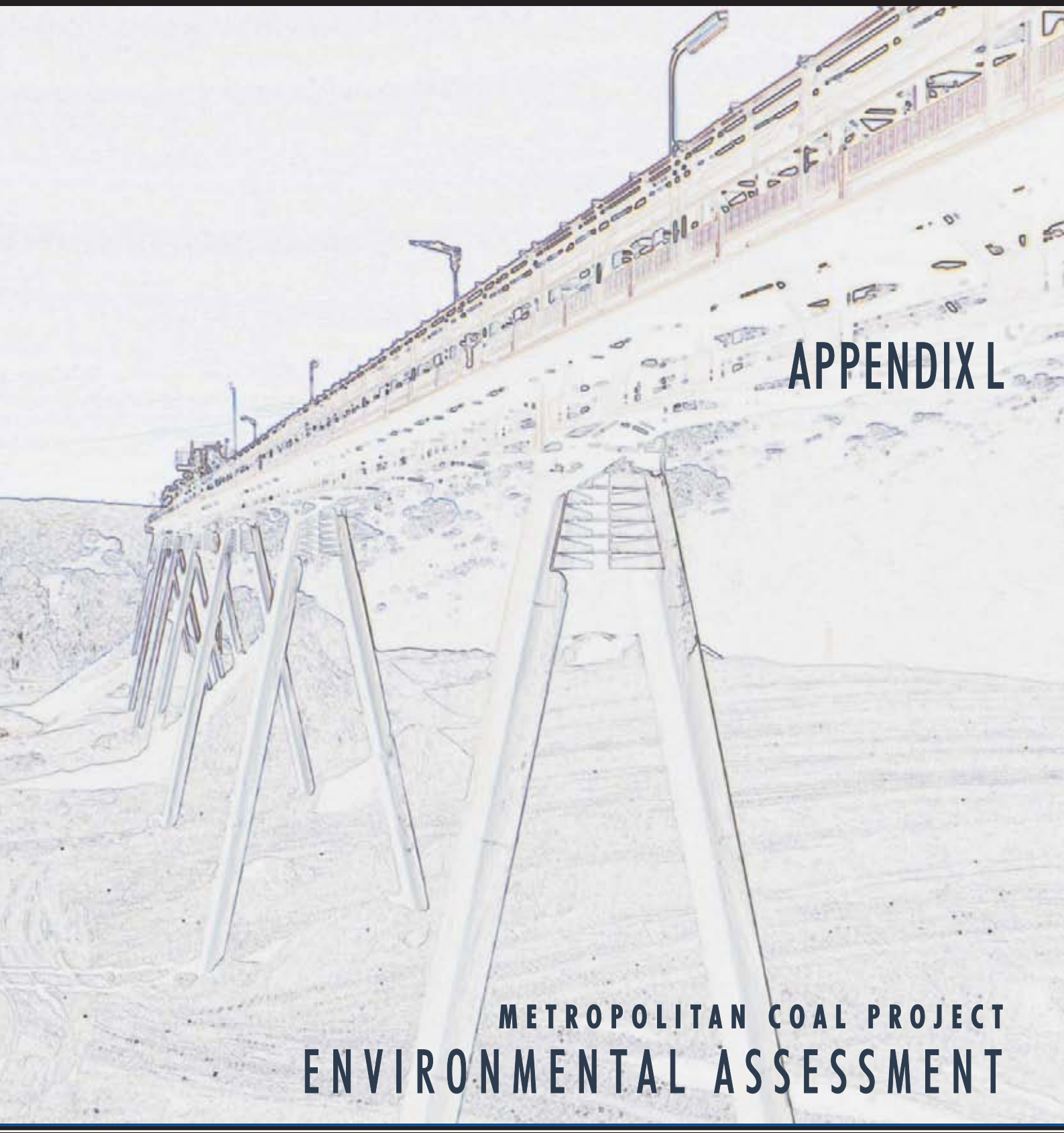


APPENDIX L

METROPOLITAN COAL PROJECT

ENVIRONMENTAL ASSESSMENT

Traffic Report

Metropolitan Colliery
Traffic Assessment

14 August 2008

Prepared for

Helensburgh Coal Pty Ltd

Suite 20/809 Pacific Highway
Chatswood NSW 2067
(t) 02 9410 4100 **(f)** 02 9410 4199
(e) info@mwttraffic.com.au
(w) www.mwttraffic.com.au

MASSON | WILSON | TWINEY
TRAFFIC AND TRANSPORT CONSULTANTS

Disclaimer

The information contained in this document produced by Masson Wilson Twiney Pty Limited is solely for the use of Helensburgh Coal Pty Ltd for the purpose for which it has been prepared and Masson Wilson Twiney Pty Ltd undertakes no duty to or accepts any responsibility to any third party who may rely upon this document.

Author: Penny Dalton
Reviewer: Bruce Masson
Printed: 14 August 2008 1:44 PM

Table of Contents

List of Tables

List of Charts

List of Figures

1. Introduction

This report has been prepared on behalf of Helensburgh Coal Pty Ltd (HCPL) to present the results of an assessment of the traffic implications of a proposal to continue operations at the Metropolitan Colliery at Helensburgh for some 25 years and to increase run-of-mine (ROM) coal production from 1.8 million tonnes per annum (Mtpa) up to 3.2Mtpa. The proposed development is known as the Metropolitan Coal Project (the Project).

An appreciation of the existing traffic situation around the Metropolitan Colliery can be gained by examining the road network, traffic volumes, traffic generated by the existing transport activity at the Metropolitan Colliery, and the operation of key intersections. These aspects are discussed in this report, along with impacts of the expanded production.

The remainder of the report is set out as follows:

- Section 2 describes the existing and proposed colliery transport operations.
- Section 3 describes the road network used by the Metropolitan Colliery haulage contractor's trucks.
- Section 4 presents results of traffic surveys and analyses of existing traffic conditions undertaken for this assessment.
- Section 5 presents estimates of future background traffic growth.
- Section 6 assesses impacts of the Project, including both the construction phase and operational traffic growth.
- Section 7 presents a summary and conclusions.

In the course of preparing this report, enquiries were made of Wollongong Council, Wollondilly Council, Camden Council, Campbelltown Council and the New South Wales (NSW) Roads and Traffic Authority (RTA) regarding background traffic data. In general, the Councils did not have traffic data available, as the roads under investigation are RTA roads, and RTA traffic data is presented in this report.

This assessment has focussed on the Metropolitan Colliery contractor haulage routes, as the heavy vehicles used have significantly more potential to affect traffic conditions and the operation of intersections than light vehicles. Outside of the local Helensburgh area, the volume of light vehicles generated by the Metropolitan Colliery rapidly becomes quite minor in the context of the background traffic levels on the major arterial and sub-arterial road network in the region.

This study has been undertaken with reference to the environmental assessment requirements of the NSW Department of Planning (DoP) for this Project. The assessment has therefore been prepared in accordance with the NSW RTA's "Guide to Traffic Generating Developments" (2002). The DoP also requires reference to the NSW RTA's "Road Design Guide" (1996). However, no roadworks are proposed as part of the Project, thus no road design is required, and this document has not been referenced in this assessment.

2. Existing and Proposed Colliery Operations

2.1 Existing Operations at Metropolitan Colliery

Metropolitan Colliery is owned and operated by HCPL, and is located on Colliery Road, Helensburgh, as shown on **Figure 1** of this report. The colliery dates back to the 1880s, and longwall mining commenced in 1995. The mine currently produces some 1.8 million tonnes (Mt) of ROM coal and 1.5 Mt of hard coking and semi-hard coking coal per year. The majority of product coal (approximately 90 percent) is currently transported by train to the Port Kembla Coal Terminal for transport to domestic and overseas customers.

Product coal for export is transported by rail to Port Kembla Coal Terminal, with trains operating up to 24 hours per day, seven days per week. Product coal for the domestic market is transported by road to Corrimal Coke Works and Coalcliff Coke Works, five days per week. Coal reject material is moved by road to Glenlee Washery for disposal, five days per week. The locations of these sites are shown on **Figure 2**.

The existing operational workforce at Metropolitan Colliery comprises some 320 people, being approximately 235 HCPL staff and 85 on-site contractors.

The majority of trucks used for hauling coal and coal reject are semi-trailer tippers with bogie drive prime movers and tri-axle trailers. On occasions, truck and super dog combinations are used, comprising either bogie drive prime movers and tri-axle dog trailers, or bogie drive prime movers and four-axle dog trailers. The truck-trailer combinations have a gross vehicle mass (GVM) of 42.5 tonnes and a payload of 27.5 tonnes, and the truck and dog combinations have a GVM of 50 tonnes, and a 32 tonne payload.

Truck routes used to transport material from the Colliery are also shown on **Figure 2**. Trucks travelling to Corrimal Coke Works use Parkes Street, Old Princes Highway, F6 Southern Freeway, Princes Highway (Bulli Pass Road), Bellambi Lane, Northern Distributor, and Railway Street to reach the Coke Works.

Trucks travelling to Coalcliff Coke Works use Parkes Street, Old Princes Highway, and Lawrence Hargrave Drive.

Trucks travelling to Glenlee Washery use Parkes Street, Old Princes Highway, F6 Southern Freeway, Appin Road, Bulli Appin Road, Church Street, Appin Road, Narellan Road, Camden Bypass, Macarthur Road, Springs Road, and Glenlee Road. When Bulli Tops is fogged in, these trucks use Parkes Street, Old Princes Highway, F6 Southern Freeway, Wilton Road, F5 Freeway Wilton to Kenny Hill off ramp, Narellan Road, Camden Bypass, Macarthur Road, Springs Road and Glenlee Road.

Trucks transporting product coal normally operate out of Metropolitan Colliery between 7:00am and 5:00pm, Monday to Friday. On average, 12 truck loads per day are moved to Coalcliff, with a maximum of 20 truck loads per day, and 12 truck loads per day are moved to Corrimal per day, with a maximum of 20 truck loads.

2.2 Project Description

The Project would extend the life of the Metropolitan Colliery by approximately 25 years by continued development of underground mining operations within existing HCPL coal lease and sub-lease and two new Mining Lease Application areas. The existing mining and materials handling systems on the site would be upgraded to facilitate an increased ROM coal production from 1.8 Mtpa up to 3.2 Mtpa.

The main activities associated with development of the Project would include:

- ongoing surface and underground exploration activities in the Project underground mining area and surrounds;
- continued development of underground mining operations within existing HCPL coal lease (and associated sub-lease) and two new Mining Lease Application areas (MLA 1 and MLA 2);
- upgrades of the existing mining and materials handling systems (e.g. longwall machinery and conveyors) to facilitate an increased ROM coal production rate (up to approximately 3.2 Mtpa);
- upgrades of the Coal Handling and Preparation Plan (CHPP) to facilitate increased production of washed coal (approximately 2.8 Mtpa), including the addition of a beneficiation circuit to produce a new thermal coal product;
- continued transport of coal reject to the Glenlee Washery for emplacement by Sada (with annual road movements capped at the existing maximum rate);
- continued transport of product coal by road to Coalcliff and Corrimal Coke Works (with annual road movements capped at the existing maximum rate);
- construction of a coal reject paste plant and associated coal reject stockpile, pumping, pipeline and underground delivery systems to facilitate the underground backfilling of the mine void using coal reject materials as an integrated component of the longwall mining operation;
- train loading and train movements associated with the transport of product coal to Port Kembla 24 hours per day, seven days per week;

- surface access within the Woronora Special Area and surrounds that is required for the environmental monitoring, management and remediation of mine subsidence;
- upgrades and/or extension of the existing supporting infrastructure systems (e.g. underground access, water management system, yard area, conveyor transfers and drives, ventilation, gas management and electrical systems) as required;
- extension of the life of the Metropolitan Colliery by approximately 25 years; and
- other associated minor infrastructure, plant, equipment and activities.

HCPL does not propose to increase the maximum annual rate of the transport of coking coal to Corrimal and Coalcliff, or the maximum annual rate of coal reject transport to Glenlee Washery. The annual road movements on these routes would be capped at the existing annual maximum levels, and the existing routes used by the trucks would remain unchanged. The potential impacts of the Project with regard to traffic would therefore be restricted to some limited additional construction traffic and operational deliveries and the continuation of these existing haulage activities over the extended life of the Metropolitan Colliery.

The Project Description indicates that the transport of coal reject to Glenlee Washery would cease in Year 12, however for simplicity, the assessment which follows assumes that these movements would continue at the current maximum rate for the life of the Project. The resulting assessment is therefore conservative with respect to potential traffic impacts.

The existing operational workforce at Metropolitan Colliery of 320 people would be maintained, with some additional staff during the construction phase.

HCPL's proposed development schedule covers the period from the beginning of 2010 to the end of 2032. Construction activities would be staged and progressive, and would take place from 2010 to 2014 inclusive.

3. Existing Road Network

The existing road network surrounding the colliery and being used by the colliery haulage contractor's trucks is described in this section.

3.1 Road Hierarchy

It is usual to classify roads according to a road hierarchy, in order to determine their functional role within the road network. Changes to traffic flows on the roads can then be assessed within the context of the road hierarchy. Roads are classified according to the role they fulfil and the volume of traffic they should appropriately carry given their classification. The RTA has set down the following guidelines for the functional classification of roads:

- Arterial Road - typically a main road carrying over 15,000 vehicles per day and fulfilling a role as a major inter-regional link (over 1,500 vehicles per hour).
- Sub-arterial Road - defined as secondary inter-regional links, typically carrying volumes between 5,000 and 20,000 vehicles per day (500 to 2,000 vehicles per hour).
- Collector Road - provides a link between local roads and regional roads, typically carrying between 2,000 and 10,000 vehicles per day (250 to 1,000 vehicles per hour). At volumes greater than 5,000 vehicles per day, residential amenity begins to decline noticeably.
- Local Road - provides access to individual allotments, carrying low volumes, typically less than 2,000 vehicles per day (250 vehicles per hour).

In recent years the RTA has adopted a classification system relating to funding purposes. It defines roads as:

- State Roads – performing an important state function for which the RTA funds one hundred percent of the maintenance cost. State roads are essentially arterial roads.
- Regional Roads – roads performing a significant regional function and for which the RTA and Council contribute fifty percent each towards maintenance. Regional roads are essentially sub-arterial roads.

- Local Roads – roads performing a local or collector function and for which the Council funds one hundred percent of the maintenance cost.

The hierarchy of roads of relevance to the Metropolitan Colliery is provided below.

3.2 Regional Transport Setting

The Metropolitan Colliery is located in Helensburgh, which is located approximately 40 kilometres (km) south of Sydney and approximately 30km north of Wollongong, NSW (**Figure 2**). The major regional roads include:

The **F6 Southern Freeway** is an arterial road, which provides the major link road between Sydney and Wollongong. The freeway extends southwards from Princes Highway at Waterfall and follows the Woronora Plateau to the Bulli Tops Interchange, which it meets Old Princes Highway, Appin Road and Mount Ousley Road (which forms part of the freeway itself). The Southern Freeway then descends the Illawarra Escarpment and parallels the Wollongong metropolitan area for its entire length. Once on the coastal plan, the freeway continues south for a further 20km, where it again meets Princes Highway to the north of Albion Park Rail.

Princes Highway (State Highway No. 1) is an arterial road which provides a major link between Sydney and Wollongong. The Freeway replaces Princes Highway along much of its length, and the Old Princes Highway roughly parallels the freeway route. Princes Highway extends southwards from Parramatta Road at Broadway through the southern suburbs of Sydney and around the western boundary of the Royal National Park, and provides access to the F6 Southern Freeway at Waterfall. It heads south through the Illawarra region of NSW and the city of Wollongong. It continues south, through the South Coast of NSW, passing through Nowra and Batemans Bay, and finally crossing the border into Victoria south of Eden.

Appin Road (Main Road 177, State Route 69) is a sub-arterial road which provides a transport link between Bulli Heights north of Wollongong and Campbelltown. The route continues farther north as Campbelltown Road (State Route 56) and joins the F5 South Western Freeway north of Campbelltown. Appin Road passes through the town of Appin.

Narellan Road (partly State Route 69) is an arterial road which forms part of Metroad 9 connecting Campbelltown to Windsor. Narellan Road itself connects Campbelltown and Narellan, with a major interchange at South Western Freeway/Hume Highway. Narellan Road is presently being extended westward from Camden Valley Way to The Northern Road at Narellan.

The **Sydney-Kiama Railway** extends through the region, providing a passenger and freight rail link along the coast between Kiama and Sydney via Wollongong. Metropolitan Colliery is connected to the main line via a siding between Helensburgh Station and Otford Station.

3.3 Roads of Relevance to the Metropolitan Colliery Operations

The roads used by the haulage contractor's trucks travelling to and from Metropolitan Colliery are briefly described below.

Colliery Road is a private road which provides access to Metropolitan Colliery from Parkes Street. It has a wide carriageway with little or no linemarking. It has some steep sections and tight bends, but accommodates the large trucks used by the haulage contractor. It intersects with Parkes Street at a tee intersection.

Parkes Street forms the primary access road through Helensburgh and functions as a collector road for the Helensburgh township. It extends eastwards from Old Princes Highway and has a single travel lane in each direction. It has double centre lines, and kerbside parking is generally permitted along both kerbs. Parkes Street provides access to local streets in the Helensburgh area, and to the local shopping area around the Walker Street intersection. At intersections, Parkes Street has priority over side street traffic, with the exception of the Walker Street intersection, which is controlled with a roundabout. Parkes Street forms the stem of the tee intersection with Old Princes Highway, so Old Princes Highway has priority.

Lawrence Hargrave Drive performs a sub-arterial function in the road network, as it provides a secondary regional link along the coast, extending between Old Princes Highway at Helensburgh and Princes Highway at Bulli. The Coalcliff Coke Works is located on Lawrence Hargrave Drive at Coalcliff, and trucks travel between the Coke Works and the Metropolitan Colliery. Lawrence Hargrave Drive typically has a single travel lane in each direction, and has priority over side streets. It provides the only vehicular access to numerous localities along the coast, such as Stanwell Park, Coalcliff and Wombarra. Its intersection with Old Princes Highway at Helensburgh is controlled with a roundabout. At the intersection of Lawrence Hargrave Drive with Otford Road/Lady Wakehurst Drive, Lawrence Hargrave Drive has a hairpin bend. Priority is given to northbound traffic on Lawrence Hargrave Drive, with "Stop" controls for vehicles approaching on Lawrence Hargrave Drive from the west and on Lady Wakehurst Drive from the east. Lawrence Hargrave Drive follows a steep grade down southbound to Stanwell Park. It has a 60 km per hour (km/hr) speed limit, and has double centre lines along most of its length, and kerbside parking is not permitted.

The **F6 Southern Freeway** runs north-south through the region, providing access between Sydney and Bulli. There are ramps at Helensburgh which allow both northbound and southbound traffic to enter and exit the freeway. The southbound on/off ramps form the fourth leg of the roundabout intersection with Lawrence Hargrave Drive and Old Princes Highway. The northbound on/off ramps are located farther to the south, forming the stem of a tee intersection with Old Princes Highway. The Freeway is used by Metropolitan Colliery haulage contractor's trucks travelling to and from Glenlee Washery and the Corrimal Coke Works. This section of the freeway has a 100km/hr speed limit, and two travel lanes in each direction.

Appin Road provides a link between Princes Highway at Bulli Tops to Narellan Road near Campbelltown. It provides the main vehicular access for the township of Appin. To the north of Appin, it is also known as Narellan Appin Road. In the Campbelltown area, Appin Road is a divided road, with two or three travel lanes in each direction, and additional turn lanes at major intersections, which are signal controlled. It has a speed limit of 80 km/hr. Beyond the urban area, the speed limit is 70 km/hr, and the carriageway reduces to an undivided road with a single travel lane in each direction. In the rural area between Campbelltown and Appin, it has a speed limit of 80 km/hr, and a single travel lane in each direction. The road is undulating, with no particularly steep grades or sharp bends. In the township of Appin, the speed limit is 60 km/hr, with a 40 km/hr school zone, and some kerbside parking is permitted.

To the east of Appin, it is also known as Bulli Appin Road, and between Appin and Bulli Tops, Appin Road has one or two travel lanes in each direction, with a 100 km/hr speed limit. This section is undulating, with no particularly steep grades or sharp bends.

Narellan Road extends approximately east-west between Campbelltown and Narellan. It is generally a high quality urban road, with a minimum of two travel lanes in each direction plus additional turn lanes at major intersections. The major intersections are controlled with traffic signals, and the speed limit is 80 km/hr to the west of Blaxland Road, and 60km/hr to the east.

Springs Road is a two lane rural road, which extends eastwards from Macarthur Road through Spring Farm. It has a straight alignment with minor grades. It intersects with Richardson Road at a tee intersection, where Springs Road traffic has priority. It intersects with Macarthur Road at a tee intersection, where Macarthur Road traffic has priority. Springs Road currently functions as a local road, however with planned development of the Spring Farm release area, it will function as a collector road.

Camden Bypass links Narellan Road at Narellan with Old Hume Highway at Camden South and functions as an arterial road. Ramps provide access for northbound and southbound traffic to enter and exit Camden Bypass to and from Macarthur Road. It is a high standard divided road, with two travel lanes in each direction, and 100 km/hr speed limit.

3.4 Possible Changes to the Road System

The RTA has developed a preferred option for the reconstruction of the intersection of Lawrence Hargrave Drive and Princes Highway at the bottom of Bulli Pass. The selected proposal consists of a single northbound lane from Georges Avenue that is aligned west of the existing Princes Highway and spans Bulli Pass to provide a seamless connection with Lawrence Hargrave Drive. This work would remove the existing right turn from the Princes Highway to Lawrence Hargrave Drive.

The Project plan has gone on display to the public, and the RTA is presently considering the submissions before finalising the concept design. It is anticipated that over the life of the Project, this and other road improvements would be made on the regional road system.

3.5 Historic Annual Average Daily Traffic Volumes on RTA Roads

The RTA publishes traffic volume data at selected locations on its roads. Available data on roads used by the Metropolitan Colliery haulage contractor's trucks was collated, and is presented below.

The most recent data available from RTA was from surveys undertaken in 2002 (Sydney Region) and 2003 (Southern Region). This data is presented in Table 3.1. The traffic volume reported at each location is the Annual Average Daily Traffic (AADT), which is assessed as the total volume of traffic recorded at the location taken over a calendar year, divided by the number of days in that year.

Table 3.1 – Annual Average Daily Traffic 2002, 2003

Road	Location	Year	AADT
Route to/from Coalcliff			
Lawrence Hargrave Dr	Stanwell Park, West of Bald Hill Rd	2003	5,546
Route to/from Corrimal			
F6 Freeway	Bulli Tops, 4km North of Appin Rd	2003	36,459
Princes Highway	Bulli Pass, East of Mt Ousley Rd	2003	11,135
	Bulli, South of Sturdee Ave	2003	24,431
	Bulli, North of Molloy St	2003	22,328
	Woonona, South of Campbell St	2003	21,890
	Russell Vale, North of Keerong Ave	2003	22,251
	Corrimal, North of Collins St	2003	14,121
Route to/from Glenlee Washery			
F6 Freeway	Bulli Tops, 4km North of Appin Rd	2003	36,459
Appin Road	Bulli Tops, North of F6 Freeway	2003	9,008
	Appin, North of Maldon Rd	2003	9,255
	Bradbury, South of Woodland Rd	2002	20,885
Narellan Road	Narellan, East of Hartley Rd	2002	45,427
	Campbelltown, West of F5 Freeway	2002	56,320
	Campbelltown, West of Gilchrist Dr	2002	50,387
	Campbelltown, West of Railway Crossing	2002	16,638
	Campbelltown, East of Kellicar Rd	2002	19,914
Camden Bypass	Narellan, Southbound Ramp, S of Narellan Rd	2002	18,610

Source: Traffic Volume Data 2003 Southern Region, Traffic Volume Data 2002 Sydney Region.

The results in Table 3.1 demonstrate the variance in traffic volumes on the routes used by the haulage contractor's trucks. Narellan Road carries over 56,000 vehicles per day near its interchange with F5 South Western Freeway, while Lawrence Hargrave Drive carries around 5,500 vehicles per day at Stanwell Park.

Table 3.2 presents historic AADT data for RTA roads between 1987 and 2003, which shows how changes in daily traffic volumes has occurred on these roads over that period.

Table 3.2 – Historic Annual Average Daily Traffic Data 1987 to 2003

Road	Location	1987	1988	1989	1990	1991	1992	1993	1994	1996	1997	1999	2000	2002	2003
Route to/from Coalcliff															
L.Hargrave Dr	Stanwell Park, West of Bald Hill	-	2,815	-	3,244	-	3,668	-	3,819	-	4,401	-	4,620	-	5,546
Route to/from Corrimal															
F6 Freeway	Bulli Tops, North of Appin Rd	-	16,130	-	17,361	-	18,249	-	19,106	-	24,563	-	29,942	-	36,459
Princes Hwy	Bulli Pass East of Mt Ousley Rd	-	-	-	8,189	-	8,419	-	8,948	-	9,272	-	10,138	-	11,135
	Bulli, South of Sturdee Ave	-	18,475	-	21,067	-	27,257	-	22,023	-	23,826	-	24,648	-	24,431
	Bulli, North of Molloy St	-	-	-	-	-	-	-	-	-	-	-	22,656	-	22,328
	Woonona, South of Campbell St	-	-	-	-	-	-	-	-	-	-	-	23,468	-	21,890
	Woonona, North of Hale St	-	18,312	-	20,234	-	21,415	-	20,095	-	22,202	-	-	-	-
	Russell Vale, North of Keerong Av	-	-	-	22,486	-	22,083	-	20,447	-	21,819	-	22,911	-	22,251
	Corrimal North of Collins	-	-	-	-	-	-	-	-	-	-	-	-	-	14,121
Route to/from Glenlee Washery															
F6 Freeway	Bulli Tops, North of Appin Rd	-	16,130	-	17,361	-	18,249	-	19,106	-	24,563	-	29,942	-	36,549
Appin Rd	Bulli Tops, West of F6 Freeway	-	9,255	-	9,761	-	10,286	-	8,297	-	8,241	-	8,463	-	9,008
	Appin, North of Maldon Rd	-	7,073	-	7,699	-	8,051	-	8,663	-	8,363	-	8,906	-	9,255
Appin Rd	Bradbury, South of Woodland Rd	9,359	-	7,978	-	13,208	-	16,313	-	18,201	-	21,757	-	20,885	-
Narellan Rd	Narellan, East of Hartley Rd	-	-	-	-	-	-	-	-	34,327	-	40,521	-	45,427	-
	Cambelltown, West of F5 Freeway	21,400	-	25,481	-	27,661	-	31,979	-	36,391	-	46,000	-	56,320	-
	Cambelltown, West of Gilchrist Dr	23,489	-	26,520	-	31,713	-	36,603	-	36,899	-	46,632	-	50,387	-
	Cambelltown, West of Railway	-	-	-	-	-	-	-	-	24,020	-	28,189	-	16,638	-
	Cambelltown, East of Menangle Rd	15,332	-	16,294	-	17,515	-	15,882	-	17,822	-	-	-	-	-
	Cambelltown, South of Kellicar Rd		-		-		-		-	15,416	-	21,794	-	19,914	-
Camden Bypass	Southbound Ramp S of Narellan Rd	-	-	-	-	-	-	-	-	14,931	-	17,149	-	18,610	-

Source: Traffic Volume Data 2003 Southern Region, Traffic Volume Data 2002 Sydney Region.

4. Existing Traffic Conditions

4.1 Traffic Survey Programme

A programme of traffic surveys was conducted along the routes used by the Metropolitan Colliery haulage contractor's trucks. These surveys recorded hourly traffic volumes and vehicle classifications by direction over a one week period from Sunday 21 October 2007 to Saturday 27 October 2007 (inclusive) at each of the following locations:

Site 1. Colliery Road near Parkes Street.
Site 2. Parkes Street east of Old Princes Highway at Helensburgh.
Site 3. Lawrence Hargrave Dr between Walker St and Stonehaven Rd, Stanwell Tops.
Site 4. Old Princes Highway at Bulli Pass.
Site 5. Princes Highway north of Bellambi Lane, Russell Vale.
Site 6. Bulli Appin Road, Appin near Kings Fall Bridge.
Site 7. Narellan-Appin Road north of Appin township, south of Brian Road.
Site 8. Appin Road outside Campbelltown Hospital at Ambarvale/Bradbury.
Site 9. Narellan Road east of Hume Highway interchange, Narellan Vale.
Site 10. Camden Bypass between Macarthur Road and Narellan Road at Elderslie.
Site 11. Springs Road west of Richardson Road at Spring Farm.

The survey locations are presented on **Figure 3**. The survey on Colliery Road was repeated for one week from Thursday 15 November to Wednesday 21 November 2007, due to errors in the October survey results. The results presented in this report for Colliery Road are based on the November 2007 survey period.

In addition, morning and evening peak period surveys of vehicle turning movements, including vehicle classifications, were conducted at the following intersections on Wednesday 24 October 2007, between 7:00am and 9:00am, and between 4:00pm and 6:00pm:

Site A. Colliery Road and Parkes Street.
Site B. Parkes Street and Walker Street.
Site C. Parkes Street and Old Princes Highway.
Site D. Old Princes Highway and Lawrence Hargrave Drive.

Site E. Lawrence Hargrave Drive and Walker Street.
Site F. Railway Street and Corrimal Coke Works entry.

The locations of the intersection surveys are presented on **Figures 4A and 4B**. The traffic surveys were supplemented by data collected by HCPL including records of delivery/courier, coal and coal reject truck trips to and from the colliery during the survey periods. The movements of HCPL employees, on-site contractors and general visitors make up the bulk of the remaining traffic to and from the site.

4.2 Existing Average Weekday Traffic Volumes

4.2.1 Average Weekday Traffic on Haulage Routes

Table 4.1 summarises the surveyed average weekday traffic volumes at the automatic survey locations (Sites 1 to 11) described in Section 4.1, and shown on **Figure 3**. These are the average two-way daily flows over the Monday to Friday period. The table also summarises the types of vehicles at each location, being light, rigid or articulated vehicles. Light vehicles include motorcycles, cars, vans, 4WDs, and utes, including those towing a trailer or caravan. Rigid vehicles include single unit trucks and buses with two to four axles. Articulated vehicles are the largest heavy vehicles, and include all articulated vehicles such as semi-trailers, rigid trucks with trailers and B Doubles.

Table 4.1 – Average Weekday Daily Traffic Volumes by Haulage Route (veh/day)

Site	Road and Location	Light Vehicles		Rigid Vehicles		Articulated Vehicles		Total Vehicles
		Number	Percent	Number	Percent	Number	Percent	
Through Helensburgh (All Routes)								
1	Colliery Road	570	68.8	117	14.1	142	17.1	829
2	Parkes Street	6,873	91.8	435	5.8	178	2.4	7,486
Route to/from Coalcliff								
3	Lawrence Hargrave Dr at Stanwell Tops	5,494	93.6	300	5.1	77	1.3	5,870
Route to/from Corrimal								
4	Old Princes Hwy at Bulli Pass	9,948	94.6	505	4.8	63	0.6	10,516
5	Princes Hwy at Russell Vale	24,061	93.3	1,538	6.0	181	0.7	25,780
Route to/from Glenlee Washery								
6	Bulli-Appin Road at Kings Fall Bridge	7,148	87.5	689	8.4	337	4.1	8,174
7	Narellan-Appin Road at Appin	9,015	90.9	625	6.3	276	2.8	9,916
8	Appin Rd at Bradbury	28,207	94.9	1,145	3.9	377	1.2	29,729
9	Narellan Road at Narellan Vale	52,075	93.6	2,815	5.1	723	1.3	55,613
10	Camden Bypass at Elderslie	17,705	91.8	1,090	5.6	497	2.6	19,292
11	Springs Road at Spring Farm	2,253	77.0	432	14.8	239	8.2	2,924

The results generally demonstrate moderate volumes of heavy vehicles (both rigid and articulated) on the surveyed roads. The contribution of heavy vehicles to total traffic on the public roads varies from about 5 percent on Appin Road at Bradbury to about 23 percent on Springs Road, and is less than 10 percent on most routes.

About 31 percent of the traffic currently generated by Metropolitan Colliery over the average weekday is heavy vehicles, of which 45 percent are rigid and 55 percent are articulated. About 80 percent of the articulated vehicles on Parkes Street can be attributed to the Metropolitan Colliery, although articulated vehicles make up only 2.4 percent of the total traffic on Parkes Street.

4.2.2 Average Weekday Articulated Vehicle Trips on Haulage Routes

The distribution of articulated vehicles on the surrounding network by direction was reviewed for the average weekday, and the results are presented in Table 4.2. It should be noted that these represent all articulated vehicles at each location, not just those trips generated to and from Metropolitan Colliery.

Table 4.2 – Average Weekday Daily Articulated Vehicle Volumes (veh/day)

Site	Road and Location	Two Way
Through Helensburgh (All Routes)		
1	Colliery Road	142
2	Parkes Street	178
Route to/from Coalcliff		
3	Lawrence Hargrave Dr at Stanwell Tops	77
Route to/from Corrimal		
4	Old Princes Hwy at Bulli Pass	63
5	Princes Hwy at Russell Vale	181
Route to/from Glenlee Washery		
6	Bulli-Appin Road at Kings Fall Bridge	337
7	Narellan-Appin Road at Appin	276
8	Appin Rd at Bradbury	377
9	Narellan Road at Narellan Vale	723
10	Camden Bypass at Elderslie	497
11	Springs Road at Spring Farm	239

Note: Includes all articulated vehicles, not just articulated vehicles to/from Metropolitan Colliery.

4.3 Metropolitan Colliery Traffic Generation

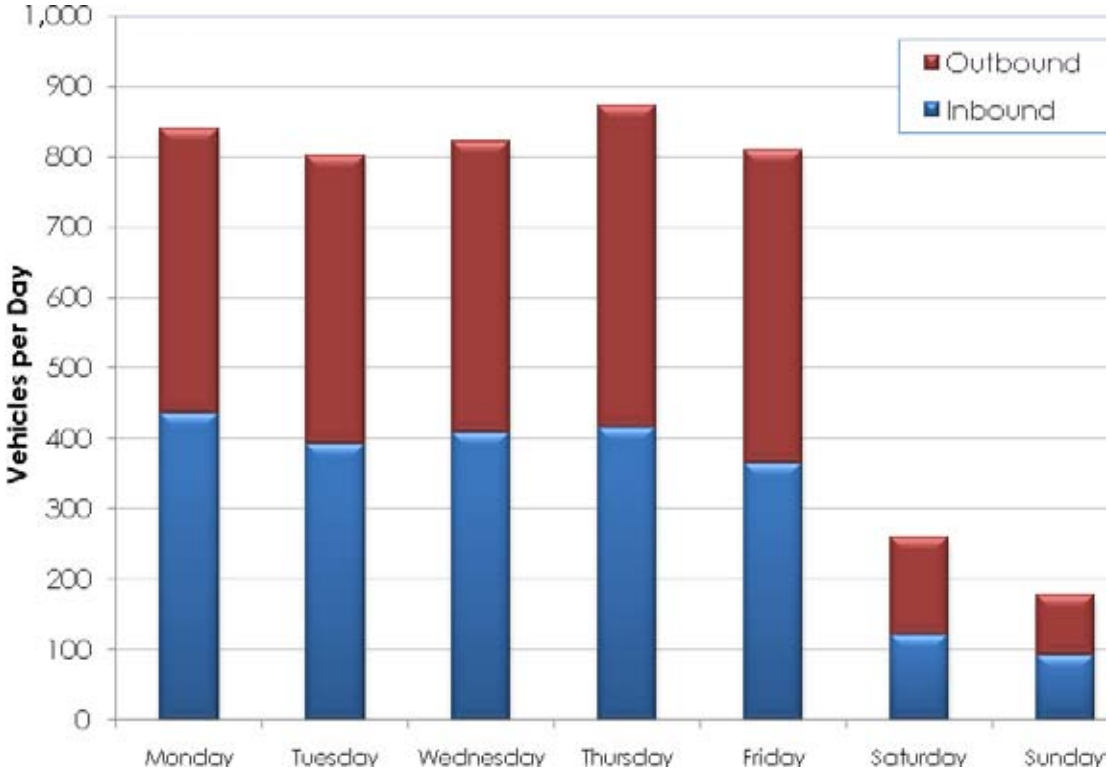
4.3.1 MWT Survey Results

The survey data from Colliery Road allows the total traffic in and out of the Colliery each day to be determined. This is presented in Chart 4.1, which demonstrates that

the total traffic generation of the colliery did not vary significantly by day of the week, and that the weekend traffic generation is significantly lower than that on weekdays.

The total weekday traffic generation varied between approximately 800 and 875 vehicle trips per day, with an average of about 830 vehicle trips per day. The total traffic generation on the surveyed Saturday was 260 vehicle trips per day, and on the Sunday, it was about 180 vehicle trips per day.

Chart 4.1 – Daily Traffic In and Out of Metropolitan Colliery



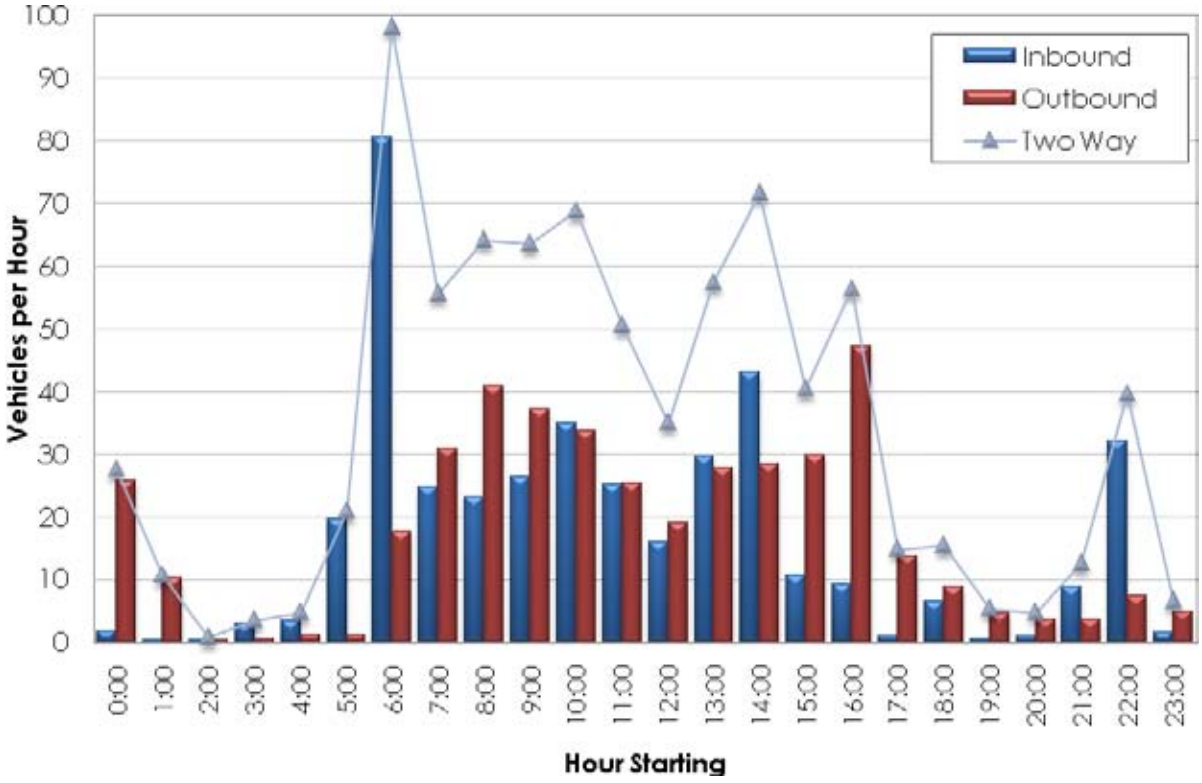
The survey undertaken on Colliery Road also allows the existing volume of traffic generated by the Metropolitan Colliery to be identified on an hour-by-hour basis over the week. Chart 4.2 presents the total hourly traffic generated in each direction and two-way on the average weekday.

It is noted that the distribution pattern of trips into and out of the colliery throughout each day was similar for all weekdays. The notable exceptions are:

- traffic generation declined on Friday after 2:00pm, and this decline was not observed on the other weekdays, and
- traffic generation very early on Monday morning was negligible, while on the other weekdays, it was up to nearly 40 vehicles per hour (vph).

Thus, the pattern of traffic generation is consistent during the week, with the exceptions being very early on Monday and late on Friday, when the start and end of the weekend activity influences the traffic generation.

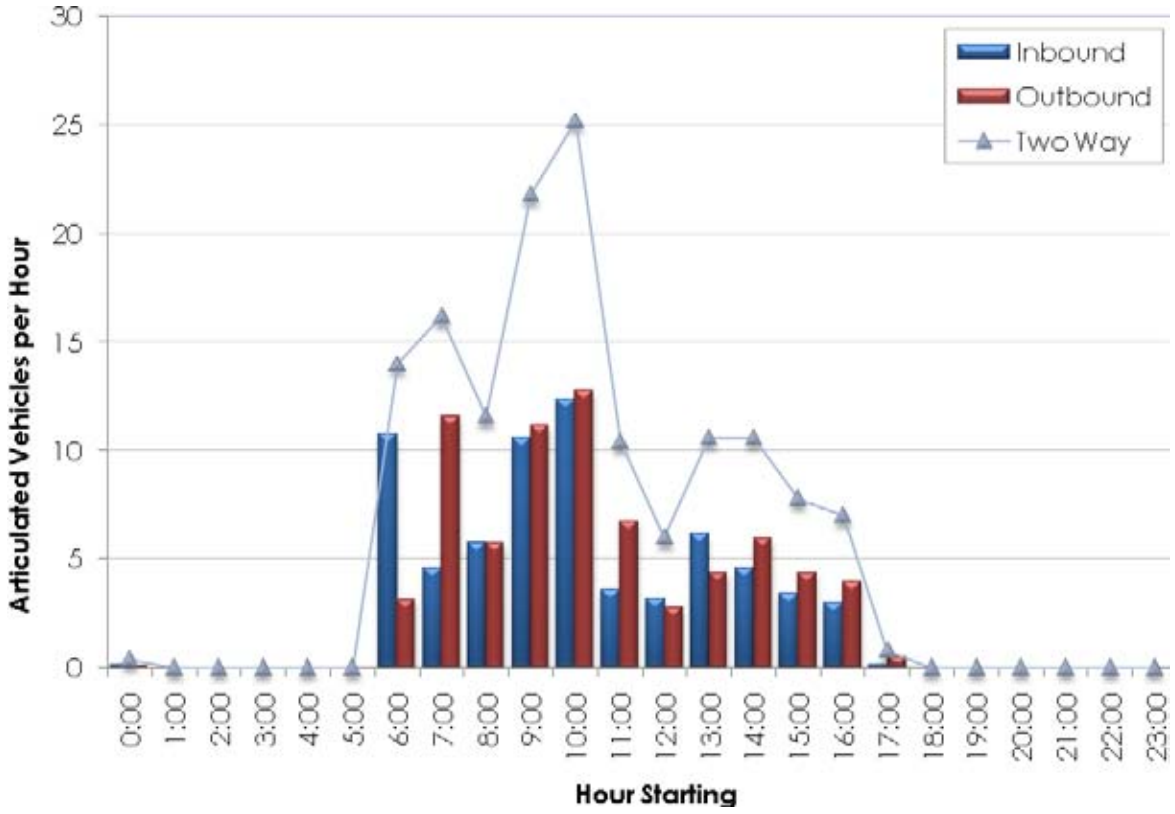
Chart 4.2 – Weekday Hourly Total Traffic Generation of Metropolitan Colliery



This chart shows a distinct peak in total vehicle trip generation of about 100 vehicle trips generated by Metropolitan Colliery between 6:00am and 7:00am. The chart also shows three distinct peaks for inbound traffic, being 6:00 to 7:00am, 2:00pm to 3:00pm and 10:00pm to 11:00pm. The outbound peaks were less distinct, but occurred from 12:00am to 1:00am, 8:00am to 9:00am, and 4:00pm to 5:00pm. Examination of the data indicates that the peak periods are dominated by light vehicles, indicating that the peak periods relate primarily to the movement of staff to and from the site at shift change times.

Chart 4.3 presents the hourly generation of articulated vehicles (only) on the average weekday.

Chart 4.3 – Weekday Hourly Articulated Traffic Generation of Metropolitan Colliery



This chart shows that the trips to and from the colliery by articulated vehicles occur mainly between 6:00am and 5:00pm. Over the average weekday, the site generated 142 trips by articulated trucks, being an average of 68 trips inbound and 74 trips outbound (note that the small difference between inbound and outbound articulated vehicles can be attributed to normal automatic traffic counter error).

The overall peak number of trips by articulated vehicles in any one hour on the average weekday was 25 trips between 10:00am and 11:00am, and it is noted that generally the articulated vehicle activity was higher during the morning than the afternoon.

4.3.2 HCPL Traffic Data for Metropolitan Colliery

Couriers and Deliveries

HCPL provided Masson Wilson Twiney (MWT) with data regarding courier and delivery vehicle movements over the period 21 October 2007 to 30 November 2007 inclusive, excluding 30-31 October. This shows a total of 187 courier/delivery arrivals, or an average of 6 to 7 couriers/deliveries per weekday, with the majority being deliveries to the site for parts, equipment and fuel.

The type of vehicles used for these deliveries varied from utes and vans through to semitrailers, as shown in Table 4.3.

Table 4.3 – Courier and Delivery Vehicle Types

Type of Vehicle	Number Recorded	Percent of Total
Truck	73	39.0
4T truck	36	19.3
Van	18	9.6
3T truck	17	9.1
Semitrailer	12	6.4
8T truck	8	4.3
Ute	8	4.3
10T truck	5	2.7
Compactor	5	2.7
Wagon	2	1.1
8 wheeler	2	1.1
Agitator	1	0.5
Total	**187**	**100**

Source: HCPL data for 21 October 2007 to 30 November 2007.

The HCPL data also recorded the suburb from which each vehicle had come. This data reveals that over the surveyed period, Port Kembla was the most common origin for courier/delivery trips, followed by Unanderra and Mittagong. The likely routes used by courier and delivery vehicles were assessed, and the results are summarised in Table 4.4. This assumes that one quarter of trips from the south (south of Fairy Meadow) would use Bulli Pass, and the remainder would use Mount Ousley Road.

Table 4.4 – Likely Courier Trip Routes

Likely Route	Percent of Trips
F6 Southern Freeway North	23
Princes Hwy (Bulli Pass)	16
F6 Southern Freeway South (Mt Ousley Road)	45
Bulli-Appin Road	15
Helensburgh Local	1

The courier trips tend to be concentrated in the morning, with 60 per cent of the recorded arrivals occurring between 9:00am and midday.

Coal Hauling to Coalcliff and Corrimal

HCPL provided MWT with data regarding the daily coal hauling trips to Coalcliff and Corrimal for the whole of November 2007. This is summarised in Table 4.5 below.

Table 4.5 – Coal Hauling Trips from Metropolitan Colliery November 2007

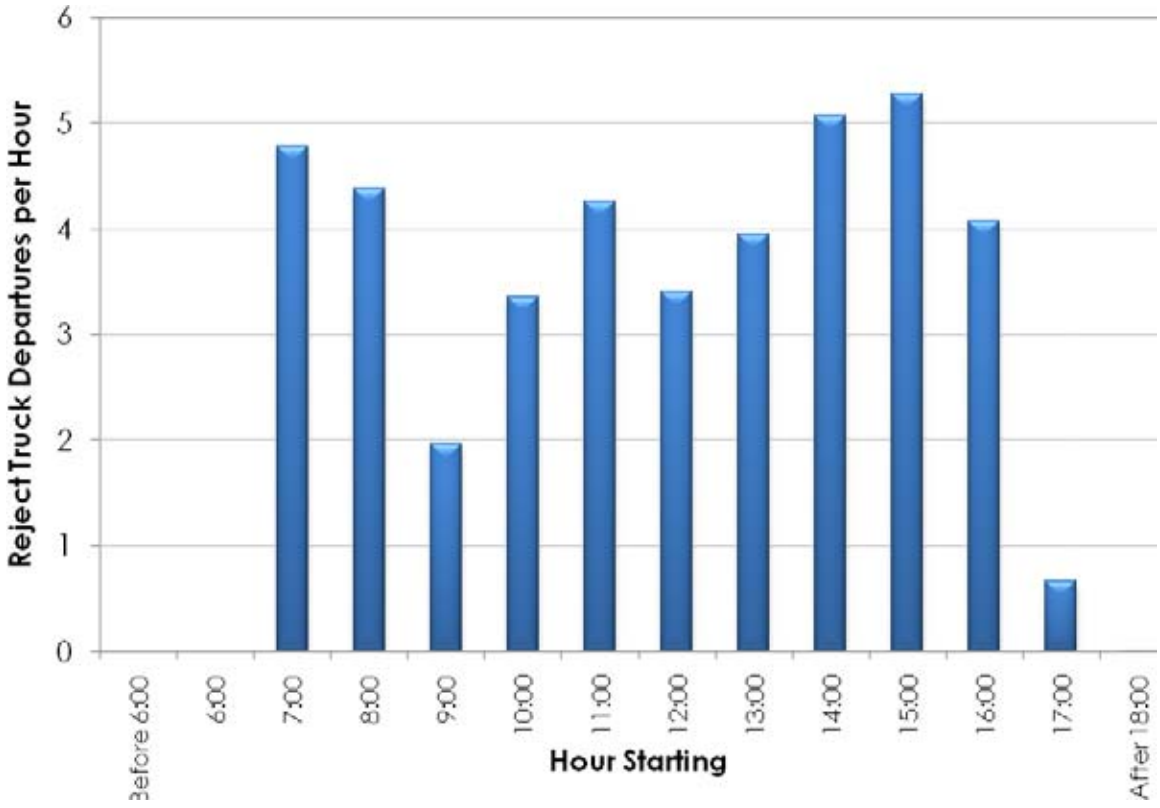
Truck Loads	To Coalcliff	To Corrimal	Total
Total in November	292	251	543
Weekday Average	13.3	11.4	24.7
Maximum per Weekday	19	16	35
Minimum per Weekday	10	0	12

Coal Rejects Haulage

HCPL also provided MWT with data regarding coal reject truck trips departing Metropolitan Colliery from 25 June 2007 to 2 December 2007.

Over that period, there was an average of approximately 40 departures per weekday. These departures are typically spread between 7:00am and 6:00pm, as shown in Chart 4.4.

Chart 4.4 – Hourly Average Coal Reject Truck Departures from Metropolitan Colliery



The chart demonstrates that there is typically fewer than five coal reject trucks departing Metropolitan Colliery in any hour of the day between 7:00am and 6:00pm.

4.4 Contribution of Metropolitan Colliery to Traffic on Haulage Routes

Based on the data provided by HCPL, the typical contribution of Metropolitan Colliery traffic to the total traffic on the surveyed routes was estimated. This is summarised in Table 4.6, which includes courier and delivery vehicles, coal reject transport vehicles and coal product transport vehicles as recorded by HCPL.

Total trips generated by employees, on-site contractors and other visitors were taken to comprise the remaining traffic on Colliery Road, i.e., some 681 vehicle trips per day. Details of the distribution of these employee/other trips were not known, however was estimated as follows for the average weekday:

- 25 percent to/from the local Helensburgh area.
- 25 percent to/from the south between Stanwell Park and Thirroul (using Parkes Street, Walker Street and Lawrence Hargrave Drive).

- 25 percent to/from the south (using Parkes Street, Old Princes Highway and F6 Southern Freeway).
- 15 percent to/from the north (using Parkes Street, Old Princes Highway and the F6 Southern Freeway).
- 10 percent to/from the south past Thirroul (using Parkes Street, Old Princes Highway, F6 Southern Freeway, and Princes Highway [Bulli Pass Road]).

It is noted that the existing Metropolitan Colliery (and future Project) traffic contributions are insignificant to the total traffic flows on the F6 Southern Freeway, which carries over 35,000 vehicles per day and so potential traffic impacts on the F6 are not considered further in the remainder of this report.

The assessment presented in Table 4.6 assumes that the destinations of the courier and delivery vehicle trips when they leave the Colliery are the same as their origins as recorded by HCPL. The routes were based on the original data provided by HCPL, and the likely fastest route between the origin and the Colliery.

Table 4.6 – Average Weekday Colliery Traffic on Haulage Routes (veh/day)

Site	Road and Location	Couriers Delivery	Coal Reject Transport	Coal Product Transport	Employee Other	Total Colliery Vehicles	Total All Vehicles	Colliery Percent of Total
Through Helensburgh (All Routes)								
1	Colliery Road	14	82	52	681	829	829	100
2	Parkes Street	14	82	52	340	488	7,486	6.5
Route to/from Coalcliff								
3	Lawrence Hargrave Dr at Stanwell Tops	0	0	28	170	198	5,871	3.4
Route to/from Corrimal								
4	Old Princes Hwy at Bulli Pass	2	0	24	68	94	10,516	0.9
5	Princes Hwy at Russell Vale	2	0	24	34	60	25,780	0.2
Route to/from Glenlee Washery								
6	Bulli-Appin Road at Kings Fall Bridge	2	82	0	0	84	8,174	1.0
7	Narellan-Appin Road at Appin	0	82	0	0	82	9,916	0.8
8	Appin Rd at Bradbury	0	82	0	0	82	29,729	0.3
9	Narellan Road at Narellan Vale	0	82	0	0	82	55,613	0.1
10	Camden Bypass at Elderslie	0	82	0	0	82	19,292	0.4
11	Springs Road at Spring Farm	0	82	0	0	82	2,924	2.8

This table demonstrates that the Colliery makes only a minor contribution to total traffic volumes on the haulage routes. With the exception of Parkes Street and Lawrence Hargrave Drive, Metropolitan Colliery traffic contributes less than three percent of total traffic on the public roads used by the Colliery trucks.

4.5 Existing Peak Hour Traffic Conditions

4.5.1 Peak Hour Intersection Turning Movements

The results of the intersection turning movement surveys indicate that the overall busiest hour in the morning and evening on the surrounding road system occurred between 8:00am and 9:00am, and 5:00pm and 6:00pm. The results of the intersection surveys are presented in **Figures 5 and 6** and the two way peak hour volumes are summarised in Table 4.7 and Table 4.8 for the morning and evening peak hours, respectively.

Table 4.7 – Surveyed Morning Peak Hour Total Traffic Volumes 8:00am-9:00am (veh/hr)

Road	Location	Site	Light	Rigid	Articulated	Total
Colliery Rd	East of Parkes St	A	42	6	14	62
Corrimal Coke Works	South of Railway St	F	1	0	0	1
F6 Ramp	West of Old Princes Hwy	D	202	12	15	229
Lawrence Hargrave Dr	East of Old Princes Hwy	D	302	4	10	316
	West of Walker St	E	415	18	16	449
Old Princes Hwy	North of Parkes St	C	225	3	0	228
	North of Lawrence Hargrave Dr	D	392	22	22	436
	South of Lawrence Hargrave Dr	D	458	14	15	487
Parkes St	North of Colliery Rd	A	675	22	0	697
	South of Colliery Rd	A	709	26	14	749
	East of Walker St	B	711	25	12	748
	East of Old Princes Hwy	C	552	22	21	595
Railway St	West of Corrimal Coke Works	F	476	19	0	495
Walker St	North of Parkes St	B	103	4	1	108
	South of Parkes St	B	418	25	6	449
	North of Lawrence Hargrave Dr	E	151	15	7	173

Table 4.8 – Surveyed Evening Peak Hour Total Traffic Volumes 5:00pm-6:00pm (veh/hr)

Road	Location	Site	Light	Rigid	Articulated	Total
Colliery Rd	East of Parkes St	A	28	3	3	34
Corrimal Coke Works	South of Railway St	F	0	0	0	0
F6 Ramp	West of Old Princes Hwy	D	587	10	3	600
Lawrence Hargrave Dr	East of Old Princes Hwy	D	348	8	1	357
	West of Walker St	E	506	2	1	509
Old Princes Hwy	North of Parkes St	C	176	3	0	179
	North of Lawrence Hargrave Dr	D	583	7	5	595
	South of Lawrence Hargrave Dr	D	322	7	3	332
Parkes St	North of Colliery Rd	A	512	10	0	522
	South of Colliery Rd	A	536	13	3	552
	East of Walker St	B	588	12	3	603
	East of Old Princes Hwy	C	674	12	5	691
Railway St	West of Corrimal Coke Works	F	539	8	0	547
Walker St	North of Parkes St	B	140	3	0	143
	South of Parkes St	B	493	4	0	497
	North of Lawrence Hargrave Dr	E	191	3	0	194

The results demonstrate that the heavy vehicle component at intersections surveyed is higher during the morning peak than the evening peak.

The traffic volumes reflect the roles the various roads fulfil in the road hierarchy, with Parkes Street carrying around 500 to 750 vehicles per hour during peak hours due to its role as the main access road for the Helensburgh area generally, and due to its town centre traffic role near Walker Street.

4.5.2 Peak Hour Intersection Operating Conditions

The surveyed intersections were analysed using SIDRA Intersection, which is an advanced micro-analytical traffic evaluation tool for the assessment of intersection treatments in terms of capacity, level of service and a wide range of performance measures including delay, queue length and stops for vehicles and pedestrians, as well as fuel consumption, pollutant emissions and operating cost. SIDRA Intersection determines the average delay that vehicles encounter, the degree of saturation of the intersection, and the level of service.

SIDRA Intersection provides analysis of the operating conditions which can be compared to the performance criteria set out in Table 4.9. SIDRA Intersection also determines the degree of saturation, known as the x-value, which is the ratio of the arrival rate of vehicles to the capacity of the approach.

Table 4.9 – Level of Service Criteria

Level of Service	Average Delay per Vehicle (secs/veh)	Signals & Roundabouts	Give Way & Stop Signs
A	less than 14	Good operation	Good operation
B	15 to 28	Good with acceptable delays & spare capacity	Acceptable delays & Spare capacity
C	29 to 42	Satisfactory	Satisfactory, but accident study required
D	43 to 56	Operating near capacity	Near capacity & accident study required
E	57 to 70	At capacity; at signals, incidents will cause excessive delays Roundabouts require other control mode	At capacity, requires other control mode
F	> 70	Extra capacity required	Extreme delay, traffic signals or other major treatment required

Adapted from RTA Guide to Traffic Generating Developments, 2002.

The results of the analysis are presented in Table 4.10, noting that the average delay per vehicle reported at roundabouts and priority intersections is for the movement with the highest average delay per vehicle.

Table 4.10 – Intersection Operating Conditions – Surveyed Traffic Flows 2007

Site	Intersection	X-Value		Average Delay (sec/veh)		Level of Service	
		AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
A	Colliery Rd and Parkes St	0.23	0.18	14.0	11.2	A	A
B	Parkes St and Walker St	0.39	0.42	11.6	12.2	A	A
C	Parkes St and Old Princes Hwy	0.30	0.33	10.7	14.6	A	B
D	Old Princes Hwy and Lawrence Hargrave Dr	0.25	0.45	14.7	14.6	B	B
E	Lawrence Hargrave Dr and Walker St	0.23	0.14	11.6	15.5	A	B
F	Railway St & Corrimal Coke Works Entry	0.17	-	8.3	-	A	-

Note: No turning vehicles in PM peak at Corrimal Coke Works intersection.
Avg Delay is for the worst movement at priority and roundabouts.

The results indicate that the intersections currently operate at good levels of service during the morning and evening peak hours, with acceptable delays and spare capacity.

4.6 Road Safety

MWT has reviewed the accident history of the Helensburgh area by analysing validated data provided by RTA for the period 1 October 2002 to 30 September 2007. The data is based on crashes reported to the Police. Over the five year period, there were 69 reported crashes in Helensburgh, including one fatal crash resulting in one fatality, 34 injury crashes, and 34 non-injury tow-away crashes.

The accident data was reviewed to determine whether any accidents in the period investigated involved trucks on the key haulage routes used by Colliery haulage contractor trucks in the Helensburgh area. Over the five year period investigated, there were eight accidents which involved trucks, of which two occurred along the haulage routes used by the Colliery haulage contractor. These were both non-injury tow-away accidents and are briefly summarised below:

- Lawrence Hargrave Drive at Old Princes Highway, Wednesday 10 December 2003 at 10:40am – a westbound heavy rigid truck turning right collided with a northbound car going straight at the roundabout; and
- Lawrence Hargrave Drive at Walker Street, Thursday 2 December 2004 at 9:00am – a light truck turning right collided with an eastbound car going straight.

In both cases, these tow away crashes involved light and heavy rigid trucks, not the articulated vehicles used for the haulage of coal product and coal reject from the Colliery.

Review of the RTA data therefore identified no particular accident pattern or causation factors in the Helensburgh area.

5. Future Background Traffic Growth

5.1 Growth in Background Traffic

Traffic volumes are expected to continue to increase on the haulage routes, regardless of the operations at the Colliery. Table 3.2 on page 11 demonstrates that the average daily volumes have varied considerably over time from route to route. It is expected that growth rates on the different routes would continue to vary in the future, due to the varying roles and linkages provided by each of the roads.

MWT's traffic model of the Sydney region provides long term forecasts for traffic on some of the roads of interest to Metropolitan Colliery. The model forecasts volumes for years 2011, 2016, and 2026, and includes Appin Road, Narellan Road and Camden Bypass.

The time horizons of particular interest to the Metropolitan Colliery with regard to traffic conditions are:

- Year 2014, being the end of the construction period, combining operational traffic, construction traffic and growth in background traffic; and
- Year 2032, being the end of the Project, combining operational traffic and growth in background traffic.

The MWT model's forecasts for morning peak hour traffic were used to generate forecasts for the years of interest to Metropolitan Colliery. This assumes that daily traffic would grow at the same rate as morning peak traffic. It is noted that the 2026 modelled network includes some changes to the road network, including an assumed interchange at the SW Freeway with Menangle Road, and a road extension from the interchange west to Burragorang Road. This results in a decline in traffic on some routes. Due to these road network changes, it is not considered valid, noting that the RTA and the NSW Department of Transport (DOT) are not themselves producing any formal traffic forecasts beyond 2026. Given that this is the limit of available forecast data, the impacts of the Project on traffic conditions in 2026 has been considered on these three roads, rather than 2032.

Table 5.1 below presents forecast traffic volumes based on the MWT traffic model.

Table 5.1 – Forecast Traffic Volumes

Location	2007 Survey	2014 Interpolated	2026 Model
Average Weekday Morning Peak Hour – based on Survey and MWT model results (veh/hr)			
Appin Road	2,196	2,303	2,293
Narellan Road	4,271	5,784	6,334
Camden Bypass	1,586	2,718	2,910
Average Weekday – based on Survey and AM Growth Rates from above (veh/day)			
Appin Road	29,729	31,180	31,042
Narellan Road	55,613	75,311	82,475
Camden Bypass	19,292	33,066	35,397

Forecasts for the remaining routes were based on the historic growth in AADT as set out in Table 3.2. Growth over the most recent ten year period for which data was available (or nearest available) is presented in Table 5.2.

Table 5.2 – Historic 10 year Average Annual Traffic Growth Rates

Road	Growth Period	Total Growth (percent)	Average Annual Growth (percent)
Lawrence Hargrave Dr	1994 to 2003	45.2	5.02
Princes Hwy, Bulli Pass	1994 to 2003	24.5	2.72
Princes Hwy, Russell Vale	1994 to 2003	8.8	0.98
Bulli-Appin Road	1994 to 2003	8.6	0.95
Narellan-Appin Road	1994 to 2003	6.8	0.76

Data for the local Helensburgh area was not available, and it is expected that background growth in Helensburgh would be low. For the purpose of this assessment, an average growth rate of one percent per annum was adopted.

Traffic growth on Springs Road is expected to occur as a result of the Spring Farm development. MWT previously assessed the traffic implications of this release area, and found that Springs Road would be expected to carry some 790 vehicles per hour west of Richardson Road during morning and evening peak hours (MWT, 2004). Further to the east of Richardson Road, the volume would be lower, at around 380 vehicles per hour. Assuming peak hour flows represent approximately 10 per cent of the daily flow, the future average weekday flow on Springs Road is assumed to be 7,900 vehicles per day west of Richardson Road, and 3,800 vehicles per day to the east of Richardson Road. For the purpose of this comparative assessment, the higher volume has been adopted for both the 2014 and 2032 scenarios.

5.2 Background Traffic Growth on Haulage Routes

Table 5.3 summarises the future daily traffic volumes on the haulage routes roads assuming that the Metropolitan Colliery would continue to operate as it does at present (i.e no change in traffic generation).

Table 5.3 – Existing and Future Average Weekday Traffic with Existing Colliery Operations (veh/day)

Site	Road and Location	Avg Weekday Two Way Traffic			Colliery	Colliery Traffic Percent of Total		
		2007	2014	2032	Traffic	2007	2014	2032
Through Helensburgh (All Routes)								
1	Colliery Road	829	829	829	829	100	100	100
2	Parkes Street	7,486	7,976	9,236	488	6.5	6.1	5.3
Route to/from Coalcliff								
3	Lawrence Hargrave Dr at Stanwell Tops	5,871	7,894	13,098	198	3.4	2.5	1.5
Route to/from Corrimal								
4	Old Princes Hwy at Bulli Pass	10,516	12,503	17,612	94	0.9	0.8	0.5
5	Princes Hwy at Russell Vale	25,780	27,547	32,090	60	0.2	0.2	0.2
Route to/from Glenlee Washery								
6	Bulli-Appin Road at Kings Fall Bridge	8,174	8,713	10,100	84	1.0	1.0	0.8
7	Narellan-Appin Road at Appin	9,916	10,439	11,783	82	0.8	0.8	0.7
8	Appin Rd at Bradbury[A]	29,729	31,180	31,042	82	0.3	0.3	0.3
9	Narellan Road at Narellan Vale[A]	55,613	75,311	82,475	82	0.1	0.1	0.1
10	Camden Bypass at Elderslie[A]	19,292	33,066	35,397	82	0.4	0.2	0.2
11	Springs Road at Spring Farm	2,924	7,900	7,900	82	2.8	1.0	1.0

Notes: Assumes Metropolitan Colliery continues to operate beyond 2010, with no increase in production.
[A] These forecasts are for 2026 not 2032, due to limit of model.

Table 5.3 demonstrates that the contribution of Metropolitan Colliery to total traffic on the haulage routes would decline in the future, as growth in non-Colliery traffic would continue to occur. Outside of the local Helensburgh area, the Colliery traffic would comprise less than one per cent of the total traffic on these routes in the long term.

With regard to the 2026 forecasts, it is noted that after 2026, the proportion of Colliery traffic on these roads would continue to decline as background traffic increases, but at this stage, the extent of this cannot be predicted with any certainty.

5.3 Peak Hour Traffic Growth on Local Area Roads

Traffic forecasts on the roads in the local Helensburgh area were developed assuming that there would be no changes to traffic generated by Metropolitan Colliery over the forecasting period. As demonstrated in Table 4.6, and by deduction from the results of the intersection surveys, the contribution of Metropolitan Colliery to traffic on the Parkes Street and other roads in the local Helensburgh area is reasonably significant, thus application of a growth rate over all traffic would result in an overestimate of likely future conditions.

A background growth rate of one percent per annum was assumed for all traffic not travelling to or from the Colliery, and no growth was assumed for all traffic travelling to and from the Colliery. This rate was also applied at the intersection of Railway Street and the Corrimal Coke Works access. The resulting traffic volumes are summarised in Table 5.4 and Table 5.5.

Table 5.4 – Existing and Forecast Morning Peak Hour Total Traffic Volumes (veh/hr)

Site	Road and Location	Existing 2007				Year 2014 (2007 + 7 years of growth)				Year 2032 (2007 + 25 years of growth)			
		Light	Rigid	Articul-ated	Total	Light	Rigid	Articul-ated	Total	Light	Rigid	Articul-ated	Total
	Colliery Rd												
A	East of Parkes St	42	6	14	62	42	6	14	62	42	6	14	62
	Corrimal Coke Works												
F	South of Railway St	1	0	0	1	1	0	0	1	1	0	0	1
	F6 Ramp												
D	West of Old Princes Hwy	202	12	15	229	217	12	16	245	253	15	17	285
	Lawrence Hargrave Dr												
D	East of Old Princes Hwy	302	4	10	316	325	4	11	340	379	4	12	395
E	West of Walker St	415	18	16	449	444	19	17	480	517	22	20	559
	Old Princes Hwy												
C	North of Parkes St	225	3	0	228	240	3	0	243	281	4	0	285
D	North of Lawrence Hargrave Dr	392	22	22	436	420	22	22	464	488	27	23	538
D	South of Lawrence Hargrave Dr	458	14	15	487	490	14	15	519	572	16	16	604
	Parkes St												
A	North of Colliery Rd	675	22	0	697	722	24	0	746	843	28	0	871
A	South of Colliery Rd	709	26	14	749	756	28	14	798	877	32	14	923
E	East of Walker St	711	25	12	748	759	25	12	796	879	30	12	921
C	East of Old Princes Hwy	552	22	21	595	588	23	21	632	685	28	23	736
	Railway St												
F	West of Corrimal Coke Works	476	19	0	495	509	20	0	529	595	24	0	619
	Walker St												
B	North of Parkes St	103	4	1	108	110	4	1	115	129	5	1	135
B	South of Parkes St	418	25	6	449	446	25	6	477	520	30	7	557
E	North of Lawrence Hargrave Dr	151	15	7	173	161	16	7	184	186	18	9	213

Note: Assumes Metropolitan Colliery continues to operate beyond 2010, with no increase in production.

Table 5.5 – Existing and Forecast Evening Peak Hour Total Traffic Volumes (veh/hr)

Site	Road and Location	Existing 2007				Year 2014 (2007 + 7 years of growth)				Year 2032 (2007 + 25 years of growth)			
		Light	Rigid	Articul-ated	Total	Light	Rigid	Articul-ated	Total	Light	Rigid	Articul-ated	Total
	Colliery Rd												
A	East of Parkes St	28	3	3	34	28	3	3	34	28	3	3	34
	Corrimal Coke Works												
F	South of Railway St	0	0	0	0	0	0	0	0	0	0	0	0
	F6 Ramp												
D	West of Old Princes Hwy	587	10	3	600	627	10	3	640	733	12	4	749
	Lawrence Hargrave Dr												
D	West of Old Princes Hwy	348	8	1	357	372	8	1	381	436	10	1	447
E	West of Walker St	506	2	1	509	541	2	1	544	630	2	1	633
	Old Princes Hwy												
C	North of Parkes St	176	3	0	179	188	3	0	191	220	4	0	224
D	North of Lawrence Hargrave Dr	583	7	5	595	622	7	5	634	727	8	6	741
D	South of Lawrence Hargrave Dr	322	7	3	332	343	7	3	353	402	8	3	413
	Parkes St												
A	North of Colliery Rd	512	10	0	522	547	10	0	557	640	13	0	653
A	South of Colliery Rd	536	13	3	552	571	13	3	587	664	16	3	683
E	East of Walker St	588	12	3	603	626	12	3	641	729	14	4	747
C	East of Old Princes Hwy	674	12	5	691	721	12	5	738	840	14	6	860
	Railway St												
F	West of Corrimal Coke Works	539	8	0	547	577	8	0	585	674	10	0	684
	Walker St												
B	North of Parkes St	140	3	0	143	149	3	0	152	176	3	0	179
B	South of Parkes St	493	4	0	497	526	4	0	530	614	5	0	619
E	North of Lawrence Hargrave Dr	191	3	0	194	203	3	0	206	236	3	0	239

Note: Assumes Metropolitan Colliery continues to operate beyond 2010, with no increase in production.

The resulting morning and evening peak hour turning movements are presented on **Figures 7 to 10** for the 2014 and 2032 scenarios, respectively.

5.4 Future Peak Hour Intersection Operating Conditions

The SIDRA Intersection analysis was repeated using forecast traffic at the intersections with 20 years of background growth. The results are presented in Table 5.6.

Table 5.6 – Existing and Forecast Intersection Operating Conditions

Site	Intersection	X-Value		Average Delay (sec/veh)		Level of Service	
		AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
	Surveyed 2007						
A	Parkes St & Colliery Rd	0.23	0.18	14.0	11.2	A	A
B	Parkes St & Walker St	0.39	0.42	11.6	12.2	A	A
C	Parkes St & Old Princes Hwy	0.30	0.33	10.7	14.6	A	B
D	Old Princes Hwy & L. Hargrave Dr	0.25	0.45	14.7	14.6	B	B
E	Lawrence Hargrave Dr & Walker St	0.23	0.14	11.6	15.5	A	B
F	Railway St & Corrimal Coke Works	0.17	-	8.3	-	A	-
	Forecast 2014						
A	Parkes St & Colliery Rd	0.25	0.19	14.8	11.4	B	A
B	Parkes St & Walker St	0.42	0.39	11.8	12.0	A	A
C	Parkes St & Old Princes Hwy	0.31	0.35	11.0	15.4	A	B
D	Old Princes Hwy & L. Hargrave Dr	0.28	0.49	14.8	14.7	B	B
E	Lawrence Hargrave Dr & Walker St	0.24	0.15	11.6	15.5	A	B
F	Railway St & Corrimal Coke Works	0.18	-	8.5	-	A	-
	Forecast 2032						
A	Parkes St & Colliery Rd	0.28	0.23	17.4	12.3	B	A
B	Parkes St & Walker St	0.50	0.47	12.5	12.7	A	A
C	Parkes St & Old Princes Hwy	0.38	0.42	12.5	17.6	A	B
D	Old Princes Hwy & L. Hargrave Dr	0.34	0.59	15.3	15.1	B	B
E	Lawrence Hargrave Dr & Walker St	0.28	0.18	11.8	15.5	A	B
F	Railway St & Corrimal Coke Works	0.21	-	9.3	-	A	-

Note: No turning vehicles in PM peak at Corrimal Coke Works intersection.
Avg Delay is for the worst movement at priority and roundabouts.

These results demonstrate that the key intersections in the Helensburgh area are expected to continue to operate at good levels of service with the forecast growth in background traffic. Delays would remain at acceptable levels, and the intersections would have spare capacity during the peak hours.

6. Potential Impacts of the Project

As noted previously, this assessment of the potential traffic implications of the Project is focussed on the current Metropolitan Colliery key haulage routes, as the light vehicles generated by the Colliery are of lesser significance to the operation of intersections and general road network operating conditions than heavy vehicles.

In addition, as noted in Section 2.2, the coal reject haulage movements have conservatively been included at maximum for the life of the Project. This is a conservative assessment as the Project Description indicates that the transport of coal reject to Glenlee Washery would cease in Year 12.

6.1 Daily Construction Traffic Generation and Distribution 2010 to 2014

HCPL has advised that during the construction works, which would be undertaken progressively for up to five years, there would be an average of five additional employees on the site each day. The construction workforce would remain below 20 persons at most times, with an infrequent peak of 50 additional employees. Not all these employees would attend the site on every day. Surface construction activities would generally occur between 7:00am and 6:00pm.

The volume of traffic generated by construction workers would vary from day to day, however as a conservatively high estimate, it is assumed that 75 percent of the peak construction workforce would attend on any given day, and that they would travel by car, with an average of 1.5 workers per car. This yields up to 25 cars arriving and departing the site on any given day, or 50 vehicle trips per day.

At its peak, construction activities are expected to generate vehicle trips to and from Metropolitan Colliery as shown in Table 6.1.

Table 6.1 – Daily Peak Construction Traffic Generation (veh/day)

Trip Generator	Number of Trips per Day	Type of Vehicle
Employees	50	Car
Large Deliveries	12	Truck
Oversize Loads	2	Semitrailer/oversize
Visitors and sales reps	6	Car and small truck
Small Deliveries	12	Van and small truck
Total	**82**	

It is expected that the distribution of these trips would be similar to those of the existing operations at the Colliery. The delivery trips were therefore assumed to be spread on the road system according to the distribution set out in Table 4.4, determined from the HCPL records of couriers and deliveries. The additional employee trips were assumed to be spread as follows, which conservatively assumes that the additional employees would be drawn from outside of Helensburgh:

- 25 percent to/from the south between Stanwell Park and Thirroul (using Parkes Street, Walker Street and Lawrence Hargrave Drive).
- 25 percent to/from the north (using Parkes Street, Old Princes Highway and F6 Southern Freeway).
- 25 percent to/from the south (using Parkes Street, Old Princes Highway and F6 Southern Freeway [Mount Ousley Road]).
- 15 percent to/from the south past Thirroul (using Parkes Street and Princes Highway [Bulli Pass Road]).
- 10 percent to/from the west (using Parkes Street, Old Princes Highway, F6 Southern Freeway and Bulli-Appin Road).

Table 6.2 compares the existing total and Colliery traffic on haulage routes with the estimated peak construction traffic during the period 2010 to 2014.

Table 6.2 – Construction Traffic on Haulage Routes 2010 to 2014 (veh/day)

Site	Road and Location	Existing Total Vehicles	Existing Colliery Vehicles	Additional Delivery Vehicles	Additional Employee Vehicles at Peak
Through Helensburgh (All Routes)					
1	Colliery Road	829	829	32	50
2	Parkes Street	7,486	488	32	38
Route to/from Coalcliff					
3	Lawrence Hargrave Dr at Stanwell Tops	5,871	198	0	12
Route to/from Corrimal					
4	Old Princes Hwy at Bulli Pass	10,516	94	6	8
5	Princes Hwy at Russell Vale	25,780	60	6	4
Route to/from Glenlee Washery					
6	Bulli-Appin Road at Kings Fall Bridge	8,174	84	6	6
7	Narellan-Appin Road at Appin	9,916	82	0	6
8	Appin Rd at Bradbury	29,729	82	0	6
9	Narellan Road at Narellan Vale	55,613	82	0	4
10	Camden Bypass at Elderslie	19,292	82	0	0
11	Springs Road at Spring Farm	2,924	82	0	0

These results demonstrate that the total daily traffic generation of the colliery can be expected to increase by about 10 per cent from 829 to 911 trips per day during the peak of construction activity. As the additional traffic is spread on the surrounding road system outside of Helensburgh, the contribution of this additional traffic to total traffic would be negligible.

6.2 Additional Daily Operational Traffic Generation 2010 to 2032

As shown in Table 6.3, the expansion of operations at Metropolitan Colliery is expected to generate the following additional vehicle trips to and from the site each day, as a result of increased consumption of parts, fuel and other consumables.

Table 6.3 – Additional Daily Operational Traffic Generation (veh/day)

Trip Generator	Number of Trips per Day	Type of Vehicle
Large Deliveries	4	Truck
Visitors and sales reps	2	Car and small truck
Small Deliveries	6	Van and small truck
Total	**12**	

Based on the existing distribution of traffic to and from the Colliery, the likely distribution of these additional operational trips on the surrounding road network is summarised in Table 6.4 below.

Table 6.4 – Operational Traffic on Haulage Routes 2010 to 2032 (veh/day)

Site	Road and Location	Existing Total Vehicles	Existing Colliery Vehicles	Additional Operational Vehicles 2010 to 2032
Through Helensburgh (All Routes)				
1	Colliery Road	829	829	12
2	Parkes Street	7,486	488	12
Route to/from Coalcliff				
3	Lawrence Hargrave Dr at Stanwell Tops	5,871	198	0
Route to/from Corrimal				
4	Old Princes Hwy at Bulli Pass	10,516	94	2
5	Princes Hwy at Russell Vale	25,780	60	2
Route to/from Glenlee				
6	Bulli-Appin Road at Kings Fall Bridge	8,174	84	2
7	Narellan-Appin Road at Appin	9,916	82	0
8	Appin Rd at Bradbury	29,729	82	0
9	Narellan Road at Narellan Vale	55,613	82	0
10	Camden Bypass at Elderslie	19,292	82	0
11	Springs Road at Spring Farm	2,924	82	0

Note: The transport of coal reject to Glenlee would cease in Year 12, however for simplicity these existing movements have conservatively been assumed to continue for the life of the Project.

The movement of coal product by train to Port Kembla would be increased by the proposed Project. Each train has a nominal capacity of 3,375 tonnes, and HCPL has advised that there would be an average of three additional train loads per day, and a peak of eight additional train loads per day. The potential impacts of this increase in operational rail transport movements is addressed in the Environmental Assessment and are not considered further in this report.

6.3 Total Colliery Traffic Generation on Haulage Routes 2007 to 2032

Table 6.5 summarises the volume of traffic generated by the Colliery over the three periods of interest:

- 2007 to 2010 – existing operations.
- 2010 to 2014 – expanded operations plus construction.
- 2014 to 2032 – expanded operations.

It is noted that the 2010 to 2014 period forecasts are based on peak construction employee traffic, and that at most times during this period, the forecasts below represent an overestimate of the likely generation of the Colliery.

Table 6.5 – Colliery Vehicles on Haulage Routes 2007 to 2032 (veh/day)

Site	Road and Location	Colliery Vehicles 2007 to 2010	Colliery Vehicles 2010 to 2014	Colliery Vehicles 2014 to 2032
Through Helensburgh (All Routes)				
1	Colliery Road	829	923	841
2	Parkes Street	488	570	500
Route to/from Coalcliff				
3	Lawrence Hargrave Dr at Stanwell Tops	198	210	198
Route to/from Corrimal				
4	Old Princes Hwy at Bulli Pass	94	110	96
5	Princes Hwy at Russell Vale	60	72	62
Route to/from Glenlee Washery				
6	Bulli-Appin Road at Kings Fall Bridge	84	98	86
7	Narellan-Appin Road at Appin	82	88	82
8	Appin Rd at Bradbury	82	86	82
9	Narellan Road at Narellan Vale	82	82	82
10	Camden Bypass at Elderslie	82	82	82
11	Springs Road at Spring Farm	82	82	82

Note: The transport of coal reject to Glenlee would cease in Year 12, however for simplicity these existing movements have conservatively been assumed to continue for the life of the Project.

6.4 Impacts of the Proposed Project to Traffic on Haulage Routes

Table 6.6 presents the average weekday traffic on the key routes with the proposed construction and expansion works at Metropolitan Colliery. The table also presents the average weekday volume attributable to the Metropolitan Colliery.

Table 6.6 – Average Weekday Colliery Traffic on Haulage Routes (veh/day)

Site	Road and Location	Year 2007 Total	Year 2007 Colliery	Year 2007 Colliery Percent of Total	Year 2014 Total	Year 2014 Colliery	Year 2014 Colliery Percent of Total	Year 2032 Total	Year 2032 Colliery	Year 2032 Colliery Percent of Total
Through Helensburgh (All Routes)										
1	Colliery Road	829	829	100	923	923	100	841	841	100
2	Parkes Street	7,486	488	6.5	8,058	570	7.1	9,248	500	5.4
Route to/from Coalcliff										
3	Lawrence Hargrave Dr at Stanwell Tops	5,871	198	3.4	7,878	210	2.7	12,997	198	1.5
Route to/from Corrimal										
4	Old Princes Hwy at Bulli Pass	10,516	94	0.9	12,519	110	0.9	17,614	96	0.5
5	Princes Hwy at Russell Vale	25,780	60	0.2	27,557	72	0.3	32,085	62	0.2
Route to/from Glenlee Washery										
6	Bulli-Appin Road at Kings Fall Bridge	8,174	84	1.0	8,727	98	1.1	10,102	86	0.9
7	Narellan-Appin Road at Appin	9,916	82	0.8	10,445	88	0.8	11,783	82	0.7
8	Appin Rd at Bradbury	29,729	82	0.3	31,184	86	0.3	31,042	82	0.3
9	Narellan Road at Narellan Vale	55,613	82	0.1	75,311	82	0.1	82,475	82	0.1
10	Camden Bypass at Elderslie	19,292	82	0.4	33,066	82	0.2	35,397	82	0.2
11	Springs Road at Spring Farm	2,924	82	2.8	7,982	82	1.0	7,982	82	1.0

Note: The transport of coal reject to Glenlee would cease in Year 12, however for simplicity these existing movements have conservatively been assumed to continue for the life of the Project.

This table demonstrates that the Colliery's contribution to total traffic on the haulage routes on an average weekday would remain very low with the proposed construction and expansion of coal production operations.

With the construction activity, the Colliery's contribution to traffic on Parkes Street would increase slightly in 2014 to 7.1 percent of the total, but would reduce in the longer term to 5.4 percent, which is below the existing proportion.

6.5 Impacts on Peak Hour Traffic Volumes on Local Area Roads

Based on the existing distribution of delivery trips arriving at Metropolitan Colliery, it was assumed that 20 percent of the daily deliveries would occur during the morning peak hour, and none would occur during the evening peak hour.

The distribution of additional employee trips during the morning and evening peak hours was based on the existing distribution of light vehicles arriving at and departing from Metropolitan Colliery, as a proportion of the daily total by direction. These proportions are also shown in Table 6.7.

The distribution of additional traffic to and from the Metropolitan Colliery is summarised below.

Table 6.7 – Estimated Additional Peak Hour Traffic Generation

	Two Way Daily Trips (veh/day)	Inbound Trips			Outbound Trips			Two Way Hourly Trips (veh/hr)
		Daily (veh/day)	Hourly (percent of daily)	Hourly (veh/hr)	Daily (veh/day)	Hourly (percent of daily)	Hourly (veh/hr)	
2010 to 2014 Morning Peak								
Construction Employees	50	25	4.3	1	25	10.5	3	4
Construction Deliveries	32	16	20.0	3	16	20.0	3	6
Operational	12	6	20.0	1	6	20.0	1	2
Total				5			7	12
2010 to 2014 Evening Peak								
Construction Employees	50	25	0.2	0	25	4.3	1	1
Construction Deliveries	32	16	0.0	0	16	0.0	0	0
Operational	12	6	0.0	0	6	0.0	0	0
Total				0			1	1
2010 to 2032 Morning Peak								
Operational	12	6	20.0	1	6	20.0	1	2
Total				1			1	2
2010 to 2032 Evening Peak								
Operational	12	6	0.0	0	6	0.0	0	0
Total				0			0	0

This table demonstrates that the proposed construction and expansion would generate only very small volumes of additional traffic during morning and evening peak hours.

This table demonstrates that the combination of peak estimated construction and operational expansion traffic would generate only very small volumes of additional traffic during the morning and evening peak hours. Once the construction activities are completed, the peak hour impacts of the additional operational traffic would be negligible in the context of the general background traffic and its day to day variations.

6.6 Impacts on Operation of Intersections

The additional traffic expected to be generated by Metropolitan Colliery during the on-street peak hours would be sufficiently low that its impacts on the operation of the surrounding intersections are considered to be negligible. Formal analysis of the operation of the intersections is not considered to be warranted as results would be only fractionally different from those presented in Section 5.4.

6.7 Consideration of Alternative Haulage Routes

Consideration was given to the existing transport routes used for trucking coal to the Corrimal and Coalcliff coke works and Glenlee Washery, to determine if these routes are the most acceptable with regard to general environmental impacts, taking into consideration the distance travelled and amenity in built up areas. The existing and possible alternative routes are discussed below.

The Coalcliff Coke Works is located south of Stanwell Park to the south-east of Helensburgh, some 7km straight line distance from Metropolitan Colliery. The current haul route is approximately 11km long, and is reasonably direct. The existing route passes through the built up areas of Stanwell Tops, Stanwell Park and Coalcliff. An alternative haul route exists to the south via Bulli Pass then north via Lawrence Hargrave Drive, a travel distance of some 32km. This alternative route passes through the built up areas of Thirroul, Austinmer, Coledale, Wombarra, Scarborough, and Clifton. The existing haul route is considerably shorter than the alternative, and passes through significantly fewer built up areas. The existing route is therefore considered to be the more acceptable with regard to environmental impacts.

The Corrimal Coke Works is located closer to Wollongong and therefore, an alternative is available via the F6 Southern Freeway to Mount Ousley then north to the Corrimal Coke Works via the Northern Distributor. This route is some 36km long while the existing route via Bulli Pass is 28km. Both routes pass through built up areas, and as the existing route is 8km shorter, it is considered to be the more environmentally acceptable route.

The haulage of coal reject to the Glenlee Washery generally utilises the major roads that are available along the route and hence no consideration of alternative routes is considered necessary.

Importantly, the Project does not involve any change to the current maximum annual truck movements associated with the transport of product coal to the Corrimal and Coalcliff coke works and the transport of coal reject to the Glenlee Washery (Section 2.2).

7. Summary and Conclusions

7.1 Summary

Existing and Proposed Colliery Operations

- Metropolitan Colliery is located on Colliery Road, Helensburgh. The mine dates back to the 1880s and longwall mining has been conducted since 1995.
- Production coal and coal reject is moved from the site by both truck and rail. Trucks use specific routes between the colliery and Corrimal Coke Works, Coalcliff Coke Works and Glenlee Washery.
- It is proposed to extend the life of the Colliery by approximately 25 years by continued development of underground mining operations, with an upgrading of facilities to increase the ROM coal production from 1.8Mtpa up to 3.2Mtpa.
- The maximum annual rate of coal product and coal reject transport by road would not be increased.
- Construction work would be undertaken in a staged manner between 2010 and 2014, and increased operations would continue between 2010 and 2032.

Road Network

- Metropolitan Colliery is served by major regional roads including F6 Southern Freeway, Princes Highway, Appin Road, and Narellan Road.
- Trucks associated with the colliery use Parkes Street and Old Princes Highway in the local Helensburgh area. From there, they also use Lawrence Hargrave Drive to Coalcliff Coke Works; F6 Southern Freeway, Appin Road, Narellan Road, Camden Bypass, Macarthur Road and Springs Road to Glenlee Washery; and F6 Southern Freeway, Princes Highway (Bulli Pass), Bellambi Lane, Northern Distributor and Railway Street to Corrimal Coke Works.
- Traffic volumes on the state roads used by the trucks vary significantly, between Lawrence Hargrave Drive which carries approximately 5,500 vehicles per day and Narellan Road, which carries approximately 56,000 vehicles per day.
- Growth in traffic volumes on the roads used by the colliery trucks varied significantly in the past due to changes to the road network and varying levels of development in some areas.

Existing Traffic Conditions

- MWT conducted a programme of traffic surveys in 2007 along the haulage routes and at local intersections, mostly in the Helensburgh area.
- The surveys revealed moderate volumes of heavy vehicles on the haulage routes, with the proportion varying across the routes.
- Metropolitan Colliery generates an average of 830 vehicle trips per day on an average weekday. There is a peak in its traffic generation between 6:00 and 7:00am, and the peaks in Colliery traffic generation do not correlate with the general peak hours on the surrounding local road network.
- Metropolitan Colliery makes only a minor contribution to traffic on the surrounding local roads and haulage routes. With the exception of Parkes Street, Metropolitan Colliery traffic contributes less than three percent of total traffic on the public roads used by the Colliery trucks.
- The key intersections in Helensburgh operate at good levels of service during peak hours, with short delays and spare capacity.
- Road accident data was analysed over a five year period and no particular accident patterns or causation factors were identified that were of relevance to road safety performance.

Background Traffic Growth

- MWT's model of the Sydney region was used to generate forecasts for the years of interest on Appin Road Campbelltown, Narellan Road and Camden Bypass. Historic growth rates were used to generate forecasts on Lawrence Hargrave Drive, Princes Highway, Bulli-Appin Road and Narellan-Appin Road. Forecast growth on Springs Road was based on planned development in that area.
- With the background growth in traffic on the haulage routes, the contribution of Metropolitan Colliery traffic to total traffic would decline. Outside of the local Helensburgh area, the Colliery traffic would comprise less than two percent of total traffic on these routes in the long term.
- Despite background growth in traffic in the Helensburgh area, the key intersections are expected to continue to operate at good levels of service, with short delays and spare capacity.

Potential Impacts of the Proposed Project

- Construction activity would take place between the start of 2010 and the end of 2014. The construction workforce would remain below 20 persons at most times, with an infrequent peak of 50 persons, not all of whom would attend the site every day.
- During peak construction activity, the Project is estimated to generate some 82 vehicle trips per day.
- At the completion of the construction period, the Project is estimated to generate some 12 additional operational trips per day.
- With the additional traffic, Metropolitan Colliery would continue to make only a small contribution to total traffic volumes on the haulage routes.

- The additional traffic during peak hours would be sufficiently small that its impact on the operation of the key intersections would be negligible.

7.2 Conclusions

This study has found that the proposed extension of the life of Metropolitan Colliery from 2010 to 2032 and expansion of its production capacity would have only minor impacts on the operation of the surrounding road system. The contribution of the Metropolitan Colliery to total traffic on the surrounding road network would decline over time, as background traffic levels increase.

The short term increase in traffic associated with the construction works between 2010 and 2014 would be minor. Similarly, the traffic associated with increased deliveries as a result of the proposed expansion of coal production would be very minor in the context of the expected background growth in traffic on the surrounding road system.

As the Project road haulage of product coal and coal reject would be capped at the existing maximum annual rates, the extension of the Metropolitan Colliery life would see the continuation of these existing haulage movements on the key routes. The haulage of coal reject to Glenlee Washery is not expected to continue for the whole life of the Project. Once coal reject haulage to Glenlee Washery ceases, the Metropolitan Colliery contribution to larger articulated heavy vehicle trips would decrease significantly.

In summary, the potential impacts of the Project on the performance and safety of the road network are expected to be minor in nature and no specific management or mitigation measures are required. Notwithstanding, it is recommended that HCPL prepare a Transport Management Plan for the Project to identify potential areas where traffic (e.g. workforce traffic movements) could be minimised.

8. References

Masson Wilson Twiney (2004) *Spring Farm Urban Release Area*. Report prepared for Lean & Hayward Pty Ltd.

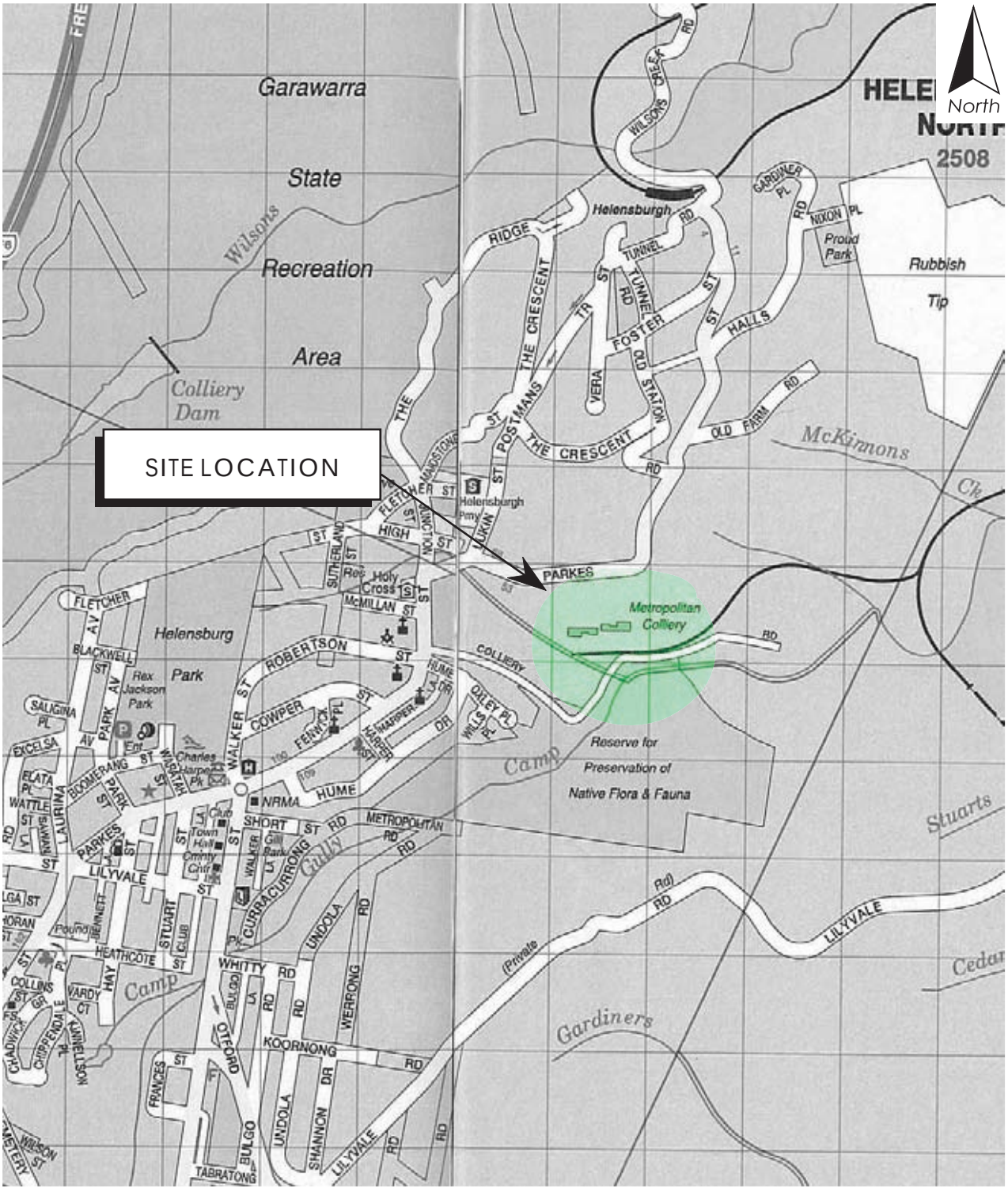
Roads and Traffic Authority (1996) *Road Design Guide.*

Roads and Traffic Authority (2002) *Guide to Traffic Generating Developments.*

Figures

SITE LOCATION

METROPOLITAN COLLIERY



MASSON | WILSON | TWINEY
TRAFFIC AND TRANSPORT CONSULTANTS

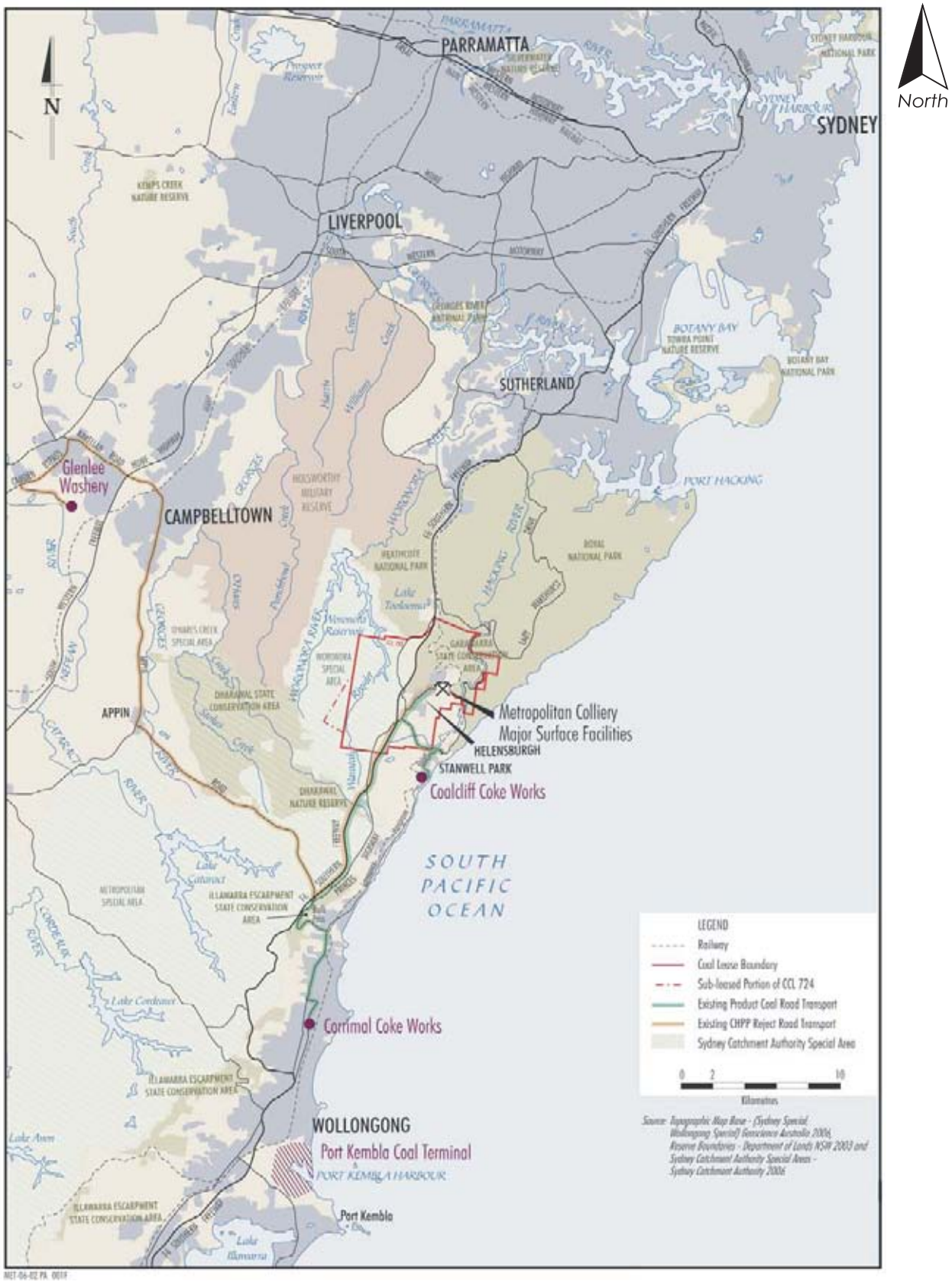
Figure 1

Filename: 063271di01.ai

Date: 18 April 2007

EXISTING HAULAGE ROUTES

METROPOLITAN COLLIERY



MASSON | WILSON | TWINEY
TRAFFIC AND TRANSPORT CONSULTANTS

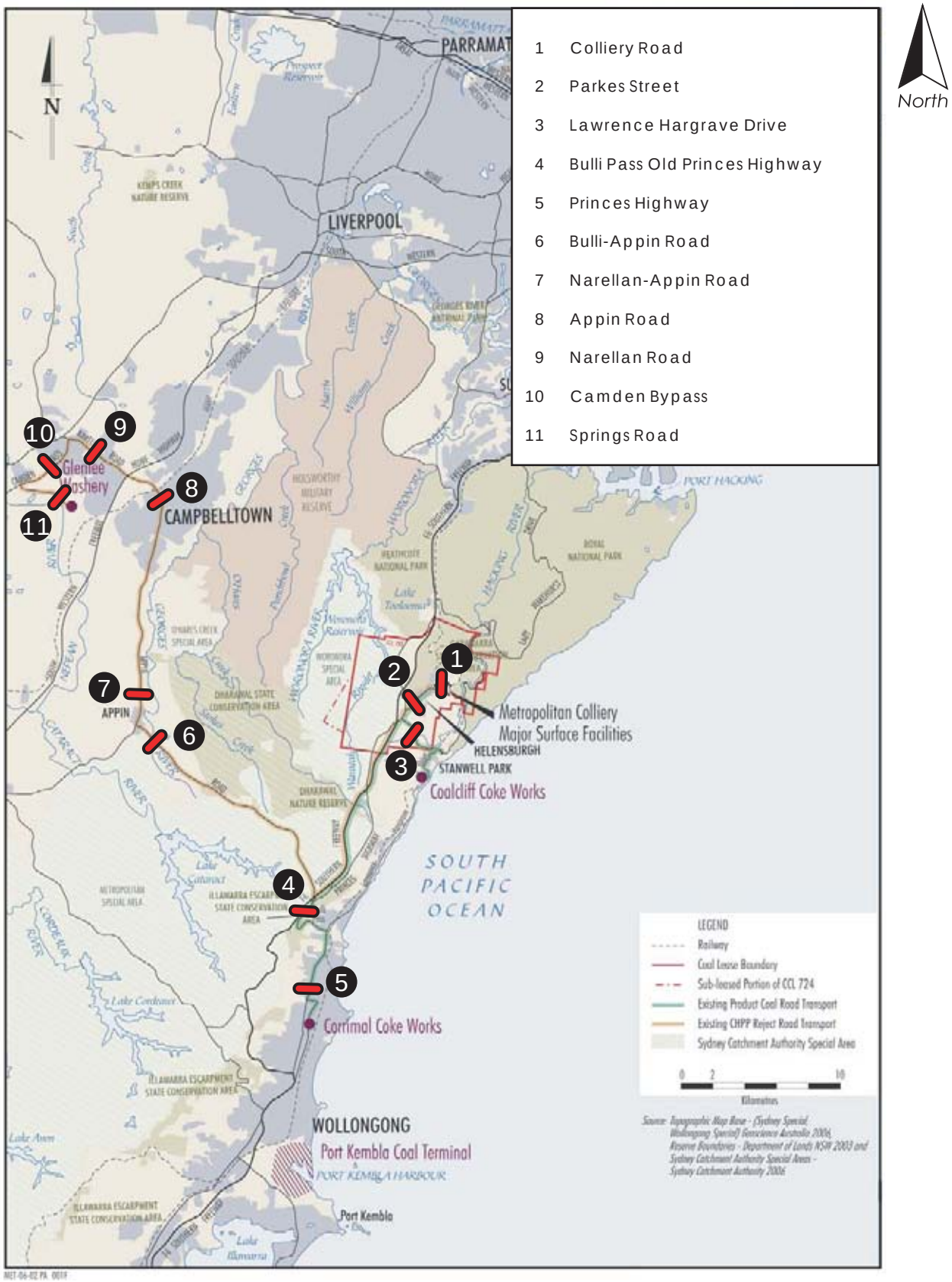
Figure 2

Filename: 063271di04.ai

Date: 5 March 2008

TUBE COUNT SURVEY LOCATIONS

METROPOLITAN COLLIERY



MASSON | WILSON | TWINEY

TRAFFIC AND TRANSPORT CONSULTANTS

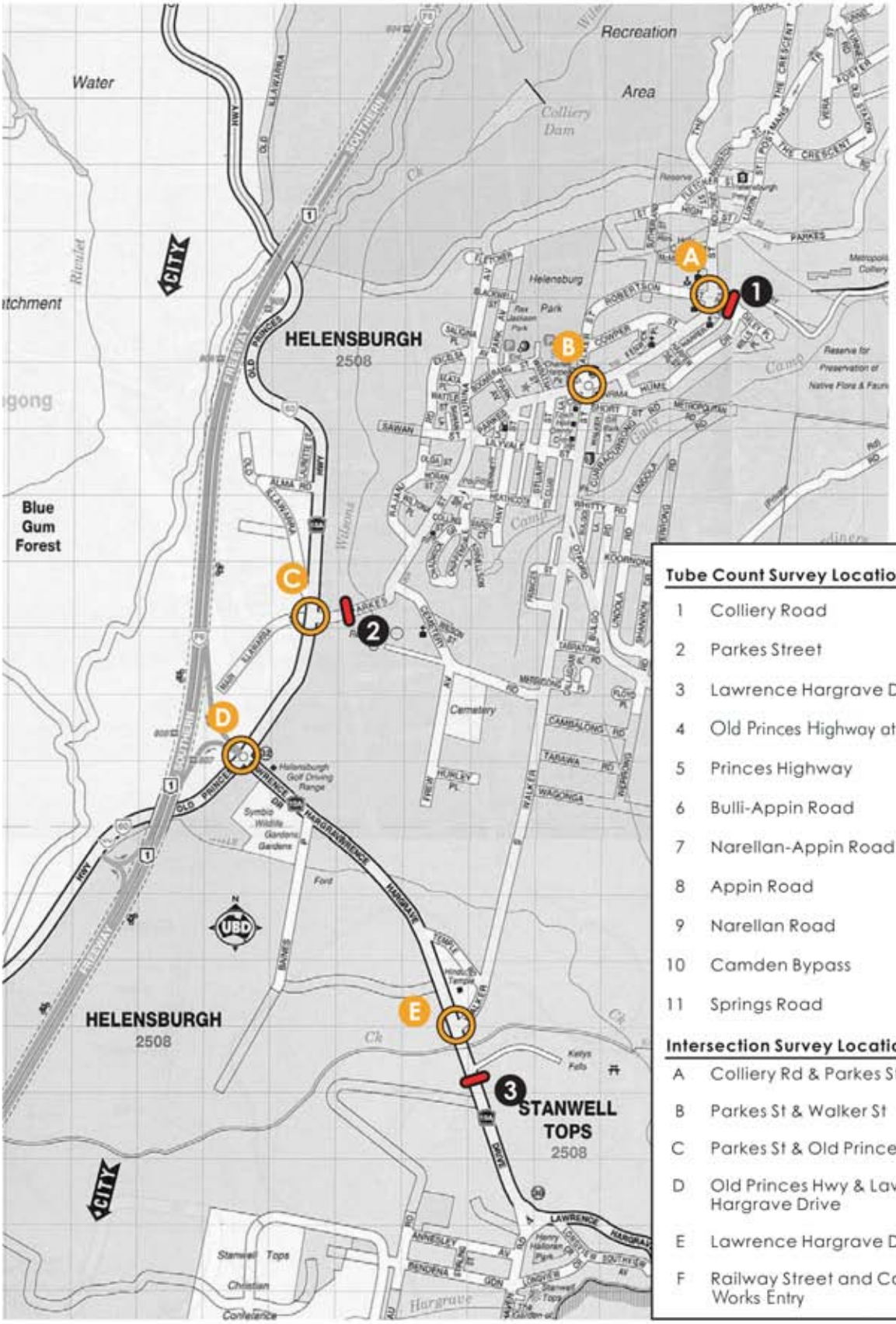
Figure 3

Filename: 063271di11.ai

Date: 29 February 2008

INTERSECTION SURVEY LOCATIONS

METROPOLITAN COLLIERY



Tube Count Survey Locations

1	Colliery Road
2	Parkes Street
3	Lawrence Hargrave Drive
4	Old Princes Highway at Bulli Pass
5	Princes Highway
6	Bulli-Appin Road
7	Narellan-Appin Road
8	Appin Road
9	Narellan Road
10	Camden Bypass
11	Springs Road

Intersection Survey Locations

A	Colliery Rd & Parkes St
B	Parkes St & Walker St
C	Parkes St & Old Princes Hwy
D	Old Princes Hwy & Lawrence Hargrave Drive
E	Lawrence Hargrave Dr & Walker St
F	Railway Street and Corrimal Coke Works Entry

MASSON | WILSON | TWINEY
TRAFFIC AND TRANSPORT CONSULTANTS

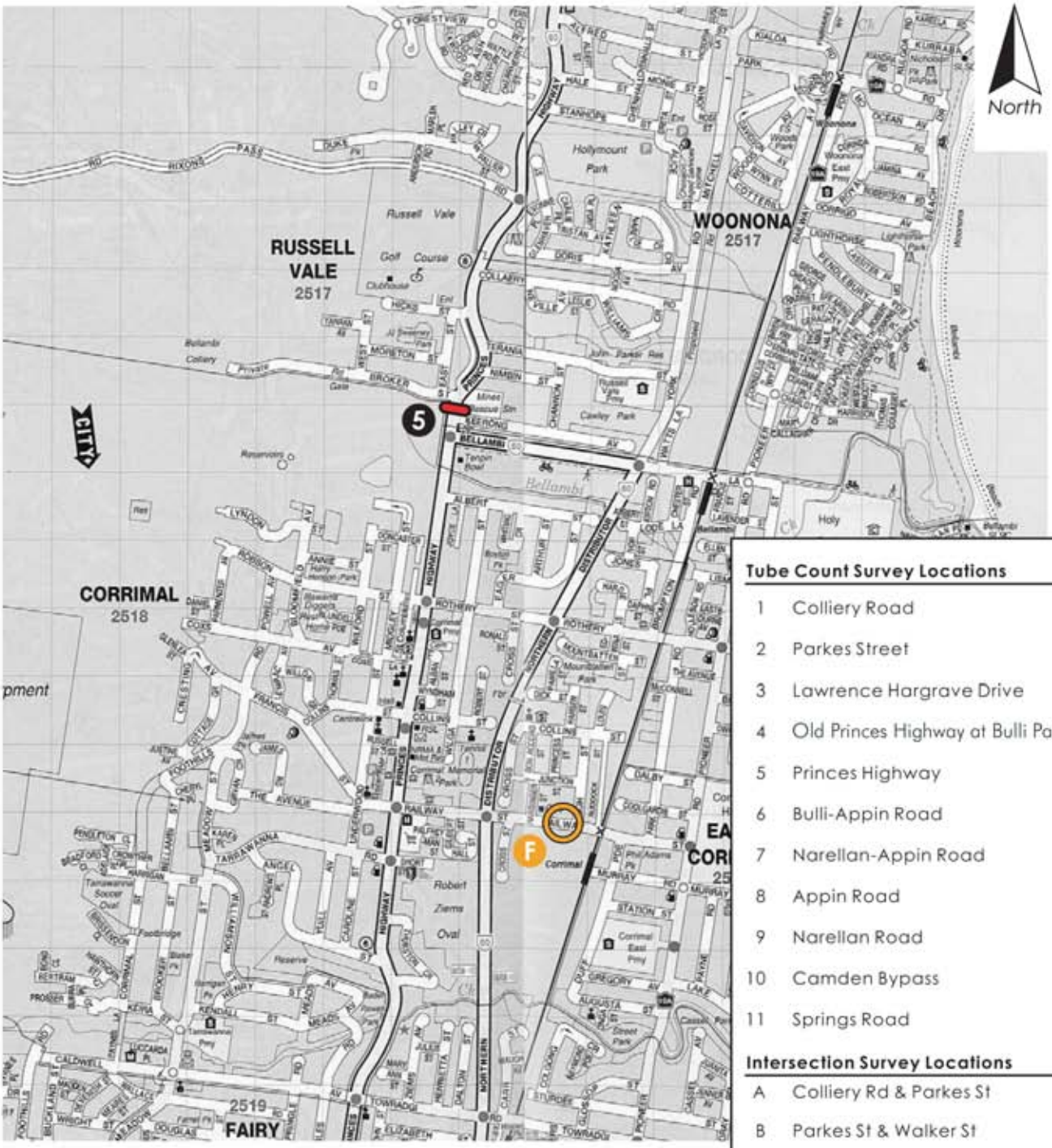
Figure 4A

Filename: 063271di12.ai

Date: 29 February 2008

INTERSECTION SURVEY LOCATIONS

METROPOLITAN COLLIERY



Tube Count Survey Locations

1	Colliery Road
2	Parkes Street
3	Lawrence Hargrave Drive
4	Old Princes Highway at Bulli Pass
5	Princes Highway
6	Bulli-Appin Road
7	Narellan-Appin Road
8	Appin Road
9	Narellan Road
10	Camden Bypass
11	Springs Road

Intersection Survey Locations

A	Colliery Rd & Parkes St
B	Parkes St & Walker St
C	Parkes St & Old Princes Hwy
D	Old Princes Hwy & Lawrence Hargrave Drive
E	Lawrence Hargrave Dr & Walker St
F	Railway Street and Corrimal Coke Works Entry

MASSON | WILSON | TWINEY
TRAFFIC AND TRANSPORT CONSULTANTS

Figure 4B

Filename: 063271di13.ai

Date: 29 February 2008

MORNING PEAK HOUR TRAFFIC VOLUMES

METROPOLITAN COLLIERY

Key

5: Light Vehicles (8:00-9:00am)

(5): Rigid Vehicles (8:00-9:00am)

[5]: Articulated Vehicles (8:00-9:00am)

MASSON | WILSON | TWINEY
TRAFFIC AND TRANSPORT CONSULTANTS

Figure 5

Filename: 063271di02.ai

Date: 18 April 2007

EVENING PEAK HOUR TRAFFIC VOLUMES

METROPOLITAN COLLIERY

Key

5: Light Vehicles (17:00-18:00)

(5): Rigid Vehicles (17:00-18:00)

[5]: Articulated Vehicles (17:00-18:00)

MASSON | WILSON | TWINEY
TRAFFIC AND TRANSPORT CONSULTANTS

Figure 6

Filename: 063271di03.ai

Date: 18 April 2007

2014 MORNING PEAK HOUR TRAFFIC VOLUMES WITH BACKGROUND GROWTH

METROPOLITAN COLLIERY

Key

5: Light Vehicles (8:00-9:00am)

(5): Rigid Vehicles (8:00-9:00am)

[5]: Articulated Vehicles (8:00-9:00am)

MASSON | WILSON | TWINEY
TRAFFIC AND TRANSPORT CONSULTANTS

Figure 7

Filename: 063271di07.ai

Date: 21 February 2007

2014 EVENING PEAK HOUR TRAFFIC VOLUMES WITH BACKGROUND GROWTH

METROPOLITAN COLLIERY

Key

5: Light Vehicles (8:00-9:00am)

(5): Rigid Vehicles (8:00-9:00am)

[5]: Articulated Vehicles (8:00-9:00am)

MASSON | WILSON | TWINEY

TRAFFIC AND TRANSPORT CONSULTANTS

Figure 8

Filename: 063271di08.ai

Date: 21 February 2007

2032 MORNING PEAK HOUR TRAFFIC VOLUMES WITH BACKGROUND GROWTH

METROPOLITAN COLLIERY

Key

5: Light Vehicles (8:00-9:00am)

(5): Rigid Vehicles (8:00-9:00am)

[5]: Articulated Vehicles (8:00-9:00am)

MASSON | WILSON | TWINEY

TRAFFIC AND TRANSPORT CONSULTANTS

Figure 9

Filename: 063271di09.ai

Date: 21 February 2007

2032 EVENING PEAK HOUR TRAFFIC VOLUMES WITH BACKGROUND GROWTH

METROPOLITAN COLLIERY

Key

5: Light Vehicles (8:00-9:00am)

(5): Rigid Vehicles (8:00-9:00am)

[5]: Articulated Vehicles (8:00-9:00am)

MASSON | WILSON | TWINEY

TRAFFIC AND TRANSPORT CONSULTANTS

Figure 10

Filename: 063271di10.ai

Date: 21 February 2007

Appendix A - Raw Survey Results

CfeIT bob.white@cfeit.com (02) 9740 8600

Traffic Count Summary Report

Count Number 2370 Ref : **MWT** Directory Ref : **UBD 12 A-9**

Street **COLLIERY ROAD, HELENSBURGH : From PARKES STREET to METROPOLITAN COLLIERY : EAST BOUND**

Location Close to Parkes Street Intersection. *Carriageway*

Start Date	15-NOV-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	35
Weekly 85th Percentile Speed	48
Five Day AADT	404
Seven Day AADT	319

TOTAL COUNT MATRIX

	MON *19TH*	TUE *20TH*	WED *21ST*	THU *15TH*	FRI *16TH*	SAT *17TH*	SUN *18TH*	5 Dav Total	5 Dav Average	7 Dav Total	7 Dav Average
Midnight - 1am	1	2	1	3	2	0	0	**9**	**2**	**9**	**1**
1am - 2am	0	0	0	1	1	0	0	**2**	**0**	**2**	**0**
2am - 3am	1	0	0	1	0	0	0	**2**	**0**	**2**	**0**
3am - 4am	3	3	3	3	3	2	0	**15**	**3**	**17**	**2**
4am - 5am	4	5	4	2	3	0	1	**18**	**4**	**19**	**3**
5am - 6am	23	16	17	21	21	22	6	**98**	**20**	**126**	**18**
6am - 7am	**92**	**90**	**78**	**69**	**74**	**54**	**40**	**403**	**81**	**497**	**71**
7am - 8am	26	25	24	25	24	7	1	**124**	**25**	**132**	**19**
8am - 9am	25	20	20	26	25	3	2	**116**	**23**	**121**	**17**
9am - 10am	26	19	28	31	28	3	2	**132**	**26**	**137**	**20**
10am - 11am	38	27	27	45	38	5	1	**175**	**35**	**181**	**26**
11am - Midday	22	27	24	21	32	3	2	**126**	**25**	**131**	**19**
Midday - 1pm	24	10	13	16	17	0	2	**80**	**16**	**82**	**12**
1pm - 2pm	25	28	37	33	25	2	0	**148**	**30**	**150**	**21**
2pm - 3pm	**46**	**51**	**55**	**47**	17	0	3	**216**	**43**	**219**	**31**
3pm - 4pm	13	9	11	10	10	2	2	**53**	**11**	**57**	**8**
4pm - 5pm	11	4	14	11	6	3	2	**46**	**9**	**51**	**7**
5pm - 6pm	0	1	0	0	4	2	6	**5**	**1**	**13**	**2**
6pm - 7pm	1	3	0	1	**28**	**13**	**12**	**33**	**7**	**58**	**8**
7pm - 8pm	1	0	0	1	1	0	0	**3**	**1**	**3**	**0**
8pm - 9pm	1	2	1	1	0	0	0	**5**	**1**	**5**	**1**
9pm - 10pm	12	11	10	9	2	0	4	**44**	**9**	**48**	**7**
10pm - 11pm	40	40	42	39	0	0	0	**161**	**32**	**161**	**23**
11pm - Midnight	2	0	0	1	5	0	7	**8**	**2**	**15**	**2**
Total	**437**	**393**	**409**	**417**	**366**	**121**	**93**	**2022**	**404**	**2236**	**319**

CfeIT bob.white@cfeit.com (02) 9740 8600

Traffic Count Summary Report

Count Number	**2370**	Ref : **MWT**	Directory Ref : **UBD 12 A-9**
Street	**COLLIERY ROAD, HELENSBURGH : From METROPOLITAN COLLIERY to PARKES STREET : WEST BOUND**		
Location	Close to Parkes Street Intersection.		*Carriageway*

TOTAL COUNT MATRIX

Start Date	15-NOV-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	36
Weekly 85th Percentile Speed	48
Five Day AADT	425
Seven Day AADT	335

	MON *19TH*	TUE *20TH*	WED *21ST*	THU *15TH*	FRI *16TH*	SAT *17TH*	SUN *18TH*	5 Dav Total	5 Dav Average	7 Dav Total	7 Dav Average
Midnight - 1am	0	34	29	35	31	0	0	**129**	**26**	**129**	**18**
1am - 2am	0	8	16	17	10	11	0	**51**	**10**	**62**	**9**
2am - 3am	1	0	0	1	0	1	0	**2**	**0**	**3**	**0**
3am - 4am	0	1	0	1	1	0	0	**3**	**1**	**3**	**0**
4am - 5am	1	1	1	2	1	1	1	**6**	**1**	**8**	**1**
5am - 6am	2	1	2	0	1	1	0	**6**	**1**	**7**	**1**
6am - 7am	31	15	10	16	16	7	**12**	**88**	**18**	**107**	**15**
7am - 8am	**47**	23	19	32	33	**23**	4	**154**	**31**	**181**	**26**
8am - 9am	26	**45**	**47**	**52**	35	5	2	**205**	**41**	**212**	**30**
9am - 10am	30	28	31	43	**54**	4	1	**186**	**37**	**191**	**27**
10am - 11am	32	28	25	40	44	5	4	**169**	**34**	**178**	**25**
11am - Midday	22	27	35	23	20	15	4	**127**	**25**	**146**	**21**
Midday - 1pm	24	21	12	16	22	3	2	**95**	**19**	**100**	**14**
1pm - 2pm	19	22	22	34	**42**	5	2	**139**	**28**	**146**	**21**
2pm - 3pm	31	30	24	21	36	5	4	**142**	**28**	**151**	**22**
3pm - 4pm	35	30	28	32	24	7	3	**149**	**30**	**159**	**23**
4pm - 5pm	**60**	**51**	**64**	**48**	13	5	3	**236**	**47**	**244**	**35**
5pm - 6pm	13	12	20	16	8	1	4	**69**	**14**	**74**	**11**
6pm - 7pm	3	9	2	3	27	**22**	**26**	**44**	**9**	**92**	**13**
7pm - 8pm	3	2	6	3	10	15	5	**24**	**5**	**44**	**6**
8pm - 9pm	4	3	4	4	4	0	5	**19**	**4**	**24**	**3**
9pm - 10pm	6	3	4	3	3	3	2	**19**	**4**	**24**	**3**
10pm - 11pm	8	9	8	5	7	0	0	**37**	**7**	**37**	**5**
11pm - Midnight	5	6	4	9	1	0	1	**25**	**5**	**26**	**4**
Total	**403**	**409**	**413**	**456**	**443**	**139**	**85**	**2124**	**424**	**2348**	**335**

CfeIT bob.white@cfeit.com (02) 9740 8600

Traffic Count Summary Report

Count Number	**2157**	Ref : **MWT**	Directory Ref : **UBD 11 K-13**
Street	**PARKES STREET, HELENSBURG : From OLD PRINCES HIGHWAY to CEMETERY ROAD : NORTH EAST**		
Location	East of the Old Princes Highway, on 50 KPH Sign		*Carriageway*

TOTAL COUNT MATRIX

Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	56
Weekly 85th Percentile Speed	65
Five Day AADT	3737
Seven Day AADT	3492

	MON *22ND*	TUE *23RD*	WED *24TH*	THU *25TH*	FRI *26TH*	SAT *27TH*	SUN *21ST*	5 Dav Total	5 Dav Average	7 Dav Total	7 Dav Average
Midnight - 1am	16	17	18	16	21	36	51	**88**	**18**	**175**	**25**
1am - 2am	4	7	6	15	15	28	27	**47**	**9**	**102**	**15**
2am - 3am	6	3	4	4	10	12	20	**27**	**5**	**59**	**8**
3am - 4am	7	10	4	4	10	12	10	**35**	**7**	**57**	**8**
4am - 5am	14	13	18	14	8	10	10	**67**	**13**	**87**	**12**
5am - 6am	59	51	38	43	45	34	19	**236**	**47**	**289**	**41**
6am - 7am	129	152	140	128	126	114	51	**675**	**135**	**840**	**120**
7am - 8am	124	159	132	129	143	112	50	**687**	**137**	**849**	**121**
8am - 9am	**193**	**180**	**181**	**168**	172	167	73	**894**	**179**	**1134**	**162**
9am - 10am	165	176	173	152	144	181	119	**810**	**162**	**1110**	**159**
10am - 11am	161	151	171	155	159	**287**	160	**797**	**159**	**1244**	**178**
11am - Midday	185	156	151	134	**178**	286	**258**	**804**	**161**	**1348**	**193**
Midday - 1pm	184	185	164	170	219	**289**	**276**	**922**	**184**	**1487**	**212**
1pm - 2pm	164	202	194	201	234	231	199	**995**	**199**	**1425**	**204**
2pm - 3pm	272	273	255	267	240	224	193	**1307**	**261**	**1724**	**246**
3pm - 4pm	327	325	337	315	371	218	219	**1675**	**335**	**2112**	**302**
4pm - 5pm	407	415	427	**454**	**436**	209	200	**2139**	**428**	**2548**	**364**
5pm - 6pm	**410**	**461**	**501**	427	435	211	207	**2234**	**447**	**2652**	**379**
6pm - 7pm	360	370	340	330	315	178	133	**1715**	**343**	**2026**	**289**
7pm - 8pm	184	169	181	179	159	107	90	**872**	**174**	**1069**	**153**
8pm - 9pm	102	109	120	135	77	62	69	**543**	**109**	**674**	**96**
9pm - 10pm	97	96	92	110	85	67	62	**480**	**96**	**609**	**87**
10pm - 11pm	79	87	82	92	74	61	40	**414**	**83**	**515**	**74**
11pm - Midnight	28	47	44	34	70	65	21	**223**	**45**	**309**	**44**
Total	**3677**	**3814**	**3773**	**3676**	**3746**	**3201**	**2557**	**18686**	**3737**	**24444**	**3492**

 CFE Information Technologies

CfeIT bob.white@cfeit.com (02) 9740 8600

Traffic Count Summary Report

Count Number	**2157**	Ref : **MWT**	Directory Ref : **UBD 11 K-13**
Street	**PARKES STREET, HELENSBURG : From CEMETERY ROAD to OLD PRINCES HIGHWAY : SOUTH WEST**		
Location	East of the Old Princes Highway, on 50 KPH Sign		*Carriageway*

TOTAL COUNT MATRIX

Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	58
Weekly 85th Percentile Speed	67
Five Day AADT	3749
Seven Day AADT	3480

	MON *22ND*	TUE *23RD*	WED *24TH*	THU *25TH*	FRI *26TH*	SAT *27TH*	SUN *21ST*	5 Dav Total	5 Dav Average	7 Dav Total	7 Dav Average
Midnight - 1am	7	26	28	13	24	21	17	**98**	**20**	**136**	**19**
1am - 2am	3	20	8	33	22	18	14	**86**	**17**	**118**	**17**
2am - 3am	3	4	7	10	6	6	7	**30**	**6**	**43**	**6**
3am - 4am	11	12	11	11	9	18	7	**54**	**11**	**79**	**11**
4am - 5am	62	56	59	49	58	24	19	**284**	**57**	**327**	**47**
5am - 6am	248	241	259	257	214	73	41	**1219**	**244**	**1333**	**190**
6am - 7am	364	409	394	376	330	122	62	**1873**	**375**	**2057**	**294**
7am - 8am	**446**	**469**	**455**	**448**	**451**	197	80	**2269**	**454**	**2546**	**364**
8am - 9am	402	439	413	439	440	228	176	**2133**	**427**	**2537**	**362**
9am - 10am	253	274	264	276	305	**273**	214	**1372**	**274**	**1859**	**266**
10am - 11am	228	219	213	216	218	219	**220**	**1094**	**219**	**1533**	**219**
11am - Midday	162	187	176	205	212	259	200	**942**	**188**	**1401**	**200**
Midday - 1pm	173	170	170	151	177	212	**205**	**841**	**168**	**1258**	**180**
1pm - 2pm	162	149	143	152	182	228	163	**788**	**158**	**1179**	**168**
2pm - 3pm	186	171	172	190	194	221	145	**913**	**183**	**1279**	**183**
3pm - 4pm	**212**	**261**	198	**222**	**236**	212	156	**1129**	**226**	**1497**	**214**
4pm - 5pm	208	216	**225**	**222**	177	**246**	168	**1048**	**210**	**1462**	**209**
5pm - 6pm	150	178	187	185	173	229	143	**873**	**175**	**1245**	**178**
6pm - 7pm	98	118	109	130	155	181	118	**610**	**122**	**909**	**130**
7pm - 8pm	73	67	60	57	106	91	69	**363**	**73**	**523**	**75**
8pm - 9pm	74	52	71	52	46	59	69	**295**	**59**	**423**	**60**
9pm - 10pm	55	55	52	41	34	53	30	**237**	**47**	**320**	**46**
10pm - 11pm	21	20	29	19	34	46	16	**123**	**25**	**185**	**26**
11pm - Midnight	7	17	18	13	16	37	4	**71**	**14**	**112**	**16**
Total	**3608**	**3830**	**3721**	**3767**	**3819**	**3273**	**2343**	**18745**	**3749**	**24361**	**3480**

 CFE Information Technologies

CfeIT bob.white@cfeit.com (02) 9740 8600

Traffic Count Summary Report

Count Number	**2156**	Ref : **MWT**	Directory Ref : **UBD 13 M-5**
Street	**LAWRENCE HARGRAVE DRIVE, STANWELL TOPS : From STONEHAVEN ROAD to WALKER STREET : NORTH WEST**		
Location	Mid-section between Stonehaven Road and Walker Street, To freeway sign		*Carriageway*

TOTAL COUNT MATRIX

Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	75
Weekly 85th Percentile Speed	86
Five Day AADT	2971
Seven Day AADT	3283

	MON *22ND*	TUE *23RD*	WED *24TH*	THU *25TH*	FRI *26TH*	SAT *27TH*	SUN *21ST*	5 Dav Total	5 Dav Average	7 Dav Total	7 Dav Average
Midnight - 1am	3	6	4	2	4	16	17	**19**	**4**	**52**	**7**
1am - 2am	1	1	1	6	4	11	8	**13**	**3**	**32**	**5**
2am - 3am	2	2	2	2	3	4	10	**11**	**2**	**25**	**4**
3am - 4am	7	5	8	5	10	6	8	**35**	**7**	**49**	**7**
4am - 5am	31	29	36	23	34	21	10	**153**	**31**	**184**	**26**
5am - 6am	155	163	151	157	126	51	21	**752**	**150**	**824**	**118**
6am - 7am	258	273	254	240	228	92	64	**1253**	**251**	**1409**	**201**
7am - 8am	312	**340**	323	349	306	142	79	**1630**	**326**	**1851**	**264**
8am - 9am	**320**	313	**340**	**352**	**319**	200	181	**1644**	**329**	**2025**	**289**
9am - 10am	242	212	212	216	176	225	239	**1058**	**212**	**1522**	**217**
10am - 11am	171	134	154	157	172	**285**	**439**	**788**	**158**	**1512**	**216**
11am - Midday	171	162	150	152	158	262	424	**793**	**159**	**1479**	**211**
Midday - 1pm	185	158	140	150	150	279	413	**783**	**157**	**1475**	**211**
1pm - 2pm	179	142	144	132	149	274	379	**746**	**149**	**1399**	**200**
2pm - 3pm	200	178	**211**	168	191	**324**	451	**948**	**190**	**1723**	**246**
3pm - 4pm	**212**	**223**	192	**197**	**254**	268	**501**	**1078**	**216**	**1847**	**264**
4pm - 5pm	188	166	166	182	171	276	490	**873**	**175**	**1639**	**234**
5pm - 6pm	153	167	171	167	112	211	391	**770**	**154**	**1372**	**196**
6pm - 7pm	133	142	117	103	133	190	248	**628**	**126**	**1066**	**152**
7pm - 8pm	73	54	52	75	73	120	109	**327**	**65**	**556**	**79**
8pm - 9pm	59	35	43	45	51	65	67	**233**	**47**	**365**	**52**
9pm - 10pm	31	27	34	34	45	88	47	**171**	**34**	**306**	**44**
10pm - 11pm	8	19	20	17	29	58	15	**93**	**19**	**166**	**24**
11pm - Midnight	2	11	14	10	18	43	6	**55**	**11**	**104**	**15**
Total	**3096**	**2962**	**2939**	**2941**	**2916**	**3511**	**4617**	**14854**	**2970**	**22982**	**3283**

 CFE Information Technologies

CfeIT bob.white@cfeit.com (02) 9740 8600

Traffic Count Summary Report

Count Number	**2156**	Ref : **MWT**	Directory Ref : **UBD 13 M-5**
Street	**LAWRENCE HARGRAVE DRIVE, STANWELL TOPS : From WALKER STREET to STONEHAVEN ROAD : SOUTH EAST**		
Location	Mid-section between Stonehaven Road and Walker Street, To freeway sign		*Carriageway*

TOTAL COUNT MATRIX

Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	76
Weekly 85th Percentile Speed	87
Five Day AADT	2900
Seven Day AADT	3165

	MON *22ND*	TUE *23RD*	WED *24TH*	THU *25TH*	FRI *26TH*	SAT *27TH*	SUN *21ST*	5 Dav Total	5 Dav Average	7 Dav Total	7 Dav Average
Midnight - 1am	12	10	11	19	19	19	40	**71**	**14**	**130**	**19**
1am - 2am	4	8	6	16	15	14	24	**49**	**10**	**87**	**12**
2am - 3am	2	3	3	5	6	4	17	**19**	**4**	**40**	**6**
3am - 4am	2	1	3	1	4	8	16	**11**	**2**	**35**	**5**
4am - 5am	7	5	5	3	4	9	20	**24**	**5**	**53**	**8**
5am - 6am	18	22	22	13	20	37	46	**95**	**19**	**178**	**25**
6am - 7am	71	68	61	52	77	77	82	**329**	**66**	**488**	**70**
7am - 8am	85	87	69	81	67	121	137	**389**	**78**	**647**	**92**
8am - 9am	117	135	119	118	133	143	345	**622**	**124**	**1110**	**159**
9am - 10am	183	135	152	136	127	208	315	**733**	**147**	**1256**	**179**
10am - 11am	184	170	128	126	164	249	424	**772**	**154**	**1445**	**206**
11am - Midday	**248**	**179**	**165**	**149**	**171**	**391**	**445**	**912**	**182**	**1748**	**250**
Midday - 1pm	195	154	147	135	187	**419**	**367**	**818**	**164**	**1604**	**229**
1pm - 2pm	146	152	139	152	172	335	302	**761**	**152**	**1398**	**200**
2pm - 3pm	183	179	144	167	176	279	286	**849**	**170**	**1414**	**202**
3pm - 4pm	250	220	217	251	286	254	276	**1224**	**245**	**1754**	**251**
4pm - 5pm	**295**	266	336	303	295	268	224	**1495**	**299**	**1987**	**284**
5pm - 6pm	**295**	**346**	**338**	**330**	**333**	234	212	**1642**	**328**	**2088**	**298**
6pm - 7pm	293	269	272	275	269	161	163	**1378**	**276**	**1702**	**243**
7pm - 8pm	164	172	184	182	197	155	99	**899**	**180**	**1153**	**165**
8pm - 9pm	128	116	97	110	116	81	57	**567**	**113**	**705**	**101**
9pm - 10pm	74	73	75	85	100	74	49	**407**	**81**	**530**	**76**
10pm - 11pm	38	48	68	63	59	62	25	**276**	**55**	**363**	**52**
11pm - Midnight	23	21	25	40	48	70	13	**157**	**31**	**240**	**34**
Total	**3017**	**2839**	**2786**	**2812**	**3045**	**3672**	**3984**	**14499**	**2899**	**22155**	**3165**

 CFE Information Technologies

CfeIT bob.white@cfeit.com (02) 9740 8600

Traffic Count Summary Report

Count Number	**2155**	Ref : **MWT**	Directory Ref : **UBD 21 N-3**
Street	**OLD PRINCES HIGHWAY, BULLI PASS : From MOUNT OUSLEY ROAD to LAWRENCE HARGRAVE DRIVE : NORTH EAST**		
Location	Midway on Bulli Pass		*Carriageway*

TOTAL COUNT MATRIX

Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	56
Weekly 85th Percentile Speed	66
Five Day AADT	5215
Seven Day AADT	5406

	MON *22ND*	TUE *23RD*	WED *24TH*	THU *25TH*	FRI *26TH*	SAT *27TH*	SUN *21ST*	5 Dav Total	5 Dav Average	7 Dav Total	7 Dav Average
Midnight - 1am	47	45	44	46	84	70	89	**266**	**53**	**425**	**61**
1am - 2am	18	45	43	36	41	44	58	**183**	**37**	**285**	**41**
2am - 3am	8	7	9	14	17	23	27	**55**	**11**	**105**	**15**
3am - 4am	7	9	8	13	10	11	16	**47**	**9**	**74**	**11**
4am - 5am	14	18	13	14	18	18	23	**77**	**15**	**118**	**17**
5am - 6am	37	32	29	24	33	34	38	**155**	**31**	**227**	**32**
6am - 7am	158	169	181	157	145	119	54	**810**	**162**	**983**	**140**
7am - 8am	190	194	193	159	191	125	117	**927**	**185**	**1169**	**167**
8am - 9am	207	**199**	**214**	**222**	203	167	266	**1045**	**209**	**1478**	**211**
9am - 10am	184	184	182	177	**204**	198	379	**931**	**186**	**1508**	**215**
10am - 11am	**217**	197	198	161	169	294	708	**942**	**188**	**1944**	**278**
11am - Midday	193	167	180	175	196	**360**	**1046**	**911**	**182**	**2317**	**331**
Midday - 1pm	194	207	202	186	216	368	**1070**	**1005**	**201**	**2443**	**349**
1pm - 2pm	180	190	195	195	248	332	723	**1008**	**202**	**2063**	**295**
2pm - 3pm	295	276	351	301	338	344	477	**1561**	**312**	**2382**	**340**
3pm - 4pm	429	478	521	443	525	369	424	**2396**	**479**	**3189**	**456**
4pm - 5pm	**640**	**693**	739	691	**716**	**397**	377	**3479**	**696**	**4253**	**608**
5pm - 6pm	615	650	**770**	**696**	699	**397**	387	**3430**	**686**	**4214**	**602**
6pm - 7pm	597	616	589	507	557	338	266	**2866**	**573**	**3470**	**496**
7pm - 8pm	300	285	352	291	335	190	205	**1563**	**313**	**1958**	**280**
8pm - 9pm	128	132	182	184	170	107	144	**796**	**159**	**1047**	**150**
9pm - 10pm	114	92	146	152	123	113	111	**627**	**125**	**851**	**122**
10pm - 11pm	98	105	118	114	107	88	92	**542**	**108**	**722**	**103**
11pm - Midnight	72	93	107	92	87	109	56	**451**	**90**	**616**	**88**
Total	**4942**	**5083**	**5566**	**5050**	**5432**	**4615**	**7153**	**26073**	**5214**	**37841**	**5405**

 CFE Information Technologies

CfeIT bob.white@cfeit.com (02) 9740 8600

Traffic Count Summary Report

Count Number	**2155**	Ref : **MWT**	Directory Ref : **UBD 21 N-3**
Street	**OLD PRINCES HIGHWAY, BULLI PASS : From LAWRENCE HARGRAVE DRIVE to MOUNT OUSLEY ROAD : SOUTH WEST**		
Location	Midway on Bulli Pass		*Carriageway*

TOTAL COUNT MATRIX

Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	50
Weekly 85th Percentile Speed	58
Five Day AADT	5302
Seven Day AADT	5474

	MON *22ND*	TUE *23RD*	WED *24TH*	THU *25TH*	FRI *26TH*	SAT *27TH*	SUN *21ST*	5 Dav Total	5 Dav Average	7 Dav Total	7 Dav Average
Midnight - 1am	10	10	8	11	8	31	30	**47**	**9**	**108**	**15**
1am - 2am	8	9	11	6	4	16	21	**38**	**8**	**75**	**11**
2am - 3am	15	13	15	24	14	15	9	**81**	**16**	**105**	**15**
3am - 4am	37	34	30	43	37	29	17	**181**	**36**	**227**	**32**
4am - 5am	176	163	157	142	150	73	57	**788**	**158**	**918**	**131**
5am - 6am	607	614	605	569	558	198	136	**2953**	**591**	**3287**	**470**
6am - 7am	720	773	766	741	716	190	128	**3716**	**743**	**4034**	**576**
7am - 8am	**794**	**783**	**773**	**789**	**767**	264	140	**3906**	**781**	**4310**	**616**
8am - 9am	493	472	497	458	446	325	236	**2366**	**473**	**2927**	**418**
9am - 10am	264	337	316	288	306	327	304	**1511**	**302**	**2142**	**306**
10am - 11am	206	220	221	208	219	319	486	**1074**	**215**	**1879**	**268**
11am - Midday	203	178	176	188	213	**344**	**699**	**958**	**192**	**2001**	**286**
Midday - 1pm	207	193	159	214	188	**382**	704	**961**	**192**	**2047**	**292**
1pm - 2pm	266	231	205	221	230	348	606	**1153**	**231**	**2107**	**301**
2pm - 3pm	**275**	**234**	224	208	234	304	625	**1175**	**235**	**2104**	**301**
3pm - 4pm	203	230	226	**249**	263	316	**751**	**1171**	**234**	**2238**	**320**
4pm - 5pm	201	222	**243**	224	**268**	326	736	**1158**	**232**	**2220**	**317**
5pm - 6pm	198	187	224	198	229	299	555	**1036**	**207**	**1890**	**270**
6pm - 7pm	133	133	152	164	150	210	340	**732**	**146**	**1282**	**183**
7pm - 8pm	72	77	91	78	94	116	173	**412**	**82**	**701**	**100**
8pm - 9pm	55	70	71	61	71	113	112	**328**	**66**	**553**	**79**
9pm - 10pm	76	72	71	105	84	86	103	**408**	**82**	**597**	**85**
10pm - 11pm	34	49	49	46	67	83	47	**245**	**49**	**375**	**54**
11pm - Midnight	5	27	24	12	43	64	17	**111**	**22**	**192**	**27**
Total	**5258**	**5331**	**5314**	**5247**	**5359**	**4778**	**7032**	**26509**	**5301**	**38319**	**5474**

 CFE Information Technologies

CfeIT bob.white@cfeit.com (02) 9740 8600

Traffic Count Summary Report

Count Number 2152 Ref : MWT Directory Ref : UBD 25 P-6

Street **PRINCES HIGHWAY, RUSSELL VALE : From BELLAMBI LANE to BROKER STREET : NORTH BOUND**

Location Combined Counts 2153 and 2154 Northbound, North of Bellambi Lane, House No. , ELP *Carriageway*

TOTAL COUNT MATRIX

Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	52
Weekly 85th Percentile Speed	59
Five Day AADT	13143
Seven Day AADT	12444

	MON *22ND*	TUE *23RD*	WED *24TH*	THU *25TH*	FRI *26TH*	SAT *27TH*	SUN *21ST*	5 Dav Total	5 Dav Average	7 Dav Total	7 Dav Average
Midnight - 1am	30	29	41	42	43	98	99	**185**	**37**	**382**	**55**
1am - 2am	22	11	19	19	11	68	69	**82**	**16**	**219**	**31**
2am - 3am	14	6	16	25	12	46	46	**73**	**15**	**165**	**24**
3am - 4am	30	31	28	37	32	41	40	**158**	**32**	**239**	**34**
4am - 5am	99	108	104	89	94	81	58	**494**	**99**	**633**	**90**
5am - 6am	335	326	325	308	322	122	93	**1616**	**323**	**1831**	**262**
6am - 7am	615	621	622	618	576	248	147	**3052**	**610**	**3447**	**492**
7am - 8am	680	706	714	697	686	411	233	**3483**	**697**	**4127**	**590**
8am - 9am	**848**	**844**	**824**	**832**	**822**	596	352	**4170**	**834**	**5118**	**731**
9am - 10am	744	709	767	740	802	740	635	**3762**	**752**	**5137**	**734**
10am - 11am	731	739	737	717	801	900	799	**3725**	**745**	**5424**	**775**
11am - Midday	764	769	717	802	782	**1041**	**879**	**3834**	**767**	**5754**	**822**
Midday - 1pm	785	765	743	754	780	**1064**	855	**3827**	**765**	**5746**	**821**
1pm - 2pm	782	736	829	807	834	861	823	**3988**	**798**	**5672**	**810**
2pm - 3pm	824	890	899	930	947	840	870	**4490**	**898**	**6200**	**886**
3pm - 4pm	1103	1122	1189	1156	1221	844	**883**	**5791**	**1158**	**7518**	**1074**
4pm - 5pm	1196	1244	1268	**1236**	**1316**	836	831	**6260**	**1252**	**7927**	**1132**
5pm - 6pm	**1223**	**1302**	**1318**	1188	1193	720	742	**6224**	**1245**	**7686**	**1098**
6pm - 7pm	732	679	738	792	764	576	526	**3705**	**741**	**4807**	**687**
7pm - 8pm	386	437	434	473	487	414	349	**2217**	**443**	**2980**	**426**
8pm - 9pm	279	348	310	420	347	261	252	**1704**	**341**	**2217**	**317**
9pm - 10pm	236	242	255	354	295	249	183	**1382**	**276**	**1814**	**259**
10pm - 11pm	125	135	177	183	258	232	120	**878**	**176**	**1230**	**176**
11pm - Midnight	68	182	127	85	154	173	46	**616**	**123**	**835**	**119**
Total	**12651**	**12981**	**13201**	**13304**	**13579**	**11462**	**9930**	**65716**	**13143**	**87108**	**12444**

CfeIT bob.white@cfeit.com (02) 9740 8600

Traffic Count Summary Report

Count Number 2149 Ref : MWT Directory Ref : UBD 25 P-6

Street **PRINCES HIGHWAY, RUSSELL VALE : From BELLAMBI LANE to BROKER STREET : SOUTH BOUND**

Location Combined Counts 2150 and 2151 Southbound, North of Bellambi Lane, House No. , ELP *Carriageway*

TOTAL COUNT MATRIX

Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	48
Weekly 85th Percentile Speed	58
Five Day AADT	12637
Seven Day AADT	11973

	MON *22ND*	TUE *23RD*	WED *24TH*	THU *25TH*	FRI *26TH*	SAT *27TH*	SUN *21ST*	5 Dav Total	5 Dav Average	7 Dav Total	7 Dav Average
Midnight - 1am	50	27	46	59	52	108	132	**234**	**47**	**474**	**68**
1am - 2am	19	18	29	22	29	82	104	**117**	**23**	**303**	**43**
2am - 3am	14	12	13	21	12	62	68	**72**	**14**	**202**	**29**
3am - 4am	23	16	19	26	16	39	36	**100**	**20**	**175**	**25**
4am - 5am	52	56	56	48	67	52	57	**279**	**56**	**388**	**55**
5am - 6am	175	166	170	194	180	106	77	**885**	**177**	**1068**	**153**
6am - 7am	471	498	495	476	485	220	150	**2425**	**485**	**2795**	**399**
7am - 8am	932	937	951	832	798	396	240	**4450**	**890**	**5086**	**727**
8am - 9am	**1394**	**1387**	**1422**	**1434**	**1454**	728	343	**7091**	**1418**	**8162**	**1166**
9am - 10am	924	891	853	964	1033	947	723	**4665**	**933**	**6335**	**905**
10am - 11am	763	766	799	862	850	944	771	**4040**	**808**	**5755**	**822**
11am - Midday	729	745	771	831	867	**994**	**849**	**3943**	**789**	**5786**	**827**
Midday - 1pm	715	725	764	730	725	868	**814**	**3659**	**732**	**5341**	**763**
1pm - 2pm	686	695	723	717	736	**872**	720	**3557**	**711**	**5149**	**736**
2pm - 3pm	863	831	886	841	860	790	744	**4281**	**856**	**5815**	**831**
3pm - 4pm	**939**	**967**	**1033**	**1013**	**1040**	738	710	**4992**	**998**	**6440**	**920**
4pm - 5pm	796	874	1002	933	951	736	658	**4556**	**911**	**5950**	**850**
5pm - 6pm	715	854	804	830	803	637	581	**4006**	**801**	**5224**	**746**
6pm - 7pm	634	713	757	678	705	590	529	**3487**	**697**	**4606**	**658**
7pm - 8pm	392	483	522	455	463	401	349	**2315**	**463**	**3065**	**438**
8pm - 9pm	254	242	352	303	317	314	285	**1468**	**294**	**2067**	**295**
9pm - 10pm	148	183	208	238	272	239	194	**1049**	**210**	**1482**	**212**
10pm - 11pm	136	142	173	168	322	232	117	**941**	**188**	**1290**	**184**
11pm - Midnight	53	112	107	95	205	219	61	**572**	**114**	**852**	**122**
Total	**11877**	**12340**	**12955**	**12770**	**13242**	**11314**	**9312**	**63184**	**12636**	**83810**	**11972**

CfeIT bob.white@cfeit.com (02) 9740 8600

Traffic Count Summary Report

Count Number	**2168**	Ref : **MWT**	Directory Ref : **UBD ??**
Street	**BULLI APPIN ROAD, APPIN : From CHURCH STREET to KINGS FALLS BRIDGE : SOUTH EAST**		
Location	Combined Counts 2169 and 2170 Southeastbound, near Kings Fall Bridge		*Carriageway*

TOTAL COUNT MATRIX

Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	94
Weekly 85th Percentile Speed	106
Five Day AADT	4216
Seven Day AADT	4372

	MON *22ND*	TUE *23RD*	WED *24TH*	THU *25TH*	FRI *26TH*	SAT *27TH*	SUN *21ST*	5 Dav Total	5 Dav Average	7 Dav Total	7 Dav Average
Midnight - 1am	23	27	29	23	28	20	35	**130**	**26**	**185**	**26**
1am - 2am	8	11	9	13	16	17	20	**57**	**11**	**94**	**13**
2am - 3am	10	14	14	12	14	21	13	**64**	**13**	**98**	**14**
3am - 4am	21	18	14	25	18	30	12	**96**	**19**	**138**	**20**
4am - 5am	43	37	31	29	26	39	37	**166**	**33**	**242**	**35**
5am - 6am	148	135	167	150	140	119	61	**740**	**148**	**920**	**131**
6am - 7am	**311**	326	300	290	**307**	174	92	**1534**	**307**	**1800**	**257**
7am - 8am	283	**341**	**332**	**295**	273	147	133	**1524**	**305**	**1804**	**258**
8am - 9am	225	274	284	283	256	190	297	**1322**	**264**	**1809**	**258**
9am - 10am	229	237	224	204	179	234	466	**1073**	**215**	**1773**	**253**
10am - 11am	242	207	192	175	206	280	626	**1022**	**204**	**1928**	**275**
11am - Midday	214	183	167	142	197	**334**	**715**	**903**	**181**	**1952**	**279**
Midday - 1pm	191	173	176	159	253	**320**	**681**	**952**	**190**	**1953**	**279**
1pm - 2pm	198	178	169	187	238	311	523	**970**	**194**	**1804**	**258**
2pm - 3pm	258	218	270	211	264	300	427	**1221**	**244**	**1948**	**278**
3pm - 4pm	434	406	**431**	410	453	250	312	**2134**	**427**	**2696**	**385**
4pm - 5pm	**451**	**445**	417	**424**	**472**	265	259	**2209**	**442**	**2733**	**390**
5pm - 6pm	416	395	415	342	412	265	290	**1980**	**396**	**2535**	**362**
6pm - 7pm	250	238	214	201	263	204	170	**1166**	**233**	**1540**	**220**
7pm - 8pm	106	87	96	104	180	140	114	**573**	**115**	**827**	**118**
8pm - 9pm	72	63	74	74	98	91	78	**381**	**76**	**550**	**79**
9pm - 10pm	73	59	82	86	65	99	62	**365**	**73**	**526**	**75**
10pm - 11pm	41	39	44	47	57	65	51	**228**	**46**	**344**	**49**
11pm - Midnight	53	57	50	47	64	84	52	**271**	**54**	**407**	**58**
Total	**4300**	**4168**	**4201**	**3933**	**4479**	**3999**	**5526**	**21081**	**4216**	**30606**	**4372**

CfeIT bob.white@cfeit.com (02) 9740 8600

Traffic Count Summary Report

Count Number 2167 Ref : MWT Directory Ref : UBD ??

Street **BULLI APPIN ROAD, APPIN : From CHURCH STREET to KINGS FALLS BRIDGE : NORTH WEST**

Location Norwestbound lane, near Kings Fall Bridge *Carriageway*

Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	93
Weekly 85th Percentile Speed	104
Five Day AADT	3957
Seven Day AADT	4343

TOTAL COUNT MATRIX

	MON *22ND*	TUE *23RD*	WED *24TH*	THU *25TH*	FRI *26TH*	SAT *27TH*	SUN *21ST*	5 Dav Total	5 Dav Average	7 Dav Total	7 Dav Average
Midnight - 1am	19	9	21	24	14	38	59	**87**	**17**	**184**	**26**
1am - 2am	8	7	5	12	9	18	34	**41**	**8**	**93**	**13**
2am - 3am	5	12	11	20	6	29	21	**54**	**11**	**104**	**15**
3am - 4am	12	17	21	32	20	25	25	**102**	**20**	**152**	**22**
4am - 5am	46	47	44	51	40	45	18	**228**	**46**	**291**	**42**
5am - 6am	179	184	175	171	162	88	54	**871**	**174**	**1013**	**145**
6am - 7am	220	298	231	233	190	108	56	**1172**	**234**	**1336**	**191**
7am - 8am	**441**	**573**	**450**	**482**	**419**	139	97	**2365**	**473**	**2601**	**372**
8am - 9am	323	322	351	305	357	257	207	**1658**	**332**	**2122**	**303**
9am - 10am	189	205	219	175	183	237	311	**971**	**194**	**1519**	**217**
10am - 11am	168	182	183	189	193	232	347	**915**	**183**	**1494**	**213**
11am - Midday	196	180	190	182	201	**263**	**383**	**949**	**190**	**1595**	**228**
Midday - 1pm	163	178	167	207	196	268	388	**911**	**182**	**1567**	**224**
1pm - 2pm	273	252	234	257	243	**320**	497	**1259**	**252**	**2076**	**297**
2pm - 3pm	**301**	244	251	235	274	317	649	**1305**	**261**	**2271**	**324**
3pm - 4pm	**301**	**269**	257	255	313	291	827	**1395**	**279**	**2513**	**359**
4pm - 5pm	282	**269**	**276**	**278**	**329**	312	**972**	**1434**	**287**	**2718**	**388**
5pm - 6pm	286	262	266	240	311	315	709	**1365**	**273**	**2389**	**341**
6pm - 7pm	205	146	162	152	204	230	435	**869**	**174**	**1534**	**219**
7pm - 8pm	107	96	132	102	102	113	220	**539**	**108**	**872**	**125**
8pm - 9pm	56	68	78	74	82	89	108	**358**	**72**	**555**	**79**
9pm - 10pm	75	103	81	77	70	94	92	**406**	**81**	**592**	**85**
10pm - 11pm	68	57	47	74	66	119	54	**312**	**62**	**485**	**69**
11pm - Midnight	23	74	53	27	41	96	13	**218**	**44**	**327**	**47**
Total	**3946**	**4054**	**3905**	**3854**	**4025**	**4043**	**6576**	**19784**	**3956**	**30403**	**4343**

CfeIT bob.white@cfeit.com (02) 9740 8600

Traffic Count Summary Report

Count Number	**2148**	Ref : **MWT**	Directory Ref : **UBD ???**
Street	**APPIN ROAD, APPIN : From CHURCH STREET to BRIAN ROAD : SOUTH BOUND**		
Location	Southbound South of Brian Road, House No.270, TREE		*Carriageway*

TOTAL COUNT MATRIX

Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	82
Weekly 85th Percentile Speed	89
Five Day AADT	4920
Seven Day AADT	5109

	MON *22ND*	TUE *23RD*	WED *24TH*	THU *25TH*	FRI *26TH*	SAT *27TH*	SUN *21ST*	5 Dav Total	5 Dav Average	7 Dav Total	7 Dav Average
Midnight - 1am	23	19	22	25	29	38	61	**118**	**24**	**217**	**31**
1am - 2am	12	8	12	13	12	26	26	**57**	**11**	**109**	**16**
2am - 3am	7	16	16	16	23	19	14	**78**	**16**	**111**	**16**
3am - 4am	18	19	16	18	13	22	20	**84**	**17**	**126**	**18**
4am - 5am	38	32	30	23	25	31	36	**148**	**30**	**215**	**31**
5am - 6am	135	120	138	123	126	100	59	**642**	**128**	**801**	**114**
6am - 7am	267	297	289	269	**274**	146	98	**1396**	**279**	**1640**	**234**
7am - 8am	261	**316**	**302**	**305**	268	152	149	**1452**	**290**	**1753**	**250**
8am - 9am	248	283	276	273	263	226	318	**1343**	**269**	**1887**	**270**
9am - 10am	246	245	269	209	201	282	502	**1170**	**234**	**1954**	**279**
10am - 11am	273	227	205	207	232	352	727	**1144**	**229**	**2223**	**318**
11am - Midday	**277**	224	211	196	264	**425**	**763**	**1172**	**234**	**2360**	**337**
Midday - 1pm	239	218	240	206	278	395	**774**	**1181**	**236**	**2350**	**336**
1pm - 2pm	244	205	237	207	269	**410**	591	**1162**	**232**	**2163**	**309**
2pm - 3pm	294	314	311	249	335	390	471	**1503**	**301**	**2364**	**338**
3pm - 4pm	528	509	501	**495**	**547**	319	357	**2580**	**516**	**3256**	**465**
4pm - 5pm	**530**	**533**	506	493	**547**	324	307	**2609**	**522**	**3240**	**463**
5pm - 6pm	527	503	**517**	456	521	373	296	**2524**	**505**	**3193**	**456**
6pm - 7pm	326	304	283	327	368	268	216	**1608**	**322**	**2092**	**299**
7pm - 8pm	162	156	155	190	270	189	149	**933**	**187**	**1271**	**182**
8pm - 9pm	116	112	123	139	128	120	110	**618**	**124**	**848**	**121**
9pm - 10pm	99	103	102	139	94	119	81	**537**	**107**	**737**	**105**
10pm - 11pm	58	62	60	70	85	80	60	**335**	**67**	**475**	**68**
11pm - Midnight	31	37	28	37	73	130	43	**206**	**41**	**379**	**54**
Total	**4959**	**4862**	**4849**	**4685**	**5245**	**4936**	**6228**	**24600**	**4920**	**35764**	**5109**

CfeIT bob.white@cfeit.com (02) 9740 8600

Traffic Count Summary Report

Count Number 2166 Ref : MWT Directory Ref : UBD ???

Street **APPIN ROAD, APPIN : From CHURCH STREET to BRIAN ROAD : NORTH BOUND**

Location Northbound South of Brian Road, House No.270, TREE *Carriageway*

Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	78
Weekly 85th Percentile Speed	86
Five Day AADT	4996
Seven Day AADT	5284

TOTAL COUNT MATRIX

	MON *22ND*	TUE *23RD*	WED *24TH*	THU *25TH*	FRI *26TH*	SAT *27TH*	SUN *21ST*	5 Dav Total	5 Dav Average	7 Dav Total	7 Dav Average
Midnight - 1am	17	11	22	27	16	42	83	**93**	**19**	**218**	**31**
1am - 2am	11	7	7	14	8	16	41	**47**	**9**	**104**	**15**
2am - 3am	4	9	9	17	11	23	26	**50**	**10**	**99**	**14**
3am - 4am	12	20	24	31	25	21	24	**112**	**22**	**157**	**22**
4am - 5am	75	65	67	81	62	36	28	**350**	**70**	**414**	**59**
5am - 6am	193	188	185	170	177	61	44	**913**	**183**	**1018**	**145**
6am - 7am	312	360	320	286	257	106	62	**1535**	**307**	**1703**	**243**
7am - 8am	**613**	**753**	**594**	**607**	**562**	172	95	**3129**	**626**	**3396**	**485**
8am - 9am	534	565	565	552	536	338	258	**2752**	**550**	**3348**	**478**
9am - 10am	274	300	301	272	305	339	391	**1452**	**290**	**2182**	**312**
10am - 11am	228	240	262	212	250	327	360	**1192**	**238**	**1879**	**268**
11am - Midday	233	211	232	227	243	**351**	**447**	**1146**	**229**	**1944**	**278**
Midday - 1pm	184	213	215	242	218	304	436	**1072**	**214**	**1812**	**259**
1pm - 2pm	255	281	242	263	244	346	528	**1285**	**257**	**2159**	**308**
2pm - 3pm	336	263	270	272	306	363	696	**1447**	**289**	**2506**	**358**
3pm - 4pm	**370**	**367**	**347**	332	362	350	830	**1778**	**356**	**2958**	**423**
4pm - 5pm	354	353	306	**360**	**383**	341	**928**	**1756**	**351**	**3025**	**432**
5pm - 6pm	341	315	318	349	354	**375**	813	**1677**	**335**	**2865**	**409**
6pm - 7pm	290	218	201	219	247	307	482	**1175**	**235**	**1964**	**281**
7pm - 8pm	125	119	146	129	137	140	254	**656**	**131**	**1050**	**150**
8pm - 9pm	68	86	100	105	108	130	133	**467**	**93**	**730**	**104**
9pm - 10pm	55	78	67	88	79	118	97	**367**	**73**	**582**	**83**
10pm - 11pm	60	56	39	51	75	131	68	**281**	**56**	**480**	**69**
11pm - Midnight	28	72	52	31	65	120	25	**248**	**50**	**393**	**56**
Total	**4972**	**5150**	**4891**	**4937**	**5030**	**4857**	**7149**	**24980**	**4996**	**36986**	**5283**

CfeIT bob.white@cfeit.com (02) 9740 8600

Traffic Count Summary Report

Count Number	**2171**	Ref : **MWT**	Directory Ref : **UBD 346 H-9**
Street	**APPIN ROAD, BRADBURY : From THERRY ROAD to NARELLAN ROAD : SOUTH BOUND**		
Location	Combined Counts 2146, 2172 and 2173 Southbound, Outside Hospital		*Carriageway*

TOTAL COUNT MATRIX

Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	64
Weekly 85th Percentile Speed	74
Five Day AADT	14479
Seven Day AADT	14115

	MON *22ND*	TUE *23RD*	WED *24TH*	THU *25TH*	FRI *26TH*	SAT *27TH*	SUN *21ST*	5 Dav Total	5 Dav Average	7 Dav Total	7 Dav Average
Midnight - 1am	98	99	99	100	134	220	289	**530**	**106**	**1039**	**148**
1am - 2am	46	53	56	51	69	144	159	**275**	**55**	**578**	**83**
2am - 3am	34	39	41	53	54	120	100	**221**	**44**	**441**	**63**
3am - 4am	36	47	36	38	50	82	85	**207**	**41**	**374**	**53**
4am - 5am	75	77	77	65	73	75	69	**367**	**73**	**511**	**73**
5am - 6am	223	225	252	200	222	171	94	**1122**	**224**	**1387**	**198**
6am - 7am	397	419	367	396	385	240	169	**1964**	**393**	**2373**	**339**
7am - 8am	461	532	577	528	513	355	273	**2611**	**522**	**3239**	**463**
8am - 9am	678	**702**	**718**	**735**	**717**	609	507	**3550**	**710**	**4666**	**667**
9am - 10am	667	663	664	624	691	807	833	**3309**	**662**	**4949**	**707**
10am - 11am	649	631	631	672	661	1019	1088	**3244**	**649**	**5351**	**764**
11am - Midday	**702**	652	660	603	716	**1083**	**1158**	**3333**	**667**	**5574**	**796**
Midday - 1pm	714	636	667	668	776	**1177**	**1124**	**3461**	**692**	**5762**	**823**
1pm - 2pm	682	752	692	715	852	1013	939	**3693**	**739**	**5645**	**806**
2pm - 3pm	943	985	947	923	1095	989	860	**4893**	**979**	**6742**	**963**
3pm - 4pm	1297	1257	1278	1274	1268	887	787	**6374**	**1275**	**8048**	**1150**
4pm - 5pm	1434	1419	1429	1541	1503	941	723	**7326**	**1465**	**8990**	**1284**
5pm - 6pm	**1637**	**1634**	**1590**	**1650**	**1505**	962	754	**8016**	**1603**	**9732**	**1390**
6pm - 7pm	1166	1158	1214	1358	1215	818	717	**6111**	**1222**	**7646**	**1092**
7pm - 8pm	692	743	703	829	951	601	584	**3918**	**784**	**5103**	**729**
8pm - 9pm	468	545	501	606	574	431	430	**2694**	**539**	**3555**	**508**
9pm - 10pm	501	443	444	517	481	443	306	**2386**	**477**	**3135**	**448**
10pm - 11pm	303	306	308	389	417	413	251	**1723**	**345**	**2387**	**341**
11pm - Midnight	159	181	197	211	317	400	113	**1065**	**213**	**1578**	**225**
Total	**14062**	**14198**	**14148**	**14746**	**15239**	**14000**	**12412**	**72393**	**14478**	**98805**	**14115**

CfeIT bob.white@cfeit.com (02) 9740 8600

Traffic Count Summary Report

Count Number 2174 Ref : MWT Directory Ref : UBD 346 H-9

Street **APPIN ROAD, BRADBURY : From THERRY ROAD to NARELLAN ROAD : NORTH BOUND**

Location Combined Counts 2175 and 2176 Northbound, Outside Hospital *Carriageway*

TOTAL COUNT MATRIX

Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	62
Weekly 85th Percentile Speed	73
Five Day AADT	15251
Seven Day AADT	14843

	MON *22ND*	TUE *23RD*	WED *24TH*	THU *25TH*	FRI *26TH*	SAT *27TH*	SUN *21ST*	5 Dav Total	5 Dav Average	7 Dav Total	7 Dav Average
Midnight - 1am	55	52	56	69	65	142	198	**297**	**59**	**637**	**91**
1am - 2am	35	27	37	37	49	84	99	**185**	**37**	**368**	**53**
2am - 3am	36	46	37	46	49	71	64	**214**	**43**	**349**	**50**
3am - 4am	69	78	84	92	90	84	67	**413**	**83**	**564**	**81**
4am - 5am	343	327	330	326	327	170	93	**1653**	**331**	**1916**	**274**
5am - 6am	857	874	900	881	867	335	142	**4379**	**876**	**4856**	**694**
6am - 7am	1114	1146	1069	1043	1072	382	194	**5444**	**1089**	**6020**	**860**
7am - 8am	1296	1450	1316	1340	1214	629	305	**6616**	**1323**	**7550**	**1079**
8am - 9am	**1440**	**1506**	**1464**	**1521**	**1501**	898	598	**7432**	**1486**	**8928**	**1275**
9am - 10am	912	926	915	874	940	1019	817	**4567**	**913**	**6403**	**915**
10am - 11am	779	707	776	718	779	1055	929	**3759**	**752**	**5743**	**820**
11am - Midday	698	687	699	696	786	**1061**	**943**	**3566**	**713**	**5570**	**796**
Midday - 1pm	645	683	675	694	712	**985**	940	**3409**	**682**	**5334**	**762**
1pm - 2pm	702	727	679	739	689	917	883	**3536**	**707**	**5336**	**762**
2pm - 3pm	887	828	847	846	932	953	1004	**4340**	**868**	**6297**	**900**
3pm - 4pm	**1003**	**903**	**1006**	1010	942	923	1005	**4864**	**973**	**6792**	**970**
4pm - 5pm	852	883	859	**1078**	940	931	**1192**	**4612**	**922**	**6735**	**962**
5pm - 6pm	835	810	861	922	886	965	1101	**4314**	**863**	**6380**	**911**
6pm - 7pm	849	751	782	840	**983**	913	865	**4205**	**841**	**5983**	**855**
7pm - 8pm	532	566	548	606	740	647	616	**2992**	**598**	**4255**	**608**
8pm - 9pm	365	403	370	464	534	476	404	**2136**	**427**	**3016**	**431**
9pm - 10pm	230	330	238	381	367	364	272	**1546**	**309**	**2182**	**312**
10pm - 11pm	189	220	193	214	311	349	195	**1127**	**225**	**1671**	**239**
11pm - Midnight	93	112	111	119	212	268	102	**647**	**129**	**1017**	**145**
Total	**14816**	**15042**	**14852**	**15556**	**15987**	**14621**	**13028**	**76253**	**15250**	**103902**	**14843**

CfeIT bob.white@cfeit.com (02) 9740 8600

Traffic Count Summary Report

Count Number	**2180**	Ref : **MWT**	Directory Ref : **UBD 346 A-3**
Street	**NARELLAN ROAD, BLAIR ATHOL : From HUME HIGHWAY INTERCHANGE to GILCHRIST DRIVE : SOUTH EAST**		
Location	Combined Count 2181 and 2182 Southeastbound - Between Hume Highway Interchange and UWC access. House N		*Carriageway*

Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	74
Weekly 85th Percentile Speed	85
Five Day AADT	27863
Seven Day AADT	26347

TOTAL COUNT MATRIX

	MON *22ND*	TUE *23RD*	WED *24TH*	THU *25TH*	FRI *26TH*	SAT *27TH*	SUN *21ST*	5 Dav Total	5 Dav Average	7 Dav Total	7 Dav Average
Midnight - 1am	87	105	123	141	158	253	314	**614**	**123**	**1181**	**169**
1am - 2am	49	53	73	79	85	169	206	**339**	**68**	**714**	**102**
2am - 3am	47	52	46	73	72	136	111	**290**	**58**	**537**	**77**
3am - 4am	66	76	73	76	97	104	100	**388**	**78**	**592**	**85**
4am - 5am	185	185	196	176	169	123	95	**911**	**182**	**1129**	**161**
5am - 6am	683	667	678	636	666	289	159	**3330**	**666**	**3778**	**540**
6am - 7am	1612	1611	1608	1545	1408	523	276	**7784**	**1557**	**8583**	**1226**
7am - 8am	2182	2212	2196	2155	2069	901	421	**10814**	**2163**	**12136**	**1734**
8am - 9am	**2596**	**2661**	**2580**	**2550**	**2546**	1705	892	**12933**	**2587**	**15530**	**2219**
9am - 10am	1945	2044	2066	2054	2186	1869	1836	**10295**	**2059**	**14000**	**2000**
10am - 11am	1587	1700	1640	1697	1722	**2147**	1889	**8346**	**1669**	**12382**	**1769**
11am - Midday	1579	1446	1517	1656	1614	2141	**1936**	**7812**	**1562**	**11889**	**1698**
Midday - 1pm	1372	1386	1430	1505	1680	**2005**	**1839**	**7373**	**1475**	**11217**	**1602**
1pm - 2pm	1393	1388	1459	1378	1658	1808	1577	**7276**	**1455**	**10661**	**1523**
2pm - 3pm	1781	1805	1748	1756	1890	1851	1427	**8980**	**1796**	**12258**	**1751**
3pm - 4pm	1907	1947	**2016**	1840	**1896**	1535	1325	**9606**	**1921**	**12466**	**1781**
4pm - 5pm	**2014**	**2034**	1993	1888	1783	1437	1180	**9712**	**1942**	**12329**	**1761**
5pm - 6pm	1925	2017	1942	**2173**	1871	1535	1224	**9928**	**1986**	**12687**	**1812**
6pm - 7pm	1485	1552	1567	1910	1671	1425	1024	**8185**	**1637**	**10634**	**1519**
7pm - 8pm	922	909	897	1188	1206	914	691	**5122**	**1024**	**6727**	**961**
8pm - 9pm	579	610	644	782	816	665	536	**3431**	**686**	**4632**	**662**
9pm - 10pm	475	506	498	583	601	576	426	**2663**	**533**	**3665**	**524**
10pm - 11pm	316	356	383	364	515	564	277	**1934**	**387**	**2775**	**396**
11pm - Midnight	184	201	217	239	410	526	148	**1251**	**250**	**1925**	**275**
Total	**26971**	**27523**	**27590**	**28444**	**28789**	**25201**	**19909**	**139317**	**27863**	**184427**	**26346**

CfeIT bob.white@cfeit.com (02) 9740 8600

Traffic Count Summary Report

Count Number 2177 Ref : MWT Directory Ref : UBD 346 A-3

Street **NARELLAN ROAD, BLAIR ATHOL : From HUME HIGHWAY INTERCHANGE to GILCHRIST DRIVE : NORTH WEST**

Location Combined Counts 2178 and 2179 Northwestbound - Between Hume Highway Interchange and UWS access. House *Carriageway*

TOTAL COUNT MATRIX

Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	74
Weekly 85th Percentile Speed	85
Five Day AADT	27750
Seven Day AADT	26262

	MON *22ND*	TUE *23RD*	WED *24TH*	THU *25TH*	FRI *26TH*	SAT *27TH*	SUN *21ST*	5 Dav Total	5 Dav Average	7 Dav Total	7 Dav Average
Midnight - 1am	88	90	73	94	104	260	260	**449**	**90**	**969**	**138**
1am - 2am	44	45	48	61	88	153	163	**286**	**57**	**602**	**86**
2am - 3am	45	62	43	45	71	117	99	**266**	**53**	**482**	**69**
3am - 4am	76	86	97	107	92	110	90	**458**	**92**	**658**	**94**
4am - 5am	350	332	328	314	326	218	127	**1650**	**330**	**1995**	**285**
5am - 6am	963	956	994	960	949	443	211	**4822**	**964**	**5476**	**782**
6am - 7am	1237	1341	1302	1198	1204	540	287	**6282**	**1256**	**7109**	**1016**
7am - 8am	1537	1569	1536	1511	1464	832	425	**7617**	**1523**	**8874**	**1268**
8am - 9am	**1681**	**1683**	**1720**	**1681**	**1653**	1107	702	**8418**	**1684**	**10227**	**1461**
9am - 10am	1360	1279	1292	1332	1342	1492	1095	**6605**	**1321**	**9192**	**1313**
10am - 11am	1313	1339	1336	1359	1417	1680	1700	**6764**	**1353**	**10144**	**1449**
11am - Midday	1452	1419	1454	1497	1564	**1917**	**1713**	**7386**	**1477**	**11016**	**1574**
Midday - 1pm	1485	1488	1480	1586	1670	**1975**	**1758**	**7709**	**1542**	**11442**	**1635**
1pm - 2pm	1552	1610	1558	1656	1811	1937	1584	**8187**	**1637**	**11708**	**1673**
2pm - 3pm	1931	2034	2051	2136	2243	1942	1593	**10395**	**2079**	**13930**	**1990**
3pm - 4pm	2187	2154	2098	1594	2243	1791	1738	**10276**	**2055**	**13805**	**1972**
4pm - 5pm	2234	2339	2347	2197	2234	1826	1727	**11351**	**2270**	**14904**	**2129**
5pm - 6pm	**2430**	**2343**	**2521**	**2443**	**2413**	1764	1469	**12150**	**2430**	**15383**	**2198**
6pm - 7pm	1771	1925	1816	1993	1969	1377	1025	**9474**	**1895**	**11876**	**1697**
7pm - 8pm	1134	1026	1165	1471	1234	978	712	**6030**	**1206**	**7720**	**1103**
8pm - 9pm	837	931	834	1335	840	720	591	**4777**	**955**	**6088**	**870**
9pm - 10pm	645	705	635	1190	705	701	466	**3880**	**776**	**5047**	**721**
10pm - 11pm	289	406	357	454	640	687	264	**2146**	**429**	**3097**	**442**
11pm - Midnight	159	230	188	282	513	574	147	**1372**	**274**	**2093**	**299**
Total	**26800**	**27392**	**27273**	**28496**	**28789**	**25141**	**19946**	**138750**	**27750**	**183837**	**26262**

CfeIT bob.white@cfeit.com (02) 9740 8600

Traffic Count Summary Report

Count Number	**2163**	Ref : **MWT**	Directory Ref : **UBD 344 H-3**
Street	**CAMDEN BY-PASS, ELDERSLIE : From MACARTHUR ROAD to NARELLAN ROAD : NORTH EAST**		
Location	Combined Counts 2164 and 2165 Noreastbound, between Macarthur Road and Narellan Road		*Carriageway*

TOTAL COUNT MATRIX

Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	96
Weekly 85th Percentile Speed	104
Five Day AADT	10019
Seven Day AADT	9361

	MON *22ND*	TUE *23RD*	WED *24TH*	THU *25TH*	FRI *26TH*	SAT *27TH*	SUN *21ST*	5 Dav Total	5 Dav Average	7 Dav Total	7 Dav Average
Midnight - 1am	30	20	36	23	32	57	84	**141**	**28**	**282**	**40**
1am - 2am	18	19	22	18	22	32	35	**99**	**20**	**166**	**24**
2am - 3am	36	26	34	30	27	30	24	**153**	**31**	**207**	**30**
3am - 4am	63	74	59	68	65	47	30	**329**	**66**	**406**	**58**
4am - 5am	233	248	271	254	231	103	57	**1237**	**247**	**1397**	**200**
5am - 6am	665	679	677	665	677	226	99	**3363**	**673**	**3688**	**527**
6am - 7am	944	891	905	898	830	317	144	**4468**	**894**	**4929**	**704**
7am - 8am	**1075**	**1043**	**1082**	**1038**	**1018**	456	191	**5256**	**1051**	**5903**	**843**
8am - 9am	831	939	911	919	897	661	373	**4497**	**899**	**5531**	**790**
9am - 10am	699	667	666	718	731	710	608	**3481**	**696**	**4799**	**686**
10am - 11am	526	560	515	571	547	**734**	**616**	**2719**	**544**	**4069**	**581**
11am - Midday	486	517	497	492	493	695	602	**2485**	**497**	**3782**	**540**
Midday - 1pm	454	445	493	506	484	**587**	**519**	**2382**	**476**	**3488**	**498**
1pm - 2pm	445	507	444	477	495	509	460	**2368**	**474**	**3337**	**477**
2pm - 3pm	536	491	514	510	519	491	471	**2570**	**514**	**3532**	**505**
3pm - 4pm	**569**	566	**628**	**599**	**579**	459	463	**2941**	**588**	**3863**	**552**
4pm - 5pm	550	**582**	570	582	508	526	465	**2792**	**558**	**3783**	**540**
5pm - 6pm	517	560	552	542	524	477	464	**2695**	**539**	**3636**	**519**
6pm - 7pm	326	424	388	415	492	489	375	**2045**	**409**	**2909**	**416**
7pm - 8pm	268	264	288	299	297	290	245	**1416**	**283**	**1951**	**279**
8pm - 9pm	147	174	215	247	220	184	191	**1003**	**201**	**1378**	**197**
9pm - 10pm	125	162	208	167	161	208	162	**823**	**165**	**1193**	**170**
10pm - 11pm	82	101	101	93	162	211	71	**539**	**108**	**821**	**117**
11pm - Midnight	47	41	35	54	116	152	33	**293**	**59**	**478**	**68**
Total	**9672**	**10000**	**10111**	**10185**	**10127**	**8651**	**6782**	**50095**	**10019**	**65528**	**9361**

CfeIT bob.white@cfeit.com (02) 9740 8600

Traffic Count Summary Report

Count Number	**2160**	Ref : **MWT**	Directory Ref : **UBD 344 H-3**
Street	**CAMDEN BY-PASS, ELDERSLIE : From MACARTHUR ROAD to NARELLAN ROAD : SOUTH WEST**		
Location	Combined Counts 2161 and 2162 Southwestbound, between Macarthur Road and Narellan Road		*Carriageway*

TOTAL COUNT MATRIX

Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	89
Weekly 85th Percentile Speed	107
Five Day AADT	9273
Seven Day AADT	8651

	MON *22ND*	TUE *23RD*	WED *24TH*	THU *25TH*	FRI *26TH*	SAT *27TH*	SUN *21ST*	5 Dav Total	5 Dav Average	7 Dav Total	7 Dav Average
Midnight - 1am	42	33	47	49	64	107	137	**235**	**47**	**479**	**68**
1am - 2am	14	25	18	32	43	49	73	**132**	**26**	**254**	**36**
2am - 3am	9	20	22	18	21	28	50	**90**	**18**	**168**	**24**
3am - 4am	16	30	26	22	25	29	31	**119**	**24**	**179**	**26**
4am - 5am	40	48	60	55	41	31	27	**244**	**49**	**302**	**43**
5am - 6am	85	82	92	82	88	76	65	**429**	**86**	**570**	**81**
6am - 7am	276	266	268	237	232	153	74	**1279**	**256**	**1506**	**215**
7am - 8am	394	379	368	365	386	264	138	**1892**	**378**	**2294**	**328**
8am - 9am	**519**	**548**	**513**	**557**	**538**	333	198	**2675**	**535**	**3206**	**458**
9am - 10am	367	460	390	373	379	415	325	**1969**	**394**	**2709**	**387**
10am - 11am	416	413	399	350	362	513	463	**1940**	**388**	**2916**	**417**
11am - Midday	440	434	378	397	440	**585**	**546**	**2089**	**418**	**3220**	**460**
Midday - 1pm	465	433	442	451	517	**653**	488	**2308**	**462**	**3449**	**493**
1pm - 2pm	474	481	466	445	537	644	457	**2403**	**481**	**3504**	**501**
2pm - 3pm	647	614	662	636	743	632	459	**3302**	**660**	**4393**	**628**
3pm - 4pm	809	852	719	702	784	544	462	**3866**	**773**	**4872**	**696**
4pm - 5pm	928	997	973	836	905	578	**512**	**4639**	**928**	**5729**	**818**
5pm - 6pm	**1059**	**1039**	**1095**	**975**	**970**	576	476	**5138**	**1028**	**6190**	**884**
6pm - 7pm	759	838	898	762	780	508	380	**4037**	**807**	**4925**	**704**
7pm - 8pm	508	549	618	587	515	342	263	**2777**	**555**	**3382**	**483**
8pm - 9pm	317	379	361	392	350	269	199	**1799**	**360**	**2267**	**324**
9pm - 10pm	250	283	264	355	260	211	158	**1412**	**282**	**1781**	**254**
10pm - 11pm	140	193	161	194	258	267	127	**946**	**189**	**1340**	**191**
11pm - Midnight	93	129	106	124	193	217	63	**645**	**129**	**925**	**132**
Total	**9067**	**9525**	**9346**	**8996**	**9431**	**8024**	**6171**	**46365**	**9273**	**60560**	**8651**

CfeIT bob.white@cfeit.com (02) 9740 8600

Traffic Count Summary Report

Count Number 2159 Ref : MWT Directory Ref : UBD 344 G-6

Street **SPRINGS ROAD, SPRING FARM : From MACARTHUR ROAD to RICHARDSON ROAD : EAST BOUND**

Location West of Richardson Road, ELP 206 *Carriageway*

Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	74
Weekly 85th Percentile Speed	84
Five Day AADT	1540
Seven Day AADT	1395

TOTAL COUNT MATRIX

	MON *22ND*	TUE *23RD*	WED *24TH*	THU *25TH*	FRI *26TH*	SAT *27TH*	SUN *21ST*	5 Day Total	5 Day Average	7 Day Total	7 Day Average
Midnight - 1am	1	4	2	5	4	11	11	**16**	**3**	**38**	**5**
1am - 2am	0	4	3	7	3	7	7	**17**	**3**	**31**	**4**
2am - 3am	1	2	1	1	3	2	5	**8**	**2**	**15**	**2**
3am - 4am	3	14	14	8	8	6	2	**47**	**9**	**55**	**8**
4am - 5am	13	27	32	25	33	6	5	**130**	**26**	**141**	**20**
5am - 6am	50	55	60	54	63	16	0	**282**	**56**	**298**	**43**
6am - 7am	91	102	104	86	89	45	6	**472**	**94**	**523**	**75**
7am - 8am	99	113	102	100	103	57	16	**517**	**103**	**590**	**84**
8am - 9am	**148**	**154**	**145**	**144**	**140**	86	24	**731**	**146**	**841**	**120**
9am - 10am	102	103	91	114	100	94	**74**	**510**	**102**	**678**	**97**
10am - 11am	100	104	103	78	94	103	69	**479**	**96**	**651**	**93**
11am - Midday	80	97	94	91	86	**119**	**74**	**448**	**90**	**641**	**92**
Midday - 1pm	87	66	83	82	81	**99**	**73**	**399**	**80**	**571**	**82**
1pm - 2pm	103	87	88	86	94	87	47	**458**	**92**	**592**	**85**
2pm - 3pm	99	76	124	108	114	81	64	**521**	**104**	**666**	**95**
3pm - 4pm	**136**	**151**	**140**	**119**	**130**	60	64	**676**	**135**	**800**	**114**
4pm - 5pm	103	111	118	117	106	63	70	**555**	**111**	**688**	**98**
5pm - 6pm	116	105	87	105	96	67	57	**509**	**102**	**633**	**90**
6pm - 7pm	62	61	66	69	77	68	61	**335**	**67**	**464**	**66**
7pm - 8pm	42	42	24	45	38	55	34	**191**	**38**	**280**	**40**
8pm - 9pm	26	21	39	41	25	27	26	**152**	**30**	**205**	**29**
9pm - 10pm	20	27	27	26	28	25	16	**128**	**26**	**169**	**24**
10pm - 11pm	13	13	9	14	18	37	4	**67**	**13**	**108**	**15**
11pm - Midnight	7	7	4	5	31	28	7	**54**	**11**	**89**	**13**
Total	**1502**	**1546**	**1560**	**1530**	**1564**	**1249**	**816**	**7702**	**1540**	**9767**	**1395**

CfeIT bob.white@cfeit.com (02) 9740 8600

Traffic Count Summary Report

Count Number	**2159**	Ref : **MWT**	Directory Ref : **UBD 344 G-6**
Street	**SPRINGS ROAD, SPRING FARM : From RICHARDSON ROAD to MACARTHUR ROAD : WEST BOUND**		
Location	West of Richardson Road, ELP 206		*Carriageway*

TOTAL COUNT MATRIX

Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	71
Weekly 85th Percentile Speed	80
Five Day AADT	1384
Seven Day AADT	1263

	MON *22ND*	TUE *23RD*	WED *24TH*	THU *25TH*	FRI *26TH*	SAT *27TH*	SUN *21ST*	5 Dav Total	5 Dav Average	7 Dav Total	7 Dav Average
Midnight - 1am	1	5	2	2	3	9	14	**13**	**3**	**36**	**5**
1am - 2am	0	2	2	1	2	7	9	**7**	**1**	**23**	**3**
2am - 3am	2	4	3	5	2	6	6	**16**	**3**	**28**	**4**
3am - 4am	5	10	8	2	5	6	4	**30**	**6**	**40**	**6**
4am - 5am	7	28	25	25	22	4	0	**107**	**21**	**111**	**16**
5am - 6am	37	44	45	49	51	11	6	**226**	**45**	**243**	**35**
6am - 7am	48	45	51	42	41	26	7	**227**	**45**	**260**	**37**
7am - 8am	69	71	63	59	45	38	25	**307**	**61**	**370**	**53**
8am - 9am	**105**	**120**	**127**	**114**	**130**	69	30	**596**	**119**	**695**	**99**
9am - 10am	89	91	65	84	83	85	71	**412**	**82**	**568**	**81**
10am - 11am	76	77	81	90	77	86	**73**	**401**	**80**	**560**	**80**
11am - Midday	90	76	85	78	88	**102**	70	**417**	**83**	**589**	**84**
Midday - 1pm	69	65	88	92	93	**114**	**75**	**407**	**81**	**596**	**85**
1pm - 2pm	69	58	74	71	63	71	54	**335**	**67**	**460**	**66**
2pm - 3pm	105	112	118	104	118	86	71	**557**	**111**	**714**	**102**
3pm - 4pm	**144**	**151**	**144**	**130**	**145**	86	54	**714**	**143**	**854**	**122**
4pm - 5pm	105	119	133	118	120	74	48	**595**	**119**	**717**	**102**
5pm - 6pm	112	105	115	120	115	69	50	**567**	**113**	**686**	**98**
6pm - 7pm	97	88	78	96	69	60	57	**428**	**86**	**545**	**78**
7pm - 8pm	35	39	41	52	55	33	15	**222**	**44**	**270**	**39**
8pm - 9pm	27	20	21	28	46	20	27	**142**	**28**	**189**	**27**
9pm - 10pm	12	18	12	26	23	19	12	**91**	**18**	**122**	**17**
10pm - 11pm	11	13	9	19	21	33	7	**73**	**15**	**113**	**16**
11pm - Midnight	7	3	4	6	10	17	4	**30**	**6**	**51**	**7**
Total	**1322**	**1364**	**1394**	**1413**	**1427**	**1131**	**789**	**6920**	**1384**	**8840**	**1262**

CfeIT bob.white@cfeit.com (02) 9740 8600

Daily Classification Summary

Count Number	**2370** Ref : **MWT**
Street	**COLLIERY ROAD, HELENSBURGH : From PARKES STREET to METROPOLITAN COLLIERY : EAST BOUND**
Location	Close to Parkes Street Intersection. *Carriageway*

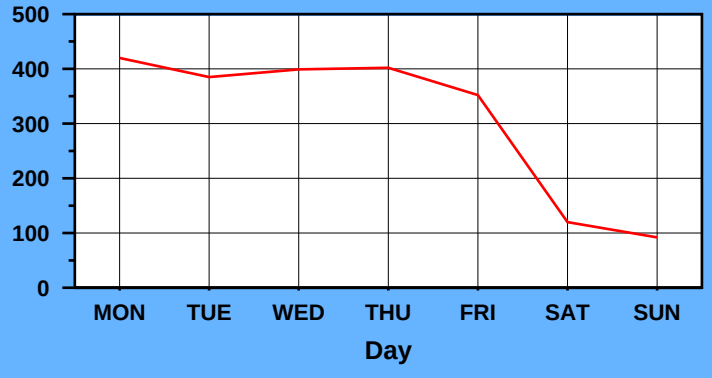
Start Date	15-NOV-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	**35**
Weekly 85th Percentile Speed	**48**
Five Day AADT	**404**
Seven Day AADT	**319**

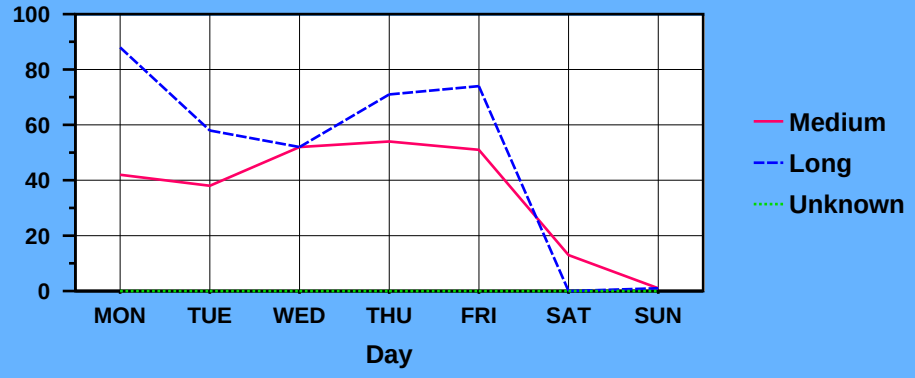
THE BODY OF THIS REPORT SHOWS : SEVENDAY TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	17	290	0	21	21	0	1	1	4	58	24	0	0	0	**437**
TUESDAY	8	288	1	16	22	0	0	1	2	40	15	0	0	0	**393**
WEDNESDAY	10	294	1	26	26	0	1	1	2	30	18	0	0	0	**409**
THURSDAY	15	274	3	22	29	3	0	0	1	51	19	0	0	0	**417**
FRIDAY	14	226	1	26	25	0	2	2	4	43	23	0	0	0	**366**
SATURDAY	1	107	0	7	6	0	0	0	0	0	0	0	0	0	**121**
SUNDAY	1	88	2	1	0	0	0	0	0	1	0	0	0	0	**93**
5 Dav Total	64	1372	6	111	123	3	4	5	13	222	99	0	0	0	**2022**
5 Dav Pct	3	68		5	6				1	11	5				
7 Dav Total	66	1567	8	119	129	3	4	5	13	223	99	0	0	0	**2236**
7 Dav Pct	3	70		5	6				1	10	4				

Volume



Class Volumes



CfeIT bob.white@cfeit.com (02) 9740 8600

Daily Classification Summary

Count Number 2370 Ref : MWT

Street **COLLIERY ROAD, HELENSBURGH : From METROPOLITAN COLLIERY to PARKES STREET : WEST BOUND**

Location Close to Parkes Street Intersection. *Carriageway*

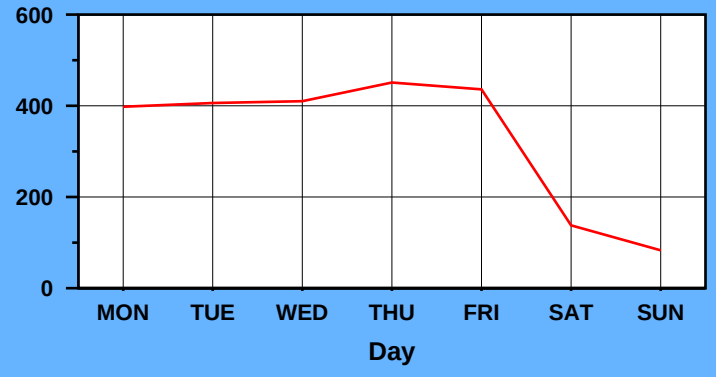
Start Date	15-NOV-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	**36**
Weekly 85th Percentile Speed	**48**
Five Day AADT	**425**
Seven Day AADT	**335**

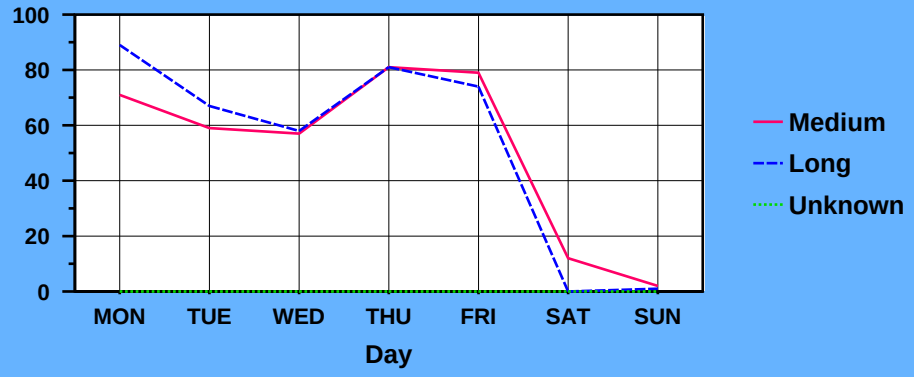
THE BODY OF THIS REPORT SHOWS : SEVENDAY TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	5	238	0	24	46	1	0	7	4	52	26	0	0	0	**403**
TUESDAY	3	279	1	26	33	0	1	5	6	41	14	0	0	0	**409**
WEDNESDAY	3	294	1	28	27	2	0	3	5	33	17	0	0	0	**413**
THURSDAY	5	287	2	32	48	1	0	2	3	56	20	0	0	0	**456**
FRIDAY	7	283	0	30	49	0	1	2	4	46	21	0	0	0	**443**
SATURDAY	1	126	0	6	6	0	0	0	0	0	0	0	0	0	**139**
SUNDAY	2	78	2	2	0	0	0	0	0	1	0	0	0	0	**85**
5 Day Total	23	1381	4	140	203	4	2	19	22	228	98	0	0	0	**2124**
5 Day Pct	1	65		7	10			1	1	11	5				
7 Day Total	26	1585	6	148	209	4	2	19	22	229	98	0	0	0	**2348**
7 Day Pct	1	68		6	9			1	1	10	4				

Volume



Class Volumes



CfeIT bob.white@cfeit.com (02) 9740 8600

Daily Classification Summary

Count Number	**2157** Ref : **MWT**
Street	**PARKES STREET, HELENSBURG : From OLD PRINCES HIGHWAY to CEMETERY ROAD : NORTH EAST**
Location	East of the Old Princes Highway, on 50 KPH Sign *Carriageway*

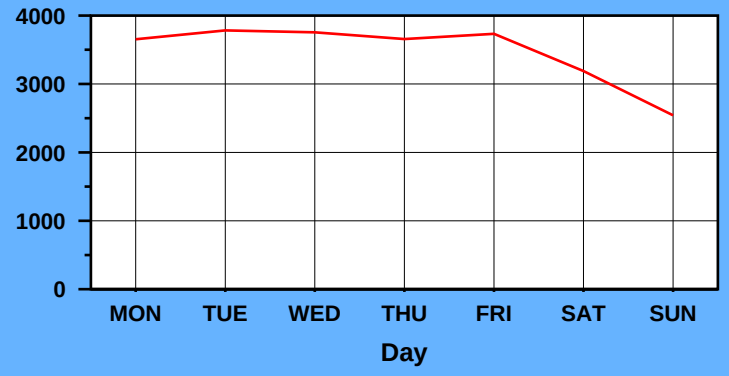
Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	**56**
Weekly 85th Percentile Speed	**65**
Five Day AADT	**3737**
Seven Day AADT	**3492**

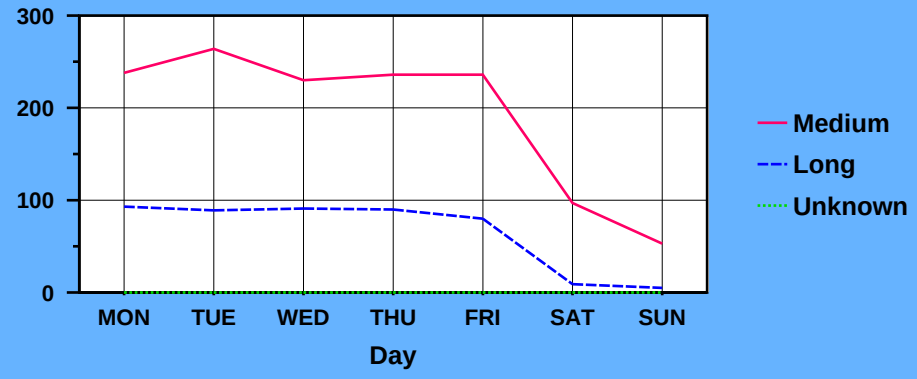
THE BODY OF THIS REPORT SHOWS : SEVENDAY TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	23	3290	33	201	34	3	8	13	6	52	14	0	0	0	**3677**
TUESDAY	31	3409	21	231	31	2	4	14	8	48	15	0	0	0	**3814**
WEDNESDAY	17	3419	16	201	27	2	8	10	18	39	16	0	0	0	**3773**
THURSDAY	19	3305	26	213	22	1	8	10	6	51	15	0	0	0	**3676**
FRIDAY	12	3394	24	207	27	2	10	9	7	41	13	0	0	0	**3746**
SATURDAY	12	3020	63	86	11	0	4	3	0	1	1	0	0	0	**3201**
SUNDAY	15	2442	42	53	0	0	4	1	0	0	0	0	0	0	**2557**
5 Day Total	102	16817	120	1053	141	10	38	56	45	231	73	0	0	0	**18686**
5 Day Pct	1	90	1	6	1					1					
7 Day Total	129	22279	225	1192	152	10	46	60	45	232	74	0	0	0	**24444**
7 Day Pct	1	91	1	5	1					1					

Volume



Class Volumes



CfeIT bob.white@cfeit.com (02) 9740 8600

Daily Classification Summary

Count Number 2157 Ref : MWT

Street **PARKES STREET, HELENSBURG : From CEMETERY ROAD to OLD PRINCES HIGHWAY : SOUTH WEST**

Location East of the Old Princes Highway, on 50 KPH Sign *Carriageway*

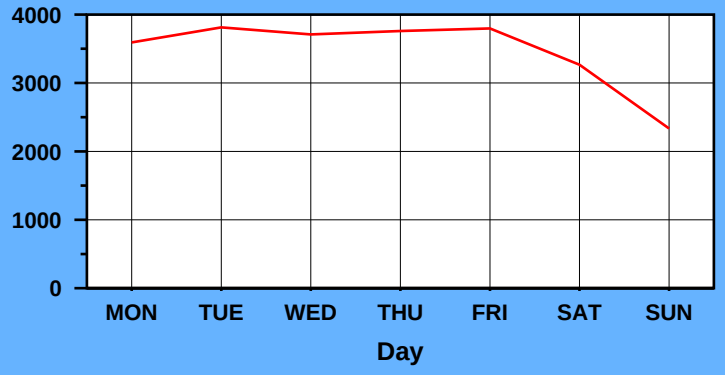
Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	**58**
Weekly 85th Percentile Speed	**67**
Five Day AADT	**3749**
Seven Day AADT	**3480**

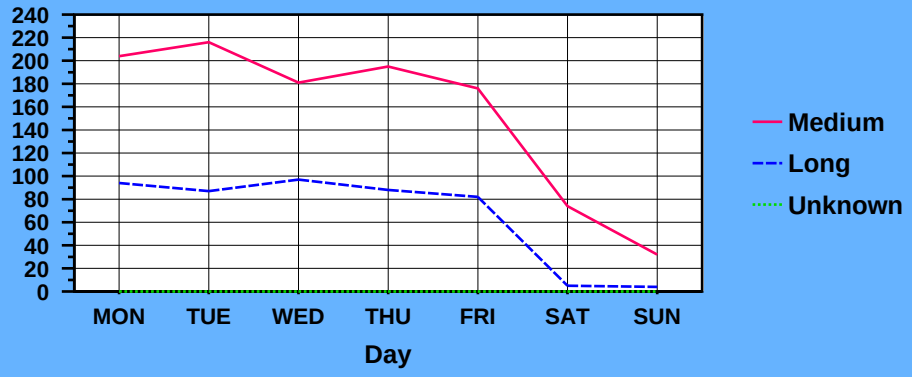
THE BODY OF THIS REPORT SHOWS : SEVENDAY TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	15	3269	26	162	41	1	6	4	10	56	18	0	0	0	**3608**
TUESDAY	17	3484	26	167	46	3	4	6	7	56	14	0	0	0	**3830**
WEDNESDAY	11	3412	20	155	20	6	4	4	15	48	26	0	0	0	**3721**
THURSDAY	8	3449	27	165	27	3	7	2	5	53	21	0	0	0	**3767**
FRIDAY	21	3506	34	151	24	1	6	4	6	49	17	0	0	0	**3819**
SATURDAY	6	3114	74	67	6	1	4	0	1	0	0	0	0	0	**3273**
SUNDAY	9	2261	37	31	1	0	2	0	0	2	0	0	0	0	**2343**
5 Day Total	72	17120	133	800	158	14	27	20	43	262	96	0	0	0	**18745**
5 Day Pct		91	1	4	1					1	1				
7 Day Total	87	22495	244	898	165	15	33	20	44	264	96	0	0	0	**24361**
7 Day Pct		92	1	4	1					1					

Volume



Class Volumes



CfeIT bob.white@cfeit.com (02) 9740 8600

Daily Classification Summary

Count Number 2156 Ref : MWT

Street **LAWRENCE HARGRAVE DRIVE, STANWELL TOPS : From STONEHAVEN ROAD to WALKER STREET : NORTH WEST**

Location Mid-section between Stonehaven Road and Walker Street, To freeway sign *Carriageway*

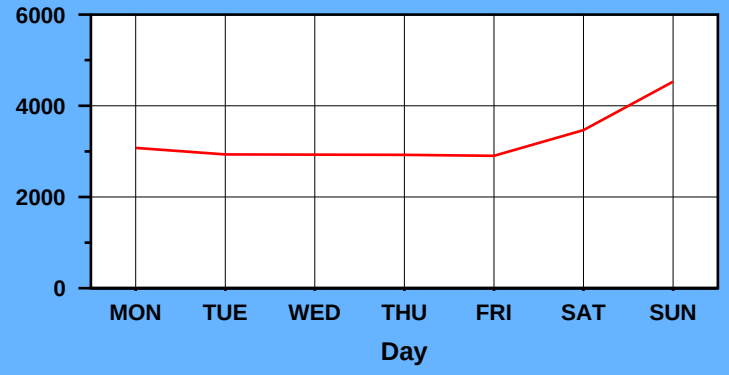
Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	**75**
Weekly 85th Percentile Speed	**86**
Five Day AADT	**2971**
Seven Day AADT	**3283**

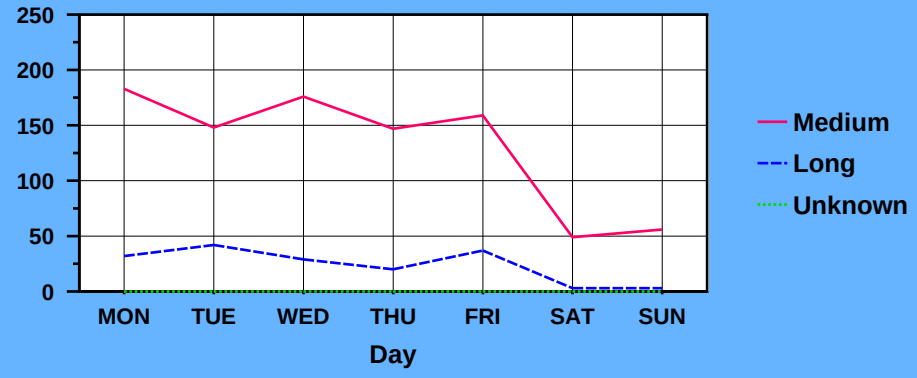
THE BODY OF THIS REPORT SHOWS : SEVENDAY TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	19	2823	39	156	27	0	4	3	6	19	0	0	0	0	**3096**
TUESDAY	29	2712	31	134	14	0	4	4	6	27	1	0	0	0	**2962**
WEDNESDAY	9	2695	30	156	20	0	1	4	5	19	0	0	0	0	**2939**
THURSDAY	16	2743	15	133	14	0	3	2	2	13	0	0	0	0	**2941**
FRIDAY	12	2686	22	138	20	1	2	6	7	21	1	0	0	0	**2916**
SATURDAY	43	3371	45	46	3	0	1	2	0	0	0	0	0	0	**3511**
SUNDAY	88	4433	37	55	1	0	1	2	0	0	0	0	0	0	**4617**
5 Day Total	85	13659	137	717	95	1	14	19	26	99	2	0	0	0	**14854**
5 Day Pct	1	92	1	5	1					1					
7 Day Total	216	21463	219	818	99	1	16	23	26	99	2	0	0	0	**22982**
7 Day Pct	1	93	1	4											

Volume



Class Volumes



CfeIT bob.white@cfeit.com (02) 9740 8600

Daily Classification Summary

Count Number 2156 Ref : MWT

Street **LAWRENCE HARGRAVE DRIVE, STANWELL TOPS : From WALKER STREET to STONEHAVEN ROAD : SOUTH EAST**

Location Mid-section between Stonehaven Road and Walker Street, To freeway sign *Carriageway*

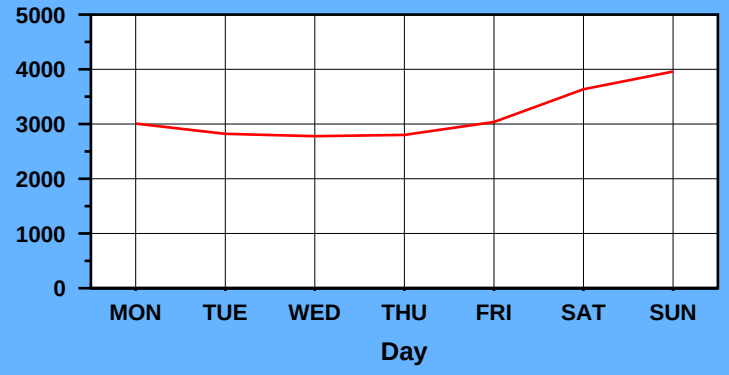
Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	**76**
Weekly 85th Percentile Speed	**87**
Five Day AADT	**2900**
Seven Day AADT	**3165**

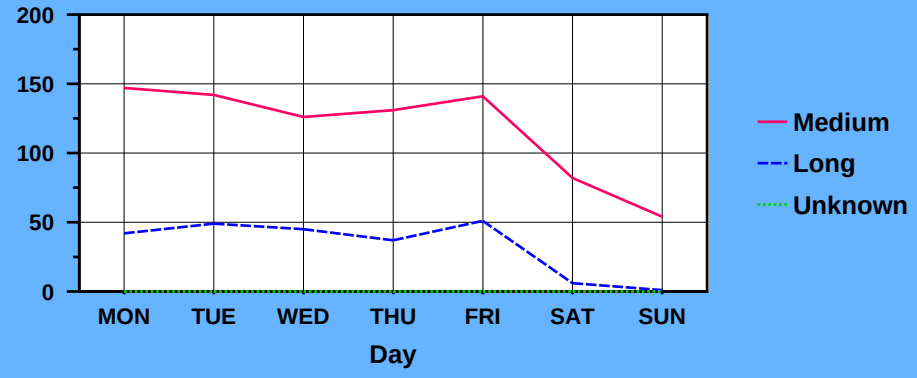
THE BODY OF THIS REPORT SHOWS : SEVENDAY TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	9	2786	33	124	22	1	3	2	3	34	0	0	0	0	**3017**
TUESDAY	17	2604	27	124	17	1	5	0	1	42	1	0	0	0	**2839**
WEDNESDAY	7	2573	35	108	18	0	0	1	1	42	1	0	0	0	**2786**
THURSDAY	10	2619	15	122	7	2	1	1	1	33	1	0	0	0	**2812**
FRIDAY	7	2827	19	125	16	0	4	1	3	42	1	0	0	0	**3045**
SATURDAY	36	3513	35	75	6	1	3	2	0	0	1	0	0	0	**3672**
SUNDAY	24	3877	28	53	1	0	0	1	0	0	0	0	0	0	**3984**
5 Day Total	50	13409	129	603	80	4	13	5	9	193	4	0	0	0	**14499**
5 Day Pct		92	1	4	1					1					
7 Day Total	110	20799	192	731	87	5	16	8	9	193	5	0	0	0	**22155**
7 Day Pct		94	1	3						1					

Volume



Class Volumes



CfeIT bob.white@cfeit.com (02) 9740 8600

Daily Classification Summary

Count Number	**2155** Ref : **MWT**
Street	**OLD PRINCES HIGHWAY, BULLI PASS : From MOUNT OUSLEY ROAD to LAWRENCE HARGRAVE DRIVE : NORTH EAST**
Location	Midway on Bulli Pass *Carriageway*

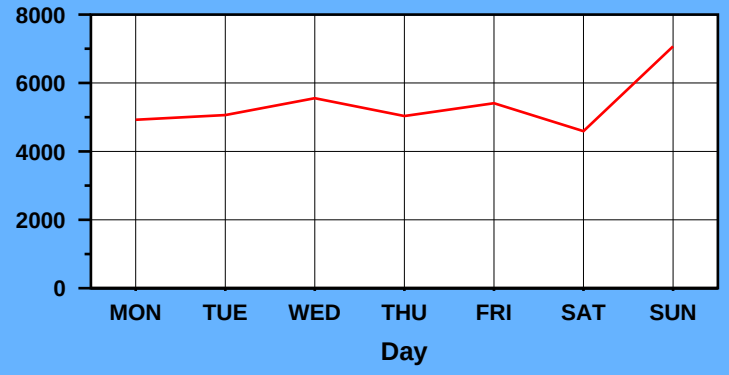
Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	**56**
Weekly 85th Percentile Speed	**66**
Five Day AADT	**5215**
Seven Day AADT	**5406**

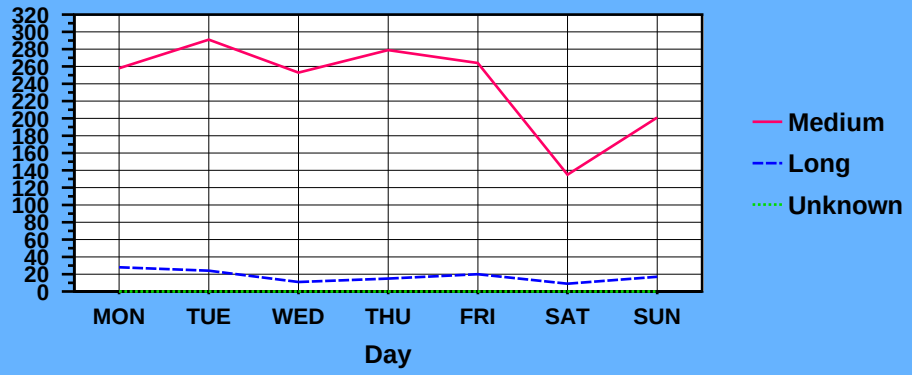
THE BODY OF THIS REPORT SHOWS : SEVENDAY TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	18	4598	40	237	20	1	11	8	3	6	0	0	0	0	**4942**
TUESDAY	20	4714	34	271	20	0	6	5	0	13	0	0	0	0	**5083**
WEDNESDAY	10	5247	45	242	11	0	5	5	0	1	0	0	0	0	**5566**
THURSDAY	16	4702	38	260	18	1	4	5	0	6	0	0	0	0	**5050**
FRIDAY	22	5070	56	250	14	0	8	5	1	6	0	0	0	0	**5432**
SATURDAY	23	4390	58	128	7	0	7	1	1	0	0	0	0	0	**4615**
SUNDAY	83	6794	58	194	6	1	10	7	0	0	0	0	0	0	**7153**
5 Day Total	86	24331	213	1260	83	2	34	28	4	32	0	0	0	0	**26073**
5 Day Pct		93	1	5											
7 Day Total	192	35515	329	1582	96	3	51	36	5	32	0	0	0	0	**37841**
7 Day Pct	1	94	1	4											

Volume



Class Volumes



CfeIT bob.white@cfeit.com (02) 9740 8600

Daily Classification Summary

Count Number	**2155** Ref : **MWT**
Street	**OLD PRINCES HIGHWAY, BULLI PASS : From LAWRENCE HARGRAVE DRIVE to MOUNT OUSLEY ROAD : SOUTH WEST**
Location	Midway on Bulli Pass *Carriageway*

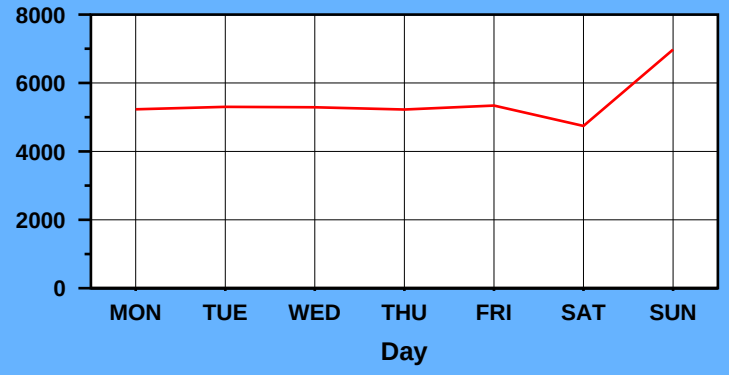
Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	**50**
Weekly 85th Percentile Speed	**58**
Five Day AADT	**5302**
Seven Day AADT	**5474**

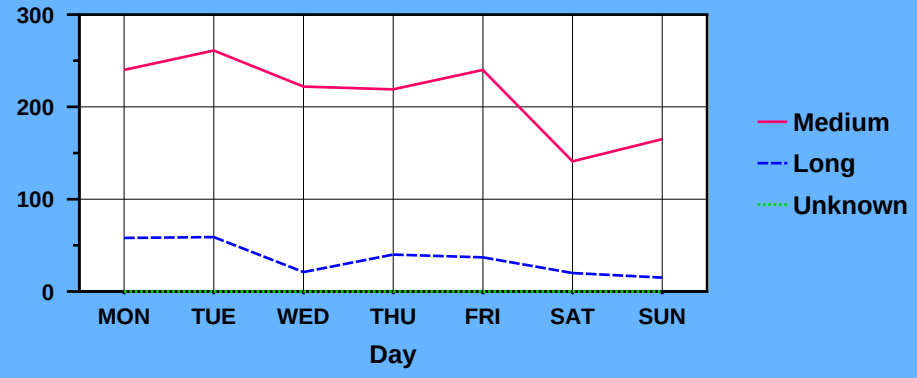
THE BODY OF THIS REPORT SHOWS : SEVENDAY TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	27	4894	39	201	36	3	4	9	7	38	0	0	0	0	**5258**
TUESDAY	30	4945	36	228	29	4	5	10	5	39	0	0	0	0	**5331**
WEDNESDAY	25	5009	37	197	21	4	3	2	6	10	0	0	0	0	**5314**
THURSDAY	23	4928	37	198	19	2	5	8	2	24	1	0	0	0	**5247**
FRIDAY	18	5018	46	206	30	4	3	2	12	20	0	0	0	0	**5359**
SATURDAY	34	4516	67	123	18	0	5	4	6	5	0	0	0	0	**4778**
SUNDAY	55	6718	79	156	9	0	12	0	0	3	0	0	0	0	**7032**
5 Day Total	123	24794	195	1030	135	17	20	31	32	131	1	0	0	0	**26509**
5 Day Pct		94	1	4	1										
7 Day Total	212	36028	341	1309	162	17	37	35	38	139	1	0	0	0	**38319**
7 Day Pct	1	94	1	3											

Volume



Class Volumes



CfeIT bob.white@cfeit.com (02) 9740 8600

Daily Classification Summary

Count Number	**2152** Ref : **MWT**
Street	**PRINCES HIGHWAY, RUSSELL VALE : From BELLAMBI LANE to BROKER STREET : NORTH BOUND**
Location	Combined Counts 2153 and 2154 Northbound, North of Bellambi Lane, House No. , ELP *Carriageway*

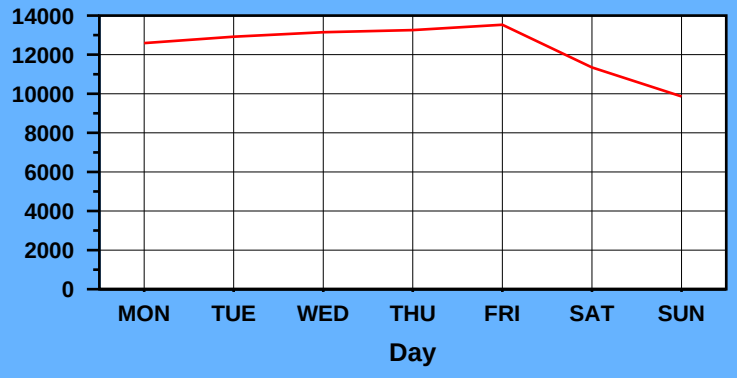
Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	**52**
Weekly 85th Percentile Speed	**59**
Five Day AADT	**13143**
Seven Day AADT	**12444**

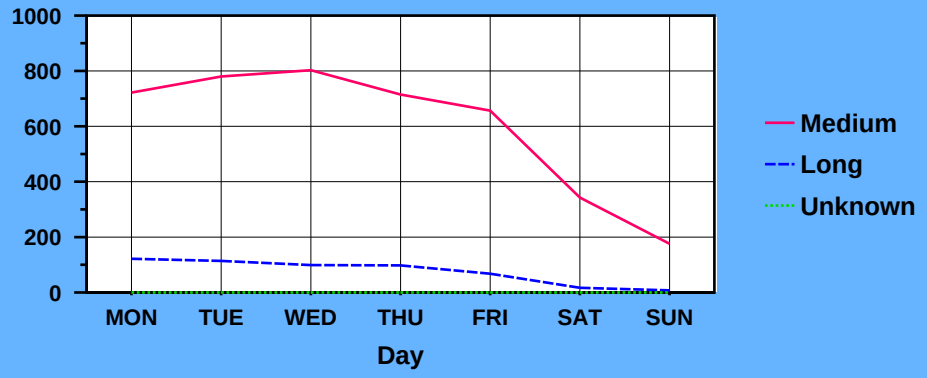
THE BODY OF THIS REPORT SHOWS : SEVENDAY TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	58	11662	87	612	101	9	12	6	9	95	0	0	0	0	**12651**
TUESDAY	60	11947	80	637	126	17	14	6	9	84	1	0	0	0	**12981**
WEDNESDAY	51	12163	85	640	140	23	13	5	8	72	1	0	0	0	**13201**
THURSDAY	47	12331	113	561	136	18	12	7	5	74	0	0	0	0	**13304**
FRIDAY	49	12710	95	569	73	15	13	1	2	52	0	0	0	0	**13579**
SATURDAY	113	10845	144	320	20	3	5	2	4	6	0	0	0	0	**11462**
SUNDAY	68	9561	117	168	7	1	3	1	0	4	0	0	0	0	**9930**
5 Day Total	265	60813	460	3019	576	82	64	25	33	377	2	0	0	0	**65716**
5 Day Pct		93	1	5	1					1					
7 Day Total	446	81219	721	3507	603	86	72	28	37	387	2	0	0	0	**87108**
7 Day Pct	1	93	1	4	1										

Volume



Class Volumes



CfeIT bob.white@cfeit.com (02) 9740 8600

Daily Classification Summary

Count Number	**2149** Ref : **MWT**
Street	**PRINCES HIGHWAY, RUSSELL VALE : From BELLAMBI LANE to BROKER STREET : SOUTH BOUND**
Location	Combined Counts 2150 and 2151 Southbound, North of Bellambi Lane, House No. , ELP *Carriageway*

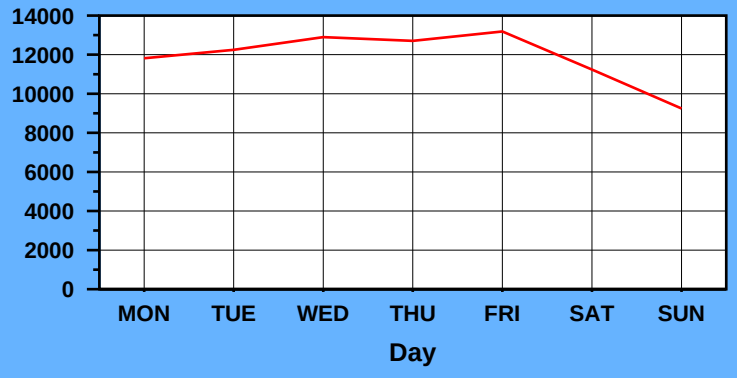
Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	**48**
Weekly 85th Percentile Speed	**58**
Five Day AADT	**12637**
Seven Day AADT	**11973**

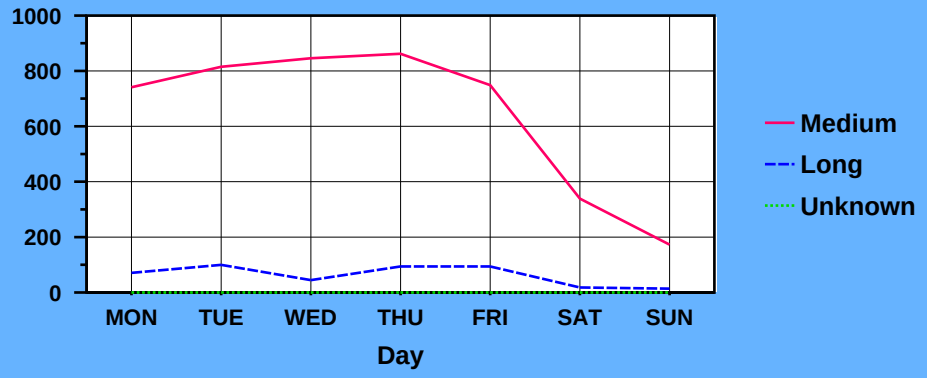
THE BODY OF THIS REPORT SHOWS : SEVENDAY TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	59	10930	76	621	112	8	12	4	10	44	1	0	0	0	**11877**
TUESDAY	93	11247	85	649	149	17	17	11	9	62	1	0	0	0	**12340**
WEDNESDAY	58	11921	85	657	164	25	11	6	2	24	2	0	0	0	**12955**
THURSDAY	65	11639	110	679	159	24	20	12	8	54	0	0	0	0	**12770**
FRIDAY	57	12235	107	644	88	17	17	15	9	53	0	0	0	0	**13242**
SATURDAY	72	10754	131	313	24	2	3	7	3	4	1	0	0	0	**11314**
SUNDAY	67	8962	96	167	5	1	6	5	0	3	0	0	0	0	**9312**
5 Day Total	332	57972	463	3250	672	91	77	48	38	237	4	0	0	0	**63184**
5 Day Pct	1	92	1	5	1										
7 Day Total	471	77688	690	3730	701	94	86	60	41	244	5	0	0	0	**83810**
7 Day Pct	1	93	1	4	1										

Volume



Class Volumes



CfeIT bob.white@cfeit.com (02) 9740 8600

Daily Classification Summary

Count Number 2168 Ref : MWT

Street **BULLI APPIN ROAD, APPIN : From CHURCH STREET to KINGS FALLS BRIDGE : SOUTH EAST**

Location Combined Counts 2169 and 2170 Southeastbound, near Kings Fall Bridge *Carriageway*

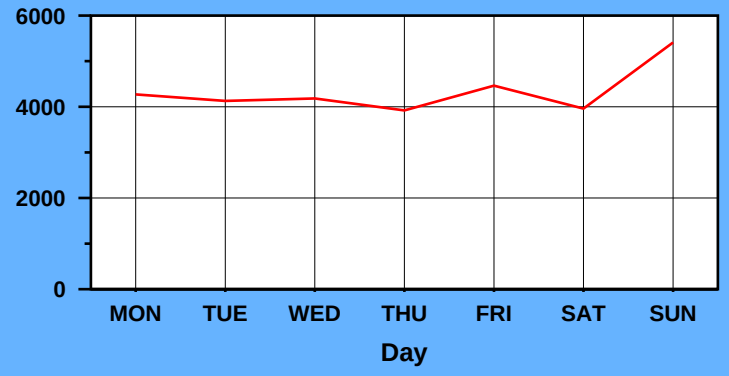
Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	**94**
Weekly 85th Percentile Speed	**106**
Five Day AADT	**4216**
Seven Day AADT	**4372**

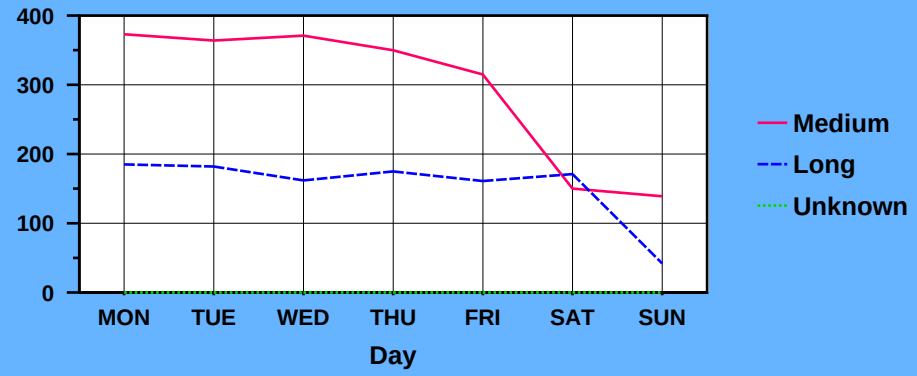
THE BODY OF THIS REPORT SHOWS : SEVENDAY TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	29	3660	53	325	46	2	12	12	23	116	22	0	0	0	**4300**
TUESDAY	39	3546	37	309	53	2	5	11	19	117	30	0	0	0	**4168**
WEDNESDAY	19	3605	44	314	52	5	7	6	24	101	24	0	0	0	**4201**
THURSDAY	13	3350	45	291	58	1	8	4	18	121	24	0	0	0	**3933**
FRIDAY	16	3903	84	261	47	7	3	6	24	104	24	0	0	0	**4479**
SATURDAY	38	3548	92	137	13	0	7	0	3	147	14	0	0	0	**3999**
SUNDAY	116	5156	73	125	14	0	11	4	2	21	4	0	0	0	**5526**
5 Day Total	116	18064	263	1500	256	17	35	39	108	559	124	0	0	0	**21081**
5 Day Pct	1	86	1	7	1				1	3	1				
7 Day Total	270	26768	428	1762	283	17	53	43	113	727	142	0	0	0	**30606**
7 Day Pct	1	87	1	6	1					2					

Volume



Class Volumes



CfeIT bob.white@cfeit.com (02) 9740 8600

Daily Classification Summary

Count Number 2167 Ref : MWT

Street **BULLI APPIN ROAD, APPIN : From CHURCH STREET to KINGS FALLS BRIDGE : NORTH WEST**

Location Norwestbound lane, near Kings Fall Bridge *Carriageway*

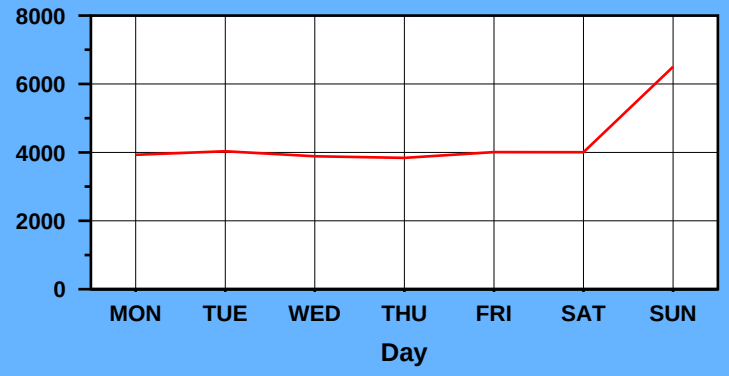
Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	**93**
Weekly 85th Percentile Speed	**104**
Five Day AADT	**3957**
Seven Day AADT	**4343**

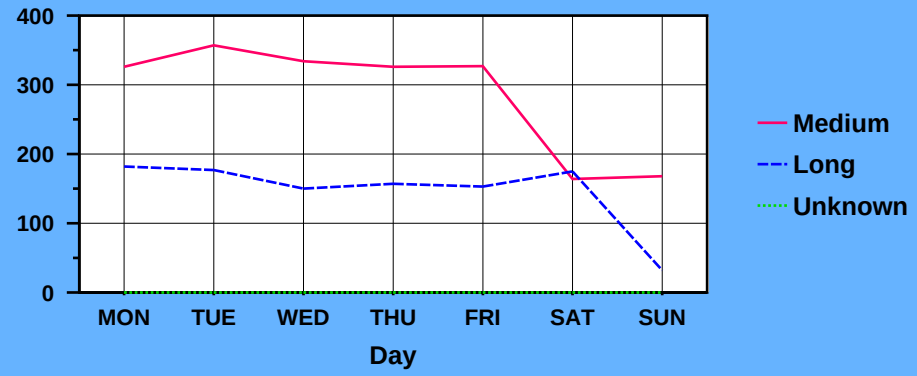
THE BODY OF THIS REPORT SHOWS : SEVENDAY TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	14	3387	37	280	44	2	7	9	28	102	36	0	0	0	**3946**
TUESDAY	20	3468	32	297	53	7	5	10	15	119	28	0	0	0	**4054**
WEDNESDAY	17	3382	22	279	50	5	4	4	27	88	27	0	0	0	**3905**
THURSDAY	12	3329	30	275	48	3	6	8	13	104	26	0	0	0	**3854**
FRIDAY	18	3486	41	276	46	5	2	4	13	102	32	0	0	0	**4025**
SATURDAY	37	3584	83	148	16	0	3	1	6	150	15	0	0	0	**4043**
SUNDAY	73	6223	80	155	12	1	3	1	1	26	1	0	0	0	**6576**
5 Day Total	81	17052	162	1407	241	22	24	35	96	515	149	0	0	0	**19784**
5 Day Pct		86	1	7	1					3	1				
7 Day Total	191	26859	325	1710	269	23	30	37	103	691	165	0	0	0	**30403**
7 Day Pct	1	88	1	6	1					2	1				

Volume



Class Volumes



CfeIT bob.white@cfeit.com (02) 9740 8600

Daily Classification Summary

Count Number 2148 Ref : MWT

Street **APPIN ROAD, APPIN : From CHURCH STREET to BRIAN ROAD : SOUTH BOUND**

Location Southbound South of Brian Road, House No.270, TREE *Carriageway*

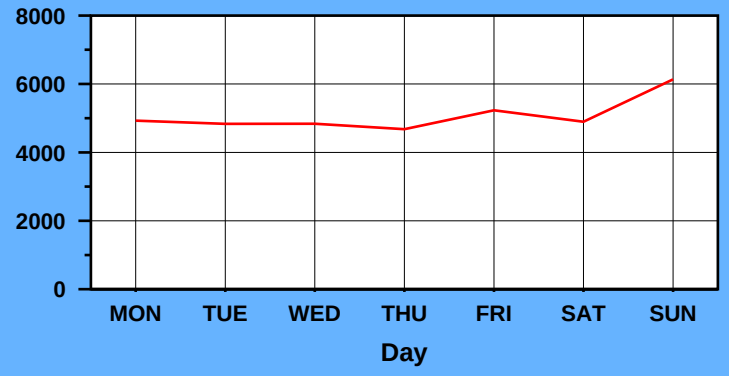
Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	**82**
Weekly 85th Percentile Speed	**89**
Five Day AADT	**4920**
Seven Day AADT	**5109**

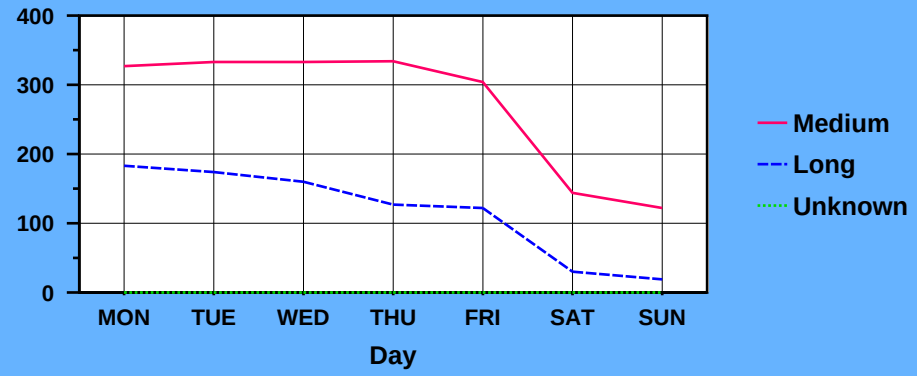
THE BODY OF THIS REPORT SHOWS : SEVENDAY TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	32	4358	59	282	37	8	9	5	12	117	40	0	0	0	**4959**
TUESDAY	28	4277	50	291	37	5	6	5	13	113	37	0	0	0	**4862**
WEDNESDAY	13	4287	56	285	40	8	1	5	13	101	40	0	0	0	**4849**
THURSDAY	5	4164	55	296	33	5	5	3	8	78	33	0	0	0	**4685**
FRIDAY	15	4705	99	262	36	6	5	2	8	73	34	0	0	0	**5245**
SATURDAY	40	4601	121	133	11	0	10	0	4	12	4	0	0	0	**4936**
SUNDAY	93	5896	98	118	4	0	11	1	0	4	3	0	0	0	**6228**
5 Day Total	93	21791	319	1416	183	32	26	20	54	482	184	0	0	0	**24600**
5 Day Pct		89	1	6	1					2	1				
7 Day Total	226	32288	538	1667	198	32	47	21	58	498	191	0	0	0	**35764**
7 Day Pct	1	90	2	5	1					1	1				

Volume



Class Volumes



CfeIT bob.white@cfeit.com (02) 9740 8600

Daily Classification Summary

Count Number	**2166** Ref : **MWT**
Street	**APPIN ROAD, APPIN : From CHURCH STREET to BRIAN ROAD : NORTH BOUND**
Location	Northbound South of Brian Road, House No.270, TREE *Carriageway*

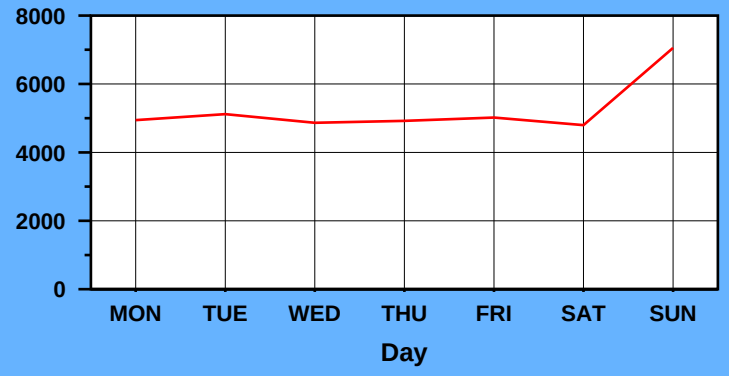
Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	**78**
Weekly 85th Percentile Speed	**86**
Five Day AADT	**4996**
Seven Day AADT	**5284**

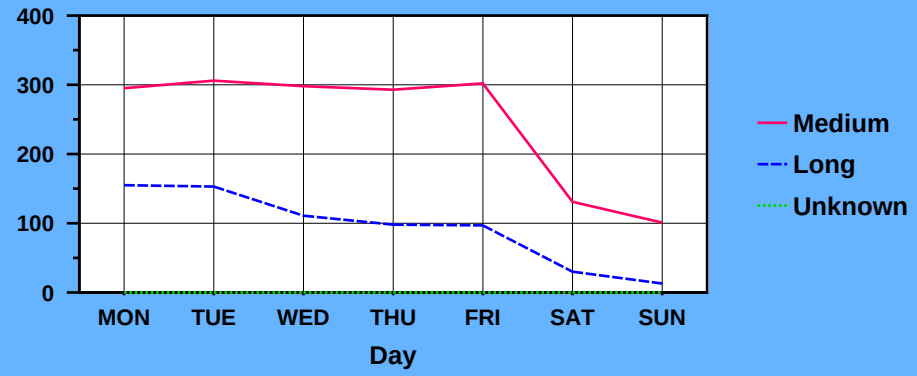
THE BODY OF THIS REPORT SHOWS : SEVENDAY TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	27	4432	63	247	41	7	5	7	11	97	35	0	0	0	**4972**
TUESDAY	31	4594	66	258	41	7	4	6	13	102	28	0	0	0	**5150**
WEDNESDAY	25	4408	49	239	49	10	0	5	26	62	18	0	0	0	**4891**
THURSDAY	15	4479	52	247	39	7	3	4	12	53	26	0	0	0	**4937**
FRIDAY	12	4553	66	247	49	6	4	5	6	58	24	0	0	0	**5030**
SATURDAY	59	4489	148	120	11	0	5	1	3	19	2	0	0	0	**4857**
SUNDAY	93	6796	146	91	9	1	4	3	0	5	1	0	0	0	**7149**
5 Day Total	110	22466	296	1238	219	37	16	27	68	372	131	0	0	0	**24980**
5 Day Pct		90	1	5	1					1	1				
7 Day Total	262	33751	590	1449	239	38	25	31	71	396	134	0	0	0	**36986**
7 Day Pct	1	91	2	4	1					1					

Volume



Class Volumes



CfeIT bob.white@cfeit.com (02) 9740 8600

Daily Classification Summary

Count Number	**2171** Ref : **MWT**
Street	**APPIN ROAD, BRADBURY : From THERRY ROAD to NARELLAN ROAD : SOUTH BOUND**
Location	Combined Counts 2146, 2172 and 2173 Southbound, Outside Hospital *Carriageway*

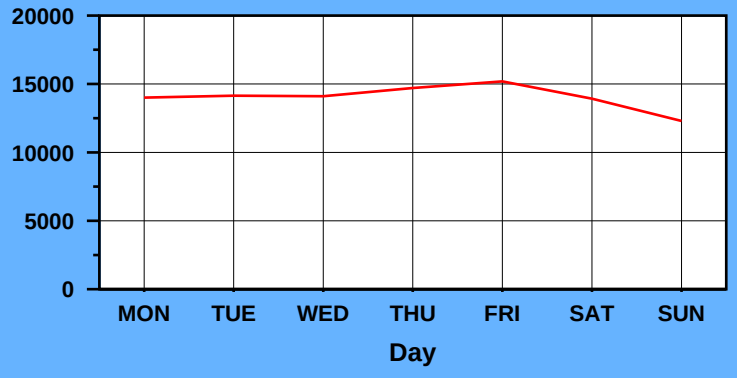
Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	**64**
Weekly 85th Percentile Speed	**74**
Five Day AADT	**14479**
Seven Day AADT	**14115**

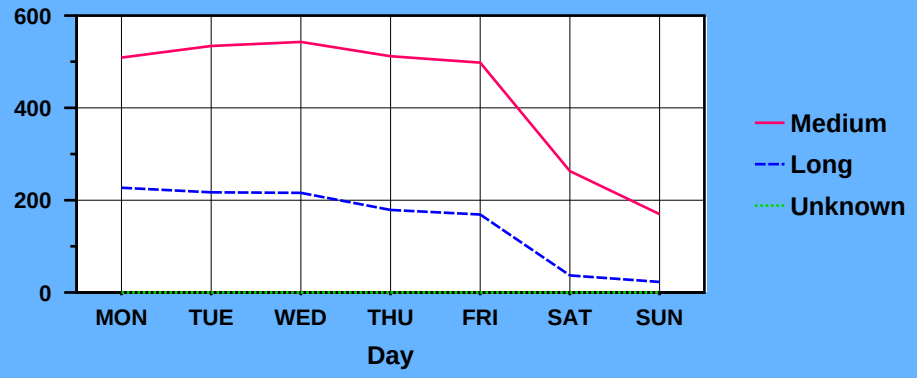
THE BODY OF THIS REPORT SHOWS : SEVENDAY TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	55	13152	119	411	85	13	10	8	21	137	51	0	0	0	**14062**
TUESDAY	55	13273	119	471	56	7	11	7	28	132	39	0	0	0	**14198**
WEDNESDAY	39	13259	91	463	67	13	15	7	21	126	47	0	0	0	**14148**
THURSDAY	43	13906	106	456	49	7	9	6	20	100	44	0	0	0	**14746**
FRIDAY	51	14374	147	435	51	12	14	3	16	98	38	0	0	0	**15239**
SATURDAY	74	13407	219	226	31	6	7	2	7	19	2	0	0	0	**14000**
SUNDAY	115	11923	181	158	10	2	8	2	1	9	3	0	0	0	**12412**
5 Day Total	243	67964	582	2236	308	52	59	31	106	593	219	0	0	0	**72393**
5 Day Pct		94	1	3						1					
7 Day Total	432	93294	982	2620	349	60	74	35	114	621	224	0	0	0	**98805**
7 Day Pct		94	1	3						1					

Volume



Class Volumes



CfeIT bob.white@cfeit.com (02) 9740 8600

Daily Classification Summary

Count Number 2174 Ref : MWT

Street **APPIN ROAD, BRADBURY : From THERRY ROAD to NARELLAN ROAD : NORTH BOUND**

Location Combined Counts 2175 and 2176 Northbound, Outside Hospital *Carriageway*

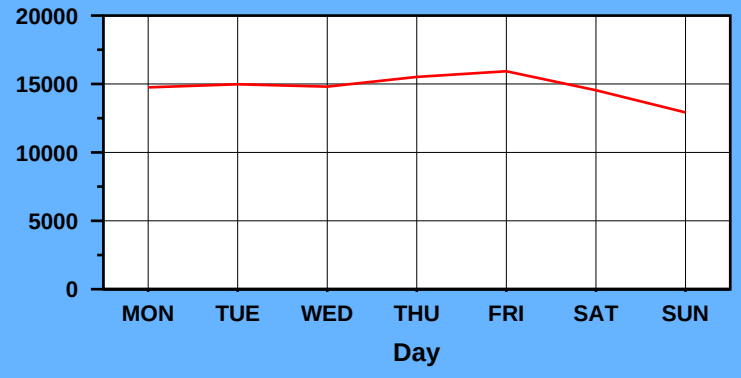
Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	**62**
Weekly 85th Percentile Speed	**73**
Five Day AADT	**15251**
Seven Day AADT	**14843**

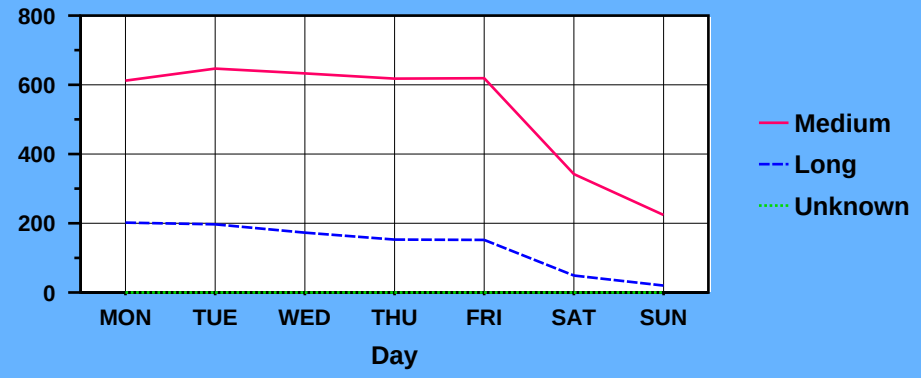
THE BODY OF THIS REPORT SHOWS : SEVENDAY TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	65	13824	113	504	91	17	12	13	13	117	47	0	0	0	**14816**
TUESDAY	61	14009	128	570	65	12	15	5	12	124	41	0	0	0	**15042**
WEDNESDAY	48	13905	93	543	74	16	16	5	17	99	36	0	0	0	**14852**
THURSDAY	40	14643	102	536	64	18	14	5	16	81	37	0	0	0	**15556**
FRIDAY	53	15045	118	527	70	22	21	6	12	86	27	0	0	0	**15987**
SATURDAY	78	13929	223	307	29	6	17	0	7	24	1	0	0	0	**14621**
SUNDAY	104	12500	180	205	16	3	5	2	2	10	1	0	0	0	**13028**
5 Day Total	267	71426	554	2680	364	85	78	34	70	507	188	0	0	0	**76253**
5 Day Pct		94	1	4						1					
7 Day Total	449	97855	957	3192	409	94	100	36	79	541	190	0	0	0	**103902**
7 Day Pct		94	1	3						1					

Volume



Class Volumes



CfeIT bob.white@cfeit.com (02) 9740 8600

Daily Classification Summary

Count Number	**2180** Ref : **MWT**
Street	**NARELLAN ROAD, BLAIR ATHOL : From HUME HIGHWAY INTERCHANGE to GILCHRIST DRIVE : SOUTH EAST**
Location	Combined Count 2181 and 2182 Southeastbound - Between Hume Highway Interchange and UWC access. House No. *Carriageway*

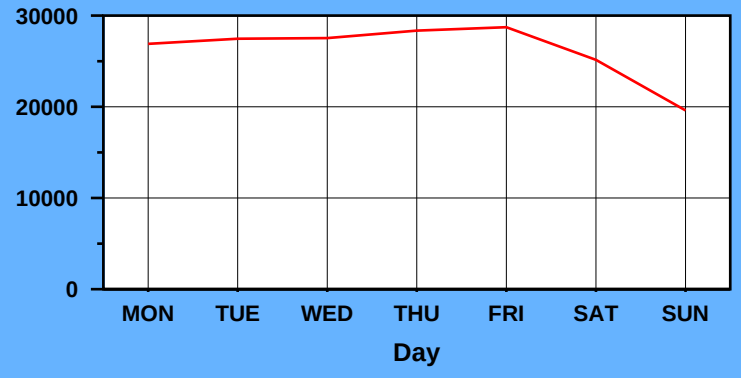
Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	**74**
Weekly 85th Percentile Speed	**85**
Five Day AADT	**27863**
Seven Day AADT	**26347**

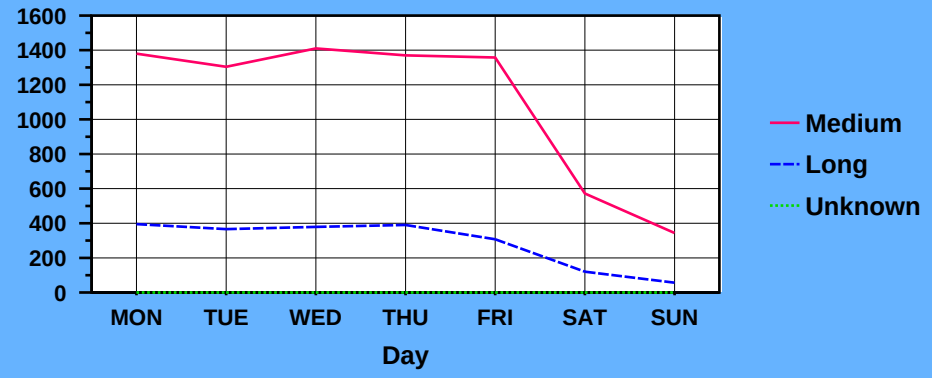
THE BODY OF THIS REPORT SHOWS : SEVENDAY TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	71	24901	224	1097	232	51	22	16	32	265	60	0	0	0	**26971**
TUESDAY	63	25595	195	1045	219	40	30	9	49	218	60	0	0	0	**27523**
WEDNESDAY	60	25518	223	1103	266	41	30	20	42	220	67	0	0	0	**27590**
THURSDAY	99	26419	166	1153	166	51	37	27	37	238	51	0	0	0	**28444**
FRIDAY	62	26809	252	1116	199	43	32	13	39	178	46	0	0	0	**28789**
SATURDAY	53	24093	363	493	69	10	16	5	11	82	6	0	0	0	**25201**
SUNDAY	299	18896	313	315	25	4	15	3	8	23	8	0	0	0	**19909**
5 Day Total	355	129242	1060	5514	1082	226	151	85	199	1119	284	0	0	0	**139317**
5 Day Pct		93	1	4	1					1					
7 Day Total	707	172231	1736	6322	1176	240	182	93	218	1224	298	0	0	0	**184427**
7 Day Pct		93	1	3	1					1					

Volume



Class Volumes



CfeIT bob.white@cfeit.com (02) 9740 8600

Daily Classification Summary

Count Number	**2177** Ref : **MWT**
Street	**NARELLAN ROAD, BLAIR ATHOL : From HUME HIGHWAY INTERCHANGE to GILCHRIST DRIVE : NORTH WEST**
Location	Combined Counts 2178 and 2179 Northwestbound - Between Hume Highway Interchange and UWS access. House No *Carriageway*

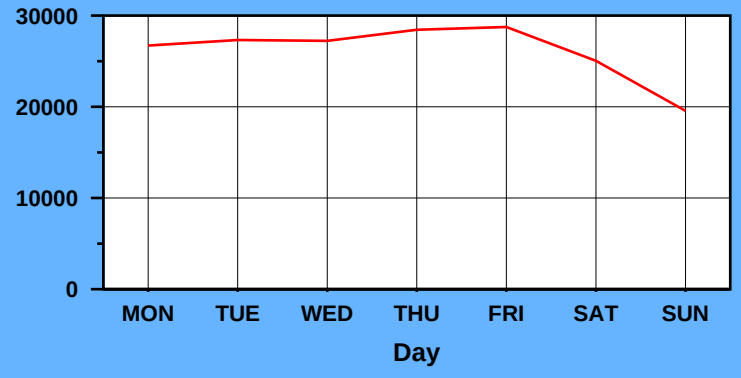
Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	**74**
Weekly 85th Percentile Speed	**85**
Five Day AADT	**27750**
Seven Day AADT	**26262**

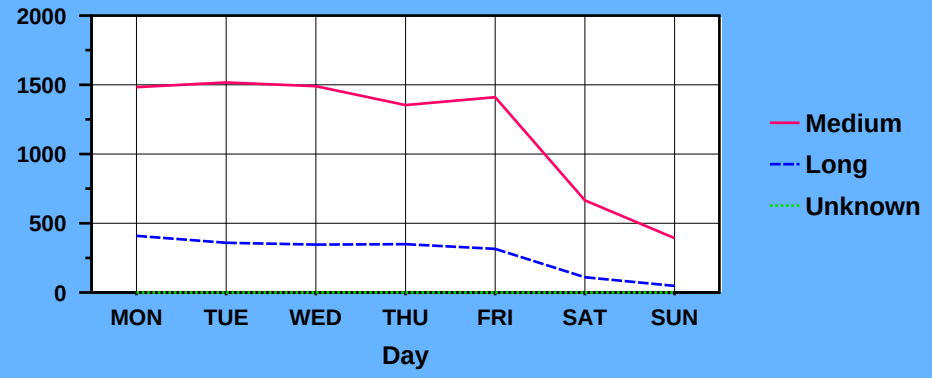
THE BODY OF THIS REPORT SHOWS : SEVENDAY TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	83	24608	217	1164	254	65	22	25	40	259	63	0	0	0	**26800**
TUESDAY	66	25236	214	1240	231	46	31	13	39	215	61	0	0	0	**27392**
WEDNESDAY	49	25180	208	1195	240	55	25	17	41	199	64	0	0	0	**27273**
THURSDAY	51	26563	179	1126	174	54	31	10	42	208	58	0	0	0	**28496**
FRIDAY	40	26743	280	1203	159	49	36	12	32	181	54	0	0	0	**28789**
SATURDAY	102	23891	372	590	60	16	12	7	17	72	2	0	0	0	**25141**
SUNDAY	392	18797	316	360	30	3	9	4	2	29	4	0	0	0	**19946**
5 Day Total	289	128330	1098	5928	1058	269	145	77	194	1062	300	0	0	0	**138750**
5 Day Pct		92	1	4	1					1					
7 Day Total	783	171018	1786	6878	1148	288	166	88	213	1163	306	0	0	0	**183837**
7 Day Pct		93	1	4	1					1					

Volume



Class Volumes



CfeIT bob.white@cfeit.com (02) 9740 8600

Daily Classification Summary

Count Number	**2163** Ref : **MWT**
Street	**CAMDEN BY-PASS, ELDERSLIE : From MACARTHUR ROAD to NARELLAN ROAD : NORTH EAST**
Location	Combined Counts 2164 and 2165 Noreastbound, between Macarthur Road and Narellan Road *Carriageway*

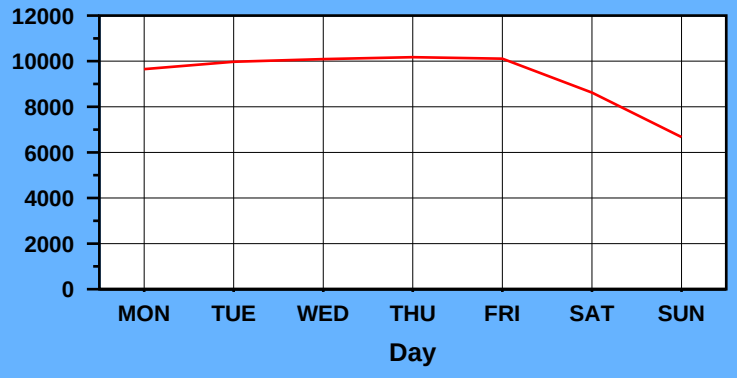
Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	**96**
Weekly 85th Percentile Speed	**104**
Five Day AADT	**10019**
Seven Day AADT	**9361**

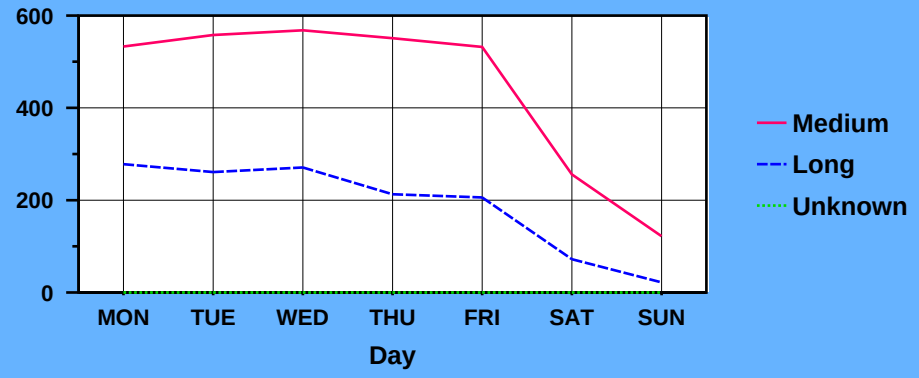
THE BODY OF THIS REPORT SHOWS : SEVENDAY TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	19	8730	112	370	145	18	17	7	22	184	48	0	0	0	**9672**
TUESDAY	25	9062	94	390	152	16	12	9	31	170	39	0	0	0	**10000**
WEDNESDAY	16	9172	84	412	134	22	21	9	34	163	44	0	0	0	**10111**
THURSDAY	11	9338	72	410	119	22	14	4	26	131	38	0	0	0	**10185**
FRIDAY	18	9262	109	393	118	21	15	7	19	129	36	0	0	0	**10127**
SATURDAY	27	8151	145	198	42	16	6	2	5	58	1	0	0	0	**8651**
SUNDAY	108	6431	99	103	14	5	6	1	3	11	1	0	0	0	**6782**
5 Day Total	89	45564	471	1975	668	99	79	36	132	777	205	0	0	0	**50095**
5 Day Pct		91	1	4	1					2					
7 Day Total	224	60146	715	2276	724	120	91	39	140	846	207	0	0	0	**65528**
7 Day Pct		92	1	3	1					1					

Volume



Class Volumes



CfeIT bob.white@cfeit.com (02) 9740 8600

Daily Classification Summary

Count Number 2160 Ref : MWT

Street **CAMDEN BY-PASS, ELDERSLIE : From MACARTHUR ROAD to NARELLAN ROAD : SOUTH WEST**

Location Combined Counts 2161 and 2162 Southwestbound, between Macarthur Road and Narellan Road *Carriageway*

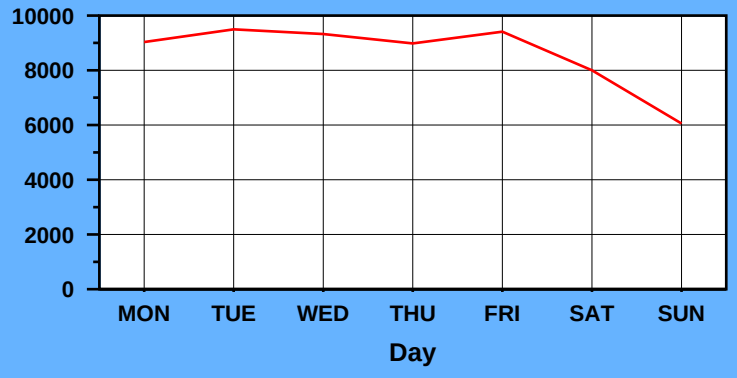
Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	**89**
Weekly 85th Percentile Speed	**107**
Five Day AADT	**9273**
Seven Day AADT	**8651**

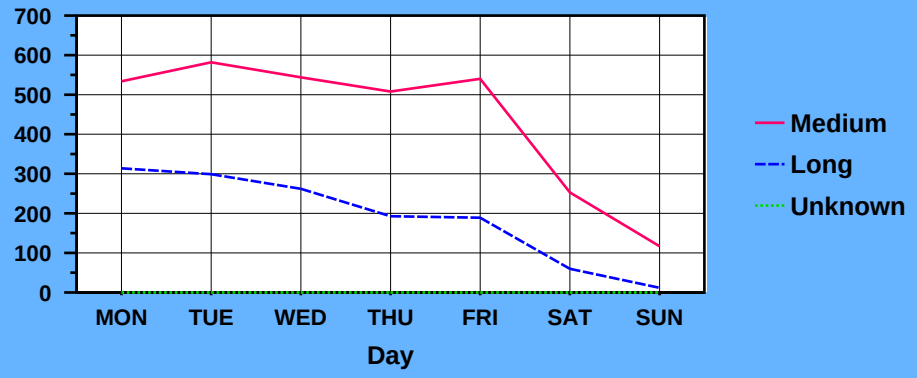
THE BODY OF THIS REPORT SHOWS : SEVENDAY TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	34	8113	72	383	131	20	18	6	32	214	44	0	0	0	**9067**
TUESDAY	26	8521	97	414	151	17	18	11	44	194	32	0	0	0	**9525**
WEDNESDAY	21	8447	72	393	123	28	17	10	36	160	39	0	0	0	**9346**
THURSDAY	14	8219	62	365	126	17	12	7	30	106	38	0	0	0	**8996**
FRIDAY	21	8584	97	388	129	23	15	6	28	109	31	0	0	0	**9431**
SATURDAY	24	7566	121	205	38	10	6	4	13	36	1	0	0	0	**8024**
SUNDAY	118	5839	85	101	14	2	2	1	2	7	0	0	0	0	**6171**
5 Day Total	116	41884	400	1943	660	105	80	40	170	783	184	0	0	0	**46365**
5 Day Pct		90	1	4	1					2					
7 Day Total	258	55289	606	2249	712	117	88	45	185	826	185	0	0	0	**60560**
7 Day Pct		91	1	4	1					1					

Volume



Class Volumes



CfeIT bob.white@cfeit.com (02) 9740 8600

Daily Classification Summary

Count Number 2159 Ref : MWT

Street **SPRINGS ROAD, SPRING FARM : From RICHARDSON ROAD to MACARTHUR ROAD : WEST BOUND**

Location West of Richardson Road, ELP 206 *Carriageway*

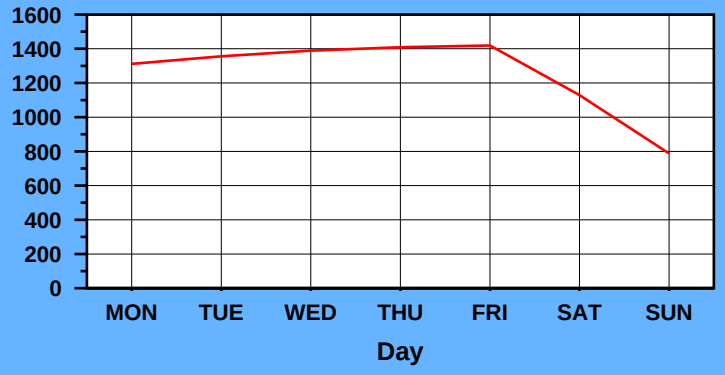
Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	**71**
Weekly 85th Percentile Speed	**80**
Five Day AADT	**1384**
Seven Day AADT	**1263**

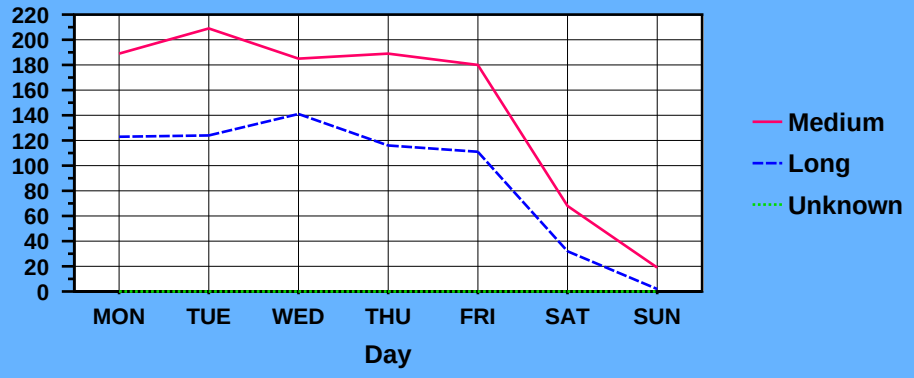
THE BODY OF THIS REPORT SHOWS : SEVENDAY TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	10	977	23	93	84	12	3	6	17	68	29	0	0	0	**1322**
TUESDAY	8	991	32	100	91	18	5	3	22	74	20	0	0	0	**1364**
WEDNESDAY	5	1020	43	77	91	17	3	3	21	82	32	0	0	0	**1394**
THURSDAY	4	1068	36	74	102	13	2	2	20	68	24	0	0	0	**1413**
FRIDAY	8	1097	31	85	81	14	2	1	22	58	28	0	0	0	**1427**
SATURDAY	2	983	46	42	21	5	3	0	6	23	0	0	0	0	**1131**
SUNDAY	1	728	39	16	2	1	1	0	0	1	0	0	0	0	**789**
5 Day Total	35	5153	165	429	449	74	15	15	102	350	133	0	0	0	**6920**
5 Day Pct	1	74	2	6	6	1			1	5	2				
7 Day Total	38	6864	250	487	472	80	19	15	108	374	133	0	0	0	**8840**
7 Day Pct		78	3	6	5	1			1	4	2				

Volume



Class Volumes



CfeIT bob.white@cfeit.com (02) 9740 8600

Daily Classification Summary

Count Number 2159 Ref : MWT

Street **SPRINGS ROAD, SPRING FARM : From MACARTHUR ROAD to RICHARDSON ROAD : EAST BOUND**

Location West of Richardson Road, ELP 206 *Carriageway*

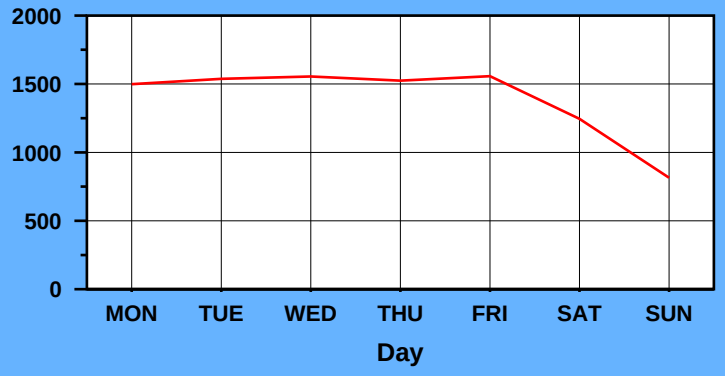
Start Date	21-OCT-07
Start Time	100
Duration	7 DAYS
Interval	1 HOUR

Weekly 50th Percentile Speed	**74**
Weekly 85th Percentile Speed	**84**
Five Day AADT	**1540**
Seven Day AADT	**1395**

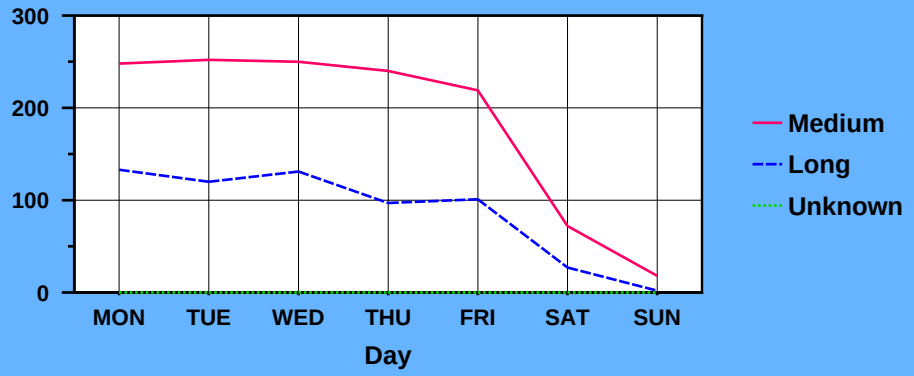
THE BODY OF THIS REPORT SHOWS : SEVENDAY TRAFFIC

Day	00	01	02	03	04	05	06	07	08	09	10	11	12	13	Total
MONDAY	3	1092	26	124	109	15	5	12	27	71	18	0	0	0	**1502**
TUESDAY	8	1126	40	145	90	17	5	10	25	67	13	0	0	0	**1546**
WEDNESDAY	5	1125	49	148	85	17	5	9	21	75	21	0	0	0	**1560**
THURSDAY	6	1151	36	129	98	13	5	8	19	42	23	0	0	0	**1530**
FRIDAY	7	1194	43	131	75	13	4	6	22	55	14	0	0	0	**1564**
SATURDAY	4	1093	53	42	22	8	2	3	2	20	0	0	0	0	**1249**
SUNDAY	1	746	49	15	3	0	1	0	0	1	0	0	0	0	**816**
5 Day Total	29	5688	194	677	457	75	24	45	114	310	89	0	0	0	**7702**
5 Day Pct		74	3	9	6	1		1	1	4	1				
7 Day Total	34	7527	296	734	482	83	27	48	116	331	89	0	0	0	**9767**
7 Day Pct		77	3	8	5	1			1	3	1				

Volume



Class Volumes



R.O.A.R. DATA
Reliable, Original & Authentic Results
Ph.88196847, Fax 88196849, Mob.0418-239019

Client : Masson Wilson Twiney
Job No/Name : 1922 Helensburgh Traffic Counts (2)
Day/Date : Wednesday 24th October 2007

Lights

	NORTH		EAST		SOUTH		
	Parkes St		*Colliery Rd*		*Parkes St*		
Time Period	T	L	R	L	R	T	TOT
0700 - 0715	47	0	0	2	7	47	**103**
0715 - 0730	73	0	0	1	2	34	**110**
0730 - 0745	63	0	0	5	1	39	**108**
0745 - 0800	67	0	0	2	4	44	**117**
0800 - 0815	81	0	0	1	3	53	**138**
0815 - 0830	81	1	0	1	3	52	**138**
0830 - 0845	113	0	1	5	3	96	**218**
0845 - 0900	120	1	1	17	5	75	**219**
Period End	**645**	**2**	**2**	**34**	**28**	**440**	**1151**

Rigid

	NORTH		EAST		SOUTH		
	Parkes St		*Colliery Rd*		*Parkes St*		
Time Period	T	L	R	L	R	T	TOT
0700 - 0715	4	0	0	0	1	1	**6**
0715 - 0730	2	0	0	0	0	0	**2**
0730 - 0745	3	0	0	0	0	3	**6**
0745 - 0800	2	0	0	0	0	3	**5**
0800 - 0815	2	0	0	0	2	0	**4**
0815 - 0830	2	0	0	0	0	7	**9**
0830 - 0845	4	0	0	1	1	2	**8**
0845 - 0900	3	1	0	1	0	1	**6**
Period End	**22**	**1**	**0**	**2**	**4**	**17**	**46**

Articulated

	NORTH		EAST		SOUTH		
	Parkes St		*Colliery Rd*		*Parkes St*		
Time Period	T	L	R	L	R	T	TOT
0700 - 0715	0	0	0	2	7	0	**9**
0715 - 0730	0	0	0	3	1	0	**4**
0730 - 0745	0	0	0	4	1	0	**5**
0745 - 0800	0	0	0	0	1	0	**1**
0800 - 0815	0	0	0	0	2	0	**2**
0815 - 0830	0	0	0	1	4	0	**5**
0830 - 0845	0	0	0	3	1	0	**4**
0845 - 0900	0	0	0	2	1	0	**3**
Period End	**0**	**0**	**0**	**15**	**18**	**0**	**33**

Lights

	NORTH		EAST		SOUTH		
	Parkes St		*Colliery Rd*		*Parkes St*		
Peak Period	T	L	R	L	R	T	TOT
0700 - 0800	250	0	0	10	14	164	**438**
0715 - 0815	284	0	0	9	10	170	**473**
0730 - 0830	292	1	0	9	11	188	**501**
0745 - 0845	342	1	1	9	13	245	**611**
0800 - 0900	395	2	2	24	14	276	**713**

Rigid

	NORTH		EAST		SOUTH		
	Parkes St		*Colliery Rd*		*Parkes St*		
Peak Period	T	L	R	L	R	T	TOT
0700 - 0800	11	0	0	0	1	7	**19**
0715 - 0815	9	0	0	0	2	6	**17**
0730 - 0830	9	0	0	0	2	13	**24**
0745 - 0845	10	0	0	1	3	12	**26**
0800 - 0900	11	1	0	2	3	10	**27**

Articulated

	NORTH		EAST		SOUTH		
	Parkes St		*Colliery Rd*		*Parkes St*		
Peak Period	T	L	R	L	R	T	TOT
0700 - 0800	0	0	0	9	10	0	**19**
0715 - 0815	0	0	0	7	5	0	**12**
0730 - 0830	0	0	0	5	8	0	**13**
0745 - 0845	0	0	0	4	8	0	**12**
0800 - 0900	0	0	0	6	8	0	**14**

PEAK HOUR	**395**	**2**	**2**	**24**	**14**	**276**	**713**

PEAK HOUR	**11**	**1**	**0**	**2**	**3**	**10**	**27**

PEAK HOUR	**0**	**0**	**0**	**6**	**8**	**0**	**14**

R.O.A.R. DATA
Reliable, Original & Authentic Results
Ph.88196847, Fax 88196849, Mob.0418-239019

Client : Masson Wilson Twiney
Job No/Name : 1922 Helensburgh Traffic Counts (2)
Day/Date : Wednesday 24th October 2007

Combined	NORTH		EAST		SOUTH		
	Parkes St		*Colliery Rd*		*Parkes St*		
Time Period	T	L	R	L	R	T	TOT
0700 - 0715	51	0	0	4	15	48	**118**
0715 - 0730	75	0	0	4	3	34	**116**
0730 - 0745	66	0	0	9	2	42	**119**
0745 - 0800	69	0	0	2	5	47	**123**
0800 - 0815	83	0	0	1	7	53	**144**
0815 - 0830	83	1	0	2	7	59	**152**
0830 - 0845	117	0	1	9	5	98	**230**
0845 - 0900	123	2	1	20	6	76	**228**
Period End	**667**	**3**	**2**	**51**	**50**	**457**	**1230**

Combined	NORTH		EAST		SOUTH		
	Parkes St		*Colliery Rd*		*Parkes St*		
Peak Period	T	L	R	L	R	T	TOT
0700 - 0800	261	0	0	19	25	171	**476**
0715 - 0815	293	0	0	16	17	176	**502**
0730 - 0830	301	1	0	14	21	201	**538**
0745 - 0845	352	1	1	14	24	257	**649**
0800 - 0900	406	3	2	32	25	286	**754**

PEAK HOUR	**406**	**3**	**2**	**32**	**25**	**286**	**754**

R.O.A.R. DATA
Reliable, Original & Authentic Results
Ph.88196847, Fax 88196849, Mob.0418-239019

Client : Masson Wilson Twiney
Job No/Name : 1922 Helensburgh Traffic Counts (2)
Day/Date : Wednesday 24th October 2007

Lights

	NORTH			WEST			SOUTH			EAST			
	Walker St			*Parkes St*			*Walker St*			*Parker St*			
Time Period	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOT**
0700 - 0715	0	4	6	5	25	12	7	1	28	9	53	2	**152**
0715 - 0730	2	4	11	2	11	4	15	5	22	16	50	1	**143**
0730 - 0745	0	2	7	2	23	7	12	3	21	21	57	2	**157**
0745 - 0800	0	3	6	2	27	7	14	2	30	16	61	0	**168**
0800 - 0815	3	3	8	5	32	10	12	10	26	26	59	3	**197**
0815 - 0830	0	5	5	1	28	8	11	7	26	18	65	2	**176**
0830 - 0845	1	5	5	7	47	12	19	6	45	29	85	1	**262**
0845 - 0900	3	7	7	2	37	31	21	3	37	41	93	4	**286**
Period End	**9**	**33**	**55**	**26**	**230**	**91**	**111**	**37**	**235**	**176**	**523**	**15**	**1541**

Lights

	NORTH			WEST			SOUTH			EAST			
	Walker St			*Parkes St*			*Walker St*			*Parker St*			
Peak Period	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOTAL**
0700 - 0800	2	13	30	11	86	30	48	11	101	62	221	5	**620**
0715 - 0815	5	12	32	11	93	28	53	20	99	79	227	6	**665**
0730 - 0830	3	13	26	10	110	32	49	22	103	81	242	7	**698**
0745 - 0845	4	16	24	15	134	37	56	25	127	89	270	6	**803**
0800 - 0900	7	20	25	15	144	61	63	26	134	114	302	10	**921**
PEAK HOUR	**7**	**20**	**25**	**15**	**144**	**61**	**63**	**26**	**134**	**114**	**302**	**10**	**921**

Rigid

	NORTH			WEST			SOUTH			EAST			
	Walker St			*Parkes St*			*Walker St*			*Parker St*			
Time Period	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOT**
0700 - 0715	0	0	0	0	2	2	0	0	0	3	2	0	**9**
0715 - 0730	0	0	0	1	0	1	1	0	0	0	2	0	**5**
0730 - 0745	0	0	0	1	1	1	0	0	1	1	1	0	**6**
0745 - 0800	0	0	0	1	3	0	2	0	0	1	1	0	**8**
0800 - 0815	0	0	0	0	5	0	2	0	0	1	1	0	**9**
0815 - 0830	0	0	0	0	1	3	1	2	4	0	2	0	**13**
0830 - 0845	0	0	0	0	0	1	0	2	1	3	4	0	**11**
0845 - 0900	0	0	0	0	0	1	1	0	1	2	0	0	**5**
Period End	**0**	**0**	**0**	**3**	**12**	**9**	**7**	**4**	**7**	**11**	**13**	**0**	**66**

Rigid

	NORTH			WEST			SOUTH			EAST			
	Walker St			*Parkes St*			*Walker St*			*Parker St*			
Peak Period	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOTAL**
0700 - 0800	0	0	0	3	6	4	3	0	1	5	6	0	**28**
0715 - 0815	0	0	0	3	9	2	5	0	1	3	5	0	**28**
0730 - 0830	0	0	0	2	10	4	5	2	5	3	5	0	**36**
0745 - 0845	0	0	0	1	9	4	5	4	5	5	8	0	**41**
0800 - 0900	0	0	0	0	6	5	4	4	6	6	7	0	**38**
PEAK HOUR	**0**	**0**	**0**	**0**	**6**	**5**	**4**	**4**	**6**	**6**	**7**	**0**	**38**

R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Fax 88196849, Mob.0418-239019

Client : Masson Wilson Twiney
Job No/Name : 1922 Helensburgh Traffic Counts (2)
Day/Date : Wednesday 24th October 2007

Articulated

	NORTH			WEST			SOUTH			EAST			
	Walker St			*Parkes St*			*Walker St*			*Parker St*			
Time Period	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOT**
0700 - 0715	0	0	0	0	7	0	0	0	0	0	1	0	**8**
0715 - 0730	0	0	0	0	1	0	0	0	0	0	4	0	**5**
0730 - 0745	0	0	0	0	1	0	0	0	0	0	4	0	**5**
0745 - 0800	0	0	0	0	1	0	0	0	0	0	1	0	**2**
0800 - 0815	0	0	0	0	2	2	0	0	0	0	0	0	**4**
0815 - 0830	0	0	0	0	2	2	0	0	0	0	1	0	**5**
0830 - 0845	0	0	0	0	1	0	0	0	0	0	3	0	**4**
0845 - 0900	0	0	0	1	1	1	1	0	0	0	2	0	**6**
Period End	**0**	**0**	**0**	**1**	**16**	**5**	**1**	**0**	**0**	**0**	**16**	**0**	**39**

Articulated

	NORTH			WEST			SOUTH			EAST			
	Walker St			*Parkes St*			*Walker St*			*Parker St*			
Peak Period	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOTAL**
0700 - 0800	0	0	0	0	10	0	0	0	0	0	10	0	**20**
0715 - 0815	0	0	0	0	5	2	0	0	0	0	9	0	**16**
0730 - 0830	0	0	0	0	6	4	0	0	0	0	6	0	**16**
0745 - 0845	0	0	0	0	6	4	0	0	0	0	5	0	**15**
0800 - 0900	0	0	0	1	6	5	1	0	0	0	6	0	**19**
PEAK HOUR	**0**	**0**	**0**	**1**	**6**	**5**	**1**	**0**	**0**	**0**	**6**	**0**	**19**

COMBINED

	NORTH			WEST			SOUTH			EAST			
	Walker St			*Parkes St*			*Walker St*			*Parker St*			
Time Period	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOT**
0700 - 0715	0	4	6	5	34	14	7	1	28	12	56	2	**169**
0715 - 0730	2	4	11	3	12	5	16	5	22	16	56	1	**153**
0730 - 0745	0	2	7	3	25	8	12	3	22	22	62	2	**168**
0745 - 0800	0	3	6	3	31	7	16	2	30	17	63	0	**178**
0800 - 0815	3	3	8	5	39	12	14	10	26	27	60	3	**210**
0815 - 0830	0	5	5	1	31	13	12	9	30	18	68	2	**194**
0830 - 0845	1	5	5	7	48	13	19	8	46	32	92	1	**277**
0845 - 0900	3	7	7	3	38	33	23	3	38	43	95	4	**297**
Period End	**9**	**33**	**55**	**30**	**258**	**105**	**119**	**41**	**242**	**187**	**552**	**15**	**1646**

COMBINED

	NORTH			WEST			SOUTH			EAST			
	Walker St			*Parkes St*			*Walker St*			*Parker St*			
Peak Period	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOTAL**
0700 - 0800	2	13	30	14	102	34	51	11	102	67	237	5	**668**
0715 - 0815	5	12	32	14	107	32	58	20	100	82	241	6	**709**
0730 - 0830	3	13	26	12	126	40	54	24	108	84	253	7	**750**
0745 - 0845	4	16	24	16	149	45	61	29	132	94	283	6	**859**
0800 - 0900	7	20	25	16	156	71	68	30	140	120	315	10	**978**
PEAK HOUR	**7**	**20**	**25**	**16**	**156**	**71**	**68**	**30**	**140**	**120**	**315**	**10**	**978**

R.O.A.R. DATA
Reliable, Original & Authentic Results
Ph.88196847, Fax 88196849, Mob.0418-239019

Client : Masson Wilson Twiney
Job No/Name : 1922 Helensburgh Traffic Counts (2)
Day/Date : Wednesday 24th October 2007

Lights

	NORTH		EAST		SOUTH		
	Old		*Parkes St*		*Old*		
Time Period	T	L	R	L	R	T	TOT
0700 - 0715	2	4	44	46	19	4	**119**
0715 - 0730	6	2	56	58	23	11	**156**
0730 - 0745	1	4	58	57	29	6	**155**
0745 - 0800	3	1	82	52	29	9	**176**
0800 - 0815	7	4	39	62	40	12	**164**
0815 - 0830	0	1	54	68	25	6	**154**
0830 - 0845	2	9	41	47	32	4	**135**
0845 - 0900	1	5	36	50	39	4	**135**
Period End	**22**	**30**	**410**	**440**	**236**	**56**	**1194**

Rigid

	NORTH		EAST		SOUTH		
	Old		*Parkes St*		*Old*		
Time Period	T	L	R	L	R	T	TOT
0700 - 0715	0	0	0	0	4	0	**4**
0715 - 0730	1	0	0	2	3	0	**6**
0730 - 0745	0	0	1	0	2	0	**3**
0745 - 0800	0	1	0	5	1	1	**8**
0800 - 0815	0	0	0	1	5	0	**6**
0815 - 0830	0	0	0	3	3	0	**6**
0830 - 0845	0	0	0	3	3	0	**6**
0845 - 0900	0	0	3	0	1	0	**4**
Period End	**1**	**1**	**4**	**14**	**22**	**1**	**43**

Articulated

	NORTH		EAST		SOUTH		
	Old		*Parkes St*		*Old*		
Time Period	T	L	R	L	R	T	TOT
0700 - 0715	0	0	0	1	8	0	**9**
0715 - 0730	0	0	0	3	1	0	**4**
0730 - 0745	0	0	0	5	1	0	**6**
0745 - 0800	0	0	0	2	1	1	**4**
0800 - 0815	0	0	0	0	3	0	**3**
0815 - 0830	0	0	0	1	5	0	**6**
0830 - 0845	0	0	0	1	1	0	**2**
0845 - 0900	0	0	0	6	4	0	**10**
Period End	**0**	**0**	**0**	**19**	**24**	**1**	**44**

Lights

	NORTH		EAST		SOUTH		
	Old		*Parkes St*		*Old*		
Peak Period	T	L	R	L	R	T	TOT
0700 - 0800	12	11	240	213	100	30	**606**
0715 - 0815	17	11	235	229	121	38	**651**
0730 - 0830	11	10	233	239	123	33	**649**
0745 - 0845	12	15	216	229	126	31	**629**
0800 - 0900	10	19	170	227	136	26	**588**
PEAK HOUR	**11**	**10**	**233**	**239**	**123**	**33**	**649**

Rigid

	NORTH		EAST		SOUTH		
	Old		*Parkes St*		*Old*		
Peak Period	T	L	R	L	R	T	TOT
0700 - 0800	1	1	1	7	10	1	**21**
0715 - 0815	1	1	1	8	11	1	**23**
0730 - 0830	0	1	1	9	11	1	**23**
0745 - 0845	0	1	0	12	12	1	**26**
0800 - 0900	0	0	3	7	12	0	**22**
PEAK HOUR	**0**	**1**	**1**	**9**	**11**	**1**	**23**

Articulated

	NORTH		EAST		SOUTH		
	Old		*Parkes St*		*Old*		
Peak Period	T	L	R	L	R	T	TOT
0700 - 0800	0	0	0	11	11	1	**23**
0715 - 0815	0	0	0	10	6	1	**17**
0730 - 0830	0	0	0	8	10	1	**19**
0745 - 0845	0	0	0	4	10	1	**15**
0800 - 0900	0	0	0	8	13	0	**21**
PEAK HOUR	**0**	**0**	**0**	**8**	**10**	**1**	**19**

R.O.A.R. DATA
Reliable, Original & Authentic Results
Ph.88196847, Fax 88196849, Mob.0418-239019

Client : Masson Wilson Twiney
Job No/Name : 1922 Helensburgh Traffic Counts (2)
Day/Date : Wednesday 24th October 2007

Combined	NORTH		EAST		SOUTH		
	Princess		*Parkes St*		*Princess*		
Time Period	T	L	R	L	R	T	TOT
0700 - 0715	2	4	44	47	31	4	**132**
0715 - 0730	7	2	56	63	27	11	**166**
0730 - 0745	1	4	59	62	32	6	**164**
0745 - 0800	3	2	82	59	31	11	**188**
0800 - 0815	7	4	39	63	48	12	**173**
0815 - 0830	0	1	54	72	33	6	**166**
0830 - 0845	2	9	41	51	36	4	**143**
0845 - 0900	1	5	39	56	44	4	**149**
Period End	**23**	**31**	**414**	**473**	**282**	**58**	**1281**

Combined	NORTH		EAST		SOUTH		
	Old		*Parkes St*		*Old*		
Peak Period	T	L	R	L	R	T	TOT
0700 - 0800	13	12	241	231	121	32	**650**
0715 - 0815	18	12	236	247	138	40	**691**
0730 - 0830	11	11	234	256	144	35	**691**
0745 - 0845	12	16	216	245	148	33	**670**
0800 - 0900	10	19	173	242	161	26	**631**

PEAK HOUR	**11**	**11**	**234**	**256**	**144**	**35**	**691**

R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Fax 88196849, Mob.0418-239019

Client :Masson wilson Twinry
Job No/Name : HELENSBURGH Traffic Counts
Day/Date : Wednesday 24th October 2007

Lights

	NORTH			WEST			SOUTH			EAST			
	Old Princess Hwy			*Freeway*			*Old Princess Hwy*			*Lawrence*			
Time Period	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOT**
0700 - 0715	0	36	14	11	12	10	0	7	3	53	5	2	**153**
0715 - 0730	1	46	19	8	12	7	0	20	0	47	11	9	**180**
0730 - 0745	0	38	24	12	8	5	0	20	3	57	13	2	**182**
0745 - 0800	1	27	17	15	6	3	0	18	4	45	11	3	**150**
0800 - 0815	2	42	21	18	6	1	2	31	4	55	12	7	**201**
0815 - 0830	1	56	16	11	10	3	0	12	1	48	4	6	**168**
0830 - 0845	3	34	13	14	8	4	0	16	9	39	2	5	**147**
0845 - 0900	2	25	20	10	19	2	1	23	8	42	5	4	**161**
Period End	**10**	**304**	**144**	**99**	**81**	**35**	**3**	**147**	**32**	**386**	**63**	**38**	**1342**

Lights

	NORTH			WEST			SOUTH			EAST			
	Old Princess Hwy			*Freeway*			*Old Princess Hwy*			*Lawrence*			
Peak Period	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOT**
0700 - 0800	2	147	74	46	38	25	0	65	10	202	40	16	**665**
0715 - 0815	4	153	81	53	32	16	2	89	11	204	47	21	**713**
0730 - 0830	4	163	78	56	30	12	2	81	12	205	40	18	**701**
0745 - 0845	7	159	67	58	30	11	2	77	18	187	29	21	**666**
0800 - 0900	8	157	70	53	43	10	3	82	22	184	23	22	**677**
PEAK HOUR	**4**	**153**	**81**	**53**	**32**	**16**	**2**	**89**	**11**	**204**	**47**	**21**	**713**

Rigid

	NORTH			WEST			SOUTH			EAST			
	Old Princess Hwy			*Freeway*			*Old Princess Hwy*			*Lawrence*			
Time Period	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOT**
0700 - 0715	0	0	1	3	0	0	0	0	0	0	0	1	**5**
0715 - 0730	0	2	1	1	0	0	0	1	1	0	0	1	**7**
0730 - 0745	0	0	0	0	1	0	0	1	0	0	0	0	**2**
0745 - 0800	0	3	1	0	1	0	0	2	0	1	0	0	**8**
0800 - 0815	1	0	0	4	1	0	0	2	1	0	0	0	**9**
0815 - 0830	0	4	1	0	0	1	0	3	0	0	0	0	**9**
0830 - 0845	0	1	2	2	0	0	0	1	0	1	0	0	**7**
0845 - 0900	0	0	0	1	0	0	0	0	0	0	0	0	**1**
Period End	**1**	**10**	**6**	**11**	**3**	**1**	**0**	**10**	**2**	**2**	**0**	**2**	**48**

Rigid

	NORTH			WEST			SOUTH			EAST			
	Old Princess Hwy			*Freeway*			*Old Princess Hwy*			*Lawrence*			
Peak Period	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOT**
0700 - 0800	0	5	3	4	2	0	0	4	1	1	0	2	**22**
0715 - 0815	1	5	2	5	3	0	0	6	2	1	0	1	**26**
0730 - 0830	1	7	2	4	3	1	0	8	1	1	0	0	**28**
0745 - 0845	1	8	4	6	2	1	0	8	1	2	0	0	**33**
0800 - 0900	1	5	3	7	1	1	0	6	1	1	0	0	**26**
PEAK HOUR	**1**	**5**	**2**	**5**	**3**	**0**	**0**	**6**	**2**	**1**	**0**	**1**	**26**

R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Fax 88196849, Mob.0418-239019

Client :
Job No/Name : HELENBURGH Traffic Counts
Day/Date : Wednesday 24th October 2007

Articulated

	NORTH			WEST			SOUTH			EAST			
	Old Princess Hwy			*Freeway*			*Old Princess Hwy*			*Lawrence*			
Time Period	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOT**
0700 - 0715	0	0	0	0	0	0	0	8	1	0	0	0	**9**
0715 - 0730	0	1	3	0	0	0	0	1	1	0	0	0	**6**
0730 - 0745	0	0	4	0	0	0	0	1	1	0	0	0	**6**
0745 - 0800	0	1	2	0	0	0	0	0	2	0	2	0	**7**
0800 - 0815	0	0	0	1	0	0	0	3	1	0	4	1	**10**
0815 - 0830	0	0	1	0	0	0	0	5	0	0	3	0	**9**
0830 - 0845	0	0	1	0	0	0	0	1	0	0	1	0	**3**
0845 - 0900	0	2	3	1	0	0	0	3	0	0	0	0	**9**
Period End	**0**	**4**	**14**	**2**	**0**	**0**	**0**	**22**	**6**	**0**	**10**	**1**	**59**

Articulated

	NORTH			WEST			SOUTH			EAST			
	Old Princess Hwy			*Freeway*			*Old Princess Hwy*			*Lawrence*			
Peak Period	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOT**
0700 - 0800	0	2	9	0	0	0	0	10	5	0	2	0	**28**
0715 - 0815	0	2	9	1	0	0	0	5	5	0	6	1	**29**
0730 - 0830	0	1	7	1	0	0	0	9	4	0	9	1	**32**
0745 - 0845	0	1	4	1	0	0	0	9	3	0	10	1	**29**
0800 - 0900	0	2	5	2	0	0	0	12	1	0	8	1	**31**
PEAK HOUR	**0**	**2**	**9**	**1**	**0**	**0**	**0**	**5**	**5**	**0**	**6**	**1**	**29**

COMBINED

	NORTH			WEST			SOUTH			EAST			
	Old Princess Hwy			*Freeway*			*Old Princess Hwy*			*Lawrence*			
Time Period	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOT**
0700 - 0715	0	36	15	14	12	10	0	15	4	53	5	3	**167**
0715 - 0730	1	49	23	9	12	7	0	22	2	47	11	10	**193**
0730 - 0745	0	38	28	12	9	5	0	22	4	57	13	2	**190**
0745 - 0800	1	31	20	15	7	3	0	20	6	46	13	3	**165**
0800 - 0815	3	42	21	23	7	1	2	36	6	55	16	8	**220**
0815 - 0830	1	60	18	11	10	4	0	20	1	48	7	6	**186**
0830 - 0845	3	35	16	16	8	4	0	18	9	40	3	5	**157**
0845 - 0900	2	27	23	12	19	2	1	26	8	42	5	4	**171**
Period End	**11**	**318**	**164**	**112**	**84**	**36**	**3**	**179**	**40**	**388**	**73**	**41**	**1449**

COMBINED

	NORTH			WEST			SOUTH			EAST			
	Old Princess Hwy			*Freeway*			*Old Princess Hwy*			*Lawrence*			
Peak Period	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOT**
0700 - 0800	2	154	86	50	40	25	0	79	16	203	42	18	**715**
0715 - 0815	5	160	92	59	35	16	2	100	18	205	53	23	**768**
0730 - 0830	5	171	87	61	33	13	2	98	17	206	49	19	**761**
0745 - 0845	8	168	75	65	32	12	2	94	22	189	39	22	**728**
0800 - 0900	9	164	78	62	44	11	3	100	24	185	31	23	**734**
PEAK HOUR	**5**	**160**	**92**	**59**	**35**	**16**	**2**	**100**	**18**	**205**	**53**	**23**	**768**

R.O.A.R. DATA
Reliable, Original & Authentic Results
Ph.88196847, Fax 88196849, Mob.0418-239019

Client : Masson Wilson Twiney
Job No/Name : 1922 Helensburgh Traffic Counts (2
Day/Date : Wednesday 24th October 2007

Lights

	WEST		NORTH		EAST		
	Lawrence		*Walker St*		*Lawrence*		
Time Per	T	L	R	L	R	T	TOT
0700 - 0715	8	1	0	6	17	50	**82**
0715 - 0730	9	0	1	6	21	61	**98**
0730 - 0745	10	0	0	4	11	70	**95**
0745 - 0800	8	0	1	12	16	49	**86**
0800 - 0815	9	0	1	5	29	76	**120**
0815 - 0830	9	0	0	10	24	50	**93**
0830 - 0845	15	0	0	19	27	48	**109**
0845 - 0900	21	0	0	10	26	37	**94**
Per End	**89**	**1**	**3**	**72**	**171**	**441**	**777**

Rigid

	WEST		NORTH		EAST		
	Lawrence		*Walker St*		*Lawrence*		
Time Per	T	L	R	L	R	T	TOT
0700 - 0715	0	0	0	1	2	1	**4**
0715 - 0730	1	0	0	0	1	0	**2**
0730 - 0745	1	0	0	0	1	1	**3**
0745 - 0800	2	0	0	0	0	0	**2**
0800 - 0815	3	0	0	0	1	0	**4**
0815 - 0830	0	0	0	2	6	0	**8**
0830 - 0845	0	0	0	1	1	0	**2**
0845 - 0900	0	0	0	3	1	0	**4**
Per End	**7**	**0**	**0**	**7**	**13**	**2**	**29**

Articulated

	WEST		NORTH		EAST		
	Lawrence		*Walker St*		*Lawrence*		
Time Per	T	L	R	L	R	T	TOT
0700 - 0715	1	0	0	0	1	0	**2**
0715 - 0730	1	0	0	0	0	0	**1**
0730 - 0745	1	0	0	0	0	2	**3**
0745 - 0800	2	0	0	0	0	1	**3**
0800 - 0815	1	0	0	0	0	5	**6**
0815 - 0830	0	0	0	0	2	3	**5**
0830 - 0845	0	0	0	1	1	0	**2**
0845 - 0900	0	0	0	0	3	0	**3**
Per End	**6**	**0**	**0**	**1**	**7**	**11**	**25**

Lights

	WEST		NORTH		EAST		
	Lawrence		*Walker St*		*Lawrence*		
Peak Per	T	L	R	L	R	T	TOT
0700 - 0800	35	1	2	28	65	230	**361**
0715 - 0815	36	0	3	27	77	256	**399**
0730 - 0830	36	0	2	31	80	245	**394**
0745 - 0845	41	0	2	46	96	223	**408**
0800 - 0900	54	0	1	44	106	211	**416**

Rigid

	WEST		NORTH		EAST		
	Lawrence		*Walker St*		*Lawrence*		
Peak Per	T	L	R	L	R	T	TOT
0700 - 0800	4	0	0	1	4	2	**11**
0715 - 0815	7	0	0	0	3	1	**11**
0730 - 0830	6	0	0	2	8	1	**17**
0745 - 0845	5	0	0	3	8	0	**16**
0800 - 0900	3	0	0	6	9	0	**18**

Articulated

	WEST		NORTH		EAST		
	Lawrence		*Walker St*		*Lawrence*		
Peak Per	T	L	R	L	R	T	TOT
0700 - 0800	5	0	0	0	1	3	**9**
0715 - 0815	5	0	0	0	0	8	**13**
0730 - 0830	4	0	0	0	2	11	**17**
0745 - 0845	3	0	0	1	3	9	**16**
0800 - 0900	1	0	0	1	6	8	**16**

PEAK HR	**54**	**0**	**1**	**44**	**106**	**211**	**416**

PEAK HR	**3**	**0**	**0**	**6**	**9**	**0**	**18**

PEAK HR	**1**	**0**	**0**	**1**	**6**	**8**	**16**

R.O.A.R. DATA
Reliable, Original & Authentic Results
Ph.88196847, Fax 88196849, Mob.0418-239019

Client : Masson Wilson Twiney
Job No/Name : 1922 Helensburgh Traffic Counts (2
Day/Date : Wednesday 24th October 2007

Combined	WEST		NORTH		EAST		
	Lawrence		*Walker St*		*Lawrence*		
Time Per	**T**	**L**	**R**	**L**	**R**	**T**	**TOT**
0700 - 0715	9	1	0	7	20	51	**88**
0715 - 0730	11	0	1	6	22	61	**101**
0730 - 0745	12	0	0	4	12	73	**101**
0745 - 0800	12	0	1	12	16	50	**91**
0800 - 0815	13	0	1	5	30	81	**130**
0815 - 0830	9	0	0	12	32	53	**106**
0830 - 0845	15	0	0	21	29	48	**113**
0845 - 0900	21	0	0	13	30	37	**101**
Per End	**102**	**1**	**3**	**80**	**191**	**454**	**831**

Combined	WEST		NORTH		EAST		
	Lawrence		*Walker St*		*Lawrence*		
Peak Per	**T**	**L**	**R**	**L**	**R**	**T**	**TOT**
0700 - 0800	44	1	2	29	70	235	**381**
0715 - 0815	48	0	3	27	80	265	**423**
0730 - 0830	46	0	2	33	90	257	**428**
0745 - 0845	49	0	2	50	107	232	**440**
0800 - 0900	58	0	1	51	121	219	**450**

PEAK HR	**58**	**0**	**1**	**51**	**121**	**219**	**450**

R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Fax 88196849 Mobile.0418239019

Client : Masson Wilson Twiney
Job No/Name : 1922 Corrimal Traffic Counts (2)
Day/Date : Wednesday 24th October 2007

Lights

	WEST		SOUTH		EAST		
	Raiway St		*Coke Works*		*Railway St*		
Time Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOT**
0700 - 0715	28	0	0	0	0	38	**66**
0715 - 0730	24	1	0	1	0	35	**61**
0730 - 0745	32	0	0	0	0	35	**67**
0745 - 0800	39	1	1	1	0	42	**84**
0800 - 0815	38	1	0	0	0	54	**93**
0815 - 0830	49	0	0	0	0	69	**118**
0830 - 0845	61	0	0	0	0	74	**135**
0845 - 0900	40	0	0	0	0	90	**130**
Per End	**311**	**3**	**1**	**2**	**0**	**437**	**754**

Rigid Trucks

	WEST		SOUTH		EAST		
	Raiway St		*Coke Works*		*Railway St*		
Time Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOT**
0700 - 0715	3	0	0	0	0	3	**6**
0715 - 0730	2	0	0	0	0	0	**2**
0730 - 0745	2	0	1	0	1	3	**7**
0745 - 0800	1	0	0	0	0	1	**2**
0800 - 0815	1	0	0	0	0	4	**5**
0815 - 0830	2	0	0	0	0	3	**5**
0830 - 0845	2	0	0	0	0	3	**5**
0845 - 0900	2	0	0	0	0	2	**4**
Per End	**15**	**0**	**1**	**0**	**1**	**19**	**36**

Articulated

	WEST		SOUTH		EAST		
	Raiway St		*Coke Works*		*Railway St*		
Time Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOT**
0700 - 0715	0	0	0	0	0	0	**0**
0715 - 0730	0	0	0	0	0	0	**0**
0730 - 0745	0	0	0	0	0	0	**0**
0745 - 0800	0	0	0	0	0	0	**0**
0800 - 0815	0	0	0	0	0	0	**0**
0815 - 0830	0	0	0	0	0	0	**0**
0830 - 0845	0	0	0	0	0	0	**0**
0845 - 0900	0	0	0	0	0	0	**0**
Per End	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Lights

	WEST		SOUTH		EAST		
	Raiway St		*Coke Works*		*Railway St*		
Peak Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOT**
0700 - 0800	123	2	1	2	0	150	**278**
0715 - 0815	133	3	1	2	0	166	**305**
0730 - 0830	158	2	1	1	0	200	**362**
0745 - 0845	187	2	1	1	0	239	**430**
0800 - 0900	188	1	0	0	0	287	**476**
PEAK HR	**188**	**1**	**0**	**0**	**0**	**287**	**476**

Rigid Trucks

	WEST		SOUTH		EAST		
	Raiway St		*Coke Works*		*Railway St*		
Peak Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOT**
0700 - 0800	8	0	1	0	1	7	**17**
0715 - 0815	6	0	1	0	1	8	**16**
0730 - 0830	6	0	1	0	1	11	**19**
0745 - 0845	6	0	0	0	0	11	**17**
0800 - 0900	7	0	0	0	0	12	**19**
PEAK HR	**7**	**0**	**0**	**0**	**0**	**12**	**19**

Articulated

	WEST		SOUTH		EAST		
	Raiway St		*Coke Works*		*Railway St*		
Peak Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOT**
0700 - 0800	0	0	0	0	0	0	**0**
0715 - 0815	0	0	0	0	0	0	**0**
0730 - 0830	0	0	0	0	0	0	**0**
0745 - 0845	0	0	0	0	0	0	**0**
0800 - 0900	0	0	0	0	0	0	**0**
PEAK HR	**0**	**0**	**0**	**0**	**0**	**0**	**0**

R.O.A.R. DATA
Reliable, Original & Authentic Results
Ph.88196847, Fax 88196849, Mobile.0418239019

Client : Masson Wilson Twiney
Job No/Name : 1922 Corrimal Traffic Counts (2)
Day/Date : Wednesday 24th October 2007

Combined	WEST		SOUTH		EAST		
	Raiway St		*Coke Works*		*Railway St*		
Time Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOT**
0700 - 0715	31	0	0	0	0	41	**72**
0715 - 0730	26	1	0	1	0	35	**63**
0730 - 0745	34	0	1	0	1	38	**74**
0745 - 0800	40	1	1	1	0	43	**86**
0800 - 0815	39	1	0	0	0	58	**98**
0815 - 0830	51	0	0	0	0	72	**123**
0830 - 0845	63	0	0	0	0	77	**140**
0845 - 0900	42	0	0	0	0	92	**134**
Per End	**326**	**3**	**2**	**2**	**1**	**456**	**790**

Combined	WEST		SOUTH		EAST		
	Raiway St		*Coke Works*		*Railway St*		
Peak Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOT**
0700 - 0800	131	2	2	2	1	157	**295**
0715 - 0815	139	3	2	2	1	174	**321**
0730 - 0830	164	2	2	1	1	211	**381**
0745 - 0845	193	2	1	1	0	250	**447**
0800 - 0900	195	1	0	0	0	299	**495**
PEAK HR	**195**	**1**	**0**	**0**	**0**	**299**	**495**

R.O.A.R. DATA
Reliable, Original & Authentic Results
Ph.88196847, Fax 88196849, Mob.0418-239019

Client : Masson Wilson Twiney
Job No/Name : 1922 Helensburgh Traffic Counts (2)
Day/Date : Wednesday 24th October 2007

Lights

	NORTH		EAST		SOUTH		
	Parkes St		*Colliery Rd*		*Parkes St*		
Time Period	T	L	R	L	R	T	TOT
1600 - 1615	44	0	0	4	2	50	**100**
1615 - 1630	33	0	0	6	3	66	**108**
1630 - 1645	62	0	2	5	0	57	**126**
1645 - 1700	53	0	2	21	0	68	**144**
1700 - 1715	41	0	0	13	1	64	**119**
1715 - 1730	39	0	0	5	2	77	**123**
1730 - 1745	49	0	1	2	0	76	**128**
1745 - 1800	74	1	0	3	0	90	**168**
Period End	**395**	**1**	**5**	**59**	**8**	**548**	**1016**

Rigid

	NORTH		EAST		SOUTH		
	Parkes St		*Colliery Rd*		*Parkes St*		
Time Period	T	L	R	L	R	T	TOT
1600 - 1615	1	0	0	0	0	3	**4**
1615 - 1630	1	0	0	0	0	0	**1**
1630 - 1645	1	0	0	1	0	2	**4**
1645 - 1700	0	0	0	0	1	1	**2**
1700 - 1715	1	0	0	1	1	4	**7**
1715 - 1730	1	0	0	0	0	2	**3**
1730 - 1745	0	0	0	0	0	0	**0**
1745 - 1800	1	0	0	1	0	1	**3**
Period End	**6**	**0**	**0**	**3**	**2**	**13**	**24**

Articulated

	NORTH		EAST		SOUTH		
	Parkes St		*Colliery Rd*		*Parkes St*		
Time Period	T	L	R	L	R	T	TOT
1600 - 1615	0	0	0	1	3	0	**4**
1615 - 1630	0	0	0	2	1	0	**3**
1630 - 1645	0	0	0	5	2	0	**7**
1645 - 1700	0	0	0	1	0	0	**1**
1700 - 1715	0	0	0	0	0	0	**0**
1715 - 1730	0	0	0	0	1	0	**1**
1730 - 1745	0	0	0	0	2	0	**2**
1745 - 1800	0	0	0	0	0	0	**0**
Period End	**0**	**0**	**0**	**9**	**9**	**0**	**18**

Lights

	NORTH		EAST		SOUTH		
	Parkes St		*Colliery Rd*		*Parkes St*		
Peak Period	T	L	R	L	R	T	TOT
1600 - 1700	192	0	4	36	5	241	**478**
1615 - 1715	189	0	4	45	4	255	**497**
1630 - 1730	195	0	4	44	3	266	**512**
1645 - 1745	182	0	3	41	3	285	**514**
1700 - 1800	203	1	1	23	3	307	**538**
PEAK HOUR	**203**	**1**	**1**	**23**	**3**	**307**	**538**

Rigid

	NORTH		EAST		SOUTH		
	Parkes St		*Colliery Rd*		*Parkes St*		
Peak Period	T	L	R	L	R	T	TOT
1600 - 1700	3	0	0	1	1	6	**11**
1615 - 1715	3	0	0	2	2	7	**14**
1630 - 1730	3	0	0	2	2	9	**16**
1645 - 1745	2	0	0	1	2	7	**12**
1700 - 1800	3	0	0	2	1	7	**13**
PEAK HOUR	**3**	**0**	**0**	**2**	**1**	**7**	**13**

Articulated

	NORTH		EAST		SOUTH		
	Parkes St		*Colliery Rd*		*Parkes St*		
Peak Period	T	L	R	L	R	T	TOT
1600 - 1700	0	0	0	9	6	0	**15**
1615 - 1715	0	0	0	8	3	0	**11**
1630 - 1730	0	0	0	6	3	0	**9**
1645 - 1745	0	0	0	1	3	0	**4**
1700 - 1800	0	0	0	0	3	0	**3**
PEAK HOUR	**0**	**0**	**0**	**0**	**3**	**0**	**3**

R.O.A.R. DATA
Reliable, Original & Authentic Results
Ph.88196847, Fax 88196849, Mob.0418-239019

Client : Masson Wilson Twiney
Job No/Name : 1922 Helensburgh Traffic Counts (2)
Day/Date : Wednesday 24th October 2007

Combined	NORTH		EAST		SOUTH		
	Parkes St		*Colliery Rd*		*Parkes St*		
Time Period	T	L	R	L	R	T	TOT
1600 - 1615	45	0	0	5	5	53	**108**
1615 - 1630	34	0	0	8	4	66	**112**
1630 - 1645	63	0	2	11	2	59	**137**
1645 - 1700	53	0	2	22	1	69	**147**
1700 - 1715	42	0	0	14	2	68	**126**
1715 - 1730	40	0	0	5	3	79	**127**
1730 - 1745	49	0	1	2	2	76	**130**
1745 - 1800	75	1	0	4	0	91	**171**
Period End	**401**	**1**	**5**	**71**	**19**	**561**	**1058**

Combined	NORTH		EAST		SOUTH		
	Parkes St		*Colliery Rd*		*Parkes St*		
Peak Period	T	L	R	L	R	T	TOT
1600 - 1700	195	0	4	46	12	247	**504**
1615 - 1715	192	0	4	55	9	262	**522**
1630 - 1730	198	0	4	52	8	275	**537**
1645 - 1745	184	0	3	43	8	292	**530**
1700 - 1800	206	1	1	25	7	314	**554**

PEAK HOUR	**206**	**1**	**1**	**25**	**7**	**314**	**554**

R.O.A.R. DATA
Reliable, Original & Authentic Results
Ph.88196847, Fax 88196849, Mob.0418-239019

Client : Masson Wilson Twiney
Job No/Name : 1922 Helensburgh Traffic Counts (2)
Day/Date : Wednesday 24th October 2007

Lights

	NORTH			WEST			SOUTH			EAST			
	Walker St			*Parkes St*			*Walker St*			*Parkes St*			
Time Period	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOT**
1600 - 1615	2	12	8	10	35	26	20	1	26	26	33	3	**202**
1615 - 1630	0	7	4	14	57	27	24	7	34	19	25	3	**221**
1630 - 1645	6	10	4	13	41	30	10	6	23	26	46	3	**218**
1645 - 1700	0	9	8	14	41	30	21	7	23	28	55	3	**239**
1700 - 1715	0	2	12	10	46	41	16	10	32	27	35	5	**236**
1715 - 1730	2	6	4	8	53	22	29	6	34	19	23	2	**208**
1730 - 1745	2	5	4	17	54	25	16	6	36	31	23	1	**220**
1745 - 1800	0	7	4	15	58	24	19	12	30	38	37	0	**244**
Period End	**12**	**58**	**48**	**101**	**385**	**225**	**155**	**55**	**238**	**214**	**277**	**20**	**1788**

Lights

	NORTH			WEST			SOUTH			EAST			
	Walker St			*Parkes St*			*Walker St*			*Parkes St*			
Peak Period	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOTAL**
1600 - 1700	8	38	24	51	174	113	75	21	106	99	159	12	**880**
1615 - 1715	6	28	28	51	185	128	71	30	112	100	161	14	**914**
1630 - 1730	8	27	28	45	181	123	76	29	112	100	159	13	**901**
1645 - 1745	4	22	28	49	194	118	82	29	125	105	136	11	**903**
1700 - 1800	4	20	24	50	211	112	80	34	132	115	118	8	**908**
PEAK HOUR	**6**	**28**	**28**	**51**	**185**	**128**	**71**	**30**	**112**	**100**	**161**	**14**	**914**

Rigid

	NORTH			WEST			SOUTH			EAST			
	Walker St			*Parkes St*			*Walker St*			*Parkes St*			
Time Period	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOT**
1600 - 1615	0	0	2	0	3	0	0	0	0	0	1	0	**6**
1615 - 1630	0	0	0	0	1	0	0	0	0	0	0	0	**1**
1630 - 1645	0	0	1	1	1	0	0	0	0	0	1	0	**4**
1645 - 1700	0	0	0	0	0	0	0	0	2	0	1	0	**3**
1700 - 1715	0	1	0	0	3	0	0	0	2	0	1	0	**7**
1715 - 1730	0	0	0	1	2	0	0	0	0	1	0	0	**4**
1730 - 1745	0	0	0	0	0	0	0	0	0	0	1	0	**1**
1745 - 1800	0	0	1	0	1	0	0	0	0	0	1	0	**3**
Period End	**0**	**1**	**4**	**2**	**11**	**0**	**0**	**0**	**4**	**1**	**6**	**0**	**29**

Rigid

	NORTH			WEST			SOUTH			EAST			
	Walker St			*Parkes St*			*Walker St*			*Parkes St*			
Peak Period	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOTAL**
1600 - 1700	0	0	3	1	5	0	0	0	2	0	3	0	**14**
1615 - 1715	0	1	1	1	5	0	0	0	4	0	3	0	**15**
1630 - 1730	0	1	1	2	6	0	0	0	4	1	3	0	**18**
1645 - 1745	0	1	0	1	5	0	0	0	4	1	3	0	**15**
1700 - 1800	0	1	1	1	6	0	0	0	2	1	3	0	**15**
PEAK HOUR	**0**	**1**	**1**	**1**	**5**	**0**	**0**	**0**	**4**	**0**	**3**	**0**	**15**

R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Fax 88196849, Mob.0418-239019

Client : Masson Wilson Twiney
Job No/Name : 1922 Helensburgh Traffic Counts (2)
Day/Date : Wednesday 24th October 2007

Articulated

	NORTH			WEST			SOUTH			EAST			
	Walker St			*Parkes St*			*Walker St*			*Parkes St*			
Time Period	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOT**
1600 - 1615	0	0	0	0	3	0	0	0	0	0	0	0	**3**
1615 - 1630	0	0	0	0	1	0	0	0	0	0	3	0	**4**
1630 - 1645	0	0	0	0	2	0	0	0	0	0	5	0	**7**
1645 - 1700	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1700 - 1715	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1715 - 1730	0	0	0	0	1	0	0	0	0	0	0	0	**1**
1730 - 1745	0	0	0	0	0	0	0	0	0	0	2	0	**2**
1745 - 1800	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Period End	**0**	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**10**	**0**	**17**

Articulated

	NORTH			WEST			SOUTH			EAST			
	Walker St			*Parkes St*			*Walker St*			*Parkes St*			
Peak Period	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOTAL**
1600 - 1700	0	0	0	0	6	0	0	0	0	0	8	0	**14**
1615 - 1715	0	0	0	0	3	0	0	0	0	0	8	0	**11**
1630 - 1730	0	0	0	0	3	0	0	0	0	0	5	0	**8**
1645 - 1745	0	0	0	0	1	0	0	0	0	0	2	0	**3**
1700 - 1800	0	0	0	0	1	0	0	0	0	0	2	0	**3**
PEAK HOUR	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**11**

COMBINED

	NORTH			WEST			SOUTH			EAST			
	Walker St			*Parkes St*			*Walker St*			*Parkes St*			
Time Period	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOT**
1600 - 1615	2	12	10	10	41	26	20	1	26	26	34	3	**211**
1615 - 1630	0	7	4	14	59	27	24	7	34	19	28	3	**226**
1630 - 1645	6	10	5	14	44	30	10	6	23	26	52	3	**229**
1645 - 1700	0	9	8	14	41	30	21	7	25	28	56	3	**242**
1700 - 1715	0	3	12	10	49	41	16	10	34	27	36	5	**243**
1715 - 1730	2	6	4	9	56	22	29	6	34	20	23	2	**213**
1730 - 1745	2	5	4	17	54	25	16	6	36	31	26	1	**223**
1745 - 1800	0	7	5	15	59	24	19	12	30	38	38	0	**247**
Period End	**12**	**59**	**52**	**103**	**403**	**225**	**155**	**55**	**242**	**215**	**293**	**20**	**1834**

COMBINED

	NORTH			WEST			SOUTH			EAST			
	Walker St			*Parkes St*			*Walker St*			*Parkes St*			
Peak Period	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOTAL**
1600 - 1700	8	38	27	52	185	113	75	21	108	99	170	12	**908**
1615 - 1715	6	29	29	52	193	128	71	30	116	100	172	14	**940**
1630 - 1730	8	28	29	47	190	123	76	29	116	101	167	13	**927**
1645 - 1745	4	23	28	50	200	118	82	29	129	106	141	11	**921**
1700 - 1800	4	21	25	51	218	112	80	34	134	116	123	8	**926**
PEAK HOUR	**6**	**29**	**29**	**52**	**193**	**128**	**71**	**30**	**116**	**100**	**172**	**14**	**940**

R.O.A.R. DATA
Reliable, Original & Authentic Results
Ph.88196847, Fax 88196849, Mob.0418-239019

Client : Masson Wilson Twiney
Job No/Name : 1922 Helensburgh Traffic Counts (2)
Day/Date : Wednesday 24th October 2007

Lights

	NORTH		EAST		SOUTH		
	Old		*Parkes St*		*Old*		
Time Period	T	L	R	L	R	T	TOT
1600 - 1615	6	24	9	38	71	6	**154**
1615 - 1630	7	30	10	32	80	7	**166**
1630 - 1645	5	26	10	42	68	5	**156**
1645 - 1700	7	20	7	42	80	3	**159**
1700 - 1715	5	22	12	49	92	6	**186**
1715 - 1730	4	21	13	37	103	4	**182**
1730 - 1745	7	16	10	33	105	5	**176**
1745 - 1800	6	27	12	27	95	6	**173**
Period End	**47**	**186**	**83**	**300**	**694**	**42**	**1352**

Rigid

	NORTH		EAST		SOUTH		
	Old		*Parkes St*		*Old*		
Time Period	T	L	R	L	R	T	TOT
1600 - 1615	0	0	0	3	4	1	**8**
1615 - 1630	0	2	0	1	1	0	**4**
1630 - 1645	0	0	1	2	5	0	**8**
1645 - 1700	0	0	1	1	3	0	**5**
1700 - 1715	0	1	1	2	4	0	**8**
1715 - 1730	0	1	0	0	1	0	**2**
1730 - 1745	0	0	0	0	0	0	**0**
1745 - 1800	0	0	0	1	1	0	**2**
Period End	**0**	**4**	**3**	**10**	**19**	**1**	**37**

Articulated

	NORTH		EAST		SOUTH		
	Old		*Parkes St*		*Old*		
Time Period	T	L	R	L	R	T	TOT
1600 - 1615	0	0	0	0	3	0	**3**
1615 - 1630	0	0	0	3	0	0	**3**
1630 - 1645	0	0	0	6	2	0	**8**
1645 - 1700	0	0	0	0	0	0	**0**
1700 - 1715	0	0	0	0	1	0	**1**
1715 - 1730	0	0	0	0	0	0	**0**
1730 - 1745	0	0	0	3	0	0	**3**
1745 - 1800	0	0	0	0	1	0	**1**
Period End	**0**	**0**	**0**	**12**	**7**	**0**	**19**

Lights

	NORTH		EAST		SOUTH		
	Old		*Parkes St*		*Old*		
Peak Period	T	L	R	L	R	T	TOT
1600 - 1700	25	100	36	154	299	21	**635**
1615 - 1715	24	98	39	165	320	21	**667**
1630 - 1730	21	89	42	170	343	18	**683**
1645 - 1745	23	79	42	161	380	18	**703**
1700 - 1800	22	86	47	146	395	21	**717**

Rigid

	NORTH		EAST		SOUTH		
	Old		*Parkes St*		*Old*		
Peak Period	T	L	R	L	R	T	TOT
1600 - 1700	0	2	2	7	13	1	**25**
1615 - 1715	0	3	3	6	13	0	**25**
1630 - 1730	0	2	3	5	13	0	**23**
1645 - 1745	0	2	2	3	8	0	**15**
1700 - 1800	0	2	1	3	6	0	**12**

Articulated

	NORTH		EAST		SOUTH		
	Old		*Parkes St*		*Old*		
Peak Period	T	L	R	L	R	T	TOT
1600 - 1700	0	0	0	9	5	0	**14**
1615 - 1715	0	0	0	9	3	0	**12**
1630 - 1730	0	0	0	6	3	0	**9**
1645 - 1745	0	0	0	3	1	0	**4**
1700 - 1800	0	0	0	3	2	0	**5**

PEAK HOUR	**22**	**86**	**47**	**146**	**395**	**21**	**717**

PEAK HOUR	**0**	**2**	**1**	**3**	**6**	**0**	**12**

PEAK HOUR	**0**	**0**	**0**	**3**	**2**	**0**	**5**

R.O.A.R. DATA
Reliable, Original & Authentic Results
Ph.88196847, Fax 88196849, Mob.0418-239019

Client : Masson Wilson Twiney
Job No/Name : 1922 Helensburgh Traffic Counts (2)
Day/Date : Wednesday 24th October 2007

Combined	NORTH		EAST		SOUTH		
	Princess		*Parkes St*		*Princess*		
Time Period	T	L	R	L	R	T	TOT
1600 - 1615	6	24	9	41	78	7	**165**
1615 - 1630	7	32	10	36	81	7	**173**
1630 - 1645	5	26	11	50	75	5	**172**
1645 - 1700	7	20	8	43	83	3	**164**
1700 - 1715	5	23	13	51	97	6	**195**
1715 - 1730	4	22	13	37	104	4	**184**
1730 - 1745	7	16	10	36	105	5	**179**
1745 - 1800	6	27	12	28	97	6	**176**
Period End	**47**	**190**	**86**	**322**	**720**	**43**	**1408**

Combined	NORTH		EAST		SOUTH		
	Old		*Parkes St*		*Old*		
Peak Period	T	L	R	L	R	T	TOT
1600 - 1700	25	102	38	170	317	22	**674**
1615 - 1715	24	101	42	180	336	21	**704**
1630 - 1730	21	91	45	181	359	18	**715**
1645 - 1745	23	81	44	167	389	18	**722**
1700 - 1800	22	88	48	152	403	21	**734**

PEAK HOUR	22	88	48	152	403	21	734

R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Fax 88196849, Mob.0418-239019

Client :Masson wilson Twinry

Job No/Name : HELENSBURGH Traffic Counts

Day/Date : Wednesday 24th October 2007

Lights

	NORTH			WEST			SOUTH			EAST			
	Old Princess Hwy			*Freeway*			*Old Princess Hwy*			*Lawrence*			
Time Period	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOT**
1600 - 1615	7	25	18	44	37	4	0	22	5	22	3	5	**192**
1615 - 1630	4	21	14	59	37	5	2	20	11	19	3	7	**202**
1630 - 1645	4	20	17	49	38	3	1	13	8	18	4	7	**182**
1645 - 1700	10	19	14	55	53	2	1	20	5	18	6	3	**206**
1700 - 1715	6	38	25	63	47	6	1	23	4	16	2	3	**234**
1715 - 1730	7	14	20	77	54	8	1	21	12	17	0	5	**236**
1730 - 1745	4	23	10	77	55	4	0	35	6	19	6	4	**243**
1745 - 1800	2	18	9	72	43	2	0	25	11	18	5	2	**207**
Period End	**44**	**178**	**127**	**496**	**364**	**34**	**6**	**179**	**62**	**147**	**29**	**36**	**1702**

Lights

	NORTH			WEST			SOUTH			EAST			
	Old Princess Hwy			*Freeway*			*Old Princess Hwy*			*Lawrence*			
Peak Period	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOTAL**
1600 - 1700	25	85	63	207	165	14	4	75	29	77	16	22	**782**
1615 - 1715	24	98	70	226	175	16	5	76	28	71	15	20	**824**
1630 - 1730	27	91	76	244	192	19	4	77	29	69	12	18	**858**
1645 - 1745	27	94	69	272	209	20	3	99	27	70	14	15	**919**
1700 - 1800	19	93	64	289	199	20	2	104	33	70	13	14	**920**
PEAK HOUR	**19**	**93**	**64**	**289**	**199**	**20**	**2**	**104**	**33**	**70**	**13**	**14**	**920**

Rigid

	NORTH			WEST			SOUTH			EAST			
	Old Princess Hwy			*Freeway*			*Old Princess Hwy*			*Lawrence*			
Time Period	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOT**
1600 - 1615	0	3	1	2	0	0	0	3	0	0	0	0	**9**
1615 - 1630	0	0	0	0	2	0	0	2	1	0	0	0	**5**
1630 - 1645	1	1	2	3	1	0	0	2	0	0	0	0	**10**
1645 - 1700	0	1	0	2	2	0	0	1	0	0	0	0	**6**
1700 - 1715	0	2	0	1	3	0	0	2	1	0	0	0	**9**
1715 - 1730	0	0	0	0	0	1	0	0	0	0	0	0	**1**
1730 - 1745	0	0	0	0	1	0	0	0	0	1	0	0	**2**
1745 - 1800	0	0	1	1	0	0	0	0	0	0	2	0	**4**
Period End	**1**	**7**	**4**	**9**	**9**	**1**	**0**	**10**	**2**	**1**	**2**	**0**	**46**

Rigid

	NORTH			WEST			SOUTH			EAST			
	Old Princess Hwy			*Freeway*			*Old Princess Hwy*			*Lawrence*			
Peak Period	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOTAL**
1600 - 1700	1	5	3	7	5	0	0	8	1	0	0	0	**30**
1615 - 1715	1	4	2	6	8	0	0	7	2	0	0	0	**30**
1630 - 1730	1	4	2	6	6	1	0	5	1	0	0	0	**26**
1645 - 1745	0	3	0	3	6	1	0	3	1	1	0	0	**18**
1700 - 1800	0	2	1	2	4	1	0	2	1	1	2	0	**16**
PEAK HOUR	**0**	**2**	**1**	**2**	**4**	**1**	**0**	**2**	**1**	**1**	**2**	**0**	**16**

R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Fax 88196849, Mob.0418-239019

Client :
Job No/Name : HELENBURGH Traffic Counts
Day/Date : Wednesday 24th October 2007

Articulated

	NORTH			WEST			SOUTH			EAST			
	Old Princess Hwy			*Freeway*			*Old Princess Hwy*			*Lawrence*			
Time Period	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOT**
1600 - 1615	0	0	0	0	0	0	0	4	0	0	1	0	**5**
1615 - 1630	0	0	3	0	0	0	0	0	0	0	0	0	**3**
1630 - 1645	0	0	5	0	0	0	0	2	1	0	0	0	**8**
1645 - 1700	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1700 - 1715	0	0	0	0	0	0	0	1	0	1	0	0	**2**
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0	0	**0**
1730 - 1745	0	0	2	0	0	0	0	0	0	0	0	0	**2**
1745 - 1800	0	0	1	0	0	0	0	1	0	0	0	0	**2**
Period End	**0**	**0**	**11**	**0**	**0**	**0**	**0**	**8**	**1**	**1**	**1**	**0**	**22**

Articulated

	NORTH			WEST			SOUTH			EAST			
	Old Princess Hwy			*Freeway*			*Old Princess Hwy*			*Lawrence*			
Peak Period	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOTAL**
1600 - 1700	0	0	8	0	0	0	0	6	1	0	1	0	**16**
1615 - 1715	0	0	8	0	0	0	0	3	1	1	0	0	**13**
1630 - 1730	0	0	5	0	0	0	0	3	1	1	0	0	**10**
1645 - 1745	0	0	2	0	0	0	0	1	0	1	0	0	**4**
1700 - 1800	0	0	3	0	0	0	0	2	0	1	0	0	**6**
PEAK HOUR	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**2**	**0**	**1**	**0**	**0**	**6**

COMBINED

	NORTH			WEST			SOUTH			EAST			
	Old Princess Hwy			*Freeway*			*Old Princess Hwy*			*Lawrence*			
Time Period	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOT**
1600 - 1615	7	28	19	46	37	4	0	29	5	22	4	5	**206**
1615 - 1630	4	21	17	59	39	5	2	22	12	19	3	7	**210**
1630 - 1645	5	21	24	52	39	3	1	17	9	18	4	7	**200**
1645 - 1700	10	20	14	57	55	2	1	21	5	18	6	3	**212**
1700 - 1715	6	40	25	64	50	6	1	26	5	17	2	3	**245**
1715 - 1730	7	14	20	77	54	9	1	21	12	17	0	5	**237**
1730 - 1745	4	23	12	77	56	4	0	35	6	20	6	4	**247**
1745 - 1800	2	18	11	73	43	2	0	26	11	18	7	2	**213**
Period End	**45**	**185**	**142**	**505**	**373**	**35**	**6**	**197**	**65**	**149**	**32**	**36**	**1770**

COMBINED

	NORTH			WEST			SOUTH			EAST			
	Old Princess Hwy			*Freeway*			*Old Princess Hwy*			*Lawrence*			
Peak Period	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOTAL**
1600 - 1700	26	90	74	214	170	14	4	89	31	77	17	22	**828**
1615 - 1715	25	102	80	232	183	16	5	86	31	72	15	20	**867**
1630 - 1730	28	95	83	250	198	20	4	85	31	70	12	18	**894**
1645 - 1745	27	97	71	275	215	21	3	103	28	72	14	15	**941**
1700 - 1800	19	95	68	291	203	21	2	108	34	72	15	14	**942**
PEAK HOUR	**19**	**95**	**68**	**291**	**203**	**21**	**2**	**108**	**34**	**72**	**15**	**14**	**942**

R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Fax 88196849, Mob.0418-239019

Client : Masson Wilson Twiney
Job No/Name : 1922 Helensburgh Traffic Counts (2
Day/Date : Wednesday 24th October 2007

Lights

	WEST		NORTH		EAST		
	Lawrence		*Walker St*		*Lawrence*		
Time Per	**T**	**L**	**R**	**L**	**R**	**T**	**TOT**
1600 - 1615	42	0	0	32	9	27	**110**
1615 - 1630	39	0	0	20	13	20	**92**
1630 - 1645	41	1	1	37	20	23	**123**
1645 - 1700	52	0	2	28	22	19	**123**
1700 - 1715	75	0	0	31	24	13	**143**
1715 - 1730	56	0	1	34	14	16	**121**
1730 - 1745	59	0	0	22	16	23	**120**
1745 - 1800	47	0	0	24	25	27	**123**
Per End	**411**	**1**	**4**	**228**	**143**	**168**	**955**

Rigid

	WEST		NORTH		EAST		
	Lawrence		*Walker St*		*Lawrence*		
Time Per	**T**	**L**	**R**	**L**	**R**	**T**	**TOT**
1600 - 1615	0	0	0	1	1	0	**2**
1615 - 1630	0	1	0	1	0	1	**3**
1630 - 1645	1	1	0	0	1	0	**3**
1645 - 1700	2	0	0	0	0	0	**2**
1700 - 1715	0	0	0	0	0	0	**0**
1715 - 1730	0	0	0	0	0	0	**0**
1730 - 1745	0	0	1	1	0	1	**3**
1745 - 1800	0	1	0	0	0	0	**1**
Per End	**3**	**3**	**1**	**3**	**2**	**2**	**14**

Articulated

	WEST		NORTH		EAST		
	Lawrence		*Walker St*		*Lawrence*		
Time Per	**T**	**L**	**R**	**L**	**R**	**T**	**TOT**
1600 - 1615	0	0	0	0	0	1	**1**
1615 - 1630	0	0	0	0	0	0	**0**
1630 - 1645	0	1	0	0	0	0	**1**
1645 - 1700	0	0	0	0	0	0	**0**
1700 - 1715	0	0	0	0	0	1	**1**
1715 - 1730	0	0	0	0	0	0	**0**
1730 - 1745	0	0	0	0	0	0	**0**
1745 - 1800	0	0	0	0	0	0	**0**
Per End	**0**	**1**	**0**	**0**	**0**	**2**	**3**

Lights

	WEST		NORTH		EAST		
	Lawrence		*Walker St*		*Lawrence*		
Peak Per	**T**	**L**	**R**	**L**	**R**	**T**	**TOT**
1600 - 1700	174	1	3	117	64	89	**448**
1615 - 1715	207	1	3	116	79	75	**481**
1630 - 1730	224	1	4	130	80	71	**510**
1645 - 1745	242	0	3	115	76	71	**507**
1700 - 1800	237	0	1	111	79	79	**507**

Rigid

	WEST		NORTH		EAST		
	Lawrence		*Walker St*		*Lawrence*		
Peak Per	**T**	**L**	**R**	**L**	**R**	**T**	**TOT**
1600 - 1700	3	2	0	2	2	1	**10**
1615 - 1715	3	2	0	1	1	1	**8**
1630 - 1730	3	1	0	0	1	0	**5**
1645 - 1745	2	0	1	1	0	1	**5**
1700 - 1800	0	1	1	1	0	1	**4**

Articulated

	WEST		NORTH		EAST		
	Lawrence		*Walker St*		*Lawrence*		
Peak Per	**T**	**L**	**R**	**L**	**R**	**T**	**TOT**
1600 - 1700	0	1	0	0	0	1	**2**
1615 - 1715	0	1	0	0	0	1	**2**
1630 - 1730	0	1	0	0	0	1	**2**
1645 - 1745	0	0	0	0	0	1	**1**
1700 - 1800	0	0	0	0	0	1	**1**

PEAK HR	**224**	**1**	**4**	**130**	**80**	**71**	**510**

PEAK HR	**3**	**1**	**0**	**0**	**1**	**0**	**5**

PEAK HR	**0**	**1**	**0**	**0**	**0**	**1**	**2**

R.O.A.R. DATA
Reliable, Original & Authentic Results
Ph.88196847, Fax 88196849, Mob.0418-239019

Client : Masson Wilson Twiney
Job No/Name : 1922 Helensburgh Traffic Counts (2
Day/Date : Wednesday 24th October 2007

Combined	WEST		NORTH		EAST		
	Lawrence		*Walker St*		*Lawrence*		
Time Per	**T**	**L**	**R**	**L**	**R**	**T**	**TOT**
1600 - 1615	42	0	0	33	10	28	**113**
1615 - 1630	39	1	0	21	13	21	**95**
1630 - 1645	42	3	1	37	21	23	**127**
1645 - 1700	54	0	2	28	22	19	**125**
1700 - 1715	75	0	0	31	24	14	**144**
1715 - 1730	56	0	1	34	14	16	**121**
1730 - 1745	59	0	1	23	16	24	**123**
1745 - 1800	47	1	0	24	25	27	**124**
Per End	**414**	**5**	**5**	**231**	**145**	**172**	**972**

Combined	WEST		NORTH		EAST		
	Lawrence		*Walker St*		*Lawrence*		
Peak Per	**T**	**L**	**R**	**L**	**R**	**T**	**TOT**
1600 - 1700	177	4	3	119	66	91	**460**
1615 - 1715	210	4	3	117	80	77	**491**
1630 - 1730	227	3	4	130	81	72	**517**
1645 - 1745	244	0	4	116	76	73	**513**
1700 - 1800	237	1	2	112	79	81	**512**

PEAK HR	**227**	**3**	**4**	**130**	**81**	**72**	**517**

R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Fax 88196849 Mobile.0418239019

Client : Masson Wilson Twiney
Job No/Name : 1922 Corrimal Traffic Counts (2
Day/Date : Wednesday 24th October 2007

Lights

	WEST		SOUTH		EAST		
	Raiway St		*Coke Works*		*Railway St*		
Time Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOT**
1600 - 1615	80	0	0	0	0	58	**138**
1615 - 1630	85	0	0	0	0	78	**163**
1630 - 1645	70	0	0	0	0	69	**139**
1645 - 1700	72	0	1	0	0	73	**146**
1700 - 1715	73	0	0	0	0	90	**163**
1715 - 1730	76	0	0	0	0	85	**161**
1730 - 1745	50	0	0	0	0	54	**104**
1745 - 1800	56	0	0	0	0	55	**111**
Per End	**562**	**0**	**1**	**0**	**0**	**562**	**1125**

Rigid Trucks

	WEST		SOUTH		EAST		
	Raiway St		*Coke Works*		*Railway St*		
Time Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOT**
1600 - 1615	0	0	0	0	0	0	**0**
1615 - 1630	1	0	0	0	0	0	**1**
1630 - 1645	3	0	0	0	0	1	**4**
1645 - 1700	2	0	0	0	0	1	**3**
1700 - 1715	0	0	0	0	0	0	**0**
1715 - 1730	4	0	0	0	0	0	**4**
1730 - 1745	3	0	0	0	0	0	**3**
1745 - 1800	0	0	0	0	0	1	**1**
Per End	**13**	**0**	**0**	**0**	**0**	**3**	**16**

Articulated

	WEST		SOUTH		EAST		
	Raiway St		*Coke Works*		*Railway St*		
Time Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOT**
1600 - 1615	0	0	0	0	0	0	**0**
1615 - 1630	0	0	0	0	0	0	**0**
1630 - 1645	0	0	0	0	0	0	**0**
1645 - 1700	0	0	0	0	0	0	**0**
1700 - 1715	0	0	0	0	0	0	**0**
1715 - 1730	0	0	0	0	0	0	**0**
1730 - 1745	0	0	0	0	0	0	**0**
1745 - 1800	0	0	0	0	0	0	**0**
Per End	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Lights

	WEST		SOUTH		EAST		
	Raiway St		*Coke Works*		*Railway St*		
Peak Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOT**
1600 - 1700	307	0	1	0	0	278	**586**
1615 - 1715	300	0	1	0	0	310	**611**
1630 - 1730	291	0	1	0	0	317	**609**
1645 - 1745	271	0	1	0	0	302	**574**
1700 - 1800	255	0	0	0	0	284	**539**
PEAK HR	**291**	**0**	**0**	**0**	**0**	**317**	**609**

Rigid Trucks

	WEST		SOUTH		EAST		
	Raiway St		*Coke Works*		*Railway St*		
Peak Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOT**
1600 - 1700	6	0	0	0	0	2	**8**
1615 - 1715	6	0	0	0	0	2	**8**
1630 - 1730	9	0	0	0	0	2	**11**
1645 - 1745	9	0	0	0	0	1	**10**
1700 - 1800	7	0	0	0	0	1	**8**
PEAK HR	**9**	**0**	**0**	**0**	**0**	**2**	**11**

Articulated

	WEST		SOUTH		EAST		
	Raiway St		*Coke Works*		*Railway St*		
Peak Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOT**
1600 - 1700	0	0	0	0	0	0	**0**
1615 - 1715	0	0	0	0	0	0	**0**
1630 - 1730	0	0	0	0	0	0	**0**
1645 - 1745	0	0	0	0	0	0	**0**
1700 - 1800	0	0	0	0	0	0	**0**
PEAK HR	**0**	**0**	**0**	**0**	**0**	**0**	**0**

R.O.A.R. DATA
Reliable, Original & Authentic Results
Ph.88196847, Fax 88196849, Mobile.0418239019

Client : Masson Wilson Twiney
Job No/Name : 1922 Corrimal Traffic Counts (2)
Day/Date : Wednesday 24th October 2007

Combined	WEST		SOUTH		EAST		
	Raiway St		*Coke Works*		*Railway St*		
Time Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOT**
1600 - 1615	80	0	0	0	0	58	**138**
1615 - 1630	86	0	0	0	0	78	**164**
1630 - 1645	73	0	0	0	0	70	**143**
1645 - 1700	74	0	1	0	0	74	**149**
1700 - 1715	73	0	0	0	0	90	**163**
1715 - 1730	80	0	0	0	0	85	**165**
1730 - 1745	53	0	0	0	0	54	**107**
1745 - 1800	56	0	0	0	0	56	**112**
Per End	**575**	**0**	**1**	**0**	**0**	**565**	**1141**

Combined	WEST		SOUTH		EAST		
	Raiway St		*Coke Works*		*Railway St*		
Peak Per	**T**	**R**	**L**	**R**	**L**	**T**	**TOT**
1600 - 1700	313	0	1	0	0	280	**594**
1615 - 1715	306	0	1	0	0	312	**619**
1630 - 1730	300	0	1	0	0	319	**620**
1645 - 1745	280	0	1	0	0	303	**584**
1700 - 1800	262	0	0	0	0	285	**547**
PEAK HR	**300**	**0**	**1**	**0**	**0**	**319**	**620**