:00 - 10:30	7	2062	0.326	7	2062	0.256	7	2062	0.582
10:30 - 11:00	7	2062	0.215	7	2062	0.263	7	2062	0.478
11:00 - 11:30	7	2062	0.284	7	2062	0.374	7	2062	0.658
11:30 - 12:00	7	2062	0.249	7	2062	0.416	7	2062	0.665
12:00 - 12:30	7	2062	0.367	7	2062	0.679	7	2062	1.046
12:30 - 13:00	7	2062	0.423	7	2062	0.298	7	2062	0.721
13:00 - 13:30	7	2062	0.471	7	2062	0.367	7	2062	0.838
13:30 - 14:00	7	2062	0.471	7	2062	0.340	7	2062	0.811
14:00 - 14:30	7	2062	0.277	7	2062	0.201	7	2062	0.478
14:30 - 15:00	7	2062	0.263	7	2062	0.277	7	2062	0.540
15:00 - 15:30	7	2062	0.326	7	2062	0.388	7	2062	0.714
15:30 - 16:00	7	2062	0.256	7	2062	0.388	7	2062	0.644
16:00 - 16:30	7	2062	0.229	7	2062	0.568	7	2062	0.797
16:30 - 17:00	7	2062	0.146	7	2062	0.631	7	2062	0.777
17:00 - 17:30	7	2062	0.146	7	2062	0.838	7	2062	0.984
17:30 - 18:00	7	2062	0.069	7	2062	0.686	7	2062	0.755
18:00 - 18:30	7	2062	0.069	7	2062	0.312	7	2062	0.381
18:30 - 19:00	7	2062	0.042	7	2062	0.194	7	2062	0.236
19:00 - 19:30	0	0	0.000	0	0	0.000	0	0	0.000
19:30 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 20:30	0	0	0.000	0	0	0.000	0	0	0.000
20:30 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 21:30	0	0	0.000	0	0	0.000	0	0	0.000
21:30 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 22:30	0	0	0.000	0	0	0.000	0	0	0.000
22:30 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 23:30	0	0	0.000	0	0	0.000	0	0	0.000
23:30 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			8.190			8.106			16.296

Parameter summary

Trip rate parameter range selected:	1300 - 2600 (units: sqm)
Survey date date range:	01/01/03 - 16/06/09
Number of weekdays (Monday-Friday):	7
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK

MULTI-MODAL PEDESTRIANS

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 - 00:30	0	0	0.000	0	0	0.000	0	0	0.000
00:30 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 01:30	0	0	0.000	0	0	0.000	0	0	0.000
01:30 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 02:30	0	0	0.000	0	0	0.000	0	0	0.000
02:30 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 03:30	0	0	0.000	0	0	0.000	0	0	0.000
03:30 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 04:30	0	0	0.000	0	0	0.000	0	0	0.000
04:30 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 05:30	0	0	0.000	0	0	0.000	0	0	0.000
05:30 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 06:30	0	0	0.000	0	0	0.000	0	0	0.000
06:30 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 07:30	7	2062	0.000	7	2062	0.000	7	2062	0.000
07:30 - 08:00	7	2062	0.007	7	2062	0.007	7	2062	0.014
08:00 - 08:30	7	2062	0.055	7	2062	0.014	7	2062	0.069
08:30 - 09:00	7	2062	0.111	7	2062	0.000	7	2062	0.111
09:00 - 09:30	7	2062	0.000	7	2062	0.000	7	2062	0.000
09:30 - 10:00	7	2062	0.049	7	2062	0.014	7	2062	0.063
10:00 - 10:30	7	2062	0.042	7	2062	0.021	7	2062	0.063
10:30 - 11:00	7	2062	0.021	7	2062	0.014	7	2062	0.035
11:00 - 11:30	7	2062	0.021	7	2062	0.028	7	2062	0.049
11:30 - 12:00	7	2062	0.028	7	2062	0.028	7	2062	0.056
12:00 - 12:30	7	2062	0.090	7	2062	0.042	7	2062	0.132
12:30 - 13:00	7	2062	0.069	7	2062	0.049	7	2062	0.118
13:00 - 13:30	7	2062	0.076	7	2062	0.125	7	2062	0.201
13:30 - 14:00	7	2062	0.125	7	2062	0.055	7	2062	0.180
14:00 - 14:30	7	2062	0.028	7	2062	0.028	7	2062	0.056
14:30 - 15:00	7	2062	0.021	7	2062	0.014	7	2062	0.035
15:00 - 15:30	7	2062	0.000	7	2062	0.007	7	2062	0.007
15:30 - 16:00	7	2062	0.042	7	2062	0.007	7	2062	0.049
16:00 - 16:30	7	2062	0.014	7	2062	0.021	7	2062	0.035
16:30 - 17:00	7	2062	0.007	7	2062	0.007	7	2062	0.014
17:00 - 17:30	7	2062	0.007	7	2062	0.076	7	2062	0.083
17:30 - 18:00	7	2062	0.021	7	2062	0.049	7	2062	0.070
18:00 - 18:30	7	2062	0.007	7	2062	0.021	7	2062	0.028
18:30 - 19:00	7	2062	0.000	7	2062	0.007	7	2062	0.007
19:00 - 19:30	0	0	0.000	0	0	0.000	0	0	0.000
19:30 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 20:30	0	0	0.000	0	0	0.000	0	0	0.000
20:30 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 21:30	0	0	0.000	0	0	0.000	0	0	0.000
21:30 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 22:30	0	0	0.000	0	0	0.000	0	0	0.000
22:30 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 23:30	0	0	0.000	0	0	0.000	0	0	0.000
23:30 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			0.841			0.634			1.475

Parameter summary

Trip rate parameter range selected:	1300 - 2600 (units: sqm)
Survey date date range:	01/01/03 - 16/06/09
Number of weekdays (Monday-Friday):	7
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK

MULTI-MODAL PUBLIC TRANSPORT USERS

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 - 00:30	0	0	0.000	0	0	0.000	0	0	0.000
00:30 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 01:30	0	0	0.000	0	0	0.000	0	0	0.000
01:30 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 02:30	0	0	0.000	0	0	0.000	0	0	0.000
02:30 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 03:30	0	0	0.000	0	0	0.000	0	0	0.000
03:30 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 04:30	0	0	0.000	0	0	0.000	0	0	0.000
04:30 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 05:30	0	0	0.000	0	0	0.000	0	0	0.000
05:30 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 06:30	0	0	0.000	0	0	0.000	0	0	0.000
06:30 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 07:30	7	2062	0.000	7	2062	0.000	7	2062	0.000
07:30 - 08:00	7	2062	0.007	7	2062	0.000	7	2062	0.007
08:00 - 08:30	7	2062	0.042	7	2062	0.000	7	2062	0.042
08:30 - 09:00	7	2062	0.028	7	2062	0.000	7	2062	0.028
09:00 - 09:30	7	2062	0.007	7	2062	0.000	7	2062	0.007
09:30 - 10:00	7	2062	0.000	7	2062	0.007	7	2062	0.007
10:00 - 10:30	7	2062	0.000	7	2062	0.000	7	2062	0.000
10:30 - 11:00	7	2062	0.007	7	2062	0.000	7	2062	0.007
11:00 - 11:30	7	2062	0.000	7	2062	0.000	7	2062	0.000
11:30 - 12:00	7	2062	0.000	7	2062	0.000	7	2062	0.000
12:00 - 12:30	7	2062	0.000	7	2062	0.000	7	2062	0.000
12:30 - 13:00	7	2062	0.000	7	2062	0.000	7	2062	0.000
13:00 - 13:30	7	2062	0.000	7	2062	0.000	7	2062	0.000
13:30 - 14:00	7	2062	0.000	7	2062	0.000	7	2062	0.000
14:00 - 14:30	7	2062	0.000	7	2062	0.000	7	2062	0.000
14:30 - 15:00	7	2062	0.000	7	2062	0.007	7	2062	0.007
15:00 - 15:30	7	2062	0.007	7	2062	0.000	7	2062	0.007
15:30 - 16:00	7	2062	0.000	7	2062	0.007	7	2062	0.007
16:00 - 16:30	7	2062	0.000	7	2062	0.007	7	2062	0.007
16:30 - 17:00	7	2062	0.000	7	2062	0.021	7	2062	0.021
17:00 - 17:30	7	2062	0.000	7	2062	0.007	7	2062	0.007
17:30 - 18:00	7	2062	0.000	7	2062	0.028	7	2062	0.028
18:00 - 18:30	7	2062	0.014	7	2062	0.000	7	2062	0.014
18:30 - 19:00	7	2062	0.000	7	2062	0.000	7	2062	0.000
19:00 - 19:30	0	0	0.000	0	0	0.000	0	0	0.000
19:30 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 20:30	0	0	0.000	0	0	0.000	0	0	0.000
20:30 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 21:30	0	0	0.000	0	0	0.000	0	0	0.000
21:30 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 22:30	0	0	0.000	0	0	0.000	0	0	0.000
22:30 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 23:30	0	0	0.000	0	0	0.000	0	0	0.000
23:30 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			0.112			0.084			0.196

Parameter summary

Trip rate parameter range selected:	1300 - 2600 (units: sqm)
Survey date date range:	01/01/03 - 16/06/09
Number of weekdays (Monday-Friday):	7
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK

MULTI-MODAL TOTAL PEOPLE

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 - 00:30	0	0	0.000	0	0	0.000	0	0	0.000
00:30 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 01:30	0	0	0.000	0	0	0.000	0	0	0.000
01:30 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 02:30	0	0	0.000	0	0	0.000	0	0	0.000
02:30 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 03:30	0	0	0.000	0	0	0.000	0	0	0.000
03:30 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 04:30	0	0	0.000	0	0	0.000	0	0	0.000
04:30 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 05:30	0	0	0.000	0	0	0.000	0	0	0.000
05:30 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 06:30	0	0	0.000	0	0	0.000	0	0	0.000
06:30 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 07:30	7	2062	0.097	7	2062	0.035	7	2062	0.132
07:30 - 08:00	7	2062	0.395	7	2062	0.076	7	2062	0.471
08:00 - 08:30	7	2062	0.672	7	2062	0.090	7	2062	0.762
08:30 - 09:00	7	2062	1.483	7	2062	0.125	7	2062	1.608
09:00 - 09:30	7	2062	0.797	7	2062	0.166	7	2062	0.963
09:30 - 10:00	7	2062	0.450	7	2062	0.187	7	2062	0.637
10:00 - 10:30	7	2062	0.367	7	2062	0.277	7	2062	0.644
10:30 - 11:00	7	2062	0.243	7	2062	0.277	7	2062	0.520
11:00 - 11:30	7	2062	0.305	7	2062	0.402	7	2062	0.707
11:30 - 12:00	7	2062	0.277	7	2062	0.443	7	2062	0.720
12:00 - 12:30	7	2062	0.457	7	2062	0.728	7	2062	1.185
12:30 - 13:00	7	2062	0.499	7	2062	0.346	7	2062	0.845
13:00 - 13:30	7	2062	0.561	7	2062	0.492	7	2062	1.053
13:30 - 14:00	7	2062	0.596	7	2062	0.395	7	2062	0.991
14:00 - 14:30	7	2062	0.305	7	2062	0.236	7	2062	0.541
14:30 - 15:00	7	2062	0.284	7	2062	0.298	7	2062	0.582
15:00 - 15:30	7	2062	0.333	7	2062	0.395	7	2062	0.728
15:30 - 16:00	7	2062	0.298	7	2062	0.409	7	2062	0.707
16:00 - 16:30	7	2062	0.249	7	2062	0.596	7	2062	0.845
16:30 - 17:00	7	2062	0.152	7	2062	0.658	7	2062	0.810
17:00 - 17:30	7	2062	0.152	7	2062	0.928	7	2062	1.080
17:30 - 18:00	7	2062	0.090	7	2062	0.769	7	2062	0.859
18:00 - 18:30	7	2062	0.090	7	2062	0.340	7	2062	0.430
18:30 - 19:00	7	2062	0.042	7	2062	0.201	7	2062	0.243
19:00 - 19:30	0	0	0.000	0	0	0.000	0	0	0.000
19:30 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 20:30	0	0	0.000	0	0	0.000	0	0	0.000
20:30 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 21:30	0	0	0.000	0	0	0.000	0	0	0.000
21:30 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 22:30	0	0	0.000	0	0	0.000	0	0	0.000
22:30 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 23:30	0	0	0.000	0	0	0.000	0	0	0.000
23:30 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			9.194			8.869			18.063

Parameter summary

Trip rate parameter range selected:	1300 - 2600 (units: sqm)
Survey date date range:	01/01/03 - 16/06/09
Number of weekdays (Monday-Friday):	7
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

03	SOUTH WEST	
	BR BRISTOL CITY	2 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	3 days
08	NORTH WEST	
	LC LANCASHIRE	1 days
	MS MERSEYSIDE	1 days

Filtering Stage 2 selection:

Parameter: Gross floor area
Range: 2063 to 6000 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/03 to 09/09/10

Selected survey days:

Monday	1 days
Tuesday	3 days
Thursday	2 days
Friday	1 days

Selected survey types:

Manual count	7 days
Directional ATC Count	0 days

Selected Locations:

Suburban Area (PPS6 Out of Centre)	4
Edge of Town	3

Selected Location Sub Categories:

Industrial Zone	5
No Sub Category	2

LIST OF SITES relevant to selection parameters

1	BR-02-D-02 NOVERS HILL BEDMINSTER BRISTOL Suburban Area (PPS6 Out of Centre) Industrial Zone Total Gross floor area: 6000 sqm	INDUSTRIAL ESTATE, BRISTOL	BRISTOL CITY
2	BR-02-D-03 CROFTS END ROAD SPEEDWELL BRISTOL Suburban Area (PPS6 Out of Centre) Industrial Zone Total Gross floor area: 6000 sqm	INDUSTRIAL ESTATE, BRISTOL	BRISTOL CITY
3	CA-02-D-01 STURROCK WAY BRETTON PETERBOROUGH Suburban Area (PPS6 Out of Centre) Industrial Zone Total Gross floor area: 4300 sqm	IND. ESTATE, PETERBOROUGH	CAMBRIDGESHIRE
4	CA-02-D-02 COLDHAM'S ROAD COLDHAM'S COMMON CAMBRIDGE Edge of Town Industrial Zone Total Gross floor area: 2063 sqm	IND. ESTATE, CAMBRIDGE	CAMBRIDGESHIRE
5	CA-02-D-03 SAVILLE ROAD WESTWOOD PETERBOROUGH Suburban Area (PPS6 Out of Centre) No Sub Category Total Gross floor area: 4425 sqm	IND. ESTATE, PETERBOROUGH	CAMBRIDGESHIRE
6	LC-02-D-04 GREEN LANE WEST GARSTANG Edge of Town Industrial Zone Total Gross floor area: 4555 sqm	INDUSTRIAL ESTATE, GARSTANG	LANCASHIRE
7	MS-02-D-05 BROADOAK ROAD ST HELENS Edge of Town No Sub Category Total Gross floor area: 2430 sqm	INDUSTRIAL ESTATE, ST HELENS	MERSEYSIDE

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

MULTI-MODAL 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 - 00:30	0	0	0.000	0	0	0.000	0	0	0.000
00:30 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 01:30	0	0	0.000	0	0	0.000	0	0	0.000
01:30 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 02:30	0	0	0.000	0	0	0.000	0	0	0.000
02:30 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 03:30	0	0	0.000	0	0	0.000	0	0	0.000
03:30 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 04:30	0	0	0.000	0	0	0.000	0	0	0.000
04:30 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 05:30	0	0	0.000	0	0	0.000	0	0	0.000
05:30 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 06:30	0	0	0.000	0	0	0.000	0	0	0.000
06:30 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 07:30	7	4253	0.185	7	4253	0.057	7	4253	0.242
07:30 - 08:00	7	4253	0.369	7	4253	0.091	7	4253	0.460
08:00 - 08:30	7	4253	0.413	7	4253	0.161	7	4253	0.574
08:30 - 09:00	7	4253	0.447	7	4253	0.238	7	4253	0.685
09:00 - 09:30	7	4253	0.430	7	4253	0.218	7	4253	0.648
09:30 - 10:00	7	4253	0.302	7	4253	0.296	7	4253	0.598
10:00 - 10:30	7	4253	0.319	7	4253	0.282	7	4253	0.601
10:30 - 11:00	7	4253	0.252	7	4253	0.218	7	4253	0.470
11:00 - 11:30	7	4253	0.289	7	4253	0.265	7	4253	0.554
11:30 - 12:00	7	4253	0.302	7	4253	0.322	7	4253	0.624
12:00 - 12:30	7	4253	0.346	7	4253	0.390	7	4253	0.736
12:30 - 13:00	7	4253	0.282	7	4253	0.296	7	4253	0.578
13:00 - 13:30	7	4253	0.279	7	4253	0.299	7	4253	0.578
13:30 - 14:00	7	4253	0.302	7	4253	0.275	7	4253	0.577
14:00 - 14:30	7	4253	0.299	7	4253	0.326	7	4253	0.625
14:30 - 15:00	7	4253	0.232	7	4253	0.228	7	4253	0.460
15:00 - 15:30	7	4253	0.262	7	4253	0.329	7	4253	0.591
15:30 - 16:00	7	4253	0.249	7	4253	0.282	7	4253	0.531
16:00 - 16:30	7	4253	0.198	7	4253	0.373	7	4253	0.571
16:30 - 17:00	7	4253	0.222	7	4253	0.427	7	4253	0.649
17:00 - 17:30	7	4253	0.128	7	4253	0.443	7	4253	0.571
17:30 - 18:00	7	4253	0.081	7	4253	0.242	7	4253	0.323
18:00 - 18:30	7	4253	0.047	7	4253	0.121	7	4253	0.168
18:30 - 19:00	7	4253	0.013	7	4253	0.027	7	4253	0.040
19:00 - 19:30	0	0	0.000	0	0	0.000	0	0	0.000
19:30 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 20:30	0	0	0.000	0	0	0.000	0	0	0.000
20:30 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 21:30	0	0	0.000	0	0	0.000	0	0	0.000
21:30 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 22:30	0	0	0.000	0	0	0.000	0	0	0.000
22:30 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 23:30	0	0	0.000	0	0	0.000	0	0	0.000
23:30 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			6.248			6.206			12.454

Parameter summary

Trip rate parameter range selected:	2063 - 6000 (units: sqm)
Survey date date range:	01/01/03 - 09/09/10
Number of weekdays (Monday-Friday):	7
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

MULTI-MODAL CYCLISTS

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 - 00:30	0	0	0.000	0	0	0.000	0	0	0.000
00:30 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 01:30	0	0	0.000	0	0	0.000	0	0	0.000
01:30 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 02:30	0	0	0.000	0	0	0.000	0	0	0.000
02:30 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 03:30	0	0	0.000	0	0	0.000	0	0	0.000
03:30 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 04:30	0	0	0.000	0	0	0.000	0	0	0.000
04:30 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 05:30	0	0	0.000	0	0	0.000	0	0	0.000
05:30 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 06:30	0	0	0.000	0	0	0.000	0	0	0.000
06:30 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 07:30	7	4253	0.003	7	4253	0.003	7	4253	0.006
07:30 - 08:00	7	4253	0.017	7	4253	0.000	7	4253	0.017
08:00 - 08:30	7	4253	0.010	7	4253	0.003	7	4253	0.013
08:30 - 09:00	7	4253	0.017	7	4253	0.010	7	4253	0.027
09:00 - 09:30	7	4253	0.007	7	4253	0.003	7	4253	0.010
09:30 - 10:00	7	4253	0.007	7	4253	0.007	7	4253	0.014
10:00 - 10:30	7	4253	0.000	7	4253	0.000	7	4253	0.000
10:30 - 11:00	7	4253	0.003	7	4253	0.003	7	4253	0.006
11:00 - 11:30	7	4253	0.007	7	4253	0.007	7	4253	0.014
11:30 - 12:00	7	4253	0.010	7	4253	0.003	7	4253	0.013
12:00 - 12:30	7	4253	0.007	7	4253	0.003	7	4253	0.010
12:30 - 13:00	7	4253	0.003	7	4253	0.007	7	4253	0.010
13:00 - 13:30	7	4253	0.007	7	4253	0.007	7	4253	0.014
13:30 - 14:00	7	4253	0.003	7	4253	0.000	7	4253	0.003
14:00 - 14:30	7	4253	0.013	7	4253	0.003	7	4253	0.016
14:30 - 15:00	7	4253	0.003	7	4253	0.003	7	4253	0.006
15:00 - 15:30	7	4253	0.017	7	4253	0.013	7	4253	0.030
15:30 - 16:00	7	4253	0.003	7	4253	0.020	7	4253	0.023
16:00 - 16:30	7	4253	0.007	7	4253	0.007	7	4253	0.014
16:30 - 17:00	7	4253	0.007	7	4253	0.010	7	4253	0.017
17:00 - 17:30	7	4253	0.007	7	4253	0.027	7	4253	0.034
17:30 - 18:00	7	4253	0.000	7	4253	0.007	7	4253	0.007
18:00 - 18:30	7	4253	0.003	7	4253	0.003	7	4253	0.006
18:30 - 19:00	7	4253	0.000	7	4253	0.003	7	4253	0.003
19:00 - 19:30	0	0	0.000	0	0	0.000	0	0	0.000
19:30 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 20:30	0	0	0.000	0	0	0.000	0	0	0.000
20:30 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 21:30	0	0	0.000	0	0	0.000	0	0	0.000
21:30 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 22:30	0	0	0.000	0	0	0.000	0	0	0.000
22:30 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 23:30	0	0	0.000	0	0	0.000	0	0	0.000
23:30 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			0.161			0.152			0.313

Parameter summary

Trip rate parameter range selected:	2063 - 6000 (units: sqm)
Survey date date range:	01/01/03 - 09/09/10
Number of weekdays (Monday-Friday):	7
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

MULTI-MODAL VEHICLE OCCUPANTS

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 - 00:30	0	0	0.000	0	0	0.000	0	0	0.000
00:30 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 01:30	0	0	0.000	0	0	0.000	0	0	0.000
01:30 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 02:30	0	0	0.000	0	0	0.000	0	0	0.000
02:30 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 03:30	0	0	0.000	0	0	0.000	0	0	0.000
03:30 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 04:30	0	0	0.000	0	0	0.000	0	0	0.000
04:30 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 05:30	0	0	0.000	0	0	0.000	0	0	0.000
05:30 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 06:30	0	0	0.000	0	0	0.000	0	0	0.000
06:30 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 07:30	7	4253	0.205	7	4253	0.054	7	4253	0.259
07:30 - 08:00	7	4253	0.416	7	4253	0.111	7	4253	0.527
08:00 - 08:30	7	4253	0.437	7	4253	0.171	7	4253	0.608
08:30 - 09:00	7	4253	0.474	7	4253	0.259	7	4253	0.733
09:00 - 09:30	7	4253	0.474	7	4253	0.245	7	4253	0.719
09:30 - 10:00	7	4253	0.322	7	4253	0.329	7	4253	0.651
10:00 - 10:30	7	4253	0.353	7	4253	0.312	7	4253	0.665
10:30 - 11:00	7	4253	0.299	7	4253	0.259	7	4253	0.558
11:00 - 11:30	7	4253	0.349	7	4253	0.292	7	4253	0.641
11:30 - 12:00	7	4253	0.339	7	4253	0.390	7	4253	0.729
12:00 - 12:30	7	4253	0.383	7	4253	0.447	7	4253	0.830
12:30 - 13:00	7	4253	0.309	7	4253	0.329	7	4253	0.638
13:00 - 13:30	7	4253	0.333	7	4253	0.329	7	4253	0.662
13:30 - 14:00	7	4253	0.333	7	4253	0.316	7	4253	0.649
14:00 - 14:30	7	4253	0.339	7	4253	0.366	7	4253	0.705
14:30 - 15:00	7	4253	0.262	7	4253	0.269	7	4253	0.531
15:00 - 15:30	7	4253	0.299	7	4253	0.366	7	4253	0.665
15:30 - 16:00	7	4253	0.296	7	4253	0.346	7	4253	0.642
16:00 - 16:30	7	4253	0.208	7	4253	0.430	7	4253	0.638
16:30 - 17:00	7	4253	0.259	7	4253	0.467	7	4253	0.726
17:00 - 17:30	7	4253	0.165	7	4253	0.527	7	4253	0.692
17:30 - 18:00	7	4253	0.104	7	4253	0.282	7	4253	0.386
18:00 - 18:30	7	4253	0.047	7	4253	0.131	7	4253	0.178
18:30 - 19:00	7	4253	0.013	7	4253	0.034	7	4253	0.047
19:00 - 19:30	0	0	0.000	0	0	0.000	0	0	0.000
19:30 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 20:30	0	0	0.000	0	0	0.000	0	0	0.000
20:30 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 21:30	0	0	0.000	0	0	0.000	0	0	0.000
21:30 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 22:30	0	0	0.000	0	0	0.000	0	0	0.000
22:30 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 23:30	0	0	0.000	0	0	0.000	0	0	0.000
23:30 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			7.018			7.061			14.079

Parameter summary

Trip rate parameter range selected:	2063 - 6000 (units: sqm)
Survey date date range:	01/01/03 - 09/09/10
Number of weekdays (Monday-Friday):	7
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

MULTI-MODAL PEDESTRIANS

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 - 00:30	0	0	0.000	0	0	0.000	0	0	0.000
00:30 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 01:30	0	0	0.000	0	0	0.000	0	0	0.000
01:30 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 02:30	0	0	0.000	0	0	0.000	0	0	0.000
02:30 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 03:30	0	0	0.000	0	0	0.000	0	0	0.000
03:30 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 04:30	0	0	0.000	0	0	0.000	0	0	0.000
04:30 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 05:30	0	0	0.000	0	0	0.000	0	0	0.000
05:30 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 06:30	0	0	0.000	0	0	0.000	0	0	0.000
06:30 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 07:30	7	4253	0.013	7	4253	0.003	7	4253	0.016
07:30 - 08:00	7	4253	0.003	7	4253	0.007	7	4253	0.010
08:00 - 08:30	7	4253	0.050	7	4253	0.007	7	4253	0.057
08:30 - 09:00	7	4253	0.020	7	4253	0.003	7	4253	0.023
09:00 - 09:30	7	4253	0.027	7	4253	0.010	7	4253	0.037
09:30 - 10:00	7	4253	0.007	7	4253	0.007	7	4253	0.014
10:00 - 10:30	7	4253	0.000	7	4253	0.003	7	4253	0.003
10:30 - 11:00	7	4253	0.017	7	4253	0.010	7	4253	0.027
11:00 - 11:30	7	4253	0.017	7	4253	0.007	7	4253	0.024
11:30 - 12:00	7	4253	0.003	7	4253	0.007	7	4253	0.010
12:00 - 12:30	7	4253	0.010	7	4253	0.024	7	4253	0.034
12:30 - 13:00	7	4253	0.027	7	4253	0.017	7	4253	0.044
13:00 - 13:30	7	4253	0.020	7	4253	0.020	7	4253	0.040
13:30 - 14:00	7	4253	0.007	7	4253	0.007	7	4253	0.014
14:00 - 14:30	7	4253	0.013	7	4253	0.007	7	4253	0.020
14:30 - 15:00	7	4253	0.020	7	4253	0.007	7	4253	0.027
15:00 - 15:30	7	4253	0.007	7	4253	0.003	7	4253	0.010
15:30 - 16:00	7	4253	0.017	7	4253	0.007	7	4253	0.024
16:00 - 16:30	7	4253	0.024	7	4253	0.037	7	4253	0.061
16:30 - 17:00	7	4253	0.013	7	4253	0.020	7	4253	0.033
17:00 - 17:30	7	4253	0.003	7	4253	0.047	7	4253	0.050
17:30 - 18:00	7	4253	0.003	7	4253	0.013	7	4253	0.016
18:00 - 18:30	7	4253	0.007	7	4253	0.010	7	4253	0.017
18:30 - 19:00	7	4253	0.000	7	4253	0.000	7	4253	0.000
19:00 - 19:30	0	0	0.000	0	0	0.000	0	0	0.000
19:30 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 20:30	0	0	0.000	0	0	0.000	0	0	0.000
20:30 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 21:30	0	0	0.000	0	0	0.000	0	0	0.000
21:30 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 22:30	0	0	0.000	0	0	0.000	0	0	0.000
22:30 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 23:30	0	0	0.000	0	0	0.000	0	0	0.000
23:30 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			0.328			0.283			0.611

Parameter summary

Trip rate parameter range selected:	2063 - 6000 (units: sqm)
Survey date date range:	01/01/03 - 09/09/10
Number of weekdays (Monday-Friday):	7
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

MULTI-MODAL PUBLIC TRANSPORT USERS

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 - 00:30	0	0	0.000	0	0	0.000	0	0	0.000
00:30 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 01:30	0	0	0.000	0	0	0.000	0	0	0.000
01:30 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 02:30	0	0	0.000	0	0	0.000	0	0	0.000
02:30 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 03:30	0	0	0.000	0	0	0.000	0	0	0.000
03:30 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 04:30	0	0	0.000	0	0	0.000	0	0	0.000
04:30 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 05:30	0	0	0.000	0	0	0.000	0	0	0.000
05:30 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 06:30	0	0	0.000	0	0	0.000	0	0	0.000
06:30 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 07:30	7	4253	0.007	7	4253	0.000	7	4253	0.007
07:30 - 08:00	7	4253	0.000	7	4253	0.000	7	4253	0.000
08:00 - 08:30	7	4253	0.007	7	4253	0.000	7	4253	0.007
08:30 - 09:00	7	4253	0.010	7	4253	0.000	7	4253	0.010
09:00 - 09:30	7	4253	0.003	7	4253	0.000	7	4253	0.003
09:30 - 10:00	7	4253	0.003	7	4253	0.000	7	4253	0.003
10:00 - 10:30	7	4253	0.000	7	4253	0.000	7	4253	0.000
10:30 - 11:00	7	4253	0.000	7	4253	0.000	7	4253	0.000
11:00 - 11:30	7	4253	0.003	7	4253	0.003	7	4253	0.006
11:30 - 12:00	7	4253	0.000	7	4253	0.000	7	4253	0.000
12:00 - 12:30	7	4253	0.000	7	4253	0.003	7	4253	0.003
12:30 - 13:00	7	4253	0.000	7	4253	0.000	7	4253	0.000
13:00 - 13:30	7	4253	0.003	7	4253	0.000	7	4253	0.003
13:30 - 14:00	7	4253	0.000	7	4253	0.003	7	4253	0.003
14:00 - 14:30	7	4253	0.003	7	4253	0.003	7	4253	0.006
14:30 - 15:00	7	4253	0.000	7	4253	0.000	7	4253	0.000
15:00 - 15:30	7	4253	0.000	7	4253	0.003	7	4253	0.003
15:30 - 16:00	7	4253	0.000	7	4253	0.003	7	4253	0.003
16:00 - 16:30	7	4253	0.000	7	4253	0.000	7	4253	0.000
16:30 - 17:00	7	4253	0.003	7	4253	0.000	7	4253	0.003
17:00 - 17:30	7	4253	0.000	7	4253	0.013	7	4253	0.013
17:30 - 18:00	7	4253	0.000	7	4253	0.000	7	4253	0.000
18:00 - 18:30	7	4253	0.000	7	4253	0.007	7	4253	0.007
18:30 - 19:00	7	4253	0.000	7	4253	0.000	7	4253	0.000
19:00 - 19:30	0	0	0.000	0	0	0.000	0	0	0.000
19:30 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 20:30	0	0	0.000	0	0	0.000	0	0	0.000
20:30 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 21:30	0	0	0.000	0	0	0.000	0	0	0.000
21:30 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 22:30	0	0	0.000	0	0	0.000	0	0	0.000
22:30 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 23:30	0	0	0.000	0	0	0.000	0	0	0.000
23:30 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			0.042			0.038			0.080

Parameter summary

Trip rate parameter range selected:	2063 - 6000 (units: sqm)
Survey date date range:	01/01/03 - 09/09/10
Number of weekdays (Monday-Friday):	7
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 100 sqm

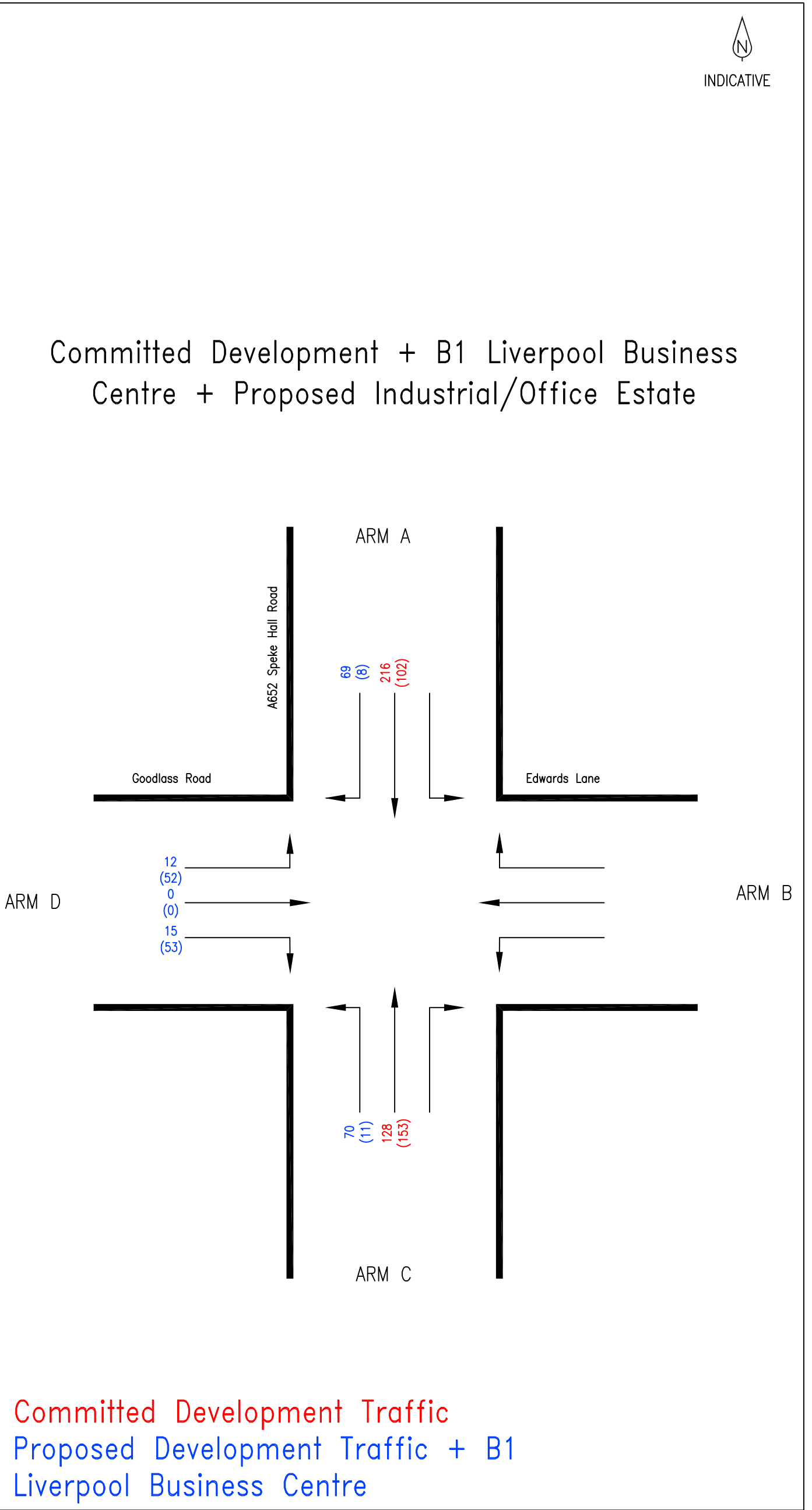
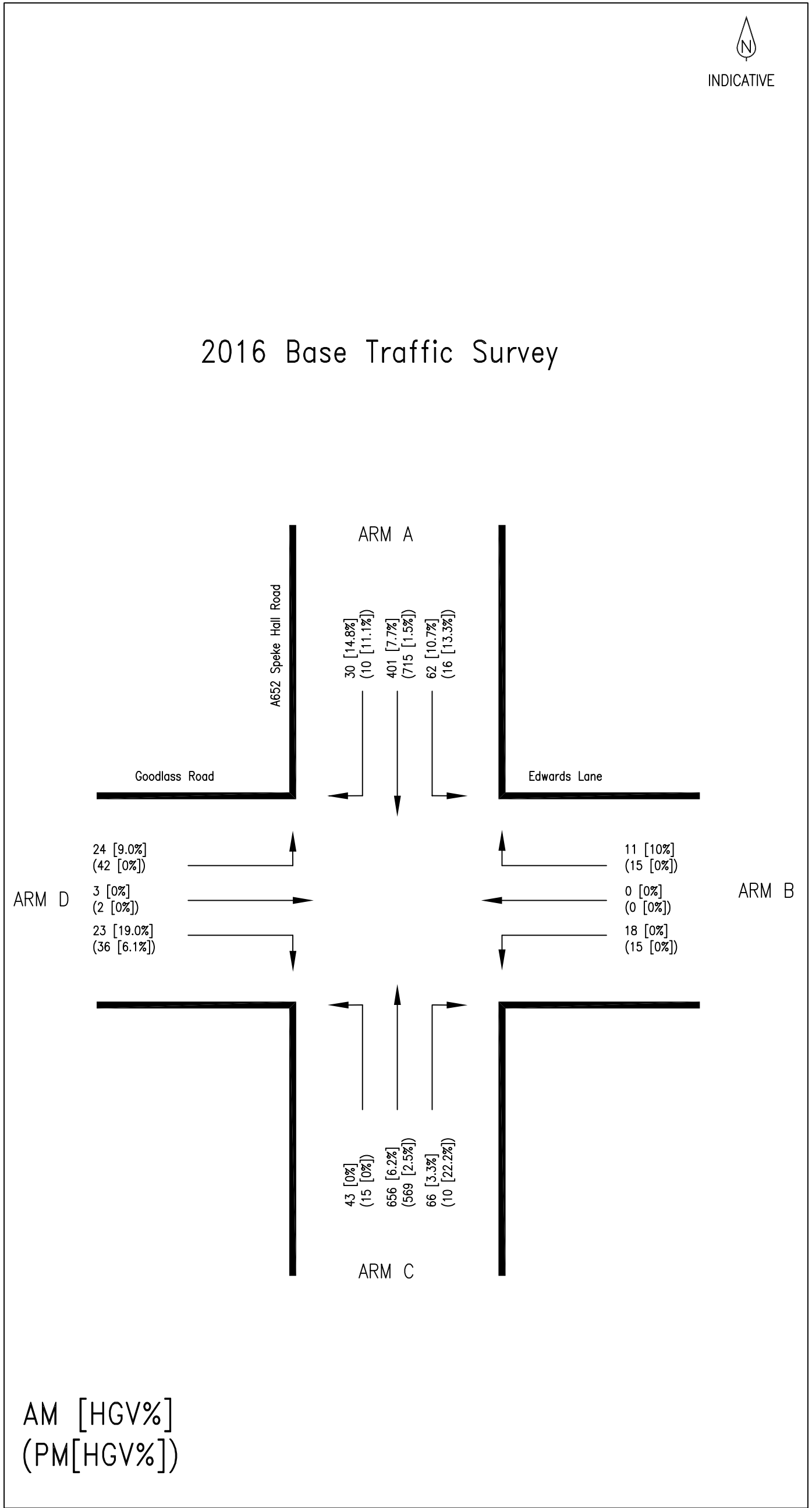
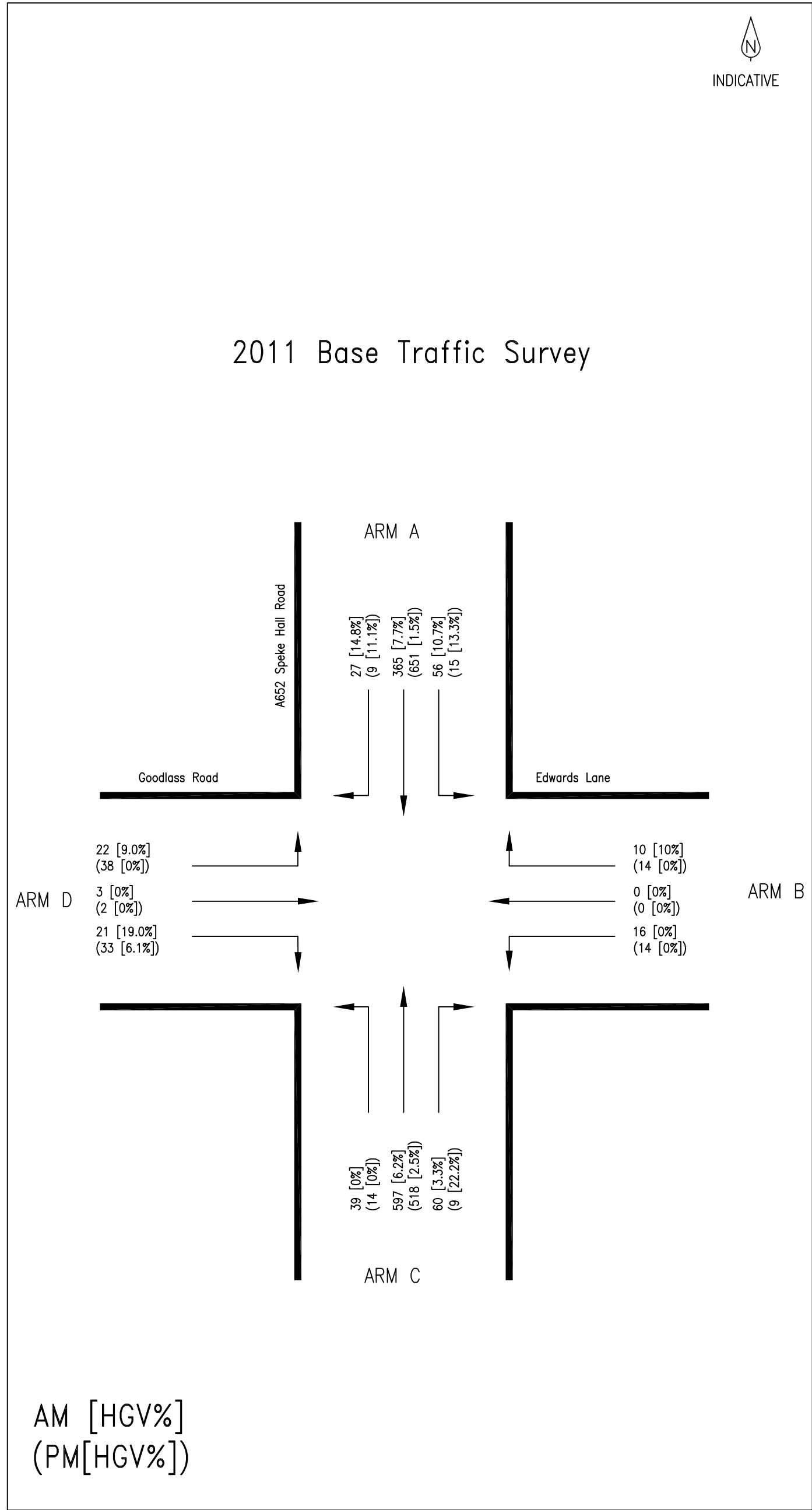
BOLD print indicates peak (busiest) period


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 - 00:30	0	0	0.000	0	0	0.000	0	0	0.000
00:30 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 01:30	0	0	0.000	0	0	0.000	0	0	0.000
01:30 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 02:30	0	0	0.000	0	0	0.000	0	0	0.000
02:30 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 03:30	0	0	0.000	0	0	0.000	0	0	0.000
03:30 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 04:30	0	0	0.000	0	0	0.000	0	0	0.000
04:30 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 05:30	0	0	0.000	0	0	0.000	0	0	0.000
05:30 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 06:30	0	0	0.000	0	0	0.000	0	0	0.000
06:30 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 07:30	7	4253	0.228	7	4253	0.060	7	4253	0.288
07:30 - 08:00	7	4253	0.437	7	4253	0.118	7	4253	0.555
08:00 - 08:30	7	4253	0.504	7	4253	0.181	7	4253	0.685
08:30 - 09:00	7	4253	0.521	7	4253	0.272	7	4253	0.793
09:00 - 09:30	7	4253	0.511	7	4253	0.259	7	4253	0.770
09:30 - 10:00	7	4253	0.339	7	4253	0.343	7	4253	0.682
10:00 - 10:30	7	4253	0.353	7	4253	0.316	7	4253	0.669
10:30 - 11:00	7	4253	0.319	7	4253	0.272	7	4253	0.591
11:00 - 11:30	7	4253	0.376	7	4253	0.309	7	4253	0.685
11:30 - 12:00	7	4253	0.353	7	4253	0.400	7	4253	0.753
12:00 - 12:30	7	4253	0.400	7	4253	0.477	7	4253	0.877
12:30 - 13:00	7	4253	0.339	7	4253	0.353	7	4253	0.692
13:00 - 13:30	7	4253	0.363	7	4253	0.356	7	4253	0.719
13:30 - 14:00	7	4253	0.343	7	4253	0.326	7	4253	0.669
14:00 - 14:30	7	4253	0.369	7	4253	0.380	7	4253	0.749
14:30 - 15:00	7	4253	0.285	7	4253	0.279	7	4253	0.564
15:00 - 15:30	7	4253	0.322	7	4253	0.386	7	4253	0.708
15:30 - 16:00	7	4253	0.316	7	4253	0.376	7	4253	0.692
16:00 - 16:30	7	4253	0.238	7	4253	0.474	7	4253	0.712
16:30 - 17:00	7	4253	0.282	7	4253	0.497	7	4253	0.779
17:00 - 17:30	7	4253	0.175	7	4253	0.615	7	4253	0.790
17:30 - 18:00	7	4253	0.107	7	4253	0.302	7	4253	0.409
18:00 - 18:30	7	4253	0.057	7	4253	0.151	7	4253	0.208
18:30 - 19:00	7	4253	0.013	7	4253	0.037	7	4253	0.050
19:00 - 19:30	0	0	0.000	0	0	0.000	0	0	0.000
19:30 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 20:30	0	0	0.000	0	0	0.000	0	0	0.000
20:30 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 21:30	0	0	0.000	0	0	0.000	0	0	0.000
21:30 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 22:30	0	0	0.000	0	0	0.000	0	0	0.000
22:30 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 23:30	0	0	0.000	0	0	0.000	0	0	0.000
23:30 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			7.550			7.539			15.089

Parameter summary

Trip rate parameter range selected:	2063 - 6000 (units: sqm)
Survey date date range:	01/01/03 - 09/09/10
Number of weekdays (Monday-Friday):	7
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

APPENDIX E



 sanderson associates (consulting engineers) ltd Highways Traffic Transportation Water T 01924 844080 mail@sandersonassociates.co.uk F 01924 844081 www.sandersonassociates.co.uk	Client Speke Business Park Limited	Project Title Goodlass Road, Speke, Liverpool	Drawing Title 2011/16 Base Traffic Flows, Committed Development Traffic & Proposed Development Traffic																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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APPENDIX F

TRL LIMITED

(C) COPYRIGHT 2010

CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

ADAPTED FROM PICADY/3 WHICH IS CROWN COPYRIGHT
BY PERMISSION OF THE CONTROLLER OF HMSO

FOR SALES AND DISTRIBUTION INFORMATION,
PROGRAM ADVICE AND MAINTENANCE CONTACT:

TRL SOFTWARE SALES
TEL: CROWTHORNE (01344) 770758, FAX: 770356
EMAIL: software@trl.co.uk

THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF HIS/HER RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:- "J:\6000\6087_GoodlassRoad\Engineering\Traffic\Picady\2011 AM.vpi" (drive-on-the-left) at 15:55:36 on Thurs

RUN INFORMATION

RUN TITLE : Goodlass Road, Speke, Liverpool
LOCATION :
DATE : 13/07/11
CLIENT :
ENUMERATOR : james.mcgavin [PC97]
JOB NUMBER : 6087
STATUS :
DESCRIPTION :

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

```

                                MINOR ROAD (ARM D)
                                I
                                I
                                I
                                I
                                I
                                I
                                I
MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
                                I
                                I
                                I
                                I
                                I
                                I
                                MINOR ROAD (ARM B)

```

ARM A IS Speke Hall Road North
ARM B IS Edwards Lane
ARM C IS Speke Hall Road South
ARM D IS Goodlass Road

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I	MINOR ROAD D	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 6.60 M.	I	(W) 6.60 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I	(WCR) 0.00 M.	I
I		I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 3.20 M.	I	(WA-D) 3.20 M.	I
I	- VISIBILITY	I	(VC-B)200.00 M.	I	(VA-D)120.00 M.	I
I	- BLOCKS TRAFFIC (SPACES)	I	NO (0)	I	NO (0)	I
I		I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 45.0 M.	I	(VD-A) 18.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 29.0 M.	I	(VD-C) 26.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 3.70 M.	I	(WD-A) -	I
I	- LANE 2 WIDTH	I	(WB-A) 0.00 M.	I	(WD-C) -	I
I	WIDTH AT 0 M FROM JUNCTION	I	-	I	8.70 M.	I
I	WIDTH AT 5 M FROM JUNCTION	I	-	I	3.20 M.	I
I	WIDTH AT 10 M FROM JUNCTION	I	-	I	3.05 M.	I
I	WIDTH AT 15 M FROM JUNCTION	I	-	I	3.05 M.	I
I	WIDTH AT 20 M FROM JUNCTION	I	-	I	3.05 M.	I
I	- LENGTH OF FLARED SECTION	I	-	I	DERIVED: 0 PCU	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

STREAM B-C

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	687.20	0.26	0.10	I

STREAM D-A

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM D-A	STREAM C-A	STREAM C-D	I
I	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

STREAM B-A

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-D	STREAM D-A	STREAM D-B	I
I	541.92	0.24	0.24	0.24	0.24	I
I						I
I		Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I		STREAM A-B	STREAM C-A	STREAM C-B	STREAM D-C	I
I		0.10	0.15	0.35	0.12	I

STREAM D-C

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM D-C	STREAM C-A	STREAM C-B	STREAM B-C	STREAM B-D	I
I	0.00	0.00	0.00	0.00	0.00	I
I						I
I		Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I		STREAM C-D	STREAM A-C	STREAM A-D	STREAM B-A	I
I		0.00	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

STREAM C-B

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-B	STREAM A-C	STREAM A-D	I
I	764.86	0.29	0.29	0.41	I

I Intercept For I STREAM A-D	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	I
I 713.49	0.27	0.38	0.27	I

B-D Stream From Left Hand Lane

I Intercept For I STREAM B-D	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-B	I
I 541.92	0.24	0.24	0.10	0.35	I
I	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-D	Slope For Opposing	Slope For Opposing	I
I	0.15	0.15			I

B-D Stream From Right Hand Lane

I Intercept For I STREAM B-D	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-B	I
I 541.92	0.24	0.24	0.10	0.35	I
I	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-D	Slope For Opposing	Slope For Opposing	I
I	0.15	0.15			I

D-B Stream From Left Hand Lane

I Intercept For I STREAM D-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing STREAM A-D	I
I 0.00	0.00	0.00	0.00	0.00	I
I	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For Opposing	I
I	0.00	0.00			I

* Due to the presence of a flare, data is not available

D-B Stream From Right Hand Lane

I Intercept For I STREAM B-D	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing STREAM A-D	I
I 0.00	0.00	0.00	0.00	0.00	I
I	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For Opposing	I
I	0.00	0.00			I

* Due to the presence of a flare, data is not available

TRAFFIC DEMAND DATA

I ARM	I FLOW	I SCALE(%)	I
I A	I 100	I	
I B	I 100	I	
I C	I 100	I	
I D	I 100	I	

Demand set: 2011 Base

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	NUMBER OF MINUTES FROM START WHEN				RATE OF FLOW (VEH/MIN)				I				
		I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE		I	AT TOP	I	AFTER
I	I	I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK	I	PEAK	
I	I	I	I	I	I	I	I	I	I	I	I	I	I	
I	ARM	A	I	15.00	I	45.00	I	75.00	I	5.60	I	8.40	I	5.60
I	ARM	B	I	15.00	I	45.00	I	75.00	I	0.32	I	0.49	I	0.32
I	ARM	C	I	15.00	I	45.00	I	75.00	I	8.70	I	13.05	I	8.70
I	ARM	D	I	15.00	I	45.00	I	75.00	I	0.57	I	0.86	I	0.57

Demand set: Proposed + Committed

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	I	NUMBER OF MINUTES FROM START WHEN				RATE OF FLOW (VEH/MIN)				I				
		I	I	I	I	I	I							
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE	I	AT TOP	I	AFTER	
I	I	I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK	I	PEAK	
I	I	I	I	I	I	I	I	I	I	I	I	I	I	
I	ARM	A	I	15.00	I	45.00	I	75.00	I	3.56	I	5.34	I	3.56
I	ARM	B	I	15.00	I	45.00	I	75.00	I	0.00	I	0.00	I	0.00
I	ARM	C	I	15.00	I	45.00	I	75.00	I	2.47	I	3.71	I	2.47
I	ARM	D	I	15.00	I	45.00	I	75.00	I	0.34	I	0.51	I	0.34

Demand set: 2011 Base

I	I	TURNING PROPORTIONS														I	
		TURNING COUNTS															
		(PERCENTAGE OF H.V.S)															
TIME		I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I	ARM	D	I	
I	07.45 - 09.15	I		I		I		I		I		I		I		I	
I		I	ARM A	I	0.000	I	0.125	I	0.815	I	0.060	I					
I		I		I	0.0	I	56.0	I	365.0	I	27.0	I					
I		I		I	(0.0)	I	(10.7)	I	(7.7)	I	(14.8)	I					
I		I		I		I		I		I							
I		I	ARM B	I	0.385	I	0.000	I	0.615	I	0.000	I					
I		I		I	10.0	I	0.0	I	16.0	I	0.0	I					
I		I		I	(10.0)	I	(0.0)	I	(0.0)	I	(0.0)	I					
I		I		I		I		I		I							
I		I	ARM C	I	0.858	I	0.086	I	0.000	I	0.056	I					
I		I		I	597.0	I	60.0	I	0.0	I	39.0	I					
I		I		I	(6.2)	I	(3.3)	I	(0.0)	I	(0.0)	I					
I		I		I		I		I		I							
I		I	ARM D	I	0.478	I	0.065	I	0.457	I	0.000	I					
I		I		I	22.0	I	3.0	I	21.0	I	0.0	I					
I		I		I	(9.0)	I	(0.0)	I	(19.0)	I	(0.0)	I					
I		I		I		I		I		I							

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
I	08.15-08.30									
I	B-ACD	0.48	4.63	0.103		0.07	0.11	1.6		0.24
I	A-B	1.03								
I	A-C	10.66								
I	A-D	1.76	6.86	0.257		0.23	0.34	4.9		0.20
I	D-AB	0.66	6.46	0.102		0.08	0.11	1.6		0.17
I	D-BC	0.68	2.32	0.293		0.20	0.39	5.4		0.60
I	C-D	2.00								
I	C-A	13.30								
I	C-B	1.10	8.16	0.135		0.11	0.15	2.3		0.14

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-ACD	0.48	4.62	0.103		0.11	0.11	1.7		0.24
A-B	1.03								
A-C	10.66								
A-D	1.76	6.86	0.257		0.34	0.34	5.1		0.20
D-AB	0.66	6.45	0.102		0.11	0.11	1.7		0.17
D-BC	0.68	2.31	0.294		0.39	0.40	6.0		0.61
C-D	2.00								
C-A	13.30								
C-B	1.10	8.16	0.135		0.15	0.16	2.3		0.14

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-ACD	0.39	5.80	0.067		0.11	0.07	1.1		0.18
A-B	0.84								
A-C	8.71								
A-D	1.44	7.70	0.187		0.34	0.23	3.6		0.16
D-AB	0.54	7.58	0.071		0.11	0.08	1.2		0.14
D-BC	0.56	3.30	0.169		0.40	0.21	3.4		0.37
C-D	1.63								
C-A	10.86								
C-B	0.90	8.92	0.101		0.16	0.11	1.7		0.12

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-ACD	0.33	6.57	0.050		0.07	0.05	0.8		0.16
A-B	0.70								
A-C	7.29								
A-D	1.20	8.30	0.145		0.23	0.17	2.6		0.14
D-AB	0.45	8.29	0.054		0.08	0.06	0.9		0.13
D-BC	0.47	4.02	0.116		0.21	0.13	2.1		0.28
C-D	1.37								
C-A	9.10								
C-B	0.75	9.48	0.079		0.11	0.09	1.3		0.11

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.1

QUEUE FOR STREAM A-D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.2
08.15	0.2
08.30	0.3
08.45	0.3
09.00	0.2
09.15	0.2

QUEUE FOR STREAM D-AB	
TIME	NO. OF
SEGMENT	VEHICLES
ENDING	IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.1

QUEUE FOR STREAM D-BC	
TIME	NO. OF
SEGMENT	VEHICLES
ENDING	IN QUEUE
08.00	0.1
08.15	0.2
08.30	0.4
08.45	0.4
09.00	0.2
09.15	0.1

QUEUE FOR STREAM C-B	
TIME	NO. OF
SEGMENT	VEHICLES
ENDING	IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.2
08.45	0.2
09.00	0.1
09.15	0.1

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-ACD	I	35.8	I 23.9	I 7.1	I 0.20	I 7.1	I 0.20
I	A-B	I	77.1	I 51.4	I	I	I	I
I	A-C	I	799.7	I 533.1	I	I	I	I
I	A-D	I	132.1	I 88.1	I 22.0	I 0.17	I 22.0	I 0.17
I	D-AB	I	49.3	I 32.9	I 7.3	I 0.15	I 7.3	I 0.15
I	D-BC	I	51.2	I 34.1	I 21.5	I 0.42	I 21.5	I 0.42
I	C-D	I	150.0	I 100.0	I	I	I	I
I	C-A	I	997.9	I 665.3	I	I	I	I
I	C-B	I	82.6	I 55.1	I 10.5	I 0.13	I 10.5	I 0.13
I	ALL	I	2375.7	I 1583.8	I 68.4	I 0.03	I 68.4	I 0.03

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

===== end of file =====

TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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Run with file:- "J:\6000\6087_GoodlassRoad\Engineering\Traffic\Picady\2011 PM.vpi" (drive-on-the-left) at 15:58:19 on Thurs

RUN INFORMATION

RUN TITLE : Goodlass Road, Speke, Liverpool
LOCATION :
DATE : 13/07/11
CLIENT :
ENUMERATOR : james.mcgavin [PC97]
JOB NUMBER : 6087
STATUS :
DESCRIPTION :

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

```

                                MINOR ROAD (ARM D)
                                I
                                I
                                I
                                I
                                I
                                I
                                I
MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
                                I
                                I
                                I
                                I
                                I
                                I
                                MINOR ROAD (ARM B)

```

ARM A IS Speke Hall Road North
ARM B IS Edwards Lane
ARM C IS Speke Hall Road South
ARM D IS Goodlass Road

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I	MINOR ROAD D	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 6.60 M.	I	(W) 6.60 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I	(WCR) 0.00 M.	I
I		I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 3.20 M.	I	(WA-D) 3.20 M.	I
I	- VISIBILITY	I	(VC-B)200.00 M.	I	(VA-D)120.00 M.	I
I	- BLOCKS TRAFFIC (SPACES)	I	NO (0)	I	NO (0)	I
I		I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 45.0 M.	I	(VD-A) 18.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 29.0 M.	I	(VD-C) 26.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 3.70 M.	I	(WD-A) -	I
I	- LANE 2 WIDTH	I	(WB-A) 0.00 M.	I	(WD-C) -	I
I	WIDTH AT 0 M FROM JUNCTION	I	-	I	8.70 M.	I
I	WIDTH AT 5 M FROM JUNCTION	I	-	I	3.20 M.	I
I	WIDTH AT 10 M FROM JUNCTION	I	-	I	3.05 M.	I
I	WIDTH AT 15 M FROM JUNCTION	I	-	I	3.05 M.	I
I	WIDTH AT 20 M FROM JUNCTION	I	-	I	3.05 M.	I
I	- LENGTH OF FLARED SECTION	I	-	I	DERIVED: 0 PCU	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

STREAM B-C

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	687.20	0.26	0.10	I

STREAM D-A

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM D-A	STREAM C-A	STREAM C-D	I
I	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

STREAM B-A

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-D	STREAM D-A	STREAM D-B	I
I	541.92	0.24	0.24	0.24	0.24	I
I						I
I		Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I		STREAM A-B	STREAM C-A	STREAM C-B	STREAM D-C	I
I		0.10	0.15	0.35	0.12	I

STREAM D-C

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM D-C	STREAM C-A	STREAM C-B	STREAM B-C	STREAM B-D	I
I	0.00	0.00	0.00	0.00	0.00	I
I						I
I		Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I		STREAM C-D	STREAM A-C	STREAM A-D	STREAM B-A	I
I		0.00	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

STREAM C-B

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-B	STREAM A-C	STREAM A-D	I
I	764.86	0.29	0.29	0.41	I

I Intercept For I STREAM A-D	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	I
I 713.49	0.27	0.38	0.27	I

B-D Stream From Left Hand Lane

I Intercept For I STREAM B-D	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-B	I
I 541.92	0.24	0.24	0.10	0.35	I
I	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-D	Slope For Opposing	Slope For Opposing	I
I	0.15	0.15			I

B-D Stream From Right Hand Lane

I Intercept For I STREAM B-D	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-B	I
I 541.92	0.24	0.24	0.10	0.35	I
I	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-D	Slope For Opposing	Slope For Opposing	I
I	0.15	0.15			I

D-B Stream From Left Hand Lane

I Intercept For I STREAM D-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing STREAM A-D	I
I 0.00	0.00	0.00	0.00	0.00	I
I	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For Opposing	I
I	0.00	0.00			I

* Due to the presence of a flare, data is not available

D-B Stream From Right Hand Lane

I Intercept For I STREAM B-D	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing STREAM A-D	I
I 0.00	0.00	0.00	0.00	0.00	I
I	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For Opposing	I
I	0.00	0.00			I

* Due to the presence of a flare, data is not available

TRAFFIC DEMAND DATA

I ARM	I FLOW	I SCALE(%)	I
I A	I 100	I	
I B	I 100	I	
I C	I 100	I	
I D	I 100	I	

Demand set: 2011 Base

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

		NUMBER OF MINUTES FROM START WHEN				RATE OF FLOW (VEH/MIN)								
I	ARM	I	I	I	I	I	I	I	I					
		FLOW STARTS	TOP OF PEAK	FLOW STOPS	BEFORE	AT TOP	AFTER							
		TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK							
I	ARM	A	I	15.00	I	45.00	I	75.00	I	8.44	I	12.66	I	8.44
I	ARM	B	I	15.00	I	45.00	I	75.00	I	0.35	I	0.52	I	0.35
I	ARM	C	I	15.00	I	45.00	I	75.00	I	6.76	I	10.14	I	6.76
I	ARM	D	I	15.00	I	45.00	I	75.00	I	0.91	I	1.37	I	0.91

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

		NUMBER OF MINUTES FROM START WHEN				RATE OF FLOW (VEH/MIN)								
I	ARM	I	I	I	I	I	I	I	I					
		FLOW STARTS	TOP OF PEAK	FLOW STOPS	BEFORE	AT TOP	AFTER							
		TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK							
		I	I	I	I	I	I							
I	ARM	A	I	15.00	I	45.00	I	75.00	I	1.38	I	2.06	I	1.38
I	ARM	B	I	15.00	I	45.00	I	75.00	I	0.00	I	0.00	I	0.00
I	ARM	C	I	15.00	I	45.00	I	75.00	I	2.05	I	3.07	I	2.05
I	ARM	D	I	15.00	I	45.00	I	75.00	I	1.31	I	1.97	I	1.31

		I	TURNING PROPORTIONS TURNING COUNTS (PERCENTAGE OF H.V.S)								I
	TIME	I	FROM/TO	I ARM	A I	ARM B I	ARM C I	ARM D I	I		
I	16.45 - 18.15	I		I		I		I	I		
I		I	ARM A	I 0.000	I 0.022	I 0.964	I 0.013	I	I		
I		I		I 0.0	I 15.0	I 651.0	I 9.0	I	I		
I		I		I (0.0)	I (13.3)	I (1.5)	I (11.1)	I	I		
I		I		I	I	I	I	I	I		
I		I	ARM B	I 0.500	I 0.000	I 0.500	I 0.000	I	I		
I		I		I 14.0	I 0.0	I 14.0	I 0.0	I	I		
I		I		I (0.0)	I (0.0)	I (0.0)	I (0.0)	I	I		
I		I		I	I	I	I	I	I		
I		I	ARM C	I 0.957	I 0.026	I 0.000	I 0.017	I	I		
I		I		I 518.0	I 14.0	I 0.0	I 9.0	I	I		
I		I		I (2.5)	I (22.2)	I (0.0)	I (0.0)	I	I		
I		I		I	I	I	I	I	I		
I		I	ARM D	I 0.521	I 0.027	I 0.452	I 0.000	I	I		
I		I		I 38.0	I 2.0	I 33.0	I 0.0	I	I		
I		I		I (0.0)	I (0.0)	I (6.1)	I (0.0)	I	I		
I		I		I	I	I	I	I	I		

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-ACD	0.51	4.20	0.122		0.08	0.14	2.0		0.27
A-B	0.28								
A-C	13.82								
A-D	0.31	7.83	0.040		0.03	0.04	0.6		0.13
D-AB	1.68	6.83	0.246		0.21	0.32	4.6		0.19
D-BC	1.59	3.56	0.446		0.39	0.76	10.4		0.49
C-D	0.37								
C-A	12.31								
C-B	0.26	6.94	0.037		0.03	0.04	0.6		0.15

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-ACD	0.51	4.20	0.122		0.14	0.14	2.1		0.27
A-B	0.28								
A-C	13.82								
A-D	0.31	7.83	0.040		0.04	0.04	0.6		0.13
D-AB	1.68	6.82	0.246		0.32	0.32	4.8		0.19
D-BC	1.59	3.56	0.446		0.76	0.78	11.6		0.51
C-D	0.37								
C-A	12.31								
C-B	0.26	6.94	0.037		0.04	0.04	0.6		0.15

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-ACD	0.42	5.43	0.077		0.14	0.08	1.3		0.20
A-B	0.22								
A-C	11.28								
A-D	0.25	8.46	0.030		0.04	0.03	0.5		0.12
D-AB	1.37	7.73	0.177		0.32	0.22	3.4		0.16
D-BC	1.30	4.58	0.283		0.78	0.41	6.5		0.31
C-D	0.30								
C-A	10.05								
C-B	0.21	7.58	0.028		0.04	0.03	0.4		0.14

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-ACD	0.35	6.27	0.056		0.08	0.06	0.9		0.17
A-B	0.19								
A-C	9.45								
A-D	0.21	8.91	0.024		0.03	0.02	0.4		0.12
D-AB	1.14	8.32	0.137		0.22	0.16	2.5		0.14
D-BC	1.09	5.32	0.205		0.41	0.26	4.1		0.24
C-D	0.25								
C-A	8.42								
C-B	0.18	8.04	0.022		0.03	0.02	0.3		0.13

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.1

QUEUE FOR STREAM A-D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUE FOR STREAM D-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.2
17.30	0.3
17.45	0.3
18.00	0.2
18.15	0.2

QUEUE FOR STREAM D-BC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.3	
17.15	0.4	
17.30	0.8	*
17.45	0.8	*
18.00	0.4	
18.15	0.3	

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-ACD	I	38.5	I 25.7	I 8.3	I 0.22	I 8.3	I 0.22
I	A-B	I	20.6	I 13.8	I	I	I	I
I	A-C	I	1036.4	I 691.0	I	I	I	I
I	A-D	I	23.4	I 15.6	I 2.9	I 0.12	I 2.9	I 0.12
I	D-AB	I	125.7	I 83.8	I 20.7	I 0.16	I 20.7	I 0.16
I	D-BC	I	119.3	I 79.5	I 41.7	I 0.35	I 41.8	I 0.35
I	C-D	I	27.5	I 18.4	I	I	I	I
I	C-A	I	923.6	I 615.7	I	I	I	I
I	C-B	I	19.3	I 12.8	I 2.7	I 0.14	I 2.7	I 0.14
I	ALL	I	2334.4	I 1556.3	I 76.3	I 0.03	I 76.3	I 0.03

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

===== end of file =====

TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
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Run with file:- "J:\6000\6087_GoodlassRoad\Engineering\Traffic\Picady\2011 AM.vpi" (drive-on-the-left) at 15:54:04 on Thurs

RUN INFORMATION

RUN TITLE : Goodlass Road, Speke, Liverpool
LOCATION :
DATE : 13/07/11
CLIENT :
ENUMERATOR : james.mcgavin [PC97]
JOB NUMBER : 6087
STATUS :
DESCRIPTION :

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MINOR ROAD (ARM D)
I
I
I
I
I
I
I
MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
I
I
I
I
I
I
MINOR ROAD (ARM B)

ARM A IS Speke Hall Road North
ARM B IS Edwards Lane
ARM C IS Speke Hall Road South
ARM D IS Goodlass Road

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I	MINOR ROAD D	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 6.60 M.	I	(W) 6.60 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I	(WCR) 0.00 M.	I
I		I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 3.20 M.	I	(WA-D) 3.20 M.	I
I	- VISIBILITY	I	(VC-B)200.00 M.	I	(VA-D)120.00 M.	I
I	- BLOCKS TRAFFIC (SPACES)	I	NO (0)	I	NO (0)	I
I		I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 45.0 M.	I	(VD-A) 18.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 29.0 M.	I	(VD-C) 26.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 3.70 M.	I	(WD-A) -	I
I	- LANE 2 WIDTH	I	(WB-A) 0.00 M.	I	(WD-C) -	I
I	WIDTH AT 0 M FROM JUNCTION	I	-	I	8.70 M.	I
I	WIDTH AT 5 M FROM JUNCTION	I	-	I	3.20 M.	I
I	WIDTH AT 10 M FROM JUNCTION	I	-	I	3.05 M.	I
I	WIDTH AT 15 M FROM JUNCTION	I	-	I	3.05 M.	I
I	WIDTH AT 20 M FROM JUNCTION	I	-	I	3.05 M.	I
I	- LENGTH OF FLARED SECTION	I	-	I	DERIVED: 0 PCU	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

STREAM B-C

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	687.20	0.26	0.10	I

STREAM D-A

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM D-A	STREAM C-A	STREAM C-D	I
I	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

STREAM B-A

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-D	STREAM D-A	STREAM D-B	I
I	541.92	0.24	0.24	0.24	0.24	I
I						I
I		Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I		STREAM A-B	STREAM C-A	STREAM C-B	STREAM D-C	I
I		0.10	0.15	0.35	0.12	I

STREAM D-C

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM D-C	STREAM C-A	STREAM C-B	STREAM B-C	STREAM B-D	I
I	0.00	0.00	0.00	0.00	0.00	I
I						I
I		Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I		STREAM C-D	STREAM A-C	STREAM A-D	STREAM B-A	I
I		0.00	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

STREAM C-B

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-B	STREAM A-C	STREAM A-D	I
I	764.86	0.29	0.29	0.41	I

I Intercept For I STREAM A-D	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	I
I 713.49	0.27	0.38	0.27	I

B-D Stream From Left Hand Lane

I Intercept For I STREAM B-D	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-B	I
I 541.92	0.24	0.24	0.10	0.35	I
I	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-D	Slope For Opposing	Slope For Opposing	I
I	0.15	0.15			I

B-D Stream From Right Hand Lane

I Intercept For I STREAM B-D	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-B	I
I 541.92	0.24	0.24	0.10	0.35	I
I	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-D	Slope For Opposing	Slope For Opposing	I
I	0.15	0.15			I

D-B Stream From Left Hand Lane

I Intercept For I STREAM D-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing STREAM A-D	I
I 0.00	0.00	0.00	0.00	0.00	I
I	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For Opposing	I
I	0.00	0.00			I

* Due to the presence of a flare, data is not available

D-B Stream From Right Hand Lane

I Intercept For I STREAM B-D	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing STREAM A-D	I
I 0.00	0.00	0.00	0.00	0.00	I
I	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For Opposing	I
I	0.00	0.00			I

* Due to the presence of a flare, data is not available

TRAFFIC DEMAND DATA

I ARM	I FLOW	I SCALE(%)	I
I A	I 100	I	
I B	I 100	I	
I C	I 100	I	
I D	I 100	I	

Demand set: Proposed + Committed

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

		NUMBER OF MINUTES FROM START WHEN				RATE OF FLOW (VEH/MIN)								
I	ARM	I	I	I	I	I	I	I	I					
		FLOW STARTS	TOP OF PEAK	FLOW STOPS	BEFORE	AT TOP	AFTER							
		TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK							
		I	I	I	I	I	I							
I	ARM	A	I	15.00	I	45.00	I	75.00	I	3.56	I	5.34	I	3.56
I	ARM	B	I	15.00	I	45.00	I	75.00	I	0.00	I	0.00	I	0.00
I	ARM	C	I	15.00	I	45.00	I	75.00	I	2.47	I	3.71	I	2.47
I	ARM	D	I	15.00	I	45.00	I	75.00	I	0.34	I	0.51	I	0.34

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

		NUMBER OF MINUTES FROM START WHEN				RATE OF FLOW (VEH/MIN)							
I	ARM	I	I	I	I	I	I	I	I				
		FLOW STARTS	TOP OF PEAK	FLOW STOPS	BEFORE	AT TOP	AFTER						
		TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK						
I	ARM	A	15.00	I	45.00	I	75.00	I	6.16	I	9.24	I	6.16
I	ARM	B	15.00	I	45.00	I	75.00	I	0.36	I	0.54	I	0.36
I	ARM	C	15.00	I	45.00	I	75.00	I	9.56	I	14.34	I	9.56
I	ARM	D	15.00	I	45.00	I	75.00	I	0.63	I	0.94	I	0.63

		I	TURNING PROPORTIONS								I					
		I	TURNING COUNTS								I					
		I	(PERCENTAGE OF H.V.S)								I					
		I									I					
	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I	ARM	D	I
I	07.45 - 09.15	I		I		I		I		I		I		I		I
I		I	ARM	A	I	0.000	I	0.000	I	0.758	I	0.242	I			
I		I		I	I	0.0	I	0.0	I	216.0	I	69.0	I			
I		I		I	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			
I		I		I	I		I		I		I		I			
I		I	ARM	B	I	0.000	I	0.000	I	0.000	I	0.000	I			
I		I		I	I	0.0	I	0.0	I	0.0	I	0.0	I			
I		I		I	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			
I		I		I	I		I		I		I		I			
I		I	ARM	C	I	0.646	I	0.000	I	0.000	I	0.354	I			
I		I		I	I	128.0	I	0.0	I	0.0	I	70.0	I			
I		I		I	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			
I		I		I	I		I		I		I		I			
I		I	ARM	D	I	0.444	I	0.000	I	0.556	I	0.000	I			
I		I		I	I	12.0	I	0.0	I	15.0	I	0.0	I			
I		I		I	I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			
I		I		I	I		I		I		I		I			

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

Demand set :		2016 Base														
-----		-----														
		TURNING PROPORTIONS														
		TURNING COUNTS														
		(PERCENTAGE OF H.V.S)														

TIME		I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I	ARM	D	I
-----		-----														
I	07.45 - 09.15	I		I			I			I			I			I
I		I	ARM	A	I	0.000	I	0.126	I	0.813	I	0.061	I			I
I		I			I	0.0	I	62.0	I	401.0	I	30.0	I			I
I		I			I	(0.0)	I	(10.7)	I	(7.7)	I	(14.8)	I			I
I		I			I		I		I		I		I			I
I		I	ARM	B	I	0.379	I	0.000	I	0.621	I	0.000	I			I
I		I			I	11.0	I	0.0	I	18.0	I	0.0	I			I
I		I			I	(10.0)	I	(0.0)	I	(0.0)	I	(0.0)	I			I
I		I			I		I		I		I		I			I
I		I	ARM	C	I	0.858	I	0.086	I	0.000	I	0.056	I			I
I		I			I	656.0	I	66.0	I	0.0	I	43.0	I			I
I		I			I	(6.2)	I	(3.3)	I	(0.0)	I	(0.0)	I			I
I		I			I		I		I		I		I			I
I		I	ARM	D	I	0.480	I	0.060	I	0.460	I	0.000	I			I
I		I			I	24.0	I	3.0	I	23.0	I	0.0	I			I
I		I			I	(9.0)	I	(0.0)	I	(19.0)	I	(0.0)	I			I
I		I			I		I		I		I		I			I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	07.45-08.00										I
I	B-ACD	0.36	6.33	0.057		0.00	0.06	0.9		0.17	I
I	A-B	0.78									I
I	A-C	7.74									I
I	A-D	1.24	8.03	0.155		0.00	0.18	2.6		0.15	I
I	D-AB	0.47	8.04	0.059		0.00	0.06	0.9		0.13	I
I	D-BC	0.49	3.75	0.132		0.00	0.15	2.1		0.31	I
I	C-D	1.42									I
I	C-A	9.84									I
I	C-B	0.83	9.31	0.089		0.00	0.10	1.4		0.12	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.00-08.15										I
I	B-ACD	0.43	5.48	0.079		0.06	0.08	1.2		0.20	I
I	A-B	0.93									I
I	A-C	9.24									I
I	A-D	1.48	7.38	0.201		0.18	0.25	3.6		0.17	I
I	D-AB	0.57	7.26	0.078		0.06	0.08	1.2		0.15	I
I	D-BC	0.59	2.98	0.197		0.15	0.24	3.4		0.42	I
I	C-D	1.69									I
I	C-A	11.75									I
I	C-B	0.99	8.72	0.113		0.10	0.13	1.9		0.13	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.15-08.30										I
I	B-ACD	0.53	4.16	0.128		0.08	0.14	2.1		0.28	I
I	A-B	1.14									I
I	A-C	11.32									I
I	A-D	1.82	6.48	0.280		0.25	0.38	5.5		0.21	I
I	D-AB	0.70	5.92	0.118		0.08	0.13	1.9		0.19	I
I	D-BC	0.71	1.92	0.372		0.24	0.55	7.3		0.80	I
I	C-D	2.07									I
I	C-A	14.39									I
I	C-B	1.21	7.90	0.153		0.13	0.18	2.6		0.15	I

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-ACD	0.53	4.15	0.128		0.14	0.15	2.2		0.28
A-B	1.14								
A-C	11.32								
A-D	1.82	6.48	0.280		0.38	0.39	5.8		0.21
D-AB	0.70	5.89	0.119		0.13	0.13	2.0		0.19
D-BC	0.71	1.92	0.373		0.55	0.57	8.4		0.83
C-D	2.07								
C-A	14.39								
C-B	1.21	7.90	0.153		0.18	0.18	2.7		0.15

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-ACD	0.43	5.47	0.079		0.15	0.09	1.4		0.20
A-B	0.93								
A-C	9.24								
A-D	1.48	7.38	0.201		0.39	0.25	4.0		0.17
D-AB	0.57	7.23	0.078		0.13	0.09	1.3		0.15
D-BC	0.59	2.97	0.198		0.57	0.25	4.2		0.43
C-D	1.69								
C-A	11.75								
C-B	0.99	8.71	0.114		0.18	0.13	2.0		0.13

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-ACD	0.36	6.32	0.058		0.09	0.06	1.0		0.17
A-B	0.78								
A-C	7.74								
A-D	1.24	8.03	0.155		0.25	0.19	2.9		0.15
D-AB	0.47	8.02	0.059		0.09	0.06	1.0		0.13
D-BC	0.49	3.74	0.132		0.25	0.16	2.5		0.31
C-D	1.42								
C-A	9.84								
C-B	0.83	9.30	0.089		0.13	0.10	1.5		0.12

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.1

QUEUE FOR STREAM A-D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.2
08.15	0.2
08.30	0.4
08.45	0.4
09.00	0.3
09.15	0.2

QUEUE FOR STREAM D-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.1

QUEUE FOR STREAM D-BC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.1	
08.15	0.2	
08.30	0.5	*
08.45	0.6	*
09.00	0.3	
09.15	0.2	

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.2
08.45	0.2
09.00	0.1
09.15	0.1

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-ACD	I	39.9	I 26.6	I 8.7	I 0.22	I 8.7	I 0.22
I	A-B	I	85.3	I 56.9	I	I	I	I
I	A-C	I	849.3	I 566.2	I	I	I	I
I	A-D	I	136.3	I 90.8	I 24.3	I 0.18	I 24.3	I 0.18
I	D-AB	I	52.1	I 34.8	I 8.3	I 0.16	I 8.3	I 0.16
I	D-BC	I	53.8	I 35.9	I 27.8	I 0.52	I 27.8	I 0.52
I	C-D	I	155.5	I 103.7	I	I	I	I
I	C-A	I	1079.1	I 719.4	I	I	I	I
I	C-B	I	90.8	I 60.6	I 12.1	I 0.13	I 12.1	I 0.13
I	ALL	I	2542.3	I 1694.8	I 81.2	I 0.03	I 81.2	I 0.03

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

===== end of file =====

TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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Run with file:- "J:\6000\6087_GoodlassRoad\Engineering\Traffic\Picady\2011 PM.vpi" (drive-on-the-left) at 15:58:48 on Thurs

RUN INFORMATION

RUN TITLE : Goodlass Road, Speke, Liverpool
LOCATION :
DATE : 13/07/11
CLIENT :
ENUMERATOR : james.mcgavin [PC97]
JOB NUMBER : 6087
STATUS :
DESCRIPTION :

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

```

                                MINOR ROAD (ARM D)
                                I
                                I
                                I
                                I
                                I
                                I
                                I
MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
                                I
                                I
                                I
                                I
                                I
                                I
                                MINOR ROAD (ARM B)

```

ARM A IS Speke Hall Road North
ARM B IS Edwards Lane
ARM C IS Speke Hall Road South
ARM D IS Goodlass Road

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I	MINOR ROAD D	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 6.60 M.	I	(W) 6.60 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I	(WCR) 0.00 M.	I
I		I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 3.20 M.	I	(WA-D) 3.20 M.	I
I	- VISIBILITY	I	(VC-B) 200.00 M.	I	(VA-D) 120.00 M.	I
I	- BLOCKS TRAFFIC (SPACES)	I	NO (0)	I	NO (0)	I
I		I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 45.0 M.	I	(VD-A) 18.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 29.0 M.	I	(VD-C) 26.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 3.70 M.	I	(WD-A) -	I
I	- LANE 2 WIDTH	I	(WB-A) 0.00 M.	I	(WD-C) -	I
I	WIDTH AT 0 M FROM JUNCTION	I	-	I	8.70 M.	I
I	WIDTH AT 5 M FROM JUNCTION	I	-	I	3.20 M.	I
I	WIDTH AT 10 M FROM JUNCTION	I	-	I	3.05 M.	I
I	WIDTH AT 15 M FROM JUNCTION	I	-	I	3.05 M.	I
I	WIDTH AT 20 M FROM JUNCTION	I	-	I	3.05 M.	I
I	- LENGTH OF FLARED SECTION	I	-	I	DERIVED: 0 PCU	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

STREAM B-C

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	687.20	0.26	0.10	I

STREAM D-A

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM D-A	STREAM C-A	STREAM C-D	I
I	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

STREAM B-A

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-D	STREAM D-A	STREAM D-B	I
I	541.92	0.24	0.24	0.24	0.24	I

I	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM A-B	STREAM C-A	STREAM C-B	STREAM D-C	I
I	0.10	0.15	0.35	0.12	I

STREAM D-C

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM D-C	STREAM C-A	STREAM C-B	STREAM B-C	STREAM B-D	I
I	0.00	0.00	0.00	0.00	0.00	I

I	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM C-D	STREAM A-C	STREAM A-D	STREAM B-A	I
I	0.00	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

STREAM C-B

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-B	STREAM A-C	STREAM A-D	I
I	764.86	0.29	0.29	0.41	I

I Intercept For I STREAM A-D	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	I
I 713.49	0.27	0.38	0.27	I

B-D Stream From Left Hand Lane

I Intercept For I STREAM B-D	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-B	I
I 541.92	0.24	0.24	0.10	0.35	I
I	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-D	Slope For Opposing	Slope For Opposing	I
I	0.15	0.15			I

B-D Stream From Right Hand Lane

I Intercept For I STREAM B-D	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-B	I
I 541.92	0.24	0.24	0.10	0.35	I
I	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-D	Slope For Opposing	Slope For Opposing	I
I	0.15	0.15			I

D-B Stream From Left Hand Lane

I Intercept For I STREAM D-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing STREAM A-D	I
I 0.00	0.00	0.00	0.00	0.00	I
I	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For Opposing	I
I	0.00	0.00			I

* Due to the presence of a flare, data is not available

D-B Stream From Right Hand Lane

I Intercept For I STREAM B-D	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing STREAM A-D	I
I 0.00	0.00	0.00	0.00	0.00	I
I	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For Opposing	I
I	0.00	0.00			I

* Due to the presence of a flare, data is not available

TRAFFIC DEMAND DATA

I ARM	I FLOW	I SCALE(%)	I
I A	I 100	I	
I B	I 100	I	
I C	I 100	I	
I D	I 100	I	

Demand set: Proposed + Committed

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

		NUMBER OF MINUTES FROM START WHEN				RATE OF FLOW (VEH/MIN)								
I	ARM	I	I	I	I	I	I	I	I					
		FLOW STARTS	TOP OF PEAK	FLOW STOPS	BEFORE	AT TOP	AFTER							
		TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK							
I	ARM	A	I	15.00	I	45.00	I	75.00	I	1.38	I	2.06	I	1.38
I	ARM	B	I	15.00	I	45.00	I	75.00	I	0.00	I	0.00	I	0.00
I	ARM	C	I	15.00	I	45.00	I	75.00	I	2.05	I	3.07	I	2.05
I	ARM	D	I	15.00	I	45.00	I	75.00	I	1.31	I	1.97	I	1.31

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

		NUMBER OF MINUTES FROM START WHEN				RATE OF FLOW (VEH/MIN)								
I	ARM	I	I	I	I	I	I	I	I					
		FLOW STARTS	TOP OF PEAK	FLOW STOPS	BEFORE	AT TOP	AFTER							
		TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK							
		I	I	I	I	I	I							
I	ARM	A	I	15.00	I	45.00	I	75.00	I	9.26	I	13.89	I	9.26
I	ARM	B	I	15.00	I	45.00	I	75.00	I	0.38	I	0.56	I	0.38
I	ARM	C	I	15.00	I	45.00	I	75.00	I	7.43	I	11.14	I	7.43
I	ARM	D	I	15.00	I	45.00	I	75.00	I	1.00	I	1.50	I	1.00

	TURNING PROPORTIONS								
	TURNING COUNTS								
	(PERCENTAGE OF H.V.S)								
TIME	I FROM/TO	I ARM	A I ARM	B I ARM	C I ARM	D I			
16.45 - 18.15	I	I	I	I	I	I	I	I	
	I ARM A	I 0.000	I 0.000	I 0.927	I 0.073	I	I	I	
	I	I 0.0	I 0.0	I 102.0	I 8.0	I	I	I	
	I	I (0.0)	I (0.0)	I (0.0)	I (0.0)	I	I	I	
	I	I	I	I	I	I	I	I	
	I ARM B	I 0.000	I 0.000	I 0.000	I 0.000	I	I	I	
	I	I 0.0	I 0.0	I 0.0	I 0.0	I	I	I	
	I	I (0.0)	I (0.0)	I (0.0)	I (0.0)	I	I	I	
	I	I	I	I	I	I	I	I	
	I ARM C	I 0.933	I 0.000	I 0.000	I 0.067	I	I	I	
	I	I 153.0	I 0.0	I 0.0	I 11.0	I	I	I	
	I	I (0.0)	I (0.0)	I (0.0)	I (0.0)	I	I	I	
	I	I	I	I	I	I	I	I	
	I ARM D	I 0.495	I 0.000	I 0.505	I 0.000	I	I	I	
	I	I 52.0	I 0.0	I 53.0	I 0.0	I	I	I	
	I	I (0.0)	I (0.0)	I (0.0)	I (0.0)	I	I	I	
	I	I	I	I	I	I	I	I	

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

Demand set: 2016 Base											

I	TURNING PROPORTIONS										I
I	TURNING COUNTS										I
I	(PERCENTAGE OF H.V.S)										I
I	-----										I
I	TIME	I FROM/TO	I ARM	A I	ARM	B I	ARM	C I	ARM	D I	I
I	-----										I
I	16.45 - 18.15	I		I		I		I		I	I
I		I ARM	A	I	0.000	I	0.022	I	0.965	I	0.013
I		I		I	0.0	I	16.0	I	715.0	I	10.0
I		I		I	(0.0)	I	(13.3)	I	(1.5)	I	(11.1)
I		I		I		I		I		I	
I		I ARM	B	I	0.500	I	0.000	I	0.500	I	0.000
I		I		I	15.0	I	0.0	I	15.0	I	0.0
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)
I		I		I		I		I		I	
I		I ARM	C	I	0.958	I	0.017	I	0.000	I	0.025
I		I		I	569.0	I	10.0	I	0.0	I	15.0
I		I		I	(2.5)	I	(22.2)	I	(0.0)	I	(0.0)
I		I		I		I		I		I	
I		I ARM	D	I	0.525	I	0.025	I	0.450	I	0.000
I		I		I	42.0	I	2.0	I	36.0	I	0.0
I		I		I	(0.0)	I	(0.0)	I	(6.1)	I	(0.0)
I		I		I		I		I		I	

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	16.45-17.00										I
I	B-ACD	0.38	5.97	0.063		0.00	0.07	1.0		0.18	I
I	A-B	0.20									I
I	A-C	10.25									I
I	A-D	0.23	8.72	0.026		0.00	0.03	0.4		0.12	I
I	D-AB	1.19	8.13	0.147		0.00	0.17	2.5		0.14	I
I	D-BC	1.13	5.02	0.224		0.00	0.28	4.0		0.25	I
I	C-D	0.33									I
I	C-A	9.06									I
I	C-B	0.13	7.84	0.016		0.00	0.02	0.2		0.13	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.00-17.15										I
I	B-ACD	0.45	5.06	0.089		0.07	0.10	1.4		0.22	I
I	A-B	0.24									I
I	A-C	12.24									I
I	A-D	0.27	8.24	0.033		0.03	0.03	0.5		0.13	I
I	D-AB	1.43	7.48	0.191		0.17	0.23	3.4		0.17	I
I	D-BC	1.34	4.23	0.318		0.28	0.45	6.4		0.34	I
I	C-D	0.39									I
I	C-A	10.82									I
I	C-B	0.15	7.34	0.020		0.02	0.02	0.3		0.14	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.15-17.30										I
I	B-ACD	0.55	3.68	0.150		0.10	0.17	2.4		0.32	I
I	A-B	0.29									I
I	A-C	14.99									I
I	A-D	0.33	7.57	0.044		0.03	0.05	0.7		0.14	I
I	D-AB	1.75	6.44	0.272		0.23	0.37	5.3		0.21	I
I	D-BC	1.64	3.13	0.525		0.45	1.02	13.6		0.64	I
I	C-D	0.48									I
I	C-A	13.25									I
I	C-B	0.18	6.65	0.028		0.02	0.03	0.4		0.15	I

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-ACD	0.55	3.67	0.150		0.17	0.17	2.6		0.32
A-B	0.29								
A-C	14.99								
A-D	0.33	7.57	0.044		0.05	0.05	0.7		0.14
D-AB	1.75	6.42	0.273		0.37	0.37	5.5		0.21
D-BC	1.64	3.13	0.525		1.02	1.06	15.6		0.67
C-D	0.48								
C-A	13.25								
C-B	0.18	6.65	0.028		0.03	0.03	0.4		0.15

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-ACD	0.45	5.05	0.089		0.17	0.10	1.6		0.22
A-B	0.24								
A-C	12.24								
A-D	0.27	8.24	0.033		0.05	0.03	0.5		0.13
D-AB	1.43	7.45	0.192		0.37	0.24	3.7		0.17
D-BC	1.34	4.22	0.318		1.06	0.48	7.8		0.36
C-D	0.39								
C-A	10.82								
C-B	0.15	7.34	0.020		0.03	0.02	0.3		0.14

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-ACD	0.38	5.96	0.063		0.10	0.07	1.1		0.18
A-B	0.20								
A-C	10.25								
A-D	0.23	8.72	0.026		0.03	0.03	0.4		0.12
D-AB	1.19	8.12	0.147		0.24	0.17	2.7		0.14
D-BC	1.13	5.02	0.224		0.48	0.30	4.7		0.26
C-D	0.33								
C-A	9.06								
C-B	0.13	7.84	0.016		0.02	0.02	0.3		0.13

QUEUE FOR STREAM B-ACD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.1
17.30	0.2
17.45	0.2
18.00	0.1
18.15	0.1

QUEUE FOR STREAM A-D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUE FOR STREAM D-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.2
17.30	0.4
17.45	0.4
18.00	0.2
18.15	0.2

QUEUE FOR STREAM D-BC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.3	
17.15	0.5	
17.30	1.0	*
17.45	1.1	*
18.00	0.5	
18.15	0.3	

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

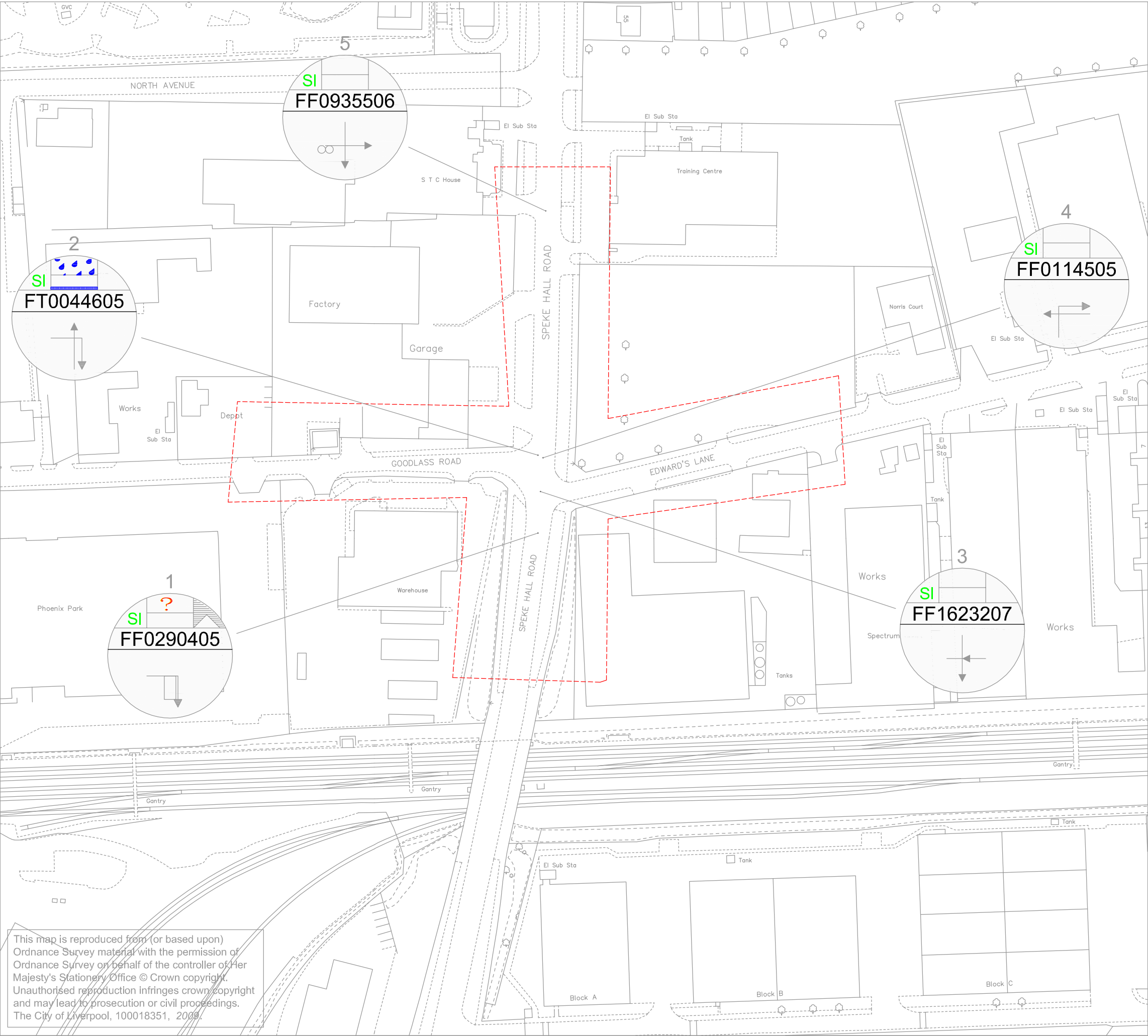
I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-ACD	I	41.3	I 27.5	I 10.0	I 0.24	I 10.0	I 0.24
I	A-B	I	22.0	I 14.7	I	I	I	I
I	A-C	I	1124.5	I 749.7	I	I	I	I
I	A-D	I	24.8	I 16.5	I 3.2	I 0.13	I 3.2	I 0.13
I	D-AB	I	131.3	I 87.5	I 23.1	I 0.18	I 23.1	I 0.18
I	D-BC	I	123.4	I 82.2	I 52.1	I 0.42	I 52.1	I 0.42
I	C-D	I	35.8	I 23.9	I	I	I	I
I	C-A	I	993.8	I 662.5	I	I	I	I
I	C-B	I	13.8	I 9.2	I 1.9	I 0.14	I 1.9	I 0.14
I	ALL	I	2510.6	I 1673.7	I 90.3	I 0.04	I 90.3	I 0.04

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

===== end of file =====

APPENDIX G



NOTES

This Drawing is an instrument of service and shall remain the property of 2020 Liverpool / Mouchel. It may not be reproduced or copied in any form. It shall not be used for the construction, enlargement or alteration of a building or area other than the said project without the authorisation of the issuing office.

Contractors shall verify and be responsible for all dimensions and conditions and shall report any discrepancies to the issuing office before proceeding with any work. Drawings shall not be scaled.

REVISION HISTORY



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INVESTOR IN PEOPLE

Mouchel working in Partnership with Liverpool City Council

PROJECT TITLE

Speke Hall Road
Accident Data Request
13/04/2005 to 12/04/2010

DRAWING INFORMATION

Accident Location Plot
Accidents
0 Fatal 0 Serious 5 Slight

Survey By	N/A	Survey Date	00/00/0000
Design By	N/A	Design Date	00/00/0000
Drawn By	B.I.S	Creation Date	15/06/2011
Checked By	K.M	Checked Date	15/06/2011
Approv'd By	J.B	Approv'd Date	15/06/2011

Drawing Status	INFORMATION	Drawing Scale	NTS
Drawing Number		Revision	

File Name		BES Ref	N/A
TCSU Site Ref	N/A		
A3 395 x 272mm		Printed on 15-Jun-11 by Smith, Barry - 2020 Liverpool	

Date: 15-June-2011

Time: 09:47:31

Title: **Speke Hall Road - 13/04/2005 to 12/04/2010**

Requested output: **D - Print Crash Report**

Date: 15-June-2011

There were 5 reported crashes resulting in injury

D-PRINT CRASH REPORT

15-Jun-2011
09:48:34

Speke Hall Road - 13/04/2005 to 12/04/2010

No	Location	Severity	Date	Day	Time	Street Lighting	Road Surface	Weather	Pedestrian Direction	Factors	Involved
1	Road No A562 Grid 342563E Section L24201 Ref 384502N A562 SPEKE HALL ROAD 30 METRES SOUTH OF GOODGLASS ROAD, LIVERPOOL, L24201/L24101	SLIGHT	10/11/2005	Thu	20:00	DRK STL	Dry	Unknown		R.TURN	
	V1 ENTERS PATH OF V2. COLLISION OCCURS.						Veh1, Car, W -> S Veh2, Car, N -> S			Casualties 1 Vehicles 2	
2	Road No A562 Grid 342563E Section L24201 Ref 384532N A562 SPEKE HALL ROAD AT JUNCTION WITH E0 GOODGLASS ROAD LIVERPOOL, L24201/L24101	SLIGHT	30/04/2005	Sat	06:15	L STL	Wet/Damp	Rain		R.TURN	
	V1 PULLS OUT INTO MAIN C/W INTO PATH OF V2. COLLISION OCCURS.						Veh1, Car, W -> E Veh2, Car, S -> N			Casualties 2 Vehicles 2	
3	Road No A5275 Grid 342564E Section L24201 Ref 384518N A5275 SPEKE HALL AT JUNCTION WITH U EDWARDS LANE, LIVERPOOL, L24201/L24081	SLIGHT	07/03/2007	Wed	11:40	L STL	Dry	Fine			HGV
	V2 REVERSES INTO MAIN C/W. COLLIDES WITH V1.						Veh1, Car, N -> S Veh2, Goods>7.5, E -> W			Casualties 1 Vehicles 2	
4	Road No A562 Grid 342565E Section L24201 Ref 384531N A562 SPEKE HALL ROAD AT HOUSE NAME SHELL 03 METRES EAST OF U GOODGLASS ROAD, LIVERPOOL, MERSEYSIDE L24201/L24101	SLIGHT	10/08/2005	Wed	10:10	L STL	Dry	Fine		R.TURN	
	V1 COLLIDED INTO THE PATH OF V2.						Veh1, Car, S -> E Veh2, Car, E -> W			Casualties 2 Vehicles 2	

Key Involved

PED Pedestrian
HGV Heavy Goods Vehicle
GV Goods Vehicle
M/C Motor Cycle
P/C Pedal Cycle
PSV Bus/Coach

Street Lighting

L Daylight
DRK Dark
NSL No Street Lights
STL Street Lights
USL Street Lights Unlit
STU Street Lights Unknown

FACTORS

+VE Positive Breath Test
R.TURN Right Turn Manoeuvre
O/TAKE Overtaking Manoeuvre
S.VEH Single Vehicle

Special Conditions

ATS OUT Traffic Lights Not Working
ATS DEF Traffic Lights Defective
SIGNS Road Signs Defective or Obscured
RD WRKS Road Works
Surface Road Surface Defective

D-PRINT CRASH REPORT

15-Jun-2011
09:48:34

Speke Hall Road - 13/04/2005 to 12/04/2010

No	Location	Severity	Date	Day	Time	Street Lighting	Road Surface	Weather	Pedestrian Direction	Factors	Involved
5	Road No A562 Grid 342566E Section L24201 Ref 384626N A562 SPEKE HALL ROAD 49 METRES SOUTH OF U NORTH AVENUE, LIVERPOOL, MERSEYSIDE, L24201/L24974	SLIGHT	22/06/2006	Thu	17:52	L NSL	Dry	Fine			P/C
	V2 RIDING ON PAVEMENT DUE TO HEAVY TRAFFIC V1 PULLS OUT OF PRIVATE ENTRANCE FAILING TO SEE P/CYCLIST & COLLISION OCCURS								Veh1, Car, N -> S Veh2, Pedal Cycle, W -> E		Casualties 1 Vehicles 2

Key Involved

PED Pedestrian
HGV Heavy Goods Vehicle
GV Goods Vehicle
M/C Motor Cycle
P/C Pedal Cycle
PSV Bus/Coach

Street Lighting

L Daylight
DRK Dark
NSL No Street Lights
STL Street Lights
USL Street Lights Unlit
STU Street Lights Unknown

FACTORS

+VE Positive Breath Test
R.TURN Right Turn Manoeuvre
O/TAKE Overtaking Manoeuvre
S.VEH Single Vehicle

Special Conditions

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ATS DEF Traffic Lights Defective
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RD WRKS Road Works
Surface Road Surface Defective