



# Explanatory paper: mass balance reporting

*Reforming waste management – creating certainty  
for an industry to grow*

## **Explanatory paper: Mass balance reporting**

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## Invitation to comment

Promoted by policy settings that have encouraged resource recovery over the past decade, the waste and resource recovery sector has grown into an economically significant part of our economy. Further growth, including substantial job creation, has been identified as possible with the next series of modernised regulatory and policy settings.

Engagement and collaboration with members of the waste management and resource recovery industry and other key stakeholders has assisted the state government in formulating initial waste reform priorities to help realise the potential of the sector, including elements to be considered in the establishment of mass balance reporting and record-keeping requirements.

Building on previous engagement, the objectives of this explanatory paper are to:

- discuss how mass balance reporting will help address key issues within the waste and resource recovery sector
- outline key feedback received regarding the concept of mass balance reporting
- identify how the EPA has sought to take into account your comments
- summarise the key features of the proposed reporting system and related matters
- help us to seek your views on the proposed reporting system and related matters
- nominate the initial reform priorities within the waste reform program following early stakeholder engagement.
- We are keen to obtain your observations and advice on the proposed reforms presented in this paper, including your views on whether the reporting system proposed will be suitably practicable and achieve the desired objectives.

You may choose to address all elements of the new reporting system, focus on particular issues of interest or put forward additional or alternative ideas for inclusion.

Your views will be used to help inform finalisation of the system for consideration by the State Government and the subsequent presentation of regulations to amend the *Environment Protection Regulations 2009* before Parliament.

Submissions should clearly reference the section and page to which each comment relates and need to be submitted by **Tuesday 31 October 2017**.

Comments may be forwarded by mail or email (preferred) to:

Waste Reform Project  
Environment Protection Authority  
GPO Box 2607  
ADELAIDE SA 5001  
Email: [epainfo@sa.gov.au](mailto:epainfo@sa.gov.au) [mark subject as 'Environment Protection (Waste Reform) Amendment Bill']

All submissions received by the EPA during the consultation period will be acknowledged and treated as public documents unless provided in confidence, subject to the requirements of the *Freedom of Information Act 1991*, and may be presented on the EPA website and quoted in reports.



## 1 Introduction

The South Australian Government is seeking to help realise the economic potential from innovation in waste and resource recovery technologies, while at the same time protecting our environment. It is committed to providing the right regulatory settings to attract investment, drive innovation and create jobs by seeking to:

- minimise the risk of environmental harm occurring
- support the highest and best, safe available use of secondary materials in accordance with the waste management hierarchy
- provide more certainty and fairness for lawful operators, promoting investment, innovation and growth of the sector
- halt illegal operators
- obtain levy revenue due to the South Australian Government.

Stakeholder feedback on the discussion paper, *Reforming waste management – creating certainty for an industry to grow*, together with input from the EPA’s regular stakeholder engagement groups, comprising representatives from the waste industry, local government, Renewal SA, the Conservation Council, Keep South Australia Beautiful (KESAB) and Green Industries SA (GISA), has helped the EPA identify the initial waste reform priorities to support the sustainable operation of the waste and resource recovery sector. These priorities are set out in Box 1.

### Initial reform priorities identified through consultation processes

#### Proposed new or amended legislation

- Introduction of changes to the *Environment Protection Act 1993* (via the Waste Reform Bill).
- Introduction of mass balance reporting (via regulations).
- Introduction of an amended manner of collection of levy at landfills to achieve material flow reform and effective levy payment (via regulations).
- Exploration of the introduction of an upfront levy liability (via regulations and requiring mass balance reporting as a pre-requisite).
- Exploration of new legislative and policy measures that will keep South Australia as a resource recovery leader – particularly promoting food waste recycling and investigating a ban on polystyrene food packaging (via policy and amendment of the *Environment Protection (Waste to Resources) Policy 2010* and other new legislation).
- Exploration of expanded waste transporter licensing to support reporting and waste flow measures (via regulations).

#### Proposed policy and administrative changes

- Implementation of effective stockpiling controls (pre-requisites include Act changes and a financial assurances policy).
- Effective recovery of illegally obtained economic benefits.
- Better management of waste soils and waste derived materials, including revision of the waste derived fill standard.
- Development of policy guidance for Energy from Waste facilities.
- Introduction of better options for managing problematic wastes (eg asbestos) including through differential levy use.
- Seeking to influence government procurement practices for better promotion of enhanced resource recovery and safe waste management.

Further reforms may be considered subsequent to these changes.

These priority reforms are designed to substantially address the most problematic issues within the waste and resource recovery sector, namely:

- static or growing stockpiles
- waste that has the potential to pose environmental risk being reused or promoted inappropriately as ‘product’
- potentially reusable ‘fill materials’ ending up at landfill due to development pressures
- the need to deal with certain problematic wastes
- illegal dumping.

They also respond to increasing interest in Energy from Waste schemes and opportunities to pursue further development of safe resource recovery activity.

These reforms will require amendments to the *Environment Protection Act 1993* (EP Act), Environment Protection (Waste to Resources) Policy 2010, Environment Protection Regulations 2009 and the implementation of these changes as well as administrative policy and operational actions.

As a first legislative step, the State Government is pursuing amendments to the EP Act to empower the EPA to pursue further priority reforms and better tackle illegal dumping. The *Environment Protection (Waste Reform) Amendment Bill* (Waste Reform Bill) was consulted upon in September–November 2016 and feedback received has been used to finalise the Bill. The Bill includes a clause for regulations to be made to provide for monitoring the movement of waste and supports regulations being made to establish mass balance reporting.

As its second legislative step, and dependent upon the Waste Reform Bill, the EPA has developed a draft proposed mass balance reporting and record-keeping system as detailed in this paper. In summary, mass balance reporting (which may also be considered as ‘material flow’ reporting) requires relevant waste facilities to report monthly to the EPA on total waste quantities by waste stream and waste types. Information is required on:

- material received at the site
- material transported from the site (to other resource recovery facilities or landfill)
- material remaining stockpiled on-site
- material used on-site
- material disposed on-site.

Record-keeping requirements along with weighbridge, video monitoring and survey requirements are proposed to apply to underpin the system.

Your views on the proposed mass balance reporting and record-keeping system will be used to help finalise the proposed system. The system will then be established by proposed amendments to the Environment Protection Regulations that will be considered by the State Government and subsequently presented to Parliament.

The EPA will need a new information technology system to enable relevant licensees to provide the required reporting information. The regulations for the new mass balance reporting and record-keeping system would formally commence once the information technology is ready.

### **Pursuing early participation**

Ahead of the formal commencement of a new reporting system, the EPA is also liaising with a selection of operators about voluntarily undertaking early testing of the proposed mass balance reporting system. Information gained from this approach will assist with ensuring the practicability of providing the information sought to support the finalisation of the new system.

## 2 The role of mass balance reporting in helping address key issues

No single reform option can successfully address all of the key issues faced in the waste and resource recovery industry. The EPA is pursuing its suite of priority reforms (listed in Box 1) to better support fair and equitable competition, stability, growth and innovation in the sector. Mass balance reporting requirements are an important element in helping address these key issues as discussed below.

### Static or growing stockpiles

Widespread large-scale stockpiling of a range of materials has emerged in South Australia, with the most prevalent materials stockpiled including soils, fill and overburden, and construction and demolition waste as well as substantial amounts of timber and green waste. Stockpiling has been repeatedly raised by industry as a significant concern due to the potential for levy avoidance through the indefinite holding of material without either recovering and selling the materials or disposing of the material to landfill. Within this, there is a need to balance the reasonable need of many businesses and local government to undertake some degree of stockpiling against excessive stockpiling that can create environmental, abandonment or unfair competition risks.

Mass balance reporting is an essential tool for enabling the EPA to be regularly informed of the scale and nature of stockpiling across the waste and resource recovery sector. Availability of this information will enable evidence-based and timely action to support appropriate stockpiling and the early identification of any issues that may arise at a site or across a segment of the waste and resource recovery sector.



**Large stockpiles of mixed waste derived from construction and demolition waste (with a scrap metal stockpile in the foreground)**

### Waste promoted as ‘product’

Depot operators have a financial incentive to minimise residual wastes requiring disposal to landfill. This helps promote resource recovery but some operations may also seek to avoid the disposal of materials by claiming that the material has a purpose, despite the material having no established and independent market. Such ‘waste’ promoted as ‘product’ is often characterised by processing of mixed waste together with infrequent testing of the ‘products’ for consistency of character. Often, such ‘products’ result in low levels of residual waste to landfill and are used by the producer themselves or a related entity. The EPA seeks the use of only genuine recovered resources, with materials that increase the risk of environmental harm being safely disposed as waste in a timely manner.

Mass balance reporting will assist in achieving the EPA’s resource recovery objectives by enabling monitoring of the movement, storage and fate of materials into, within and from all relevant licensed waste depots. Materials used for on-site operational purposes will need to be specifically reported on, allowing validation of reported amounts relative to EPA approvals for material use (including its use under the proposed ‘Approved Recovered Resource’ assessment and approval process to be established under the Waste Reform Bill).



## Potentially reusable 'fill materials' ending up at landfill due to developmental pressures

When land is being developed, uncertainty regarding testing and treatment, and time–cost pressures can lead to waste soils simply being removed from development sites, with disposal costs paid for. From 2004–05 to 2012–13, research undertaken for Zero Waste SA (now GISA) found that around 82% of landfill soil was of low risk and suitable for potential reuse. Through its reforms, the EPA seeks safe and effective soil management, including reuse through suitable facilities.

Mass balance reporting will provide regular information and greater clarity on the destinations of materials. This will better support the identification of circumstances where suitable 'fill materials' are currently not being recovered. Using aggregated data on this, the EPA will also be able to inform others of potential additional safe resource recovery opportunities.



Material that could be assessed for its potential suitability as a 'fill material'

## Dealing with certain problematic wastes

Cost-effective recovery and disposal mechanisms do not exist for particular waste streams. It is recognised that the safest place for some hazardous waste, for example asbestos to be is disposed in appropriate landfill. Other waste types, such as tyres, may also be problematic waste streams.

By providing regular information on the destinations of materials, mass balance reporting will support the monitoring of the movement, storage and fate of problematic wastes to and from licensed waste depots within South Australia. The system will provide information on all waste, extending beyond information gathered on hazardous materials through current waste tracking requirements.

## Illegal dumping

The EPA as well as other state agencies and local government respond to many illegal dumping incidents every year at significant cost to the South Australian community. As well as reducing amenity and causing potential environmental harm, offenders conducting illegal waste activities undermine the operation of the legitimate waste market by avoiding paying disposal fees, licence fees and the waste levy, and thereby benefiting from a competitive advantage.

The EPA already has a strong focus on illegal dumping with a dedicated investigations team. This team targets illegal waste activities such as unlawful landfilling, dumping of hazardous wastes, commercial quantities of demolition waste, liquid waste and industrial waste, and waste businesses and transporters operating without an EPA licence. Over the past two years, the EPA has achieved its highest ever conviction rates for illegal dumping. Through a variety of waste reform measures, the EPA is seeking to further improve illegal dumping controls for a more level playing field with the true costs of waste disposal being appropriately borne by all sector participants.

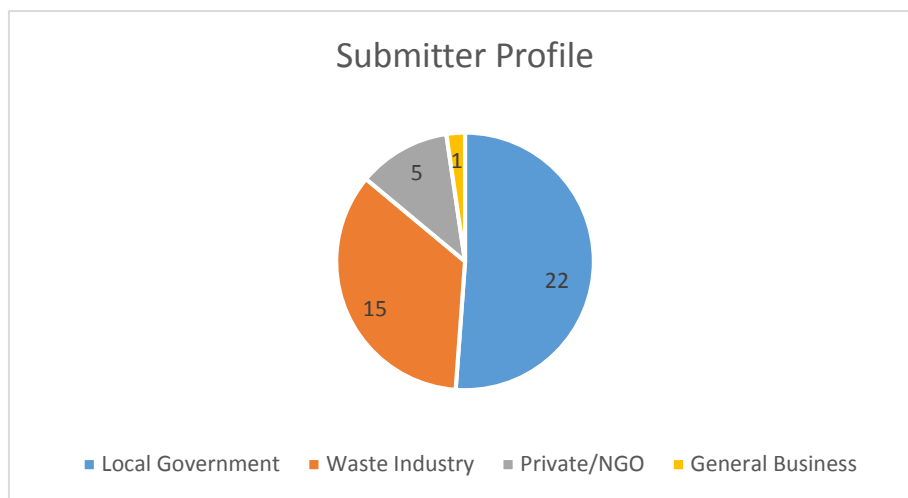
Mass balance reporting has the potential to further assist in the detection or prevention of some illegal dumping by licensees through the regular monitoring of material flows assisting in tracing waste sources and destinations. It is important to note that most illegal dumping occurs outside of the licensed waste industry and is managed by other means.

### 3 Summary of submissions on mass balance reporting

Through the waste reform program, strong industry support for mass balance reporting was initially demonstrated at the Waste Summit convened by the Minister for Sustainability, Environment and Conservation, the Hon Ian Hunter MLC in March 2015. Mass balance reporting has subsequently been discussed through:

- consultation on the discussion paper, *Reforming waste management – creating certainty for an industry to grow* (August–October 2015)
- a workshop at the Waste SA conference and regional and metropolitan consultation sessions held to provide an update on the reform program and the Waste Reform Bill (September–November 2016), and
- regular discussions with the established stakeholder forums.

The discussion paper sought views on key issues relevant to mass balance reporting. From a total of 59 submissions, the EPA received 43 submissions that commented specifically on mass balance reporting. The submitter profile for those submissions is shown in Figure 1.



**Figure 1 Discussion paper submitter profile for mass balance reporting**

Key themes arising from consultation sessions on the discussion paper and these submissions were:

- Major industry stakeholders are strongly supportive of mass balance reporting being introduced.
- For larger sites, the information likely to be required is already being collected by the licensees for their own commercial purposes.
- For smaller sites, given staffing levels and lack of weighbridges, participation in mass balance reporting would be likely to result in significant requirements for licensed operators.
- Concerns included the potential need for weighbridges to be installed, consideration of stock weight changes within reporting periods (eg through moisture loss) and the reasonable need to store materials and resulting stockpiling for periods of time.
- Contrasting views were held regarding the need for mass balance reporting, especially when comparing metropolitan and regional areas. Accordingly, varying thresholds were proposed by submitters based on, for example, waste depot size or geographic location.
- The need for cumulative consideration for related entity operations was accepted, such that if multiple waste depots that together deal with more than any waste threshold are operated by the same (or related) entity then participation in mass balance reporting should be required.
- It is important that as much waste as possible is reported for accurate information and fairness.

At the Waste SA conference workshop on 23 September 2016, participants observed that in order to effectively manage stockpile sizes 'good data on stockpile size and composition, from good tracking and reporting systems' is needed and a central reporting platform could assist with responding to illegal dumping.

Subsequently, during engagement on waste reform priorities and the draft Waste Reform Bill, further feedback regarding mass balance reporting concepts was received.

Within the discussion sessions, support was shown for mass balance reporting being pursued as a priority and for the harmonisation of waste policy, regulation and reporting of waste across the country. The need for mass balance reporting was particularly highlighted in the Adelaide session and the potential for differential impacts of mass balance reporting in regions was reiterated through other sessions. General discussion showed support for mass balance reporting and the EPA focusing regulatory effort and resources in managing and quantifying incoming and outgoing materials from waste and resource recovery facilities to promote the circulation of materials through the waste management process and support a strong market for recovered resources.

Of the 18 written submissions received in response to this consultation process, five commented specifically on mass balance reporting. Several additional submissions emphasised their support for the reforms generally and an eagerness to see the priority reforms implemented.

Submitters believe that there should be requirements in South Australia to report and record the movement and fate of waste in the state, with one specifically advising that accurate reporting will promote a level playing field, both in financial and regulatory terms, across the industry. Accordingly, the intended implementation of a consistent regulatory system is welcome and it was observed that this will assist in the reduction of the administrative and compliance burden for professional waste and resource recovery operators overall.

Comment was also received that thresholds in relation to surveying, reporting and record keeping should not overly encumber small businesses or entities such as regional councils.

Some of those providing submissions noted their continued interest in remaining engaged during the further development of mass balance reporting framework.

## 4 How we have responded to what you said

### Context

To assess appropriate scaling of a mass balance reporting system in light of views expressed, the EPA has researched that:

- Participants in the waste and resource recovery sector include private sole traders, companies and local councils.
- Private sole traders are generally small businesses, including family partnerships, with 140 registered businesses operating small landfills, resource recovery facilities and transfer stations.
- As a key provider of waste and recycling services, local councils take varying approaches to the provision of waste management services including engaging private contractors, forming subsidiary waste management authorities, purchasing services from waste management authorities established by other councils, operating services themselves, or using a mix of these approaches. About 50 councils (ie about 75% of South Australian councils) engage private contractors for the provision of some or all of their waste management services. About half of South Australian councils have either partnered with other councils to establish waste management authorities or use the services of authorities established by other councils. Maximising economies of scale to ensure efficient operations and cost minimisation has been a driving force in the establishment of these authorities.
- Our largest commercial providers manage a significant proportion of the state's waste.

Given this, it is possible to establish a system that excludes small operations from detailed mass balance reporting while effectively capturing most waste material flows.

### Proposed reporting threshold

The EPA is proposing that its mass balance reporting system apply to waste operations that receive 5,000 tonnes of waste or more per year. EPA research has determined that:

- the vast majority of material flow in the state will be captured, as:
  - 96% of waste generated in South Australia is sent to transfer stations and resource recovery facilities that receive more than 5,000 tonnes of waste per year.
  - 98% of waste disposal occurs at landfills that receive in excess of 5,000 tonnes per year.
- this threshold will avoid realisation of fears about the potential for undue burden on small operations, as by number:
  - about 25% of licensed resource recovery facilities, transfer stations and landfills would be subject to mass balance reporting requirements
  - about 58 licensees would be subject to mass balance reporting – some with more than one site.
- this threshold optimises information received without requiring extensive new weighbridges, as:
  - all relevant landfills already have weighbridges
  - over 85% of relevant resource recovery facilities & transfer stations already have on-site or readily accessible weighbridges
  - the remaining relevant resource recovery facilities & transfer stations appear to be appropriately placed to use conversion factors for materials received given their character, with further views on organic waste management reporting sought.

Under the proposed system, there are to be broader volumetric surveys for reporting landfills, annual stocktakes at other reporting depots and video camera usage requirements. The EPA proposes that the additional costs from these are extremely low relative to mass balance reporting's potential benefits from addressing the key issues facing the industry.

## 5 Monitoring and pursuing fair compliance

The EPA would use the various tools available under the EP Act to ensure compliance with proposed new reporting requirements and to further promote fairness within the waste and resource recovery industry, as well as the broader EPA licensed community.

### False and misleading information

Section 119 of the Act makes it an offence to provide false or misleading information to the EPA with significant penalties imposed. Section 120A also provides that it is an offence to provide false or misleading reports. False or misleading information may include under-reporting the quantities of waste received or stockpiled at a waste or recycling depot. It may also relate to falsely classifying waste as a particular waste stream or type.

The EPA considers that these provisions can be used together with the following information tools to deter depot operators from falsely claiming under continuing simple reporting<sup>1</sup> that they are operating below the 5,000 or more tonnes of waste per year threshold to avoid additional mass balance reporting and record-keeping system requirements:

- the EPA's existing powers under regulation 74 of the Environment Protection Regulations to require a volumetric survey from any waste depot during a financial year
- information that will be available to the EPA under the proposed mass balance reporting system about the waste volumes and types arriving from small depots at larger depots (that need to report and keep records under the proposed new system), enabling auditing of waste volume and type claims made by small depots.

### Complying with reporting requirements

Currently, Part 6 of the Environment Protection Regulations sets maximum penalties of \$4,000 (with an expiation of \$300) for the contravention of requirements to:

- submission of an appropriate monthly report no later than 28 days after the last day of each month
- determination of the mass or volume of waste received at a depot in accordance with the Regulations
- requirement for installation of an approved weighbridge
- provision of a volumetric survey within required timeframes.

Regulations for the proposed new mass balance reporting system will continue to provide similar offences to ensure the smooth operation of these important requirements<sup>2</sup>.

Your views are welcome on the adequacy of these penalty and expiation levels and whether any differential penalty or expiation levels should be allowed for repeated late provision of monthly reports or surveys.

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<sup>1</sup> That is, under regulation 71(2) Environment Protection Regulations 2009.

<sup>2</sup> Note that a person who has contravened these requirements may also be ordered by the Environment, Resources and Development Court to pay to the EPA an amount not exceeding the Court's estimation of the amount of the economic benefit obtained from the contravention under s133 of the Environment Protection Act 1993.

## 6 Detailed proposal

The current Environment Protection Regulations, in particular Part 6, are proposed to be amended to build upon existing reporting and record-keeping requirements. Your views are sought on the proposed new reporting and related requirements for operators of depots receiving 5,000 tonnes or more of waste each year.

### Reports and surveys

#### Waste monthly reports

A person licensed to conduct a depot receiving less than 5,000 tonnes of waste per year will continue to report the total mass of waste received at the depot in accordance with current requirements (that is, total mass from metropolitan Adelaide, total mass from outside metropolitan Adelaide and total mass calculated from vehicle weight conversions).

A person licensed to conduct a depot receiving 5,000 tonnes or more of waste per year must, within 28 days after the end of each month, provide the EPA with a report that includes:

- 1 the total mass of waste received at the depot during the previous month in accordance with current requirements
- 2 the **waste streams**<sup>3</sup> received at the depot during the previous month
- 3 total mass of material transferred from the depot during the previous month (and whether transferred elsewhere in South Australia, interstate or overseas)
- 4 the total mass of material remaining stockpiled onsite during the previous month
- 5 the total mass of material used onsite during the previous month
- 6 the total mass of material disposed onsite during the previous month
- 7 the **waste types**<sup>4</sup> transferred from, stockpiled, use or disposed by the depot during the previous month.

The method of measurement of waste is specified below. Information must be submitted in the form and manner approved by the EPA. Unless otherwise specified, mass will be required to be reported in tonnes with how the measurement was undertaken (eg weighbridge or conversion).

#### Volumetric surveys of waste or recycling depots

A person licensed to conduct a depot:

- 1 that has received 5,000 tonnes or more of solid waste for disposal at the depot in the preceding 12 months must have volumetric surveys of the entire depot site conducted during the following July and January, or
- 2 if requested by the EPA to conduct a volumetric survey must have a volumetric survey conducted within the financial year, and
- 3 provide the volumetric survey to the EPA no later than three months after the survey has been undertaken.

The volumetric survey must be carried out and provided by a licensed or registered surveyor under the *Survey Act 1992* or a person, or person of a class, approved by the EPA. The survey must be carried out in the form and manner specified by the EPA.

The person licensed to conduct a depot must keep a copy of the results of each survey for a period of at least five years after the date on which the survey is carried out, and make those results available for inspection and copying by an authorised officer on request.

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<sup>3</sup> Refer to discussion on waste streams.

<sup>4</sup> Refer to discussion on waste types.

### Annual stocktake requirements for waste or recycling depots

A person licensed to conduct a depot that has received 5,000 tonnes or more of solid waste in the preceding 12 months who is not required to undertake a volumetric survey in a given financial year must provide an annual stocktake of material held onsite within three months after the end of that financial year. The stocktake must be carried out in the form and manner specified by the EPA.

### Record keeping

#### Waste streams and waste types

The **waste stream** is to be determined in accordance with EPA requirements as published from time to time.

It is proposed that waste streams for general reporting may be:

- **Municipal solid waste** – The solid component of the waste stream arising from domestic premises (through kerbside collection, hard waste or directly from domestic premises).
- **Commercial and industrial waste** – the solid component of the waste stream arising from commercial, industrial, government, public or private collections from domestic premises (not collected as municipal solid waste).
- **Construction and demolition waste** – the solid component of waste stream arising from the construction, demolition or refurbishment of buildings or infrastructure, and includes waste soil or waste fill.
- Hazardous waste.
- **Other** – if it is not possible to identify whether the waste is municipal waste, commercial and industrial waste or construction and demolition waste.

Note: further delineation of materials may be required in record-keeping to ensure compliance with licence requirements, for example, in relation to undercover storage requirements for particular matter.

The **waste type** is a reference to the waste stream and (if applicable) waste substream that best describes the source of the waste and is to be determined in accordance with the EPA requirements as published from time to time.

It is proposed that waste types for reporting may be as set out in Table 1.

#### Waste and other material received at depot

A person licensed to conduct a depot must record the following information in relation waste or other material received at the depot:

- 1 the quantity of any waste received and whether it is from premises within or outside of metropolitan Adelaide, its waste stream and, where practically possible, its waste type
- 2 the quantity of any other material received and a description of the nature of that other material
- 3 the quantity of any waste received arising from a biological outbreak or natural disaster recognised by the EPA
- 4 the date and time the waste or other material was received
- 5 the registration number of the vehicle used to deliver the waste or other material to the depot
- 6 in the case of waste transported to the depot from another waste depot:
  - (a) The name and address of the other depot
  - (b) The number of any environment protection licence for the other depot.
- 7 particulars of where any waste or other material received is placed at the depot.

## Mass balance reporting

**Table 1** Waste type reporting categories

Entry via weighbridge	Exit via weighbridge	Entry without weighbridge	Exit without weighbridge
Asphalt/bitumen	Approved RR	Asphalt/bitumen	Approved RR
Bricks	Approved RR	Bricks	Approved RR
Concrete	Approved RR	Concrete	Approved RR
Insulation	Insulation	Insulation	Insulation
Masonry	Approved RR	Masonry	Approved RR
Plasterboard	Plasterboard	Plasterboard	Plasterboard
Quarried materials eg gravels	Approved RR	Quarried materials, eg gravels	Approved RR
Separate into type	Approved RR	Separate into type	Approved RR
Waste fill (soils)	Approved RR	Waste fill (soils)	Approved RR
Wood/timber (excl trees)	Wood, timber/RDF	Wood/timber (excluding trees)	Wood, timber/RDF
Biosolids, manures	Biosolids, manures	Biosolids, manures	Biosolids, manures
Dredging spoil	Dredging spoil	Dredging spoil	Dredging spoil
Polystyrene	Separate into type	Separate into type	Separate into type
Residues – define by type	Residues – define by type	Residues – define by type	Residues – define by type
Shredder floc	Shredder floc	Shredder floc	Shredder floc
Carpet	Carpet	Carpet	Carpet
Ceramics, tiles, pottery	Ceramics, tiles, pottery	Ceramics, tiles, pottery	Ceramics, tiles, pottery
Co-mingled recyclables	Separate into type eg bottles, cans	Co-mingled recyclables	Separate into type eg bottles, cans



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Entry via weighbridge	Exit via weighbridge	Entry without weighbridge	Exit without weighbridge
Compost/mulch	Approved RR eg compost/mulch	Compost/mulch	Approved RR eg compost/mulch
E-waste	E-waste	E-waste by type <sup>1</sup>	E-waste by type <sup>1</sup>
Food organics	Food organics	Food organics	Food organics
Glass	Glass	Glass	Glass
Green waste	Approved RR	Green waste	Approved RR
Mattresses <sup>2</sup>	Mattresses <sup>2</sup>	Mattresses <sup>2</sup>	Mattresses <sup>2</sup>
Metals - aluminium	Metals – aluminium	Metals – aluminium	Metals – aluminium
Metals - non-ferrous (excl aluminium)	Metals – non-ferrous (excl aluminium)	Metals – non-ferrous (excl aluminium)	Metals – non-ferrous (excl aluminium)
Metals - steel/ferrous	Metals – steel/ferrous	Metals – steel/ferrous	Metals – steel/ferrous
Mixed waste <sup>3</sup>	Mixed waste <sup>3</sup>	Mixed waste <sup>3</sup>	Mixed waste <sup>3</sup>
Paper/cardboard	Paper/cardboard	Paper/cardboard	Paper/cardboard
Plastics - film	Plastics - film	Plastics - film	Plastics - film
Plastics - hard	Plastics - hard	Plastics - hard	Plastics - hard
Street sweepings	Street sweepings	Street sweepings	Street sweepings
Textiles	Textiles	Textiles	Textiles
Trommel fines	Approved RR	Trommel fines	Approved RR
Whitegoods	Metals	Whitegoods	Whitegoods
Asbestos	Asbestos	Asbestos	Asbestos
Battery - car <sup>4</sup>	Battery – car <sup>4</sup>	Battery – car <sup>4</sup>	Battery – car <sup>4</sup>

## Mass balance reporting

Entry via weighbridge	Exit via weighbridge	Entry without weighbridge	Exit without weighbridge
Battery - heavy truck <sup>4</sup>	Battery – heavy truck <sup>4</sup>	Battery – heavy truck <sup>4</sup>	Battery – heavy truck <sup>4</sup>
Battery - motorcycle <sup>4</sup>	Battery – motorcycle <sup>4</sup>	Battery – motorcycle <sup>4</sup>	Battery – motorcycle <sup>4</sup>
Battery - SUV/4WD/light commercial <sup>4</sup>	Battery – SUV/4WD/light commercial <sup>4</sup>	Battery – SUV/4WD/light commercial <sup>4</sup>	Battery – SUV/4WD/light commercial <sup>4</sup>
Bottom ash	Bottom ash	Bottom ash	Bottom ash
Clinical and related waste	Clinical and related waste	Clinical and related waste	Clinical and related waste
Fly ash	Fly ash	Fly ash	Fly ash
High level contaminated soils	High level contaminated soils	High level contaminated soils	High level contaminated soils
High level contaminated waste	High level contaminated waste	High level contaminated waste	High level contaminated waste
Intermediate contaminated waste	Intermediate contaminated waste	Intermediate contaminated waste	Intermediate contaminated waste
Intermediate soils	Intermediate soils	Intermediate soils	Intermediate soils
Low level contaminated soils	Low level contaminated soils	Low level contaminated soils	Low level contaminated soils
Low level contaminated waste	Low level contaminated waste	Low level contaminated waste	Low level contaminated waste
Tyres – light truck <sup>5</sup>	Tyres – light truck <sup>5</sup>	Tyres – light truck <sup>5</sup>	Tyres – light truck <sup>5</sup>
Tyres – motorcycle <sup>5</sup>	Tyres – motorcycle <sup>5</sup>	Tyres – motorcycle <sup>5</sup>	Tyres – motorcycle <sup>5</sup>
Tyres – passenger <sup>5</sup>	Tyres – passenger <sup>5</sup>	Tyres – passenger <sup>5</sup>	Tyres – passenger <sup>5</sup>
Tyres – truck <sup>5</sup>	Tyres – truck <sup>5</sup>	Tyres – truck <sup>5</sup>	Tyres – truck <sup>5</sup>
Other – Quarantine waste	Other – Quarantine waste	Other – Quarantine waste	Other – Quarantine waste
Other – Radioactive waste	Other – Radioactive waste	Other – Radioactive waste	Other – Radioactive waste

## Reforming waste management – creating certainty for an industry to grow

Key re likely sources for waste type	Solid waste – MSW/C&I
Solid waste - C&D	Listed/Controlled/trackable waste
Solid waste - C&I	Other waste

- <sup>1</sup> Default values for various e-waste items apply.
- <sup>2</sup> Default value of 40 kg (average queen size mattress weight).
- <sup>3</sup> Only to be used where it is not practicable to categorise into relevant waste types.
- <sup>4</sup> Default values for various battery sizes apply.
- <sup>5</sup> Default values for various tyre sizes apply.

### **Waste and other materials transported from depot for use, recovery, recycling, processing or disposal**

A person licensed to conduct a depot must record the following information in relation to each load of waste or other material transported from the depot for use, recovery, recycling, processing or disposal at another place:

- 1 the quantity of any waste contained in the load, its waste stream and waste type
- 2 the quantity of any other material contained in the load and a description of the nature of that other material
- 3 the quantity of any waste received arising from a biological outbreak or natural disaster recognised by the EPA
- 4 the date and time the load is transported from the depot
- 5 the registration number of the vehicle used to transport the load
- 6 the name and address of the place to which the load is transported and the number of any environment protection licence for that place
- 7 in the case of waste or other material in the load that is removed from a stockpile required to have an identification number – the identification number
- 8 details of any recycling, mixing, blending or processing of any waste in the load, including the composition as a proportion of waste and other material in any waste-derived material in the load.

### **Other records relating to vehicles**

A person licensed to conduct a depot must record the following particulars in relation to vehicles that enter the depot for a purpose related to the operation of the depot (whether or not the vehicle is being, or is intended to be, used to deliver or transport waste):

- 1 the date and time on which the vehicle enters the depot
- 2 the date and time on which the vehicle leaves the depot
- 3 the registration number of the vehicle
- 4 the purpose of entry (eg for disposal and on-site use), and
- 5 the weight of the vehicle upon entry and departure.

### **Material used for operational purposes at depot**

A person licensed to conduct a depot must record the following information in relation to any or other material used for operational or related purposes:

- 1 the quantity of waste and its waste type
- 2 the nature of the purpose
- 3 the date the waste was used
- 4 particulars of any EPA approval relating to the use of waste or other material for the purpose.

Activity that constitutes an operational or related purpose is to be determined in accordance with the EPA requirements as published from time to time or as may be prescribed by regulation in subsequent reform proposals.

### **Waste and other material stockpiled at depot**

The holder of a waste or recycling depot licence must record the following information in relation to any waste and other material stockpiled at the depot:

- 1 an identification number for each stockpile and the material type(s) in the stockpile
- 2 quantity of any waste (and its waste type) or other material held in each stockpile at the time of each monthly report and the annual stocktake.

## Keeping, retention and availability of records

The holder of a waste or recycling depot licence who is required to record information must:

- 1 record and keep the information in the form and manner specified by the EPA
- 2 ensure that each record is retained for at least five years after the record is made
- 3 make any of the records available for inspection and copying by an authorised officer on request.

## Measurement of waste

### Measurement of waste at depots required to have weighbridges

If a waste depot has, in a financial year, received 5,000 tonnes or more of solid waste at the depot, the person licensed to conduct the depot must ensure that an approved weighbridge is installed at the depot no later than 4 months after the end of that financial year.

The person licensed to conduct a depot must:

- 1 Ensure that:
  - (a) each vehicle that enters or leaves the depot for a purpose relating to the operation of the depot (whether or not the vehicle is being, is intended to be or has been used to transport or deliver waste) is weighed by the weighbridge on entering and on leaving the depot unless otherwise approved<sup>5</sup>
  - (b) during any period that the weighbridge is out of operation, an alternative method approved by the EPA is used to measure and record the quantity of waste and other material transported to or from the waste depot
  - (c) take all reasonable steps to ensure that the weighbridge is maintained in proper working order
  - (d) ensure that the weighbridge has related software that records quantities of waste in any form and manner specified by the EPA
  - (e) notify the EPA of any incident that results in the weighbridge being out of operation for any period of more than 24 hours (and do so immediately on becoming aware that the incident will result in the weighbridge being out of operation for any such period).
- 2 Comply with any other requirement relating to the installation or operation of the weighbridge that the EPA may specify by written notice to the licence holder.

The EPA may require that:

- 1 a person licensed to conduct a depot that requires a weighbridge submit to the EPA, within specified timeframes, a plan of the depot indicating the proposed vehicle flow controls, including the entry and exit points where waste is transported into and out of the waste depot (a 'vehicle flow control plan').
- 2 if any change then occurs in relation to those vehicle controls, a revised vehicle control plan must be submitted to the EPA no later than 30 days after the relevant change occurs
- 3 a person licensed to conduct the depot keep a copy of the latest vehicle flow control plan at the depot and make the plan available for inspection and copying by an authorised officer on request.

### Measurement of waste at depots not required to have weighbridges

A person licensed to conduct a depot that does not have, or is not required to have, a weighbridge, or where certain waste is able to be received without being weighed on a weighbridge, must calculate the quantity of waste or other material received at the depot in accordance with conversion standards established by the EPA from time to time.

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<sup>5</sup> The EPA may allow exemptions from this requirement. For example, the EPA is aware that various depots use weighbridges for commercial vehicles entering and tare weights for exit while domestic 'trailer-traffic' is managed using conversion factors.

For depots receiving 5,000 tonnes of waste or more per annum, all other reporting and record-keeping requirements are the same as for all depots that do, or are required to have, a weighbridge, including:

- 1 information relating to the waste received at the depot
- 2 waste and other materials transported from the depot for use, recovery, recycling, processing or disposal
- 3 records relating to vehicles
- 4 material used for operational purposes at the depot
- 5 waste and other material stockpiled at the site.

### Monitoring

#### EPA may require video monitoring system

- 1 The EPA may, by written notice to the holder of a waste or recycling depot licence, require the licence holder:
  - (a) to install and operate a video monitoring system that conforms with the specifications in the notice
  - (b) to operate the system during the times specified in the notice or at all times.
- 2 The licence holder must:
  - (a) comply with the requirements specified in the notice within the period specified in the notice
  - (b) ensure that video monitoring records are kept for a least one year after being made
  - (c) Make those recordings available for inspection and copying by an authorised officer on request.

It is intended that all landfill depots receiving 5,000 tonnes of waste or more per annum must have a video monitoring system installed to monitor their weighbridges.

### Confidentiality

It will remain the case that the confidentiality of information obtained through mass balance reporting and examination of records will be protected in accordance with section 121 of the EP Act.

Aggregated, de-identified information may be reported upon and shared by the EPA, most particularly to assist with state and national waste reporting and in identifying further resource recovery opportunities.