

## **PART E - SERVICES REQUIREMENTS**

### **E1. TECHNICAL SPECIFICATION**

#### **1. SCOPE OF WORK**

##### **1.1 Background**

The Sydney Catchment Authority (SCA) requires a comprehensive waste audit of its offices to be undertaken each year.

Information from the annual waste audit is used to assess the SCA's waste management performance. This includes consideration of the total waste generated, waste sent to landfill and recycled, quantities produced per person and for the entire organisation (extrapolated), and performance indicators such as contamination, recovery and actual and potential diversion rates.

Information from the audit is also used to meet the SCA's waste reporting obligations.

All NSW government agencies are required to have a Waste Reduction and Purchasing Policy (WRAPP) plan and are required to provide a biennial progress report to the NSW Government. The annual waste audits provide information to enable the SCA to prepare its report.

Under the *Annual Reports (Statutory Bodies) Regulation 2005*, and Treasury Circular 02/08, the SCA is required to include information in its annual report relating to the SCA's waste management performance. This includes reporting the estimated amount of waste being avoided or reduced due to SCA WRAPP initiatives and reporting the estimated amount of waste being recovered due to SCA WRAPP initiatives.

The SCA is also required by its operating licence to report annually on indicators of SCA's impacts on the environment, including two waste indicators. Requirements relating to the indicators are found in Part 5 of the operating licence. Details of these indicators are found in Schedule 2 of the licence.

The SCA's *2006-2010 Environment Plan* requires the SCA to manage and minimise resource use and waste generation and undertake actions to meet targets and timeframes specified in the environment plan. The annual waste audit, production of a waste audit report and addressing of waste audit recommendations are actions under the waste minimisation objective.

##### **1.2 Purpose**

The purpose of this Professional Service Contract (PSC) is to facilitate the completion of the SCA's annual waste audit for 2008 with the option, at the sole discretion of the SCA, to extend the contract to include years 2009 and 2010. This includes the presentation of findings to the SCA prior to the provision of the necessary reports and data to enable the SCA to fulfil its waste reporting obligations.

### 1.3 Location

The 2008 waste audit will cover each of the office sites listed in table 1 below. The Penrith offices are located in the Penrith central business district and are within walking distance of each other.

Table 1

Site No	Site	Location
1	308 High St, Penrith	Suite 4, Ground floor Suite 7, Ground floor
2	311 High St, Penrith	Ground floor Level 1 Level 2 Level 3
3	67-69 Henry St, Penrith	Suite 5a, Level 1 Suite 5b, Level 1

Future audits will be conducted at the SCA's offices in the NSW Government office building in Penrith, within a single building. The SCA expects to relocate to this building in late 2008. It is anticipated that the cost of the provision of the audit component will reduce in the second and future years to the offices being located within the one building.

### 1.4 Timeframes

The anticipated start date for the 2008 audit will be mid July and the collection of waste must be completed before 29 August. Possible timeframes for the collection of waste, taking into account recycling collection schedules and avoiding irregular waste generating activities are the weeks commencing 28 July, 11 August, and 25 August. This excludes secured paper bins which will need to be weighed in the week preceding the waste collection.

Future audits will be conducted between 1 July and 31 December each year.

### 1.5 Work to be carried out by Service Provider

The Service Provider will be expected to collect waste from the sites listed in the table above, over a five day period. Currently garbage is collected daily by the cleaners in the late afternoon to early evening from bins located in kitchens and at desks. Paper and mixed recycling are collected fortnightly.

The Service Provider will be expected to collect the mixed and paper recycling, and weigh the secured paper bins, five days after the previous recycling

collection. The Service Provider will be required to supply methodology for this. Recycling collection dates will be advised.

Data is to be extrapolated to represent a full time equivalent (FTE) working year according to the accepted methodologies. The SCA will provide the details of the FTEs for each of the sites audited and for the entire organisation to enable these calculations.

The Service Provider will be expected to sort, separate and categorise the waste for analysis. Sorting is to be done in accordance with the categories in the Australian Waste Database. Service Providers should consult previous audit reports to ensure that the appropriate sorting is completed.

The Service Provider will be expected to present findings from the audit on site at the Penrith office on conclusion of the audit and prior to the preparation of the report. The presentation should provide the relevant information as outlined in Figure 1 (below).

The Service Provider will be expected to produce a report on the SCA's waste management performance. This includes consideration of the waste streams as outlined in Figure 1 (below). The report will address the SCA's waste management reporting obligations (as outlined above). Data from past audits (2005, 2006 and 2007) will be provided.

Figure 1

Waste	Recycling	Paper	
		Mixed (glass, plastic etc)	
	Garbage [sent to landfill]	Not recyclable at all	
		Potentially recyclable <sup>i</sup>	
		Recyclable	Paper
			Mixed

The Service Provider should provide a methodology for undertaking the audit as part of its tender submission.

For each audit the Service Provider will be expected to provide the SCA with:

- Raw data collected for each site (electronically and in hard copy);
- Methods for quality assurance/ quality control of the data;
- Methodology/ calculations/ data manipulation showing how the raw data was manipulated to obtain the end results and analysed (electronically in MS Excel or Access);

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<sup>i</sup> Material that could be recycled if there were changes to the recycling services provided. For example, compostable food could potentially be recycled through a worm farm (or several worm farms) and disposable paper product could be recycled if there were changes to the material the SCA's recycling service provider accepted.

- Electronic versions of all charts and tables used in the report (electronically in MS Excel);
- A presentation on the findings of the audit (within two weeks of the audit);
- A draft report (within two weeks of the presentation), as detailed in attachments one and two for comment by the SCA,
- Revised reports (within 2 weeks of receiving the SCA's comments); and
- A final waste audit report (inclusive of data) electronically (in MS Word and PDF formats).

## **1.6 Meetings and presentations**

For each audit the Service Provider will be expected to attend an initial meeting for approximately two hours (at least one week prior to the waste audit) with the Waste Audit Project Manager and SCA cleaners. In 2008 this meeting will be held at Level 2, 311 High Street Penrith.

The initial meeting will include:

- Introductions and audit overview;
- Methodology for collection and sorting waste, including equipment;
- Overview of the SCA's waste management system;
- Data analysis (including methods for calculations) and reporting requirements, including consideration of the draft structural outline; and
- Discussion of other relevant issues.

After each audit the Service Provider will be expected to prepare a presentation to the waste audit project manager and sponsor, outlining the findings of the audit. The presentation is expected to cover the areas to be addressed by the report. This includes the performance of the organisation as a whole, performance of individual sites, opportunities for improvement and recommendations, indicators and reporting requirements.

Additional meetings to discuss the SCA's comments on each draft report may be required, depending on the extent of the SCA's comments. Such meetings should be budgeted as separate items, to allow them to be charged only if the meetings were required.

## **1.7 Work to be carried out by others**

The Service Provider will accompany SCA cleaners on selected sites for the collection of waste. The SCA/ contractor will jointly brief the SCA cleaners in this regard.

## **1.8 Access**

SCA staff will be responsible for ensuring the Service Provider has access to relevant sites for the conduct of the waste audit.

## **2. STANDARDS**

### **2.1 Qualifications and Experience**

The Service Provider is required to:

- Have considerable experience in waste auditing of large office sites;
- Have considerable expertise and experience in data analysis and software packages especially Microsoft Excel and Microsoft Access; and
- Expertise in Microsoft Word and experience in providing technical and scientific reports using graphs, charts, reports and tables.

The analysis of the data and quality of the report is important to the SCA. In particular, the SCA's reporting obligations (operating licence indicators, annual reporting requirements and WRAPP reporting requirements) must be correctly calculated and reported. It would be beneficial to provide samples or extracts from similar reports, as well as outlining the experience of the proposed report writers.

### **2.2 Occupational Health and Safety**

The Service Provider is required to:

- Be fully conversant with the associated occupational health and safety (OH&S) issues of waste auditing;
- Implement OH&S measures to ensure the wellbeing of all participants;
- Provide personal protective equipment for all persons participating in the waste audit; and
- Provide documented evidence that all persons participating in the waste audit have been vaccinated for Hepatitis A and Hepatitis B.

## **3. ACCEPTANCE CRITERIA**

The following criteria are to be satisfied before the Principal will consider work under this contract to be complete:

- Supply of each year's final report (hard copy and MS Word and PDF formats); and
- Supply of each year's agreed data in agreed format (MS Excel and/or MS Access).

**ATTACHMENTS**

## ATTACHMENT ONE

The Waste Audit Report (see attachment two for suggested structure) must, at a minimum, include:

- A discussion and analysis (including data tables and graphs) of the SCA's waste management performance, addressing:
  - The amount of waste generated;
  - The amount of waste to landfill;
  - The amount of recycled material (paper and mixed);
  - The amount of waste to landfill that could have been recycled through existing SCA facilities; and
  - The amount of waste (paper and mixed) that could potentially be recycled through improvements to current practice;

for:

- The entire SCA;
  - each audited site;
  - each component of the waste stream (as per figure one); and
  - each waste category (paper, organic, plastic, glass, other organic, ferrous/non-ferrous).
- A discussion and analysis (including data tables and graphs) of the SCA's waste management performance, addressing:
  - SCA recovery rates;
  - SCA actual and potential diversion rates;
  - SCA contamination rates;

for:

  - The entire SCA;
  - each audited site;
- Organisational comparison with
  - past performance; and
  - industry benchmarks (where available).
- Opportunities for improvement and recommendations for future action, in accordance with the SCA's 2006-2010 Environment Plan, with respect to improvements identified for each site and the SCA as a whole.
- A section specifically reporting on the required regulatory information to meet SCA's operating licence, annual report, WRAPP reporting requirements and environment plan, as detailed below;
  - operating licence/environment plan;
    - Estimated volume and type of waste annually sent to landfill from the SCA's activities (kg/yr) but reported on in kg/ person/ year; and
    - Waste recycled or reused expressed as a percentage of total waste generated by the SCA's activities, by type of waste.
  - Annual report - refer to NSW government Treasury Circular 02/08 or other relevant standard; and

- WRAPP reporting requirements – NSW Government Waste Reduction and Purchasing Policy (WRAPP) Guidelines to assist reporting WRAPP progress for 2005-2007.

Further details of the requirements for the 2008 report will be discussed at the initial meeting.



## ATTACHMENT TWO

### Suggested structure for the 2008 waste audit report

1. Executive summary
2. Background
3. Methodology
  - 3.1 Overview of the waste streams

Waste	Recycling	Paper	
		Mixed (glass, plastic etc)	
	Garbage [sent to landfill]	Not recyclable at all	
		Potentially recyclable <sup>ii</sup>	
		Recyclable	Paper
			Mixed

### 3.2 Waste collection

- 3.2(a) Audited sites
- 3.2(b) Collection of samples
- 3.2(c) Collection schedule
- 3.2(d) Sorting
- 3.2(e) Confidentiality

### 3.3 Data analysis

- 3.3(a) Data entry & verification
- 3.3(b) Data extrapolation
- 3.3(c) Calculation of key performance indicators
- 3.3(d) Quality control and assurance procedures

## 4. Analysis of the waste streams (2008)

- 4.1 The overall composition of the SCA's waste (by waste stream);
- 4.2 The composition of the individual waste streams (general waste (office), general waste (kitchen), non-secured paper recycling and commingled recycling); and
- 4.3 The quantities of waste generated as per Table 1 (below).

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<sup>ii</sup> Material that could be recycled if there were changes to the recycling services provided. For example, compostable food could potentially be recycled through a worm farm (or several worm farms) and disposable paper product could be recycled if there were changes to the material the SCA's recycling service provider accepted.

Tables and graphs will need to be generated for the items listed in the data table below. These should include extrapolated information for the entire SCA as well as per person data.

Tables and graphs should also consider performance indicators (eg recovery rates, contamination rates, actual and potential diversion rates and resource loss).

Table 1: Summary of results from SCA offices

<b>Total Waste Stream</b> Kg/year kg/year/person(FTE)	<u>Contamination</u> kg/year kg/year/ person (FTE) % of Total Waste % of Recycling Stream	<u>Commingled recycling stream</u> Kg/year kg/year/person(FTE) % of Total Waste % of Recycling Stream	<u>Contamination</u> kg/year kg/year/ person (FTE) % of Total Waste % of Recycling Stream % of commingled recycling  <u>Uncontaminated commingled recycling</u> kg/year kg/year/ person (FTE) % of Total Waste % of Recycling Stream % of commingled recycling
	<b>Recycling stream</b> Kg/year kg/year/person(FTE) % of Total Waste	<u>Uncontaminated recycling</u> kg/year kg/year/ person (FTE) % of Total Waste % of Recycling Stream	<u>Contamination (paper recycling)</u> kg/year kg/year/ person (FTE) % of Total Waste % of Recycling Stream % of paper recycling  <u>Uncontaminated paper recycling</u> kg/year kg/year/ person (FTE) % of Total Waste % of Recycling Stream % of paper recycling
	<b>General Waste (to landfill)</b> Kg/year kg/year/person(FTE) % of Total Waste	<b>Non-Recyclable</b> Kg/year kg/year/person(FTE) % of Total Waste % of General Waste Stream	
		<b>Potentially Recyclable (NEW SERVICES)</b> Kg/year kg/year/person(FTE) % of Total Waste % of General Waste Stream	
		<b>Recyclable (Resource Loss)</b> Kg/year  kg/year/person(FTE) % of Total Waste % of General Waste Stream	<b>Commingled recyclables</b> Kg/year kg/year/person(FTE) % of Total Waste % Waste to landfill % of Resource Loss  <b>Paper</b> Kg/year kg/year/person(FTE) % of Total Waste % Waste to landfill % of Resource Loss

## 5. Discussion of results

### 5.1 Comparison with past performance

[Graphs, tables and text analysing the SCA's 2008 performance against past performance (2005, 2006 and 2007) should be included here, addressing at least the following matters. Where appropriate, tables and graphs should include extrapolated information for the entire SCA as well as per person data.]

- Amount of waste generated
- Amount of waste to landfill
- Amount of recycling (total recycling, mixed and paper)
- Amount of waste to landfill that could have been recycled through existing SCA facilities
- Contamination rates (paper and mixed separately)
- Resource recovery rate
- Diversion rate
- Potential diversion rate

### 5.2 Comparison against benchmarks

[Graphs, tables and text analysing the SCA's 2008 performance against available benchmarks should be included here.]

### 5.3 Site by site analysis

5.3(a) 308 High St

5.3(b) 311 High St

5.3(c) Henry St

[As a minimum, the following should be considered for each site:]

- Discussion of the key findings (quantities, waste stream composition, performance indicators etc)
- Graphs, tables and text analysing 2008 performance (per person) against past performance for that site (2005, 2006 and 2007) and the SCA as a whole and available benchmarks
- Opportunities for improvement

## 6. Recommendations

## 7. Reporting requirements

### 7.1 Operating Licence indicators:

- Estimated volume and type of waste annual sent to landfill from the SCA's activities (kg per person per year); and

[As per operating licence requirements (Part 5) this is to include data from 2001. This will be provided.]

- Waste recycled or reused expressed as a percentage of total waste generated by the SCA's activities, by type of waste.

[As per operating licence requirements (Part 5) this is to include the earliest available data (2005). This will be provided.]

### 7.2 Annual reporting requirements:

- Reducing the generation of waste (waste avoidance and minimisation) - an estimate of the amount of waste being avoided or reduced as a result of initiatives; and
- Resource recovery (waste reuse and recycling) - an estimate of the amount of waste being recovered due to these initiatives.

### 7.3 WRAPP reporting requirements

[As per the most recent WRAPP reporting guidelines from the NSW Department of Environment and Climate Change]

- Total quantity of copy paper and all other office paper waste generated and total quantity recycled;
- Total quantity of commingled containers waste generated and total quantity recycled; and
- Total quantity of cardboard waste generated and total quantity recycled

Appendix A: Definitions

Appendix B: Waste stream data tables for each site

Appendix C: Graphs of the composition of each waste stream for each site

Appendix D: Raw data collected

## ATTACHMENT THREE

For information and planning purposes, below are the approximate weights of waste collected from SCA offices during the 2007 audit.

Site No	Site	Location	Approximate staff numbers (FTE)	Kitchen waste (kg/ day))	Office waste (kg/ day)	Paper recycling (kg/ 5 days)	Mixed recycling (kg/ 5 days)
1	308 High St, Penrith	Suites 4 & 7, ground floor.	21	0.6kg	4.5kg	73.6	1.3
2	311 High St, Penrith	Ground floor	10	0.6	0.6	4.1	0.1
		Level 1	96	2.0	5.9	114.4	2.6
		Level 2	57	2.5	4.0	77.0	4.7
		Level 3	5	0.3	0.3	23.2	0.1
3	67-69 Henry St, Penrith	Suites 5a & 5b, Level 1.	18	1.1	1.4	19.3	0.9