



Griffith City Council

Tharbogang Waste Management Centre: **Waste Monitoring Program**

Revision 2.0

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1. Introduction

1.1 Purpose of Report

Griffith City Council has obtained consent from the NSW Department of Planning (DoP) to expand the quarry and landfill located at Tharbogang, approximately 10 km to the northwest of the Griffith urban area.

Condition 6, “Waste Monitoring” of the consent requires that:

“The Proponent shall prepare and implement a Waste Monitoring Program for the project to the satisfaction of the Director-General, prior to the commencement of operation. This program must:

- a) be prepared in consultation with DECCW by a suitably qualified and experienced expert; and
- b) include a suitable program to monitor the:
 - quantity, type and source of wastes received on site:
 - quantity, type and quality of the outputs produced on site.”

This document has been prepared to describe the procedures in place and to satisfy the DoP requirements.

1.2 Acknowledgements

The assistance provided by Mr John Roser, Waste Operations Manager and Council staff located at the Tharbogang Waste Management Centre (TWMC) is gratefully acknowledged.

1.3 Statement of Qualifications

This document has been prepared by Mr Phil Hawley of CPE Associates. Mr Hawley has formal qualifications in civil engineering and in management. He has consulted to the waste industry and in particular to local government for a period exceeding 10 years and prior to that was an engineer in local government for 30 years. For part of this time he was the waste manager for the City of Wollongong.

Recent consultancies include preparation of the resource recovery strategies for Wagga Wagga City Council and upper Lachlan Shire, and ongoing advice and assistance with the development and operation of the multi-award winning Resource Recovery Centre at Moss Vale operated by Wingecarribee Shire Council. Mr Hawley has consulted to several NSW regional councils regarding the development and operation of their landfills.

The document has been peer reviewed by Mr John Riggall of CPE Associates. Mr Riggall has formal qualifications in civil engineering and science (total quality management). He has consulted to government and industry for the past 10 years and prior to that was the General

Manager for the Illawarra Waste Management Board. He also has extensive prior experience working in local government and for the construction industry.

1.4 Consultation

Mr Darren Wallett of the Griffith office of the DECCW and Ms Felicity Greentree of the DoP were both consulted during the development of this document. Their guidance is gratefully acknowledged.

1.5 Disclaimer

This document has been prepared for a particular purpose, using information made available by the client in accordance with the client's instructions. Users of this document should note the assumptions and approximations used. Any use of the document outside of the stated purpose is at the user's risk.

2. Waste Monitoring Program

2.1 Waste and other materials received at the site

The DoP consent conditions include a requirement for a suitable program to monitor the quantity, type and source of wastes received on site. TWMC does not receive any trackable wastes as they are not permitted by the Environmental Protection License. The exception is asbestos but as this is only trackable when conveyed across state borders it is unlikely that any trackable materials will be received at TWMC.

All vehicles entering the TWMC and quarry site are required to cross the weighbridge located near the site entrance. The weighbridge is staffed during all hours that the facility is open. The weighbridge is connected to a computer that operates proprietary weighbridge recording and accounting software. The computer is backed up in real time to the Council's server in Griffith. For each vehicle the following information is entered: registration number, vehicle type, customer details (i.e. account or casual) and destination (i.e. either to landfill, for recycling, to the quarry, service vehicles or visitors). The software categorises transactions by quantity (ie weight), type of material (as listed in Appendix A), and source, i.e. whether from Domestic (household or Council operations), Commercial and Industrial (C&I) or Construction and Demolition (C&D). The originator of each load of waste cannot be determined and is not recorded.

After these details have been entered, the computer requires the weighbridge operator to select the material type. This is recorded along with the weight of the vehicle, or for small vehicles the DECCW standard allowance is recorded. Vehicles carrying both waste and recyclable material are recorded and charged as mixed waste. However, it is proposed to review this practice in the future, to encourage separation and greater recovery of recyclable materials. Details are also recorded for service vehicles and bona fide visitors.

For regular users where the tare weight of the vehicle is stored in the computer, the waste tonnage and appropriate charge is then immediately calculated. For small vehicles such as sedans and single axle box trailers, a standard material weight is assumed which is in accordance with DECCW guidelines and a standard charge is also immediately applied. A report from the weighbridge computer listing the standard weights that are used is in Appendix B. These vehicles are not required to be weighed out and can leave the site by a boom gate which the weighbridge operator can see and activate. This also applies for service vehicles and bona fide visitors.

All other vehicles are weighed in and the driver is advised by the weighbridge operator to cross the weighbridge for weighing out before exiting the site. Upon returning to the weighbridge these vehicles are again weighed, the appropriate charge is calculated and the transaction is completed. This also includes for truck and trailer combinations unless there are separate tares stored in the computer for the truck alone and for the truck and trailer combination.

2.2 Materials leaving the site

The DoP consent conditions also require a suitable program to monitor the quantity, type and quality of the outputs produced on site. The main materials leaving this site are quarry materials, fill and recyclables. At this stage there is no Centre for reusable materials or compost at the site and scavenging is forbidden. The quantity and type of material leaving the site is recorded and the quality is identified by the characteristics of the material e.g. quarry products, clean fill or recyclable steel, cardboard etc.

For vehicles that are conveying recovered or processed materials away from the TWMC (including quarry materials), the procedure is similar to that for vehicles conveying material into the site, except that the vehicle is heavier upon exiting rather than upon entry and so the difference in weight is the weight of the materials leaving the site. In this case the material type is entered upon exiting the site so that records of material movements are kept. For quarry materials, this is also where the data for creating the quarry invoice is generated.

The computer maintains a record of quantities, material types, sources, vehicle details and transactions for materials into and out of the facility.

The only times that vehicles enter the facility when the weighbridge attendant is not on duty are Christmas Day, Boxing Day, New Years Day and Good Friday. This applies to Council's domestic kerbside collection vehicles only. No other vehicles have out-of-hours access to the facility. On these occasions, the driver of the truck records the weight of the vehicle, the date and the time upon crossing the weighbridge. The weight is shown on an external display that can be read by the driver. The record is handed to the weighbridge operator on the next normal business day and the details entered into the computer (the tare weight of these vehicles is already recorded in the system).

2.3 Reporting

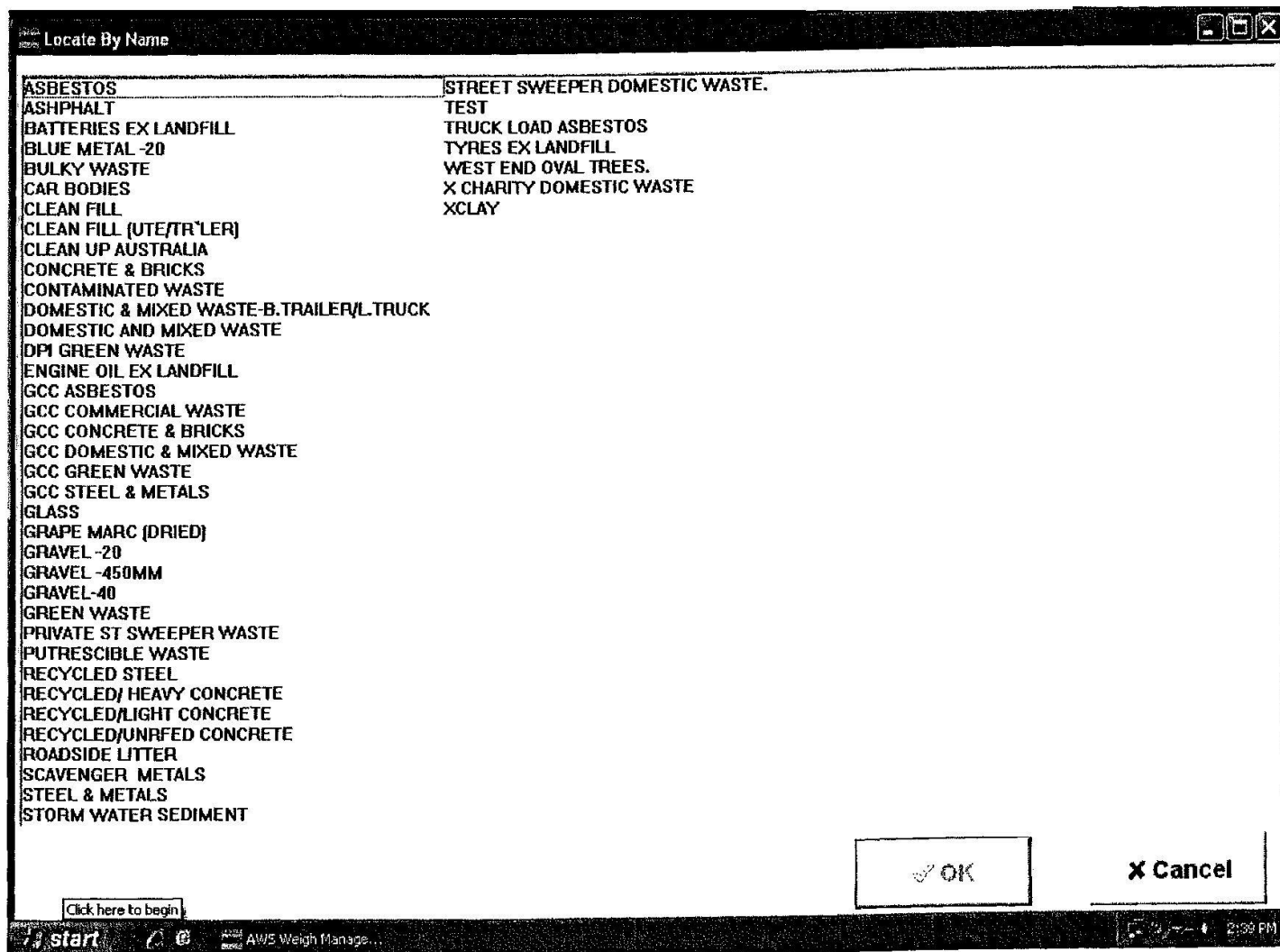
Because the data collected at the weighbridge is stored within an electronic database, the computer software has the capacity to generate reports that can be customised for different purposes, including the provision of monthly and annual reports that can be provided for purposes relating to the management of the site as well as to DECCW.

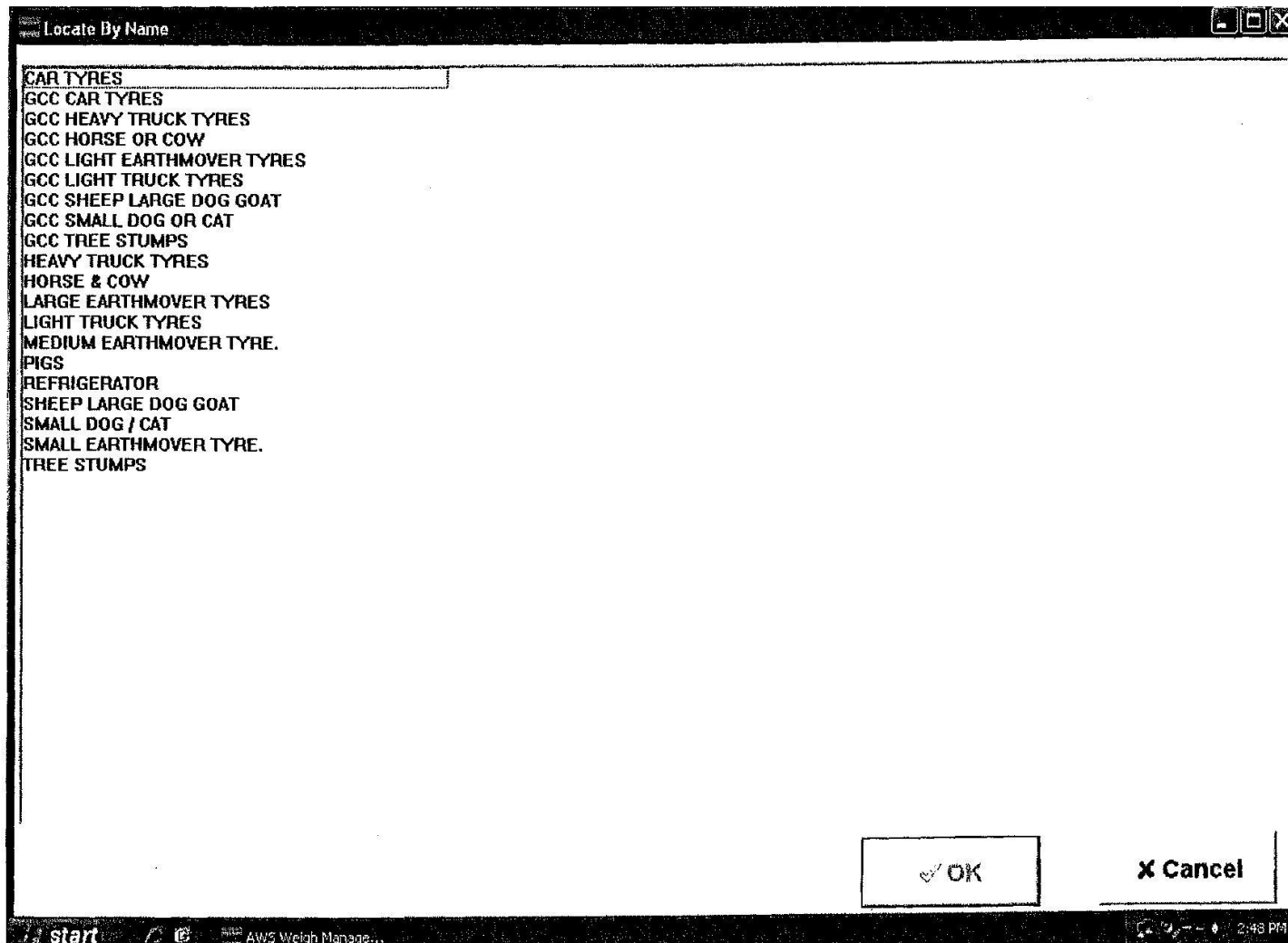
These reports are used to track the quantities of materials arriving at and leaving the site, and also the proportion of materials that are recovered. Reports can be generated to show the relative proportions of domestic, commercial and industrial (C&I), construction and demolition (C&D), greenwaste, clean fill and recyclable materials received as well as the quantities of recovered materials such as metals, shredded greenwaste and other recyclable materials that leave the site.

Appendix A. Waste Classifications

Figure 1 overleaf is a copy of a report from the landfill computer that shows the waste classifications used at TWMC.

Figure 1: Waste and Recovered Materials Report





Appendix B. Vehicle Categories

Appendix B overleaf is a copy of a report from the landfill computer that shows the vehicle classifications and standard weights that are used at Tharbogang.

The standard weights are as shown in the red highlighting.

Figure 2: Vehicle Categories and Standard Weights

**Griffith City Council
VEHICLE REPORT**

NAME	IN LOCAL	GST	IN VISIT	GST	NET CLASS(T)	PRODUCT LINK
CAR OR STATION WAGON		Yes	7.28	Yes	0.06	
CAR & SINGLE AXLE TRAILER		Yes	28.35	Yes	0.36	
UTE & BOX TRAILER		Yes	42.73	Yes	0.6	
PRE PAID TICKET CAR OR WAGON		No	0.01	No	0	
PRE PAID TICKET UTE OR TRAILER		No	0.01	No	0.06	
CLEAN UP AUST		No	0	No	0	
UTE OR BOX TRAILER		Yes	21.36	Yes	0.3	
UTE BRICKS/CONCRETE ONLY		Yes	10.92	Yes	0.3	
UTE GREEN WASTE ONLY		Yes	15.47	Yes	0.3	
UTE STEEL ONLY		Yes	5.91	Yes	0.06	
RECYCLING REWARD		No	0	No	0	
TOTAL VEHICLES: 11						

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Aussie Weighbridge System Pty Ltd

This data is the standard load weight that is recorded for each of these standard vehicle types