Nelson Bay River
Proposed Magnetite/ Hematite Mine
Traffic Impact Assessment

Prepared for:	Shree Minerals Ltd
Prepared by:	Shivani Jordan & Brian Williams July 2011

transport infrastructure | community infrastructure | industrial infrastructure | climate change




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Authorised by: _____ Date: 07 July 2011
Brian Williams

Glossary of Terms

AADT	Annual Average Daily Traffic - The total number of vehicles travelling in both directions passing a point in a year divided by the number of days in a year.
Acceleration Lane	An auxiliary lane used to allow vehicles to increase speed without interfering with the main traffic stream. It is often used on the departure side of intersections.
Access	The driveway by which vehicles and/or pedestrians enter and/or leave property adjacent to a road.
ADT	Average Daily Traffic - The average 24-hour volume being the total number of vehicles travelling in both directions passing a point in a stated period divided by the stated number of days in that period.
Austroads	The association of Australian and New Zealand road transport and traffic authorities and includes the Australian Local Government Association.
Crash	An apparently unpremeditated event which results in death or injury to a person or property damage and is attributable to the movement of a road vehicle on a public road (including vehicles entering or leaving a public road).
Degree of Saturation	The degree of saturation is defined as the ratio of demand flow to capacity, also known as the volume/capacity ratio.
Delay	The additional travel time experienced by a vehicle or pedestrian with reference to a base travel time (e.g. the free flow travel time).
DIER	Department of Infrastructure, Energy and Resources - The Tasmanian Government Department which manages the State Road Network.
km/h	kilometres per hour.
Level of Service (LOS)	Level of service is a qualitative measure describing operational conditions within a traffic stream, based on service measures such as speed and travel time, freedom of manoeuvre traffic interruptions, comfort and convenience. Level of service ranges from A to F with A being the best rating.
m	metres
Movement	A stream of vehicles that enters from the same approach and departs from the same exit (i.e. with the same origin and destination).
Sight Distance	The distance, measured along the road over which visibility occurs between a driver and an object or between two drivers at specific heights above the carriageway in their lane of travel.

SISD	Safe Intersection Sight Distance - The sight distance provides sufficient distance for a driver of a vehicle on the major road to observe a vehicle on a minor road approach moving into a collision situation and to decelerate to a stop before reaching the collision point.
Speed	Distance travelled per unit time.
85th percentile speed	The speed at which 85% of car drivers will travel slower and 15% will travel faster.
Trip	A one-way vehicular movement from one point to another excluding the return journey. Therefore, a vehicle entering and leaving a land use is counted as two trips. (RTA Guide to Traffic Generating Developments).
TIA	Traffic Impact Assessment.
Turning Movement Count	The number of vehicles observed to make a particular turning movement (left or right turn, or through movement) at an intersection over a specified period.
vpd	vehicles per day - The number of vehicles travelling in both directions passing a point during a day from midnight to midnight.
vph	vehicles per hour - The number of vehicles travelling in both directions passing a point during an hour.

1. Introduction

1.1 Background

Shree Minerals Ltd is proposing to develop a magnetite/hematite mine near Nelson Bay River in the north-west of Tasmania. Shree Minerals Ltd proposes to extract magnetite and hematite ore by open cut mining.

The main ore body for current targeting is located close to Nelson Bay River and will be extracted by developing a pit to a depth of approximately 220 m (-140 m RL). This ore will be beneficiated in an on-site processing plant prior to road transport to either the Port of Burnie and/or Port Latta for export.

Shree Minerals Ltd has engaged **pitt&sherry** to undertake a traffic impact assessment of the development. This report documents the potential impacts of the development associated with access, parking and traffic operations of the surrounding road network.

TIA reports have been prepared by **pitt&sherry** for Blackwater Silica Flour Extractive Pit (Williams, 2007) and Cominex Silica Flour Extractive Activity (Williams, 2007) Hawkes Creek Proposed Silica Extractive Pit (Pakiarajah, 2010) which assess the impacts of mine developments that are similar to those of the proposed Nelson Bay River Mine. These reports will be referred to during the traffic assessment.

This TIA has been prepared in accordance with the Department of Infrastructure, Energy and Resources (DIER) publication *Traffic Impact Assessments (TIA) Guidelines* September 2007.

1.2 Objective

The objective of this Traffic Impact Assessment is to assess the proposed cartage routes and to determine the traffic impact of the cartage of product to the Port of Burnie and/or Port Latta.

1.3 Scope of This TIA

The section of the proposed transport route from the Roger River Road - Sumac Road - Leensons Road junction to the Bass Highway and all of the Bass Highway is part of the gazetted B-double/High Productivity Vehicle Route. This route was assessed by DIER prior to gazettal. It has been assumed, because of DIER's decision to gazette those roads as part of the B-double/High Productivity Vehicle Route, that the route has appropriate features for use as part of the transport route for this development.

2. Existing Conditions

2.1 Site Description

The development site is located on the north west of Tasmania, approximately 68 km south of Smithton by road. A locality map is shown in Figure 1. The land where the development is located is managed by Forestry Tasmania. The site is located within the Circular Head municipality and is subject to the Circular Head S.46 Planning Scheme No. 1 1995. The planning scheme has zoned the area where the mine is located as Forest Resources.

The land in which the mine will be located is on the Wuthering Heights Road approximately 13 km north of that road's junction with Rebecca Road[1].

[1] Rebecca Road is called Western Explorer by DIER.

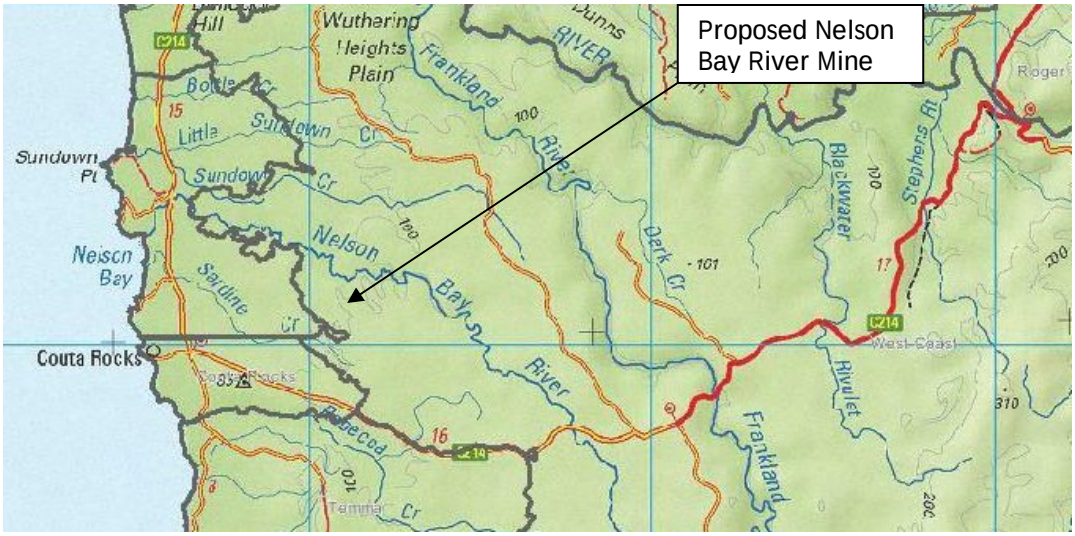

Figure 1 - Locality Map

2.2 Existing Road Network

To access the mine site from Smithton, two routes can be utilised. One route is through Irishtown Road and Grooms Cross Road. The other is via Scotchtown Road, and Trowutta Road. From the junction of Grooms Cross Road and Trowutta Road the route is common and via Trowutta Road, Roger River Road, Sumac Road, Blackwater Road, Rebecca Road, and Wuthering Heights Road. East of Smithton the cartage route is along the bass highway to either Port Latta of the Port of Burnie.

DIER manages the Bass Highway and Rebecca Road. The Bass Highway is sealed and has lanes ranging from 3.3 m to 3.5 m wide.

Circular Head Council manages Scotchtown Road, Irishtown Road, Grooms Cross Road, Trowutta Road and Roger River Road. These roads are sealed roads.

Forestry Tasmania manages Roger River Road (south of Buffs Road turnoff), Sumac Road, Blackwater Road, and Wuthering Heights Road. Roger River Road and Sumac Road are sealed. Blackwater Road is also sealed except for a 2.4 km section commencing 1.7 km south-west of Kununnah Bridge. The other Forestry Tasmania owned roads are unsealed.

Forestry roads are generally rural roads and thus the default rural speed limit of 100 km/h applies. Forestry roads have been given a classification number based on the expected cartage volumes on the road. The classification number for the majority of Wuthering Heights Road is 2. A typical cross section for a class 2 road was obtained from Forestry Tasmania and shown in Figure 2.

DIER proposes to take over the ownership of Blackwater Road from Forestry Tasmania and then seal the unsealed section of the road. The change in ownership will not change the truck route to and from the proposed mine. DIER is also proposing to seal Rebecca Road.

A site inspection was undertaken by Brian Williams and Shivani Jordan from **pitt&sherry** on the 23 September 2010 where the road width of Forestry Tasmania roads was measured. The width of Wuthering Heights Road approximately 0.7 km from Rebecca Road is 8 m with approximately 7 m of effective road width. The width from Rebecca Road 0.5 km from Wuthering Heights was measured to be 7 m with 0.5 m wide shoulders.

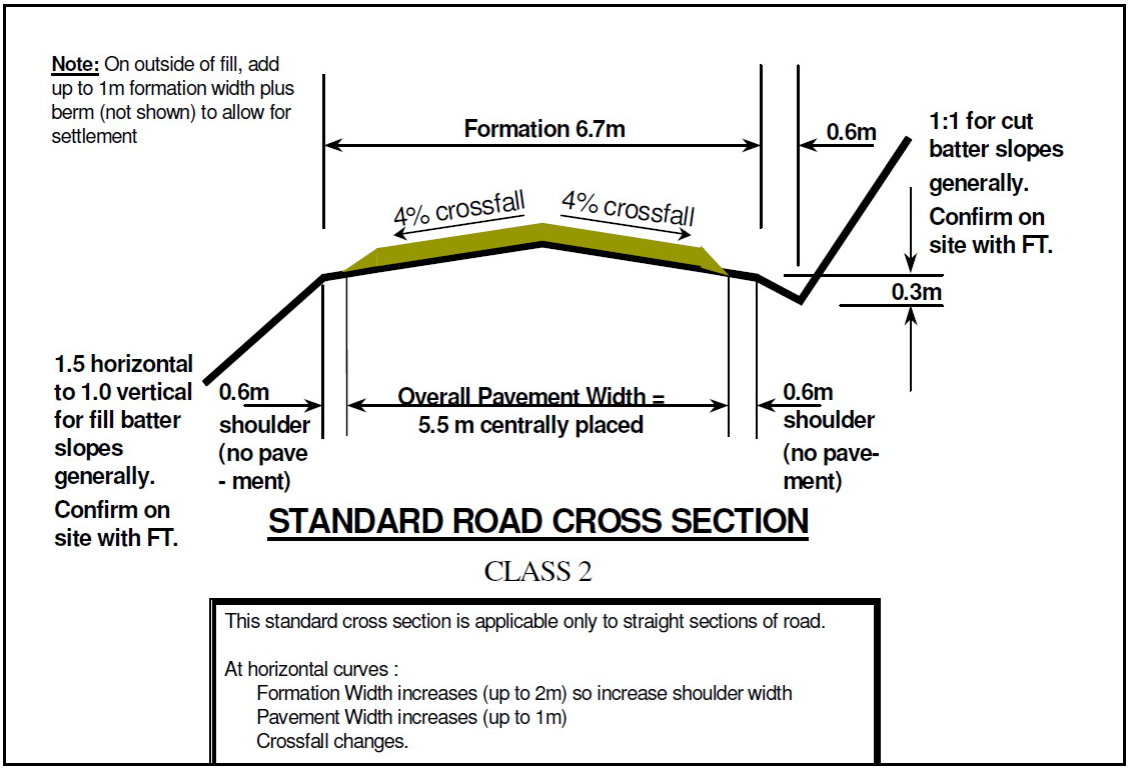

Figure 2 - Typical Cross section for a Class 2 Forestry Road

2.3 Crash History

DIER has advised that there are no reported crashes in the last five years on either Wuthering Heights Road or Rebecca Road. Thus it can be concluded that there are no significant safety problems in the vicinity of the proposed mine.

2.4 Sight Distance

No plans of the proposed access from the mine site to Wuthering Heights Road are available and thus it is not possible to asses the sight distance available at that junction.

At the junction of Wuthering Heights Road and Rebecca Road the sight distance is shown in Figures 3 and 4. The SISD is approximately 550 m to the west and 250 m to the east.

Figure 3 - Wuthering Heights - Rebecca Road junction sight distance too west

Figure 4 - Wuthering Heights - Rebecca Road junction sight distance too east

2.5 Existing Traffic Volumes

2.5.1 Wuthering Heights Road

Table B2 of the Forest Practise Code outlines typical maximum cartage volumes for each road class. Wuthering Heights Road is in the order of 1000 - 2500 tonnes per week. Assuming a truck payload of approximately 35 tonnes and that timber transport is undertaken five days a week the number of truck trips generated daily on Wuthering Heights Road is: $2*\left[2500/(35*5)\right] \approx 29vpd$

An additional 10 vpd is added to the above trips to allow for maintenance and support vehicles. Thus the average number of trips undertaken for log carting is approximately 39 vpd.

The maximum daily traffic flow for the logging component of the AADT has been assumed to be twice the average daily flow (Williams, 2007). The hourly traffic flows are provided below:

AADT: $2*39 \approx 78vpd$

Peak hourly flow south-bound: $78*0.3*0.9 \approx 21vph$

Peak hourly flow north-bound: $78*0.3*0.1 \approx 2vph$

2.5.2 Rebecca Road

DIER maintains data on the traffic flow on its road network. For Rebecca Road the most recent data is a 2003 estimate of the AADT was 36 vpd.

In January 2010 AusTraffic undertook a traffic count on Rebecca Road 800 m west of the Western Explorer-Blackwater Road junction. This count indicated that the ADT was 56 vpd. A copy of the report is in Appendix B.

2.5.3 Roger River Road

A traffic count was undertaken on Roger River Road south of Trowutta Road by the Circular Head Council in February 2010. This count indicated that the ADT was 84 vpd. A copy of this data is in Appendix B.

3. Proposed Development

The operation of the mine involves extracting magnetite/hematite from the elevated ground in the proposed mining areas. It is proposed that the extraction rate will be 350,000 tonnes in the first year of operation and then 150,000 tonnes per year.

The destination in which the material will be carted too has not been finalised. However, it is known that the destination is either Port Latta or the Port of Burnie. The destination will not influence the number of trips to and from the mine site but will influence the number of trucks required to undertake the trips.

4. Traffic Analysis

4.1 Trip Generation

Shree Minerals Ltd has provided the following information in relation to their trucking operation.

Production	350,000 tonnes/year, year 1; 150,000 tonnes/year ongoing
Tonnes per truck	33 tonnes/truck
Carting days per year	250 days
Hours of operation	12 hours per day

From the above information the daily truck flows can be calculated.

Average Daily flow:

Year 1 $2*\left(\frac{350{,}000}{33*250}\right)=85vpd$ Ongoing $2*\left(\frac{150{,}000}{33*250}\right)=36vpd$

The AADT for the cartage operations is:

Year 1 $2*\left(\frac{350{,}000}{33*365}\right)=58vpd$ Ongoing $2*\left(\frac{150{,}000}{33*365}\right)=25vpd$

The peak flow is calculated below:

Average flow - Year 1 $\frac{85}{12}\approx 7vph$

Average flow - ongoing $\frac{36}{12}\approx 3vph$

In addition to the cartage operation the following trips are expected to be generated from the development:

- Management and support — support staff 5 - equates to 10 trips daily
- Plant Operations- — mining operations 15 and processing 12 - equates to 54 trips daily and allow for 1 heavy vehicle equates to 2 trips a week

As there are no permanent residences on the mining lease, all staff will be required to travel to and from the operation daily.

Daily trips generated from the proposed mine including product is 122 vpd for year 1 and 89 vpd for ongoing operations.

4.2 Capacity Assessment

4.2.1 Route Capacity

The traffic flows on the cartage route are much lower than the capacity of the roads.

This development will increase the heavy vehicle and traffic volume by approximately 85 vpd in year 1 and 36 vpd for ongoing operations which is considered to be low. Thus it is expected that there would be no operational or safety issues on the truck route.

4.2.2 Junction Capacity

Table 2.4 of the Austroads Guide to Traffic Management Part 6: Intersections, Interchanges and crossings provides an initial guide to determine if a detailed traffic analysis is necessary. The Guide states that if the volumes are shown to be less than the volumes in the table below (Table 2.4 of the Guide) then a detailed analysis is unlikely to be necessary.

Major road type[1]	Major road flow (vph)[2]	Minor road flow (vph)[3]
Two-lane	400	250
	500	200
	650	100
Four-lane	1000	100
	1500	50
	2000	25

Notes:
1. Major road is through road (i.e. has priority).
2. Major road flow includes all major road traffic with priority over minor road traffic.
3. Minor road design volumes include through and turning volumes.

Figure 5 - Table 2.4 from Austroads Guide to Traffic Management Part 6

The traffic volumes calculated in Section 4.1 above for the mine access road (minor road), for ongoing operation, and Wuthering Heights Road (major road) are less than the volumes in the above table. Similarly the estimated traffic volumes at the Wuthering Heights Road Rebecca Road junctions are also below the assessment levels recommended by the Guide. Thus a detailed analysis of the intersection is not required as it is unlikely that there will be any operational problems.

4.3 Sight Distance

The Forestry Tasmania roads in the vicinity of the mine operate with the default rural speed limit of 100 km/h. However it is expected that the 85th percentile speed on the roads would be less than the speed limit due to the nature of the road and the unsealed road surface. The 85th percentile speed rather than the maximum speed limit should be used in the assessment of the sight distances.

Section 9.6.1 of the Circular Head Council Planning Scheme (CHC, 1995) indicates that sight distances from a development access are to comply with the sight distance requirements and design details of Attachment 1 of the scheme. A copy of this attachment is included in Appendix A.

Sight distances at junctions along the truck route should be in accordance with Austroads Guidelines Part 4A – Unsignalised and signalised intersections (2009). The Austroads requirements for SISD are included in Appendix A. The junction of Wuthering Heights Road and the mine access road should be designed so that SISD is provided.

The SISD at the Wuthering Heights – Rebecca Road junction is sufficient for a travel speed of 100 km/h (250 m)[2] for cars and 90 km/h (235 m) for trucks.

4.4 Road Safety

It is considered that the additional traffic generated from the mine development is unlikely to increase the number of crashes on the surrounding road network as the hourly volume generated from the development is very low.

[2] Table 3.2 of Austroads Guide to Road Design part 4A Unsignalised and Signalised Intersections

4.5 Parking Assessment

Section 10.4 of the Planning Scheme (Circular Head, 1995) does not specify any parking requirements for an extractive pit. It is expected that the traffic generated from the mine would closely reflect a General Industry. The Planning Scheme indicates that the minimum number of car parking spaces required for a general industry is 2 spaces per 3 persons.

Assuming the maximum number of vehicles (32 vehicles) is at the site at the same time, the minimum number of car spaces required for the development is 22 car spaces.

Dimensions for car spaces and associated turning areas must comply with the Australian Standard for off-street parking AS2890.1.

4.6 Junction Design Requirements

Austroads Guide to Road Design – Part 4A outlines warrants for an auxiliary treatment at an unsignalised intersection. Figure 4.9 of the guide shown below, is a graph illustrating thresholds of each intersection treatment based on turn volumes and major road traffic volumes.

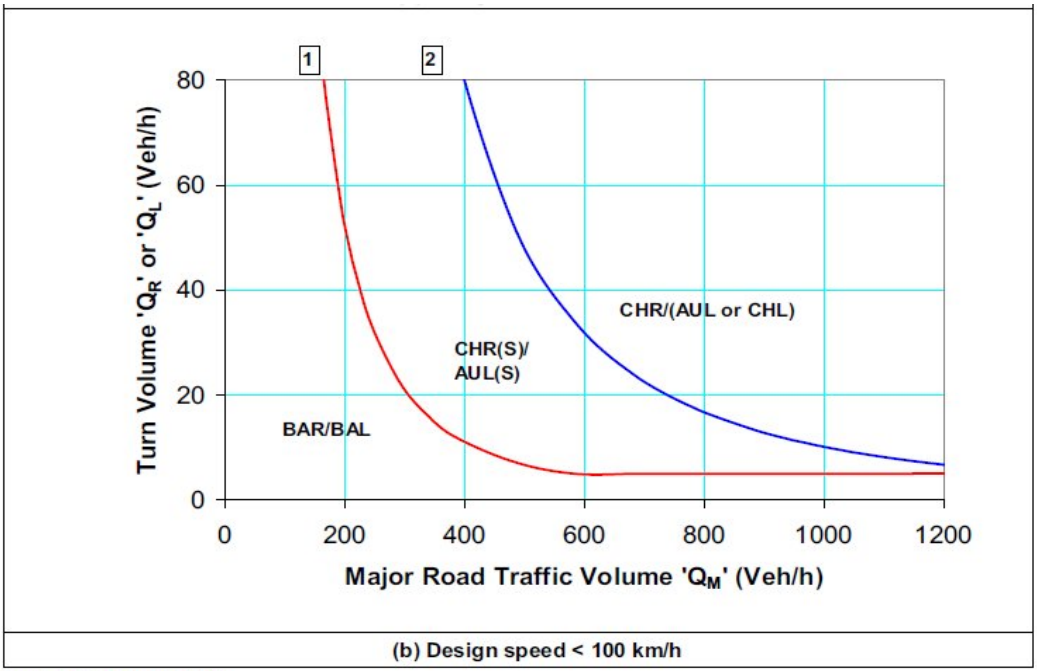

Figure 6 - Figure 4.9 from Austroads Guide to Road Design – Part 4A

The traffic volumes calculated in Section 4.1 above of the mine access are within the BAR region, which is a rural basic treatment. Austroads recommends that all junctions have a type BA treatment as a minimum requirement. Austroads guidelines (Austroads, 2009) outline the requirements for BA junctions.

Efficient egress and ingress to and from the site via the development access should be provided. Austroads Guidelines provides a guide for sufficient intersection design for specific design vehicles.

5. Conclusion and Recommendations

An assessment of the traffic impacts of the mine development has been undertaken. This assessment includes examination of parking, sight distances from junctions, traffic operations and road safety. The results of the assessment can be summarised as follows:

- The mine access junction onto Wuthering Heights Road should be designed to be in accordance with Council's Planning Scheme (CHC, 1995) and the Austroads Guide to Road Design Part 4A.
- There were no crashes in the vicinity of the mine in the last 5 years.
- The increased traffic generated by the development for impact to the surrounding road network is minimal for both the year 1 and ongoing carting operations. Therefore the traffic operations of the surrounding road network will continue to operate at an acceptable level of service.
- Parking spaces commensurate with the Planning Scheme requirements (22 spaces) should be provided for employees. Dimensions for car spaces and associated turning areas must comply with the Australian Standard for off-street parking AS2890.1.

6. References

1. Pakiarajah Shivani 2010, *Hawkes Creek Proposed Silica Extractive pit Traffic Impact Assessment*, **pitt&sherry**, Hobart.
2. Williams Brian 2007, *Blackwater Silica Flour Extractive Pit Traffic Impact Assessment*, **pitt&sherry**, Hobart.
3. Williams Brian 2007, *Cominex Silica Flour Extractive Activity Increase in Production Traffic Impact Assessment*, **pitt&sherry**, Hobart.
4. Circular Head Council (CHC), 1995, *Circular Head Planning Scheme No.1*, Circular Head Council Tasmania.
5. Austroads 2009, *Guide to Road Design – Part 4A: Unsignalised and Signalised Intersections*, Austroads Inc,Sydney.
6. AS2890.1:2004 Australian Standards, *Off-street Parking,* Standards Australia Sydney, NSW.
7. Forest Practices Board, 2000, *Forest Practices Code 2000,* Forest Practices Board, Hobart, Tasmania.

Appendix A

Sight Distance Requirements

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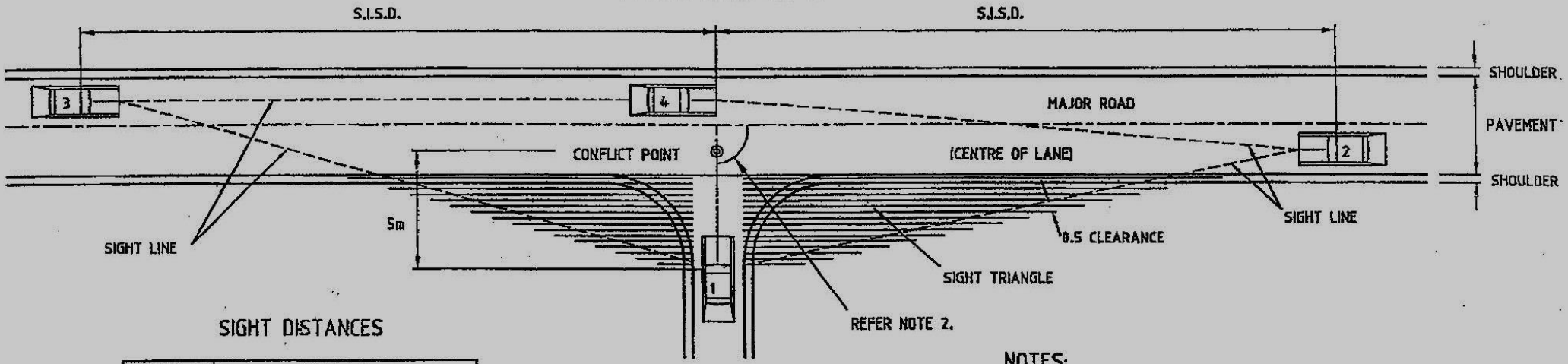
Circular Head Planning Scheme Requirements

SIGHT DISTANCES

(2 LANE ROAD ONLY)



PLAN

SIGHT DISTANCES

DESIGN SPEED (km/h)	S.I.S.D. (m)	
	RURAL R_T=2.0secs	URBAN R_T=1.5secs
40	70	60
50	90	80
60	115	105
70	140	130
80	175	165
90	210	
100	250	

DEFINITIONS:

DESIGN SPEED = THE POSTED OR GENERAL SPEED LIMIT IS TO BE USED UNLESS THE 85th PERCENTILE SPEED IS SIGNIFICANTLY HIGHER.

S.I.S.D. = SAFE INTERSECTION SIGHT DISTANCE.
DISTANCE REQUIRED BY A DRIVER ON A MAJOR ROAD TO OBSERVE A VEHICLE MOVING FROM A MINOR ROAD INTO A COLLISION SITUATION AND TO DECELERATE AND STOP BEFORE REACHING THE CONFLICT POINT.

R_T = DRIVERS REACTION TIME

NOTES:

1. FOR MAXIMUM ACCESS SLOPES REFER SD-1003 AND SD-1013.
2. THE ANGLE OF INTERSECTION SHOULD BE BETWEEN 70° AND 90° TO THE MAJOR ROAD.

SIGHT LINE REQUIREMENTS.

ALL SIGHT LINES (DRIVER TO OBJECT VEHICLE) ARE TO BE BETWEEN POINTS 1.2m ABOVE THE ROAD AND ACCESS SURFACE AT THE RESPECTIVE VEHICLE POSITIONS WITH A CLEARANCE TO ANY SIGHT OBSTRUCTION OF 0.5m TO THE SIDE AND BELOW, AND 2.0m ABOVE ALL SIGHT LINES.

THE SIGHT LINE REQUIREMENTS ARE TO BE MAINTAINED OVER THE FULL SIGHT TRIANGLES FOR VEHICLES AT ANY POINT BETWEEN POSITIONS 1, 2 AND 3 AND THE ACCESS JUNCTION.

- A DRIVER AT POSITION 1 MUST HAVE SIGHT LINES TO SEE CARS AT ANY POINT BETWEEN POSITION 2 AND POSITION 3.
- A DRIVER AT ANY POINT BETWEEN POSITION 3 AND THE ACCESS MUST HAVE SIGHT LINES TO SEE A CAR AT POSITION 4.
- A DRIVER AT POSITION 4 MUST HAVE SIGHT LINES TO SEE A CAR AT ANY POINT BETWEEN POSITION 2 AND THE ACCESS.

No.	Amendment	Appr.	Date
E			
D			
C			
B			
A			

CIRCULAR HEAD COUNCIL

Scale: NOT TO SCALE

Issue Date: NOV. 1997

Approved: 16/11/98

Drawing Title: MUNICIPAL STANDARD DRAWING

ACCESS SIGHT DISTANCE REQUIREMENTS

SINCLAIR KNIGHT MERZ

INSTITUTE OF MUNICIPAL ENGINEERING AUSTRALIA

Drawing No. SD-1030

Amendment

Austroads Recommendations

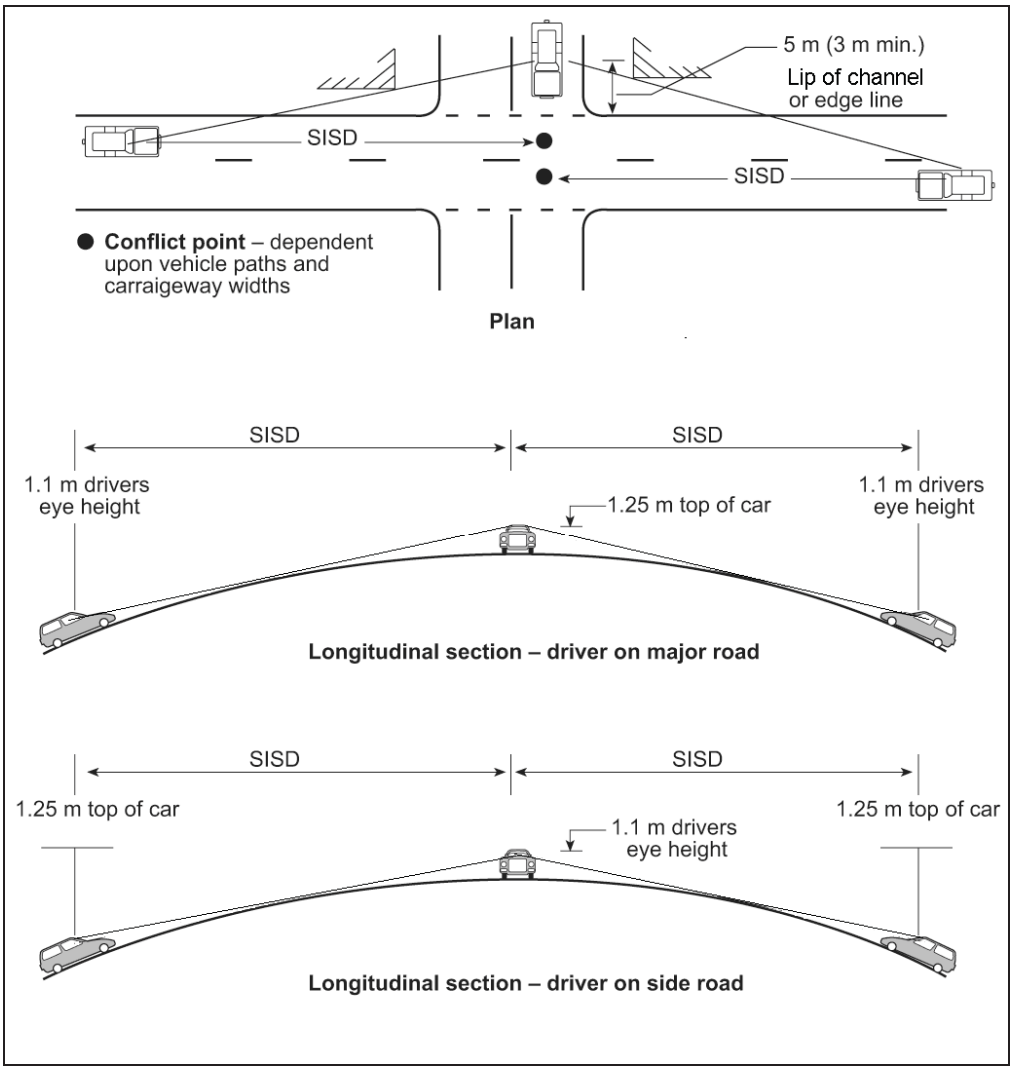


Figure 3.2: Safe intersection sight distance (SISD)

Equation 2 provides the formula for SISD.

$$SISD = \frac{D_T \times V}{3.6} + \frac{V^2}{254 \times (d + 0.01 \times a)} \qquad 2$$

where:

SISD = safe intersection sight distance (m)

DT = decision time (s) = observation time (3 s) + reaction time (s): refer to the Guide to Road Design – Part 3: Geometric Design (Austroads 2009a) for a guide to values

V = operating (85th percentile) speed (km/h)

d = coefficient of deceleration – refer to Table 3.2 and the Guide to Road Design – Part 3: Geometric Design (Austroads 2009a) for a guide to values

a = longitudinal grade in % (in direction of travel: positive for uphill grade, negative for downhill grade).

Table 3.2: Safe intersection sight distance (SISD) and corresponding minimum crest vertical curve size for sealed roads (S<L)

Design speed (km/h)		Based on safe intersection sight distance for cars1 h1 = 1.1; h2 = 1.25, d = 0.362; Observation time = 3 s					
		R_T = 1.5s[3]		R_T = 2.0s		R_T = 2.5s	
		SISD (m)	K	SISD (m)	K	SISD (m)	K
40		67	4.9	73	6	-	-
50		90	8.6	97	10	-	-
60		114	14	123	16	-	-
70		141	22	151	25	-	-
80		170	31	181	35	-	-
90		201	43	214	49	226	55
100		234	59	248	66	262	74
110		-	-	285	87	300	97
120		-	-	324	112	341	124
130		-	-	365	143	383	157
Minimum SISD capability provided by the crest vertical curve size [4]	**Car at night [5]**	d = 0.46, h_1 = 0.65 m, h_2 = 1.25 m, observation time = 2.6 s. d = 0.46, h_1 = 1.1 m, h_2 = 0.75 m, observation time = 2.5 s.					
	Truck	d = 0.24, h_1 = 2.4 m, h_2 = 1.25 m, observation time = 3.0 s.					
	Truck at night [5]	d = 0.29, h_1 = 1.05 m, h_2 = 1.25m, observation time = 1.8 s. d = 0.29, h_1 = 2.4m, h_2 = 0.75m, observation time = 3.0s.					

1. If the average grade over the braking length is not zero, calculate the safe intersection sight distance (SISD) values using the correction factors in Table 3.3 (or use Equation 2) by applying the average grade over the braking length.
2. A coefficient of deceleration of greater than 0.36 is not provided in this table. The provision of SISD requires more conservative values than for other sight distance models (e.g. the stopping sight distance model allows values up to 0.46 in constrained situations). This is because there is a much higher likelihood of colliding with hazards at intersections (that is, other vehicles). Comparatively, there is a relatively low risk of hitting a small object on the road (the stopping sight distance model).
3. A 1.5 s reaction time is only to be used in constrained situations where drivers will be alert. Typical situations are given in Table 4.2 of the *Guide to Road Design – Part 3: Geometric Design (Austroads 2009a)*. The general minimum reaction time is 2 s.
4. These check cases assume the same combination of design speed and reaction time as those listed in the table, except that the 120 km/h and 130 km/h speeds are not used for the truck cases.
5. Many of the sight distances corresponding to the minimum crest size are greater than the range of most headlights (that is, 120–150m). In addition, tighter horizontal curvature will cause the light beam to shine off the pavement (assuming 3 degrees lateral spread each way).

Notes:

To determine SISD for trucks around horizontal curves, use Equation 2 with an observation time of 2.5 s.

Combinations of design speed and reaction times not shown in this table are generally not used.

Appendix B

Traffic Data

ROAD NAME	START OF UNIFORM TRAFFIC SEGMENT			END OF UNIFORM TRAFFIC SEGMENT			2003 SEGMENT LENGTH (km)	2003 Estimated AADT [1] (vehicles per day)	Site No. (5-digit Road No. & 3-digit Station No.)	2003 % SEMI'S *(where available; approx. only; "AUSTROADS 1994" definition)*	2003 % TRUCKS *(approx. only; "AUSTROADS 1994" definition; including "semi's")*
	Link No.	Link Dist. (km)	Junction or Feature *(NB: These "Uniform Traffic Segments" are a coarse approximation - traffic volumes along a road usually vary at every point of access)*	Link No.	Link Dist. (km)	Junction or Feature					
Heemskirk DR	19	0.00	Couta Rocks Rd Couta Rocks	23	3.30	Blackwater Rd	15.70	36	A2810100		
Heemskirk DR	23	3.30	Blackwater Rd	62	2.86	Corinna DR	53.68	17	A2810110		
Heemskirk DR	62	2.86	Corinna DR	62	6.27	Pieman River North Bank	3.41	83	A2810150		

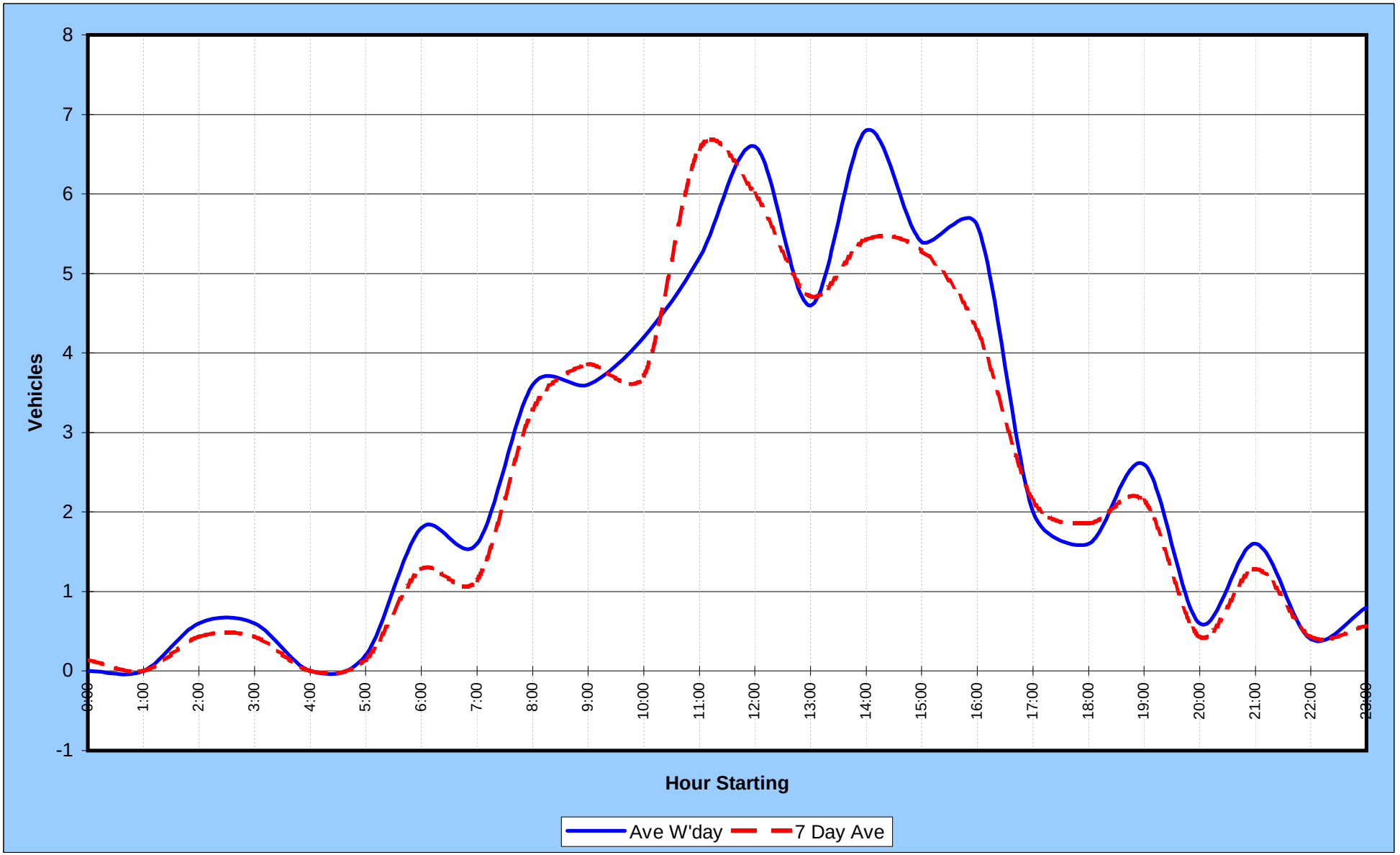
Traffic Count Summary Sheet

STREET NAME :	Rebecca Road (Week 3)	LOCATION:	800m west of Norfolk Road
SUBURB:	Tarkine	START DATE :	25/01/2010
SITE ID NUMBER :	6004	FINISH DATE :	31/01/2010
PREPARED BY :	Austraffic	SPEED ZONE :	Unsigned
REPORT DATE:	2/02/2010	ROAD CLASSIFICATION: AUSTROADS94	

		DIRECTION OF TRAVEL		
		TWO-WAY	Eastbound	Westbound
TRAFFIC VOLUME:	Weeks Days Only	60	37	23
[VEH/DAY]	7 Days Average	56	35	20
PEAK HOUR **AM**	11:00	5	4	1
VOLUME: **PM**	14:00	7	4	3
TOTAL SPEEDS:	85th Percentile	74.0	73.5	74.7
Km/Hr	Average	63.9	62.5	66.0
CLASSIFICATION % *:	CLASS 1 %	74.3%	83.1%	60.7%

NOTES : (OBSERVATIONS)

* CLASS 1 - Short Vehicles up to 5.5m


8
7
6
5
4
3
2
1
0
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6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Hour Starting
Ave W'day
7 Day Ave

MetroCount Traffic Executive
Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-897 -- English (ENA)

Datasets:

Site:	**[5] Weat Roger Rd. 3035Mtr. from Trowutta Rd.**
Direction:	8 - East bound A>B, West bound B>A. **Lane:** 0
Survey Duration:	12:07 Friday, 12 February 2010 => 11:40 Friday, 19 February 2010
File:	19 Feb.W.Roger River Rd.3035M From Trowutta Rd.ECO (Plus)
Identifier:	AQ53MPYC MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**12:07 Friday, 12 February 2010 => 11:40 Friday, 19 February 2010**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range:	10 - 160 km/h.
Direction:	North, East, South, West (bound)
Separation:	All - (Headway)
Name:	Default Profile
Scheme:	Vehicle classification (ARX)
Units:	Metric (meter, kilometer, m/s, km/h, kg, tonne)
In profile:	Vehicles = 586 / 590 (99.32%)

Weekly Vehicle Counts (Virtual Week)

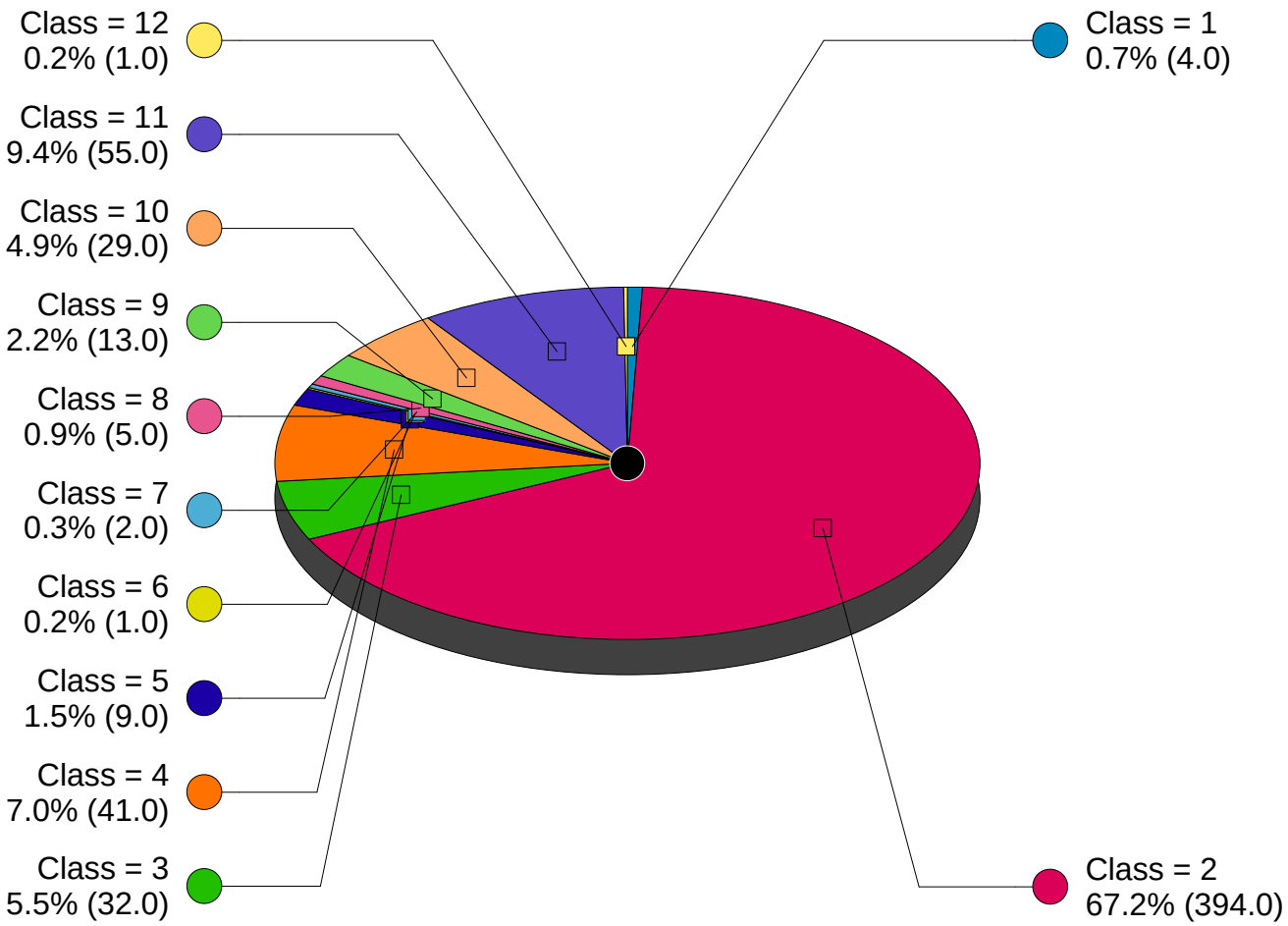
VirtWeeklyVehicle-897
Site: 5.0EW
Description: **Weat Roger Rd. 3035Mtr. from Trowutta Rd.**
Filter time: **12:07 Friday, 12 February 2010 => 11:40 Friday, 19 February 2010**
Scheme: Vehicle classification (ARX)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0100-0200	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0200-0300	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.1
0300-0400	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.2	0.3
0400-0500	1.0	0.0	0.0	0.0	0.0	3.0	1.0	0.2	0.7
0500-0600	1.0	5.0	6.0	2.0	0.0	1.0	1.0	2.8	2.3
0600-0700	0.0	2.0	2.0	1.0	2.0	0.0	1.0	1.4	1.1
0700-0800	6.0	3.0	6.0	6.0	0.0	3.0	0.0	4.2	3.4
0800-0900	9.0	2.0	3.0	5.0	5.0	10.0	4.0	4.8	5.4
0900-1000	4.0	**10.0<**	5.0	1.0	6.0	8.0	4.0	5.2	5.4
1000-1100	**10.0<**	2.0	2.0	5.0	**6.0<**	8.0	7.0	5.0	5.7
1100-1200	6.0	5.0	**7.0<**	**6.0<**	2.0	**10.0<**	**11.0<**	**5.2<**	**6.7<**
1200-1300	5.0	3.0	3.0	5.0	8.0	9.0	6.0	4.8	5.6
1300-1400	6.0	6.0	**7.0<**	**8.0<**	18.0	9.0	**11.0<**	9.0	9.3
1400-1500	**12.0<**	9.0	2.0	3.0	**27.0<**	11.0	5.0	**10.6<**	**9.9<**
1500-1600	7.0	**12.0<**	4.0	5.0	23.0	13.0	2.0	10.2	9.4
1600-1700	4.0	4.0	3.0	3.0	17.0	**13.0<**	0.0	6.2	6.3
1700-1800	0.0	2.0	0.0	4.0	7.0	9.0	5.0	2.6	3.9
1800-1900	1.0	4.0	0.0	2.0	11.0	4.0	3.0	3.6	3.6
1900-2000	1.0	1.0	0.0	1.0	3.0	6.0	0.0	1.2	1.7
2000-2100	1.0	0.0	2.0	0.0	2.0	1.0	1.0	1.0	1.0
2100-2200	0.0	0.0	2.0	0.0	1.0	1.0	0.0	0.6	0.6
2200-2300	0.0	0.0	1.0	0.0	2.0	1.0	0.0	0.6	0.6
2300-2400	0.0	1.0	0.0	0.0	4.0	0.0	0.0	1.0	0.7
Totals									
0700-1900	70.0	62.0	42.0	53.0	130.0	107.0	58.0	71.4	74.6
0600-2200	72.0	65.0	48.0	55.0	138.0	115.0	60.0	75.6	79.0
0600-0000	72.0	66.0	49.0	55.0	144.0	116.0	60.0	77.2	80.3
0000-0000	74.0	72.0	55.0	57.0	144.0	122.0	62.0	80.4	83.7
AM Peak	1000	0900	1100	1100	1000	1100	1100		
	10.0	10.0	7.0	6.0	6.0	10.0	11.0		
PM Peak	1400	1500	1300	1300	1400	1600	1300		
	12.0	12.0	7.0	8.0	27.0	13.0	11.0		

*** - No data.**

Class Bin Chart

ClassBin-896 (Metric) **Site:**5.0EW
Description: Weat Roger Rd. 3035Mtr. from Trowutta Rd.
Filter time: 12:07 Friday, 12 February 2010 => 11:40 Friday, 19 February 2010
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0)
Scheme: Vehicle classification (ARX)
Total=586



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sustainable*thinking*®

Brisbane
Suite 8, Level 1
83 Leichhardt Street
Spring Hill QLD 4000
PO Box 1080
Spring Hill QLD 4004
T: (07) 3832 8874

Canberra
1st Floor
20 Franklin Street
PO Box 4442
Manuka ACT 2603
T: (02) 6295 2100
F: (02) 6260 6555

Devonport
1st Floor
35 Oldaker Street
PO Box 836
Devonport Tasmania 7310
T: (03) 6424 1641
F: (03) 6424 9215

Hobart
GF, 199 Macquarie Street
GPO Box 94
Hobart Tasmania 7001
T: (03) 6210 1400
F: (03) 6223 1299

Hobart Building Surveying
199 Macquarie Street
T: (03) 6210 1476
F: (03) 6223 7017

Launceston
4th Floor
113 – 115 Cimitiere Street
PO Box 1409
Launceston Tasmania 7250
T: (03) 6323 1900
F: (03) 6334 4651

Melbourne
Level 1, HWT Tower
40 City Road, Southbank VIC 3006
PO Box 259
South Melbourne Victoria 3205
T: (03) 9682 5290
F: (03) 9682 5292

E: info@pittsh.com.au
www.pittsh.com.au

incorporated as
Pitt and Sherry (Operations) Pty Ltd
ABN 67 140 184 309