

## Appendix E

## Traffic Impact Assessment Report

Woy Woy Waste Management Facility  
Composting and Alternative Waste Technology Development  
Traffic Implications Assessment

24 October 2006

**Client**

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Gosford City Council

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**Project Manager / Author**

Glen Varley  
Principal – Traffic and Transport

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**Internet**

[www.ap.urscorp.com](http://www.ap.urscorp.com)

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# 1 Introduction

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## Purpose of Report

This report investigates the traffic implications associated with the development of an enclosed composting facility to process 30,000tpa of green waste and 15,000tpa of biosolids, and an Alternative Waste Technology (AWT) for the processing of 70,000tpa of municipal solid waste (MSW) on the current landfill site at the Woy Woy Waste Management Facility, located near Gosford, NSW.

URS Australia Pty Ltd has been commissioned by Gosford City Council to prepare this traffic report on their behalf.

## Site Context

The Woy Waste Management Facility is owned and operated by Gosford City Council, located on Nagari Road, Woy Woy South, approximately 45km north of Sydney and 4km south of Gosford City.

Consisting of Lot 110 of DP 755251, Lot 1 of DP 126813 and Lot 1 of DP 654885 the site is contained wholly within the Gosford Local Government Area. Zoned 5(a) Special Uses under the Gosford Planning Scheme Ordinance the site is currently licensed by the Environmental Planning Authority (EPA) as a Solid Waste Class 1 Landfill (License number 6053).

The current facility is licensed to receive up to 100,000 tonnes of waste per year. The current operations at the site include...

- Gatehouse and weighbridge,
- Landfill waste within clay lined cells,
- Resource recovery and recycling, and
- Green waste collection and sorting.

The operations at the site attract some 1,190 vehicle trips per week with a weekday average of 180 vehicles and 150 vehicles per day on weekends, as shown in *Table 3*.



Source: UBD Australian City Streets - Version 3, 2005

## WOY WOY WASTE MANAGEMENT FACILITY

Figure 1: Study Area

## 2 Existing Conditions

### Road Network and Environs

The classification of roads on the existing road network can be used as an indication of functionality and role with respect to volume of traffic they should appropriately carry.

The Road and Traffic Authority, N.S.W. (RTA) has developed a set of road hierarchy classifications detailed in *Table 1* indicating typical nominal volumes expressed in Average Annual Daily Traffic (AADT) serviced by varying classes of roads.

| Type of Road      | Traffic Volume | Peak Hour Volume<br>in Vehicles per Hour<br>(vph) |
|-------------------|----------------|---------------------------------------------------|
| Arterial Road     | >15,000        | 1,500 - 5,600                                     |
| Sub Arterial Road | 5,000 - 20,000 | 500 - 2,000                                       |
| Collector Road    | 2,000 - 10,000 | 200 - 1,000                                       |
| Local road        | <2,000         | 0 - 200                                           |

Table 1: RTA Functional Classification of Roads

AADT information has been obtained from Council and the RTA fixed count locations within the Hunter Region for the year 2002. The figures presented in this report have been derived in accordance with the annual growth rates presented in the RTA's Traffic Volume Data for Hunter Region, 2001.

### Brisbane Water Drive

Brisbane Water Drive paralleling the Sydney to Newcastle railway line to the west and the shoreline of Brisbane Water to the east is classified as an arterial or main road with an AADT of some 17,850 just prior to Woy Woy. The road is the primary access corridor



between the peninsular suburbs of Umina, Ettalong and Woy Woy and the F3 Motorway.

Running between the Pacific Highway, at West Gosford, and Woy Woy township Brisbane Waters Drive also serves as the principle road freight link to the peninsular.

## Woy Woy Road

Woy Woy Road is a 12 kilometre long sub arterial, or regional road, extending from the intersection with Pacific Highway, at Kariong, to Rawson Road, Woy Woy.

The regional road serves as an alternate connection between the peninsular suburbs of Umina Ettalong and Woy Woy etc... with the F3 Motorway.

Typically a dual lane sealed carriageway passing through the Brisbane Water National Park, Woy Woy Road has a regulated speed environment of 80km/h through the National Park, reducing to 60km/h through the urban residential catchments of Kariong and Woy Woy.



Figure 2: Woy Woy Road looking East



Figure 3: Woy Woy Road looking West

The roadway is generally undulating and exhibits frequent sharp horizontal alignment and adverse crossfall as dictated by the surrounding topography. The vertical gradient from Phegans Bay to Correa Bay is some 8 to 10%.

In addition to serving as an alternative access to the Pacific Highway, the section of Woy Woy Road, through Woy Woy south, provides access to the recreational boat ramp at Correa Bay reserve, the Pier Street public wharf and Rawson Road public wharf.

## Empire Bay Drive

Empire Bay Drive runs south through Bensville, Empire Bay and Daley's Point from Avoca Drive, Kincumber. Empire Bay Drive continues west to The Rip Bridge and on to Woy Woy.

The sub arterial or regional road provides alternate access to Gosford City Centre and the beach side towns of Avoca, Terrigal and The Entrance. The AADT on Empire Bay Drive is some 20,600 at Avoca Drive and 16,800 at the Rip Bridge.

## Railway Street

Railway Street is both a sub arterial corridor, between Brisbane Water Drive and Ocean Beach Road while it is a local road, under the control of Gosford City Council, between Ocean Beach Road and Nagari Road.

Railway Street runs east west, parallel to the Sydney Newcastle railway line and ends adjacent to the rail overbridge at Nagari Road.



Figure 4: Railway Street looking East

Railway Street is a buffer between residential properties to the south of the road reserve and the railway line to the north. Providing access to the current Woy Woy Waste Management facility via Nagari Road, the carriageway carries considerable traffic in the morning and evening peaks, serving as a 'rat run' between Woy Woy Road and Rawson Road thus eliminating the need of Woy Woy Road traffic to negotiate the level rail crossing on Rawson Road, north of Railway Street.

## Nagari Road

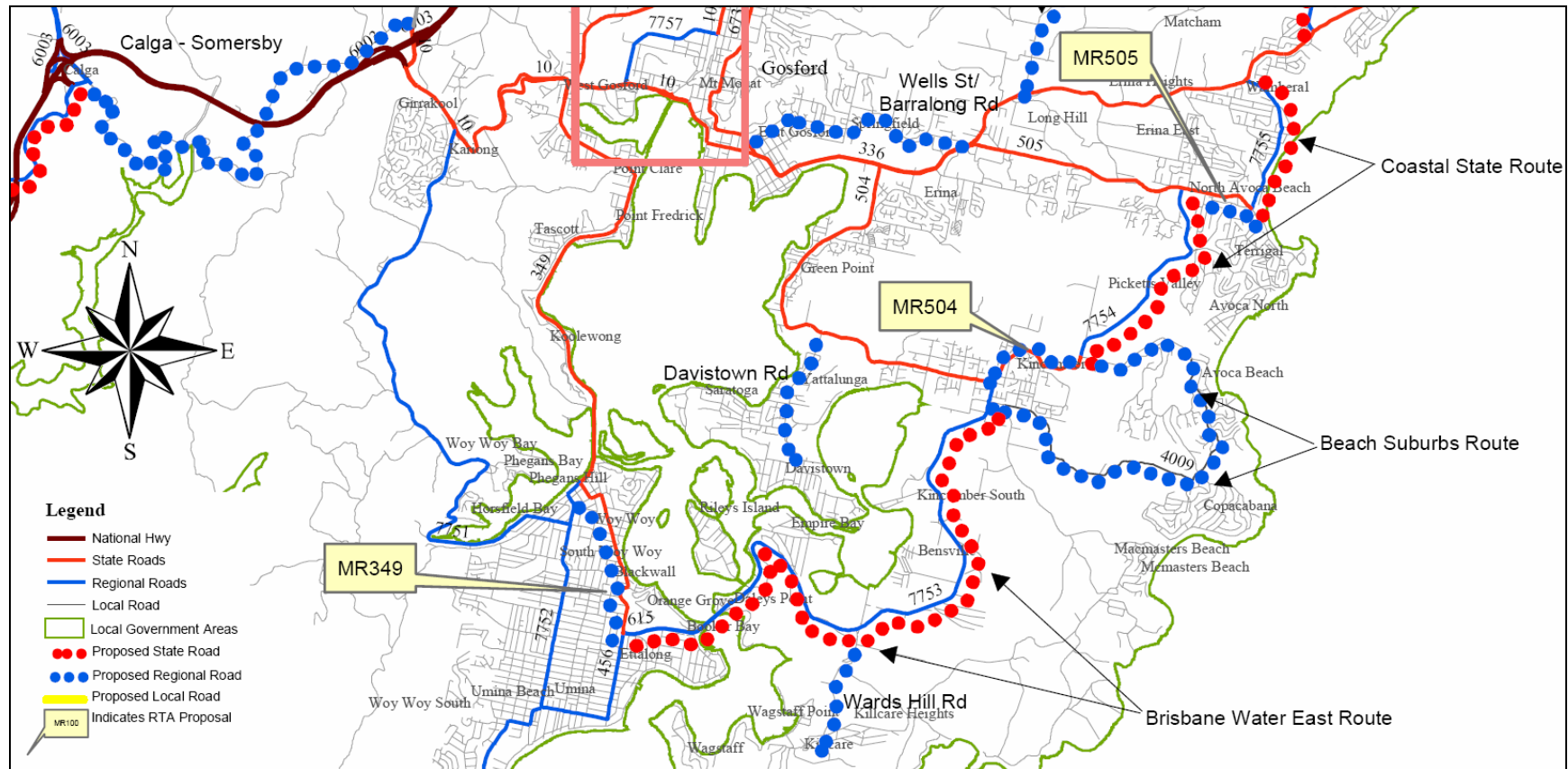
Nagari Road is a short local road connecting Railway Street with the current Woy Woy Waste Management facility.

The sealed road accommodates one travel lane in each direction catering also for the movement of heavy vehicles.



Figure 5: Nagari Road looking West





Source: RTA State Road Classification Review

## GOSFORD ROAD NETWORK HIERARCHY

Figure 6: Road Classifications

## Traffic Management Controls

Significant traffic management controls within the study area impact the route choice of motorists in the vicinity of the Woy Woy Waste Management facility. The key controls are...

- Priority controlled single lane underpass beneath the Sydney Newcastle rail line between Woy Woy Road and Railway Street, near Correa Bay Reserve,
- Railway level crossing on Rawson Road, north of Railway Street, and
- 8 tonne gross vehicular load limit on Woy Woy Road between Langford Drive, Kariong, and immediately north of the F C Nichols Pty Ltd Abattoir. An exemption was conceded to Roy Lamb Sand Soil & Metal given Woy Woy Road provides the sole corridor to access the family property.

## Traffic Volumes

### Average Annual Daily Traffic

An indication of the traffic conditions on the road system, in the vicinity of the Woy Woy Waste Management facility, is represented in terms of the two way AADT volumes. Compiled by Council and the RTA a summary of the volume data is detailed in *Table 2*.

The traffic volumes in *Table 2* demonstrate a general growth in traffic within the study area. It should be noted that even with the introduction of the 8 tonne load limit on Woy Woy Road, the volume of traffic has continued to rise at a more accelerated rate.

| Location                                                     | Survey Station | 1988 (AADT) | 1990 (AADT) | 1992 (AADT) | 1995 (AADT) | 1998 (AADT) | 2001 (AADT) | 2006 (AADT) |
|--------------------------------------------------------------|----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Brisbane Water Drive M.R.349 south of S.H.10 Pacific Highway | 05.042         | 19595       | 18345       | 20509       | 21069       | 21960       | 23935       |             |
| Brisbane Water Drive M.R.349 at Woy Woy Creek                | 05.043         | -           | 15384       | 14082       | 14836       | 15618       | -           |             |
| Woy Woy Road south of S.H.10 Kariong                         | 05.293         | 21337       | 25519       | 27291       | -           | 33872       | 39473       |             |
| Woy Woy Road west of underpass                               | -              | -           | -           | -           | -           | -           | -           | % 10,670    |
| Railway Street east of Nagari                                | -              | -           | -           | -           | -           | -           | -           |             |
| Empire Bay Drive at The Rip Bridge                           | 05.127         | 12378       | 14164       | 16925       | 15926       | 16431       | 16879       |             |

Source: RTA Traffic Volume Data for Hunter Region 2001

# Denotes figures interpolated from hourly counts (multiplier of 12)

% Denotes Woy Woy Road west of underpass ADT figures supplied by Gosford City Council

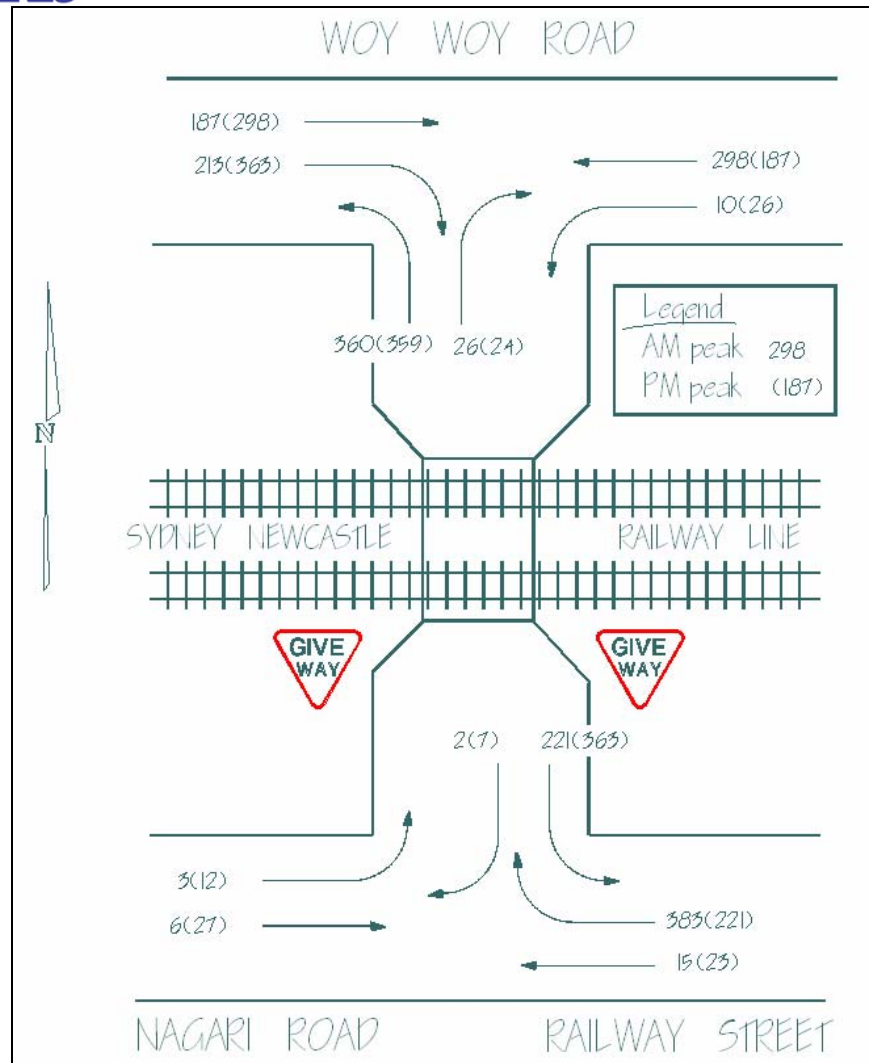
Table 2: Existing Average Daily Traffic Volumes (AADT)

## Hourly Traffic Volumes

A review of the existing peak hour traffic volumes and movement activity was undertaken at the intersections of Woy Woy Road with the railway underpass, north of Shoalhaven Drive, and Railway Street at the railway underpass and Nagari Road, Woy Woy South, as presented in *Figure 7*.

These two intersections serve as access to the current Woy Woy Waste Management Facility and were manually counted during the morning peak periods on Monday 18 and Tuesday 19 September, 2006, between the hours of 7:00am and 9:00am. The peak one (1) hour flow was heaviest and recorded on Tuesday 19 September, 2006, during the hours of 7:30am and 8:30am. The evening peak data, employed in the intersection analysis, represents a mirror of the morning peak traffic movements combined with count data from the entrance of the waste management facility.

Of the vehicle numbers counted 12 were deemed to have been made by employees during each peak hour.



Source: Manual count Tuesday 19 September, 2006



Figure 7: Woy Woy Road and Railway Street Intersection Counts



## Public Transport

### Bus

Woy Woy Bay Road is utilised by the Busways company. Phegans Bay and Woy Woy via Horsfield Bay, Route 58, generally runs three (3) services between Woy Woy Railway Station and Phegans Bay Road, Phegans Bay, half hourly during the weekday morning and evening peak hour periods.

The service is predominantly caters for journey to work trips, facilitating access to the Sydney to Newcastle rail line. The route also provides access to the Woy Woy town centre retail outlets from the residential catchments around Phegans Bay. No service is provided on Sundays or Public Holidays.



Source: Busways Route Map

### WOY WOY BUS ROUTES

Figure 8: Bus Routes

## Rail

The Sydney to Newcastle Rail Line utilises the Woy Woy Railway Station and operates seven (7) services during the morning and evening weekday peak hour period, divided between trips to Sydney and Newcastle.

## Pedestrian and Cycle Environment

Woy Woy South and surrounds is generally a built up urban environment, bordering on National Park, offering minimal pedestrian and cycle infrastructure to encourage these modes of transport. Formalised pedestrian footways on Railway Street cater for pedestrian movements between the surrounding residential catchments and Woy Woy town centre.

## Accident History

The accident history has been supplied by Gosford City Council for Woy Woy Road. The statistics cover a five (5) year period from year 2000 to 2005, which, at this time, is the latest data available.

Forty four (44) accidents have been recorded during this time within the study area, as presented in *Figure 11*. No fatalities were recorded while only 16 (36%) involved injury and, of these, six (6) required medical attention.

More than 75% of accidents are clustered in the Phegans Bay and Horsfield Bay areas. The predominant feature of these particular areas is the horizontal and vertical alignments of the carriageway. In conjunction with the road alignment, age and weather conditions almost certainly contributed.

An alarming statistic found was the predominant age of motorists involved in accidents within the study area. Of the 44 accidents recorded, some 30 accidents (68%) involved drivers 35 years old or younger.

## Road Safety

An issue raised by three (3) local residents on Woy Woy Road and reinforced during site inspection was the movement of vehicles between Woy Woy Road and Railway Street at the underpass.

It was noted that a number of right turning motorists from Woy Woy Road, cut the south western corner at speed, but not exceeding the speed limit, when approaching the underpass. The underpass is priority controlled, with Give Way signposting on the southern side. It was also noted, from damage present on the overhead hazard sign posting, that high vehicles have failed to observe the 2.5metre clearance warning located on both sides of the rail overbridge.



Figure 9: Woy Woy Road and Rail Underpass

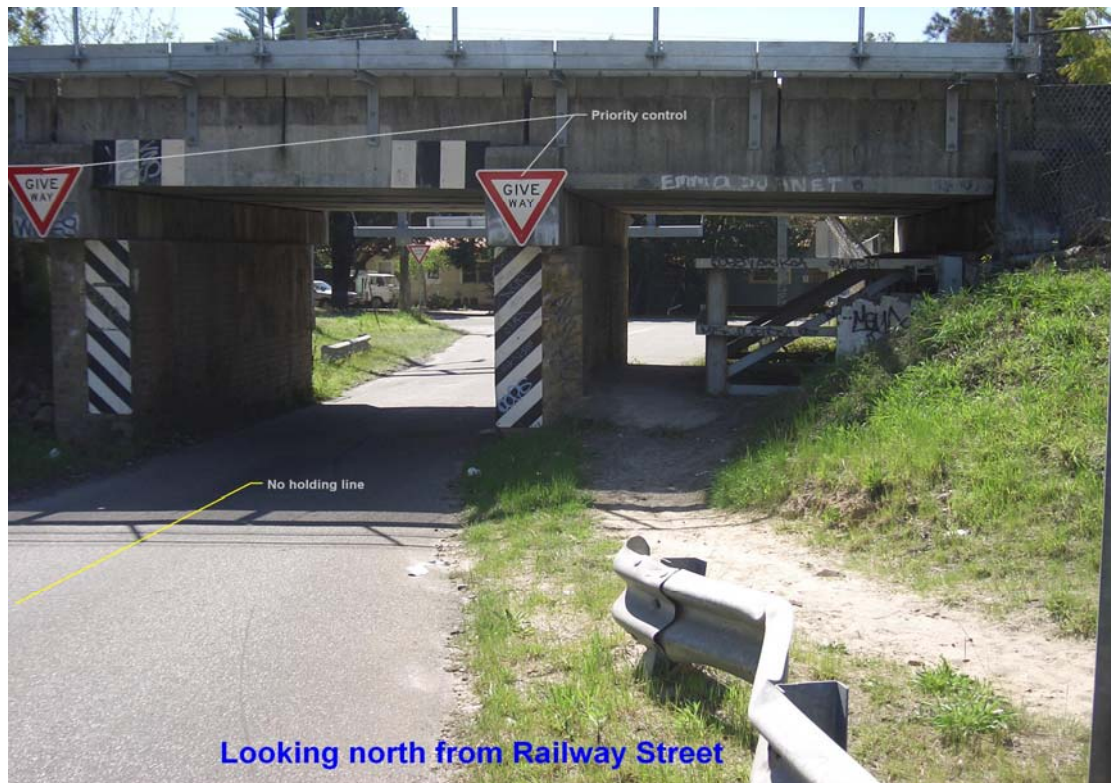


Figure 10: Railway Street and Rail Underpass

Micro analysis of the priority controlled intersection of Woy Woy Road and the underpass reports a good Level of Service (LoS), A, during the morning and evening peaks, as shown in *Table 3*. Generally, with the current lane configuration, it is considered the intersection has spare capacity of some 30%. The critical movement at the intersection is the right turn, northbound, from the underpass onto Woy Woy Road eastbound which is currently operating at a LoS B.

## Intersection Performance Indicators

The operational performance of an intersection is best described by the indicators of Level of Service (LoS), Average Vehicle Delay (AVD) and the Degree of Saturation (DS) during the peak operation hours. The intersection performance indicators adopted in this assessment are presented below.

### Level of Service (LoS)



| LOS | Traffic Signal Control                                | Priority and Sign Control                                           | Roundabout Control                              |
|-----|-------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------|
| A   | Good                                                  | Good                                                                | Good                                            |
| B   | Good with minimal delays and spare capacity           | Acceptable delays and spare capacity                                | Acceptable delays and spare capacity            |
| C   | Satisfactory with spare capacity                      | Satisfactory but accident study required                            | Satisfactory                                    |
| D   | Satisfactory but operating near capacity              | Near capacity and accident study required                           | Operating near capacity                         |
| E   | At capacity and incidents will cause excessive delays | At capacity and requires consideration of an alternate control mode | At capacity and requires alternate control mode |
| F   | Unsatisfactory and requires additional capacity       | Unacceptable and requires an alternate control mode                 | Unsatisfactory, requires alternate control mode |

Table 3: Level of Service Indicators

## Average Vehicle Delay (AVD)

The AVD is a measure of the operational performance of a road network or an intersection.

AVD is determined globally over a road network or within a cordon during an assignment model run. The AVD exhibited on comparable network models, for analogous peak periods, forms the basis of comparing the operational performance of the road network.

AVD is used in the determination of intersection Level of Service. Generally, the total delay incurred by vehicles through an intersection is averaged to give an indicative delay on any specific approach. Longer delays do occur but only the average over the peak hour period is reported.

| LOS | AVD (secs)   | Traffic Signal Operation                                               |
|-----|--------------|------------------------------------------------------------------------|
| A   | 1 to 14      | Good operation                                                         |
| B   | 14 to 28     | Good with acceptable delays and spare capacity.<br>Satisfactory        |
| C   | 28 to 42     | Operating near capacity                                                |
| D   | 42 to 56     | At capacity, excessive delays;<br>R/bout requires other control mode   |
| E   | 56 to 70     | Unsatisfactory; requires additional capacity                           |
| F   | Exceeding 70 | Unsatisfactory, requires other control mode or improved channelisation |

Table 4: Average Vehicle Delay Indicators

## Degree of Saturation (DS)

The DS of an intersection is usually taken as the highest ratio of traffic volume on an approach to the intersection compared with its theoretical capacity, and is a measure of the utilisation of available green time. The DS reported is generally of a critical movement through the intersection rather than the DS of the intersection unless equal saturation occurs on all approaches.

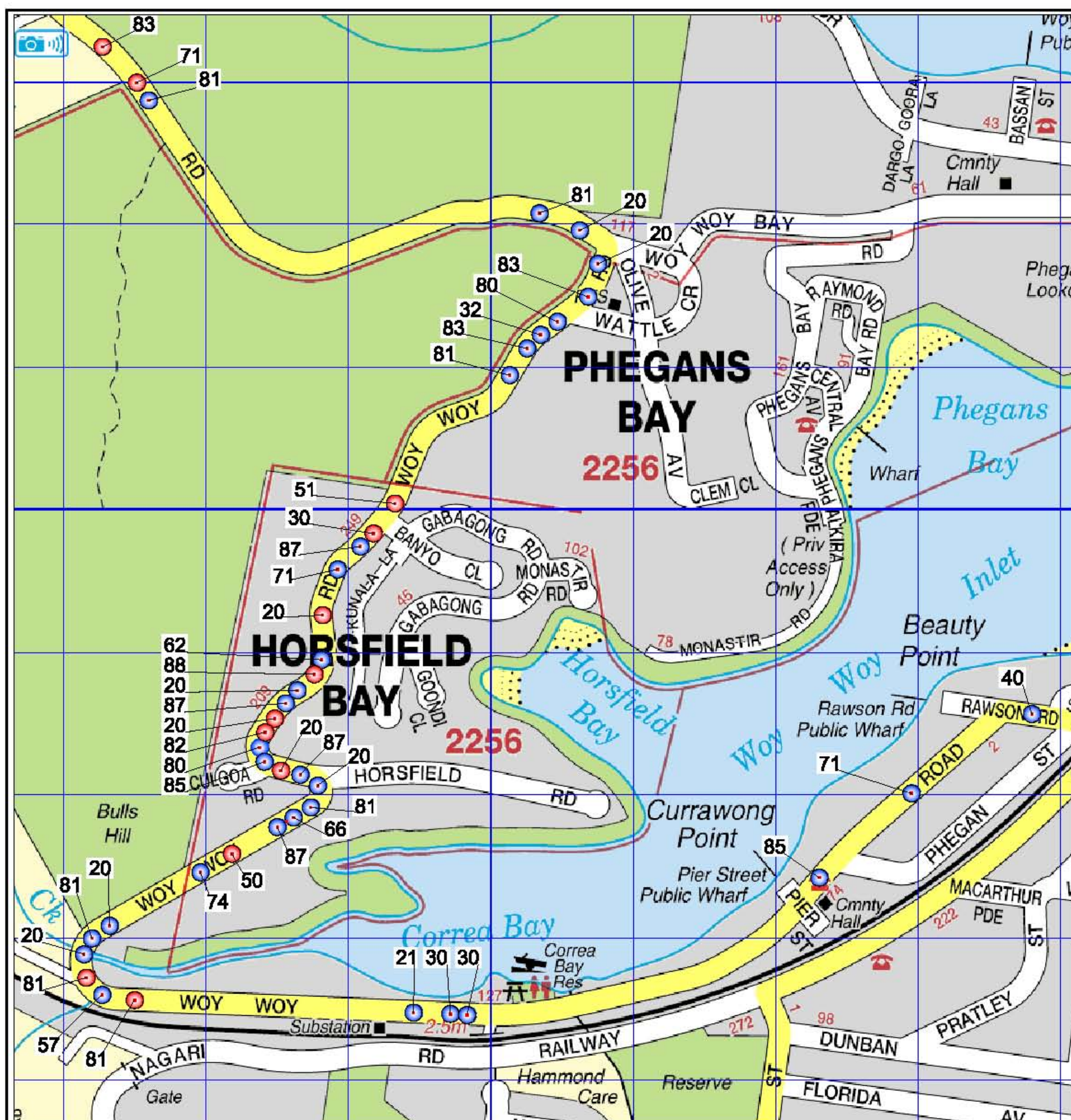
For intersections controlled by traffic signals, generally both queue length and delay increase rapidly as DS approaches 1.0. An intersection operates satisfactorily when its DS is kept below 0.875. When the DS exceeds 0.9, extensive queues can be expected.

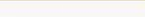
| Intersection               | D/S  |      | AVD  |      | LOS |    |
|----------------------------|------|------|------|------|-----|----|
|                            | AM   | PM   | AM   | PM   | AM  | PM |
| Woy Woy Road and Underpass | 0.68 | 0.59 | 12.0 | 13.2 | A   | A  |

Table 5: Current Intersection Performance

While the operation of the intersection is good, it is recommended that Council consider the installation of a holding line on the southern side of the underpass, to reinforce the priority control for northbound vehicles, and the construction of a roundabout, at the intersection of Woy Woy Road and the underpass to formalise traffic movements and reduce the speed with which turn movements are performed at the site.





| VEHICLES FROM OPPOSING DIRECTIONS                                                                                  | VEHICLES FROM SAME DIRECTION                                                                      | MANOEUVRING                                                                                                        | OVERTAKING                                                                                                            | ON PATH                                                                                                                  | OFF PATH, ON STRAIGHT                                                                                                           | OFF PATH, ON CURVE OR TURNING                                                                                                            |                                                                                                                                          |    |       |    |       |         |        |         |       |
|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----|-------|----|-------|---------|--------|---------|-------|
| <br>HEAD ON<br>(not overtaking) | <br>REAR END   | <br>U-TURN INTO<br>FIXED OBJECT | <br>HEAD ON<br>(incl. side swipe) | <br>ACCIDENT OR<br>BROKEN DOWN      | <br>LEFT OFF<br>CARRIAGEWAY<br>INTO OBJECT | <br>OFF CARRIAGEWAY<br>ON LEFT BEND<br>INTO OBJECT  | <br>OFF CARRIAGEWAY<br>ON RIGHT BEND<br>INTO OBJECT |    |       |    |       |         |        |         |       |
| 20                                                                                                                 | 11 Acc                                                                                            | 30                                                                                                                 | 3 Acc                                                                                                                 | 40                                                                                                                       | 1 Acc                                                                                                                           | 50                                                                                                                                       | 1 Acc                                                                                                                                    | 62 | 1 Acc | 71 | 3 Acc | 80 = 82 | 3 Acc  | 85 = 87 | 6 Acc |
| <br>RIGHT-THRU                  | <br>REAR RIGHT | <br>EMERGING FROM<br>DRIVEWAY   | <br>OUT OF CONTROL                | <br>STRUCK OBJECT<br>ON CARRIAGEWAY | <br>OUT OF CONTROL<br>ON CARRIAGEWAY       | <br>OFF CARRIAGEWAY<br>ON RIGHT BEND<br>INTO OBJECT | <br>OUT OF CONTROL<br>ON CARRIAGEWAY                |    |       |    |       |         |        |         |       |
| 21                                                                                                                 | 1 Acc                                                                                             | 32                                                                                                                 | 1 Acc                                                                                                                 | 47                                                                                                                       | 1 Acc                                                                                                                           | 51                                                                                                                                       | 1 Acc                                                                                                                                    | 66 | 1 Acc | 74 | 1 Acc | 81 = 83 | 11 Acc | 88      | 1 Acc |

- ACCIDENTS INVOLVING LIGHT VEHICLES ONLY
- ACCIDENTS INVOLVING HEAVY VEHICLES

### WOY WOY WASTE MANAGEMENT FACILITY ACCIDENTS IN WOY WOY ROAD 2000 - 2005

Source: Gosford City Council

### WOY WOY ROAD ACCIDENTS

Figure 11: Accident History 2000 – 2005



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## 3 Future Conditions

### Proposed Development

Gosford City Council operates two waste management landfills for the disposal of solid wastes at Kincumber and Woy Woy.

The Woy Woy landfill site operates between the hours of 7.00 am and 5.00 pm Monday to Friday and 8.00 am to 4.00 pm Saturday and Sunday. There would be no change to these hours of operation, for the proposed development.

Council proposes to increase the life of landfill and increase resource recovery at the Woy Woy Waste Management Facility by developing an enclosed composting facility to process 30,000tpa of green waste, 15,000tpa biosolids and an AWT for the processing of 70,000tpa of MSW.

### Access Conditions

Operating between the hours of 7.00 am and 5.00 pm Monday to Friday and 8.00 am to 4.00 pm Saturday and Sunday access is achieved via Nagari Road.

Nagari Road is primarily serviced by Railway Street, and via utilisation of the underpass, Woy Woy Road.

Railway Street provides access to the waste management facility for Council's waste services contractor SITA and the commercial, retail and residential communities on the peninsula and Brisbane Water Drive catchments. Given the 8 tonne limit restriction placed on Woy Woy Road, at Kariong, Railway Street serves as the heavy vehicle corridor.

Vehicle classification data collected at the entrance to the waste management facility over the seven day period commencing Monday 18 September, 2006, was supplied by Council.

From this data it was deduced that vehicle trips generated by Council's waste management services contractor, and the peninsula's commercial and retail activities, constitute more than 50% of the facility's traffic. This statistic will be utilised in the determination of the anticipated growth in traffic associated with the proposed development expansion.

| Vehicle Type                      | Class | Volume     |
|-----------------------------------|-------|------------|
| Mon 18 – Fri 22 September         |       |            |
| Cars                              | 1     | 62         |
| Cars with trailers and light vans | 2 + 3 | 263        |
| Weighed Vehicles                  | >3    | 570        |
| <b>Total</b>                      |       | <b>895</b> |
| Sat 23 – Sun 24 September         |       |            |
| Cars                              | 1     | 245        |
| Cars with trailers and light vans | 2 + 3 | 52         |
| Weighed Vehicles                  | >3    | 297        |
| <b>Total</b>                      |       | <b>594</b> |

Table 6: Woy Woy Waste Management Current Generation

Figure 12 presents ten (10) motor vehicle classifications, as defined by Austroads<sup>1</sup>, grouped into four categories by functionality. The counts supplied by Council group vehicle Classes 2 and 3 while the remaining Class 4 and higher are defined as heavy vehicles.

<sup>1</sup> Austroads 'Guide to Traffic Engineering Practice – Part 3 Traffic Studies', May 1994

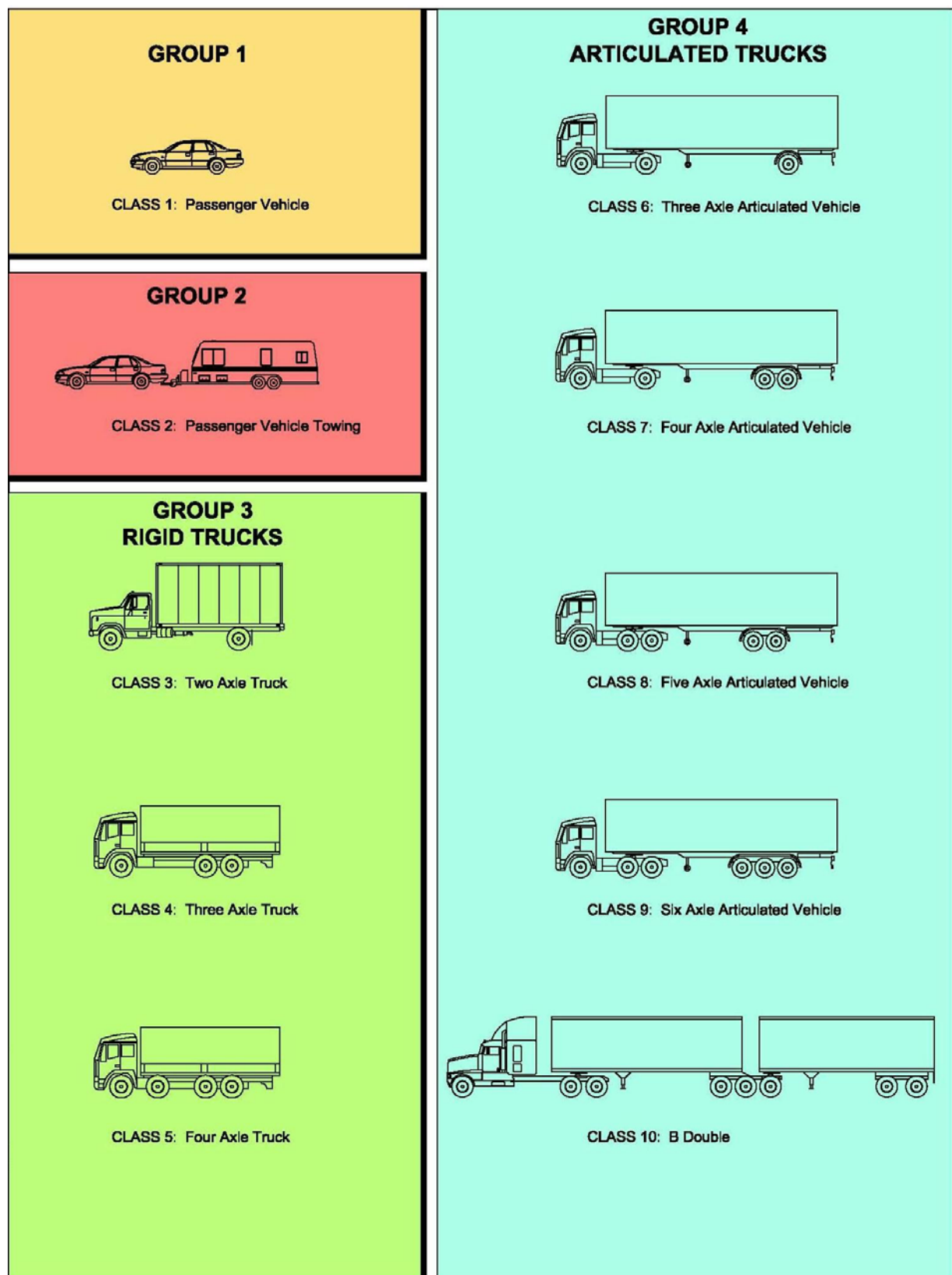


Figure 12: Vehicle Classifications Reference

## Impact Assessment

### Construction

During construction of the proposed AWT and Composting Facilities additional traffic to and from the Woy Woy WMF will be limited to the movement of construction staff vehicles and delivery of construction materials.

Parking provisions for the construction staff, service vehicles and the necessary heavy vehicle transported plant will be catered for on site, with no anticipated loss of on street parking in Nagari Road or the surrounding residential precinct.

#### ***Construction workforce***

Based on an average work force of approximately 15 personnel during construction, an increase of some 30 light vehicle movements per day (15 trips per peak hour] accessing the site, in both directions, is anticipated.

#### ***Heavy Vehicles***

In addition, the generation of heavy vehicle traffic movements associated with the transport of construction material to the site is expected to number 5 trips per peak hour period and consist of delivery trucks, water trucks, earthmoving equipment and concrete trucks.

Subsequently, no significant impact on the current operational performance of the surrounding road network is envisaged with the increase in heavy and light vehicle movements to and from the Woy Woy WMF facility during the construction phase.

## Operation

### ***Light Vehicles during Operation***

There will be an increase in the number of employees at the site during operation of the AWT and Composting facilities of approximately 15 personnel. This will result in an increase of approximately 15 light vehicles per day entering the facility. There is expected to be no significant increase in the number of light vehicles depositing waste at the facility.

### ***Heavy Vehicles during Operation***

The Woy Woy WMF currently receives approximately 75,000 tonnes per annum of waste. At its peak capacity the proposed development of an AWT and Composting facility will increase the total amount of waste entering the Woy Woy WMF to approximately 125,000 tonnes per annum (30,000 tonnes per annum greenwaste, 15,000 tonnes per annum of biosolids, 70,000 tonnes per annum of MSW and 10,000 tonnes per annum of inert waste). In addition, there will be an increased number of vehicles transporting final products from the AWT and Composting Facility off site. A breakdown of the anticipated increase in heavy vehicle numbers is given in the table below.

### **Truck Movements**

| <i>Material</i>                              | <i>Amount transported per year</i> | <i>Truck Capacity (assumed)</i> | <i>Trucks per year</i> | <i>Trucks per day</i> | <i>Trucks per peak hour</i> |
|----------------------------------------------|------------------------------------|---------------------------------|------------------------|-----------------------|-----------------------------|
| <b>Existing</b>                              |                                    |                                 |                        |                       |                             |
| MSW received                                 | 32,000                             | 100%-7 tonnes                   | 4,500                  | 14                    | 4                           |
| Construction Demolition/VENM                 | 8,900                              | 100%-10 tonnes                  | 900                    | 3                     | 1                           |
| Greenwaste received (by heavy vehicles only) | 2,500                              | 100%-10 tonnes                  | 250                    | 1                     | 1                           |



| <i>Material</i>                                            | <i>Amount transported per year</i> | <i>Truck Capacity (assumed)</i> | <i>Trucks per year</i> | <i>Trucks per day</i> | <i>Trucks per peak hour</i> |
|------------------------------------------------------------|------------------------------------|---------------------------------|------------------------|-----------------------|-----------------------------|
| Greenwaste transport offsite (by heavy vehicles only)      | 10,000                             | 100%-10 tonnes                  | 1000                   | 3                     | 1                           |
| Total                                                      |                                    |                                 | 6,650                  | 21                    | 7                           |
| <b>Future</b>                                              |                                    |                                 |                        |                       |                             |
| MSW received                                               | 70,000                             | 100%-7 tonnes                   | 10,000                 | 32                    | 10                          |
| Construction Demolition/VENM received                      | 4,500                              | 100%-10 tonnes                  | 450                    | 2                     | 1                           |
| Greenwaste and biosolids received (by Heavy vehicles only) | 25,000                             | 100%-10 tonnes                  | 2500                   | 8                     | 2                           |
| Recyclables and Stabilised Sludge exported from AWT        | 35,000                             | 100%- 10 tonnes                 | 3500                   | 11                    | 3                           |
| Compost exported (by heavy vehicles only)                  | 13,500                             | 100%- 10 tonnes                 | 1350                   | 4                     | 1                           |
| Total                                                      |                                    |                                 | 17,800                 | 78                    | 17                          |

## Post Development Traffic Growth

Currently, two waste management facilities operate within the Gosford LGA at Woy Woy and Kincumber. It is planned to phase out the landfill operations at the Kincumber site from February 2008, and introduce a transfer waste station to service the domestic and commercial needs of the Gosford community in the disposal of inert waste materials.

The Kincumber facility will continue to operate as a landfill for inert waste till such time as the site is considered 'Full', which is anticipated in year 2009.

Upon the closure of the landfill operations at Kincumber, an increase in vehicle movements, predominately heavy vehicles, can be expected to the Woy Woy waste management site. This increase, relating to the movement of an additional 14,300 tonnes of waste per year, will result in an increase of 2050 heavy vehicle trips annually to the Woy Woy WMF. It is noted that this increase will occur regardless of the proposed AWT and Composting Facility development proceeding.

At peak capacity, the number of heavy vehicle trips entering and leaving the Woy Woy WMF will increase by approximately 57 vehicles per day (11,150 annually) from existing levels. This increase is unlikely to impact the surrounding road network operation.

As such, the projected traffic increase associated with the operation of the proposed development is considered negligible. It is also noted that the only anticipated growth in vehicle movements at the site will be a result of the transformation of the current Kincumber site to a waste transfer facility and any local and intra local development growth in the commercial, retail and residential sectors associated with economic growth within the region.

## Traffic and Transport Implications

Given the stagnant growth in vehicle movements, associated with the proposed Woy Woy waste management development, no significant traffic impacts are likely on the surrounding road network.

Therefore, it is anticipated that the current access conditions are sufficient to sustain the proposed inclusion of a composting facility and adaptation of advanced waste management techniques.

## 4 Conclusion

The traffic and transport implications of the proposed development at the Woy Woy WMF of an enclosed composting facility to process 30,000tpa of green waste and 15,000tpa of biosolids, and adaptation of Alternative Waste Technology to process 70,000tpa of municipal solid waste (MSW) have been considered, and the following has been concluded:

- The proposed development of the Woy Woy Waste Management Facility will not significantly impact the surrounding road network nor increase the traffic generation associated with the increase in waste management capacity,
- The current traffic arrangements and access conditions are considered satisfactory to sustain the planned level of development within the Woy Woy Waste Management Facility,