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Dyno Nobel Asia Pacific Limited

Moranbah Ammonium Nitrate Project Traffic Impact Assessment

August 2006



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Appendices

- A Traffic Count Data
- B Traffic Flow Diagrams



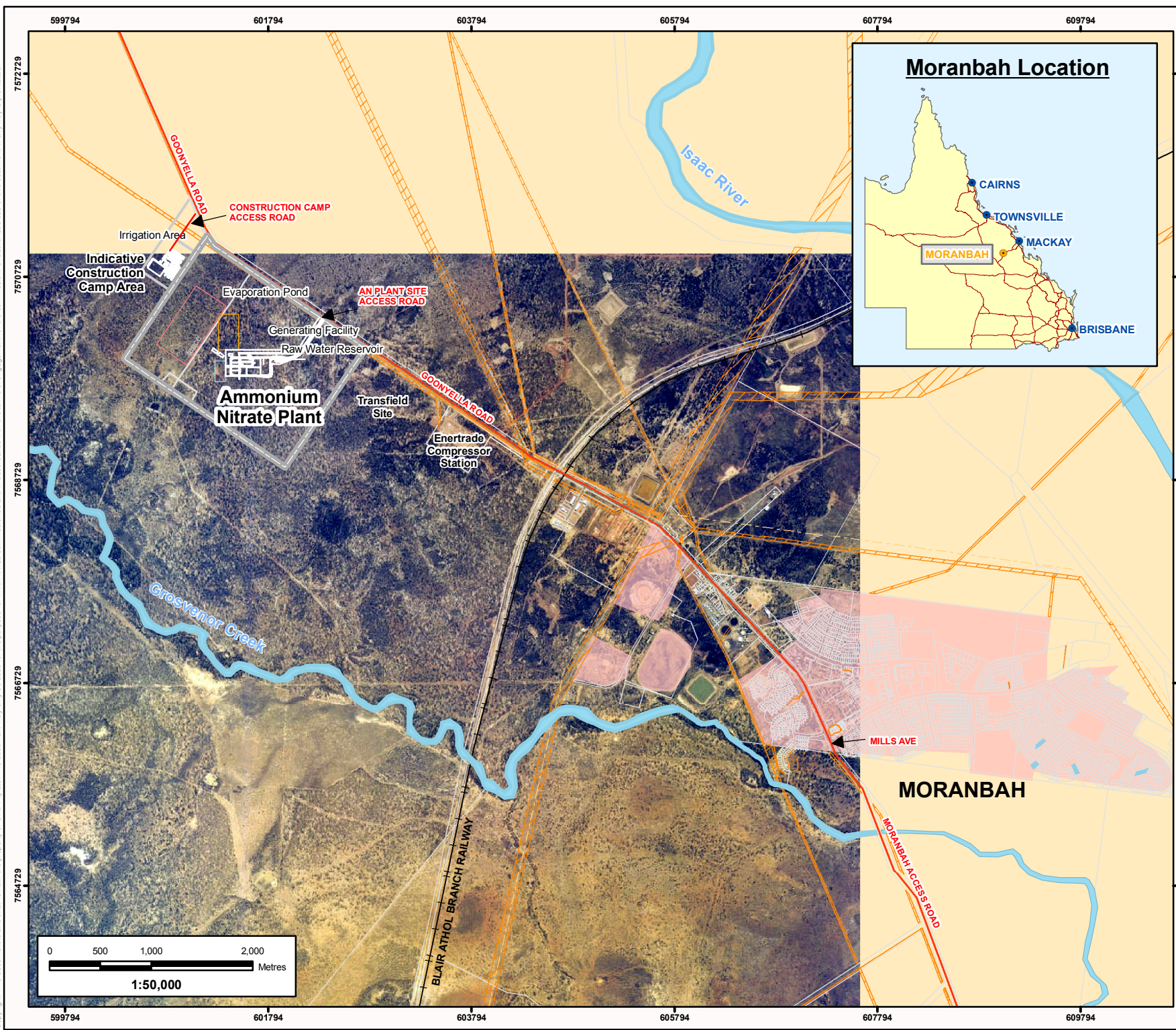
1. Introduction

1.1 Background

Dyno Nobel Asia Pacific Limited (DN) is seeking to construct and operate a proposed Ammonium Nitrate (AN) Plant and emulsion manufacturing plant in Moranbah, Queensland (the project) to complement the production of their existing plant at Moura. The proposed location of the plant is approximately 4 km northwest of the Moranbah Township in Central Queensland. To facilitate the construction process, it is proposed that a construction camp facility will be erected adjacent to the project. A locality plan is provided in Figure 1 and Figure 2.

The design life of the AN plant is 35 years, with commissioning planned for 2008. This report discusses the anticipated traffic impacts as a direct result of the proposed construction camp facility. The traffic and pavement impacts of the proposed AN Plant are discussed in separate documents, which are also appended to the EIS.

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Date: 02-10-06 Rev C
Datum: GDA94 (MGA) Zone 55
Source: Base data sourced from the State of Queensland, Department of Natural Resources, Mines. All other infrastructure supplied by Dyno Nobel Asia Pacific Ltd.
File: G:\4115824\GIS\Maps\Final\MXD\fig1_Site_Location_RevC.mxd

Legend

- Ammonium Nitrate Plant Site
- Evaporation Pond
- Generating Facility*
- Raw Water Reservoir
- Cadastre
- Easements
- Developed Area
- Watercourse
- Major Road
- Railway
- Powerlines

*Generating Facility location is subject to detailed engineering.

Moranbah Ammonium Nitrate Plant

Environmental Impact Statement

Figure 1 Site Location



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Date: 02-10-06 Rev G
 Datum: GDA94 (MGA) Zone 55
 Source: Base data sourced from the State of Queensland, Department of Natural Resources, Mines. All other infrastructure supplied by Dyno Nobel Asia Pacific Ltd.
 File: G:\4115824\GIS\Maps\Final\MXD\fig2_Site_Infrastructure_RevG.mxd

Legend

- Ammonium Nitrate Plant Site
- Evaporation Pond
- Generating Facility*
- Raw Water Reservoir
- Cadastre
- Easements
- Watercourse
- Major Road
- Railway
- Water Pipeline
- Petroleum Pipeline

*Generating Facility location is subject to detailed engineering.

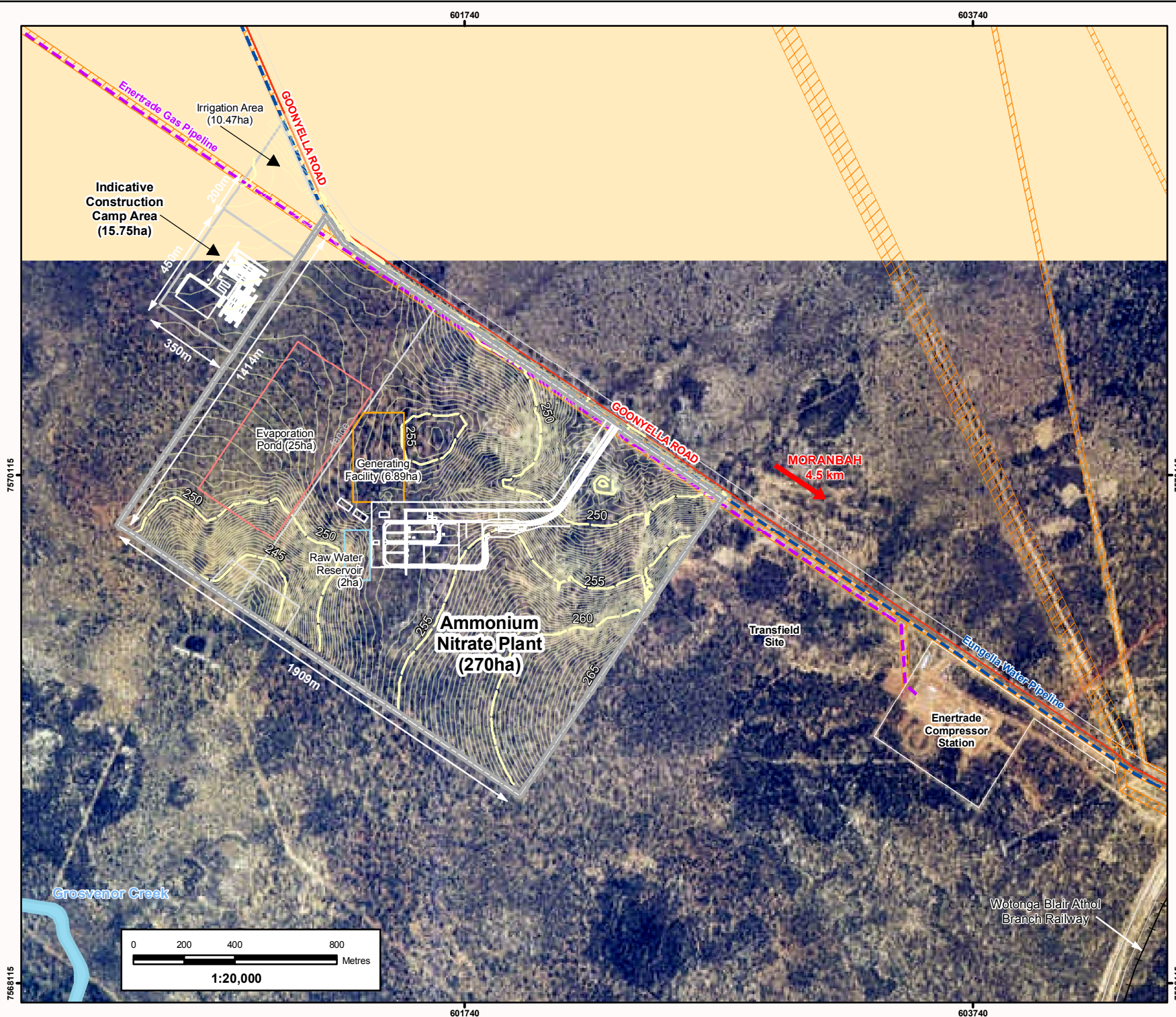
Moranbah Ammonium Nitrate Plant

Environmental Impact Statement

Figure 2
Site Infrastructure



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1.2 Purpose

A Traffic Impact Assessment has been undertaken for both the construction camp and the AN Plant so that additional impacts imposed on the surrounding traffic network can be assessed. The traffic impacts from the construction camp are expected to be contained within the local council network and as such would not directly impact the state-controlled road network. The traffic impacts from the construction and operation of the AN Plant will affect the wider road network and has been assessed with regards to the production volumes and destinations.

This report has been broken down into two parts. The Part A relates to the construction camp and is a review of the intersection operations at Mills Avenue/Goonyella Road and the AN Plant Access/Goonyella Road.

It should be noted that there are no anticipated issues with respect to pavement loading from the construction camp. The proposed development of the construction camp will not contribute to a significant amount of heavy vehicles and will not give rise to altered traffic patterns of existing users.

Part B of this report examines the impact of the proposed plant on the intersections in the immediate area. The intersections covered in this report are as follows:

- » The site access road to the proposed AN Plant
- » The intersection of Goonyella Road and Mills Avenue
- » The intersection of the Peak Downs Highway and the Moranbah Access Road

All intersections were analysed using a SIDRA 2.1 to assess their performance under AM and PM peaks for current traffic conditions (2006), projected peak construction traffic conditions (2008) and the projected operation traffic conditions (2018). A 'without plant' assessment of performance was undertaken for the construction and operations scenarios.

The design life of the plant is 35 years with commissioning planned for 2008.

Part A. Traffic Assessment Construction Camp

1.3 Development Profile

The construction camp facility is located approximately 1 km west of the proposed AN Plant as shown in Figure 2. The site comprises an area of approximately 25 Ha and will require a driveway access fronting on Goonyella Road. The accommodation camp is intended to be self-contained, with full meal catering available for all residents. In addition to this, a pub (wet canteen) will be located on site and will reduce traffic demand on the external transport network.

The construction phase is expected to continue over 22 months with workforce requirements peaking at 561 personnel during the 14th month, as indicated in Figure 3. Although the workforce requirements average at approximately 200 employees, the critical scenario of 561 employees will be considered as part of the traffic analysis.

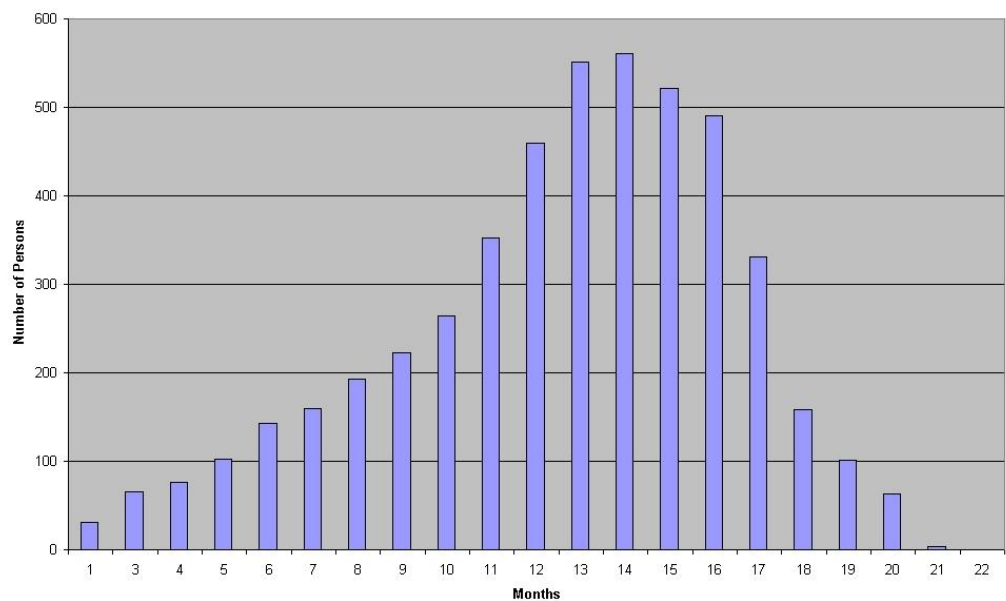


Figure 3: Workforce Requirements for Plant Construction

2. Development Context

2.1 Road Network Details and Locational Characteristics

Current typical land uses in Moranbah and the surrounding areas in the Belyando Shire include residential, beef cattle grazing, coal mining and natural environment. The topography of Moranbah is gently undulating to level plains in a predominantly rural environment. Land tenure for the proposed AN Plant and the accompanying construction camp facility is Grazing Homestead Perpetual Lease, with a current planning scheme zoning of Rural, type A.

Goonyella Road is currently the only access road in the vicinity of the proposed site. It is a council-owned road from the Blair-athol Railway Line to the Peak Downs Highway and provides access to the Moranbah central district via Mills Avenue and Curtin Street. It connects with the Sutter Development Road to the north. The section from the Blair-athol Railway Line to the Sutter Development Road is privately owned.

2.2 Current Traffic

Belyando Shire Council provided 2006 traffic count data for Moranbah-Access Road, Goonyella Road and Mills Avenue. Traffic data was supplied for the period between 7th March 2006 to 21st March 2006.

Table 1 provides a summary of the peak hour patterns for a 1.5 week period at Goonyella Road. As can be seen in the table, peak hours remain relatively constant, irrespective of the day of week.

Table 1 Peak Hours – Goonyella Road (Chainage 0.36 km)

Day	AM Peak	PM Peak
Wednesday	5:45 AM – 6:45 AM	5:30 PM – 6:30 PM
Thursday	6:15 AM – 7:15 AM	4:45 PM – 5:45 PM
Friday	5:30 AM – 6:30 AM	5:30 PM – 6:30 PM
Saturday	6:15 AM – 7:15 AM	4:45 PM – 5:45 PM
Sunday	5:00 AM – 6:00 AM	5:15 PM – 6:15 PM
Monday	6:00 AM – 7:00 AM	5:00 PM – 6:00 PM
Tuesday	6:00 AM – 7:00 AM	4:45 PM – 5:45 PM
Wednesday	5:30 AM – 6:30 AM	5:30 PM – 6:30 PM
Thursday	5:45 AM – 6:45 AM	5:00 PM – 6:00 PM
Friday	5:30 AM – 6:30 AM	4:45 PM – 5:45 PM
Saturday	6:15 AM – 7:15 AM	5:30 PM – 6:30 PM
Sunday	5:30 AM – 6:30 AM	5:30 PM – 6:30 PM
Monday	6:15 AM – 7:15 AM	5:00 PM – 6:00 PM

Presented in Figure 4 is a diagrammatic representation of the magnitude of peak hour traffic flows for the 1.5 week period. As can be seen in the graph, peak hour flows are relatively constant throughout the working week, but drops by approximately half during the weekend period.

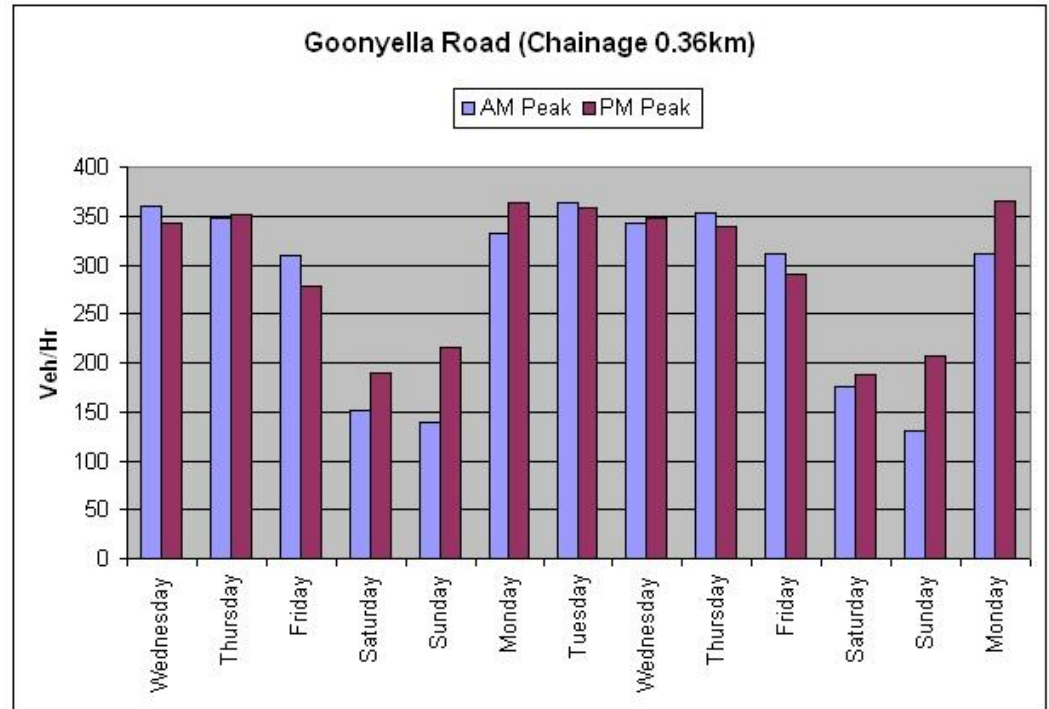


Figure 4: Peak Hour Traffic Flows

2.3 Future Traffic

Belyando Shire Council advised a growth rate of 4.5% p.a. which was then used to predict future traffic volumes on all roads.

3. Development Proposal

3.1 Traffic Generation and Directional Distribution

Traffic generation and directional distribution for the proposed construction camp facility has been based on the following assumptions:

- » Working shifts for the construction of the AN plant will be broken into 2 components with the changeover for each shift coinciding with the peak hour traffic on Goonyella Road. Whilst this may not necessarily occur, it considers the critical scenario in terms of traffic impacts.
- » During weekday peak hour traffic analysis, 2 types of trip purposes have been included in the traffic generation. Approximately 50% of employees have been assigned to each peak for work based trip purposes. In addition to this, it has been assumed that a small element of recreational based trips would occur during the peak period. Given the timing of the morning and afternoon peak hours, approximately 5% of employees have been assumed to utilise the external traffic network during peak periods for this purpose.
- » During weekend peak hour traffic analysis, it has been assumed that approximately 40% of employees will utilise the external traffic network for recreation-home based trip purposes.
- » The vehicle occupancy rate for work-home based trips originating from the construction camp facility is assumed to be 40 persons/vehicle, as discussions with the Dyno Nobel Group have indicated that 40-seat buses will be used for daily transport of employees.
- » The majority of employees will be housed within the construction camp facility, however, a small proportion of employees may be sourced locally from the Moranbah township. For the purposes of the traffic analysis, it has been assumed that 95% of employees will reside within the construction camp and the remaining 5% will reside within the township.
- » The vehicle occupancy rate for work-home based trips originating from the Moranbah township is assumed to be 1.7 persons/vehicle. This rate was adopted due to the expectation that car-pooling would occur more readily than in urban areas.
- » The vehicle occupancy rate for recreation-home based trips is assumed to be 1.7 persons/vehicle, irrespective of the trip origin.

Given the above assumptions, the traffic generation for work-home based trip purposes is assumed to be 8 heavy vehicles and 9 light vehicles during each peak period.

Recreation-home based trips are expected to incur an additional 10 light vehicle trips towards the Moranbah township, and 6 vehicle trips towards the construction camp facility during normal weekday peak hour traffic operations.



Recreation-home based trips are expected to incur an additional 133 vehicle trips towards the Moranbah township and an additional 133 vehicle trips towards the construction camp facility during normal weekend peak hour traffic operations.

Traffic flow diagrams are included in Appendix B.

3.2 Assessment Scenarios

A series of assessment scenarios were tested as part of the analysis. There are indicated in Table 2 below.

Table 2 Assessment Scenarios

Intersection	2008 AM & PM (Weekday)		2008 AM & PM (Weekend)		No. Analysis Scenarios
	Without Development	With Development	Without Development	With Development	
Mills Avenue/Goonyella Road	ü	ü	ü	ü	8
AN Plant Access/Goonyella Road	ü	ü	ü	ü	8
Construction Camp Access/Goonyella Road		ü		ü	4
TOTAL					20

4. Intersection Analysis

4.1 Overview

The analysis has been performed for post and pre-development conditions using the planning guidelines stipulated in Section 13.5.4 of the Department of Main Roads (DMR) *Road Planning and Design Manual* and SIDRA V2.1. Since 2008 is the anticipated year of commission, all traffic analyses for construction phase purposes were conducted for 2008.

The analyses were based on existing traffic data that was acquired from Belyando Shire Council, as discussed in Section 2.2. Traffic Flow diagrams for both post and pre-development conditions are included in Appendix B. Forecasted traffic conditions for 2008 are based on an annual growth rate of 4.5%.

Each of the intersections was assessed in relation to the level of service over a specific period. *Ausroads "Guide to Traffic Engineering Practice - Part 2 Roadway Capacity"* (Jan 1988) defines level of service as:

The level of service is defined as a qualitative measure describing operational conditions within the traffic stream, and their perception by motorists and/ or passengers.

The "*Guide to Traffic Engineering Practice - Part 2 Roadway Capacity*" defines each of the levels of service as:

Level of service A

Is a condition of free flow in which individual drivers are virtually unaffected by the presence of others in the traffic stream. Freedom to select desired speeds and to manoeuvre within the traffic stream is extremely high, and the general level of comfort and convenience provided is excellent.

Level of service B

Is in the zone of stable flow and drivers still have a reasonable freedom to select their desired speed and to manoeuvre within the traffic stream, although the general level of comfort and convenience is a little less than with the level of service A.

Level of service C

Is also in the zone of stable flow, but most drivers are restricted to some extent in their freedom to select their desired speed and to manoeuvre within the traffic stream. The general level of comfort and convenience declines notably at this level.

Level of Service D

Is close to the limit of stable flow and is approaching unstable flow. All drivers are severely restricted in their freedom to select their desired speed and to manoeuvre within the traffic flow will generally cause operational problems.

Level of Service E

Occurs when traffic volumes are at or close to capacity, and there is virtually no freedom to select desired speeds or to manoeuvre within the traffic stream. Flow is unstable and minor disturbances within the traffic stream will cause break-down.

Level of Service F

Is in the zone of forced flow. With it, the amount of traffic approaching the point under consideration exceeds that which can pass it. Flow break-down occurs, and queuing and delays result. These level form the basis on the assessment of the different intersections assessed.

4.2 Mills Avenue/Goonyella Road

The existing intersection between Goonyella Road and Mills Avenue is shown in Figure 5 below. The T-junction is defined as an “AUR” at-grade intersection with a 2-lane approach from the south, a 2-lane approach from Mills Avenue and a 1-lane approach from the north. The through movements on Goonyella Road are currently the priority movements. It should be noted that although the sign-posted speed limit on Goonyella Road in the vicinity of the intersection is currently 60 km/hr, speed data through the intersection suggests that the actual speed environment is 70 km/hr.

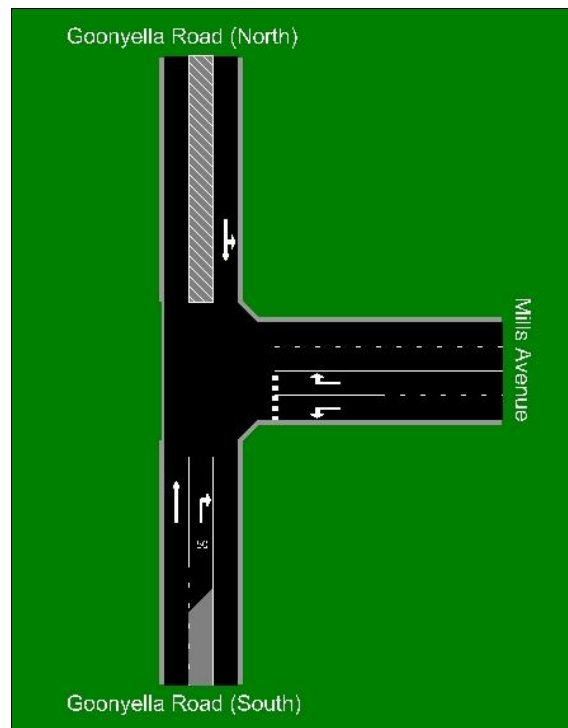


Figure 5: Mills Avenue/Goonyella Road – Intersection Layout

4.2.1 Without Construction Camp – 2008

The traffic analysis for the 2008 “without development” conditions has been conducted based on 2 scenarios:

- » Weekday Peak Hour; and
- » Weekend Peak Hour.

The following sections detail the SIDRA results.

Weekday Peak Hour

Table 3 suggests that the existing intersection arrangement at Mills Avenue/Goonyella Road will be able to provide adequate service under anticipated 2008 “without development” conditions. This is evidenced by the following:

- » The degree of saturation is well below the practical absorption capacity for unsignalised intersections (0.8), thus indicating that the current configuration is well equipped to handle an increase in peak hour traffic loading;
- » The majority of movements are operating at a Level of Service A;
- » Delay is minimal, with all movements operating at less than 20 seconds average individual vehicular delay;
- » Effective stop rates remain below the allowable threshold of 1; and
- » Queue lengths are within nominal limits as dictated by distance to adjacent intersections.

Table 3 Mills Avenue/Goonyella Road - Without Construction Camp – 2008 (Weekday)

Approach	Movement	Demand Flow (veh/hr)	Deg. Satn. (V/C)	Average Delay (sec)	Eff. Stop Rate	95% Back of Queue	Level of Service
Morning Peak							
Goonyella Road (South)	T	32	0.018	0.0	0.00	0	LOS A
	R	76	0.075	11.5	0.68	3	LOS A
Mills Avenue	L	286	0.311	11.7	0.69	14	LOS A
	R	213	0.384	15.4	0.87	21	LOS B
Goonyella Road (North)	L	51	0.098	11.2	0.71	0	LOS A
	T	119	0.098	0.0	0.00	0	LOS A
Afternoon Peak							
Goonyella Road (South)	T	32	0.018	0.0	0.00	0	LOS A
	R	85	0.087	11.9	0.72	3	LOS A

Approach	Movement	Demand Flow (veh/hr)	Deg. Satn. (V/C)	Average Delay (sec)	Eff. Stop Rate	95% Back of Queue	Level of Service
Mills Avenue	L	142	0.148	11.2	0.69	5	LOS A
	R	130	0.242	14.4	0.82	10	LOS A
Goonyella Road (North)	L	186	0.157	11.5	0.71	0	LOS A
	T	52	0.157	0.0	0.00	0	LOS A

Weekend Peak Hour

Presented in Table 4 are the results of the SIDRA analyses for weekend operations under a 2008 “without development” scenario. As expected the intersection operates satisfactorily, with a Level of Service A provided for all movements.

Table 4 Mills Avenue/Goonyella Road - Without Construction Camp – 2008 (Weekend)

Approach	Movement	Demand Flow (veh/hr)	Deg. Satn. (V/C)	Average Delay (sec)	Eff. Stop Rate	95% Back of Queue	Level of Service
Morning Peak							
Goonyella Road (South)	T	33	0.019	0.0	0.00	0	LOS A
	R	40	0.039	11.0	0.66	1	LOS A
Mills Avenue	L	137	0.145	11.3	0.66	6	LOS A
	R	96	0.160	13.1	0.72	7	LOS A
Goonyella Road (North)	L	27	0.045	10.5	0.71	0	LOS A
	T	51	0.045	0.0	0.00	0	LOS A
Afternoon Peak							
Goonyella Road (South)	T	28	0.016	0.0	0.00	0	LOS A
	R	75	0.076	11.4	0.67	3	LOS A
Mills Avenue	L	130	0.117	10.4	0.66	4	LOS A
	R	126	0.186	12.1	0.73	7	LOS A
Goonyella Road (North)	L	104	0.073	10.6	0.71	0	LOS A
	T	16	0.073	0.0	0.00	0	LOS A

4.2.2 With Construction Camp – 2008

Similar to the pre-development conditions, 2 scenarios have been tested as part of the 2008 “with development” traffic analyses. These are:

- » Weekday Peak Hour; and
- » Weekend Peak Hour.

The following sections detail the SIDRA results.

Weekday Peak Hour

Table 5 suggests that the traffic impacts as a result of the proposed construction camp facility are minimal. This is shown by the following:

- » Although the degree of saturation has increased slightly by an average of 5% in the morning peak, and 3% in the afternoon peak, the degree of saturation for each movement remains well below the practical absorption rate of 0.8 for unsignalised intersections;
- » Average vehicular delay is not affected significantly, as the reported delay for each movement remains below 20 seconds;
- » The majority of movements are still operating at a Level of Service A;
- » Effective stop rates are below the allowable threshold of 1 for each movement; and
- » Projected queue lengths are still within acceptable limits and adjacent intersections will not be impacted during normal weekday peak operations.

Table 5 Mills Avenue/Goonyella Road - With Construction Camp – 2008 (Weekday)

Approach	Movement	Demand Flow (veh/hr)	Deg. Satn. (V/C)	Average Delay (sec)	Eff. Stop Rate	95% Back of Queue	Level of Service
Morning Peak							
Goonyella Road (South)	T	32	0.018	0.0	0.00	0	LOS A
	R	76	0.073	11.6	0.68	3	LOS A
Mills Avenue	L	286	0.320	11.9	0.71	14	LOS A
	R	228	0.424	16.3	0.92	25	LOS B
Goonyella Road (North)	L	61	0.108	10.2	0.71	0	LOS A
	T	119	0.108	0.0	0.00	0	LOS A
Afternoon Peak							
Goonyella Road (South)	T	32	0.018	0.0	0.00	0	LOS A
	R	85	0.088	11.9	0.72	3	LOS A
Mills Avenue	L	142	0.151	11.3	0.69	6	LOS A
	R	149	0.269	14.3	0.82	11	LOS A
Goonyella Road (North)	L	192	0.161	11.5	0.71	0	LOS A
	T	52	0.160	0.0	0.00	0	LOS A

Weekend Peak Hour

Presented in Table 6 are the results of the SIDRA analyses for weekend peak operations under a 2008 “with development” scenario. The results of the analyses indicate that the presence of the proposed construction camp facility will not create adverse impacts on the external road network. This is evidenced by the following:

- » A Level of Service A is retained for most movements, with the exception of the right turn from Mills Avenue during afternoon peak operations. During this time, a Level of Service B is expected;
- » Average individual vehicle delay is acceptable and remains below 15 seconds for all movements;
- » Degree of saturation is acceptable and remains well below the practical absorption rate of 0.8;
- » Effective stop rates remain below the allowable threshold of 1.

Table 6 Mills Avenue/Goonyella Road - With Construction Camp – 2008 (Weekend)

Approach	Movement	Demand Flow (veh/hr)	Deg. Satn. (V/C)	Average Delay (sec)	Eff. Stop Rate	95% Back of Queue	Level of Service
Morning Peak							
Goonyella Road (South)	T	33	0.019	0.0	0.00	0	LOS A
	R	40	0.039	11.6	0.67	2	LOS A
Mills Avenue	L	137	0.157	11.8	0.68	7	LOS A
	R	229	0.369	13.8	0.79	19	LOS A
Goonyella Road (North)	L	160	0.117	9.9	0.71	0	LOS A
	T	51	0.117	0.0	0.00	0	LOS A
Afternoon Peak							
Goonyella Road (South)	T	28	0.016	0.0	0.00	0	LOS A
	R	75	0.081	12.3	0.71	3	LOS A
Mills Avenue	L	130	0.127	10.8	0.67	4	LOS A
	R	259	0.427	14.8	0.87	24	LOS B
Goonyella Road (North)	L	237	0.151	10.2	0.71	0	LOS A
	T	28	0.151	0.0	0.00	0	LOS A



4.3 AN Plant Access/Goonyella Road

The Traffic Impact Assessment that was conducted for the AN Plant indicated that a “BA” at-grade intersection was adequate for the plant access through to year 2018. Refer to Part B Section 2 of this report.

4.3.1 Without Construction Camp – 2008

The traffic analysis for the 2008 “without development” conditions has been conducted based on 2 scenarios:

- » Weekday Peak Hour; and
- » Weekend Peak Hour.

The following sections detail the SIDRA results.

Weekday Peak Hour

The SIDRA results presented in Table 7 indicate that the proposed intersection layout will be able to satisfy projected traffic demand under 2008 “without development” conditions. This is evidenced by the following:

- » A Level of Service A is provided for all movements, with the exception of the right turn from the AN Plant Access, which operates at a Level of Service C;
- » Degree of saturation for all movements is well below the practical absorption rate of 0.8 for unsignalised intersections;
- » Effective stop rates are within acceptable limits as all reported values are below 1; and
- » Average individual delay is less than 20 seconds for all movements, with the exception of the right turn from the AN Plant, which operates at an average delay of approximately 30 seconds.

Table 7 AN Plant Access/Goonyella Road – Without Construction Camp – 2008 (Weekday)

Approach	Movement	Demand Flow (veh/hr)	Deg. Satn. (V/C)	Average Delay (sec)	Eff. Stop Rate	95% Back of Queue	Level of Service
Morning Peak							
Goonyella Road (South)	L	10	0.244	14.5	0.71	0	LOS A
	T	420	0.244	0.0	0.00	0	LOS A
Goonyella Road (North)	T	123	0.070	2.6	0.01	6	LOS A
	R	1	0.070	2.6	0.01	6	LOS A
AN Plant Access	L	1	0.001	12.5	0.65	0	LOS A
	R	10	0.051	29.6	0.93	3	LOS C

Approach	Movement	Demand Flow (veh/hr)	Deg. Satn. (V/C)	Average Delay (sec)	Eff. Stop Rate	95% Back of Queue	Level of Service
Afternoon Peak							
Goonyella Road (South)	L	10	0.109	14.5	0.71	0	LOS A
	T	174	0.109	0.0	0.00	0	LOS A
Goonyella Road (North)	T	407	0.234	1.2	0.00	17	LOS A
	R	1	0.234	1.2	0.00	17	LOS A
AN Plant Access	L	1	0.001	10.7	0.62	0	LOS A
	R	10	0.060	33.1	0.94	3	LOS C

Weekend Peak Hour

Presented in Table 8 are the results of the SIDRA analyses for weekend peak operations under a 2008 “without development” scenario. As expected the intersection operates satisfactorily, with a Level of Service A provided for all movements.

Table 8 AN Plant Access/Goonyella Road – Without Construction Camp – 2008 (Weekend)

Approach	Movement	Demand Flow (veh/hr)	Deg. Satn. (V/C)	Average Delay (sec)	Eff. Stop Rate	95% Back of Queue	Level of Service
Morning Peak							
Goonyella Road (South)	L	1	0.071	9.8	0.71	0	LOS A
	T	129	0.071	0.0	0.00	0	LOS A
Goonyella Road (North)	T	154	0.086	0.6	0.00	5	LOS A
	R	1	0.086	0.6	0.00	5	LOS A
AN Plant Access	L	1	0.001	10.4	0.62	0	LOS A
	R	1	0.001	11.2	0.64	0	LOS A
Afternoon Peak							
Goonyella Road (South)	L	1	0.125	9.8	0.71	0	LOS A
	T	219	0.127	0.0	0.00	0	LOS A
Goonyella Road (North)	T	146	0.085	1.2	0.01	6	LOS A
	R	1	0.085	1.2	0.01	6	LOS A
AN Plant Access	L	1	0.001	10.9	0.62	0	LOS A
	R	1	0.001	11.9	0.65	0	LOS A

4.3.2 With Construction Camp – 2008

Similar to the pre-development conditions, 2 scenarios have been tested as part of the 2008 “with development” traffic analyses. These are:

- » Weekday Peak Hour; and
- » Weekend Peak Hour.

The following sections detail the SIDRA results.

Weekday Peak Hour

Table 9 suggests that the traffic impacts as a result of the proposed construction camp facility are minimal. This is shown by the following:

- » Despite the increase in traffic loading, degree of saturation is still within acceptable limits as each movement is operating well below the practical absorption capacity of 0.8 for unsignalised intersections;
- » Average vehicular delay is not affected significantly, as the reported delay for Goonyella Road remains below 20 seconds. Although the delay for the AN Plant Access reaches 35 seconds for the critical peak, operations are still considered acceptable as this approach caters for a relatively small traffic volume;
- » Each movement is operating satisfactorily with a minimum Level of Service C provided;
- » Effective stop rates are below the allowable threshold of 1 for each movement; and
- » Projected queue lengths are still within acceptable limits and adjacent intersections will not be impacted during normal weekday peak operations.

Table 9 AN Plant Access/Goonyella Road – With Construction Camp – 2008 (Weekday)

Approach	Movement	Demand Flow (veh/hr)	Deg. Satn. (V/C)	Average Delay (sec)	Eff. Stop Rate	95% Back of Queue	Level of Service
Morning Peak							
Goonyella Road (South)	L	19	0.253	12.2	0.71	0	LOS A
	T	426	0.253	0.0	0.00	0	LOS A
Goonyella Road (North)	T	133	0.108	15.7	0.06	23	LOS B
	R	8	0.108	15.7	0.06	23	LOS B
AN Plant Access	L	8	0.032	24.5	0.86	2	LOS B
	R	10	0.056	31.5	0.94	3	LOS C
Afternoon Peak							
Goonyella Road (South)	L	19	0.119	12.2	0.71	0	LOS A
	T	184	0.119	0.0	0.00	0	LOS A
Goonyella	T	413	0.254	5.9	0.02	44	LOS A

Approach	Movement	Demand Flow (veh/hr)	Deg. Satn. (V/C)	Average Delay (sec)	Eff. Stop Rate	95% Back of Queue	Level of Service
Road (North)	R	8	0.254	5.9	0.02	44	LOS A
AN Plant Access	L	8	0.017	16.8	0.70	1	LOS B
	R	10	0.066	35.3	0.95	3	LOS C

Weekend Peak Hour

Presented in Table 10 are the results of the SIDRA analyses for weekend operations under a 2008 “with development” scenario. Similar to the analyses undertaken for the Mills Avenue/Goonyella Road intersection, the results of the analyses for the AN Plant Access/Goonyella Road indicate that the presence of the proposed construction camp facility will not create adverse impacts on the external road network. This is evidenced by the following:

- » A Level of Service A is provided for all movements;
- » Average individual vehicle delay is acceptable and remains below 15 seconds for all movements;
- » Degree of saturation is acceptable and remains well below the practical absorption rate of 0.8;
- » Effective stop rates remain below the allowable threshold of 1.

Table 10 AN Plant Access/Goonyella Road – With Construction Camp – 2008 (Weekend)

Approach	Movement	Demand Flow (veh/hr)	Deg. Satn. (V/C)	Average Delay (sec)	Eff. Stop Rate	95% Back of Queue	Level of Service
Morning Peak							
Goonyella Road (South)	L	1	0.143	9.8	0.71	0	LOS A
	T	262	0.140	0.0	0.00	0	LOS A
Goonyella Road (North)	T	287	0.154	1.3	0.00	11	LOS A
	R	1	0.154	1.3	0.00	11	LOS A
AN Plant Access	L	1	0.001	11.0	0.62	0	LOS A
	R	1	0.002	12.9	0.67	0	LOS A
Afternoon Peak							
Goonyella Road (South)	L	1	0.200	9.8	0.71	0	LOS A
	T	352	0.194	0.0	0.00	0	LOS A
Goonyella Road (North)	T	279	0.152	2.1	0.00	12	LOS A
	R	1	0.152	2.1	0.00	12	LOS A
AN Plant Access	L	1	0.001	11.7	0.63	0	LOS A
	R	1	0.002	13.9	0.69	0	LOS A

4.4 Construction Camp Access/Goonyella Road

The intersection arrangement shown in Figure 6 is the proposed access form for the construction camp facility from Goonyella Road. The T-junction is a “BA” type intersection with 1 lane approaches/exits on each leg. The sign posted speed limit in the vicinity of the proposed intersection is currently 70 km/hr.

The traffic analysis for the 2008 “with development” conditions has been conducted based on 2 scenarios:

- » Weekday Peak Hour; and
- » Weekend Peak Hour.

The following sections detail the SIDRA results.

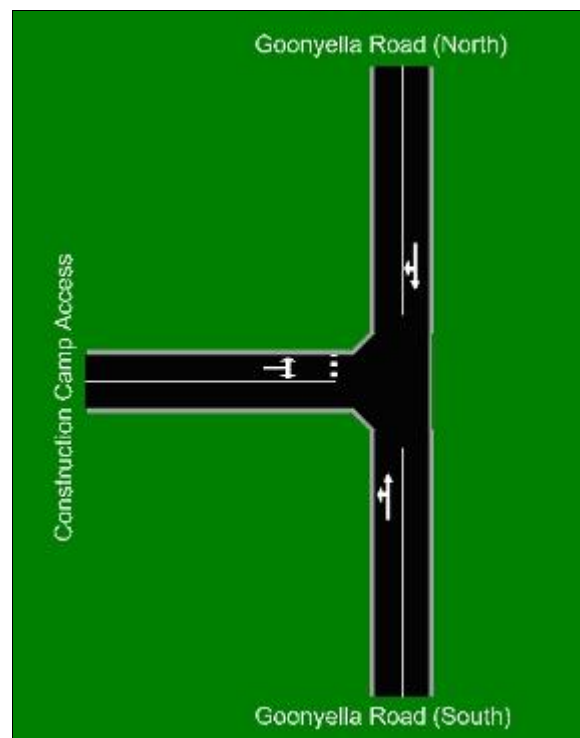


Figure 6: Construction Camp Access/Goonyella Road – Intersection Layout

Weekday Peak Hour

The results tabulated in Table 11 show that the proposed intersection form is adequate for projected 2008 traffic conditions. This is shown by the following:

- » A minimum of Level of Service C is provided for all movements;
- » Degrees of saturation are within acceptable limits and are below 0.25 for all movements;
- » Delays are below 20 seconds for Goonyella Road. Although the delay for the construction camp Access reaches 37 seconds for the critical peak, operations are still considered acceptable as this approach caters for a relatively small traffic volume; and

- » Effective stop rates are below the allowable threshold of 1.

Table 11 Construction Camp Access/Goonyella Road – With Construction Camp – 2008 (Weekday)

Approach	Movement	Demand Flow (veh/hr)	Deg. Satn. (V/C)	Average Delay (sec)	Eff. Stop Rate	95% Back of Queue	Level of Service
Morning Peak							
Goonyella Road (South)	L	14	0.246	12.5	0.71	0	LOS A
	T	420	0.246	0.0	0.00	0	LOS A
Goonyella Road (North)	T	123	0.070	2.6	0.01	6	LOS A
	R	1	0.070	2.6	0.01	6	LOS A
AN Plant Access	L	1	0.125	30.7	0.87	5	LOS C
	R	18	0.118	33.0	0.94	5	LOS C
Afternoon Peak							
Goonyella Road (South)	L	18	0.112	11.8	0.71	0	LOS A
	T	174	0.112	0.0	0.00	0	LOS A
Goonyella Road (North)	T	407	0.234	1.2	0.00	17	LOS A
	R	1	0.234	1.2	0.00	17	LOS A
AN Plant Access	L	1	0.111	34.2	0.67	4	LOS C
	R	14	0.107	36.5	0.95	4	LOS C

Weekend Peak Hour

Similar to the weekday peak hour analyses, the results presented in Table 12 show that the proposed intersection form is adequate under weekend peak hour traffic loading. This is evidenced by the following:

- » A minimum of Level of Service B is provided for all movements;
- » Degrees of saturation are within acceptable limits and are below 0.27 for all movements;
- » Delays are below 20 seconds for all movements; and
- » Effective stop rates are below the allowable threshold of 1.



Table 12 Construction Camp Access/Goonyella Road – With Construction Camp – 2008 (Weekend)

Approach	Movement	Demand Flow (veh/hr)	Deg. Satn. (V/C)	Average Delay (sec)	Eff. Stop Rate	95% Back of Queue	Level of Service
Morning Peak							
Goonyella Road (South)	L	133	0.142	9.8	0.71	0	LOS A
	T	129	0.142	0.0	0.00	0	LOS A
Goonyella Road (North)	T	154	0.086	1.2	0.00	6	LOS A
	R	1	0.086	1.2	0.00	6	LOS A
Construction Camp Access	L	1	0.250	14.8	0.71	10	LOS B
	R	133	0.261	14.8	0.86	10	LOS B
Afternoon Peak							
Goonyella Road (South)	L	133	0.198	9.8	0.71	0	LOS A
	T	219	0.198	0.0	0.00	0	LOS A
Goonyella Road (North)	T	146	0.085	1.9	0.01	6	LOS A
	R	1	0.085	1.9	0.01	6	LOS A
Construction Camp Access	L	1	0.333	18.0	0.85	13	LOS B
	R	133	0.320	18.0	0.94	13	LOS B



5. Part A Conclusions

The analyses in this report has shown that:

- » A “BA” type intersection form with 1 lane approaches/exits on each leg provides adequate performance for the peak construction period for the construction site access to Goonyella Road. Minimum Levels of Service are C and B for the peak traffic conditions under weekday and weekend peak periods, respectively.
- » The existing intersection configuration at Mills Avenue/Goonyella Road provides sufficient capacity to cater for the additional traffic demand resulting from the construction camp facility. A minimum Level of Service B is provided under both weekday and weekend peak hour traffic loading.
- » An “AUL” type intersection form is adequate for the project Access/Goonyella Road intersection under 2008 peak construction traffic loading. Minimum Levels of Service are C and A for the peak traffic conditions under weekday and weekend peak periods, respectively.



Part B Traffic Assessment Plant Traffic Generation

1. Proposed Plant Traffic Generation

1.1 Production Volumes and Destinations

It is anticipated that the new plant will produce approximately 280,000 tonnes per annum (tpa) of prill and 70,000 tpa of emulsion, which will be shipped to the locations as indicated in Table 1.

Table 1 Production Volumes and Destinations

General Location (Main Roads District Maps (No./Title)	Prill (tonnes/year)	Emulsion (tonnes/year)
8 Mackay (Eastern Basin)	109,668	25,572
9 Northern	31,320	6,500
10 North Western	18,270	3,792
15 Central Highlands	120,742	33,582
Bowen Basin (Moranbah) Total	280,000	69,445

1.2 Existing Data

Belyando Shire Council provided the existing traffic volumes for the Moranbah Access Road, Goonyella Road and Mills Avenue for 2006 volumes.

The traffic volumes for the Peak Downs Highway were provided by the Department of Main Roads for 2005 AADT. Based on the data provided by Belyando Shire Council, the AM and PM peak values were estimated as 20% of AADT values.

1.3 Generation of future traffic volumes

Belyando Shire Council advised a growth rate of 4.5% p.a., which was then used to predict the future traffic volumes on all roads.

1.4 Construction Phase

1.4.1 Construction Staff Home Based Work Trips

The construction phase will take place over a 22 month period with the construction work force averaging at about 200 employees. Over a period of approximately 5 months the workforce will exceed 400 employees with an estimated 561 employees in the peak month. It is assumed that the majority (90%) of the construction workforce



will be transported in 40 seat buses between the plant site and a construction camp facility. The remaining 10% of construction workers would be sourced locally and these would use private vehicles to travel to the site from the Moranbah Township. With the mix of buses and private vehicles, the forecast average construction staff home based work trips vehicle occupancy is 15. The estimated number of employee home based work vehicle trips is 40 in both the AM and PM peak hours for the peak generated construction month. For the purposes of this study, it was assumed that all trips were to be routed through the Mills Avenue intersection.

1.4.2 Haulage of Construction Materials and Plant.

All earthworks materials will be obtained from within the site without importing additional material.

The type of heavy vehicles and related equipment involved in the construction of the facilities will depend on the extent of prefabrication and modularisation of the plant components but could be expected to include:

- ▶ Earthworks moving plant including scrapers, excavators or backhoes, graders, dozers, water trucks and rollers;
- ▶ Ready mix concrete trucks and concrete pumps;
- ▶ Mobile cranes.

The peak number of heavy vehicles per day was taken as two B-doubles containing materials and three B-Doubles removing waste bins, equating to 10 movements per day. It is possible that all movements may occur within the peak times, delivering materials and removing waste within the hour, generating a movement to and a movement from the plant.

1.5 Operations Phase

1.5.1 Operations Staff Home Based Work Trips

The personnel requirements for the proposed plant are listed in Table 2.

Table 2 Personnel requirements

Number of Personnel	Description	Shift
22	Plant maintenance and operation staff	7.00 am – 4.00 pm
20	Administration Staff	7.30 am – 5.00 pm
10	Plant Operations	6.00 am – 6.00 pm
10	Plant Operations	6.00 pm – 6.00 am

Conservatively, all staff were assumed to travel during the AM and PM peak resulting in 52 staff travelling to and 10 from the plant during the AM peak with the reverse

occurring during the PM peak. Using a vehicle occupancy of 1.7 to account for car-pooling, this resulted in the following directional splits;

- ▶ 31 vehicles travelling to, 6 from the plant during the AM peak
- ▶ 6 vehicles travelling to, 31 from the plant during the PM peak

1.5.2 Heavy Vehicles

The production output of the plant is expected to create 34 heavy vehicle movements per day (1 in and 1 out per truck) as indicated in Table 3 and Table 4.

Table 3 Average Heavy Vehicle Trip Generation and Destinations

Destination of output materials	Trucks/day Prill	Trucks/day Emulsion	Total Trucks/day
Clermont	1	0	1
Collinsville	0	0	0
Copabella	1	0	1
Curragh	1	0	1
Ernest Henry	1	0	1
Gregory	0	0	0
Newlands	1	0	1
Norwich Park	1	0	1
Goonyella	1	0	1
Goonyella	1	1	2
Hail Creek	3	1	3
Peak Downs	1	1	2
Saraji	1	0	1
TOTAL		Total trucks per day	17

The waste output of the plant has been estimated to require 1 truck per day, creating 2 movements per day.

Table 4 details the number of heavy vehicle movements during the operations phase.



Table 4 Total Generated Heavy Vehicle Movements Per Day

	Trucks Per Day	Movements Per day
Production haulage	17	34
Waste haulage	1	2
Total	18	36

Taking AM and PM peak values as 20% of daily movements, the plant will produce a total of 8 heavy vehicle movements in the AM and PM peaks. The ITE trip generation manual indicates that a 50% (in): 50% (out) split should be used for heavy vehicles.

1.6 Summary

Table 5 and Table 6 summaries of the generated traffic for the construction and operations phase.

Table 5 Summary of Generated Staff Movements

AM	Construction	Operation
To Plant Site	40	31
To Moranbah Township	0	6
PM		
To Plant Site	0	6
To Moranbah Township	40	31

Table 6 Summary of Generated Heavy Vehicle Movements

AM	Construction	Operation
To Plant Site	10	4
From Plant Site	10	4
PM		
To Plant Site	10	4
From Plant Site	10	4

2. Impact of Plant Development

2.1 Proposed Access Intersection with Goonyella Road

2.1.1 Proposed Intersection Layout

The intersection shown in Figure 1 is the proposed access for the plant site from Goonyella Road. The T-intersection would be a 'basic' type intersection (according to the Department of Main Roads, Road Planning and Design Manual, Chapter 13), positioned approximately 2.5 km west of Moranbah Township (consisting of a one lane approach and one lane departure on each leg). While this layout was found to be adequate for the forecast future volumes, DN may opt for a more advanced intersection type incorporating acceleration/deceleration lanes. The presence of these lanes would lead to increased efficiency and safety.

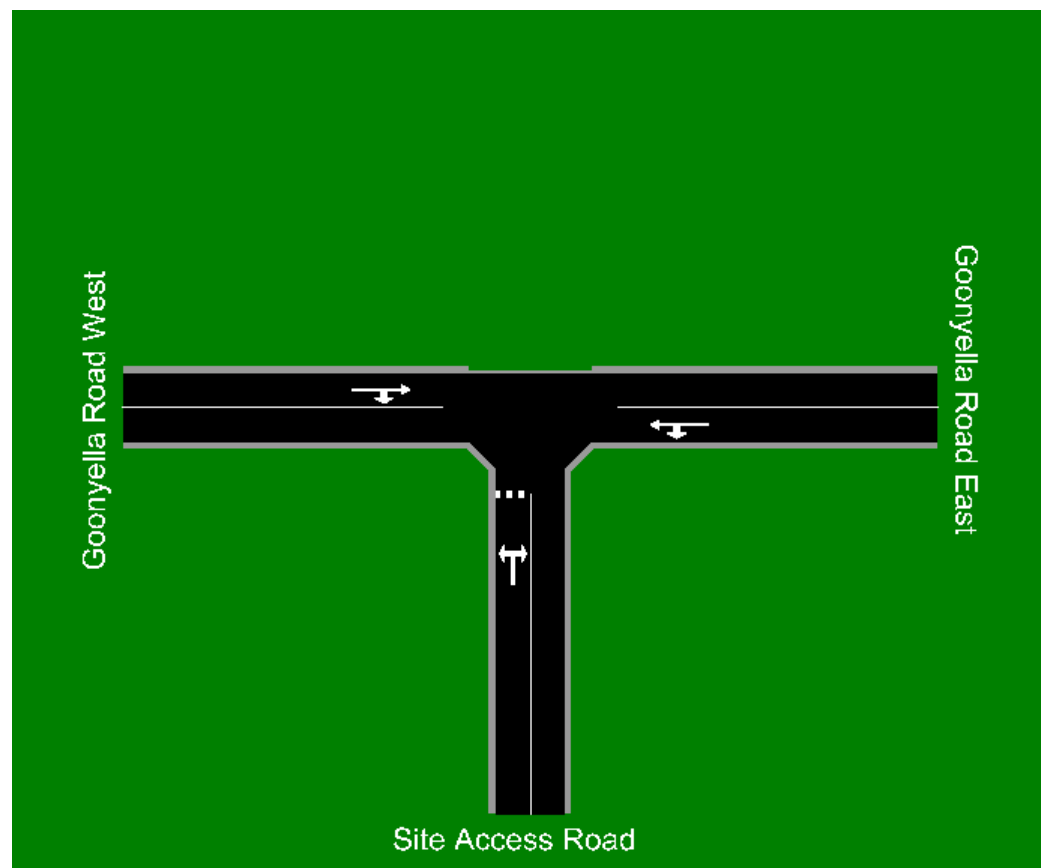


Figure 1: Proposed Access Road Intersection Layout

Discussions with DN have indicated that widening may occur, and as such, the alternate intersection arrangement presented in Figure 2 may apply.

The proposed configuration is described as being an “AUL” type layout with a 2-lane approach from the AN Plant Access Road and a 1-lane approach/exit from Goonyella Road.

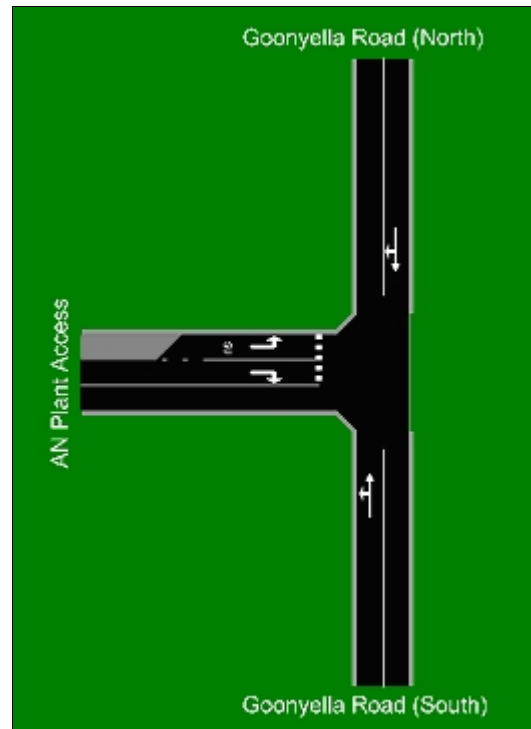


Figure 2: Alternate Plant Access/Goonyella Road Intersection Layout

2.1.2 Performance Summary

A SIDRA analysis was undertaken on this proposed intersection for the 2008 construction (Table 7) and 2018 operations (Table 8) phases. The analysis revealed that the proposed intersection is able to adequately handle the traffic volumes projected for the construction and operations phases. The following details apply:

- ▶ The minimum level of service expected is B for all movements;
- ▶ The degree of saturation is below 0.5 for all movements;
- ▶ The effective stop rate is below 1 for all movements;
- ▶ The average delay is less than 30 sec for all movements.

Table 7 Performance Summary 2008 Construction Phase

Approach	Movement	Dem Flow (veh/hr)	Deg. Sat. (V/C)	Ave. Delay (sec)	Eff. Stop Rate	95% Back of Queue (m)	Level of Service
AM Peak							
Site Access Road	L	1	0.050	21.3	0.80	2	LOS B
	R	11	0.051	26.3	0.92	2	LOS B
Approach		12	0.051	25.9	0.91	2	LOS B
Goonyella Road East	L	50	0.281	12.1	0.73	0	LOS A
	T	420	0.280	0.0	0.00	0	LOS A
Approach		470	0.280	1.3	0.08	0	LOS A
Goonyella Road West	T	123	0.074	3.0	0.01	6	LOS A
	R	1	0.074	3.0	0.01	6	LOS A
Approach		124	0.074	3.0	0.01	6	LOS A
All Vehicles		606	0.281	2.1	0.08	6	NA
PM Peak							
Site Access Road	L	1	0.125	15.7	0.67	4	LOS B
	R	50	0.120	16.8	0.89	4	LOS B
Approach		51	0.120	16.8	0.89	4	LOS B
Goonyella Road East	L	11	0.116	16.4	0.74	0	LOS B
	T	174	0.115	0.0	0.00	0	LOS A
Approach		185	0.115	1.0	0.04	0	LOS A
Goonyella Road West	T	407	0.247	1.2	0.00	17	LOS A
	R	1	0.247	1.2	0.00	17	LOS A
Approach		408	0.247	1.2	0.00	17	LOS A
All Vehicles		644	0.247	2.4	0.08	17	NA



Table 8 Performance Summary 2018 Operations Phase

Approach	Movement	Dem Flow (veh/hr)	Deg. Sat. (V/C)	Ave. Delay (sec)	Eff. Stop Rate	95% Back of Queue (m)	Level of Service
AM Peak							
Peak Downs East	L	2	0.057	28.3	0.94	2	LOS B
	R	9	0.057	27.6	0.95	2	LOS B
Approach		11	0.057	27.8	0.94	2	LOS B
Moranbah Access North	L	34	0.405	11.4	0.73	0	LOS A
	T	652	0.405	0.0	0.00	0	LOS A
Approach		686	0.405	0.6	0.04		LOS A
Peak Downs West	T	190	0.121	16.6	0.01	29	LOS B
	R	2	0.121	16.6	0.01	29	LOS B
Approach		192	0.121	16.6	0.01	29	LOS B
All Vehicles		889	0.405	4.4	0.04	29	NA
PM Peak							
Peak Downs East	L	2	0.125	22.6	0.84	4	LOS B
	R	34	0.123	20.6	0.93	4	LOS B
Approach		36	0.123	20.8	0.93	4	LOS B
Moranbah Access North	L	9	0.170	12.9	0.74	0	LOS A
	T	270	0.169	0.0	0.00	0	LOS A
Approach		279	0.169	0.4	0.02		LOS A
Peak Downs West	T	631	0.384	5.7	0.00	59	LOS A
	R	2	0.384	5.7	0.00	59	LOS A
Approach		633	0.384	5.7	0.00	59	LOS A
All Vehicles		948	0.384	4.7	0.04	59	NA

2.2 Intersection of Mills Avenue and Goonyella Road

2.2.1 Intersection Layout

The existing intersection between Goonyella Road and Mills Avenue is shown in Figure 3. The T-intersection is considered as an 'AUR' at grade intersection with a 2 lane approach/1 lane departure from the south, 1 lane approach/1 lane departure from the north and a 2 lane approach/2 lane departure on Mills Avenue to the east.

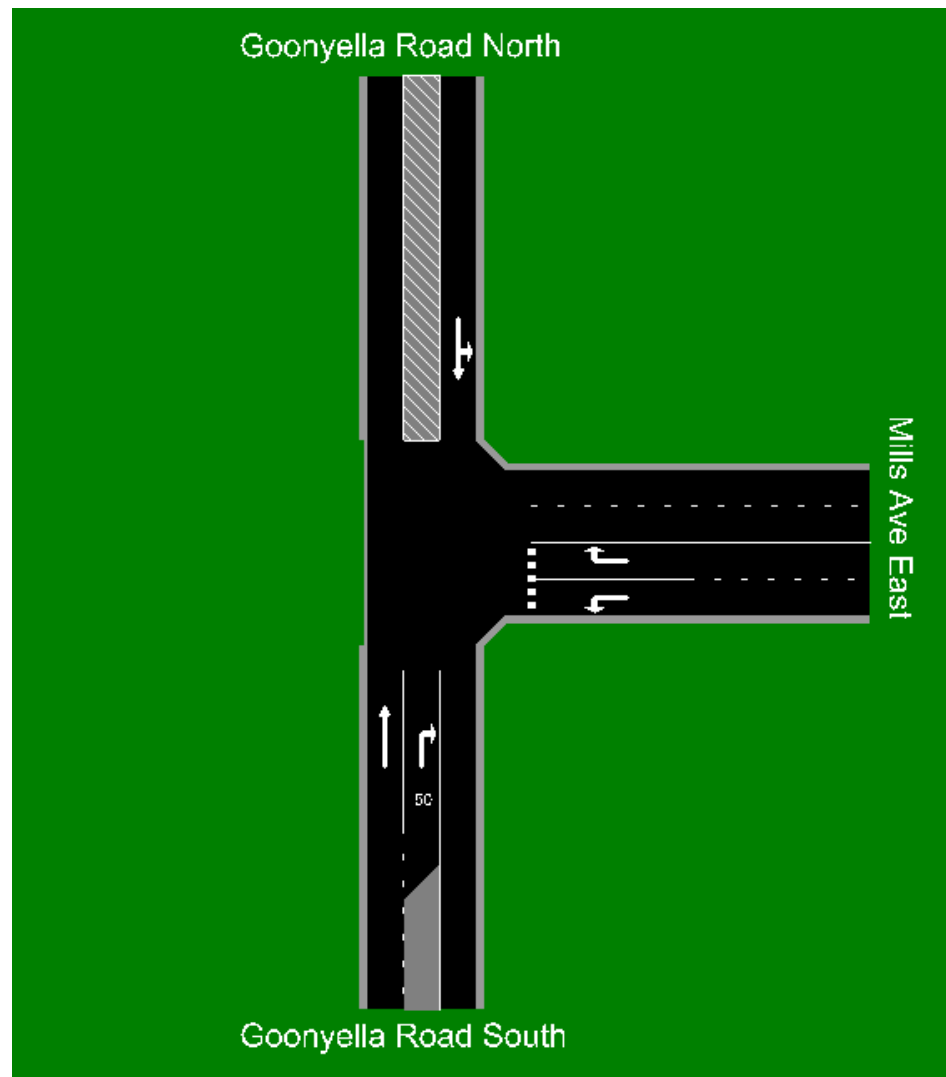


Figure 3: Mills Avenue with Goonyella Road Intersection Layout

2.2.2 Performance Summary

The SIDRA analysis for this intersection was undertaken to compare the performance of the intersection without the plant to the performance of the intersection with the proposed plant. This was achieved through separate analyses:

- 2008, with construction traffic and without proposed plant; and
- 2018 with operations traffic and without proposed plant.

The results in Table 9 indicate that the existing intersection is adequately able to cater for current traffic volumes.

Table 9 Performance Summary 2006 Existing Conditions

Approach	Movement	Dem Flow (veh/hr)	Deg. Sat. (V/C)	Ave. Delay (sec)	Eff. Stop Rate	95% Back of Queue (m)	Level of Service
AM Peak							
Goonyella Road South	T	20	0.012	0.0	0.00	0	LOS A
	R	69	0.072	9.9	0.65	3	LOS A
Approach		89	0.072	7.7	0.50	3	LOS A
Mills Avenue East	L	261	0.252	9.2	0.65	10	LOS A
	R	195	0.309	11.6	0.76	13	LOS A
Approach		456	0.309	10.2	0.70	13	LOS A
Goonyella Road North	L	46	0.090	8.9	0.67	0	LOS A
	T	99	0.090	0.0	0.00	0	LOS A
Approach		145	0.090	2.8	0.21	0	LOS A
All Vehicles		690	0.309	8.4	0.57	13	NA
PM Peak							
Goonyella Road South	T	20	0.012	0.0	0.00	0	LOS A
	R	77	0.075	10.0	0.67	3	LOS A
Approach		97	0.075	7.9	0.53	3	LOS A
Mills Avenue East	L	130	0.127	9.2	0.64	5	LOS A
	R	119	0.192	11.4	0.74	8	LOS A
Approach		249	0.192	10.2	0.69	8	LOS A
Goonyella Road North	L	170	0.134	8.9	0.67	0	LOS A
	T	38	0.134	0.0	0.00	0	LOS A
Approach		208	0.134	7.3	0.55	0	LOS A
All Vehicles		554	0.192	8.7	0.61	8	NA

It was found that the intersection is able to adequately handle the projected traffic volumes for 2008 and 2018 with the following:

- ▶ Minimum level of service B;
- ▶ The practical absorption capacity of unsignalised intersections of 0.8;
- ▶ Average delay less than 25.5 sec
- ▶ All approaches with effective stop rate less than 1; and
- ▶ The longest queue is 76m on Mills Avenue in 2018 during the AM peak

Table 10 Performance Summary 2008 Without Plant

Approach	Movement	Dem Flow (veh/hr)	Deg. Sat. (V/C)	Ave. Delay (sec)	Eff. Stop Rate	95% Back of Queue (m)	Level of Service
AM Peak							
Goonyella Road South	T	22	0.013	0.0	0.00	0	LOS A
	R	76	0.079	10.0	0.65	3	LOS A
Approach		98	0.079	7.8	0.51	3	LOS A
Mills Avenue East	L	286	0.280	9.3	0.66	11	LOS A
	R	213	0.350	12.5	0.81	17	LOS A
Approach		499	0.351	10.7	0.72	17	LOS A
Goonyella Road North	L	51	0.099	8.9	0.67	0	LOS A
	T	109	0.099	0.0	0.00	0	LOS A
Approach		160	0.099	2.8	0.21	0	LOS A
All Vehicles		757	0.350	8.6	0.59	17	NA
PM Peak							
Goonyella Road South	T	22	0.013	0.0	0.00	0	LOS A
	R	85	0.085	10.1	0.68	3	LOS A
Approach		107	0.085	8.1	0.54	3	LOS A
Mills Avenue East	L	142	0.141	9.3	0.65	5	LOS A
	R	130	0.219	11.9	0.76	9	LOS A
Approach		272	0.219	10.5	0.70	9	LOS A
Goonyella Road North	L	186	0.146	8.9	0.67	0	LOS A
	T	42	0.146	0.0	0.00	0	LOS A
Approach		228	0.146	7.3	0.55	0	LOS A
All Vehicles		607	0.219	8.9	0.61	9	NA



Table 11 Performance Summary 2008 Construction Phase

Approach	Movement	Dem Flow (veh/hr)	Deg. Sat. (V/C)	Ave. Delay (sec)	Eff. Stop Rate	95% Back of Queue (m)	Level of Service
AM Peak							
Goonyella Road South	T	32	0.022	0.0	0.00	0	LOS A
	R	76	0.079	10.2	0.66	3	LOS A
Approach		108	0.079	7.2	0.46	3	LOS A
Mills Avenue East	L	286	0.287	9.5	0.67	12	LOS A
	R	253	0.441	14.2	0.90	26	LOS A
Approach		539	0.441	11.7	0.78	26	LOS A
Goonyella Road North	L	51	0.108	8.9	0.67	0	LOS A
	T	119	0.108	0.0	0.00	0	LOS A
Approach		170	0.108	2.7	0.20	0	LOS A
All Vehicles		817	0.441	9.2	0.62	26	NA
PM Peak							
Goonyella Road South	T	32	0.022	0.0	0.00	0	LOS A
	R	85	0.091	10.5	0.71	4	LOS A
Approach		117	0.091	7.6	0.51	4	LOS A
Mills Avenue East	L	142	0.148	9.5	0.67	5	LOS A
	R	130	0.240	12.8	0.80	9	LOS A
Approach		272	0.240	11.1	0.73	9	LOS A
Goonyella Road North	L	226	0.178	8.8	0.67	0	LOS A
	T	52	0.178	0.0	0.00	0	LOS A
Approach		278	0.178	7.1	0.54	0	LOS A
All Vehicles		667	0.240	8.8	0.61	9	NA

Table 12 Performance Summary 2018 Without Plant

Approach	Movement	Dem Flow (veh/hr)	Deg. Sat. (V/C)	Ave. Delay (sec)	Eff. Stop Rate	95% Back of Queue (m)	Level of Service
AM Peak							
Goonyella Road South	T	34	0.020	0.0	0.00	0	LOS A
	R	118	0.132	10.8	0.71	6	LOS A
Approach		152	0.131	8.4	0.55	6	LOS A
Mills Avenue East	L	443	0.477	10.9	0.78	29	LOS A
	R	331	0.687	21.5	1.20	58	LOS B
Approach		774	0.687	15.5	0.96	58	LOS B
Goonyella Road North	L	79	0.153	8.9	0.67	0	LOS A
	T	168	0.153	0.0	0.00	0	LOS A
Approach		247	0.153	2.9	0.21	0	LOS A
All Vehicles		1173	0.687	11.9	0.75	58	NA
PM Peak							
Goonyella Road South	T	34	0.020	0.0	0.00	0	LOS A
	R	131	0.158	11.3	0.77	6	LOS A
Approach		165	0.158	9.0	0.61	6	LOS A
Mills Avenue East	L	221	0.242	10.0	0.70	9	LOS A
	R	202	0.433	16.7	0.98	23	LOS B
Approach		423	0.433	13.2	0.83	23	LOS A
Goonyella Road North	L	289	0.228	8.9	0.67	0	LOS A
	T	65	0.227	0.0	0.00	0	LOS A
Approach		354	0.228	7.3	0.55	0	LOS A
All Vehicles		942	0.433	10.2	0.69	23	NA



Table 13 Performance Summary 2018 Operations Phase

Approach	Movement	Dem Flow (veh/hr)	Deg. Sat. (V/C)	Ave. Delay (sec)	Eff. Stop Rate	95% Back of Queue (m)	Level of Service
AM Peak							
Peak Downs East	L	37	0.022	0.0	0.00	0	LOS A
	R	118	0.133	10.9	0.71	6	LOS A
Approach		155	0.134	8.3	0.54	6	LOS A
Moranbah Access North	L	443	0.483	11.1	0.79	30	LOS A
	T	362	0.767	25.1	1.34	76	LOS B
Approach		805	0.767	17.4	1.04	76	LOS B
Peak Downs West	T	85	0.159	8.9	0.67	0	LOS A
	R	171	0.159	0.0	0.00	0	LOS A
Approach		256	0.159	2.9	0.22		LOS A
All Vehicles		1216	0.767	13.2	0.80	76	NA
PM Peak							
Peak Downs East	L	37	0.022	0.0	0.00	0	LOS A
	R	131	0.166	11.6	0.79	7	LOS A
Approach		168	0.166	9.1	0.62	7	LOS A
Moranbah Access North	L	221	0.249	10.1	0.72	10	LOS A
	T	208	0.464	17.8	1.00	26	LOS B
Approach		429	0.464	13.8	0.85	26	LOS A
Peak Downs West	T	320	0.248	8.9	0.67	0	LOS A
	R	68	0.248	0.0	0.00	0	LOS A
Approach		388	0.248	7.3	0.55		LOS A
All Vehicles		985	0.464	10.5	0.69	26	NA

2.3 Intersection of Peak Downs Highway and Moranbah Access Road

2.3.1 Intersection Layout

The existing intersection between the Peak Downs Highway and the Moranbah Access Road is shown in Figure 4. The intersection is considered 'AUL/AUR' with auxiliary lanes provided for right and left turn movements from the Peak Downs Highway. This intersection consists of a 2 lane approach/2 lane departure (one short lane) from the east, 1 lane approach/1 lane departure from the north and a 2 lane approach/1 lane departure from the west.

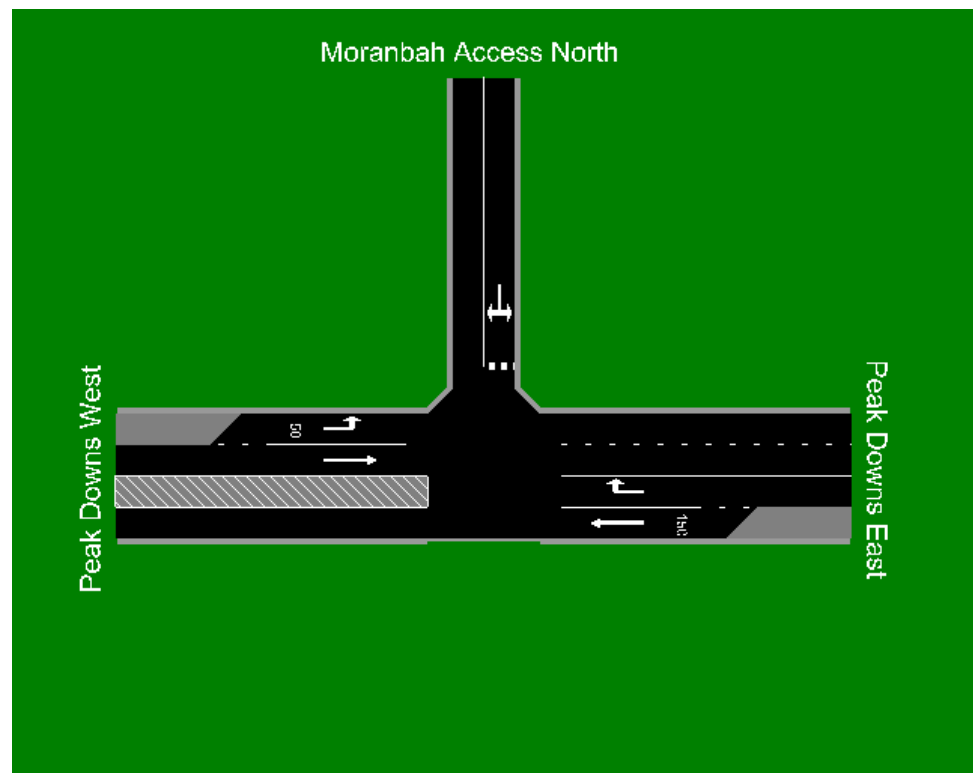


Figure 4: Peak Downs Hwy – Moranbah Access Rd Intersection Layout

2.3.2 Performance Summary

The SIDRA analysis of the intersection revealed that the intersection would be unable to efficiently carry the projected 2018 volumes irrespective of the presence of the proposed plant. The existing intersection was found to perform adequately under 2008 conditions with the construction generated traffic, providing a minimum level of service B. Under 2018 conditions the Moranbah Access Road approach falls to a level of service F with a degree of saturation greater than 1 and queues in excess of 400m. This indicates that the intersection will require remedial works to expand capacity. An analysis of a proposed intersection with sufficient capacity is provided in section 3.4 below.



Table 14 Performance Summary 2006 Existing Conditions

Approach	Movement	Dem Flow (veh/hr)	Deg. Sat. (V/C)	Ave. Delay (sec)	Eff. Stop Rate	95% Back of Queue (m)	Level of Service
AM Peak							
Peak Downs East	T	148	0.089	3.0	0.15	1	LOS A
	R	42	0.089	3.0	0.15	1	LOS A
Approach		190	0.089	3.0	0.15	1	LOS A
Moranbah Access North	L	194	0.426	16.2	0.78	25	LOS B
	R	102	0.427	16.1	0.90	25	LOS B
Approach		296	0.426	16.2	0.82	25	LOS B
Peak Downs West	L	70	0.042	12.8	0.75	0	LOS A
	T	130	0.080	0.0	0.00	0	LOS A
Approach		200	0.080	4.5	0.26	0	LOS A
All Vehicles		686	0.427	9.1	0.47	25	NA
PM Peak							
Peak Downs East	T	63	0.116	9.3	0.48	5	LOS A
	R	127	0.116	9.3	0.48	5	LOS A
Approach		190	0.116	9.3	0.48	5	LOS A
Moranbah Access North	L	92	0.308	15.7	0.71	13	LOS B
	R	101	0.308	15.7	0.86	13	LOS B
Approach		193	0.308	15.7	0.79	13	LOS B
Peak Downs West	L	106	0.065	12.9	0.75	0	LOS A
	T	94	0.058	0.0	0.00	0	LOS A
Approach		200	0.065	6.8	0.40	0	LOS A
All Vehicles		583	0.308	10.6	0.55	13	NA



Table 15 Performance Summary 2008 Without Plant

Approach	Movement	Dem Flow (veh/hr)	Deg. Sat. (V/C)	Ave. Delay (sec)	Eff. Stop Rate	95% Back of Queue (m)	Level of Service
AM Peak							
Peak Downs East	T	162	0.094	3.0	0.16	2	LOS A
	R	46	0.094	3.0	0.16	2	LOS A
Approach		208	0.094	3.0	0.16	2	LOS A
Moranbah Access North	L	212	0.484	17.3	0.83	32	LOS B
	R	112	0.483	17.2	0.94	32	LOS B
Approach		324	0.484	17.2	0.86	32	LOS B
Peak Downs West	L	77	0.047	12.8	0.75	0	LOS A
	T	142	0.088	0.0	0.00	0	LOS A
Approach		219	0.088	4.5	0.26	0	LOS A
All Vehicles		751	0.484	9.6	0.49	32	NA
PM Peak							
Peak Downs East	T	69	0.130	9.4	0.48	5	LOS A
	R	139	0.130	9.4	0.48	5	LOS A
Approach		208	0.130	9.4	0.48	5	LOS A
Moranbah Access North	L	101	0.354	16.8	0.75	18	LOS B
	R	111	0.355	16.7	0.89	18	LOS B
Approach		212	0.354	16.7	0.83	18	LOS B
Peak Downs West	L	116	0.071	12.9	0.75	0	LOS A
	T	103	0.064	0.0	0.00	0	LOS A
Approach		219	0.071	6.8	0.40	0	LOS A
All Vehicles		639	0.355	10.9	0.57	18	NA



Table 16 Performance Summary 2008 Construction Phase

Approach	Movement	Dem Flow (veh/hr)	Deg. Sat. (V/C)	Ave. Delay (sec)	Eff. Stop Rate	95% Back of Queue (m)	Level of Service
AM Peak							
Peak Downs East	T	162	0.094	3.9	0.18	3	LOS A
	R	55	0.094	3.9	0.18	3	LOS A
Approach		217	0.094	3.9	0.18	3	LOS A
Moranbah Access North	L	222	0.514	18.2	0.85	37	LOS B
	R	112	0.514	17.8	0.95	37	LOS B
Approach		334	0.514	18.1	0.89	37	LOS B
Peak Downs West	L	77	0.047	12.8	0.75	0	LOS A
	T	142	0.088	0.0	0.00	0	LOS A
Approach		219	0.088	4.5	0.26	0	LOS A
All Vehicles		770	0.514	10.2	0.51	37	NA
PM Peak							
Peak Downs East	T	69	0.149	10.0	0.50	6	LOS A
	R	149	0.149	10.0	0.50	6	LOS A
Approach		218	0.149	10.0	0.50	6	LOS A
Moranbah Access North	L	111	0.384	18.0	0.78	21	LOS B
	R	111	0.384	17.3	0.91	21	LOS B
Approach		222	0.385	17.6	0.84	21	LOS B
Peak Downs West	L	116	0.071	12.9	0.75	0	LOS A
	T	103	0.064	0.0	0.00	0	LOS A
Approach		219	0.071	6.8	0.40	0	LOS A
All Vehicles		659	0.384	11.5	0.58	21	NA



Table 17 Performance Summary 2018 Without Plant

Approach	Movement	Dem Flow (veh/hr)	Deg. Sat. (V/C)	Ave. Delay (sec)	Eff. Stop Rate	95% Back of Queue (m)	Level of Service
AM Peak							
Peak Downs East	T	251	0.152	3.2	0.17	3	LOS A
	R	72	0.152	3.2	0.17	3	LOS A
Approach		323	0.151	3.2	0.17	3	LOS A
Moranbah Access North	L	330	1.034	132.5	3.53	411	LOS F
	R	173	1.036	132.4	2.79	411	LOS F
Approach		503	1.034	132.5	3.27	411	LOS F
Peak Downs West	L	119	0.072	12.8	0.75	0	LOS A
	T	221	0.137	0.0	0.00	0	LOS A
Approach		340	0.137	4.5	0.26	0	LOS A
All Vehicles		1166	1.036	59.4	1.53	411	NA
PM Peak							
Peak Downs East	T	107	0.234	10.0	0.53	10	LOS A
	R	216	0.234	10.0	0.53	10	LOS A
Approach		323	0.234	10.0	0.53	10	LOS A
Moranbah Access North	L	147	0.750	31.2	1.25	70	LOS C
	R	172	0.751	31.1	1.21	70	LOS C
Approach		319	0.751	31.1	1.23	70	LOS C
Peak Downs West	L	180	0.109	12.9	0.75	0	LOS A
	T	160	0.099	0.0	0.00	0	LOS A
Approach		340	0.109	6.8	0.40	0	LOS A
All Vehicles		982	0.751	15.8	0.71	70	NA



Table 18 Performance Summary 2018 Operations Phase

Approach	Movement	Dem Flow (veh/hr)	Deg. Sat. (V/C)	Ave. Delay (sec)	Eff. Stop Rate	95% Back of Queue (m)	Level of Service
AM Peak							
Peak Downs East	T	251	0.151	3.3	0.17	3	LOS A
	R	73	0.151	3.3	0.17	3	LOS A
Approach		324	0.151	3.3	0.17	3	LOS A
Moranbah Access North	L	331	1.064	174.7	4.10	503	LOS F
	R	175	1.061	174.7	3.18	503	LOS F
Approach		506	1.063	174.7	3.78	503	LOS F
Peak Downs West	L	121	0.074	12.9	0.75	0	LOS A
	T	221	0.137	0.0	0.00	0	LOS A
Approach		342	0.137	4.6	0.27		LOS A
All Vehicles		1172	1.064	77.7	1.76	503	NA
PM Peak							
Peak Downs East	T	107	0.237	10.1	0.53	10	LOS A
	R	217	0.237	10.1	0.53	10	LOS A
Approach		324	0.237	10.1	0.53	10	LOS A
Moranbah Access North	L	158	0.786	33.8	1.34	81	LOS C
	R	174	0.787	33.7	1.27	81	LOS C
Approach		332	0.787	33.7	1.30	81	LOS C
Peak Downs West	L	182	0.111	13.0	0.75	0	LOS A
	T	160	0.099	0.0	0.00	0	LOS A
Approach		342	0.111	6.9	0.40		LOS A
All Vehicles		998	0.787	16.9	0.74	81	NA

2.4 Proposed Intersection of Peak Downs Highway and Moranbah Access Road

2.4.1 Intersection Layout

The proposed intersection between the Peak Downs Highway and the Moranbah Access Road is shown in Figure 5. The proposed intersection is considered to be an 'AUL/AUR' type intersection, similar to the existing intersection layout shown in Figure 4 with expanded width on the north approach for separated right and left turn movements.

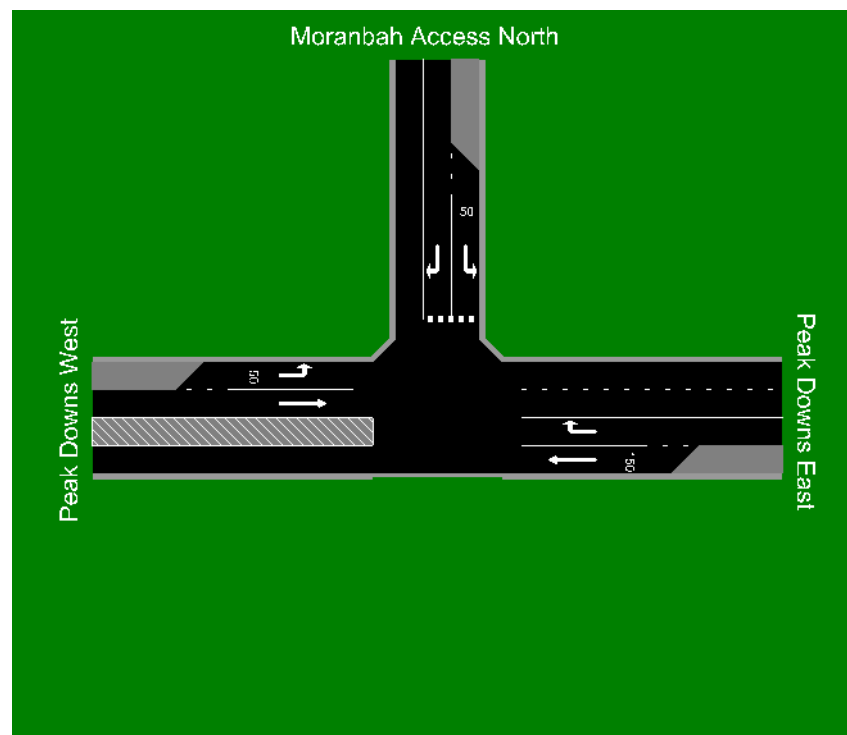


Figure 5: Proposed Peak Downs Hwy – Moranbah Access Rd Intersection Layout

2.4.2 Performance Summary

The proposed intersection was analysed for 2018 with and without the plant. It was found that the proposed intersection is able to adequately handle the projected volumes, providing the following:

- ▶ Minimum level of service C;
- ▶ Degree of saturation below 0.7;
- ▶ Average Delay less than 35.5 sec; and
- ▶ Maximum queue lengths reducing to 38m.



Table 19 Performance Summary Proposed 2018 Without Plant

Approach	Movement	Dem Flow (veh/hr)	Deg. Sat. (V/C)	Ave. Delay (sec)	Eff. Stop Rate	95% Back of Queue (m)	Level of Service
AM Peak							
Peak Downs East	T	251	0.152	3.3	0.17	3	LOS A
	R	72	0.152	3.3	0.17	3	LOS A
Approach		323	0.151	3.3	0.17	3	LOS A
Moranbah Access North	L	330	0.408	15.2	0.85	22	LOS B
	R	173	0.625	33.7	1.12	35	LOS C
Approach		503	0.625	21.5	0.94	35	LOS B
Peak Downs West	L	119	0.072	12.8	0.75	0	LOS A
	T	221	0.137	0.0	0.00	0	LOS A
Approach		340	0.137	4.5	0.26	0	LOS A
All Vehicles		1166	0.625	11.5	0.53	35	NA
PM Peak							
Peak Downs East	T	107	0.234	10.1	0.53	10	LOS A
	R	216	0.234	10.1	0.53	10	LOS A
Approach		323	0.234	10.1	0.53	10	LOS A
Moranbah Access North	L	147	0.178	14.0	0.75	7	LOS A
	R	172	0.573	30.3	1.09	32	LOS C
Approach		319	0.573	22.8	0.93	32	LOS B
Peak Downs West	L	180	0.109	12.9	0.75	0	LOS A
	T	160	0.099	0.0	0.00	0	LOS A
Approach		340	0.109	6.8	0.40	0	LOS A
All Vehicles		982	0.573	13.1	0.62	32	NA



Table 20 Performance Summary Proposed 2018 Operations Phase

Approach	Movement	Dem Flow (veh/hr)	Deg. Sat. (V/C)	Ave. Delay (sec)	Eff. Stop Rate	95% Back of Queue (m)	Level of Service
AM Peak							
Peak Downs East	T	251	0.151	3.3	0.17	3	LOS A
	R	73	0.151	3.3	0.17	3	LOS A
Approach		324	0.151	3.3	0.17	3	LOS A
Moranbah Access North	L	331	0.412	15.3	0.85	23	LOS B
	R	175	0.651	35.5	1.14	38	LOS C
Approach		506	0.651	22.3	0.95	38	LOS B
Peak Downs West	L	121	0.074	12.9	0.75	0	LOS A
	T	221	0.137	0.0	0.00	0	LOS A
Approach		342	0.137	4.6	0.27		LOS A
All Vehicles		1172	0.651	11.9	0.54	38	NA
PM Peak							
Peak Downs East	T	107	0.237	10.1	0.53	10	LOS A
	R	217	0.237	10.1	0.53	10	LOS A
Approach		324	0.237	10.1	0.53	10	LOS A
Moranbah Access North	L	158	0.191	14.0	0.76	7	LOS A
	R	174	0.596	31.6	1.10	34	LOS C
Approach		332	0.596	23.2	0.94	34	LOS B
Peak Downs West	L	182	0.111	13.0	0.75	0	LOS A
	T	160	0.099	0.0	0.00	0	LOS A
Approach		342	0.111	6.9	0.40		LOS A
All Vehicles		998	0.596	13.4	0.62	34	NA

3. Traffic Management Plan

Materials will be transported to and from the site via the existing road network. Due to the relatively small amount of traffic generated by the plant, the existing road network will be able to safely handle the increase in traffic. The Traffic Management Plan (TMP) should comply with the following documents:

- ▶ Transport Infrastructure Act, 1994,
- ▶ Transport Operations (Road Use Management) Act 1995
- ▶ Road Transport Reform Act 1999 Act No. 42 of 1999
- ▶ Transport Legislation Amendment ACT 1997
- ▶ Transport Legislation Amendment Act 2001
- ▶ Transport and Other Legislation Amendment Act 2004
- ▶ Transport and Other Legislation Amendment Act (No. 2) 2004
- ▶ The Sixth Code of Carriage of Dangerous Goods

All materials will be transported to and from the site via the existing road network. The following guidelines will be used during road haulage:

- ▶ Notify Queensland Transport, Police and the community of date, type and duration of heavy/over-dimensional vehicle transport that may impede traffic on the Peak Downs highway.
- ▶ Contractor to prepare Vehicle Movement Plan for the construction of the project to identify traffic issues.
- ▶ Site safety collection points are to be agreed with local Emergency Service groups for the aerial removal of injured personnel in case of vehicle traffic incident.
- ▶ Acquisition of all required permits from Department of Main Roads, Queensland Railways, local Council's and other statutory authorities as required.
- ▶ Transport of hazardous or dangerous goods shall be in accordance with 'The Sixth Code of Carriage of Dangerous Goods' (Federal) and Transport Operations (Road Use Management) Regulation 1995 Incorporating Dangerous Goods' (State). Advice from Queensland Transport shall be obtained prior to transport
- ▶ A pilot vehicle shall be used, as required.
- ▶ The appropriate signage shall be provided on road vehicles

The development of the Ammonium Nitrate plant should have no impact on the following:

- ▶ Geotechnical stability, as it is not an extractive industry (e.g. Quarry)
- ▶ Road traffic noise, as the development is sufficiently distanced from residential developments and the traffic generated by the plant would follow approved routes, which already carry heavy vehicles.

- ▶ Visual impacts, as headlight glare created while accessing/leaving the site will not impact on any residential areas and the traffic generated on roads will be using approved roads, which currently service similar traffic.
- ▶ Parking, as parking will be provided for all vehicles onsite
- ▶ Pedestrians and cyclists due to the location of the site.

3.1 Construction Phase TMP

The construction phase is expected to last for 22 months, generating a number of light and heavy vehicle movements. The traffic management plan for the construction phase will incorporate the following:

- ▶ The haulage routes for heavy vehicles including those carrying construction materials, waste materials and oversize loads will be discussed with the relevant authorities, including the Department of Main Roads. Where necessary, the required permits will be obtained and appropriate safety procedures will be utilised.
- ▶ During construction of the site access intersection, appropriate signage in accordance with the Department of Main Roads *Traffic and Road Use Manual* (TRUM) will be used to inform road users of the change in road conditions.
- ▶ SIDRA analysis has revealed that the proposed intersection would be able to provide an acceptable level of service, however deceleration/acceleration lanes may be incorporated into the final design to further improve road safety.
- ▶ As this is construction of a new site with no overlap of construction and operation, only one access road is required and will be used during both phases.
- ▶ The TMP will allow for minimal impact on public transport movement.
- ▶ Dust management strategies

3.2 Operations Phase TMP

The operations phase will generate a number of light and heavy vehicle movements. The heavy vehicle routes will be discussed with the relevant Main Roads Districts. The operations phase TMP will incorporate the following:

- ▶ All materials will be transported according to Queensland Transport's Transporting Dangerous Goods Requirement where appropriate.
- ▶ The haulage routes will be discussed with the relevant local and state authorities
- ▶ The operations phase should have minimal impact on existing public transport movements.
- ▶ Access to the site will be via the access intersection constructed during the construction phase.



4. Public Transport

The only public transport servicing Moranbah is the daily Emerald to Mackay bus service, stopping at the town square bus stop. The project will not impact on any existing public transport facilities or inhibit any future facilities. The traffic generated by the plant is not expected to have any measurable impact on this bus service. The school bus service operating in the area of Moranbah is not expected to be adversely affected by the generated traffic from this plant as the amount of traffic generated (both light and heavy vehicles) is not considered significant when compared to current levels. The construction of the site access intersection will not affect any existing public transport facilities.



5. Incidents

All ammonium nitrate product will be transported in compliance to the appropriate legislation. A spill management team should be trained and available for response to any release of ammonium product to the environment. In the event of a spill, the relevant authorities and emergency services should be notified.

The solid AN prill would be shipped in 67t loads, transported by an AB Triple. Since this is a solid, the cleanup process would be relatively easy unless the spill involves a waterway. The maximum amount of release in one spill would be limited to 67t of ammonium nitrate prill.

The liquid emulsion would be shipped in 52t loads, transported by a B Triple. Due to the liquid phase of the product, any spill would be difficult to cleanup, however a spill would require a puncturing of the transport container. The maximum amount of release in one spill would be limited to 52t of ammonium nitrate emulsion.



6. Future Development

Belyando Shire Council owns Moranbah Access Road and Goonyella Road south of the train line, while Goonyella Road north of the train line is owned by Goonyella Mines. Consultation with the local council has revealed that there are plans to rehabilitate a section of Moranbah access road near the airport in the near future. There are no plans for other works in the area on local shire owned roads.



7. Part B Conclusions

The analyses in this report has shown that:

- ▶ A 'basic' type intersection is sufficient to provide adequate performance through to 2018 for access to the site from Goonyella Road. A minimum level of service B is provided. Dyno Nobel Asia Pacific Limited may opt for the addition of acceleration/deceleration lanes, which would improve the flow, access, and safety of the intersection.
- ▶ The performance of the existing intersection between Mills Avenue and Goonyella Road is deemed adequate to 2018 on all approaches. A minimum level of service B is provided.
- ▶ The performance of the intersection of the Peak Downs Highway and Moranbah Access Road is adequate to 2008 conditions, however it will require remedial works in order to adequately handle the forecasted traffic in 2018. The proposed intersection with an 'AUL/AUR' type treatment approach on the Moranbah Access Road was found to provide a minimum level of service C under 2018 conditions.
- ▶ The development of the ammonium nitrate plant should not affect either existing or future public transport infrastructure. There should be no impact on the movement of existing services as the traffic generated by the plant is small in comparison to the current existing traffic.
- ▶ In the event of an incident, the maximum amounts of ammonium nitrate spilled would be 67t of prill and 52t of emulsion.
- ▶ There are plans for the rehabilitation of a section of Moranbah access road near the airport. Belyando Shire council plans no other rehabilitation.



Appendix A

Traffic Count Data

Goonyella Road – Chainage 0.36

Goonyella Road – Chainage 0.71

Goonyella Road – Chainage 2.91

Goonyella Road

Site Number 1
Chainage 0.36

	Start Date	End Date	No. Days	Count	AADT	%CV
1	19/06/2002	2/08/2002	14	25194	1799.57	
2	1/12/2004	15/12/2004	14	37857	2704.07	14.53
3	7/03/2006	21/03/2006	14	42099	3007.07	20.3
Average					2503.57	17.42

Site Number 2
Chainage 0.71

	Start Date	End Date	No. Days	Count	AADT	%CV
1	24/03/2003	14/04/2003	21	35712	1700.57	6.76
Average					1700.57	6.76

Site Number 3
Chainage 2.91

	Start Date	End Date	No. Days	Count	AADT	%CV
1	20/10/2004	1/11/2004	12	53164	4430.33	15.73
2	1/12/2005	15/12/2004	14	53490	3820.71	14.45
3	7/03/2006	21/03/2006	14	51499	3678.50	20.3
Average					3976.52	16.83

Site Number 4
Chainage 21.3

	Start Date	End Date	No. Days	Count	AADT	%CV
1	2/02/2005	2/03/2005	28	44555	1591.25	14.08
Average					1591.25	14.08

Site Number 5
Chainage 21.4

	Start Date	End Date	No. Days	Count	AADT	%CV
1	2/02/2005	2/03/2005	28	37925	1354.46	14.66
Average					1354.46	14.66

MetroCount Traffic Executive Class Bin Chart

ClassBin-58 -- English (ENA)

Datasets:

Site: [42101] GOONYELLA ROAD CH. 0.36 KM
Direction: 6 - West bound A>B, East bound B>A., Lane: 0
Survey Duration: 12:34 Tuesday, 7 March 2006 => 10:41 Tuesday, 21 March 2006
File: H:\working documents\Engineering\ROADS\Traffic Counts\Goonyella\4210121Mar2006.EC0 (Plus)
Identifier: K2442HXX MC56-6 [MC55] (c)Microcom 02/03/01
Algorithm: Factory default
Data type: Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time: 12:34 Tuesday, 7 March 2006 => 10:41 Tuesday, 21 March 2006
Included classes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range: 10 - 160 km/h.
Direction: North, East, South, West (bound)
Separation: All - (Headway)
Name: Factory default profile
Scheme: Vehicle classification (AustRoads94)
Units: Metric (meter, kilometer, m/s, km/h, kg, tonne)
In profile: Vehicles = 42099 / 42122 (99.95%)

Class Bins

Class 1 - 32275 (76.66%)
Class 2 - 1279 (3.04%)
Class 3 - 5291 (12.57%)
Class 4 - 1092 (2.59%)
Class 5 - 307 (0.73%)
Class 6 - 107 (0.25%)
Class 7 - 68 (0.16%)
Class 8 - 59 (0.14%)
Class 9 - 711 (1.69%)
Class 10 - 650 (1.54%)
Class 11 - 256 (0.61%)
Class 12 - 4 (0.01%)

* Tuesday, 7 March 2006 - Total=1745 (Incomplete), 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

* Wednesday, 8 March 2006 - Total=3545, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
9	7	6	8	61	309	346	256	184	151	158	158	139	190	162	203	291	334	274	143	81	33	12	10
2	2	0	1	12	51	67	79	40	45	29	46	40	43	41	58	62	78	71	54	21	8	4	2
3	3	1	2	11	79	113	68	47	37	56	44	36	52	40	38	64	69	85	37	20	8	5	3
2	1	3	2	13	87	88	49	39	33	41	34	15	53	42	53	78	100	62	27	19	7	1	3
2	1	2	3	25	92	78	61	58	36	32	34	38	42	39	54	87	87	56	25	21	10	2	2

AM Peak 0545 - 0645 (380), AM PHF=0.80 PM Peak 1730 - 1830 (343), PM PHF=0.86

* Thursday, 9 March 2006 - Total=3514, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
0	5	4	6	68	273	339	195	171	163	176	160	177	163	196	211	309	341	294	137	61	34	21	10
0	2	0	1	9	41	61	70	43	45	46	36	48	44	42	55	59	78	78	57	16	8	7	3
0	2	2	0	11	62	92	48	34	37	38	39	45	35	39	58	76	80	74	26	22	12	7	3
0	1	1	3	16	98	105	44	46	41	43	42	41	47	61	48	87	107	90	31	15	9	5	1
0	0	1	2	32	72	81	33	48	40	49	43	43	37	54	50	87	76	52	23	8	5	2	3

AM Peak 0615 - 0715 (348), AM PHF=0.83 PM Peak 1645 - 1745 (352), PM PHF=0.82

* Friday, 10 March 2006 - Total=3305, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
6	3	8	13	61	282	292	213	188	168	173	177	182	193	184	218	235	260	242	93	45	18	23	28
3	1	3	2	9	48	61	73	44	34	39	45	36	46	46	46	63	61	55	40	14	2	5	9
2	1	0	1	13	66	81	46	40	36	54	43	46	55	46	50	62	63	88	31	13	2	5	10
0	1	3	3	14	103	83	41	50	43	38	43	48	43	50	57	53	66	56	19	8	6	5	7
1	0	2	7	25	85	67	53	54	55	42	46	52	49	43	65	57	70	43	13	10	8	8	3

AM Peak 0530 - 0630 (310), AM PHF=0.75 PM Peak 1730 - 1830 (279), PM PHF=0.79

* Saturday, 11 March 2006 - Total=1927, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
2	2	6	7	34	132	134	119	95	124	115	120	108	104	87	109	127	189	141	78	30	33	20	10
0	1	0	2	3	19	18	36	18	33	33	31	31	34	22	26	23	42	38	37	10	7	6	2
2	0	4	2	9	26	44	28	28	25	26	25	29	19	30	20	30	62	28	17	13	5	5	4
0	1	0	2	7	47	36	29	26	34	24	29	26	34	14	29	33	45	32	12	4	11	7	2
0	0	2	1	15	40	36	26	23	32	30	35	23	17	21	34	41	40	43	12	3	10	2	2

AM Peak 0615 - 0715 (162), AM PHF=0.86 PM Peak 1645 - 1745 (190), PM PHF=0.77

* Sunday, 12 March 2006 - Total=2060, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
7	7	9	21	38	139	119	85	67	96	105	126	122	107	124	118	134	205	192	120	54	40	24	11
1	2	2	4	7	35	24	38	9	29	29	31	32	27	22	25	39	37	48	49	20	10	11	2
0	3	2	5	10	30	37	13	24	13	23	38	38	26	34	37	34	51	51	37	8	10	4	3
4	1	3	8	11	49	28	21	15	32	26	28	35	25	30	36	33	65	46	14	17	12	5	4
2	1	2	4	10	31	30	13	19	22	27	29	17	29	38	20	28	52	37	20	9	8	4	2

AM Peak 0500 - 0600 (139), AM PHF=0.81 PM Peak 1715 - 1815 (216), PM PHF=0.83

* Monday, 13 March 2006 - Total=3489, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
8	4	4	10	70	255	333	230	195	165	142	192	192	156	155	205	283	363	296	118	50	28	22	13
2	0	0	0	6	53	66	66	53	45	32	40	47	36	27	61	68	84	71	53	14	11	9	4
1	1	1	2	19	65	86	57	51	52	31	47	41	43	43	45	60	89	94	38	16	4	9	3
4	3	1	5	15	72	90	53	48	45	35	58	58	39	37	37	78	109	71	15	10	9	4	4
1	0	2	3	30	65	91	54	43	23	44	47	46	39	48	62	77	81	60	12	10	4	0	2

AM Peak 0600 - 0700 (333), AM PHF=0.91 PM Peak 1700 - 1800 (363), PM PHF=0.83

* Tuesday, 14 March 2006 - Total=3568, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
10	16	3	7	58	272	364	219	172	169	165	183	169	167	173	215	305	359	275	141	50	34	19	24
3	6	3	1	9	43	74	63	40	38	34	45	27	34	48	53	68	85	77	58	13	12	5	4
2	5	0	0	7	65	92	56	39	35	48	35	52	40	41	59	69	95	77	31	17	6	9	8
3	1	0	4	19	82	113	48	39	49	42	51	49	50	37	54	75	86	66	29	8	4	1	10
2	4	0	2	24	82	85	52	54	47	41	52	41	43	47	49	93	92	55	23	12	12	4	2

AM Peak 0600 - 0700 (364), AM PHF=0.81 PM Peak 1645 - 1745 (369), PM PHF=0.94

* Wednesday, 15 March 2006 - Total=3551, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
3	7	4	6	58	279	329	222	211	158	135	188	196	199	181	194	284	339	299	128	60	35	22	14
1	5	1	2	7	43	80	67	45	33	44	33	50	45	50	37	51	70	68	46	19	10	8	2
1	2	2	1	11	72	98	49	54	36	33	51	48	49	47	47	82	84	95	27	17	11	5	4
0	0	0	1	14	94	79	55	44	39	26	59	52	54	48	48	81	95	75	28	14	5	4	6
1	0	1	2	26	70	72	51	69	50	32	45	46	51	36	62	70	90	61	27	10	9	5	2

AM Peak 0530 - 0630 (342), AM PHF=0.87 PM Peak 1730 - 1830 (348), PM PHF=0.92

* Thursday, 16 March 2006 - Total=3489, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
8	4	5	15	55	272	337	240	178	153	170	154	141	192	205	221	285	339	258	137	55	26	27	11
1	0	1	3	5	45	93	76	43	48	29	45	43	52	48	55	68	74	80	54	15	6	6	1
2	2	0	6	11	61	93	68	41	34	43	32	35	37	51	56	71	82	87	25	16	7	5	3
2	2	2	5	16	79	90	56	58	45	51	47	32	49	44	60	79	105	62	35	15	5	10	3
3	0	2	1	23	87	71	40	36	26	47	30	31	54	62	50	67	78	49	23	10	8	6	4

AM Peak 0545 - 0645 (353), AM PHF=0.95 PM Peak 1700 - 1800 (339), PM PHF=0.81

* Friday, 17 March 2006 - Total=3247, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
7	4	2	10	61	267	305	179	175	162	165	167	194	171	213	241	242	284	197	98	51	30	11	11	
1	1	1	1	8	35	58	54	41	32	42	45	45	43	60	54	67	65	56	37	18	7	7	5	2
1	1	0	0	20	55	96	47	46	43	54	45	56	49	54	63	49	65	59	30	10	11	0	0	3
2	1	1	4	19	56	72	35	54	44	32	30	49	39	49	68	52	86	39	20	15	7	3	3	1
3	1	0	6	14	71	89	43	34	43	37	47	46	40	51	56	74	68	43	11	6	5	1	3	2

AM Peak 0530 - 0630 (311), AM PHF=0.81 PM Peak 1645 - 1745 (290), PM PHF=0.84

* Saturday, 18 March 2006 - Total=1986, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
8	9	3	5	41	134	135	151	92	120	116	143	111	97	96	91	124	166	170	93	28	28	21	5	
2	3	1	0	5	20	23	64	14	28	41	40	22	27	22	24	27	42	56	48	11	9	6	2	1
3	3	0	1	12	36	38	30	20	31	29	33	24	28	28	28	28	34	40	17	4	7	7	2	2
1	0	2	2	8	48	38	33	29	36	17	28	32	18	23	18	30	50	38	16	10	5	7	0	0
2	0	0	2	16	30	36	24	29	25	29	42	33	24	23	21	39	40	36	12	3	7	1	1	1

AM Peak 0615 - 0715 (176), AM PHF=0.69 PM Peak 1730 - 1830 (188), PM PHF=0.83

* Sunday, 19 March 2006 - Total=1997, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
4	8	3	4	23	124	111	96	71	79	98	130	127	109	105	142	166	201	167	105	47	37	20	10	
1	3	0	2	5	24	29	38	24	20	19	35	31	30	32	37	46	50	51	41	12	12	3	4	0
2	2	0	1	8	27	29	18	13	20	28	34	32	32	22	37	48	41	46	23	10	11	9	1	1
0	1	1	1	8	43	28	23	11	20	26	29	31	25	22	36	38	63	43	22	16	9	2	2	8
1	2	2	0	12	30	25	17	23	19	25	33	32	22	29	32	34	47	27	19	9	5	6	3	1

AM Peak 0530 - 0630 (131), AM PHF=0.76 PM Peak 1730 - 1830 (207), PM PHF=0.82

* Monday, 20 March 2006 - Total=3256, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
10	3	3	8	55	245	310	206	172	179	149	157	151	146	163	182	281	366	262	109	44	37	14	4	
0	0	1	1	7	61	67	69	40	39	44	41	41	38	38	48	60	91	72	50	13	15	6	3	0
1	1	1	1	13	50	77	50	53	52	41	39	37	31	49	33	79	85	76	30	13	8	4	0	3
8	1	0	2	14	75	90	41	35	41	32	42	32	28	37	47	67	108	63	16	10	9	4	0	1
1	1	1	4	21	59	76	46	44	47	32	35	41	49	39	54	75	82	51	13	9	5	0	1	0

AM Peak 0515 - 0715 (312), AM PHF=0.87 PM Peak 1700 - 1800 (386), PM PHF=0.86

* Tuesday, 21 March 2006 - Total=1347 (Incomplete), 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
4	3	2	8	65	278	319	211	162	146	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0	0	0	2	5	46	82	60	35	36	59	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	1	0	0	16	64	93	47	36	49	55	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1	0	0	3	17	88	64	53	41	29	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0	2	2	3	27	60	93	51	60	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

MetroCount Traffic Executive **Class Bin Chart**

ClassBin-56 -- English (ENA)

Datasets:

Site: [42102] GOONYELLA ROAD CH. 2.91 KM
Direction: 6 - West bound A>B, East bound B>A., Lane: 0
Survey Duration: 12:52 Tuesday, 7 March 2006 => 11:03 Tuesday, 21 March 2006
File: H:\working documents\Engineering\ROADS\Traffic Counts\Goonyella\4210221Mar2006.EC0 (Plus)
Identifier: K2174CFQ MC56-6 [MC55] (c)Microcom 02/03/01
Algorithm: Factory default
Data type: Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time: 12:52 Tuesday, 7 March 2006 => 11:03 Tuesday, 21 March 2006
Included classes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range: 10 - 160 km/h.
Direction: North, East, South, West (bound)
Separation: All - (Headway)
Name: Factory default profile
Scheme: Vehicle classification (AustRoads94)
Units: Metric (meter, kilometer, m/s, km/h, kg, tonne)
In profile: Vehicles = 51499 / 51521 (99.96%)

Class Bins

Class 1 - 40062 (77.79%)
Class 2 - 1389 (2.70%)
Class 3 - 7430 (14.43%)
Class 4 - 1144 (2.22%)
Class 5 - 275 (0.53%)
Class 6 - 125 (0.24%)
Class 7 - 56 (0.11%)
Class 8 - 28 (0.05%)
Class 9 - 365 (0.71%)
Class 10 - 430 (0.83%)
Class 11 - 188 (0.37%)
Class 12 - 7 (0.01%)

* Tuesday, 7 March 2006 - Total=2077 (Incomplete), 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
-	-	-	-	-	-	-	-	-	-	-	-	-	182	170	173	159	500	431	157	53	26	14	12
-	-	-	-	-	-	-	-	-	-	-	-	-	44	46	33	86	120	110	62	20	12	5	3
-	-	-	-	-	-	-	-	-	-	-	-	-	51	50	54	99	114	149	38	17	6	3	4
-	-	-	-	-	-	-	-	-	-	-	-	-	48	38	39	78	156	89	22	10	2	1	4
-	-	-	-	-	-	-	-	-	-	-	-	15	39	36	47	94	110	83	37	6	6	5	1

* Wednesday, 8 March 2006 - Total=4447, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
7	4	3	10	138	515	505	290	210	169	164	146	163	185	166	172	374	487	452	180	69	22	7	9
3	0	1	2	10	115	110	110	52	46	37	31	32	47	28	24	68	108	111	67	34	7	2	1
2	1	1	1	11	134	134	80	61	42	47	38	44	33	42	39	97	108	149	40	17	6	1	4
2	2	1	2	36	154	140	49	43	47	46	39	39	56	50	55	116	141	110	39	8	5	2	2
0	1	0	3	81	112	121	51	54	34	34	38	48	49	46	54	93	130	82	34	10	4	2	2

AM Peak 0600 - 0600 (516), AM PHF=0.04 PM Peak 1730 - 1830 (531), PM PHF=0.89

* Thursday, 9 March 2006 - Total=4462, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
5	5	9	10	140	489	550	257	177	149	179	193	171	179	176	186	401	484	427	152	71	23	19	8
2	2	2	1	12	111	117	102	46	31	35	48	50	47	49	41	78	106	118	56	29	6	8	4
2	3	2	2	13	115	144	76	42	34	44	48	41	34	37	44	93	112	143	40	22	5	4	2
1	0	1	2	33	135	140	42	55	46	51	54	31	53	43	50	115	170	94	28	8	3	4	0
0	0	4	5	82	128	149	37	32	38	49	43	49	45	47	53	115	96	72	28	12	9	3	2

AM Peak 0600 - 0700 (560), AM PHF=0.92 PM Peak 1730 - 1830 (527), PM PHF=0.78

* Friday, 10 March 2006 - Total=4125, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
12	4	6	16	133	477	519	283	158	173	170	182	193	187	180	221	261	397	313	148	46	14	17	18
3	1	4	4	11	123	110	117	38	37	43	48	54	55	44	44	72	91	78	51	17	7	2	6
7	1	0	1	14	103	135	59	39	35	47	50	50	56	50	54	65	84	127	34	17	3	5	4
2	2	1	2	33	139	129	53	44	44	37	43	45	28	49	69	64	115	58	38	5	1	5	4
0	0	1	9	75	112	145	44	37	57	43	41	44	48	37	54	60	107	50	25	7	3	5	1

AM Peak 0615 - 0715 (526), AM PHF=0.81 PM Peak 1730 - 1830 (427), PM PHF=0.84

* Saturday, 11 March 2006 - Total=2457, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
3	11	8	6	71	264	269	198	81	107	111	107	113	74	94	87	133	321	220	118	35	11	8	7
2	5	2	2	3	72	49	86	17	27	24	24	29	15	22	17	12	65	57	53	16	1	5	2
0	0	2	0	7	49	81	51	24	22	24	27	28	15	25	14	23	89	72	25	7	2	1	0
1	3	0	0	18	76	53	36	21	35	29	24	34	22	19	30	31	75	38	18	6	6	1	3
0	3	4	4	43	67	86	25	19	23	34	32	22	22	28	26	67	92	53	22	6	2	1	2

AM Peak 0615 - 0715 (306), AM PHF=0.89 PM Peak 1700 - 1800 (321), PM PHF=0.87

* Sunday, 12 March 2006 - Total=2436, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
9	1	8	15	72	249	225	159	67	84	93	107	119	99	106	104	126	320	263	117	58	18	8	10
4	1	1	3	3	64	47	75	15	17	21	37	29	19	18	27	18	69	84	58	30	4	1	4
3	0	1	3	7	49	56	34	18	18	22	27	33	33	23	27	25	61	71	35	16	3	2	3
1	0	5	7	14	72	42	32	17	24	16	19	31	27	26	27	23	105	54	13	10	8	4	1
1	0	1	2	48	64	80	17	17	25	34	24	26	20	39	23	60	85	54	11	2	3	1	2

AM Peak 0615 - 0715 (253), AM PHF=0.79 PM Peak 1730 - 1830 (345), PM PHF=0.82

* Monday, 13 March 2006 - Total=4192, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
6	4	4	7	118	442	499	307	150	153	130	177	179	135	158	143	318	820	441	171	66	28	11	15
1	0	1	0	9	115	104	115	49	41	29	41	46	33	47	47	67	114	130	77	35	13	5	1
1	1	1	1	8	107	128	69	43	39	27	34	48	39	42	27	68	129	140	36	17	8	5	6
1	3	0	5	34	127	110	77	25	38	45	52	46	35	27	29	83	162	100	34	8	4	1	3
3	0	2	1	67	93	157	46	32	35	29	50	39	28	52	40	100	115	71	24	6	3	0	5

AM Peak 0615 - 0715 (510), AM PHF=0.81 PM Peak 1730 - 1830 (547), PM PHF=0.84

* Tuesday, 14 March 2006 - Total=4400, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
6	11	4	6	129	480	511	279	165	157	149	163	167	183	177	180	364	496	457	216	56	20	7	17
1	5	2	1	8	114	111	117	44	44	42	37	37	45	42	45	55	89	120	96	33	5	3	2
0	5	1	0	8	122	127	69	34	35	36	33	50	45	44	51	93	131	160	49	12	2	2	5
3	1	0	2	39	130	143	56	48	37	31	42	50	49	43	37	111	134	89	29	5	5	0	6
2	0	1	3	75	114	130	37	39	41	38	51	30	44	48	43	105	142	88	42	6	8	2	4

AM Peak 0615 - 0715 (517), AM PHF=0.90 PM Peak 1730 - 1830 (556), PM PHF=0.87

* Wednesday, 15 March 2006 - Total=4399, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
4	4	3	8	139	502	549	286	156	167	141	193	165	178	161	172	345	477	462	178	57	17	23	11
1	3	0	1	5	125	117	117	32	40	40	44	33	43	44	30	64	91	113	63	24	5	3	0
1	1	1	2	16	126	140	74	49	31	33	50	45	38	36	43	94	108	169	39	17	8	7	6
2	0	1	3	41	154	134	53	36	35	33	51	44	44	40	42	80	151	95	34	8	1	6	3
0	0	1	2	77	98	158	42	37	41	35	48	43	53	41	37	107	127	86	42	8	3	7	2

AM Peak 0600 - 0700 (549), AM PHF=0.87 PM Peak 1730 - 1830 (569), PM PHF=0.83

* Thursday, 16 March 2006 - Total=4161, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
6	6	2	18	126	466	496	306	132	141	134	173	152	164	163	189	346	470	403	156	64	20	19	9
0	2	0	2	5	112	97	94	31	38	31	37	43	43	48	39	61	89	116	67	31	7	5	2
4	2	1	6	12	118	137	84	36	35	26	50	34	53	41	50	100	107	143	30	9	3	4	1
1	1	0	6	34	143	127	79	33	40	34	48	40	31	40	68	89	149	71	23	13	7	6	0
1	1	1	4	75	93	135	49	32	28	43	38	35	37	34	43	97	125	75	36	11	3	4	6

* Friday, 17 March 2006 - Total=3898, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
12	6	4	12	133	437	488	255	148	163	172	171	168	159	186	241	242	379	272	141	56	18	8	12
0	2	2	1	7	108	99	96	36	33	40	34	51	35	39	67	65	75	95	59	25	8	2	3
5	1	0	0	16	116	136	64	33	45	57	46	44	43	56	63	53	78	89	33	16	5	3	7
4	1	2	6	34	126	121	52	51	42	27	43	29	33	47	56	51	120	39	27	7	2	2	0
3	2	0	5	76	107	130	43	28	45	47	48	44	42	44	56	63	105	49	22	8	3	1	2

AM Peak 0600 - 0700 (488), AM PHF=0.88 PM Peak 1730 - 1830 (409), PM PHF=0.85

* Saturday, 18 March 2006 - Total=2356, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
12	4	4	11	81	264	236	196	74	94	95	116	91	78	46	76	149	283	278	106	31	16	12	3
3	1	0	0	5	67	47	100	23	25	30	31	23	32	11	17	27	63	80	50	18	3	2	1
4	3	3	0	2	63	78	37	16	27	24	34	20	19	10	26	39	43	90	18	8	5	6	1
1	0	0	9	22	80	39	33	20	20	18	28	27	13	16	16	37	76	42	16	3	2	2	0
4	0	1	2	52	54	72	26	15	22	23	23	21	14	9	17	56	101	65	22	2	6	2	1

AM Peak 0615 - 0715 (289), AM PHF=0.72 PM Peak 1730 - 1830 (347), PM PHF=0.86

* Sunday, 19 March 2006 - Total=2423, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
5	13	5	11	89	226	203	140	77	88	105	117	113	107	101	136	166	300	243	110	41	11	9	7
0	2	0	0	4	62	34	78	23	24	26	24	33	31	23	30	52	76	65	47	24	3	1	2
3	2	3	4	6	50	47	27	19	23	27	34	27	30	22	27	40	60	86	24	3	0	3	1
0	5	0	4	17	61	47	23	17	27	29	36	28	17	22	34	33	94	48	17	9	5	2	3
2	4	2	3	62	53	75	12	18	14	23	23	25	29	34	35	61	70	44	22	5	3	3	1

AM Peak 0615 - 0715 (247), AM PHF=0.79 PM Peak 1730 - 1830 (315), PM PHF=0.84

* Monday, 20 March 2006 - Total=3774, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
11	4	2	12	99	392	492	260	136	175	128	162	123	118	156	138	218	481	388	155	54	10	16	4
0	2	1	2	5	103	94	111	27	38	35	37	29	26	30	29	60	120	117	67	19	4	6	2
2	1	1	0	7	99	105	51	47	46	32	43	25	31	49	22	86	114	122	30	21	1	8	1
7	0	0	4	29	110	114	49	39	45	30	44	34	25	36	33	75	141	91	33	10	4	0	0
2	1	0	6	58	80	119	49	23	46	31	38	35	36	41	54	97	106	56	25	4	1	2	1

AM Peak 0615 - 0715 (448), AM PHF=0.94 PM Peak 1730 - 1830 (486), PM PHF=0.86

* Tuesday, 21 March 2006 - Total=1877 (Incomplete), 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
7	4	3	9	125	481	511	218	142	125	139	-	-	-	-	-	-	-	-	-	-	-	-	-
2	2	1	2	7	111	105	118	42	20	40	13	-	-	-	-	-	-	-	-	-	-	-	-
2	1	0	0	14	123	134	79	27	36	40	-	-	-	-	-	-	-	-	-	-	-	-	-
3	0	1	3	29	134	116	79	25	29	24	-	-	-	-	-	-	-	-	-	-	-	-	-
0	1	1	4	75	123	156	42	48	40	35	-	-	-	-	-	-	-	-	-	-	-	-	-

MetroCount Traffic Executive Class Bin Chart

ClassBin-61 -- English (ENA)

Datasets:

Site: [22221] GOONYELLA ROAD BEFORE 8049
Direction: 7 - North bound A>B, South bound B>A., Lane: 0
Survey Duration: 12:39 Wednesday, 16 February 2005 => 13:15 Wednesday, 2 March 2005
File: H:\working documents\Engineering\ROADS\Traffic Counts\Goonyella\2222102Mar2005.EC0 (Plus)
Identifier: K2442HXH MC56-8 [MC55] (c)Microcom 02/03/01
Algorithm: Factory default
Data type: Axle sensors - Paired (Class/Speed/Count)

Site: [22221] GOONYELLA ROAD BEFORE 8049
Direction: 7 - North bound A>B, South bound B>A., Lane: 0
Survey Duration: 13:11 Wednesday, 2 February 2005 => 12:38 Wednesday, 16 February 2005
File: H:\working documents\Engineering\ROADS\Traffic Counts\Goonyella\2222116Feb2005.EC0 (Plus)
Identifier: K2442HXH MC56-8 [MC55] (c)Microcom 02/03/01
Algorithm: Factory default
Data type: Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time: 13:11 Wednesday, 2 February 2005 => 13:15 Wednesday, 2 March 2005
Included classes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range: 10 - 160 km/h.
Direction: North, East, South, West (bound)
Separation: All - (Headway)
Name: Factory default profile
Scheme: Vehicle classification (AustRoads94)
Units: Metric (meter, kilometer, m/s, km/h, kg, tonne)
In profile: Vehicles = 44553 / 44581 (99.94%)

Class Bins

Class 1 - 37966 (85.22%)
 Class 2 - 311 (0.70%)
 Class 3 - 3504 (7.86%)
 Class 4 - 724 (1.63%)
 Class 5 - 305 (0.68%)
 Class 6 - 6 (0.01%)
 Class 7 - 59 (0.13%)
 Class 8 - 70 (0.16%)
 Class 9 - 597 (1.34%)
 Class 10 - 528 (1.19%)
 Class 11 - 480 (1.08%)
 Class 12 - 3 (0.01%)

*** Wednesday, 2 February 2005 - Total=894 (Incomplete), 15 minute drops**

[unlabeled]; 16-bit groups																							
0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
-	-	-	-	-	-	-	-	-	-	-	-	-	34	68	64	142	257	235	59	21	5	5	5
-	-	-	-	-	-	-	-	-	-	-	-	-	0	28	16	42	45	90	28	8	1	1	2
-	-	-	-	-	-	-	-	-	-	-	-	-	19	18	17	32	66	49	10	9	2	2	1
-	-	-	-	-	-	-	-	-	-	-	-	-	4	17	14	38	58	49	12	4	2	0	1
-	-	-	-	-	-	-	-	-	-	-	-	-	11	15	17	30	88	48	8	0	0	2	1

*** Thursday, 3 February 2005 - Total=1862, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
2	3	1	0	24	304	307	100	56	56	51	82	59	54	59	70	133	239	224	37	19	9	7	2
0	0	0	0	2	35	86	33	15	17	23	13	11	23	8	14	34	41	82	18	11	1	1	0
1	1	1	0	4	64	66	20	15	11	12	9	16	9	15	18	38	73	49	9	6	1	3	0
0	1	0	0	4	102	68	18	11	12	9	19	11	10	18	16	27	59	42	8	1	1	2	1
1	1	0	0	14	109	87	29	15	16	7	12	21	12	12	22	34	66	51	2	1	3	1	1

AM Peak 0630 - 0630 (357), AM PHF=0.87 PM Peak 1715 - 1815 (280), PM PHF=0.85

*** Friday, 4 February 2005 - Total=1695, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
0	2	1	4	21	293	274	78	51	49	57	47	60	75	84	115	97	150	177	39	10	5	5	1
0	1	1	0	2	46	61	38	16	15	14	10	21	15	19	20	31	25	58	7	1	0	1	0
0	1	0	1	3	66	59	7	10	9	18	10	18	9	17	43	19	34	44	13	3	2	1	0
0	0	0	1	2	89	56	11	12	13	6	12	9	22	20	30	29	39	32	14	5	1	1	0
0	0	0	2	14	90	76	22	13	12	19	15	12	29	29	22	19	52	43	5	1	2	2	1

AM Peak 0515 - 0615 (328), AM PHF=0.91 PM Peak 1730 - 1830 (193), PM PHF=0.83

*** Saturday, 5 February 2005 - Total=913, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
0	4	1	4	11	181	135	37	15	25	18	18	21	24	31	22	43	139	139	26	8	6	4	5
0	0	0	1	0	18	38	14	5	8	2	4	9	4	12	6	14	20	45	13	2	1	2	1
0	3	1	0	1	39	27	7	2	7	5	6	4	10	7	8	11	24	27	10	4	0	1	0
0	1	0	1	1	55	29	9	5	3	5	3	3	2	6	2	8	39	22	2	2	3	1	1
0	0	0	2	9	69	41	7	3	7	6	5	5	8	6	6	10	62	39	3	0	2	0	3

AM Peak 0515 - 0615 (201), AM PHF=0.73 PM Peak 1730 - 1830 (167), PM PHF=0.67

*** Sunday, 6 February 2005 - Total=824, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	0	3	1	7	170	119	28	18	20	14	11	10	14	21	23	38	133	138	22	14	14	2	3
0	0	1	1	0	18	34	15	7	4	3	2	4	2	5	7	9	24	40	10	3	6	2	1
0	0	1	0	0	49	30	3	5	5	4	2	1	3	11	6	8	27	35	6	4	6	0	0
0	0	1	0	1	50	24	5	4	6	3	3	3	5	2	5	7	39	34	5	4	1	0	2
1	0	0	0	6	53	31	5	2	5	4	4	2	4	3	5	14	43	29	1	3	1	0	0

AM Peak 0515 - 0615 (186), AM PHF=0.88 PM Peak 1730 - 1830 (167), PM PHF=0.91

*** Monday, 7 February 2005 - Total=1854, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
2	5	2	2	23	317	292	74	67	55	41	51	45	35	50	60	166	242	239	49	21	4	9	3
1	1	0	0	2	37	61	31	21	17	13	13	4	14	11	15	34	52	76	19	6	1	3	0
0	3	1	1	2	66	57	17	23	12	3	8	8	11	13	14	50	68	73	8	8	2	3	1
1	1	0	0	3	111	81	9	5	15	11	15	17	4	13	15	40	56	45	10	7	0	1	2
0	0	1	1	16	103	73	17	18	11	14	15	16	6	13	16	42	66	45	12	0	1	2	1

AM Peak 0515 - 0615 (361), AM PHF=0.81 PM Peak 1730 - 1830 (271), PM PHF=0.89

*** Tuesday, 8 February 2005 - Total=1979, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
5	11	3	3	23	324	339	86	52	53	45	59	59	51	58	58	175	257	230	62	7	9	6	3
1	8	0	2	2	38	90	30	14	11	11	14	15	13	15	10	52	56	93	36	2	3	1	1
1	1	1	0	3	76	55	19	5	18	13	19	16	16	18	16	38	77	49	15	5	3	1	2
2	2	2	0	3	101	82	18	15	16	10	14	18	11	8	7	48	60	33	7	0	1	4	0
1	0	0	1	15	109	112	19	17	8	11	12	10	11	17	25	37	64	55	5	0	2	0	0

AM Peak 0515 - 0615 (376), AM PHF=0.86 PM Peak 1715 - 1815 (284), PM PHF=0.79

*** Wednesday, 9 February 2005 - Total=1852, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
0	1	3	2	33	292	318	80	46	39	61	47	44	51	47	64	178	229	235	47	19	7	7	2
0	0	2	0	3	32	84	38	12	5	15	10	9	10	14	7	47	47	67	18	10	2	3	2
0	1	1	1	5	64	56	16	10	11	11	11	16	11	13	15	57	53	69	12	8	1	2	0
0	0	0	0	6	100	74	14	11	9	18	15	6	19	8	20	53	61	70	13	0	0	1	0
0	0	0	1	19	96	104	12	13	14	17	11	13	11	12	22	21	69	29	4	1	4	1	0

AM Peak 0515 - 0615 (344), AM PHF=0.86 PM Peak 1745 - 1845 (274), PM PHF=0.98

*** Thursday, 10 February 2005 - Total=1847, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
3	1	0	1	28	294	333	89	54	62	56	45	52	57	44	75	151	242	189	36	18	8	7	2
0	0	0	1	2	30	94	37	17	15	13	8	10	13	13	12	36	44	89	16	8	3	3	2
1	1	0	0	3	58	67	15	10	11	11	14	14	19	11	15	37	50	44	13	5	0	1	0
1	0	0	0	4	111	82	14	13	14	12	14	16	13	9	21	42	75	38	4	5	3	0	0
1	0	0	0	19	95	90	23	14	22	13	12	12	12	11	27	34	73	18	3	0	2	3	0

AM Peak 0530 - 0630 (367), AM PHF=0.83 PM Peak 1715 - 1815 (267), PM PHF=0.81

*** Friday, 11 February 2005 - Total=1777, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	1	0	1	19	318	314	64	42	38	48	43	60	65	123	112	90	181	197	41	14	9	3	3
0	1	0	1	1	49	88	30	12	13	15	9	12	17	37	32	22	37	55	27	2	1	2	0
0	0	0	0	4	65	57	11	12	10	8	15	13	19	29	32	26	40	66	4	5	3	0	0
1	0	0	0	3	105	89	13	6	6	10	10	17	20	28	20	20	45	43	8	4	2	1	2
0	0	0	0	11	105	80	10	10	9	15	9	8	9	39	28	22	59	33	2	3	3	0	1

AM Peak 0515 - 0615 (363), AM PHF=0.86 PM Peak 1730 - 1830 (225), PM PHF=0.85

*** Saturday, 12 February 2005 - Total=863, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
3	1	2	4	19	160	136	41	36	27	17	18	19	22	14	10	44	110	126	35	12	5	1	1
1	1	0	0	1	13	42	21	11	9	5	2	0	6	4	2	4	20	42	17	5	2	0	1
1	0	2	0	3	40	33	5	5	6	3	5	2	4	3	2	16	26	32	6	3	1	1	0
0	0	0	2	5	58	27	11	7	6	5	6	8	10	2	1	7	30	17	7	3	0	0	0
1	0	0	2	10	49	34	6	13	6	4	5	9	2	5	5	15	34	35	5	1	2	0	0

AM Peak 0515 - 0615 (169), AM PHF=0.81 PM Peak 1730 - 1830 (130), PM PHF=0.82

*** Sunday, 13 February 2005 - Total=792, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
2	2	0	0	20	132	105	35	19	15	16	15	19	22	15	19	43	127	116	41	11	4	6	7
1	1	0	0	0	13	26	17	8	4	5	3	5	4	0	1	9	20	40	22	4	1	3	0
0	0	0	0	3	37	38	8	5	3	2	6	2	9	9	9	11	29	23	5	4	0	1	0
0	1	0	0	3	36	19	6	4	4	6	2	5	6	1	5	10	40	21	9	2	1	0	1
1	0	0	0	12	46	23	4	2	5	3	4	6	3	5	4	13	38	32	6	1	2	2	6

AM Peak 0530 - 0630 (148), AM PHF=0.79 PM Peak 1715 - 1815 (147), PM PHF=0.82

*** Monday, 14 February 2005 - Total=1787, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
2	1	4	0	26	254	281	90	58	49	48	44	53	48	61	66	152	249	197	65	9	2	5	3
0	1	0	0	1	28	67	29	14	16	11	13	10	12	19	19	40	58	96	37	5	1	3	0
0	0	3	0	4	56	64	22	15	13	13	15	18	13	12	14	36	58	43	14	2	0	1	1
1	0	0	0	5	87	67	16	14	7	10	8	15	10	11	15	46	68	37	6	1	0	0	1
1	0	1	0	16	83	83	23	15	13	14	9	10	13	19	19	32	65	31	8	1	1	1	1

AM Peak 0630 - 0630 (301), AM PHF=0.86 PM Peak 1715 - 1815 (277), PM PHF=0.81

*** Tuesday, 15 February 2005 - Total=1964, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
4	3	2	2	22	293	324	102	68	50	87	65	60	61	52	90	170	233	229	38	15	3	7	3
2	1	2	0	1	26	98	44	15	14	17	20	25	21	8	19	41	50	73	23	6	2	1	1
1	0	1	2	4	77	69	22	18	12	12	16	7	11	15	25	41	49	38	6	6	0	3	0
1	0	0	0	3	105	77	19	16	18	15	9	13	14	18	19	56	65	37	7	0	1	0	1
0	2	0	0	14	85	90	18	19	6	13	20	15	15	11	27	32	69	61	2	3	0	3	1

AM Peak 0615 - 0615 (365), AM PHF=0.87 PM Peak 1730 - 1830 (285), PM PHF=0.81

*** Wednesday, 16 February 2005 - Total=2065, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
5	3	1	1	26	336	316	93	61	58	61	66	67	62	56	81	151	273	236	56	25	10	14	7
2	2	0	0	5	39	79	37	15	17	17	20	24	15	19	23	34	57	89	16	10	1	3	2
1	1	0	0	6	67	71	24	12	16	13	15	8	17	7	14	36	58	39	13	4	5	3	1
2	0	0	1	1	109	75	13	17	17	13	14	20	15	13	26	40	94	53	20	9	2	5	1
0	0	1	0	14	121	91	19	17	8	18	17	15	15	17	18	42	64	55	7	2	2	3	3

AM Peak 0630 - 0630 (380), AM PHF=0.79 PM Peak 1715 - 1815 (306), PM PHF=0.81

*** Thursday, 17 February 2005 - Total=1921, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
2	1	2	5	27	309	307	99	42	55	80	59	58	33	50	90	163	241	225	41	18	8	3	3
0	0	1	1	2	41	93	33	8	15	13	18	16	6	13	22	41	53	93	23	4	0	2	0
0	0	0	2	2	63	63	27	11	13	29	9	13	8	19	15	41	56	50	7	5	4	1	0
0	1	0	1	3	122	74	12	10	13	15	14	14	12	12	20	44	50	43	7	5	2	0	0
2	0	1	1	20	93	77	27	13	10	23	18	15	7	16	23	37	82	39	4	4	2	0	3

AM Peak 0615 - 0615 (361), AM PHF=0.74 PM Peak 1715 - 1815 (281), PM PHF=0.76

*** Friday, 18 February 2005 - Total=1725, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
4	1	0	1	26	299	308	93	49	53	51	50	66	58	89	112	104	169	152	15	14	5	4	2
2	0	0	0	1	39	96	26	11	10	9	12	14	13	21	34	20	26	49	7	4	2	2	0
0	1	0	1	2	66	59	18	12	10	14	7	11	10	21	26	32	29	33	4	8	0	0	0
2	0	0	0	4	116	78	23	10	21	11	14	21	18	25	22	27	56	34	4	1	0	1	1
0	0	0	0	19	78	75	26	16	12	17	17	20	17	22	30	25	58	36	0	1	3	1	1

AM Peak 0615 - 0615 (366), AM PHF=0.77 PM Peak 1730 - 1830 (186), PM PHF=0.84

*** Saturday, 19 February 2005 - Total=854, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	1	2	3	14	188	122	33	21	15	26	27	21	16	25	17	37	105	144	22	6	5	2	1
0	0	0	1	0	16	43	15	5	3	6	6	3	6	6	5	13	12	51	5	2	3	0	0
1	0	2	2	0	44	14	7	4	3	7	3	4	4	10	4	5	22	33	13	2	1	1	0
0	0	0	0	2	53	21	6	3	8	8	6	11	4	5	5	8	21	24	3	1	0	1	1
0	1	0	0	12	75	44	5	9	1	5	12	5	2	4	3	11	50	36	1	1	1	0	0

AM Peak 0615 - 0615 (215), AM PHF=0.72 PM Peak 1745 - 1845 (158), PM PHF=0.77

*** Sunday, 20 February 2005 - Total=842, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
4	2	0	2	10	149	110	41	23	19	18	20	21	23	18	16	50	131	125	35	15	5	3	2
2	2	0	0	0	16	35	24	12	4	8	1	5	5	6	3	15	14	34	7	8	2	1	0
1	0	0	0	2	41	20	9	0	4	5	2	6	7	0	5	13	22	28	11	2	0	1	0
1	0	0	1	1	43	21	2	7	8	7	9	5	3	2	3	10	42	26	6	2	2	1	1
0	0	0	1	7	49	34	6	4	3	0	8	5	8	10	5	12	53	37	11	3	1	0	1

AM Peak 0615 - 0615 (168), AM PHF=0.88 PM Peak 1730 - 1830 (167), PM PHF=0.74

*** Monday, 21 February 2005 - Total=1839, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
3	0	2	1	28	281	274	78	67	71	54	43	48	55	44	59	151	257	234	50	2	14	6	9
0	0	0	0	2	31	69	25	17	19	11	9	16	14	16	9	52	49	106	20	7	3	1	3
1	0	1	0	3	86	68	15	14	17	10	14	15	15	10	16	33	64	45	12	2	6	4	2
1	0	1	0	2	91	75	18	18	18	12	10	14	10	8	14	34	62	33	12	0	2	0	3
1	0	0	1	21	73	62	20	18	17	21	10	6	16	10	20	32	82	50	6	0	3	1	2

AM Peak 0615 - 0615 (319), AM PHF=0.88 PM Peak 1715 - 1815 (314), PM PHF=0.74

*** Tuesday, 22 February 2005 - Total=2021, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	1	3	3	26	312	329	87	76	50	55	67	61	43	49	88	164	269	249	59	15	4	4	7
0	0	0	0	1	37	89	41	15	11	14	12	17	8	9	11	34	73	93	24	5	0	1	2
0	0	2	3	3	90	72	16	25	18	8	23	15	13	8	19	36	50	51	11	5	1	1	2
0	0	0	0	4	111	76	20	20	11	19	13	13	13	16	27	42	67	52	14	5	1	2	2
1	1	1	0	18	84	92	10	16	10	20	19	16	9	16	31	32	79	53	9	0	2	0	1

AM Peak 0615 - 0815 (364), AM PHF=0.82 PM Peak 1730 - 1930 (290), PM PHF=0.78

*** Wednesday, 23 February 2005 - Total=2085, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	7	1	1	27	338	345	93	59	77	58	63	49	61	55	93	168	260	240	66	6	5	6	7
0	3	0	0	2	44	110	35	21	12	11	15	10	18	16	20	48	53	103	30	2	1	3	1
1	0	0	0	2	94	59	22	11	27	21	17	15	10	14	23	38	64	50	15	1	0	1	2
0	2	1	1	3	114	97	16	14	25	14	16	14	16	10	22	45	74	41	9	2	1	1	2
0	2	0	0	20	86	79	18	13	14	12	15	9	17	15	20	37	69	46	12	1	3	1	2

AM Peak 0615 - 0815 (404), AM PHF=0.89 PM Peak 1715 - 1915 (310), PM PHF=0.75

*** Thursday, 24 February 2005 - Total=1962, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	1	1	3	28	321	320	89	59	66	43	60	59	55	43	91	152	261	240	43	14	8	3	1
0	1	0	0	2	41	92	32	14	20	14	11	16	15	17	20	40	64	107	15	4	0	1	0
1	0	0	0	4	92	62	21	14	12	13	21	17	8	10	24	35	56	40	11	4	2	1	1
0	0	0	1	7	101	82	16	16	21	9	13	14	16	12	19	43	55	34	10	3	2	0	0
0	0	1	1	15	87	84	20	15	13	7	15	12	16	4	28	30	86	39	7	3	4	1	0

AM Peak 0615 - 0815 (372), AM PHF=0.92 PM Peak 1715 - 1915 (304), PM PHF=0.71

*** Friday, 25 February 2005 - Total=1757, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
3	4	1	3	32	323	280	68	52	36	56	54	64	67	81	95	99	203	167	26	14	9	4	4
0	4	0	0	2	50	95	23	14	10	11	9	18	20	21	28	35	47	54	10	4	2	1	2
1	0	1	1	4	71	59	12	11	8	17	16	17	22	19	20	23	47	42	5	7	2	0	1
2	0	0	2	6	104	89	20	16	8	15	13	12	15	21	27	18	47	34	9	2	1	2	0
0	0	0	0	20	98	73	13	11	12	13	16	17	10	30	20	23	62	37	2	1	4	1	1

AM Peak 0615 - 0815 (368), AM PHF=0.88 PM Peak 1715 - 1915 (210), PM PHF=0.85

*** Saturday, 26 February 2005 - Total=942, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
4	1	0	5	19	193	165	40	25	23	27	19	9	16	29	21	36	152	125	20	7	4	0	2
0	0	0	0	1	28	50	17	4	5	7	6	1	1	8	4	10	28	42	12	2	0	0	0
0	1	0	1	0	48	34	11	9	6	7	4	1	6	9	8	9	34	32	6	1	2	0	1
3	0	0	4	7	59	40	6	9	3	7	4	2	3	6	4	8	35	19	2	4	1	0	1
1	0	0	0	11	58	41	6	3	9	6	5	5	6	6	5	9	55	32	0	0	1	0	0

AM Peak 0615 - 0815 (216), AM PHF=0.91 PM Peak 1715 - 1915 (186), PM PHF=0.75

*** Sunday, 27 February 2005 - Total=842, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
2	3	2	1	11	164	124	30	16	19	12	15	15	16	14	15	45	143	151	20	14	6	2	2
0	0	0	1	0	20	39	14	5	4	3	6	6	4	8	16	24	48	9	7	3	1	0	1
0	1	1	0	1	41	27	5	6	5	1	2	5	3	3	1	8	30	25	2	4	1	1	1
1	1	1	0	4	51	24	7	0	5	2	7	2	5	1	9	8	35	31	7	1	1	0	0
1	1	0	0	6	52	34	4	5	4	5	3	2	2	8	3	13	54	47	2	2	1	0	1

AM Peak 0615 - 0815 (183), AM PHF=0.88 PM Peak 1715 - 1915 (167), PM PHF=0.77

*** Monday, 28 February 2005 - Total=1789, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
2	1	2	2	28	303	274	64	45	55	41	58	51	46	47	66	161	232	251	38	8	5	6	3
1	0	0	1	2	41	78	27	10	18	10	15	6	11	19	20	39	41	114	15	5	0	4	1
1	0	1	0	3	79	64	13	8	14	12	12	16	13	16	13	28	68	58	6	2	2	0	0
0	0	0	0	7	109	58	10	14	15	9	15	14	9	11	51	59	42	10	1	3	0	2	0
0	1	1	1	16	74	74	14	13	8	10	16	15	14	9	22	43	64	37	7	0	0	2	0

AM Peak 0615 - 0815 (340), AM PHF=0.78 PM Peak 1715 - 1915 (305), PM PHF=0.67

*** Tuesday, 1 March 2005 - Total=1956, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
2	2	5	3	22	303	331	89	62	57	52	35	61	46	54	68	159	265	256	46	23	6	9	1
0	1	1	0	2	37	116	35	14	17	10	9	10	17	11	10	41	55	110	21	9	2	2	1
0	0	2	0	4	87	58	21	12	13	19	13	17	13	15	16	43	70	53	11	5	3	2	0
0	0	1	3	6	98	72	9	14	18	11	7	20	3	18	16	32	53	46	9	6	1	3	0
2	1	1	0	10	81	85	23	22	9	13	6	14	13	10	26	43	87	47	5	3	0	2	0

AM Peak 0615 - 0815 (362), AM PHF=0.82 PM Peak 1715 - 1915 (320), PM PHF=0.73

*** Wednesday, 2 March 2005 - Total=1070 (Incomplete), 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	3	4	3	27	333	331	85	42	65	38	61	55	-	-	-	-	-	-	-	-	-	-	-
1	0	2	0	2	39	96	29	8	16	12	17	13	15	-	-	-	-	-	-	-	-	-	-
0	0	1	0	5	86	73	17	14	13	9	13	10	-	-	-	-	-	-	-	-	-	-	-
0	2	0	2	6	110	81	22	13	19	6	16	18	-	-	-	-	-	-	-	-	-	-	-
0	1	1	1	14	98	81	17	14	17	11	15	14	-	-	-	-	-	-	-	-	-	-	-

AM Peak 0615 - 0815 (380), AM PHF=0.89

MetroCount Traffic Executive Class Bin Chart

ClassBin-63 -- English (ENA)

Datasets:

Site: [22222] GOONYELLA ROAD AFTER 8049
Direction: 7 - North bound A>B, South bound B>A, Lane: 0
Survey Duration: 12:44 Wednesday, 16 February 2005 => 12:38 Wednesday, 2 March 2005
File: H:\working documents\Engineering\ROADS\Traffic Counts\Goonyella\2222202Mar2005.EC0 (Plus)
Identifier: K2174CFQ MC56-6 [MC55] (c)Microcom 02/03/01
Algorithm: Factory default
Data type: Axle sensors - Paired (Class/Speed/Count)

Site: [22222] GOONYELLA ROAD AFTER 8049
Direction: 7 - North bound A>B, South bound B>A, Lane: 0
Survey Duration: 12:39 Wednesday, 2 February 2005 => 12:33 Wednesday, 16 February 2005
File: H:\working documents\Engineering\ROADS\Traffic Counts\Goonyella\2222216Feb2005.EC0 (Plus)
Identifier: K2174CFQ MC56-6 [MC55] (c)Microcom 02/03/01
Algorithm: Factory default
Data type: Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time: 12:39 Wednesday, 2 February 2005 => 12:38 Wednesday, 2 March 2005
Included classes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range: 10 - 160 km/h.
Direction: North, East, South, West (bound)
Separation: All - (Headway)
Name: Factory default profile
Scheme: Vehicle classification (AustRoads94)
Units: Metric (meter, kilometer, m/s, km/h, kg, tonne)
In profile: Vehicles = 37925 / 37947 (99.94%)

Class Bins

Class 1 - 32121 (84.70%)
Class 2 - 243 (0.64%)
Class 3 - 3397 (8.96%)
Class 4 - 498 (1.31%)
Class 5 - 235 (0.62%)
Class 6 - 7 (0.02%)
Class 7 - 43 (0.11%)
Class 8 - 43 (0.11%)
Class 9 - 551 (1.45%)
Class 10 - 367 (0.97%)
Class 11 - 420 (1.11%)
Class 12 - 0 (0.00%)

* Wednesday, 2 February 2005 - Total=779 (Incomplete), 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
-	-	-	-	-	-	-	-	-	-	-	-	-	36	61	55	126	225	201	44	19	3	5	4
-	-	-	-	-	-	-	-	-	-	-	-	-	12	15	14	33	44	63	24	7	1	1	2
-	-	-	-	-	-	-	-	-	-	-	-	-	13	15	14	28	55	41	8	8	1	2	1
-	-	-	-	-	-	-	-	-	-	-	-	6	3	16	13	37	50	33	7	4	1	0	1
-	-	-	-	-	-	-	-	-	-	-	-	9	8	15	14	22	76	44	5	0	0	2	0

* Thursday, 3 February 2005 - Total=1614, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
3	0	0	0	18	260	206	63	55	48	44	46	57	39	45	55	118	210	183	23	17	8	4	1
0	0	0	0	2	27	82	30	13	13	19	8	11	17	9	11	31	35	70	16	10	4	1	0
1	0	0	0	2	57	62	15	17	9	11	8	16	8	11	13	34	43	34	8	6	1	2	0
0	0	0	0	2	93	56	15	11	12	7	18	9	5	16	14	25	55	31	6	0	1	1	1
2	0	0	0	12	93	86	23	14	14	7	11	21	9	10	17	28	57	48	3	1	2	0	0

AM Peak 0530 - 0630 (320), AM PHF=0.85 PM Peak 1715 - 1815 (245), PM PHF=0.88

* Friday, 4 February 2005 - Total=1457, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
0	2	1	3	14	245	260	66	99	32	42	45	57	70	69	95	85	131	159	25	8	3	5	1
0	1	1	0	2	41	78	34	13	11	6	8	16	13	16	15	32	17	55	5	2	0	1	0
0	1	0	1	2	53	55	7	9	7	13	9	20	9	13	40	13	25	39	8	3	1	1	0
0	0	0	0	1	66	52	7	8	8	6	12	11	19	15	24	24	40	26	11	2	1	1	0
0	0	0	2	9	86	75	18	9	6	17	16	10	29	25	16	16	49	39	1	1	1	2	1

AM Peak 0630 - 0630 (283), AM PHF=0.83 PM Peak 1730 - 1830 (183), PM PHF=0.83

* Saturday, 5 February 2005 - Total=754, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
0	3	0	3	7	162	121	28	14	17	14	14	15	8	20	13	36	114	121	25	7	5	3	4
0	0	0	1	0	13	35	13	4	3	1	4	7	4	8	4	13	18	44	12	2	0	1	1
0	3	0	0	1	36	27	3	3	7	3	2	4	1	3	1	8	19	25	8	3	0	1	0
0	0	0	0	1	49	22	7	4	2	4	3	1	0	5	1	5	27	15	2	2	3	1	1
0	0	0	2	5	64	37	5	3	5	6	5	3	3	4	4	10	50	37	3	0	2	0	2

AM Peak 0515 - 0615 (184), AM PHF=0.72 PM Peak 1730 - 1830 (146), PM PHF=0.73

* Sunday, 6 February 2005 - Total=684, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	9	3	1	2	134	108	24	13	19	13	14	10	10	16	16	26	110	120	18	11	10	2	3
0	0	1	1	0	13	36	13	5	4	3	3	4	1	3	5	8	16	40	10	2	4	1	1
0	0	1	0	0	31	25	3	3	5	4	2	2	2	9	4	6	23	23	3	4	5	0	0
0	0	1	0	0	43	17	4	3	7	3	4	3	4	1	4	5	31	30	4	3	0	1	2
1	0	0	0	2	47	30	4	2	3	3	5	1	3	3	3	7	41	27	1	2	1	0	0

AM Peak 0515 - 0615 (167), AM PHF=0.84 PM Peak 1715 - 1815 (135), PM PHF=0.82

* Monday, 7 February 2005 - Total=1575, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	5	2	2	16	271	269	58	54	49	95	47	32	30	45	41	153	211	191	33	18	2	8	2
1	1	0	0	2	28	72	21	15	17	12	11	2	11	10	11	33	47	67	11	8	0	3	0
0	3	1	1	2	50	53	13	22	12	2	6	5	8	14	7	46	54	54	6	6	1	2	1
0	1	0	0	1	103	74	8	5	12	9	15	12	5	11	11	39	48	36	6	6	0	1	1
0	0	1	1	11	90	70	16	12	8	12	15	13	8	10	12	39	62	34	10	0	1	2	0

AM Peak 0530 - 0630 (318), AM PHF=0.77 PM Peak 1715 - 1815 (231), PM PHF=0.86

* Tuesday, 8 February 2005 - Total=1686, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
3	5	3	1	15	272	305	74	40	43	26	54	49	40	47	51	161	223	190	53	7	8	3	3
1	3	0	0	1	23	73	27	5	12	8	12	14	12	15	8	48	48	79	36	3	2	1	1
0	1	1	0	3	65	55	13	8	11	11	17	15	9	13	13	37	61	39	10	4	3	1	2
2	1	2	0	1	81	72	17	17	14	8	13	15	12	8	8	43	54	24	5	0	2	1	0
0	0	0	1	10	103	105	17	12	6	9	12	5	7	11	22	33	60	48	2	0	1	0	0

AM Peak 0515 - 0615 (322), AM PHF=0.78 PM Peak 1715 - 1815 (254), PM PHF=0.80

* Wednesday, 9 February 2005 - Total=1586, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
0	0	2	2	23	245	289	70	31	33	52	43	35	38	40	53	158	200	198	27	18	3	5	1
0	0	1	0	3	26	78	36	7	4	14	9	5	9	13	5	43	43	58	14	9	1	3	1
0	0	1	1	3	66	50	14	7	5	11	12	16	11	8	14	49	42	51	4	8	0	1	0
0	0	0	0	2	83	68	9	9	11	15	11	6	10	7	14	49	55	65	7	0	0	1	0
0	0	0	1	15	90	93	11	8	13	12	11	8	8	12	20	22	60	24	2	1	2	0	0

AM Peak 0530 - 0630 (301), AM PHF=0.84 PM Peak 1745 - 1845 (234), PM PHF=0.90

* Thursday, 10 February 2005 - Total=1561, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
2	1	0	1	17	251	300	76	37	48	48	39	39	38	39	62	141	210	156	30	13	6	5	2
0	0	0	1	1	24	86	32	11	10	11	8	8	9	11	11	39	59	72	15	4	3	3	2
1	1	0	0	3	49	56	13	8	11	15	8	10	15	9	8	36	42	40	9	5	0	1	0
1	0	0	0	2	94	76	13	9	13	11	13	9	7	9	14	33	61	30	3	4	1	0	0
0	0	0	0	11	84	82	18	9	14	11	10	12	7	10	29	33	68	14	3	0	2	1	0

AM Peak 0530 - 0630 (320), AM PHF=0.85 PM Peak 1715 - 1815 (243), PM PHF=0.84

* Friday, 11 February 2005 - Total=1496, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	0	0	0	13	254	282	65	34	37	42	35	33	46	102	101	78	148	168	35	11	6	3	2
0	0	0	0	1	29	78	32	9	12	12	8	11	9	32	28	21	19	48	22	2	0	2	0
0	0	0	0	3	53	54	10	9	10	7	12	9	16	23	30	29	34	98	3	4	1	1	0
1	0	0	0	1	84	77	11	7	6	9	9	8	11	24	20	12	42	33	9	2	2	0	1
0	0	0	0	8	88	73	12	9	9	14	6	5	11	23	23	16	59	29	1	3	3	0	1

AM Peak 0530 - 0630 (304), AM PHF=0.86 PM Peak 1730 - 1830 (201), PM PHF=0.87

* Saturday, 12 February 2005 - Total=692, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	1	1	4	11	145	107	35	19	10	12	17	18	12	9	34	91	110	28	6	4	0	0	0
0	1	0	0	0	11	34	17	5	2	4	3	1	5	3	2	6	15	40	14	2	2	0	0
0	0	1	0	1	38	25	4	3	2	2	4	2	5	2	2	12	17	25	6	1	1	0	0
0	0	0	3	3	50	20	8	3	5	2	3	8	5	2	1	4	25	16	6	2	0	0	0
1	0	0	1	7	46	28	6	8	3	2	2	6	3	5	3	12	34	28	2	1	1	0	0

AM Peak 0515 - 0615 (168), AM PHF=0.84 PM Peak 1730 - 1830 (125), PM PHF=0.78

* Sunday, 13 February 2005 - Total=661, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	2	0	0	14	122	99	25	21	13	13	9	16	14	11	17	26	108	101	31	6	6	1	5
0	1	0	0	0	12	27	11	8	8	5	2	4	3	0	1	8	12	38	16	2	2	1	0
0	0	0	0	2	33	37	6	3	4	3	3	2	5	7	10	7	24	19	3	3	1	0	0
0	1	0	0	1	31	12	7	8	2	3	2	6	4	0	4	5	36	20	9	0	2	0	0
1	0	0	0	11	46	23	1	2	2	2	2	4	2	4	2	8	36	24	3	1	1	0	3

AM Peak 0530 - 0630 (141), AM PHF=0.77 PM Peak 1715 - 1815 (134), PM PHF=0.88

* Monday, 14 February 2005 - Total=1490, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
0	0	0	1	17	212	258	70	51	44	34	41	42	44	46	49	139	224	162	40	6	2	5	3
0	0	0	0	1	22	56	26	13	14	8	13	6	10	16	20	39	52	67	20	3	1	3	0
0	0	0	1	2	47	60	16	14	13	9	11	15	14	7	7	36	47	33	11	2	0	1	1
0	0	0	0	3	67	63	13	12	4	8	8	13	7	7	12	36	66	31	4	1	0	0	0
0	0	0	0	11	76	79	15	12	13	9	9	9	13	16	10	29	59	31	5	0	1	1	2

AM Peak 0530 - 0630 (259), AM PHF=0.85 PM Peak 1715 - 1815 (238), PM PHF=0.89

* Tuesday, 15 February 2005 - Total=1649, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
2	2	3	2	15	299	301	78	49	39	51	46	49	58	51	69	148	204	191	28	14	1	6	3
0	1	2	0	0	17	88	39	15	12	12	15	20	18	8	12	39	45	56	15	6	1	1	1
0	0	1	2	3	64	59	14	9	8	18	11	3	12	15	19	36	38	47	5	5	0	3	0
2	0	0	0	1	78	70	10	9	15	12	4	10	10	18	15	32	57	31	6	0	0	0	1
0	1	0	0	11	80	84	16	16	4	9	16	16	18	10	23	22	64	57	2	3	0	2	1

AM Peak 0515 - 0615 (310), AM PHF=0.88 PM Peak 1730 - 1830 (224), PM PHF=0.85

* Wednesday, 16 February 2005 - Total=1744, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
4	2	0	1	14	290	279	77	47	51	43	60	43	54	49	74	132	240	193	41	23	9	12	6
2	2	0	0	1	33	74	35	12	16	11	18	18	13	13	19	33	47	70	13	12	1	3	2
0	0	0	0	4	62	62	17	9	14	10	18	9	10	6	10	32	48	35	9	1	5	3	1
2	0	0	1	0	84	65	10	13	15	9	10	4	13	12	26	36	83	42	15	7	2	3	1
0	0	0	0	9	111	76	15	13	6	14	14	12	18	10	19	32	62	46	4	3	1	3	2

AM Peak 0515 - 0615 (331), AM PHF=0.76 PM Peak 1715 - 1815 (263), PM PHF=0.78

* Thursday, 17 February 2005 - Total=1636, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
0	1	1	4	22	267	280	73	33	50	59	54	46	25	48	71	144	215	187	30	16	8	3	0
0	0	0	1	2	30	89	25	9	20	9	14	12	6	12	21	37	48	81	17	4	0	2	0
0	0	0	2	1	54	58	19	10	14	23	10	10	6	15	13	40	47	39	6	4	4	1	0
0	1	0	1	2	104	59	10	6	9	12	16	12	8	9	19	34	45	33	5	4	2	0	0
0	0	1	0	17	79	74	19	8	7	14	14	12	5	12	18	33	75	34	2	4	2	0	0

AM Peak 0530 - 0630 (330), AM PHF=0.78 PM Peak 1715 - 1815 (248), PM PHF=0.77

* Friday, 18 February 2005 - Total=1542, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
4	0	0	1	18	259	284	77	42	50	44	45	65	67	76	105	93	253	133	13	14	4	4	3
2	0	0	0	1	33	91	23	12	12	10	9	14	12	19	33	21	21	42	5	4	1	2	0
0	0	0	1	1	52	52	16	8	9	13	7	12	12	16	21	26	25	29	4	8	0	0	1
2	0	0	0	2	99	66	21	6	18	10	13	22	16	20	22	22	48	31	4	1	0	1	1
0	0	0	0	14	75	75	17	14	11	11	14	17	17	21	29	24	57	31	0	1	3	1	1

AM Peak 0515 - 0615 (317), AM PHF=0.80 PM Peak 1730 - 1830 (176), PM PHF=0.77

* Saturday, 19 February 2005 - Total=759, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	1	1	2	9	178	110	23	23	12	24	21	21	14	15	14	25	98	136	18	6	4	2	1
0	0	0	0	0	10	36	9	5	3	6	4	2	4	3	5	12	10	51	3	2	2	0	0
1	0	1	2	0	42	14	5	3	4	6	4	4	5	5	4	3	21	29	11	2	1	1	0
0	0	0	0	0	53	20	6	3	4	6	6	9	4	4	4	5	19	22	3	0	0	1	1
0	1	0	0	5	73	40	3	12	1	6	7	6	1	3	3	5	49	34	1	2	1	0	0

AM Peak 0515 - 0615 (204), AM PHF=0.70 PM Peak 1745 - 1845 (160), PM PHF=0.74

* Sunday, 20 February 2005 - Total=707, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
2	2	0	6	6	138	95	32	20	35	14	11	15	16	13	15	38	121	104	26	10	4	3	2
1	2	0	0	0	15	31	17	10	3	5	2	4	2	5	3	13	11	30	4	5	1	1	0
0	0	0	0	2	37	17	8	1	4	5	2	3	5	0	4	8	22	23	7	2	0	1	0
1	0	0	1	0	38	19	2	6	6	4	5	3	3	1	3	7	38	18	5	1	2	1	0
0	0	0	6	4	48	29	5	3	2	0	2	5	6	5	5	10	50	33	10	2	1	0	2

AM Peak 0515 - 0615 (154), AM PHF=0.80 PM Peak 1730 - 1830 (141), PM PHF=0.70

* Monday, 21 February 2005 - Total=1553, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
2	0	1	1	21	231	252	72	56	62	47	38	29	42	31	48	130	220	190	33	9	7	7	7
0	0	0	0	2	21	67	27	11	15	12	9	10	11	12	7	48	42	87	12	6	2	1	2
1	0	0	0	2	70	61	11	14	17	7	10	9	15	8	13	30	50	34	9	3	1	0	1
0	0	1	0	1	77	68	13	11	13	8	10	16	8	7	10	25	53	26	9	0	1	1	2
1	0	0	1	16	63	56	21	20	16	20	9	4	15	4	16	27	75	43	3	0	3	1	2

AM Peak 0515 - 0615 (277), AM PHF=0.80 PM Peak 1715 - 1815 (253), PM PHF=0.76

* Tuesday, 22 February 2005 - Total=1717, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	0	3	2	19	276	293	71	59	45	45	97	49	33	37	71	149	217	204	45	9	2	5	5
0	0	0	0	1	33	85	38	8	11	10	10	14	7	5	9	53	62	84	18	5	0	1	2
0	0	2	2	2	73	63	10	18	18	5	18	18	12	7	16	31	40	38	7	3	0	3	2
0	0	0	0	2	66	63	15	16	8	11	23	7	7	11	16	33	60	36	11	1	0	1	1
1	0	1	0	13	84	82	0	17	8	19	16	10	7	14	28	32	75	46	9	0	2	0	0

AM Peak 0515 - 0615 (328), AM PHF=0.85 PM Peak 1715 - 1815 (269), PM PHF=0.77

* Wednesday, 23 February 2005 - Total=1799, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	4	1	1	18	288	322	74	48	61	52	58	43	48	46	74	157	226	207	51	3	5	5	6
0	2	0	0	1	39	101	27	15	9	10	14	10	11	14	15	46	41	90	25	2	1	3	0
1	0	0	0	1	84	59	17	9	20	19	16	15	11	16	12	36	56	39	11	1	0	0	2
0	1	1	1	1	99	81	10	10	17	11	16	11	10	5	23	40	66	39	7	0	1	1	3
0	1	0	0	15	76	81	20	14	15	12	12	7	16	12	24	38	63	39	8	0	3	1	1

AM Peak 0515 - 0615 (358), AM PHF=0.88 PM Peak 1715 - 1815 (276), PM PHF=0.76

* Thursday, 24 February 2005 - Total=1666, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	1	0	2	21	273	292	68	41	49	37	50	50	34	33	89	143	234	191	37	12	4	3	1
0	1	0	0	2	33	82	24	13	15	10	11	13	10	15	20	48	60	83	12	4	0	1	0
1	0	0	1	2	76	58	14	10	7	10	14	16	4	7	24	25	40	32	9	4	2	1	1
0	0	0	0	4	82	72	13	9	14	8	12	10	12	8	20	39	49	24	9	2	1	0	0
0	0	0	1	13	82	80	17	9	13	9	13	11	8	3	25	31	85	52	7	2	1	1	0

AM Peak 0515 - 0615 (322), AM PHF=0.88 PM Peak 1715 - 1815 (257), PM PHF=0.76

* Friday, 25 February 2005 - Total=1506, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
3	4	0	3	24	270	258	52	44	36	53	43	54	57	72	93	81	172	143	16	12	8	4	2
0	4	0	0	2	37	91	15	13	12	9	6	16	16	19	26	31	38	48	7	3	1	1	2
1	0	0	1	1	61	48	9	11	7	15	14	12	18	14	22	17	40	34	4	7	2	0	1
2	0	0	2	3	84	53	18	12	7	16	14	13	13	18	25	13	36	28	4	2	1	2	0
0	0	0	0	18	88	66	10	8	10	13	9	13	10	21	20	20	58	33	1	0	4	1	1

AM Peak 0515 - 0615 (324), AM PHF=0.89 PM Peak 1715 - 1815 (182), PM PHF=0.78

* Saturday, 26 February 2005 - Total=762, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	1	0	5	10	166	141	30	19	13	14	16	5	14	21	14	24	130	112	17	5	2	0	1
0	0	0	0	0	20	49	11	3	1	4	5	1	4	6	3	9	23	41	11	2	0	0	0
0	1	0	1	0	40	27	9	5	3	5	3	1	5	7	3	7	26	28	4	1	2	0	1
1	0	0	4	4	52	29	7	6	2	3	3	1	3	6	3	4	28	11	2	2	0	0	0
0	0	0	0	6	54	36	3	5	7	2	5	3	2	3	5	4	53	32	0	0	0	0	1

AM Peak 0515 - 0615 (195), AM PHF=0.90 PM Peak 1730 - 1830 (150), PM PHF=0.71

* Sunday, 27 February 2005 - Total=695, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	1	1	1	4	148	110	26	10	16	9	9	13	8	10	13	34	122	127	15	9	5	1	2
0	0	0	1	0	17	37	13	3	5	4	1	6	4	2	6	13	18	39	8	5	3	1	0
0	0	1	0	1	37	21	3	4	4	1	2	3	1	2	1	6	29	22	1	2	0	0	1
0	1	0	0	0	44	21	7	0	4	1	3	2	2	1	3	4	33	25	5	1	1	0	0
1	0	0	0	3	80	31	3	3	3	3	2	2	1	5	3	11	48	41	1	1	1	0	1

AM Peak 0515 - 0615 (168), AM PHF=0.84 PM Peak 1715 - 1815 (143), PM PHF=0.74

* Monday, 28 February 2005 - Total=1571, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	1	2	2	19	264	254	55	37	50	39	52	43	32	41	64	149	209	207	29	8	5	6	3
0	0	0	1	2	29	74	22	9	14	10	14	7	4	8	15	37	34	100	11	6	0	4	1
1	0	1	0	2	72	54	15	7	14	10	9	13	12	16	14	27	58	44	2	1	2	0	0
0	0	0	0	4	95	54	8	11	15	9	15	10	5	8	10	48	50	35	10	1	3	0	2
0	1	1	1	11	68	72	10	10	7	9	14	13	11	9	25	37	67	28	6	0	0	2	0

AM Peak 0515 - 0615 (309), AM PHF=0.84 PM Peak 1715 - 1815 (275), PM PHF=0.69

* Tuesday, 1 March 2005 - Total=1684, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
2	2	2	3	15	262	307	63	53	46	39	29	46	35	60	57	152	231	216	35	17	2	9	1
0	1	0	0	4	26	105	27	10	15	5	8	8	13	13	9	40	44	98	18	8	0	2	1
0	0	0	0	1	77	51	13	9	5	15	12	13	9	16	9	46	59	40	7	3	2	2	0
0	0	1	3	4	83	68	9	13	17	10	7	11	4	19	13	28	49	38	7	3	0	3	0
2	1	1	0	6	76	83	14	21	9	9	2	14	9	12	26	38	79	40	3	2	0	2	0

AM Peak 0515 - 0615 (341), AM PHF=0.81 PM Peak 1715 - 1815 (286), PM PHF=0.73

* Wednesday, 2 March 2005 - Total=905 (Incomplete), 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
1	2	4	1	19	292	304	73	37	59	29	52	-	-	-	-	-	-	-	-	-	-	-	-
1	0	2	0	1	32	92	26	7	16	6	16	12	-	-	-	-	-	-	-	-	-	-	-
0	0	1	0	3	76	61	14	10	11	8	13	12	-	-	-	-	-	-	-	-	-	-	-
0	1	0	1	3	97	71	19	12	17	7	14	8	-	-	-	-	-	-	-	-	-	-	-
0	1	1	0	12	87	80	14	8	15	8	9	-	-	-	-	-	-	-	-	-	-	-	-

AM Peak 0515 - 0615 (362), AM PHF=0.91



Appendix B

Traffic Flow Diagrams

Goonyella Road/Mills Avenue – Weekday

Goonyella Road/Mills Avenue – Weekend

Goonyella Road/AN Plant Access – Weekday

Goonyella Road/AN Plant Access – Weekend

Goonyella Road/Construction Camp Access – Weekday

Goonyella Road/Construction Camp Access – Weekend



Legend

00	Percentage Heavy Vehicles
100	Traffic Volume

Mills Avenue/Goonyella Road - Weekday		Mills Avenue/Goonyella Road - Weekend	
2008 (AM) - Without Construction Camp	2008 (PM) - Without Construction Camp	2008 (AM) - Without Construction Camp	2008 (PM) - Without Construction Camp
2008 (AM) - With Construction Camp	2008 (PM) - With Construction Camp	2008 (AM) - With Construction Camp	2008 (PM) - With Construction Camp

Mills Avenue/Goonyella Road - Weekday		Mills Avenue/Goonyella Road - Weekend	
2008 (AM) - Without Construction Camp	2008 (PM) - Without Construction Camp	2008 (AM) - Without Construction Camp	2008 (PM) - Without Construction Camp
2008 (AM) - With Construction Camp	2008 (PM) - With Construction Camp	2008 (AM) - With Construction Camp	2008 (PM) - With Construction Camp



Goonyella Road/Construction Camp Access - Weekday	
2008 (AM) - With Construction Camp	2008 (PM) - With Construction Camp
<p>Diagram showing traffic flow for 2008 (AM) with construction camp. The diagram includes a horizontal road with a left-turn lane, a through lane, and a right-turn lane. A vertical road intersects from the bottom. Traffic volumes are shown in black and red numbers. Red numbers indicate percentage heavy vehicles.</p> <p>Top left: 0 (black), 44 (red) Top middle: 0 (black), 18 (black) Bottom left: 14 (black), 57 (red) Bottom middle: 14 (black), 420 (black) Bottom right: 14 (black), 14 (red)</p>	<p>Diagram showing traffic flow for 2008 (PM) with construction camp. The diagram includes a horizontal road with a left-turn lane, a through lane, and a right-turn lane. A vertical road intersects from the bottom. Traffic volumes are shown in black and red numbers. Red numbers indicate percentage heavy vehicles.</p> <p>Top left: 0 (black), 57 (red) Top middle: 0 (black), 14 (black) Bottom left: 18 (black), 44 (red) Bottom middle: 18 (black), 174 (black) Bottom right: 18 (black), 18 (red)</p>
Goonyella Road/Construction Camp Access - Weekend	
2008 (AM) - With Construction Camp	2008 (PM) - With Construction Camp
<p>Diagram showing traffic flow for 2008 (AM) with construction camp. The diagram includes a horizontal road with a left-turn lane, a through lane, and a right-turn lane. A vertical road intersects from the bottom. Traffic volumes are shown in black and red numbers. Red numbers indicate percentage heavy vehicles.</p> <p>Top left: 0 (black), 133 (red) Top middle: 0 (black), 133 (black) Bottom left: 133 (black), 0 (red) Bottom middle: 133 (black), 129 (black) Bottom right: 11 (red)</p>	<p>Diagram showing traffic flow for 2008 (PM) with construction camp. The diagram includes a horizontal road with a left-turn lane, a through lane, and a right-turn lane. A vertical road intersects from the bottom. Traffic volumes are shown in black and red numbers. Red numbers indicate percentage heavy vehicles.</p> <p>Top left: 0 (black), 133 (red) Top middle: 0 (black), 133 (black) Bottom left: 133 (black), 0 (red) Bottom middle: 133 (black), 219 (black) Bottom right: 19 (red)</p>

Legend	
00	Percentage Heavy Vehicles
100	Traffic Volume



GHD Pty Ltd ABN 39 008 488 373

201 Charlotte Street Brisbane Qld 4000

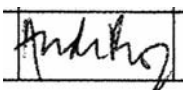
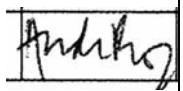
GPO Box 668 Brisbane Qld 4001 Australia

T: (07) 3316 3000 F: (07) 3316 3333 E: bnemail@ghd.com.au

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