Willowgarth High School, Residential Development – Transport Statement

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Willowgarth High School, Residential Development – Transport Statement

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Capabilities on project:
Transportation

1 Introduction

1.1 Introduction

On behalf of Barnsley Metropolitan Borough Council (BMBC), AECOM has been commissioned to prepare a Transport Statement (TS) to support a planning application for the redevelopment of the Willowgarth High School site in Grimethorpe for residential development. The site is bounded by an area of green space to the north and east, existing residential development to the south and greenbelt land to the west (on the opposite side of Brierley Road).

It is intended that the development is served off the existing school access (northern) on Brierley Road; a location plan is provided in **Figure 1**.

Figure 1: Site Location

A Transport Scoping Study (TSS) has previously been prepared and submitted to BMBC. This Transport Statement has been prepared to reflect the TSS, as appropriate.

1.2 Development Proposals

The development site is located to the east of Brierley Road, between the residential areas of Brierley to the north and Grimethorpe to the south. The proposals would see the existing Willowgarth High School site redeveloped to provide 110 detached and semi-detached dwellings; an indicative Masterplan is provided in DLP Drawing YK1805 SK02 (**Appendix A**).

Based on the school's Travel Plan (2008), some 815 pupils are on the school role, with 86 staff employed across teaching and ancillary roles. This TS therefore seeks to quantify the net impact of the development proposals, in traffic terms, over and above the existing use of the site.

1.3 Report Format

Following this introductory section:

- **Section 2** outlines the baseline conditions on the highway network in the vicinity of the site, reflecting a site visit undertaken on Tuesday 17th May 2011;
- **Section 3** describes the accessibility of the site and its connectivity with surrounding areas, focusing particularly on non-car modes;
- **Section 4** identifies the likely trip generation and distribution of development traffic and makes a comparison with the current use of the site;
- **Section 5** describes the results of operational assessments of the site access on Brierley Road for the peak periods of operation; and
- **Section 6** provides a summary and conclusions.

2 Baseline Conditions

2.1 Introduction

This section of the TS outlines the existing conditions on the surrounding highway network. Specifically it identifies any traffic issues observed during a site visit on the 17th May 2011 and analyses the historic accident record for the latest available 3 year period, with a view to identifying any common locations / causes.

2.2 Existing Network Operation

Brierley Road runs north – south along the western boundary of the site; access to the development will be taken from here at the location of the existing northern school access junction. During the site visit the southern school access was observed to be gated; the gates were closed until approximately 13:50 when they were opened to allow traffic to leave the site. Traffic was then observed to both access and egress the school site via both the northern and southern junctions, which resulted in potential for conflict, with several 'near misses' observed during the school afternoon peak.

The speed limit on Brierley Road is 30mph and traffic flows were observed to be light during the site visit, albeit a noticeable peak occurred to coincide with the end of the school day. Footways are provided on both sides of the carriageway, together with street lighting. The carriageway width in the vicinity of the site access measures 9.6m, with the eastern footway being 1.7m and the western footway being 1.6m.

The alignment of Brierley Road as it passes the site is straight and thus, ordinarily, offers good visibility to both the north and south from the site access. During the school peak, however, vehicles were observed to park along Brierley Road on both sides of the road, impacting detrimentally on visibility for vehicles leaving the site. This was compounded by traffic using both the school accesses simultaneously – the distance between the two accesses is approximately 30m (centreline to centreline).

The road follows a steep downhill gradient towards the south, warning signs suggest a 1:10 gradient. Brierley Road past the development site is a bus route, with stops provided in close proximity to the site access for both northbound and southbound travel. During the site visit, buses were observed to be hindered by parked vehicles on Brierley Road.

Two pedestrian refuges are provided on Brierley Road to the north and south of the school accesses. Whilst these were used by some pupils, a large number were observed crossing at other locations in the vicinity of the school. Given the aforementioned observations with regards to vehicular movements during the afternoon school peak, the potential for conflict between vehicles and pedestrians was considered to be high. The majority of pupils travelling on foot were observed to head south towards Grimethorpe, with a lesser number heading north towards Brierley. Heading south, pupils used both footways and, owing to them walking in large groups, were frequently observed walking in the carriageway, creating a potential road safety issue. Heading north a popular route was observed to be via a footpath across fields to the north west of the school.

The development proposals are considered to improve the current situation in terms of the potential for conflicting vehicular movements and potential road safety issues for pedestrians. The loss of the school would remove the current obstructive on-street parking during the school afternoon peak (with residential parking incorporated within the development). It would also concentrate trips associated with the development on a single access, rather than the two that are currently used.

2.3 Road Safety

Accident data has been sourced from Barnsley Metropolitan Borough Council for the latest available three year period for the network in the vicinity of the development. The following summarises the data received by accident location, severity and type, with the full dataset provided in **Appendix B**.

The accident report provided between, January 2008 to December 2010 indicates that a total of 16 separate incidents occurred during this time period, of which 13 were classified as slight severity and 3 as serious. 12 accidents involved cars, 1 motor cycle, 2 pedestrians and 1 bus passenger.

2 slight accidents occurred along Church Street to the south of its junction with Church Drive, 3 slight and 1 serious accidents occurred in the vicinity of Church Street / Barnsley Road / Cliff Lane junction, 7 slight and 2 serious accidents

occurred along Brierley Road and 1 slight accident occurred along Common Road, near its junction with Ash Leigh. Further analysis has been undertaken to assess the cause of the accidents and whether the proposed development will have a detrimental impact on the road safety.

2.3.1 Church Street

At the Church Street / Barnsley Road / Cliff Lane junction 2 of the slight accidents involved vehicle collisions due to turning movements, 1 of the slight accidents involved a rear end shunt and the serious accident involved a bus passenger falling due to the driver braking suddenly. The two remaining slight accidents involved a rear end shunt and a collision with another vehicle due to turning movements respectively.

2.3.2 Common Road

The slight accident involved a rear end shunt.

2.3.3 Brierley Road

To the north of the development site a slight accident involved a collision where 1 vehicle pulled out into the wrong side of the road and collided with another moving vehicle.

To the south of the junction with Windmill Avenue a vehicle lost control and skidded in to the path of an oncoming vehicle in the opposite direction, when negotiating a right hand bend (slight); it should be noted that this occurred with a dry road surface just before midnight.

At the junction with Manor Grove a serious accident involved 2 vehicles colliding due to 1 vehicle travelling onto the wrong side of the road into the path on an oncoming vehicle.

At the junction with Manor Crescent (north) a slight accident involved a pedestrian running into the path of an oncoming vehicle. At the junction with Manor Crescent (south) a further slight accident involved a vehicle edging out of the junction into the path of an oncoming vehicle. To the south of Manor Crescent a slight accident involving 2 vehicles occurred due to a car pulling out of Grimethorpe Hall and in doing so collided with an oncoming motorcyclist.

At the junction with Park Road a slight accident involved a vehicle reversing and a pedestrian, who was walking backwards oblivious to any traffic, colliding with the vehicle. A second accident of slight severity involved a vehicle reversing into two pedestrians.

To the south of the junction with Clifton Road a serious accident occurred involving a vehicle losing control and colliding with a wall.

The accidents which occurred during this time period were mainly collisions due to drivers lack of concentration. Therefore it is considered that the proposed development will not have a detrimental impact on the road safety within the local road network, particularly given that the development proposals will result in fewer 2 way trips than the current use of the site as a school.

3 Accessibility & Connectivity

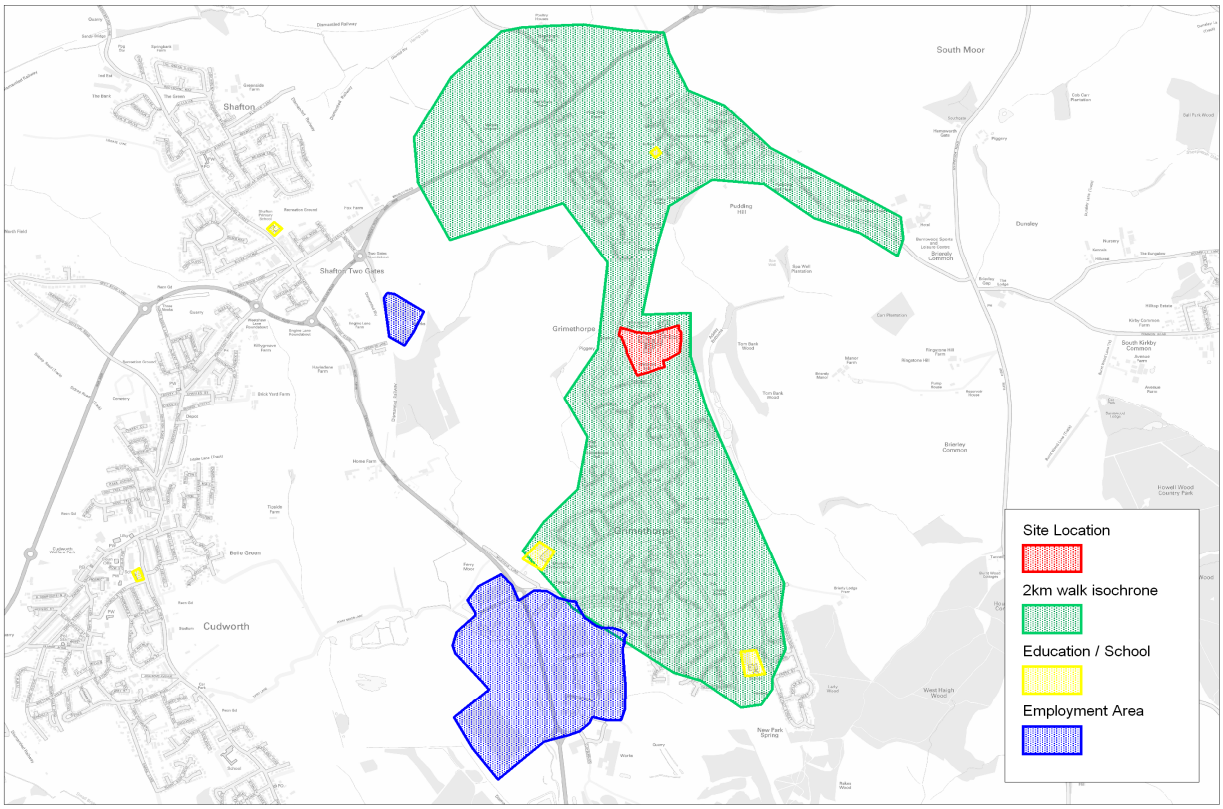
3.1 Introduction

This section of the report identifies the existing level of provision for access to the site and identifies improvements proposed to facilitate development.

3.2 Access for Pedestrians

The Institution for Highways and Transportation (IHT) offers guidance on likely walking distance for various journey types; this suggests that individuals are likely to walk up to 2km for education / commuting trips. **Figure 2** highlights those areas within a 2km walk of the site, together with key education / employment destinations within this catchment. As shown, Brierley in its entirety and the vast majority of Grimethorpe is within a 2km walk of the site (measurements taken from site access on Brierley Road).

Figure 2: Pedestrian Catchment



To facilitate pedestrian journeys footways will be provided throughout the proposed development on either side of the access road; these will in turn link to the off-site pedestrian network. A footway is provided on either side of Brierley Road, in the immediate vicinity of the site access, with street lighting also noted. Circa 70m south of the development access, a central refuge assists pedestrian movements across Brierley Road, providing access to the northbound bus stop. Dropped kerbs are provided at the refuge currently, however, there is no tactile paving. Approximately 50m further south stepped access is provided to the residential area to the immediate south of the development site. Continuing south on Brierley Road, dropped kerbs are provided over the junction with Sandhill Grove, facilitating onward movements.

Heading north from the site towards Brierley, the footway on the eastern side of the road terminates some 30m north of the site access; here a central refuge is provided to assist pedestrians crossing to the footway on the western side of the road (again the crossing lacks tactile paving). Upon entering Brierley the road follows a steep uphill gradient. Dropped kerbs are provided over residential side road junctions including Hillside Crescent and The Rise, providing continuity of pedestrian provision heading northwards.

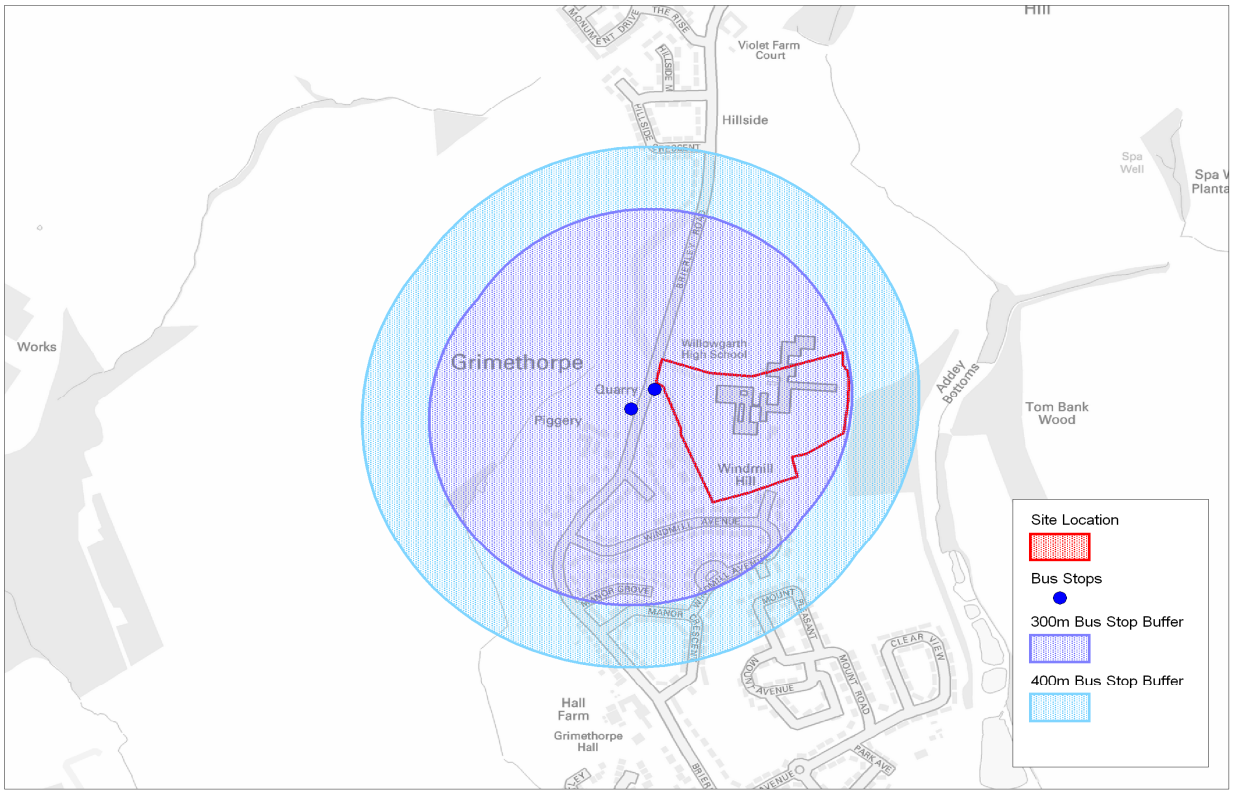
3.3 Access for Cyclists

With reference to the Barnsley Cycle Map and Sustrans, there are no formal cycle routes within the vicinity of the development site. The topography of the surrounding area is also such that some residents may be discouraged from cycling. Notwithstanding this, PPG13 suggests that cycling can substitute for short car journeys, particularly those of up to 5km and it is therefore important that cycle journeys are encouraged as far as possible. To this end, cycle stores will be provided for all dwellings within the development.

3.4 Access for Public Transport Users

The IHT's guidance suggests a desirable walking distance to bus stops for new development of 300m, with a maximum 400m walk distance permissible. **Figure 3** shows the location of nearby bus stops, together with a 300m and 400m buffer around each stop. As can be seen from **Figure 3**, the site in its entirety is within 300m of an existing stop.

Figure 3: Bus Stop Accessibility



The nearest bus stops are located on Brierley Road; the southbound stop is some 50m south of the access junction to the development and incorporates a shelter. The opposite stop, for northbound travel, is located approximately 60m further south and benefits from a pole, flag and timetable information; a pedestrian refuge encourages ease of access to the bus stop over Brierley Road. The stops are served by a number of services, as outlined in **Table 1**, below.

Table 1 - Buses Serving the Proposed Development on Brierley Road

Service	Route	Mon – Sat Frequency	Sun Frequency
35 / 35b	Pontefract – Barnsley / Hemsworth - Barnsley	2ph	1ph
36	South Elmsall - Barnsley	1ph	1ph
37/a	Barnsley – Brierley (Circular)	1ph 1000 – 1600 (Mon – Fri) / 1ph 1000 – 1400 (Sat)	No Sunday Service
46 / 47	Barnsley - Pontefract	1ph	No Sunday Service

Source: SYPTE

Currently services 35/b and 36 only pick up / drop off from these stops to coincide with school start and finish times, however, they pass the site throughout the day and as such there is considered to be scope for these services to stop more frequently at the development as part of their existing route.

3.5 Access for Car Users

As indicated previously, vehicular access to the development will be by way of the existing school access (northern). This is currently formed of a priority T-junction incorporating a right turn ghost island facility. A secondary access to the school and 4 residential properties is provided some 30m to the south, however, this is currently gated and as such all movements associate with the school are via the northern access.

There is a requirement to retain the southern access, given that this provides access to the aforementioned private residential dwellings. However, it is considered that consolidating this with the proposed development access might increase the potential for conflict between development traffic and that associated with the existing dwellings, with a need to form a second junction within the site, within approximately 20m of the junction with Brierley Road. The preferred option is therefore to retain the southern junction to provide access to the 4 existing residential properties and utilise the northern junction to access the proposed development.

Given that the development proposals will generate fewer two-way movements in the peak periods than the existing use (as set out in Section 4), the proximity of the northern and southern junctions with Brierley Road to one another is not considered to be an issue, albeit some widening of the existing access road from the northern junction is required and there would be a need to remove / cut back some planting between the two accesses to ensure inter-visibility between the northern and southern junctions.

Drawing P-001 (**Appendix A**) shows the proposed access arrangements. The access has been designed to reflect the South Yorkshire Local Authorities Residential Design Guide and as such is also reflective of Manual for Streets. A 7.3m access road is provided with footways on either side; these have been designed to tie in with the existing footways on Brierley Road. Visibility splays of 2.4m x 43m (required for a 30mph road) can be achieved. The kerb radius on the northern side of the access has been amended to 10m (currently 5m) to ensure the swept path of a large refuse vehicle can be accommodated. The existing right turn ghost island facility is to be maintained.

4 Trip Generation & Distribution

4.1 Introduction

This section of the report identifies the current trip generation of the site as a High School and makes a comparison between this and the anticipated trip generation of the development proposals, assuming 110 dwellings are provided. The distribution of development traffic is also considered with a view to identifying whether the proposals will result in a material increase in traffic (considered to be an increase of 30 or more two-way trips in either peak period).

4.2 Trip Generation

4.2.1 Existing Vehicular Trips

The School Travel Plan provided by BMBC indicates that the number of pupils was 815 with 86 employees (comprising teaching and non-teaching staff) at March 2008. The Travel Plan indicated the following hours of operation for the school:

- Breakfast club open from 08.00-08.40;
- Start time 08.40, Finish time 14.55; and
- After school club runs 15.15 to 16.00.

The vast majority of the pupils travel in from Cudworth, Grimethorpe, Shafton or central Barnsley. According to the questionnaire surveys undertaken with pupils to inform the Travel Plan, only 3% travel to and from the school by car, whilst 64% travel to/from school by bus. These figures have been used to determine likely vehicle movements, with an assumption made that approximately 60 pupils can be accommodated on a single-decker school bus.

The data indicated that 26% walk to school but it may be the case that some of these pupils walk a short distance having been dropped off by car in the vicinity of the school. This is borne out by concerns raised in the Travel Plan that

- "The school traffic can cause congestion and sharp traffic peaks"; and
- "Parents parking on Brierley Road, especially at the start and finish of the school day, present additional dangers."

Notwithstanding the above, the assessments of net impact of development have been undertaken assuming the Travel Plan figures of 3% of pupils travelling by car and 64% travelling by bus.

Of the 74 staff surveyed, 15% car share and 84% travelled in their own car. Therefore of the 86 staff, this would equate to 72 cars with the majority single occupancy trips.

Table 2 below shows approximate vehicular trips to/from school (or vicinity of the school) based on the 3% 'by car' and 64% 'by bus' percentages. It is assumed that staff would arrive before the morning peak hour and depart after the afternoon school peak hour (with staff departures occurring within the network peak, 1700 – 1800).

Table 2 – Vehicular trips to/from school

		AM (0800 – 0900)		PM School Peak (1500 – 1600)		PM Peak (1700 – 1800)	
		Arr	Dep	Arr	Dep	Arr	Dep
Pupils	Car trips (3% of 815)	25	25	25	25	-	-
	Bus trips (64% of 815 and based on 60 pupils / bus)	8	8	8	8	-	-
Staff	Car trips	-	-	-	-	-	72
	Total	33	33	33	33	-	72

Source: Consultants Calculations

Based on the maps provided in the Travel Plan, it has been assumed that the vehicular trips would distribute approximately 50% to/from north and 50% to/from the south along Brierley Road. **Figure 4** shows the existing turning movements at the site access junction, reflecting the table above.

4.2.2 Development Trip Generation

The TRICS database (2011(a) v6.7.1) has been interrogated to determine vehicular trip rates (per dwelling) for the 'Houses, privately owned' category (representing a worst case scenario). **Appendix C** provides the full TRICS output, whilst the peak hour trip rates are shown in **Table 3**, below.

Table 3 - Houses Privately Owned

	Vehicular Trip Rates		Traffic Generation (110 Dwellings)	
	Arr	**Dep**	**Arr**	**Dep**
AM (0800 – 0900)	0.150	0.411	17	45
PM School Peak (1500 – 1600)	0.270	0.222	30	24
PM Peak (1700 – 1800)	0.399	0.231	44	25

Source: TRICS 2011(a)

4.2.3 Net Difference

Table 4 summarises the net difference in vehicular trips generated by the proposals as compared with the existing use of the site.

Table 4 - Net Difference in Trips

	Arr	Dep	Two-Way
AM (0800 – 0900)	-16	+12	-4
PM School Peak (1500 – 1600)	-3	-9	-12
PM Peak (1700 – 1800)	+44	-47	-3

Source: Consultants' Calculations

As can be seen from the above table, the development proposals for 110 dwellings generate fewer two-way trips in any peak period than the current use of the site. Ordinarily then there would not be a requirement to undertake an operational assessment. However, to ensure that the junction is likely to operate satisfactorily with the differing arrival / departure profile of the proposed development as compared with that for the school an indicative assessment has been undertaken for the site access reflecting that contained within the Transport Scoping Study. The details of this assessment are provided in Section 5.

4.3 Trip Distribution

Development traffic has been distributed in accordance with the distribution assumed for school traffic, i.e. 50% to / from the north and 50% to / from the south. Given the relative proximity of Grimethorpe and Brierley and the A6165 Engine Lane and A628 Barnsley Road, which provide access to key surrounding employment destinations to the south and north respectively, this apportionment of development trips on Brierley Road is considered reasonable. **Figure 5** shows the distribution of development traffic, whilst **Figure 6** illustrates the net difference for each turning movement at the site access.

5 Operational Assessments

5.1 Introduction

Given the findings of the previous section, the development proposals are not considered to result in a material increase in traffic at any off-site junctions. Indeed, the calculations suggest that, in terms of two-way movements, the redevelopment of the site for 110 dwellings will generate fewer trips in the morning, afternoon school and evening peaks than the existing use of the site.

As such, the operational assessments carried out are limited to an indicative assessment of the site access junction with Brierley Road in order to demonstrate that the change in arrival / departure profile in each peak hour, as a consequence of the development, would not be likely to result in any capacity issues.

5.2 Operational Assessments

Traffic flow data for Brierley Road has been taken from June 2008 two-way counts, undertaken on behalf of BMBC. The count was undertaken to the south of the development access, in proximity to Lilydene Avenue / Dell Avenue. Nonetheless, it provides an indication of likely two-way movements on Brierley Road. The traffic counts have been factored to a year of application registration of 2011 and a design year 5 years hence using National Traffic Model forecasts, factored with TEMPRO, as follows:

- 2008 to 2011 – 1.0436; and
- 2008 to 2016 – 1.1662.

The proposed site access arrangement, shown on **Drawing P001**, has been modelled using PICADY v.4.0. The results are shown in **Table 5 and 6**, below with the modelled flows reflected in **Figures 7 and 8** and the full model outputs provided in **Appendix D**.

Table 5 - 2011 Base + Development

Arm	AM (0800 – 0900)		PM School Peak (1500 – 1600)		PM Peak (1700 – 1800)	
	RFC	Queue	RFC	Queue	RFC	Queue
Brierley Road (SB)	0.000	0	0.000	0	0.000	0
Site Access	0.065	0	0.034	0	0.036	0
Brierley Road (NB)	0.018	0	0.029	0	0.043	0

Table 6 - 2016 Base + Development

Arm	AM (0800 – 0900)		PM School Peak (1500 – 1600)		PM Peak (1700 – 1800)	
	RFC	Queue	RFC	Queue	RFC	Queue
Brierley Road (SB)	0.000	0	0.000	0	0.000	0
Site Access	0.066	0	0.035	0	0.037	0
Brierley Road (NB)	0.018	0	0.030	0	0.043	0

As can be seen from the above the access arrangements are anticipated to operate well within capacity in both the AM and PM network peak periods in 2011 and 2016. The assessment of the school afternoon peak, which has also been modelled for completeness, indicates that this also operates satisfactorily, with significant reserve capacity and negligible queuing.

5.3 Summary

In summary, the assessments of the proposed site access arrangement suggest that it will operate satisfactorily in the design year with the addition of the development related traffic.

6 Summary & Conclusions

6.1 Summary

AECOM has been commissioned by Barnsley Metropolitan Borough Council to prepare this Transport Statement in support of an application for a 110 residential dwelling development on the site of Willowgarth High School, Grimethorpe. The Transport Statement:

- Identifies the existing network conditions in the vicinity of the development site, reflecting a site visit in May 2011 and a review of the historic accident record for the adjacent road network. During the site visit, undertaken during the school afternoon peak, key issues observed included 'near misses' resulting from both the northern and southern access points to school being open for vehicular traffic, together with pedestrian safety concerns resulting from large numbers of pupils crossing Brierley Road. On-street parking associated with pupil pick-ups was observed to be obstructive, particularly to buses;
- Provides an overview of the accessibility of the site and its connectivity with surrounding uses, focusing on non-car modes. The entire site is within 300m of an existing route and the pedestrian provision in the vicinity of the site is good;
- Demonstrates the likely trip generation (vehicular) of the proposals and identifies how development traffic will be distributed on the road network. A comparison with the existing use of the site as a High School has been carried out – this demonstrates that the proposals will generate fewer two-way trips in the AM and PM network peak periods than the current use;
- As such, the development proposals are not considered to have a material impact at any off-site junctions and the scope of operational assessments has been limited to the site access;
- Identifies the proposed site access arrangements, reflecting amendments to the existing northern school site access. It is proposed that the right turn ghost island that is currently in place is retained and the existing site access road is widened to provide a full standard residential access in line with South Yorkshire's Residential Design Guidelines;
- Summarises the findings of operational assessments of this site access arrangement, undertaken using PICADY v.4.0. These demonstrate that the access arrangements operate satisfactorily, with negligible queuing and delay, in the design year of 2016 with the addition of the development traffic.

6.2 Conclusions & Recommendations

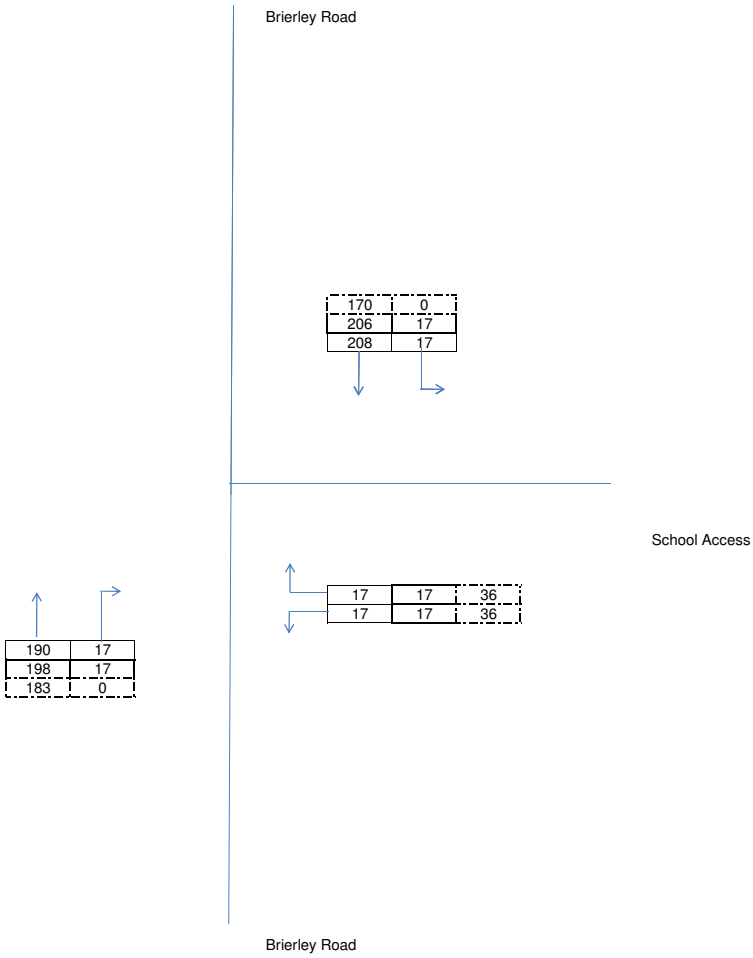
Given the above, it is considered that the proposals will not have a detrimental impact on the local highway network, moreover, the redevelopment of the site will also overcome current traffic issues associated with the school afternoon peak period that occur currently. As such, there are considered to be no substantive highway reasons why the development should not be granted consent.

Appendices

Capabilities on project:
Transportation

Appendix A – Figures & Plans

Growth Factor
1.0436

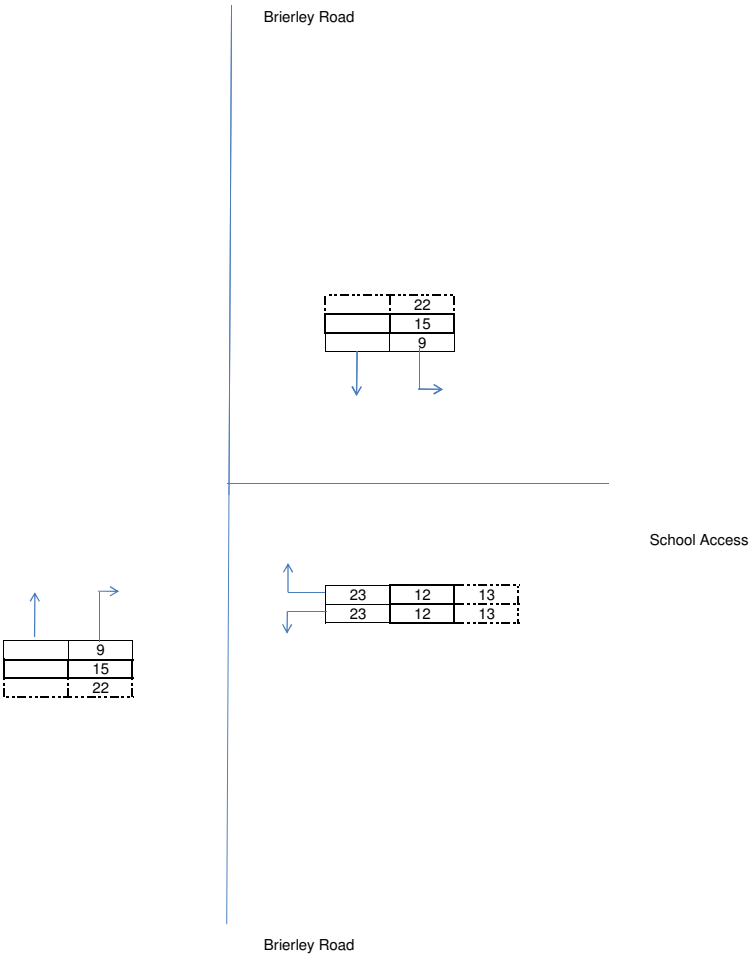


AM Peak (0800-0900)
PM School Peak (1500-1600)
PM Peak (1700-1800)

						Date	16/05/2011
						Design	GS
Client: Barnsley Metropolitan Borough Council	Project: Willowgarth High School, Residential Development	Title: 2011 Base Flows	AECOM	Drawing Number: Figure 4	Revision:	Checked	CO
						Approved	TD
				File Path: F/Projects/BarnsleyNorthernConnectivityStudy/Willowgarth			

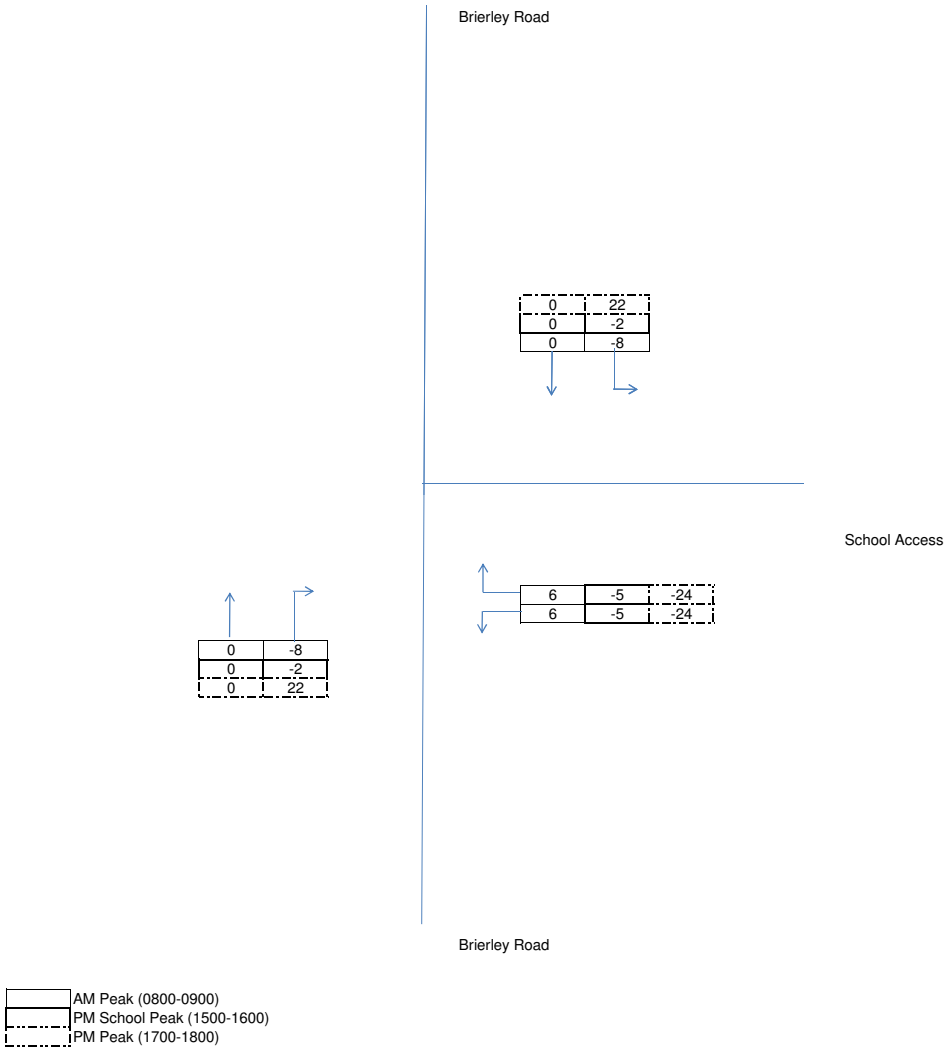
Trip Generation

	ARR	DEP
0800 - 0900	17	45
1500 - 1600	30	24
1700 - 1800	44	25



AM Peak (0800-0900)
PM School Peak (1500-1600)
PM Peak (1700-1800)

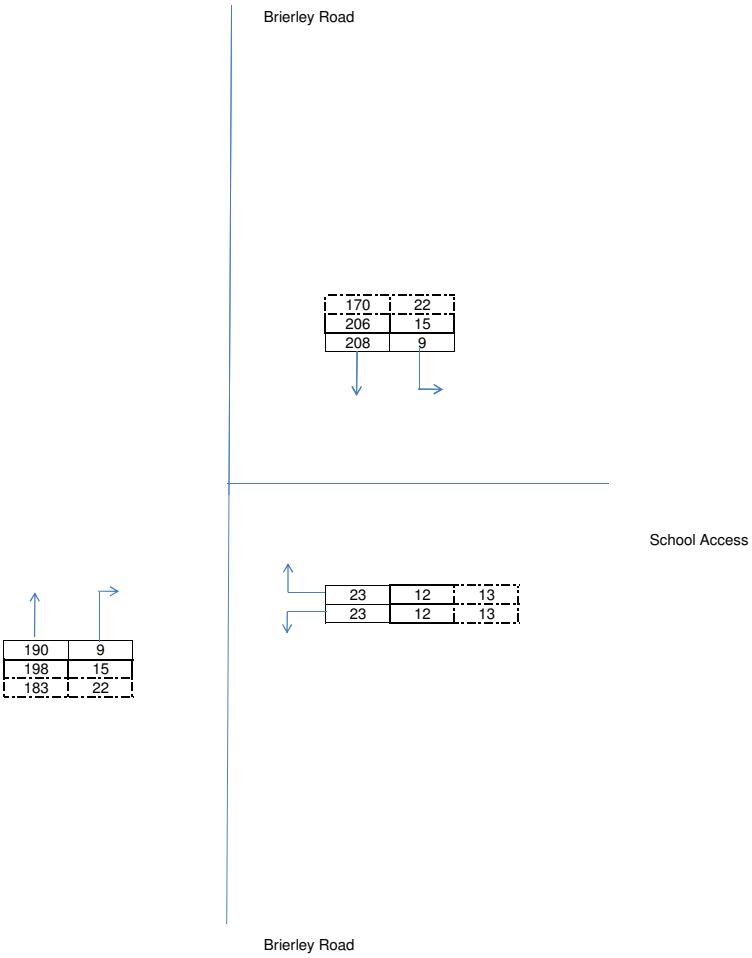
					Date	16/05/2011
					Design	GS
Client: Barnsley Metropolitan Borough Council	Project: Willowgarth High School, Residential Development	Title: Residential Development Flows (110 Dwellings)	AECOM	Drawing Number: Figure 5	Revision:	Checked / Approved: CO / TD
				File Path: F/Projects/BarnsleyNorthernConnectivityStudy/Willowgarth		



AM Peak (0800-0900)
PM School Peak (1500-1600)
PM Peak (1700-1800)

						Date	16/05/2011
						Design	GS
Client: Barnsley Metropolitan Borough Council	Project: Willowgarth High School, Residential Development	Title: Net Difference	AECOM	Drawing Number: Figure 6	Revision:	Checked	CO
						Approved	TD
				File Path: F/Projects/BarnsleyNorthernConnectivityStudy/Willowgarth			

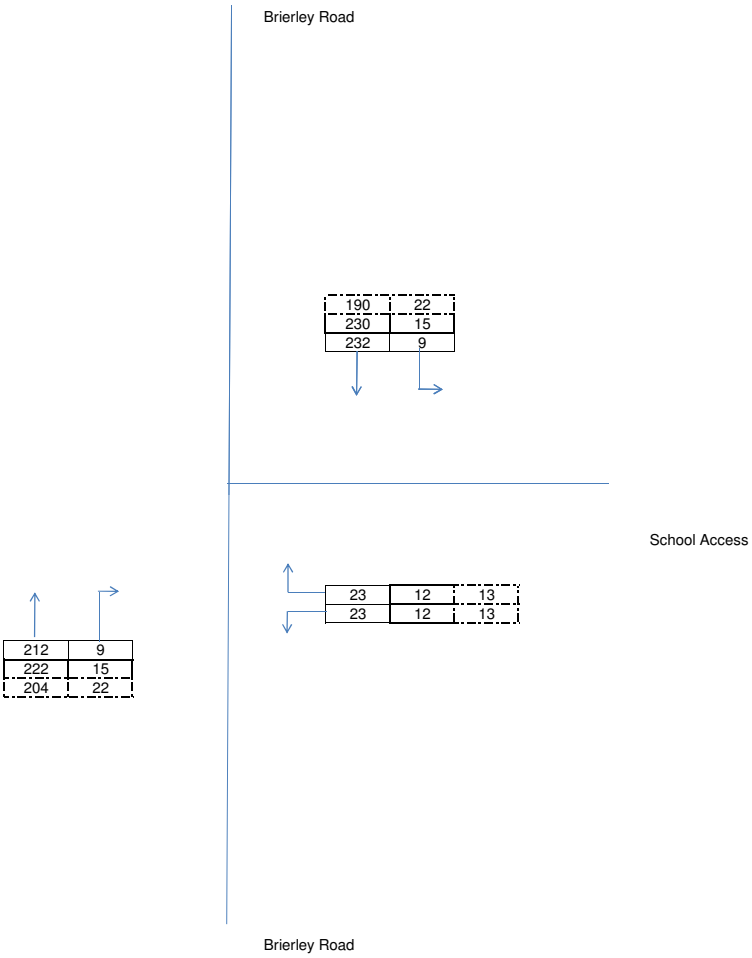
Growth Factor
1.0436



AM Peak (0800-0900)
PM School Peak (1500-1600)
PM Peak (1700-1800)

						Date	16/05/2011
						Design	GS
Client: Barnsley Metropolitan Borough Council	Project: Willowgarth High School, Residential Development	Title: 2011 Base + Development	AECOM	Drawing Number: Figure 7	Revision:	Checked	CO
						Approved	TD
				File Path: F/Projects/BarnsleyNorthernConnectivityStudy/Willowgarth			

Growth Factor
1.1662



AM Peak (0800-0900)
PM School Peak (1500-1600)
PM Peak (1700-1800)

						Date	16/05/2016
						Design	GS
Client: Barnsley Metropolitan Borough Council	Project: Willowgarth High School, Residential Development	Title: 2016 Base + Development	AECOM	Drawing Number: Figure 8	Revision:	Checked	CO
						Approved	TD
				File Path: F/Projects/BarnsleyNorthernConnectivityStudy/Willowgarth			

Capabilities on project:
Transportation

Appendix B – Accident Data

Details of Personal Injury Accidents for Period - **01/01/2008** **to** **31/12/2010** (36) months

Selection:
Selected using Manual Selection

Notes:
AECOM - Grimethorpe

			Vehicles				Casualties			
Police Ref.	Day	Location Description	Veh No / Type / Manv / Dir / Class				Sex / Age / Sev			
Road No.	Date									
	Time									
Grid Ref.	D/L									
	R.S.C									
	Weather									
	Speed									
	Account of Accident									
B-00530-08	Tuesday	CHURCH ST BRIERLEY	Veh 2	Car	Stopping	NW to SE				
	29/04/2008		Veh 1	Car	Stopping	NW to SE FSP	F	19	Slight	
C 3	1920hrs									
	Daylight:street lights present									
E 441,060	Wet/Damp									
N 411,022	Fine without high winds									
	30 mph									
	V1 STOPPED TO LET ONCOMING TF PASS PARKED CARS WHEN V2 FAILED TO REACT IN TIME AND COLL WITH REAR.									
B-00649-08	Wednesday	BARNSLEY RD BRIERLEY J/W	Veh 2	Car	Starting	SE to NE				
	28/05/2008	CHURCH ST	Veh 1	Car	Going ahead	NE to SW FSP	F	41	Slight	
A 628	2220hrs									
	Darkness: street lights present a									
E 440,732	Wet/Damp									
N 411,274	Fine without high winds									
	30 mph									
	V1 TV WEST ALONG BARNSLEY RD TW SHAFTON PASSING CHURCH ST. V2 WAS TURNING R ONTO BARNSLEY RD FROM CHURCH ST TW HEMSWORTH & COLL OCCURRED.									
B-00841-08	Sunday	BARNSLEY ROAD BRIERLEY AT J/W	Veh 1	Car	Going ahead	NE to SW Dri	M	25	Slight	
	13/07/2008	CHURCH STREET	Veh 2	M/C > 500 cc	Wait to turn right	NW to SE	F	54	Slight	
A 628	1750hrs									
	Daylight: no street lighting									
E 440,736	Dry									
N 411,277	Fine without high winds									
	30 mph									
	V 1 TRAVELLING ON BARNSLEY ROAD BRIERLEY TOWARDS BARNSLEY , V2 WAITING AT JUNCTION TO TURN ONTO CHURCH STREET OF BARNSLEY ROAD , V2 TURNED EARLY AND COLLISION OCCURED.									
B-01053-08	Monday	BRIERLEY RD GRIMETHORPE O/S	Veh 1	Car	Stopping	SE to NW Ped	F	18	Slight	
	01/09/2008	161								
C 2	2049hrs									
	Darkness: street lights present a									
E 440,970	Dry									
N 409,812	Fine without high winds									
	30 mph									
	V1 TV ALONG BRIERLEY RD TW BRIERLEY WHEN PED RAN INTO RD & COLL WITH N/S OF V1.									
B-01424-08	Monday	CHURCH ST BRIERLEY AT J/W	Veh 2	Other M/veh	Going ahead	0 to 0				
	17/11/2008	CHURCH DR	Veh 1	Car	Turning right	NW to SE Dri	M	46	Slight	
C 3	1643hrs									
	Darkness: street lights present a									
E 441,042	Dry									
N 411,042	Fine without high winds									
	30 mph									
	V1 TURNING RGT AS V2 TR DOWN THE OFFSIDE OF TR COLL WITH DRIVERS DOOR OF V1 BEFORE LEAVING THE SCENE.									

Details of Personal Injury Accidents for Period - **01/01/2008** **to** **31/12/2010** (36) months

Selection:
Selected using Manual Selection

Notes:
AECOM - Grimethorpe

Police Ref. / Road No. / Grid Ref.	Day / Date / Time / D/L / R.S.C / Weather / Speed / Account of Accident	Location Description	Vehicles: Veh No / Type / Manv / Dir / Class	Casualties: Sex / Age / Sev
B-01574-08	Wednesday 17/12/2008	CROSSHILLS BRIERLEY J/W CHURCH ST	Veh 1 Bus/coach Starting SE to NW Board	F 81 Serious
U	0953hrs			
	Daylight:street lights present			
E 440,751	Dry			
N 411,295	Unknown			
	30 mph			
	PASS GOT ON BUS AND AS BUS SET OFF DRIVER HAD TO BRAKE CAUSING PASS TO FALL.			
B-00079-09	Friday 16/01/2009	BRIERLEY RD GRIMETHORPE 15 MTS FROM J/W MANOR GR	Veh 2 Car Going ahead S to N Dri Veh 1 Car Going ahead NE to SW Dri	M 45 Slight M 24 Serious
C 2	1800hrs			
	Darkness: street lights present a			
E 440,942	Wet/Damp			
N 409,838	Fine without high winds			
	30 mph			
	V1 TV DOWNHILL ALONG BRIERLEY RD TW GRIMETHORPE. V2 TV IN OPP DIRC. V1 TV ONTO WRONG SIDE OF RD INTO PATH OF V2, DRIVER OF V2 TRIES TO AVOID COLL BY MOUNTING FOOTPATH BUT COLL OCCURS.			
B-00503-09	Sunday 10/05/2009	BRIERLEY RD BRIERLEY 150 MTS FROM WILLOWGARTH SCHOOL	Veh 1 Car Going ahead 0 to 0 Dri Veh 1 Car Going ahead 0 to 0 FSP Veh 2 Car O/take m/veh o/side 0 to 0 Dri	M 61 Slight F 59 Slight M 20 Slight
A 628	1100hrs			
	Daylight:street lights present			
E 441,098	Dry			
N 410,401	Fine without high winds			
	30 mph			
	BOTH VEHS TV ALONG A628 WHEN V2 PULLED OUT ONTO WRONG SIDE OF RD TO O/T A VEH & COLL HEAD ON WITH V1. AT TIME OF RTC V2 WAS FULLY ON WRONG SIDE OF RD.			
B-00975-09	Thursday 09/07/2009	COMMON RD BRIERLEY	Veh 2 Car Going ahead SW to NE Veh 1 Other M/veh Parked SW to NE Dri	M 28 Slight
C 3	1930hrs			
	Daylight:street lights present			
E 441,363	Dry			
N 411,007	Fine without high winds			
	30 mph			
	V1 STATIONARY WHEN V2 TR IN SAME DIRECTION COLL WITH REAR OF V1 THEN LEFT THE SCENE.			
B-00785-09	Tuesday 21/07/2009	BRIERLEY RD GRIMETHORPE AT J/W PARK RD	Veh 1 Car Reversing SW to E Ped	F 15 Slight
C 2	2106hrs			
	Darkness: street lights present a			
E 441,205	Wet/Damp			
N 409,445	Raining without high winds			
	30 mph			
	AS VEH WAS REVERSING THE CASUALTY WAS WALKING BACKWARDS PAYING NO ATTENTION TO TRAFFIC AND COLL OCC.			

Details of Personal Injury Accidents for Period - **01/01/2008** **to** **31/12/2010** (36) months

Selection:
Selected using Manual Selection

Notes:
AECOM - Grimethorpe

			Vehicles				Casualties		
Police Ref.	Day	Location Description	Veh No / Type / Manv / Dir / Class				Sex / Age / Sev		
Road No.	Date								
	Time								
Grid Ref.	D/L								
	R.S.C								
	Weather								
	Speed								
	Account of Accident								
B-01387-09	Wednesday	BRIERLEY RD GRIMETHORPE	Veh 2	M/C < 50 cc	Going ahead	S to N	M	Slight	
	09/12/2009		Veh 1	Car	Starting	W to E			
C 2	1726hrs								
	Darkness: street lights present a								
E 441,086	Dry								
N 409,654	Fine without high winds								
	30 mph								
	V1 TURNED R OUT OF GRIMETHORPE HALL ONTO BRIERLEY RD. AS V1 WAS HALFWAY ACROSS RD WHEN DRIVER SAW M/CYCLIST APP ON O/S W/O LIGHTS. M/CYCLE ATTEMPTED TO TURN TO N/S BUT COLL OCCURRED WITH V1. AS A RESULT RIDER & PILLION PASS CAME OFF BIKE.BOTH REMOUNT M/ CYCLE & LEAVE SCENE.								
B-01435-09	Saturday	BRIERLEY RD GRIMETHORPE AT J/W	Veh 2	Car	Going ahead	S to N			
	19/12/2009	MANOR RD	Veh 1	Car	Going ahead	E to W Dri	M 27	Slight	
U	1030hrs								
	Daylight:street lights present								
E 441,063	Frost/Ice								
N 409,705	Other								
	30 mph								
	V1 EDGING OUT OF JCT INTO PATH OF V2 AND COLL OCC.								
B-01439-09	Saturday	CHURCH ST BRIERLEY AT J/W	Veh 2	Car	Going ahead	SE to NW			
	19/12/2009	BARNSLEY RD	Veh 1	Car	Stopping	SE to NW FSP	F 16	Slight	
C 3	2230hrs		Veh 1	Car	Stopping	SE to NW Dri	M 47	Slight	
	Darkness: street lights present a								
E 440,730	Wet/Damp								
N 411,265	Fine without high winds								
	30 mph								
	V1 BRAKING FOR JCT, V2 COLL WITH REAR THEN LEFT THE SCENE.								
B-00084-10	Saturday	BRIERLEY RD GRIMETHORPE	Veh 1	Car	Going ahead	N to S			
	23/01/2010		Veh 2	Car	Going ahead	S to N Dri	M 54	Slight	
C 2	2318hrs								
	Darkness: street lights present a								
E 440,910	Dry								
N 409,915	Fine without high winds								
	30 mph								
	V1 NEGOTIATING RGT HAND BEND, LOST CONTROL AND SKIDDED INTO V2 TR IN OPP DIRECTION THEN DRIVER OF V1 LEFT THE SCENE.								
B-00108-10	Wednesday	PARK RD BRIERLEY AT J/W	Veh 1	Car	Reversing	SE to NE Ped	M 5	Slight	
	27/01/2010	BRIERLEY RD	Veh 1	Car	Reversing	SE to NE Ped	F 27	Slight	
U	1848hrs								
	Darkness: street lights present a								
E 441,212	Dry								
N 409,449	Fine without high winds								
	30 mph								
	V1 REVERSING WHEN HE COLL WITH CAS 1 & 2.								

Details of Personal Injury Accidents for Period - **01/01/2008** **to** **31/12/2010** (36) months

Selection:
Selected using Manual Selection

Notes:
AECOM - Grimethorpe

			Vehicles						Casualties		
Police Ref.	Day	Location Description	Veh No / Type / Manv / Dir / Class						Sex / Age / Sev		
Road No.	Date										
	Time										
Grid Ref.	D/L										
	R.S.C										
	Weather										
	Speed										
	Account of Accident										
B-00104-10	Wednesday 27/01/2010	BRIERLEY RD GRIMETHORPE	Veh 1	Car	Going ahead	S	to N	FSP	M	20	Serious
C 2	1600hrs										
	Daylight:street lights present										
E 441,291	Wet/Damp										
N 409,303	Fine with high winds										
	30 mph										

DRIVER LOST CONTROL COLLIDING WITH WALL THEN LEFT THE SCENE.

Accidents between dates 01/01/2008 and 31/12/2010 (36) months
Selection: **Notes:**
Selected using Manual Selection **AECOM - Grimethorpe**

B-00530-08 29/04/2008 Tuesday Time:1920 Vehicles 2 Casualties 1 Slight
Easting: 441,060 Northing: 411,022
Fine without high winds Road Surface:Wet/Damp Daylight:street lights present
Road Type: Single carriageway Speed Limit: 30

Location: CHURCH ST BRIERLEY
Description:V1 STOPPED TO LET ONCOMING TF PASS PARKED CARS WHEN V2 FAILED TO REACT IN TIME AND COLL WITH REAR.

Vehicle Reference1 Car Slowing or Stopping
First point of impact:Did not impact
Vehicle direction: NW to SE Journey: Other/Not known
Age of Driver : 20 Breath test:Negative

Contributory Factors : 408 108 701 406 103 103

Casualty Reference 1 Age:19 Female Passenger Severity:Slight
Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference2 Car Slowing or Stopping
First point of impact:Back
Vehicle direction: NW to SE Journey: Other/Not known
Age of Driver : 23 Breath test:Negative

Contributory Factors : 408 108 701 406 103 103

Accidents between dates 01/01/2008 and 31/12/2010 (36) months
Selection: **Notes:**
Selected using Manual Selection **AECOM - Grimethorpe**

B-00649-08 28/05/2008 Wednesday Time: 2220 Vehicles 2 Casualties 1 Slight
Easting: 440,732 Northing: 411,274
Fine without high winds Road Surface: Wet/Damp Darkness: street lights present and lit
Road Type: Single carriageway Speed Limit: 30

Location: BARNSLEY RD BRIERLEY J/W CHURCH ST
Description: V1 TV WEST ALONG BARNSLEY RD TW SHAFTON PASSING CHURCH ST. V2 WAS TURNING R ONTO BARNSLEY RD FROM CHURCH ST TW HEMSWORTH & COLL OCCURRED.

Vehicle Reference 1 Car Going ahead
First point of impact: Front
Vehicle direction: NE to SW Journey: Other/Not known
Age of Driver : 40 Breath test: Negative

Contributory Factors : 405 103 103

Casualty Reference 1 Age: 41 Female Passenger Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference 2 Car Moving off
First point of impact: Front
Vehicle direction: SE to NE Journey: Other/Not known
Age of Driver : 40 Breath test: Negative

Contributory Factors : 405 103 103

Accidents between dates 01/01/2008 and 31/12/2010 (36) months
Selection: **Notes:**
Selected using Manual Selection **AECOM - Grimethorpe**

B-00841-08 13/07/2008 Sunday Time:1750 Vehicles 2 Casualties 2 Slight
Easting: 440,736 Northing: 411,277
Fine without high winds Road Surface:Dry Daylight: no street lighting
Road Type: Dual carriageway Speed Limit: 30

Location: BARNSLEY ROAD BRIERLEY AT J/W CHURCH STREET
Description:V 1 TRAVELLING ON BARNSLEY ROAD BRIERLEY TOWARDS BARNSLEY , V2 WAITING AT JUNCTION TO TURN ONTO CHURCH STREET OF BARNSLEY ROAD , V2 TURNED EARLY AND COLLISION OCCURED.

Vehicle Reference:1 Car Going ahead
First point of impact:Offside
Vehicle direction: NE to SW Journey: Other/Not known
Age of Driver : 25 Breath test:Not requested

Contributory Factors : 403 405 406

Casualty Reference:1 Age:25 Male Driver/rider Severity:Slight
Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference:2 Motorcycle over 500cc Waiting to turn right
First point of impact:Offside
Vehicle direction: NW to SE Journey: Other/Not known
Age of Driver : 54 Breath test:Not requested

Contributory Factors : 403 405 406

Casualty Reference:2 Age:54 Female Passenger Severity:Slight
Ped Dir: Ped Movement :
Ped Location:

Accidents between dates 01/01/2008 and 31/12/2010 (36) months
Selection: **Notes:**
Selected using Manual Selection **AECOM - Grimethorpe**

B-01053-08 01/09/2008 Monday Time:2049 Vehicles 1 Casualties 1 Slight
Easting: 440,970 Northing: 409,812
Fine without high winds Road Surface:Dry Darkness: street lights present and lit
Road Type: Single carriageway Speed Limit: 30

Location: BRIERLEY RD GRIMETHORPE O/S 161
Description:V1 TV ALONG BRIERLEY RD TW BRIERLEY WHEN PED RAN INTO RD & COLL WITH N/S OF V1.

Vehicle Reference:1 Car Slowing or Stopping
First point of impact:Nearside
Vehicle direction: SE to NW Journey: Other/Not known
Age of Driver : 42 Breath test:Negative

Contributory Factors : 802 806

Casualty Reference 1 Age:18 Female Pedestrian Severity:Slight
Ped Dir:9 Ped Movement : Driver's offside
Ped Location:In carr elsewhere

Accidents between dates 01/01/2008 and 31/12/2010 (36) months
Selection: **Notes:**
Selected using Manual Selection **AECOM - Grimethorpe**

B-01424-08 17/11/2008 Monday Time:1643 Vehicles 2 Casualties 1 Slight
Easting: 441,042 Northing: 411,042
Fine without high winds Road Surface:Dry Darkness: street lights present and lit
Road Type: Single carriageway Speed Limit: 30

Location: CHURCH ST BRIERLEY AT J/W CHURCH DR
Description:V1 TURNING RGT AS V2 TR DOWN THE OFFSIDE OF TR COLL WITH DRIVERS DOOR OF V1 BEFORE LEAVING THE SCENE.

Vehicle Reference:1 Car Turning right
First point of impact:Offside
Vehicle direction: NW to SE Journey: Other/Not known
Age of Driver : 46 Breath test:Negative

Contributory Factors : 403

Casualty Reference 1 Age:46 Male Driver/rider Severity:Slight
Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference:2 Other motor vehicle Going ahead
First point of impact:Front
Vehicle direction: Parked to Parked Journey: Other/Not known
Age of Driver : Breath test:Driver not contacted

Contributory Factors : 403

Accidents between dates 01/01/2008 and 31/12/2010 (36) months
Selection: **Notes:**
Selected using Manual Selection **AECOM - Grimethorpe**

B-01574-08 17/12/2008 Wednesday Time:0953 Vehicles 1 Casualties 1 Serious
Easting: 440,751 Northing: 411,295
Unknown Road Surface:Dry Daylight:street lights present
Road Type: Single carriageway Speed Limit: 30

Location: CROSSHILLS BRIERLEY J/W CHURCH ST
Description:PASS GOT ON BUS AND AS BUS SET OFF DRIVER HAD TO BRAKE CAUSING PASS TO FALL.

Vehicle Reference:1 Bus or coach Moving off
First point of impact:Did not impact
Vehicle direction: SE to NW Journey: Journey as part of work
Age of Driver : 41 Breath test:Not requested

Contributory Factors : 408

Casualty Reference 1 Age:81 Female Passenger Severity:Serious
Ped Dir: Ped Movement :
Ped Location:

Accidents between dates 01/01/2008 and 31/12/2010 (36) months
Selection: **Notes:**
Selected using Manual Selection **AECOM - Grimethorpe**

B-00079-09 16/01/2009 Friday Time:1800 Vehicles 2 Casualties 2 Serious
Easting: 440,942 Northing: 409,838
Fine without high winds Road Surface:Wet/Damp Darkness: street lights present and lit
Road Type: Single carriageway Speed Limit: 30

Location: BRIERLEY RD GRIMETHORPE 15 MTS FROM J/W MANOR GR
Description:V1 TV DOWNHILL ALONG BRIERLEY RD TW GRIMETHORPE. V2 TV IN OPP DIRC. V1 TV ONTO WRONG SIDE OF RD INTO PATH OF V2, DRIVER OF V2 TRIES TO AVOID COLL BY MOUNTING FOOTPATH BUT COLL OCCURS.

Vehicle Reference1 Car Going ahead
First point of impact:Offside
Vehicle direction: NE to SW Journey: Other/Not known
Age of Driver : 24 Breath test:Not requested

Contributory Factors : 410 601

Casualty Reference 1 Age:24 Male Driver/rider Severity:Serious

Ped Dir:Pedestrian Di Ped Movement : Not pedestrian
Ped Location:

Vehicle Reference2 Car Going ahead
First point of impact:Front
Vehicle direction: S to N Journey: Other/Not known
Age of Driver : 45 Breath test:Negative

Contributory Factors : 410 601

Casualty Reference 2 Age:45 Male Driver/rider Severity:Slight

Ped Dir:Pedestrian Di Ped Movement : Not pedestrian
Ped Location:

Accidents between dates 01/01/2008 and 31/12/2010 (36) months
Selection: **Notes:**
Selected using Manual Selection **AECOM - Grimethorpe**

B-00503-09 10/05/2009 Sunday Time:1100 Vehicles 2 Casualties 3 Slight
Easting: 441,098 Northing: 410,401
Fine without high winds Road Surface:Dry Daylight:street lights present
Road Type: Single carriageway Speed Limit: 30

Location: BRIERLEY RD BRIERLEY 150 MTS FROM WILLOWGARTH SCHOOL
Description:BOTH VEHS TV ALONG A628 WHEN V2 PULLED OUT ONTO WRONG SIDE OF RD TO O/T A VEH & COLL HEAD ON WITH V1. AT TIME OF RTC V2 WAS FULLY ON WRONG SIDE OF RD.

Vehicle Reference:1 Car Going ahead
First point of impact:Front
Vehicle direction: Parked to Parked Journey: Other/Not known
Age of Driver : 61 Breath test:Negative

Contributory Factors : 108 306 403 601

Casualty Reference:1 Age:61 Male Driver/rider Severity:Slight
Ped Dir:Pedestrian Di Ped Movement : Not pedestrian
Ped Location:

Casualty Reference:2 Age:59 Female Passenger Severity:Slight
Ped Dir:Pedestrian Di Ped Movement : Not pedestrian
Ped Location:

Vehicle Reference:2 Car Overtaking moving vehicle on its offside
First point of impact:Offside
Vehicle direction: Parked to Parked Journey: Other/Not known
Age of Driver : 20 Breath test:Negative

Contributory Factors : 108 306 403 601

Casualty Reference:3 Age:20 Male Driver/rider Severity:Slight
Ped Dir:Pedestrian Di Ped Movement : Not pedestrian
Ped Location:

Accidents between dates 01/01/2008 and 31/12/2010 (36) months
Selection: **Notes:**
Selected using Manual Selection **AECOM - Grimethorpe**

B-00975-09 09/07/2009 Thursday Time:1930 Vehicles 2 Casualties 1 Slight
Easting: 441,363 Northing: 411,007
Fine without high winds Road Surface:Dry Daylight:street lights present
Road Type: Single carriageway Speed Limit: 30

Location: COMMON RD BRIERLEY
Description:V1 STATIONARY WHEN V2 TR IN SAME DIRECTION COLL WITH REAR OF V1 THEN LEFT THE SCENE.

Vehicle Reference:1 Other motor vehicle Parked
First point of impact:Back
Vehicle direction: SW to NE Journey: Other/Not known
Age of Driver : 28 Breath test:Driver not contacted

Contributory Factors : 501

Casualty Reference:1 Age:28 Male Driver/rider Severity:Slight
Ped Dir:Pedestrian Di Ped Movement : Not pedestrian
Ped Location:

Vehicle Reference:2 Car Going ahead
First point of impact:Front
Vehicle direction: SW to NE Journey: Other/Not known
Age of Driver : 47 Breath test:Failed to provide

Contributory Factors : 501

Accidents between dates 01/01/2008 and 31/12/2010 (36) months
Selection: **Notes:**
Selected using Manual Selection **AECOM - Grimethorpe**

B-00785-09 21/07/2009 Tuesday Time: 2106 Vehicles 1 Casualties 1 Slight
Easting: 441,205 Northing: 409,445
Raining without high winds Road Surface: Wet/Damp Darkness: street lights present and lit
Road Type: Single carriageway Speed Limit: 30

Location: BRIERLEY RD GRIMETHORPE AT J/W PARK RD
Description: AS VEH WAS REVERSING THE CASUALTY WAS WALKING BACKWARDS PAYING NO ATTENTION TO TRAFFIC AND COLL OCC.

Vehicle Reference: 1 Car Reversing
First point of impact: Offside
Vehicle direction: SW to E Journey: Other/Not known
Age of Driver : 27 Breath test: Negative

Contributory Factors : 602 802 805

Casualty Reference 1 Age: 15 Female Pedestrian Severity: Slight
Ped Dir: 9 Ped Movement : Driver's nearside
Ped Location: Location U/K

Accidents between dates 01/01/2008 and 31/12/2010 (36) months
Selection: **Notes:**
Selected using Manual Selection **AECOM - Grimethorpe**

B-01387-09 09/12/2009 Wednesday Time:1726 Vehicles 2 Casualties 1 Slight
Easting: 441,086 Northing: 409,654
Fine without high winds Road Surface:Dry Darkness: street lights present and lit
Road Type: Single carriageway Speed Limit: 30

Location: BRIERLEY RD GRIMETHORPE
Description:V1 TURNED R OUT OF GRIMETHORPE HALL ONTO BRIERLEY RD. AS V1 WAS HALFWAY ACROSS RD WHEN DRIVER SAW M/CYCLIST APP ON O/S W/O LIGHTS. M/CYCLE ATTEMPTED TO TURN TO N/S BUT COLL OCCURRED WITH V1. AS A RESULT RIDER & PILLION PASS CAME OFF BIKE.BOTH REMOUNT M/

Vehicle Reference:1 Car Moving off
First point of impact:Offside
Vehicle direction: W to E Journey: Journey as part of work
Age of Driver : 34 Breath test:Negative

Contributory Factors : 306 405 409 506

Vehicle Reference:2 Motorcycle 50cc and under Going ahead
First point of impact:Front
Vehicle direction: S to N Journey: Other/Not known
Age of Driver : Breath test:Driver not contacted

Contributory Factors : 306 405 409 506

Casualty Reference 1 Age: Male Passenger Severity:Slight
Ped Dir:Pedestrian Di Ped Movement : Not pedestrian
Ped Location:

Accidents between dates 01/01/2008 and 31/12/2010 (36) months
Selection: **Notes:**
Selected using Manual Selection **AECOM - Grimethorpe**

B-01435-09 19/12/2009 Saturday Time:1030 Vehicles 2 Casualties 1 Slight
Easting: 441,063 Northing: 409,705
Other Road Surface:Frost/Ice Daylight:street lights present
Road Type: Single carriageway Speed Limit: 30

Location: BRIERLEY RD GRIMETHORPE AT J/W MANOR RD
Description:V1 EDGING OUT OF JCT INTO PATH OF V2 AND COLL OCC.

Vehicle Reference:1 Car Going ahead
First point of impact:Front
Vehicle direction: E to W Journey: Other/Not known
Age of Driver : 27 Breath test:Driver not contacted

Contributory Factors : 405

Casualty Reference:1 Age:27 Male Driver/rider Severity:Slight
Ped Dir:Pedestrian Di Ped Movement : Not pedestrian
Ped Location:

Vehicle Reference:2 Car Going ahead
First point of impact:Front
Vehicle direction: S to N Journey: Other/Not known
Age of Driver : Breath test:Driver not contacted

Contributory Factors : 405

Accidents between dates 01/01/2008 and 31/12/2010 (36) months
Selection: **Notes:**
Selected using Manual Selection **AECOM - Grimethorpe**

B-01439-09 19/12/2009 Saturday Time: 2230 Vehicles 2 Casualties 2 Slight
Easting: 440,730 Northing: 411,265
Fine without high winds Road Surface: Wet/Damp Darkness: street lights present and lit
Road Type: Single carriageway Speed Limit: 30

Location: CHURCH ST BRIERLEY AT J/W BARNSLEY RD
Description: V1 BRAKING FOR JCT, V2 COLL WITH REAR THEN LEFT THE SCENE.

Vehicle Reference: 1 Car Slowing or Stopping
First point of impact: Back
Vehicle direction: SE to NW Journey: Other/Not known
Age of Driver : 47 Breath test: Driver not contacted

Contributory Factors : 308 307

Casualty Reference: 1 Age: 47 Male Driver/rider Severity: Slight
Ped Dir: Pedestrian Di Ped Movement : Not pedestrian
Ped Location:

Casualty Reference: 2 Age: 16 Female Passenger Severity: Slight
Ped Dir: Pedestrian Di Ped Movement : Not pedestrian
Ped Location:

Vehicle Reference: 2 Car Going ahead
First point of impact: Front
Vehicle direction: SE to NW Journey: Other/Not known
Age of Driver : Breath test: Driver not contacted

Contributory Factors : 308 307

Accidents between dates 01/01/2008 and 31/12/2010 (36) months
Selection: **Notes:**
Selected using Manual Selection **AECOM - Grimethorpe**

B-00084-10 23/01/2010 Saturday Time:2318 Vehicles 2 Casualties 1 Slight
Easting: 440,910 Northing: 409,915
Fine without high winds Road Surface:Dry Darkness: street lights present and lit
Road Type: Single carriageway Speed Limit: 30

Location: BRIERLEY RD GRIMETHORPE
Description:V1 NEGOTIATING RGT HAND BEND, LOST CONTROL AND SKIDDED INTO V2 TR IN OPP DIRECTION THEN DRIVER OF V1 LEFT THE SCENE.

Vehicle Reference1 Car Going ahead
First point of impact:Front
Vehicle direction: N to S Journey: Other/Not known
Age of Driver : Breath test:Driver not contacted

Contributory Factors : 403 409 410 502

Vehicle Reference2 Car Going ahead
First point of impact:Front
Vehicle direction: S to N Journey: Journey as part of work
Age of Driver : 54 Breath test:Driver not contacted

Contributory Factors : 403 409 410 502

Casualty Reference 1 Age:54 Male Driver/rider Severity:Slight
Ped Dir:Pedestrian Di Ped Movement : Not pedestrian
Ped Location:

Accidents between dates 01/01/2008 and 31/12/2010 (36) months
Selection: **Notes:**
Selected using Manual Selection **AECOM - Grimethorpe**

B-00108-10 27/01/2010 Wednesday Time:1848 Vehicles 1 Casualties 2 Slight
Easting: 441,212 Northing: 409,449
Fine without high winds Road Surface:Dry Darkness: street lights present and lit
Road Type: Single carriageway Speed Limit: 30

Location: PARK RD BRIERLEY AT J/W BRIERLEY RD
Description:V1 REVERSING WHEN HE COLL WITH CAS 1 & 2.

Vehicle Reference:1 Car Reversing
First point of impact:Back
Vehicle direction: SE to NE Journey: Other/Not known
Age of Driver : 42 Breath test:Negative

Contributory Factors : 108 405 702 710

Casualty Reference:1 Age:27 Female Pedestrian Severity:Slight
Ped Dir:Pedestrian Di Ped Movement : Driver's nearside
Ped Location:In carr elsewhere

Casualty Reference:2 Age:5 Male Pedestrian Severity:Slight
Ped Dir:Pedestrian Di Ped Movement : Driver's nearside
Ped Location:In carr elsewhere

Accidents between dates 01/01/2008 and 31/12/2010 (36) months
Selection: **Notes:**
Selected using Manual Selection **AECOM - Grimethorpe**

B-00104-10 27/01/2010 Wednesday Time:1600 Vehicles 1 Casualties 1 Serious
Easting: 441,291 Northing: 409,303
Fine with high winds Road Surface:Wet/Damp Daylight:street lights present
Road Type: Single carriageway Speed Limit: 30

Location: BRIERLEY RD GRIMETHORPE
Description:DRIVER LOST CONTROL COLLIDING WITH WALL THEN LEFT THE SCENE.

Vehicle Reference1 Car Going ahead
First point of impact:Front
Vehicle direction: S to N Journey: Other/Not known
Age of Driver : Breath test:Driver not contacted

Contributory Factors : 410

Casualty Reference 1 Age:20 Male Passenger Severity:Serious
Ped Dir:Pedestrian Di Ped Movement : Not pedestrian
Ped Location:

Accidents involving:

	Fatal	Serious	Slight	Total
Motor vehicles only excluding 2-wheels	0	3	11	14
2-wheeled motor vehicles	0	0	2	2
Pedal cycles	0	0	0	0
Horses & other	0	0	0	0
Total	0	3	13	16

Casualties:

	Fatal	Serious	Slight	Total
Vehicle driver	0	1	9	10
Passenger	0	2	6	8
Motorcycle ride	0	0	0	0
Cyclist	0	0	0	0
Pedestrian	0	0	4	4
Other	0	0	0	0
Total	0	3	19	22

Accidents between dates **01/01/2008 and 31/12/2010** (36) months

Selection:
Selected using Manual Selection

Notes:
AECOM - Grimethorpe

Police Ref.	Date	Cas.	Sev.	Cycs	Peds	Ch	OAPs	Vis.	Manv.	Road Cond.	Time	Location
B-00530-08	29/04/2008	1	Slight	0	0	0	0	Light	No turn	Wet/Damp	1920	CHURCH ST BRIERLEY
B-00649-08	28/05/2008	1	Slight	0	0	0	0	Dark	No turn	Wet/Damp	2220	BARNSLEY RD BRIERLEY J/W CHURCH ST
B-00841-08	13/07/2008	2	Slight	0	0	0	0	Light	Right	Dry	1750	BARNSLEY ROAD BRIERLEY AT J/W CHURCH STREET
B-01053-08	01/09/2008	1	Slight	0	1	0	0	Dark	No turn	Dry	2049	BRIERLEY RD GRIMETHORPE O/S 161
B-01424-08	17/11/2008	1	Slight	0	0	0	0	Dark	Right	Dry	1643	CHURCH ST BRIERLEY AT J/W CHURCH DR
B-01574-08	17/12/2008	1	Serious	0	0	0	1	Light	No turn	Dry	0953	CROSSHILLS BRIERLEY J/W CHURCH ST
B-00079-09	16/01/2009	2	Serious	0	0	0	0	Dark	No turn	Wet/Damp	1800	BRIERLEY RD GRIMETHORPE 15 MTS FROM J/W MANOR GR
B-00503-09	10/05/2009	3	Slight	0	0	0	1	Light	No turn	Dry	1100	BRIERLEY RD BRIERLEY 150 MTS FROM WILLOWGARTH SCHOOL
B-00975-09	09/07/2009	1	Slight	0	0	0	0	Light	No turn	Dry	1930	COMMON RD BRIERLEY
B-00785-09	21/07/2009	1	Slight	0	1	1	0	Dark	No turn	Wet/Damp	2106	BRIERLEY RD GRIMETHORPE AT J/W PARK RD
B-01387-09	09/12/2009	1	Slight	0	0	0	0	Dark	No turn	Dry	1726	BRIERLEY RD GRIMETHORPE
B-01435-09	19/12/2009	1	Slight	0	0	0	0	Light	No turn	Frost/Ice	1030	BRIERLEY RD GRIMETHORPE AT J/W MANOR RD
B-01439-09	19/12/2009	2	Slight	0	0	0	0	Dark	No turn	Wet/Damp	2230	CHURCH ST BRIERLEY AT J/W BARNSLEY RD
B-00084-10	23/01/2010	1	Slight	0	0	0	0	Dark	No turn	Dry	2318	BRIERLEY RD GRIMETHORPE
B-00108-10	27/01/2010	2	Slight	0	2	1	0	Dark	No turn	Dry	1848	PARK RD BRIERLEY AT J/W BRIERLEY RD
B-00104-10	27/01/2010	1	Serious	0	0	0	0	Light	No turn	Wet/Damp	1600	BRIERLEY RD GRIMETHORPE
Column Totals		22		0	4	2	2					
No. of Accidents				0	3	2	2					

Total number of accidents listed: 16

Accidents between dates **01/01/2008** **and** **31/12/2010** (36) months

Selection:
Selected using Manual Selection

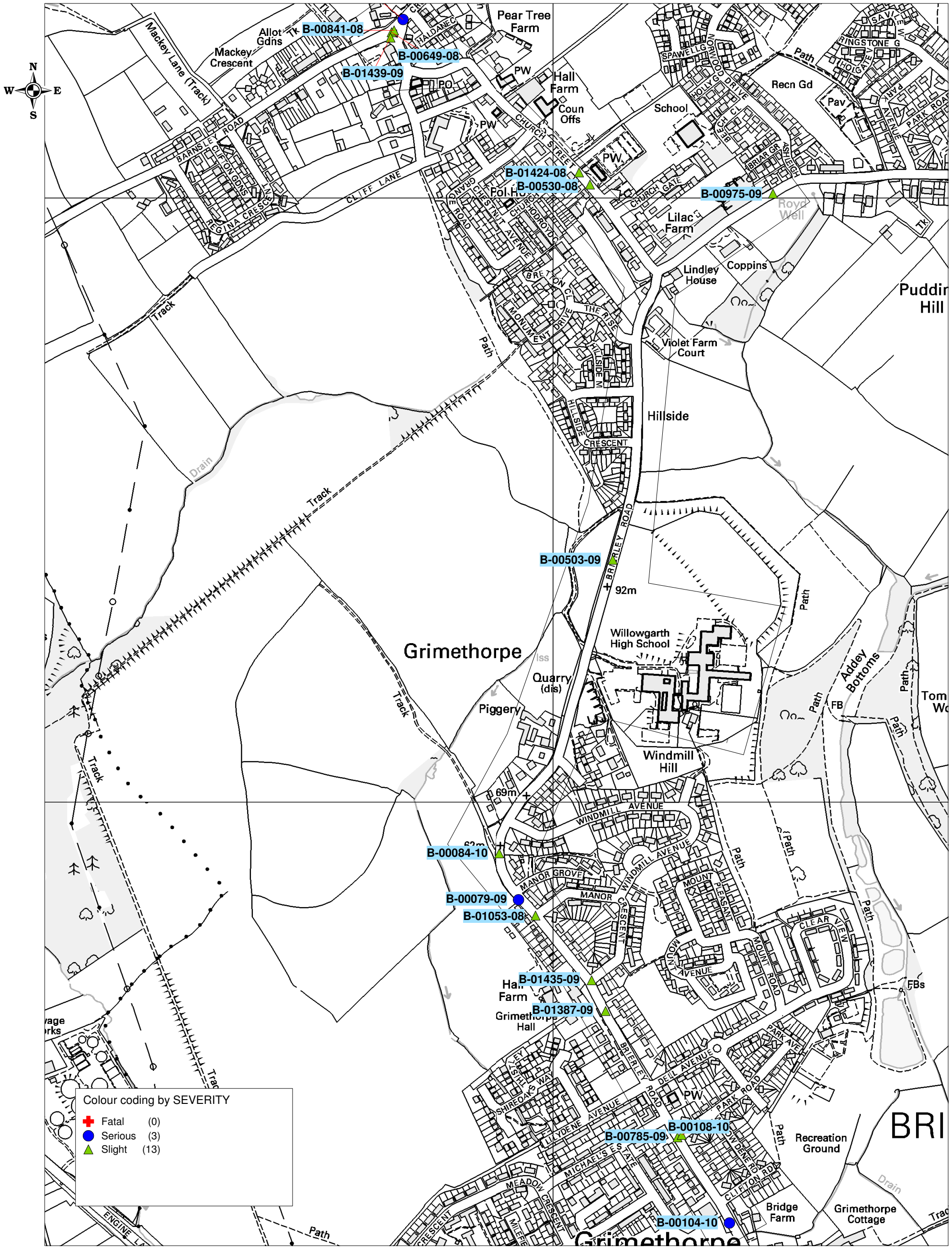
Notes:
AECOM - Grimethorpe

Police Ref.	Acc Class	Date	Time	Grid References	Casualties Ftl	Ser	Slt	Causation Factors/ Prob	Ped L M D	Light	Weather	Road Surface	Vehicle Types
B-00530-08	Slight	29/04/2008	1920	441060 411022	0	0	1	408V1A 108V1A 701V1A 406V2A 103V1A 103V2A	0 0 0	Light	Fine without high winds	Wet/Damp	9 9
B-00649-08	Slight	28/05/2008	2220	440732 411274	0	0	1	405V2A 103V2B 103V1B	0 0 0	Dark	Fine without high winds	Wet/Damp	9 9
B-00841-08	Slight	13/07/2008	1750	440736 411277	0	0	2	403V2B 405V2B 406V2B	0 0 0	Light	Fine without high winds	Dry	9 5
B-01053-08	Slight	01/09/2008	2049	440970 409812	0	0	1	802C1A 806C1A	5 3 9	Dark	Fine without high winds	Dry	9
B-01424-08	Slight	17/11/2008	1643	441042 411042	0	0	1	403V2A	0 0 0	Dark	Fine without high winds	Dry	14 9
B-01574-08	Serious	17/12/2008	0953	440751 411295	0	1	0	408V1A	0 0 0	Light	Unknown	Dry	11
B-00079-09	Serious	16/01/2009	1800	440942 409838	0	1	1	410V1A 601V1A	0 0 0	Dark	Fine without high winds	Wet/Damp	9 9
B-00503-09	Slight	10/05/2009	1100	441098 410401	0	0	3	108V2B 306V2A 403V2A 601V2A	0 0 0	Light	Fine without high winds	Dry	9 9
B-00975-09	Slight	09/07/2009	1930	441363 411007	0	0	1	501V2A	0 0 0	Light	Fine without high winds	Dry	9 14
B-00785-09	Slight	21/07/2009	2106	441205 409445	0	0	1	602C1A 802C1A 805C1A	10 1 9	Dark	Raining without high winds	Wet/Damp	9
B-01387-09	Slight	09/12/2009	1726	441086 409654	0	0	1	306V2A 405V2A 409V2A 506V2B	0 0 0	Dark	Fine without high winds	Dry	2 9
B-01435-09	Slight	19/12/2009	1030	441063 409705	0	0	1	405V1A	0 0 0	Light	Other	Frost/Ice	9 9
B-01439-09	Slight	19/12/2009	2230	440730 411265	0	0	2	308V2A 307V2A	0 0 0	Dark	Fine without high winds	Wet/Damp	9 9
B-00084-10	Slight	23/01/2010	2318	440910 409915	0	0	1	403V1A 409V1A 410V1A 502V1B	0 0 0	Dark	Fine without high winds	Dry	9 9
B-00108-10	Slight	27/01/2010	1848	441212 409449	0	0	2	108V1B 405V1B 702V1B 710V1B	5 1 2	Dark	Fine without high winds	Dry	9
B-00104-10	Serious	27/01/2010	1600	441291 409303	0	1	0	410V1A	0 0 0	Light	Fine with high winds	Wet/Damp	9

Column Totals
No. of Accidents

Total number of accidents listed: 16

Selected Range of Accidents between dates 01/01/2008 and 31/12/2010
Selected using Manual Selection



MAKING SOUTH YORKSHIRE ROADS SAFER	Reproduced from the Ordnance Survey mapping with the permission of the Controller of Her Majesty's Stationery Office (c) Crown copyright. Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings. Rotherham MBC Licence No. 100019587. South Yorkshire LTP Partnership Licence No: 100019587 2011 Selected map area	SCALE	1 : 6000
		DATE	06/06/2011
		DRWG No.	
		DRN BY	

Appendix C – TRICS Outputs

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

06	WEST MIDLANDS		
	SH	SHROPSHIRE	1 days
	WM	WEST MIDLANDS	2 days
	WO	WORCESTERSHIRE	3 days
08	NORTH WEST		
	CH	CHESHIRE	2 days
	LC	LANCASHIRE	2 days
	MS	MERSEYSIDE	1 days
09	NORTH		
	CB	CUMBRIA	1 days
	TV	TEES VALLEY	1 days
	TW	TYNE & WEAR	1 days

Filtering Stage 2 selection:

Parameter: Number of dwellings
Range: 79 to 372 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/02 to 11/06/09

Selected survey days:

Monday	1 days
Tuesday	3 days
Wednesday	1 days
Thursday	6 days
Friday	3 days

Selected survey types:

Manual count	14 days
Directional ATC Count	0 days

Selected Locations:

Suburban Area (PPS6 Out of Centre)	5
Edge of Town	8
Neighbourhood Centre (PPS6 Local Centre)	1

Selected Location Sub Categories:

Residential Zone	8
No Sub Category	6

LIST OF SITES relevant to selection parameters

1 CB-03-A-04 SEMI DETACHED, WORKINGTON CUMBRIA
MOORCLOSE ROAD
SALTERBACK
WORKINGTON
Edge of Town
No Sub Category
Total Number of dwellings: 82

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

CREWE
Edge of Town
Residential Zone
Total Number of dwellings: 174

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

CREWE
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Number of dwellings: 129

4 LC-03-A-22 BUNGALOWS, BLACKPOOL LANCASHIRE
CLIFTON DRIVE NORTH

BLACKPOOL
Edge of Town
Residential Zone
Total Number of dwellings: 98

5 LC-03-A-29 DETACHED/SEMI D., BLACKBURN LANCASHIRE
REVIDGE ROAD
FOUR LANE ENDS
BLACKBURN
Edge of Town
Residential Zone
Total Number of dwellings: 185

6 MS-03-A-01 TERRACED, RUNCORN MERSEYSIDE
PALACE FIELDS AVENUE

RUNCORN
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total Number of dwellings: 372

7 SH-03-A-04 TERRACED, SHREWSBURY SHROPSHIRE
ST MICHAEL'S STREET

SHREWSBURY
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Number of dwellings: 108

8 TV-03-A-01 MIXED HOUSES/FLATS, HARTLEPL TEES VALLEY
POWLETT ROAD

HARTLEPOOL
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Number of dwellings: 225

9 TW-03-A-01 SEMI DETACHED, SUNDERLAND TYNE & WEAR
LEECHMERE ROAD
HILLVIEW
SUNDERLAND
Edge of Town
Residential Zone
Total Number of dwellings: 81

LIST OF SITES relevant to selection parameters (Cont.)

10 WM-03-A-01 TERRACED, COVENTRY WEST MIDLANDS
FOLESHILL ROAD
FOLESHILL
COVENTRY
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 79

11 WM-03-A-03 MIXED HOUSING, COVENTRY WEST MIDLANDS
BASELEY WAY
ROWLEYS GREEN
COVENTRY
Edge of Town
Residential Zone
Total Number of dwellings: 84

12 WO-03-A-03 DETACHED, KIDDERMINSTER WORCESTERSHIRE
BLAKEBROOK
BLAKEBROOK
KIDDERMINSTER
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 138

13 WO-03-A-05 TERRACED/DET., BROMSGROVE WORCESTERSHIRE
ST GODWALDS ROAD
ASTON FIELDS
BROMSGROVE
Edge of Town
No Sub Category
Total Number of dwellings: 215

14 WO-03-A-06 DET./TERRACED, BROMSGROVE WORCESTERSHIRE
ST GODWALDS ROAD
ASTON FIELDS
BROMSGROVE
Edge of Town
No Sub Category
Total Number of dwellings: 232

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 08:00	14	157	0.061	14	157	0.277	14	157	0.338
08:00 - 09:00	14	157	0.150	14	157	0.411	14	157	0.561
09:00 - 10:00	14	157	0.168	14	157	0.204	14	157	0.372
10:00 - 11:00	14	157	0.152	14	157	0.181	14	157	0.333
11:00 - 12:00	14	157	0.176	14	157	0.182	14	157	0.358
12:00 - 13:00	14	157	0.192	14	157	0.179	14	157	0.371
13:00 - 14:00	14	157	0.175	14	157	0.173	14	157	0.348
14:00 - 15:00	14	157	0.191	14	157	0.200	14	157	0.391
15:00 - 16:00	14	157	0.270	14	157	0.222	14	157	0.492
16:00 - 17:00	14	157	0.327	14	157	0.194	14	157	0.521
17:00 - 18:00	14	157	0.399	14	157	0.231	14	157	0.630
18:00 - 19:00	14	157	0.305	14	157	0.233	14	157	0.538
19:00 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			2.566			2.687			5.253

Parameter summary

Trip rate parameter range selected:	79 - 372 (units:)
Survey date date range:	01/01/02 - 11/06/09
Number of weekdays (Monday-Friday):	14
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

Appendix D – PICADY Outputs

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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 4.0 INTERIM (OCTOBER 2006)

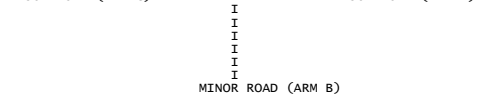
Run with file:-
"F:\PROJECTS\Transport Planning - Northern Barnsley Connectivity Study\Willowgarth School Site TSS\
Transport Statement\Modelling\2011_2016 Base + Dev AM.vpi"
(drive-on-the-left) at 11:48:38 on Tuesday, 17 May 2011

.RUN INFORMATION
****

RUN TITLE: Willowgarth High School - 2011 / 2016 Base + Dev
LOCATION:
DATE: 17/05/11
CLIENT:
ENUMERATOR: staresg [UKLDS2PC15650]
JOB NUMBER:
STATUS:
DESCRIPTION:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY
****

INPUT DATA



ARM A IS Brierley Road North
ARM B IS Site Access
ARM C IS Brierley Road South

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

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 6.40 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 3.00 M.
- VISIBILITY	(VC-B) 100.0 M.
- BLOCKS TRAFFIC	NO
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 24.0 M.
- VISIBILITY TO RIGHT	(VB-A) 17.0 M.
- LANE 1 WIDTH	(WB-C) -
- LANE 2 WIDTH	(WB-A) -
- WIDTH AT 0 M FROM JUNC.	10.00 M.
- WIDTH AT 5 M FROM JUNC.	5.00 M.
- WIDTH AT 10 M FROM JUNC.	3.65 M.
- WIDTH AT 15 M FROM JUNC.	3.65 M.
- WIDTH AT 20 M FROM JUNC.	3.65 M.
- LENGTH OF FLARED SECTION	1 VEHS

.SLOPES AND INTERCEPT

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

Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
583.81	0.22	0.09

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
454.19	0.21	0.08	0.13	0.29

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B

686.89	0.26	0.26

NB These values do not allow for any site specific corrections

.TRAFFIC DEMAND DATA

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

Demand set: 2011 AM Base + Dev

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	2.71	4.07	2.71
ARM B	15.00	45.00	75.00	0.57	0.86	0.57
ARM C	15.00	45.00	75.00	2.49	3.73	2.49

TURNING PROPORTIONS
TURNING COUNTS (VEH/HR)
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.041	0.959
		0.0	9.0	208.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.500	0.000	0.500
		23.0	0.0	23.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.955	0.045	0.000
		190.0	9.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2011 AM Base + Dev
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)
07.45-08.00									
B-C	0.29	9.55	0.030		0.00	0.03	0.5		0.11
B-A	0.29	7.01	0.041		0.00	0.04	0.6		0.15
C-A	2.38								
C-B	0.11	9.70	0.012		0.00	0.01	0.2		0.10
A-B	0.11								
A-C	2.61								

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)
08.00-08.15									
B-C	0.34	9.39	0.037		0.03	0.04	0.6		0.11
B-A	0.34	6.80	0.051		0.04	0.05	0.8		0.15
C-A	2.85								
C-B	0.13	9.56	0.014		0.01	0.01	0.2		0.11
A-B	0.13								
A-C	3.12								

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)
08.15-08.30									
B-C	0.42	9.18	0.046		0.04	0.05	0.7		0.11
B-A	0.42	6.53	0.065		0.05	0.07	1.0		0.16
C-A	3.49								
C-B	0.17	9.37	0.018		0.01	0.02	0.3		0.11
A-B	0.17								
A-C	3.82								

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-C	0.42	9.18	0.046		0.05	0.05	0.7		0.11
B-A	0.42	6.53	0.065		0.07	0.07	1.0		0.16
C-A	3.49								
C-B	0.17	9.37	0.018		0.02	0.02	0.3		0.11
A-B	0.17								
A-C	3.82								

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-C	0.34	9.39	0.037	0.05	0.04	0.6	0.11	
B-A	0.34	6.80	0.051	0.07	0.05	0.8	0.16	
C-A	2.85							
C-B	0.13	9.56	0.014	0.02	0.01	0.2	0.11	
A-B	0.13							
A-C	3.12							

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-C	0.29	9.55	0.030		0.04	0.03	0.5		0.11
B-A	0.29	7.01	0.041		0.05	0.04	0.7		0.15
C-A	2.38								
C-B	0.11	9.70	0.012		0.01	0.01	0.2		0.10
A-B	0.11								
A-C	2.61								

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.0

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-C	31.7	21.1	3.5	0.11	3.5	0.11
B-A	31.7	21.1	4.9	0.16	4.9	0.16
C-A	261.5	174.3				
C-B	12.4	8.3	1.3	0.11	1.3	0.11
A-B	12.4	8.3				
A-C	286.3	190.9				
ALL	635.9	423.9	9.7	0.02	9.7	0.02

* 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 JOB

.SLOPES AND INTERCEPT

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

will be adjusted)

Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
583.81	0.22	0.09

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
454.19	0.21	0.08	0.13	0.29

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
686.89	0.26	0.26

NB These values do not allow for any site specific corrections

.TRAFFIC DEMAND DATA

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

Demand set: 2016 AM Base + Dev

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START TO TOP OF RISE	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO TOP OF PEAK	NUMBER OF MINUTES FROM START WHEN FLOW STOPS IS REACHED	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	3.01	4.52	3.01
ARM B	15.00	45.00	75.00	0.57	0.86	0.57
ARM C	15.00	45.00	75.00	2.76	4.14	2.76

TURNING PROPORTIONS
TURNING COUNTS (VEH/HR)
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.037	0.963
		0.0	9.0	232.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.500	0.000	0.500
		23.0	0.0	23.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.959	0.041	0.000
		212.0	9.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2016 AM Base + Dev
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)
07.45-08.00									
B-C	0.29	9.47	0.030		0.00	0.03	0.5		0.11
B-A	0.29	6.89	0.042		0.00	0.04	0.6		0.15
C-A	2.66								
C-B	0.11	9.62	0.012		0.00	0.01	0.2		0.11
A-B	0.11								
A-C	2.91								

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)
08.00-08.15									
B-C	0.34	9.30	0.037		0.03	0.04	0.6		0.11
B-A	0.34	6.67	0.052		0.04	0.05	0.8		0.16
C-A	3.18								
C-B	0.13	9.46	0.014		0.01	0.01	0.2		0.11
A-B	0.13								
A-C	3.48								

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)
08.15-08.30									
B-C	0.42	9.06	0.047		0.04	0.05	0.7		0.12
B-A	0.42	6.36	0.066		0.05	0.07	1.0		0.17
C-A	3.89								
C-B	0.17	9.25	0.018		0.01	0.02	0.3		0.11
A-B	0.17								
A-C	4.26								

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-C	0.42	9.06	0.047		0.05	0.05	0.7		0.12
B-A	0.42	6.36	0.066		0.07	0.07	1.1		0.17
C-A	3.89								
C-B	0.17	9.25	0.018		0.02	0.02	0.3		0.11
A-B	0.17								
A-C	4.26								

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-C	0.34	9.30	0.037		0.05	0.04	0.6		0.11
B-A	0.34	6.67	0.052		0.07	0.06	0.8		0.16
C-A	3.18								
C-B	0.13	9.46	0.014		0.02	0.01	0.2		0.11
A-B	0.13								
A-C	3.48								

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-C	0.29	9.47	0.030		0.04	0.03	0.5		0.11

B-A	0.29	6.89	0.042	0.06	0.04	0.7	0.15	
C-A	2.66							
C-B	0.11	9.62	0.012	0.01	0.01	0.2	0.11	
A-B	0.11							
A-C	2.91							

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.0

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-C	31.7	21.1	3.5	0.11	3.5	0.11
B-A	31.7	21.1	5.0	0.16	5.0	0.16
C-A	291.8	194.5				
C-B	12.4	8.3	1.3	0.11	1.3	0.11
A-B	12.4	8.3				
A-C	319.3	212.9				
ALL	699.2	466.1	9.9	0.01	9.9	0.01

* 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 JOB

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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 4.0 INTERIM (OCTOBER 2006)

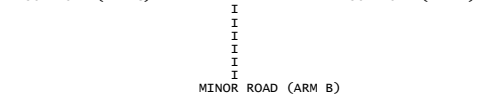
Run with file:-
"F:\PROJECTS\Transport Planning - Northern Barnsley Connectivity Study\Willowgarth School Site TSS\
Transport Statement\Modelling\2011_2016 Base + Dev PM Peak.vpi"
(drive-on-the-left) at 11:57:17 on Tuesday, 17 May 2011

.RUN INFORMATION
****

RUN TITLE: Willowgarth High School - 2011 / 2016 Base + Dev
LOCATION:
DATE: 17/05/11
CLIENT:
ENUMERATOR: staresg [UKLDS2PC15650]
JOB NUMBER:
STATUS:
DESCRIPTION:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY
****

INPUT DATA



ARM A IS Brierley Road North
ARM B IS Site Access
ARM C IS Brierley Road South

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

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 6.40 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 3.00 M.
- VISIBILITY	(VC-B) 100.0 M.
- BLOCKS TRAFFIC	NO
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 24.0 M.
- VISIBILITY TO RIGHT	(VB-A) 17.0 M.
- LANE 1 WIDTH	(WB-C) -
- LANE 2 WIDTH	(WB-A) -
- WIDTH AT 0 M FROM JUNC.	10.00 M.
- WIDTH AT 5 M FROM JUNC.	5.00 M.
- WIDTH AT 10 M FROM JUNC.	3.65 M.
- WIDTH AT 15 M FROM JUNC.	3.65 M.
- WIDTH AT 20 M FROM JUNC.	3.65 M.
- LENGTH OF FLARED SECTION	1 VEHS

.SLOPES AND INTERCEPT

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

Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
583.81	0.22	0.09

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
454.19	0.21	0.08	0.13	0.29

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B

686.89	0.26	0.26

NB These values do not allow for any site specific corrections

.TRAFFIC DEMAND DATA

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

Demand set: 2011 PM Base + Dev

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	TO TOP OF PEAK	FLOW STOPS IS REACHED	FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00		2.40	3.60	2.40
ARM B	15.00	45.00	75.00		0.32	0.49	0.32
ARM C	15.00	45.00	75.00		2.56	3.84	2.56

TURNING PROPORTIONS
TURNING COUNTS (VEH/HR)
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15	ARM A	0.000	0.115	0.885
		0.0	22.0	170.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.500	0.000	0.500
		13.0	0.0	13.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.893	0.107	0.000
		183.0	22.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2011 PM Base + Dev
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)
16.45-17.00									
B-C	0.16	9.70	0.017		0.00	0.02	0.2		0.10
B-A	0.16	7.06	0.023		0.00	0.02	0.3		0.14
C-A	2.30								
C-B	0.28	9.78	0.028		0.00	0.03	0.4		0.11
A-B	0.28								
A-C	2.13								

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)
17.00-17.15									
B-C	0.19	9.57	0.020		0.02	0.02	0.3		0.11
B-A	0.19	6.87	0.028		0.02	0.03	0.4		0.15
C-A	2.74								
C-B	0.33	9.66	0.034		0.03	0.04	0.5		0.11
A-B	0.33								
A-C	2.55								

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-C	0.24	9.40	0.025		0.02	0.03	0.4		0.11
B-A	0.24	6.61	0.036		0.03	0.04	0.5		0.16
C-A	3.36								
C-B	0.40	9.49	0.043		0.04	0.04	0.6		0.11
A-B	0.40								
A-C	3.12								

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)
17.30-17.45									
B-C	0.24	9.40	0.025		0.03	0.03	0.4		0.11
B-A	0.24	6.61	0.036		0.04	0.04	0.6		0.16
C-A	3.36								
C-B	0.40	9.49	0.043		0.04	0.04	0.7		0.11
A-B	0.40								
A-C	3.12								

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)
17.45-18.00									

B-C	0.19	9.57	0.020	0.03	0.02	0.3	0.11
B-A	0.19	6.87	0.028	0.04	0.03	0.5	0.15
C-A	2.74						
C-B	0.33	9.66	0.034	0.04	0.04	0.5	0.11
A-B	0.33						
A-C	2.55						

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-C	0.16	9.70	0.017		0.02	0.02	0.3		0.10
B-A	0.16	7.06	0.023		0.03	0.02	0.4		0.14
C-A	2.30								
C-B	0.28	9.78	0.028		0.04	0.03	0.4		0.11
A-B	0.28								
A-C	2.13								

QUEUE FOR STREAM B-C

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 B-A

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 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

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-C	17.9	11.9	1.9	0.11	1.9	0.11
B-A	17.9	11.9	2.7	0.15	2.7	0.15
C-A	251.9	167.9				
C-B	30.3	20.2	3.2	0.11	3.2	0.11
A-B	30.3	20.2				
A-C	234.0	156.0				
ALL	582.2	388.2	7.8	0.01	7.8	0.01

* 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 JOB

.SLOPES AND INTERCEPT

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

will be adjusted)

Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
583.81	0.22	0.09

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
454.19	0.21	0.08	0.13	0.29

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
686.89	0.26	0.26

NB These values do not allow for any site specific corrections

.TRAFFIC DEMAND DATA

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

Demand set: 2016 PM Base + Dev

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START TO TOP OF RISE	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO TOP OF PEAK	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE TOP OF PEAK	RATE OF FLOW (VEH/MIN) AT PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	2.65	3.98	2.65
ARM B	15.00	45.00	75.00	0.32	0.49	0.32
ARM C	15.00	45.00	75.00	2.83	4.24	2.83

TURNING PROPORTIONS
TURNING COUNTS (VEH/HR)
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15	ARM A	0.000	0.104	0.896
		0.0	22.0	190.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.500	0.000	0.500
		13.0	0.0	13.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.903	0.097	0.000
		204.0	22.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2016 PM Base + Dev
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)
16.45-17.00									
B-C	0.16	9.63	0.017		0.00	0.02	0.2		0.11
B-A	0.16	6.96	0.023		0.00	0.02	0.3		0.15
C-A	2.56								
C-B	0.28	9.71	0.028		0.00	0.03	0.4		0.11
A-B	0.28								
A-C	2.38								

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)
17.00-17.15									
B-C	0.19	9.49	0.021		0.02	0.02	0.3		0.11
B-A	0.19	6.75	0.029		0.02	0.03	0.4		0.15
C-A	3.06								
C-B	0.33	9.58	0.034		0.03	0.04	0.5		0.11
A-B	0.33								
A-C	2.85								

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-C	0.24	9.30	0.026		0.02	0.03	0.4		0.11
B-A	0.24	6.46	0.037		0.03	0.04	0.6		0.16
C-A	3.74								
C-B	0.40	9.39	0.043		0.04	0.04	0.7		0.11
A-B	0.40								
A-C	3.49								

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-C	0.24	9.30	0.026		0.03	0.03	0.4		0.11
B-A	0.24	6.46	0.037		0.04	0.04	0.6		0.16
C-A	3.74								
C-B	0.40	9.39	0.043		0.04	0.04	0.7		0.11
A-B	0.40								
A-C	3.49								

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-C	0.19	9.49	0.021		0.03	0.02	0.3		0.11
B-A	0.19	6.75	0.029		0.04	0.03	0.5		0.15
C-A	3.06								
C-B	0.33	9.58	0.034		0.04	0.04	0.5		0.11
A-B	0.33								
A-C	2.85								

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-C	0.16	9.63	0.017		0.02	0.02	0.3		0.11

B-A	0.16	6.96	0.023	0.03	0.02	0.4	0.15	
C-A	2.56							
C-B	0.28	9.71	0.028	0.04	0.03	0.4	0.11	
A-B	0.28							
A-C	2.38							

QUEUE FOR STREAM B-C

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 B-A

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 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

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-C	17.9	11.9	1.9	0.11	1.9	0.11
B-A	17.9	11.9	2.7	0.15	2.7	0.15
C-A	280.8	187.2				
C-B	30.3	20.2	3.3	0.11	3.3	0.11
A-B	30.3	20.2				
A-C	261.5	174.3				
ALL	638.7	425.8	7.9	0.01	7.9	0.01

* 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 JOB

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

PICADY 5.0 ANALYSIS PROGRAM
RELEASE 4.0 INTERIM (OCTOBER 2006)

FOR SALES AND DISTRIBUTION INFORMATION,
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TRL SOFTWARE BUREAU
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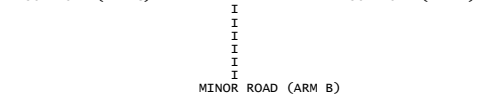
Run with file:-
"F:\PROJECTS\Transport Planning - Northern Barnsley Connectivity Study\Willowgarth School Site TSS\
Transport Statement\Modelling\2011_2016 Base + Dev School PM Peak.vpi"
(drive-on-the-left) at 11:53:34 on Tuesday, 17 May 2011

.RUN INFORMATION
****

RUN TITLE: Willowgarth High School - 2011 / 2016 Base + Dev
LOCATION:
DATE: 17/05/11
CLIENT:
ENUMERATOR: staresg [UKLDS2PC15650]
JOB NUMBER:
STATUS:
DESCRIPTION:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY
****

INPUT DATA



ARM A IS Brierley Road North
ARM B IS Site Access
ARM C IS Brierley Road South

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

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 6.40 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 3.00 M.
- VISIBILITY	(VC-B) 100.0 M.
- BLOCKS TRAFFIC	NO
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 24.0 M.
- VISIBILITY TO RIGHT	(VB-A) 17.0 M.
- LANE 1 WIDTH	(WB-C) -
- LANE 2 WIDTH	(WB-A) -
- WIDTH AT 0 M FROM JUNC.	10.00 M.
- WIDTH AT 5 M FROM JUNC.	5.00 M.
- WIDTH AT 10 M FROM JUNC.	3.65 M.
- WIDTH AT 15 M FROM JUNC.	3.65 M.
- WIDTH AT 20 M FROM JUNC.	3.65 M.
- LENGTH OF FLARED SECTION	1 VEHS

.SLOPES AND INTERCEPT

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

Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
583.81	0.22	0.09

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
454.19	0.21	0.08	0.13	0.29

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B

I 686.89	0.26	0.26 I

NB These values do not allow for any site specific corrections

.TRAFFIC DEMAND DATA

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

Demand set: 2011 School PM Peak Base + Dev

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	TO TOP OF PEAK	FLOW STOPS IS REACHED	RATE OF FLOW (VEH/MIN) BEFORE FALLING	AT TOP OF PEAK	AFTER PEAK
	TO RISE					
ARM A	15.00	45.00	75.00	2.76	4.14	2.76
ARM B	15.00	45.00	75.00	0.30	0.45	0.30
ARM C	15.00	45.00	75.00	2.66	3.99	2.66

TURNING PROPORTIONS
TURNING COUNTS (VEH/HR)
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.068	0.932
		0.0	15.0	206.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.500	0.000	0.500
		12.0	0.0	12.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.930	0.070	0.000
		198.0	15.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2011 School PM Peak Base + Dev
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)
07.45-08.00									
B-C	0.15	9.59	0.016		0.00	0.02	0.2		0.11
B-A	0.15	6.96	0.022		0.00	0.02	0.3		0.15
C-A	2.48								
C-B	0.19	9.68	0.019		0.00	0.02	0.3		0.11
A-B	0.19								
A-C	2.58								

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)
08.00-08.15									
B-C	0.18	9.45	0.019		0.02	0.02	0.3		0.11
B-A	0.18	6.75	0.027		0.02	0.03	0.4		0.15
C-A	2.97								
C-B	0.22	9.54	0.024		0.02	0.02	0.4		0.11
A-B	0.22								
A-C	3.09								

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)
08.15-08.30									
B-C	0.22	9.25	0.024		0.02	0.02	0.4		0.11
B-A	0.22	6.46	0.034		0.03	0.03	0.5		0.16
C-A	3.63								
C-B	0.28	9.35	0.029		0.02	0.03	0.4		0.11
A-B	0.28								
A-C	3.78								

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-C	0.22	9.25	0.024		0.02	0.02	0.4		0.11
B-A	0.22	6.46	0.034		0.03	0.04	0.5		0.16
C-A	3.63								
C-B	0.28	9.35	0.029		0.03	0.03	0.5		0.11
A-B	0.28								
A-C	3.78								

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-C	0.18	9.45	0.019	0.02	0.02	0.3	0.11	
B-A	0.18	6.75	0.027	0.04	0.03	0.4	0.15	
C-A	2.97							
C-B	0.22	9.54	0.024	0.03	0.02	0.4	0.11	
A-B	0.22							
A-C	3.09							

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-C	0.15	9.59	0.016		0.02	0.02	0.2		0.11
B-A	0.15	6.96	0.022		0.03	0.02	0.3		0.15
C-A	2.48								
C-B	0.19	9.68	0.019		0.02	0.02	0.3		0.11
A-B	0.19								
A-C	2.58								

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-C	16.5	11.0	1.8	0.11	1.8	0.11
B-A	16.5	11.0	2.5	0.15	2.5	0.15
C-A	272.5	181.7				
C-B	20.6	13.8	2.2	0.11	2.2	0.11
A-B	20.6	13.8				
A-C	283.5	189.0				
ALL	630.4	420.3	6.5	0.01	6.5	0.01

* 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 JOB

.SLOPES AND INTERCEPT

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

will be adjusted)

Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
583.81	0.22	0.09

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
454.19	0.21	0.08	0.13	0.29

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
686.89	0.26	0.26

NB These values do not allow for any site specific corrections

.TRAFFIC DEMAND DATA

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

Demand set: 2016 School PM Peak Base + Dev

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START TO TOP OF RISE	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO TOP OF PEAK	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	3.06	4.59	3.06
ARM B	15.00	45.00	75.00	0.30	0.45	0.30
ARM C	15.00	45.00	75.00	2.96	4.44	2.96

TURNING PROPORTIONS
TURNING COUNTS (VEH/HR)
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.061	0.939
		0.0	15.0	230.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.500	0.000	0.500
		12.0	0.0	12.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.937	0.063	0.000
		222.0	15.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2016 School PM Peak Base + Dev
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)
07.45-08.00									
B-C	0.15	9.52	0.016		0.00	0.02	0.2		0.11
B-A	0.15	6.85	0.022		0.00	0.02	0.3		0.15
C-A	2.79								
C-B	0.19	9.60	0.020		0.00	0.02	0.3		0.11
A-B	0.19								
A-C	2.89								

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)
08.00-08.15									
B-C	0.18	9.35	0.019		0.02	0.02	0.3		0.11
B-A	0.18	6.61	0.027		0.02	0.03	0.4		0.16
C-A	3.33								
C-B	0.22	9.45	0.024		0.02	0.02	0.4		0.11
A-B	0.22								
A-C	3.45								

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)
08.15-08.30									
B-C	0.22	9.13	0.024		0.02	0.02	0.4		0.11
B-A	0.22	6.29	0.035		0.03	0.04	0.5		0.16
C-A	4.07								
C-B	0.28	9.23	0.030		0.02	0.03	0.4		0.11
A-B	0.28								
A-C	4.22								

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-C	0.22	9.13	0.024		0.02	0.02	0.4		0.11
B-A	0.22	6.29	0.035		0.04	0.04	0.5		0.16
C-A	4.07								
C-B	0.28	9.23	0.030		0.03	0.03	0.5		0.11
A-B	0.28								
A-C	4.22								

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-C	0.18	9.35	0.019		0.02	0.02	0.3		0.11
B-A	0.18	6.61	0.027		0.04	0.03	0.4		0.16
C-A	3.33								
C-B	0.22	9.45	0.024		0.03	0.02	0.4		0.11
A-B	0.22								
A-C	3.45								

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-C	0.15	9.52	0.016		0.02	0.02	0.2		0.11

B-A	0.15	6.85	0.022	0.03	0.02	0.3	0.15	
C-A	2.79							
C-B	0.19	9.60	0.020	0.02	0.02	0.3	0.11	
A-B	0.19							
A-C	2.89							

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-C	16.5	11.0	1.8	0.11	1.8	0.11
B-A	16.5	11.0	2.6	0.16	2.6	0.16
C-A	305.6	203.7				
C-B	20.6	13.8	2.2	0.11	2.2	0.11
A-B	20.6	13.8				
A-C	316.6	211.1				
ALL	696.5	464.3	6.6	0.01	6.6	0.01

* 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 JOB