Reforming waste management – Creating certainty for an industry to grow

EPA
South Australia

Reforming waste management – Creating certainty for an industry to grow

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Stakeholder consultation

Engagement and collaboration with members of the waste management and resource recovery industry and other key stakeholders has assisted the State Government in formulating the policy proposals raised in this discussion paper. This engagement has included the Waste Summit convened in March 2015 by the Minister for Sustainability, Environment and Conservation, the Hon Ian Hunter MLC, and the Waste Management Industry Reference Group.

Building on our early engagement, the objectives of this Discussion Paper are to:

- summarise the key issues faced currently within the waste management and resource recovery industry
- discuss reform options to assist in achieving a better and more equitable industry while reducing environmental risk and damage cost effectively
- seek your views on selected draft reform options
- inform you of the intent and status of other reforms.

Responses to this paper will guide legislative changes to be brought forward later this year. These changes will help to foster growth in the industry and drive job creation.

Sections 1–3 of this document provide the context of the waste management and resource recovery industry, strategic government objectives, an outline of previous reforms, and details of the issues and drivers influencing the industry. Section 4 sets out the key issues that are currently faced in the waste management and resource recovery industry. Section 5 identifies and discusses various options that may help with addressing these issues. Section 6 goes on to discuss potential amendments to the *Environment Protection Act 1993* to enhance tools to regulate the sector and better tackle illegal dumping. Section 7 nominates several high-level ideas to deal with particular problematic wastes, to help avoid waste and enhance resource recovery. Questions are posed through sections 5, 6 and 7 and appear in collated form at the end of the document.

We are keen to obtain your observations and advice on the options and questions presented in this paper. You may choose to address all of the questions or focus on particular issues or options of interest and also seek to put forward other options to address the issues faced. Your views and answers to questions posed in this document will:

- assist in analysing the potential opportunities and costs that may arise from implementation of proposed reforms
- support examination of which option(s) will be best for dealing with an issue
- aid in pursuing the detailed design of some reform options.

Submissions should clearly reference the section, question and page to which each comment relates and need to be submitted by 2 October 2015.

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

Waste Reform Project
Environment Protection Authority
GPO Box 2607
ADELAIDE SA 5001
Email: epainfo@epa.sa.gov.au (mark subject as ‘Reforming waste management’)

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 quoted in EPA reports.

Foreword

South Australia has established its place among the leaders in waste management reform and resource recovery, with the State's recycling rate being amongst the world's best. However, there is still much that can be done to ensure that our resources are managed to best protect our environment while creating an increasingly vibrant state.

Activity in the resource recovery sector has steadily increased over the past 10 years, incentivised through government policy, including Zero Waste SA programs and underpinning regulation administered by the South Australian Environment Protection Authority (EPA). The establishment of Green Industries SA is intended to build upon that success.

The waste management and resource recovery industry, including local government activity, makes an important contribution to the 'green economy' and is a significant sector in South Australia. It creates around 4,800 jobs either directly or indirectly and over $1 billion in annual turnover. With the right regulatory settings and other drivers in place, it is anticipated that this sector will continue to grow[1].

The more waste that we can recycle, reuse or remanufacture, the stronger the basis for an expanded recycling and resource management industry, creating more 'green jobs' in reprocessing, sorting and collection of materials.

Our state has helped to lead the way in demonstrating that protecting the environment need not come at the expense of industry activity – but can support business and jobs growth.

Well-framed legislation and policy that is effectively used is an essential element in supporting our industries, and can also have an important influence on markets.

From regular engagement with industry, the Government understands that key themes in effectively supporting business include:

- Partnering – the role of the EPA as a regulator, educator, referee and coach.
- Early engagement when making changes allows business to adapt.
- Certainty is crucial and an underlying factor in securing future investment.
- Strong, robust regulation and a level playing field are needed.
- Good performers should be rewarded.
- Helping define what 'better' looks like to encourage innovation.
- Building markets through better procurement.

Identifying new opportunities to support resource recovery[2].

The Government's early engagement processes on the regulation of the waste management and resource recovery industry, including the Waste Summit in March 2015, has highlighted the need for waste reform to achieve industry certainty and robust regulation that better supports a level playing field and a healthy environment.

The Hon Ian Hunter MLC
Minister for Sustainability, Environment and Conservation

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1 Report for ZWSA: Econsearch, 'Economic Aspects of the Zero Waste SA Strategy Review' (2014) as cited in Resources and Waste Advisory Group, *Review of South Australia's Waste Strategy 2011–2015* (2014).

2 Points adapted from EPA Round-table Report 2014 and advice on feedback from consultation on the establishment of Green Industries SA

Executive summary

South Australia has introduced many waste management reforms over the past decade that have successfully promoted resource recovery in our state and established our reputation as a leader in this field.

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 settings to attract investment, drive innovation and create jobs. This is being achieved through new initiatives such as the establishment of Green Industries SA and creating a regulatory regime that better underpins the confident and fair operation of this sector.

Despite innovation and growth in the sector, feedback from stakeholders has consistently indicated the need changes to regulatory settings to help unlock the next growth opportunities and address current challenges within the waste and resource recovery industry. The industry continues to be impacted by:

- static or growing stockpiles
- waste promoted as ‘product’ and issues around ensuring environmental risks are reliably tested
- potential re-use of ‘fill materials’ ending up at landfill due to development pressures
- the need to deal with certain problematic wastes
- illegal dumping.

Opportunities also exist to respond to increasing interest in energy from waste schemes and to pursue further development of safe resource recovery activity.

Table A summarises the key options explored in the paper that may help government to better address the identified problems, opportunities and underlying other issues for the future improvement of the waste management and resource recovery industry. The table identifies the potential role of each option and its likely level of influence on each relevant matter. Some are expected to result in major or moderate improvements while other supporting changes are not expected to have a direct impact on an issue. Instead they aim to either underpin the success of other changes or will help with understanding and enforcement. The table also indicates for each topic whether the purpose of the paper is to support consultation on the reform option on the character of a proposal that is to be pursued, or to inform of reforms that are to be pursued. The general character of discussion and input sought in respect of each of these options is as follows:

- **Mass balance reporting** involves a proposal to amend the *Environment Protection Regulations 2009* (EP Regulations) to require licensed waste facilities including transfer stations, resource recovery facilities and waste disposal depots, to report on the monthly tonnages of materials that a site receives, stockpiles and processes and transfers for sale or disposal. It is anticipated that the scheme would be supported by requirements for annual volumetric and topographical survey. Electronic Waste Tracking: views are sought on the reasonableness and scope of the proposal and the implications of requiring electronic tracking for wastes that are already tracked.
- **Upfront levy liability** involves a proposal to amend the EP Regulations for a wider range of facilities will be liable for the waste levy, including those that store, recover, recycle or process waste. This liability would be extinguished when facilities send waste off-site for lawful reuse, processing or disposal. These facilities would only

Table A Reform options to address identified issues

Proposed reform options – with potential level of influence on issue (major, moderate or supportive to improvements)	**Problems, opportunities and other underlying issues**								
	Static or growing stockpiles	**Waste promoted as 'product' and ensuring environmental risks are reliably tested**	**Potential 'fill' materials end up at landfill due to development pressure**	**Dealing with problematic wastes**	**Illegal dumping**	**Increasing interest in 'Energy from Waste' schemes**	**Further developing safe resource recovery**	**Balancing risk-based flexibility and clarity/ certainty for reuse of wastes**	**Inability to identify detailed resource recovery requirements**
Mass balance reporting (5.1)	Supporting	Supporting	Supporting	Supporting	Moderate	Supporting	Supporting	Supporting	Major
Upfront levy liability (5.2)	Major	Supporting						Supporting	
Improving stockpiling controls (5.3), eg licence conditions, audits	Major	Supporting	Supporting	Moderate			Supporting	Supporting	
Better managing waste soils & fill (5.4)		Major	Major					Major	
Changes to the waste levy (5.5), eg collection, differential levy, rate		Major (potentially)	Major (potentially)	Major (potentially)	Moderate	Major (potentially)	Major (potentially)	Supporting	Supporting
Use of financial assurances (5.6)	Major	Major		Supporting		Moderate		Moderate	
Expanded transport licensing (5.7)		Supporting			Moderate		Supporting		
Proximity principle (5.8)				Moderate			Moderate		
Enhanced recovered product plans (5.9)	Supporting	Major	Supporting	Supporting		Moderate	Major	Major	Supporting

Proposed reform options – with potential level of influence on issue (major, moderate or supportive to improvements)	**Problems, opportunities and other underlying issues**								
	Static or growing stockpiles	**Waste promoted as 'product' and ensuring environmental risks are reliably tested**	**Potential 'fill' materials end up at landfill due to development pressure**	**Dealing with problematic wastes**	**Illegal dumping**	**Increasing interest in 'Energy from Waste' schemes**	**Further developing safe resource recovery**	**Balancing risk-based flexibility and clarity/ certainty for reuse of wastes**	**Inability to identify detailed resource recovery requirements**
Certificates of compliance (5.10)	Supporting	Supporting				Supporting	Supporting	Supporting	
Recovering illegally obtained economic benefit (5.11)	Major (potentially)	Major (potentially)			Major			Major (potentially)	
Energy from Waste technical and policy guidance (5.12)				Supporting		Major	Supporting		
Improved site monitoring (5.13)	Supporting	Supporting		Supporting			Supporting	Supporting	Supporting
Simplifying waste taxonomy and definitions (5.14)	Supporting	Supporting	Supporting	Supporting		Supporting		Supporting	
Environment Protection Act amendments (6)	Supporting - major	Supporting - major		Supporting	Supporting - major			Supporting - major	
Innovative change ideas (7)				Moderate	Moderate	Moderate	Major		
	Pursuance of options will help achieve the intended better outcomes ('what the EPA seeks')								

have to pay the levy if waste is stockpiled on that site for more than 12 months or if more waste is stored than is legally allowed. Views are sought on the effectiveness of this proposal to deter stockpiling and the reasonableness of proposed timing.

- **Improving stockpiling controls** identifies the different impacts of stockpiling and the options to address these, including additional auditing and licence condition amendment to manage potential environmental risks, the broader use of financial assurances to address potential abandonment risks, and to explore expansion of the EPA's legislative powers to effectively manage excessive accumulation of material. Views are sought on the influencers of stockpiling and potential benefits of change.
- **Better managing waste soils and fill** briefly reports on this issue and the EPA's continuing review of the *Standard for the production and use of waste derived fill*, the intent to explore improvements to government procurement processes, the duties of large waste generators in respect of their waste and the potential use of soils banks. Views are sought on potential options regarding responsibility for large waste generators.
- **Changes to the waste levy** outlines the character of the current levy and its distribution, and then proceeds to explore the potential for the use of differential levies for problematic wastes, and the potential for increases to the waste levy. Views are sought on what (if any) waste types should attract a differential levy, the likely impacts of changes to the levy, other options that should be considered and on levy expenditure.
- **Use of financial assurances** reports on the EPA's intention to develop a policy to support the effective use of financial assurances and the key features that such a policy will address. Views are sought on the types of financial assurance that may be preferred, the scope of use of financial assurances and the elements that a policy should address.
- **Expanded transport licensing** introduces the idea of licensing additional commercial transporters of waste to cater for collection of domestic waste by private operators, and the transport of construction and demolition waste. Views are sought on whether the proposals included are appropriate.
- **Proximity principle** discusses the concept that waste should be managed as close to its place of origin or generation as is responsibly possible. It discusses whether the introduction of a proximity principle could be a useful option for managing any South Australian wastes – either particular wastes or generally. Views are sought on whether this option should be explored further and what advantages or disadvantages are likely to arise from the use of this principle.
- **Enhanced recovered product plans** briefly reports on the EPA's intention to implement recovered products plans more effectively in order to better regulate the processing and use of recovered materials. The intention to review cost-recovery models for new products is outlined. Views are sought on what steps need to be taken to aid effective use of recovered product plans.
- **Certificates of compliance** discusses the EPA's intended approach to introducing the regular use of certificates of compliance for a licensee to self-assess compliance with their conditions of licence annually and report this to the EPA. Views are sought on preferences around the how certificates of compliance are implemented.
- **Recovering illegally obtained economic benefit** outlines the EPA's intention to develop a policy to support successful recovery of economic benefits arising from contraventions of the *Environment Protection Act 1993* and discusses the matters that the policy will address. Views are sought on the likely value of the intended policy.
- **'Energy from waste' technical and policy guidance** outlines existing policy and briefly reports on the EPA's intention to develop further guidance in this area.
- **Improved site monitoring** briefly notes that the EPA will continue to explore how technological advances can support its regulatory work.
- **Options for changes** to the EP Act explores a range of amendments to provide more effective tools to manage the waste and resource recovery sector and tackle illegal dumping, including amendment to the Objects of the Act, amendment of the definition of 'waste' to allow 'products' to be declared, new expiation powers, insurance requirements, scope of use of financial assurances, evidentiary provisions around waste, cost-recovery powers for

the assessment of new product proposals, responsibility for pollution, tracking device use requirements, and authorised officer entry powers. Views are sought regarding these changes.

- **Innovative change ideas** introduces high-level conceptual ideas to gauge the level of early support for further exploration of reform proposals relating to banning the use of microplastics, managing expanded polystyrene food packaging, mandatory recycling of food waste and the idea of 'save as you throw' waste pricing. Views are sought on the viability of such options and potentially desirable alternatives or other innovative approaches.

A consolidated list of questions is provided at the end of the paper. We are keen to obtain your observations and advice on the options and questions presented in this report. You may choose to address all of the questions or focus on particular issues or options of interest to you.

Views and submissions are to be submitted by 2 October 2015 and feedback will then be reviewed along with resourcing considerations, to determine the options to be pursued for the reform program.

Implementation of some of the proposals canvassed in the discussion paper will be reliant on additional resources. These would include the need for the development and implementation of an information system, contemporary technologies for monitoring waste, and additional data analysis and audit staff to administer mass balance reporting, upfront levy liability and certificates of compliance. As part of this reform, the EPA will also consider the distribution of costs and work to ensure a better cost-recovery approach to reflect effort required, for example, for the assessment of potential products and, potentially, increased auditing requirements.

1 Introduction

> We must continually strive to ensure our economic prosperity and our enviable lifestyle progress together[3].

In recent years, through effective policy measures and industry innovation, South Australia has established its place among the leaders in waste management reform and resource recovery. Our recycling rate is among the world's best[4].

The industry has advised that further regulatory reforms are required to unlock future growth potential and drive growth in the sector. Through targeted and effective regulations the dual aims of economic growth and greater environmental protection can be achieved. Industry advice is complimented by research for Zero Waste SA (ZWSA) by a team of international and Australian experts that concluded[5]:

> The waste and resources sector is well positioned to deliver new, high-technology and advanced industry. Establishing and creating an environment that attracts such economic growth within the state would seem to be a strategic imperative. We consider the potential for growth in small and medium sized enterprises in the remanufacturing sector in South Australia to be worthy of policy attention.
>
> Being a leader in this sector will become increasingly important not only from a cost efficiency and competitiveness perspective, but also to facilitate global market participation and acceptance of products and services, and for South Australia to be attractive as an investment destination.

In addition to regulatory reform the research identified the need to modernise existing infrastructure through investments in new technologies.

Achieving growth and new industry development in South Australia will help drive job creation and greater economic return to the State through increasing the proportion of waste that is recovered and reprocessed locally, as compared to interstate or oversea.

The South Australian Government is committed to working with the industry to drive investment and innovation, and create jobs. This discussion paper will assist in forming the required framework that delivers growth while protecting the environment. It is one plank of the work being done in this sector. Another is the newly formed Green Industries SA (GISA).

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3 Points adapted from EPA Round-table Report 2014 and advice on feedback from consultation on the establishment of Green Industries SA.

4 *Waste Strategy 2015–2020* (2015).

5 Report for ZWSA: Resources and Waste Advisory Group, *Review of South Australia's Waste Strategy 2011–2015* (2014) pg 52.

2 Success stories and lessons learned

The state government's two waste strategies over the past decade have set ambitious targets and actions in waste management, requiring innovative policy and regulatory solutions. As resource recovery has increased and environmental protections expected by our community have changed over time, new management issues have arisen.

In analysing the waste and resource recovery industry in 2007, the EPA Board's Waste to Resources Subcommittee considered that 'a comprehensive, functional and well-understood framework for regulating the activities associated with the waste and resources recovery industry using an activity and risk-based approach' needed to be developed and that the framework should be implemented through several legislative and administrative measures[6].Significant changes in the resource recovery industry were subsequently supported by the following legislative and administrative measures:

- the *Environment Protection (Waste to Resources) Policy 2010* (Waste to Resources EPP)
- *Waste management – regulatory framework and objectives*[7]
- *Waste-derived materials – guiding principles for determining approval processes and product standards*[8]
- standards for the production and use of refuse derived fuel, waste derived fill and waste derived soil enhancers[9]
- the establishment of the EPA Illegal Dumping Unit and clear compliance priorities.

Working alongside the EPA, ZWSA built capacity, improved markets and assisted the development of new products and skills by investing more than $80 million from waste levy funds in the industry over the past decade (eg through grant programs, education and research—summarised in the consultation draft Waste Strategy 2015–2020). Benefit cost ratios for ZWSA-funded projects that improved industry competitiveness achieved ratios of 6.7 and for infrastructure investment between 1.4 and 11.5[10]. The resultant scale of change in resource recovery and landfill disposal is shown in Figure 2.

The total waste produced in South Australia has increased significantly since 2003–04 through increased waste per capita generation and population growth. Some 4.5 million tonnes of waste was generated in 2013–14 with a little under 1 million tonnes disposed to landfill[11]. South Australia has the highest recorded per capita recycling rate in Australia[12], with nearly 80% of total waste generated being recovered (ie around 3.6 million tonnes was reused, recycled or subject to energy or material recovery).

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6 EPA, EPA Board Waste to Resources Subcommittee Report (2007). Objectives and supplementary outcomes desired are set out in Appendix 1.

7 EPA, *Waste management – regulatory framework and objectives* (2008).

8 EPA, *Waste-derived materials – guiding principles for determining approval processes and product standards* (2008).

9 Standards, www.epa.sa.gov.au.

10 Report for ZWSA: Resources and Waste Advisory Group, *Review of South Australia's Waste Strategy 2011–2015* (2014) pp i–ii.

11 Report for ZWSA: Rawtec, *South Australia's Recycling Activity Survey 2013–14 Financial Year Report* (2015), pg 6.

12 Report for ZWSA: Rawtec, *South Australia's Recycling Activity Survey 2013–14 Financial Year Report* (2015), pg 31.

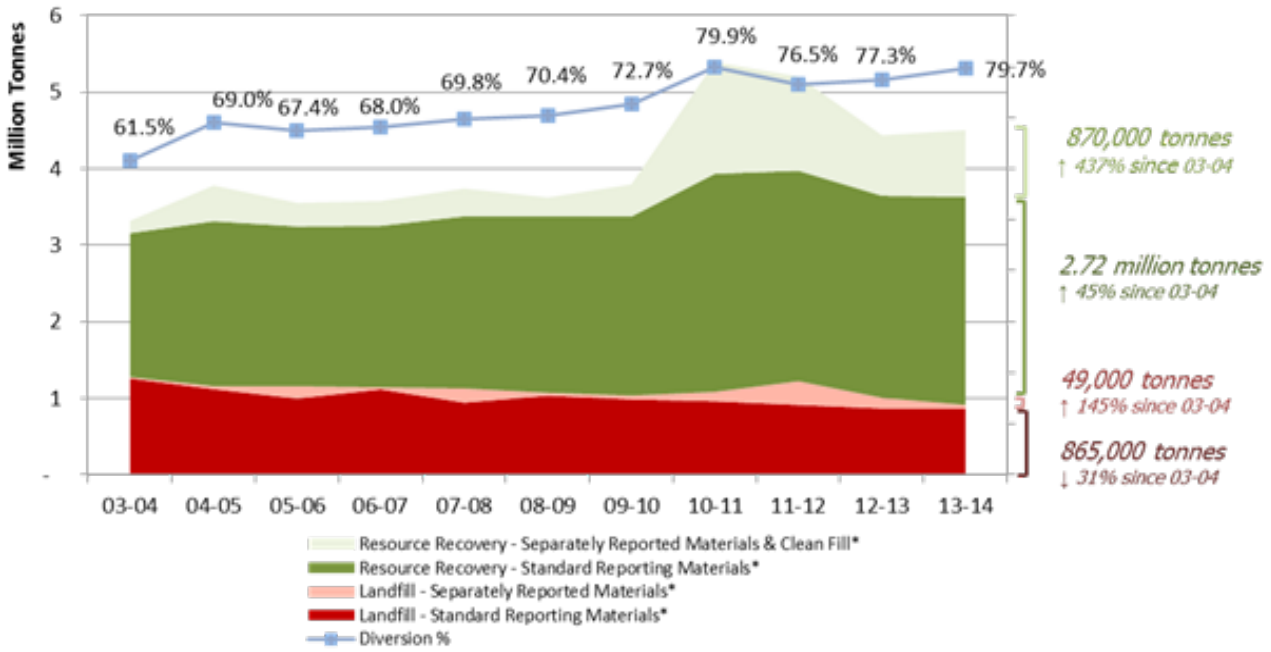

Figure 2 Waste generation, disposal and resource recovery trends in South Australia[13]

2.1 Growing the benefits of recycling

The state government sees the opportunity to further build upon these achievements, creating green jobs and developing new green business opportunities, including enhancing remanufacturing/advanced manufacturing prospects to further contribute to economic activity as well as environmental benefits (see Figure 3). It is anticipated that improved regulatory certainty and a more level playing field will encourage further growth in the resource recovery sector, which has been estimated as creating 9.2 full time equivalent jobs for recycling versus 2.8 for landfill per 10,000 tonnes of waste[14].

Importantly, as well as the social and economic opportunities arising from increased resource recovery, every tonne of waste that is recovered rather than directed to landfill results in significant environmental benefits.

Recycling of materials reduces the requirements for landfill disposal and virgin resource extraction. Each of these stages of material production have significant energy requirements, with virgin resource extraction often constituting a major proportion of energy needed for the entire production cycle[15]. In addition to substantial energy savings, other environmental benefits include:

- greenhouse gas savings
- water savings
- landfill waste
- mineral/resource savings
- biodiversity benefits
- air quality and health benefits.

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13 Sourced from Report for ZWSA: Rawtec, *South Australia's Recycling Activity Survey 2013–14 Financial Year Report* (2015), pg 6. The 2010–11 spike in material production resulted from several significant infrastructure projects occurring.

14 Access Economics (2009).

15 Report for DSEWPAC: Net balance, *The Australian Recycling Sector* (2012), pg 105.

Figure 3 Summary of the contributions of sound waste management[16]

The scale of benefits can vary between different materials but are demonstrably present for a wide range of materials. For example, a report for the Australian Government in 2012 discussed the respective environmental benefits arising for various metals, plastics, paper, cardboard, textiles, glass and organics[17].

[16] Sourced from United Nations Environment Programme, *Guidelines for National Waste Management Strategies* (2013), pg 34.

[17] Report for DSEWPAC: Net balance, *The Australian Recycling Sector* (2012) pp 97–123.

Box 1 The environmental benefits of South Australia's recycling activity

Compared to using virgin materials, SA's recycling activity in 2013–14 has been assessed as saving the equivalent of:

- The energy used by over 285,000 average households in one year
- The greenhouse gas emissions that 256,900 cars would produce in one year, and
- Nearly 9% of metropolitan Adelaide's total water consumption for 2013–14[18].

Materials recovered for recycling

[18] Report for ZWSA: Rawtec, *South Australia's Recycling Activity Survey 2013–14 Financial Year Report* (2015).

Box 2 The waste sector at a glance

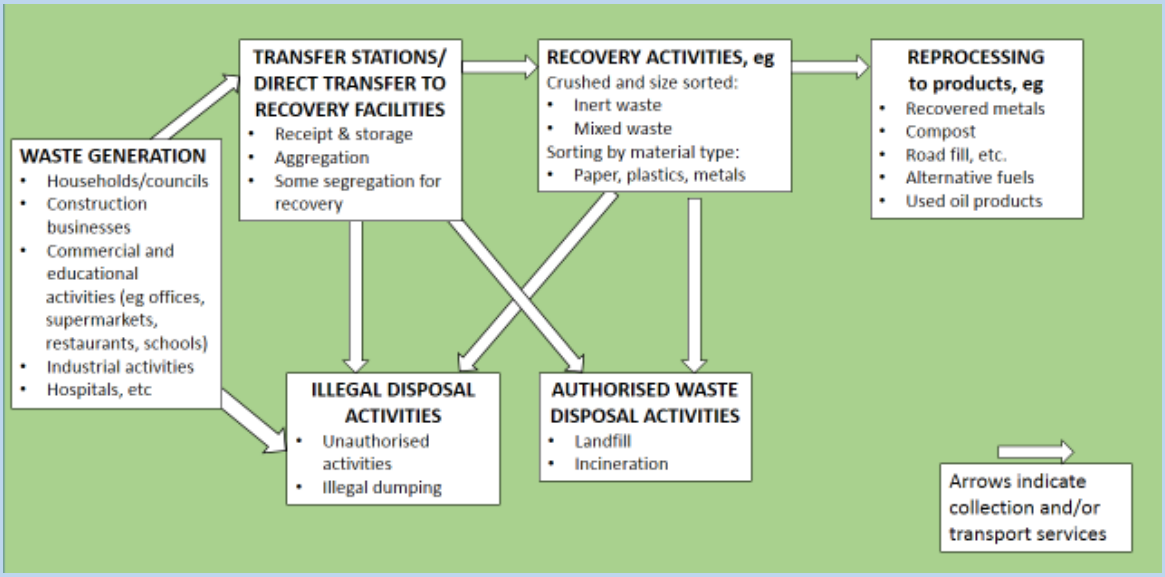
A significant sector of the SA economy[19]

- Creates around 4,800 jobs and is a growing sector.
- Has around $1 billion annual turnover, directly and indirectly contributing around $500 million to Gross State Product (GSP).
- The sector's GSP contribution is greater than the South Australian fishing and aquaculture industry and is similar to that of the air transport sector.
- Nationally, the waste sector is worth around $14.2 billion/year.

Overall scale

- Around 400 EPA licences for waste or resource recycling activities, comprising a mix of waste transfer, waste disposal (eg landfills and incineration) and resource recovery facilities[20].
- Various waste industry operators are 'vertically integrated', offering a mix of collection and transport services, resource recovery operations and disposal operations. Some sites have co-located resource recovery or waste treatment facilities and landfill disposal activities. There are relatively few large scale operations and many small facilities: nearly 75% of licenced sites receive waste of ≤5,000 tonnes/year.

The waste management and resource recovery sector by activity



Collection and transport

~670 waste transport licences held. Additional unlicensed commercial transporters handle building and demolition waste

Transfer facilities

38 metropolitan 111 regional transfer stations

Resource recovery facilities (and storage)

- ~160 licences, including:
- six metro and four regional material recovery facilities
- nine metropolitan and 25 regional composters.

Disposal facilities

- 5 major metro, 8 other metro and 48 regional operational landfills
- one medical waste incinerator
- many closed landfills still monitored through licences

Special waste streams

- 45 metro and 80 regional bottle collection depot (recovering around 80% or 650 million beverage containers), a household hazardous waste depot and a range of drop-off points for e-waste, oil and batteries.

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19 Figures are taken from Report for ZWSA: Econsearch, *Economic Aspects of the Zero Waste SA Strategy Review* (2014) as cited in Resources and Waste Advisory Group, *Review of South Australia's Waste Strategy 2011–2015* (2014).

20 'Resource recovery facility' is used in this paper as a generic term used for all types of 'waste or recycling depots' under Environment Protection Act Schedule 1 clause 3(3) that seek to reuse, recover or recycle materials or energy from waste. Scale provided excludes licences for closed landfills.

3 Issues and the drivers influencing the waste and resource recovery industry

3.1 Waste management issues and opportunities

As previously noted, the sector has grown significantly in the past decade. This has brought about new challenges that require careful consideration to ensure continued growth while protecting the environment.

Industry consultations have indicated the need for a review of the regulatory framework to ensure it is helping to facilitate a fair and competitive market. Specifically it has been suggested that consideration be given to changes that may resolve the following problems:

- static and growing stockpiles at some locations.
- some materials that still constitute 'waste' (ie unfit for purpose) being promoted as 'product' (eg 'fill'), including:
  - portions of the industry taking risks by using waste themselves (ie creating artifical 'demand' for a 'product').
  - instances of infrequent operator assessments of environmental risks associated with processed wastes.
  - tensions around the balance between flexibility and consistency of rules about when waste can appropriately be used a 'product', including fill, rather than requiring disposal to landfill.

Box 3

The problems

- Static or growing problems.
- Waste promoted as 'product' (eg fill) and ensuring environmental risks are reliably tested (industry often 'does
  and then seeks forgiveness').
- Potential 'fill' materials end up at landfill due to development pressure.
- Dealing with problematic wastes.
- Illegal dumping.

The opportunities

- Increasing interest around 'Energy from Waste' schemes.
- Further developing safe resource recovery activity.

Related underlying issues

- Balancing risk-based flexibility vs clarity/certainty for reuse of wastes (including new proposal assessments).
- Inability to identify detailed resource recovery requirements.

It may also be possible to better align drivers of contaminated site remediation and the management of the waste soils generated through remediation processes. Site remediation can be driven by the commercial imperatives of timely land development and subsequent use, meaning that the quickest solution is often viewed most favourably. Potential fill materials can end up needlessly being taken to landfill. However, the business drivers for the management of soils following their removal from a development site can result in the opposite problem: waste operators taking opportunities for levy avoidance, including through stockpiling or internal 'use' of such soils at landfill or resource recovery facilities.

Opportunities also exist to find measures to avoid or better handle problematic waste streams such as tyres, microplastics and expanded polystyrene packaging. Finding ways to reduce the rates of illegal dumping can result in cost savings to both the state and local government while increasing opportunities for the sector. Data constraints hinder the understanding of divergent business practices in the sector. [21] Gaining access to data and information will aid in addressing this as well as provide opportunities to find efficiencies in waste movement and processing.

3.2 The drivers influencing the waste and resource recovery industry

Landfills and other disposal services such as incineration (subsequently referred to as 'waste disposal depots') are in direct competition with resource recovery facilities for the same waste materials. Diverting waste from landfill therefore depends upon the business model for resource recovery operators being viable and profitable. The cost of appropriately diverting waste must also be competitive compared to the alternatives (landfill or incineration), especially since for many waste generators, the waste removal price is the primary driver in choosing a waste service provider.

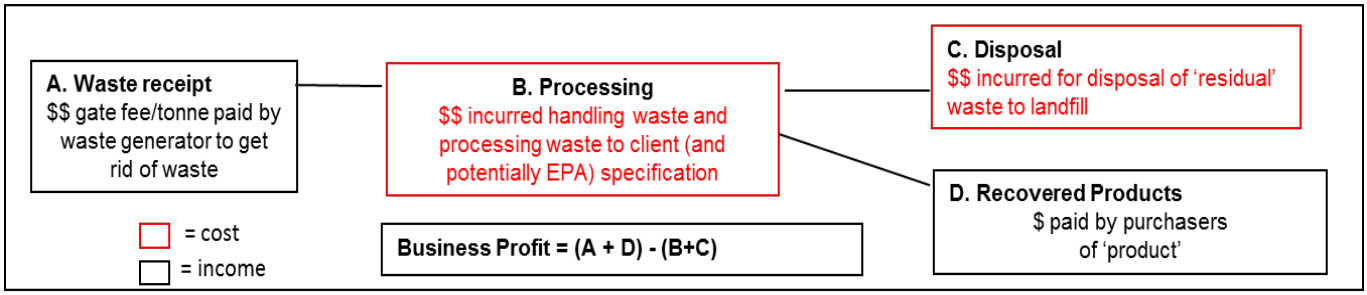

Figure 4 Business profile for resource recovery operators

Waste that stays a waste (ie requires disposal) creates revenue for waste disposal depots (through gate fees) while a material recovered from waste generates revenue for a resource recovery facility [through both its gate fees (A) and its recovered product sales (D) – see Figure 4]. This business mode creates incentives for resource recovery operators to avoid the classification of a material as a 'waste' that requires disposal, or to delay disposal (and disposal payment).

In contrast to typical producers of goods who pay for raw materials, for a resource recovery facility, a significant portion of revenue can be made at the time that the raw material is delivered, ie the gate fee (A) identified in Figure 4. This results from the fact that the raw material comprises waste and the only alternative place for it is a waste disposal depot (which option may be prohibited under Clause 11 of the Waste to Resources EPP in any case) that has to charge at least the waste levy as a minimum gate fee. A second portion of revenue can then be made by the facility upon the sale of the reprocessed material as a 'product' (D), after incurring the processing and handling costs to make the material into a product. The 'product' revenue that can be achieved is primarily influenced by comparable virgin material prices. Competitive pressures to reduce revenue from gate fees (A) creates incentives to minimise both processing costs (B) and disposal costs (C), which contributes to the issues described in Section 3.1.

Gate fees (A) can form a significant portion of overall revenue generated, particularly for mixed wastes. This is illustrated by Table 2 which shows the indicative gate fees for receipt of waste as well as indicative sales prices for recovered aggregates products from those wastes—approximately 40% to 90% of the revenue is made through the receipt of the waste (raw materials).

[21] Report for EPA & ZWSA: Rawtec in association with Mike Haywood Sustainable Resource Solutions, *EPA & Zero Waste SA – Analysis of Resource Recovery Activities Servicing Metropolitan Adelaide* (2011).

Table 1 Indicative gate fees and recovered resource sale fees for selected waste types[22]

Waste type	Gate fee (per tonne)	Recovered resource	Sale price (per tonne)
Clean Concrete	$15	Aggregate	$15
Waste Derived (Clean) Fill	$15	Clean Fill	–
Capping (Low Plasticity) Clay	$15	Clean Fill	–
Oversize Concrete	$15	Aggregate	$15
Unclean Concrete	$20	Aggregate	$15
Bricks	$25	Aggregate	$15
Clean Asphalt	$30	Bitumate/Bitumix	–
Unclean Asphalt	$40	Bitumate/Bitumix	–
Intermediate Waste Soil	$45	Clean Fill/Daily Cover	–
C&D Inert (Soils/Brick/Concr)	$60	Aggregate/Clean Fill	$15/–
Unclean Fill	$76	Aggregate/Clean Fill/Fuel	$15/–/–
Mixed C&D	$120	Aggregate/Fuel	$15/–
Mixed C&I	$120	Aggregate/Fuel/Other	$15/–/–

As waste becomes more mixed in nature, the greater the costs of processing the waste (B) to separate out valuable resources. Also, the more mixed waste that is received at the facility, the less certain the ratio of recoverable resource (C) to residual waste that will require disposal (D). Since residual waste must be disposed of at a waste disposal depot, it represents a cost that varies with the composition of the waste being received at the site.

The actual processing costs and variable disposal cost (B and C) often cannot be passed through to customers by raising the recovered product price (D) due to competing virgin product prices. Instead costs needs to be reflected in the gate fee (A) to provide for the financially sustainable operation of the facility. If the gate fee (A) is set too low, an operator will not be able to afford to effectively process mixed waste received and dispose of the residual waste arising.

Notably, strong competition to successfully obtain waste for its gate fee revenue (A) acts as an incentive to minimise gate fees. Incoming 'waste' is also desired since it is the necessary 'raw material' for subsequent 'products' and must be sought when available (not simply being able to be obtained in large quantity at any time on demand). However, unduly low gate fees leave operators with insufficient margin to properly process waste into recovered material and/or to pay for the disposal of residual wastes. This can result in such operations potentially seeking to obtain waste material but then not processing it (or not processing it sufficiently) in a timely manner and to find uses for waste, or for poor quality recovered materials, rather than lawfully disposing of it (ie gain A but avoid incurring B or C, miss out on D).

Given these circumstances, the key drivers of the industry that can be influenced by the EPA are[23]:

- legislation and policy that distinguishes between waste and recovered resources
- legislation and policy that is designed to promote resource recovery (including the waste levy)

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22 The rates listed were derived from the advertised rates of several local sites in 2014. Elements marked '–' mean these prices are not known.

23 The EPA notes that broader government regulations, such as planning assessment regimes, are also significant influences and it is continuing to work with other government bodies on refinements to assist sound waste management.

- legislation and policy to minimise the environmental risks of recovered resources
- EPA compliance and enforcement action.

3.2.1 Distinguishing between waste and recovered resources

The amount of waste available to waste disposal depots and resource recovery facilities is affected by the legislation that distinguishes between waste and recovered resources. A material becomes a waste when it meets the definition of waste in the EP Act[24]:

> **waste** means—
>
> a any discarded, rejected, abandoned, unwanted or surplus matter, whether or not intended for sale or for recycling, reprocessing, recovery or purification by a separate operation from that which produced the matter;
>
> or
>
> b anything declared by regulation (after consultation under section 5A) or by an environment protection policy to be waste,
>
> whether of value or not;

However, clause 4 of the Waste to Resources EPP has helped clarify that material ceases to be waste when it can be demonstrated to meet the following requirements:

> For the purposes of the definition of waste in section 3(1) of the Act, waste or material resulting from the treatment of waste continues to be waste except insofar as—
>
> a it constitutes a product that meets specifications or standards published from time to time or approved in writing by the Authority; or
>
> b if no specification or standard published or approved in writing by the Authority applies to such waste or treatment of waste—it constitutes a product that is ready and intended for imminent use without the need for further treatment to prevent any environmental harm that might result from such use.

The availability of material for use as a recovered resource [e Figure 4(C), rather than requiring disposal (D)] is determined by the standards applying under clause 4(a) of the EPP[25] or, in the absence of a relevant standard, market acceptance and environmental suitability of the material under clause 4(b)[26]. If a material does not meet an applicable standard under clause 4(a), it remains waste and not then to be assessed by a person under clause 4(b). Notably, a material can initially cease to be a waste due to processing, etc but become a waste again if circumstances change (eg no imminent use exists for the material).

3.2.2 Promotion of resource recovery

The state government has taken many actions to support the development of resource recovery in South Australia, including the implementation of legislative provisions that directly promote resource recovery. For example, the Waste to Resources EPP requires that persons not dispose of, and that landfills not accept, most waste unless it has been subject

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24 Section 3.

25 Standards exist for the production and use of refuse derived fuel, waste derived fill and waste derived soil enhancers.

26 Paragraph (b) draws closely from the findings of the Environment, Resources and Development Court on when the character of waste may have changed (through recycling, reprocessing or purification, etc) sufficiently to cease being waste – see *Resourceco –v–Environment Protection Authority* [2007] SAERDC 31.

to resource recovery processing efforts prior to disposal[27]. It also prohibits the direct disposal of various recyclable materials to landfill[28]. These requirements are encouraging the development of new resource recovery facilities in southern Adelaide to bring enhanced consistency in operations between northern and southern Adelaide. The landfill bans are also directing recyclables more effectively to recovery operations, most notably for electronic wastes.

Waste disposal depots must pay a levy on all waste received for disposal[29]. For a waste disposal depot, the need to include the waste levy within its gate fees promotes waste diversion to sites with lower costs instead—resource recovery depots (intended policy outcome) or illegal dumping (unintended outcome). The significance of the levy payment to directly promote direction of materials to resource recovery has been lessened with the introduction of mandatory resource recovery under the Waste to Resources EPP. However, the levy remains an important tool in helping make recycling technologies more financially attractive relative to disposal. This can be particularly influential for waste materials that lack much competition for reprocessing.

Resource recovery operations are not currently required to pay the levy on waste they receive: it only becomes payable for waste that is sent to landfill (or incineration) for disposal. In creating a deliberate financial incentive to minimise waste being disposed at landfill, this also creates an incentive to minimise any material from a resource recovery facility being disposed to landfill.

Overcoming practical impediments to recycling (eg contamination) and improving the cost effectiveness of recovery (including collection and transport) remain key to further enhancing recovery.

3.2.3 Minimising the environmental risk of recovered resources

Given the variable nature of waste, there is a risk that recovered resources will be contaminated with substances that are potentially harmful to human health or to the environment. To minimise this risk and ensure beneficial use of recovered products, the EPA has produced standards regarding resource recovery for a range of outcomes[30]. These standards require the ongoing assessment of recovered resources by resource recovery facilities to ensure that the risk from contaminants is known and that appropriate ongoing quality control is undertaken if the recovered resources are sold.

For example, in respect of the use of recovered resources as waste derived fill, in addition to needing to meet customer requirements, the EPA has set limits for 28 potential contaminants[31]. A recovered resource that meets the contaminant requirements is unlikely to pose a risk to human health or the environment. If a resource recovered for the purpose of producing a waste derived fill does not meet this requirement, then the EPA has provided a set of less conservative limits for 29 potential contaminants that may still enable the use of the recovered resource following assessment of the suitability of applying the fill to the designated destination site by a person qualified as a site contamination auditor[32]. Resources recovered from waste to which the *Standard for the production and use of waste derived fill* applies that have not been produced to satisfy all requirements of the standard remain as waste. In general, this risk-based approach establishes a framework under which more contaminated material can be reused following more onerous compliance requirements.

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27 Refer to clause 11 and Schedule 3 of the Waste to Resources EPP for detailed requirements, including practical exclusions from the requirement and the ability for determinations to be made that waste does not require any treatment, or further treatment, prior to disposal.

28 Clause 12.

29 Section 113.

30 Published standards exist for the production and use of refuse derived fuel, waste derived fill and waste derived soil enhancers.

31 Refer to EPA, *Standard for the production and use of waste derived fill* (2010, revised October 2013).

32 As above.

3.2.4 EPA compliance and enforcement action

As well as conducting investigative and enforcement programs, the EPA dedicates substantial time to the assessment and monitoring of development applications and licences for all waste disposal depots and resource recovery facilities—for initial plans, variations and across the subsequent operation and closure of facilities. For waste disposal depots and resource recovery facilities to operate in a fair market, it is important that all operations adhere to the requirements of legislation and associated standards and policies. Otherwise, operators can unfairly manipulate the costs that they incur and proceed to undercut competitors in obtaining waste (raw material).

The EPA needs to monitor and address compliance issues that arise in a proportional, consistent, transparent, targeted and timely manner to ensure industry confidence in a level playing field designed to meet the State's strategic waste management objectives and to promote an industry culture of 'asking, then doing', rather than one of acting and then 'seeking forgiveness' from the regulator and the community.

Stockpiles of materials derived from construction and demolition waste

4 The issues – potential impacts and existing barriers to resolution

Table 2 Description of the problems, opportunities and other underlying issues

	Problems, opportunities and other underlying issues		
	Static or growing stockpiles	**Waste promoted as 'product' and ensuring environmental risks are reliably tested**	**Potential 'fill' materials end up at landfill due to development pressure**
Characteri tics	• Significant and growing stockpiles with comparatively low sales rates for recovered materials. Estimated that 100,000s of tonnes of raw and residual materials are stockpiled.	• Significant processing of mixed waste with infrequent testing of 'products' to determine contaminant levels and low levels of residual waste to landfill.	• Uncertainty or time pressures lead to waste soils simply being removed from development sites, with disposals costs paid. For 2004–05 to 2012–13, ~ 82% of landfilled soil was of low risk.
Harm to business	• Undermine viability of other resource recovery (RR) operations as facilities can charge lower gate fees since not seeking to cover real waste processing costs in a timely manner, including disposal of residual wastes. • Detrimentally affect landfills by reducing timely residual waste disposal.	• Undermine viability of other RR operations as facilities can charge lower gate fees since they are avoiding paying for the appropriate disposal of residual wastes.	• Key projects can waste money on unnecessary disposal costs.
Harm to environment	• Unknown and variable – depending upon character can pose risks, eg: – leaching of contaminants – fire – litter & visual amenity – dust or odour – biogas – vermin.	• Unknown and variable – carries risks of harm to human health and the environment by potentially spreading contaminants within our environment when poor quality (risky) 'products' are used.	• Unnecessary use of virgin materials.

	Problems, opportunities and other underlying issues		
	Static or growing stockpiles	**Waste promoted as 'product' and ensuring environmental risks are reliably tested**	**Potential 'fill' materials end up at landfill due to development pressure**
Harm to government	• Abandonment risk (cost). • Contrary to strategic waste management objectives by failing to achieve timely RR and by compromising competitors' genuine RR actions (through undercutting). • Under-reporting of 'waste' disposal for levy purposes.	• Contrary to strategic waste management objectives by not minimising environmental harm risks. • Under-reporting of 'waste' disposal for levy purposes – levy avoidance.	• Contrary to strategic waste management objectives by failing to promote RR. • Unnecessary expenditure of government monies as developer.
What the EPA seeks	• Balanced material flows. • No excessive stockpiling.	• Genuine recovered products with the resource safely recovered & potentially harmful waste disposed to landfill.	• Safe soil management and reuse through suitable facilities. • Sound government expenditure.
Current controls	• (Valid) licence conditions re stockpile volume and/or processing controls. • Audits to enforce controls.	• 'Waste' definition. • EPA standards. • (valid) licence conditions regarding testing.	• Planning Advisory Notice 20. • EPA standards.
Key current barriers	• Little commercial incentive to process received wastes in a timely manner (but balancing the genuine need for some stockpiling for supply/demand). • EPA's inability to always act in a certain, timely and robust manner (especially where low/nil environmental risks).	• Commercial incentives to take chances (and then just seek forgiveness). • Lack of simple mechanisms for the EPA to require facilities to identify and dispose of material (eg burden of proof issues).	• Uncertainty regarding requirements. • Timing pressures. • Lack of options for developers to better manage waste soils.

Problems, opportunities and other underlying issues			
	Dealing with problematic wastes	**Illegal dumping**	**Increasing interest from 'Energy from Waste' schemes**
Characteristics	• Cost-effective recovery or disposal mechanisms do not exist for particular waste streams.	• The EPA and local government respond to many illegal dumping incidents a year on both public and private land: Most are small incidents, ~1–2 a year are very large.	• Proposals involving a range of technologies to derive 'energy from waste' by using thermal treatments or digestion processes are being promoted.
Harm to business	• Excessive costs can apply for removal of problematic wastes. • Availability of any accessible, management options may be limited/non-existent.	• Undermine viability of the legitimate waste and resource recovery sector. • True cost of waste disposal is unfairly borne by land owners where illegal dumping has occurred vs waste generator. • Reduced business confidence re new investment due to uncertainty on returns (because of waste leakage).	• Without appropriate scope delineation, 'energy from waste' proposals could potentially draw waste streams away from higher-order RR businesses. • Without appropriate policy support, opportunities for the industry to derive new income and an increased employment opportunity from waste could be delayed or prevented.
Harm to environment	• Unnecessary use of virgin materials if problematic, recyclable materials are directed for RR. • Illegal dumping risks, with associated environmental harm risks.	• Unknown potential environmental harm depending on character of waste. • Actual environmental harm can result from: – leaching of contaminants – fire – litter and visual amenity – dust or odour – vermin.	• A lack of well-developed policy could result in: – approved facilities causing air pollution and amenity issues, or – the unnecessary use of virgin energy resources if proposals are refused. • If higher-order RR is undermined by 'waste to energy' proposals, the greater environmental benefits of that reuse and recycling will be lost.

Problems, opportunities and other underlying issues			
	Dealing with problematic wastes	**Illegal dumping**	**Increasing interest from 'Energy from Waste' schemes**
Harm to government	• Contrary to strategic waste management objectives by not minimising environmental harm risks or promoting RR. • Managing illegal dumping.	• Contrary to strategic waste management objectives by not minimising environmental harm risks, promoting RR or supporting the legitimate waste and resource recovery sector.	• Contrary to strategic waste management objectives by not minimising environmental harm risks or promoting RR – in the absence of policy guidance.
What the EPA seeks	• Resources safely recovered, potentially harmful waste disposed to landfill. • Equitable waste management options.	• True cost of waste disposal borne by waste generators. • Level playing field and business investment in the waste and resource recovery sector supported.	• Clear, fair regulation for 'Energy from Waste' proposals, including when a levy should/ should not apply.
Current controls	• Education. • Product stewardship schemes.. • Waste to Resources EPP – landfill bans & handling requirements.	• Waste to Resources EPP – illegal dumping provisions • Prosecution for operating a waste depot without a licence under the Act.	• Licence authorisation process. • Refuse derived fuel standard. • Consultation draft *Waste Strategy 2015–2020.*
Key current barriers	• RR or disposal costs & availability of lawful options. • National and state regulatory powers and drivers. • Disconnections between manufacturers/suppliers, consumers & waste services.	• Disconnection between waste generators and waste service providers. • Commercial incentives to take chances (& then seek forgiveness).	• A lack of guidance for regulators and industry on technical requirements. • Establishment and operating costs vs current waste disposal costs.

Problems, opportunities and other underlying issues			
	Further developing safe resource recovery activity	**Balancing risk-based flexibility and clarity/certainty for reuse of wastes**	**Inability to identify detailed resource recovery requirements**
Characteristics	• New or expanded measures to promote RR – whether by legislative or administrative actions of government.	• Proposals re new market options or opportunities to control waste disposal costs. Operators regularly question the need for materials to be landfilled.	• Individual site opportunities and constraints together with incoming waste differences mean the EPA cannot mandate specific RR requirements.
Harm to business	• A lack of government attention to promote RR activity, including well-understood, long-term measures, could: – undermine business investment and growth in this industry – increase risks of oversupply of RR facilities relative to material volumes available for recovery.	• Any inability to rapidly establish an appropriate, new RR proposal* places a financial burden on industry and can reduce entrepreneurship. * in a manner that protects intellectual property where relevant	• New opportunities to enhance RR can be missed due to a lack of knowledge.
Harm to environment	• A lack of government attention to RR activity could result in excessive and unnecessary use of virgin materials.	• Excessive and unnecessary use of virgin materials if poor/slow assessment practices occur. • If risky 'products' used, carries risks to human health and the environment by potentially spreading contaminants within our environment.	• Potential unnecessary use of virgin materials.
Harm to government	• A lack of government attention to RR activity could result in economic development and strategic waste management objectives not being met.	• Risk to achieving strategic waste management objectives by either preventing timely new RR or accidentally allowing use of environmentally risky materials. • Potential under-reporting of 'waste' disposal for levy purposes.	• Contrary to strategic waste management objectives by failing to promote RR.

Problems, opportunities and other underlying issues			
	Further developing safe resource recovery activity	**Balancing risk-based flexibility and clarity/certainty for reuse of wastes**	**Inability to identify detailed resource recovery requirements**
What the EPA seeks	• Economic development opportunities that conserve or enhance our environment.	• Genuine recovered products with the resource safely recovered & potentially harmful waste disposed to landfill.	• Genuine recovered products that are safely recovered.
Current controls	Influencing materials are: • GISA Business Plan • Waste to Resources EPP – resource recovery requirement & landfill bans.	• 'Waste' definition. • EPA standards.. • Recovered Product Plans.	• EPA guidelines[33]. • RR facility approvals[34]. • (Valid) licence conditions.
Key current barriers	• Identification of the next measures that can be affordably implemented by government. • Long-term visibility of waste levy movements—essential to investment decisions re risks.	• Frequent lack of EPA approval in advance, resulting in: – complications from non-compliance action while retrospective approval also sought, and – lack of controlled trials, etc.	• Lack of information. • Clear commercial incentives for RR improvements.

33 EPA, *Guidelines on resource recovery processing – the making of clause 11(8) determinations regarding sufficient treatment* (2012).

34 See EPA, *Guidelines on approvals for resource recovery facilities under clauses 11(6) and 12(6) of the Policy* (2010).

5 Options to address issues

The challenges in promoting effective waste management and resource recovery continue to involve finding the balance between the environmental risks associated with contamination and, potentially, recovered materials, cost-effective development and rehabilitation of land, furthering the adoption of waste management hierarchy, providing a fair commercial environment for development, and recognising the financial imperatives influencing the waste management and resource recovery industry.

For each issue set out in section 4, we may continue to seek to use our existing controls ('no change') or implement one or a range of changes. Table 3 sets out options that may help us to better address the identified issues for the future improvement of the waste management and resource recovery industry. The table assesses the level of influence that considered implementation of the option may have on each issue – some can be expected to result in major or moderate improvements while other supporting changes are not expected to have a direct impact on an issue, they aim to either underpin the success of other changes or will help with understanding and enforcement.

Most of the options that have been identified in Table 3 will help address a number of the issues faced, although no single option can assist with all issues. The options proposed can generally be implemented in a complementary manner to each other. It is generally not necessary to choose between options exclusively, although you may have views on which will be most or least helpful in dealing with particular challenges.

This section discusses each options in turn. Your views are sought on the merit of the proposals and in identifying the potential benefits and impacts that may arise from the implementation of any of these options.

You may also have views or suggestions on other effective options to address the issues faced in the waste management and resource recovery industry that you wish to raise, including those that do not necessarily involve government regulation.

Question

1 Are there other options to address any of the issues faced in the waste management and resource recovery industry that you believe should be explored (either as alternatives or in addition to the proposals discussed here)?

5.1 Mass balance reporting – reporting and recording the movement and fate of waste

The introduction of mass balance reporting requirements (on the movement, storage and fate of waste) for licensed sites within South Australia is proposed to help address the following issues (primarily by providing necessary support for other proposed options):

- static or growing stockpiles
- waste promoted as 'product' and ensuring environmental risks are reliably tested
- potential 'fill' materials end up at landfill due to development pressure
- dealing with problematic wastes
- illegal dumping
- increasing interest in 'Energy from Waste' schemes
- further developing safe resource recovery
- inability to identify detailed resource recovery requirements

The quality of waste data currently available to industry, the community, the EPA, GISA, local and state government varies considerably and the quality of legal landfill disposal data is likely to be much better than data about resource

recovery of waste[35]. Unlike data on waste disposed to landfill, resource recovery information is obtained through voluntary surveys and activity rates, inadequate record keeping and a lack of weighing facilities. These issues are exacerbated by some parts of the waste industry that choose not to participate in the voluntary data surveys.

Having mass balance reporting data is necessary to better develop and evaluate effective waste policies for the entire South Australian community. It is important for monitoring progress towards the state's strategic priorities around maximising economic development potential and environmental sustainability. Better data will also help local government manage municipal waste and the waste industry to plan, develop and better exploit business opportunities.

5.1.1 Legislative basis

In South Australia, the existing mandated reporting requirements regarding the movement and fate of waste are limited:

- The transport of listed wastes[36] and some other hazardous wastes[37] by licensed waste transporters must be reported to the EPA. However, this is only a very limited subset of all waste transported.
- All licensed landfill operators and one licensed waste incinerator in South Australia are also required to report tonnes of solid waste disposed each month under the provisions of Part 6 of the *Environment Protection Regulations 2009* for the purpose of calculating the solid waste levy payable.

New proposed mass balance reporting requirements to be introduced through amendment of Part 6 of the EP Regulations together with amendment of powers within the EP Act as needed to ensure that the EPA can monitor (and regulate) material flows throughout the waste framework depicted in Box 2[38]. Such reporting requirements could also potentially be introduced through licence condition amendments but given the restricted times at which the EPA can require licence condition amendments, it would take many years for reporting requirements to be able to be consistently applied across all relevant licences. Regulatory amendment is preferred in the interests of a level playing field for industry and consistent, faster support to address the issues faced.

Notably, there are significant penalties for making a false or misleading statement (whether by reason of the inclusion or omission of any particular) in any information furnished, or record kept, under the EP Act[39].

5.1.2 Draft mass balance reporting proposal

The EPA is proposing that a reporting and record-keeping approach be introduced that is based closely on the New South Wales' mass balance requirements in the *Protection of the Environment Operations (Waste) Regulation 2014* (NSW) that take effect from 1 August 2015[40].

A full description of the character of proposed new draft reporting and record-keeping requirements is set out in Appendix 2 for your review. The draft proposal includes requirements for associated annual volumetric and topographical surveys by qualified surveyors for relevant licensees (including surveying of material within buildings) and the potential for use of video cameras. Changes to reporting requirements could also potentially be used to support clearer levy payment requirements as discussed in section 5.5.

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35 A similar issue as faced in other states – see for example, NSW discussion at http://www.epa.nsw.gov.au/wasteregulation/new-report-req-facilities.htm.

36 See Environment Protection Act Schedule 1 Part B

37 Including water-based paints, waste oil, oil/water mixtures, wool scouring waste, grease trap waste, intermediate landfill cover (contaminated soil) and waste tyres.

38 See sections 5.3 and 6 for more information.

39 Refer to Environment Protection Act sections 119 and 120A.

40 Refer to www.epa.nsw.gov.au/wasteregulation/new-report-req-facilities.htm for details of that scheme.

Table 3 Reform options to address the identified issues

Proposed reform options – with potential level of influence on issue (major, moderate or supportive to improvements)	**Problems, opportunities and other underlying issues**								
	Static or growing stockpiles	**Waste promoted as 'product' and ensuring environmental risks are reliably tested**	**Potential 'fill' materials end up at landfill due to development pressure**	**Dealing with problematic wastes**	**Illegal dumping**	**Increasing interest in 'Energy from Waste' schemes**	**Further developing safe resource recovery**	**Balancing risk-based flexibility and clarity/ certainty for reuse of wastes**	**Inability to identify detailed resource recovery requirements**
Mass balance reporting (5.1)	Supporting	Supporting	Supporting	Supporting	Moderate	Supporting	Supporting	Supporting	Major
Upfront levy liability (5.2)	Major	Supporting						Supporting	
Improving stockpiling controls (5.3), eg licence conditions, audits	Major	Supporting	Supporting	Moderate			Supporting	Supporting	
Better managing waste soils & fill (5.4)		Major	Major					Major	
Changes to the waste levy (5.5), eg collection, differential levy, rate		Major (potentially)	Major (potentially)	Major (potentially)	Moderate	Major (potentially)	Major (potentially)	Supporting	Supporting
Use of financial assurances (5.6)	Major	Major		Supporting		Moderate		Moderate	
Expanded transport licensing (5.7)		Supporting			Moderate		Supporting		
Proximity principle (5.8)				Moderate			Moderate		

Proposed reform options – with potential level of influence on issue (major, moderate or supportive to improvements)	**Problems, opportunities and other underlying issues**								
	Static or growing stockpiles	**Waste promoted as 'product' and ensuring environmental risks are reliably tested**	**Potential 'fill' materials end up at landfill due to development pressure**	**Dealing with problematic wastes**	**Illegal dumping**	**Increasing interest in 'Energy from Waste' schemes**	**Further developing safe resource recovery**	**Balancing risk-based flexibility and clarity/ certainty for reuse of wastes**	**Inability to identify detailed resource recovery requirements**
Enhanced recovered product plans (5.9)	Supporting	Major	Supporting	Supporting		Moderate	Major	Major	Supporting
Certificates of compliance (5.10)	Supporting	Supporting				Supporting		Supporting	
Recovering illegally obtained economic benefit (5.11)	Major (potentially)	Major (potentially)			Major			Major (potentially)	
Energy from Waste technical and policy guidance (5.12)				Supporting		Major	Supporting		
Improved site monitoring (5.13)	Supporting	Supporting		Supporting			Supporting	Supporting	Supporting
Simplifying waste taxonomy and definitions (5.14)	Supporting	Supporting	Supporting	Supporting		Supporting		Supporting	
Environment Protection Act amendments (6)	Supporting - major	Supporting - major		Supporting	Supporting - major			Supporting - major	
Innovative change ideas (7)				Moderate	Moderate	Moderate	Major		
	Pursuance of options will help achieve the intended better outcomes ('what the EPA seeks')								

Essentially, the data reporting and record-keeping requirements that the EPA proposes be introduced for licensed waste facilities, including transfer stations, resource recovery facilities and waste disposal depots, requires the monthly tonnages of materials as follows:

1 Waste materials by type arriving at a site.

2 Waste materials stockpiled or stored in any manner at a site.

3 Waste materials processed at a site.

4 Waste derived products and residual waste produced at a site.

5 Waste derived products stockpiled at a site.

6 Waste derived products leaving a site.

7 Waste materials leaving a site.

8 Waste materials disposed of at a site.

This system would be based on defined types of waste materials. The proposed approach to determining categorisation of waste types is outlined in section 5.14 of this discussion paper.

5.1.3 Key discussion points

Reliable, accurate and up-to-date data on the movement and fate of waste and waste derived materials is essential to effectively understanding the scale and handling of stockpiles, where and how much material is being promoted as 'product' (validly or questionably) and how problematic wastes are being handled. Such data provides essential underpinning for understanding and pursuing a 'material flow' based regulatory regime applying to materials across the waste framework. It is critical to pursuing any upfront levy liability scheme by allowing determination of an operator's levy liability (see section 5.2) as well as supporting the effective implementation of other proposals such as financial assurance use and the recovery of illegally obtained economic benefits. It is also key to enabling any use of differential waste levies (see section 5.5). The likely benefits from these proposals are supported by the mass balance reporting proposal.

As introduced in section 3.1, analysis has shown there is a marked degree of individuality in how businesses operate and between this and the lack of information provision to government on the movement of materials in these facilities, the EPA cannot currently nominate sector-wide specific mandatory resource recovery operating requirements or material recovery targets for resource recovery guidelines[41].

It was reported that different facilities have opportunities and constraints arising primarily from facility design and land area, potential additional capital and processing costs for further improvements (particularly where limited tonnages of relevant material is involved), quality of input streams, and commodity values for recovered materials. Especially with this individuality, good quality data is required to be able to effectively consider facility performance and support review of opportunities for enhanced resource recovery performance across the waste sector, including the challenges for products derived from waste competing with those sourced from virgin material.

Finally, such reporting could potentially have a moderate impact on illegal dumping and other disposal issues by:

- revealing discrepancies arising in the volumes of waste being sent from one site to another, and the volume reported as arriving, and
- accurately recording the end destinations of waste, including disposal of material at sites that are not licensed landfills and disposal at landfill sites outside of landfill cells.

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41 Report for EPA & ZWSA: Rawtec in association with Mike Haywood Sustainable Resource Solutions, *EPA & Zero Waste SA – Analysis of Resource Recovery Activities Servicing Metropolitan Adelaide* (2011).

The strong support expressed for the introduction of mass balance reporting by participants at the Waste Summit 2015 indicates that industry is aware of these likely potential benefits[42]. The detailed scope and scale of how mass balance reporting and record-keeping are required will necessarily influence the costs associated with the proposal and your input is sought to help understand and assess these.

Currently, around 60 waste disposal facilities undertake reporting to pay waste levy, with over 20 regional facilities using population-based payments rather than weighbridge data. Including these facilities, South Australia has around 400 licences for active disposal and resource recovery facilities—including composting works and scrap metal recovery—that could potentially be required to undertake the proposed new mass balance reporting requirements.

It can be expected that many facilities already collect data regarding the movement and fate of waste for their own business purposes. Also, various transfer stations and resource recovery facilities use weighbridges although the EPA does not retain centralised information on these. Additional costs may therefore be incurred by licensees depending upon whether:

- a facility needs to pursue new software installation or upgrades to support EPA-required reporting
- a facility has existing access to a weighbridge, and
- any additional staffing that would be required to support weighbridge use.

Topographical and survey requirements would also be new requirements for licensees.

Weighbridge needs and costs vary, influenced by capacity, size and material used to construct the weighbridge. Information from NSW data suggests that around $115,000 can be used as an estimated capital cost per weighbridge. In addition, the cost of installing new weighbridge software was estimated at around $6,000, with upgrades being around $3,000[43], although informal advice has also been received suggesting that costs can exceed this.

Potential weighbridge needs may be mitigated for some facilities through access to public facilities where these are available for use. Figure 5 shows the locations of licensed facilities and such weighbridges. It suggests however that additional regional weighbridges would be needed if various regional facilities are to participate in the scheme.

EPA records indicate that nearly 75% of licensed sites, both landfills and transfer station/resource recovery facilities, handle 5,000 tonnes of waste or less per year. Around 50% of licensed sites handle less than 1,000 tonnes of waste per year. In contrast, our largest facilities dealt with more than 200,000 tonnes of waste per year. The EPA anticipates that smaller facilities would be more likely to require new software and other infrastructure to effectively participate in mass balance reporting. The EPA wishes to explore with you the likely costs applicable and whether it may be more appropriate to exclude the smallest operators from the proposed reporting requirements.

It is noted that NSW requires weighbridges for all licensed facilities that are liable for the waste levy. For example, to store or process 6,000 tonnes or more waste per year (or more than 1,000 tonnes at any time) within the regulated area[44].

In addition to industry implications, the adoption of this system will require government to develop and implement a supporting information system together with additional data analysis and audit staff to administer mass balance reporting. The introduction of such a system could also be supported by requiring the transport of materials currently tracked to be monitored electronically on a mandatory (vs optional) basis using the WasteTracker system.

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42 EPA and ZWSA, *Waste Summit 2015 – summary report* (2015).

43 Report for NSW EPA: The Centre for International Economics, *NSW waste regulation: cost benefit analysis (final report)* (2014).

44 *Protection of the Environment Operations Act 1997* (NSW) Schedule 1 clauses 34 and 42.

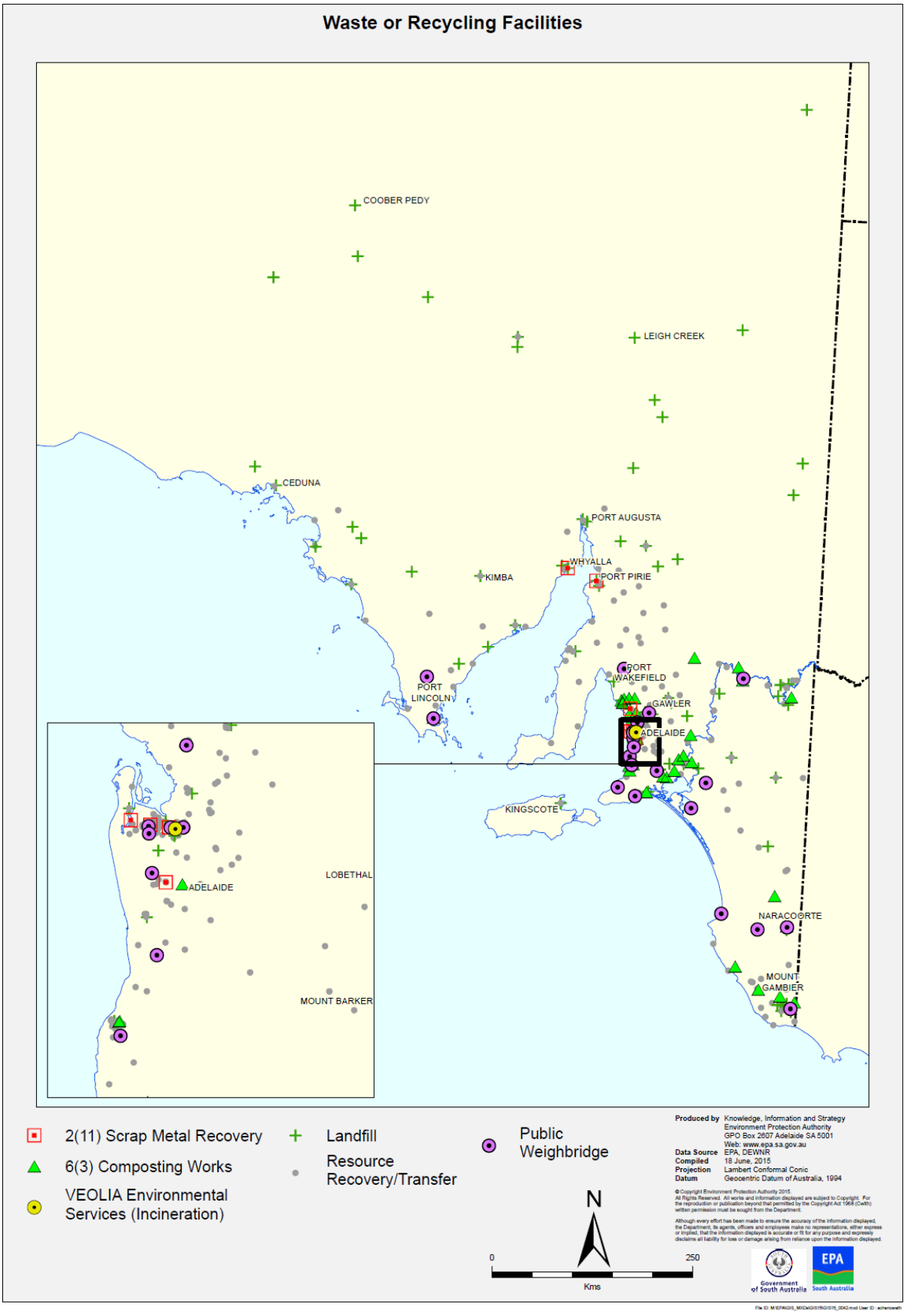

Figure 5 **Locations of public weighbridges relative to waste or recycling depots**

Questions

1 Noting that impacts may be disproportionate between large and very small facilities, how might a threshold quantity for mass balance reporting and weighbridge requirements be determined? Should the threshold be the same level in metropolitan and regional areas? Should it be similar to the threshold set under the NSW scheme? Alternatively, should it apply only to a defined geographic area in the state?

2 If you are a waste operator, do you already collect the information on amounts and types of waste that these provisions require? If yes, do you store it electronically?

3 If you are a waste operator, do you already have a weighbridge or access to a weighbridge?

4 What scale of cost increases do you anticipate incurring to comply with the data collection, electronic record keeping and electronic data reporting requirements of this proposal?

5 Noting that these provisions would not only be used to collect mass-balance data, but would also be used to secure the upfront waste levy liability scheme (section 5.2), do you think the proposals in Appendix 2 relating to:

   a record keeping

   b weighbridge requirements

   c volumetric surveys

   d potential topographic surveys

   e recording of all vehicles

   f vehicle movement plan

   g recording of materials imported for operational purposes

   h stockpile management identification details

   i potential use of video cameras

   are reasonable? If you have concerns please respond about specific provisions or requirements.

6 Do you think the proposals in Appendix 2 would be adequate to secure compliance with mass balance reporting, including for the purpose of determining waste levy liability?

7 Generally, and given that these provisions would not only be used to collect mass-balance data, but also to underpin the upfront waste levy liability scheme (section 5.2) and other proposed reforms, do you think the benefits that would arise from this proposal outweigh the costs of implementing the provisions? Why or why not?

8 If waste mass balance data and statistics collected under these provisions were to be published would you or your organisation be able to use it to better manage waste or identify and exploit business opportunities? (Note that if publication were to be pursued, the EPA would ensure that any information published met confidentiality obligations with respect to individual operators).

9 Would you have any concerns if required to use WasteTracker (vs maintaining a paper-based option) for wastes that are already tracked?

5.2 Upfront levy liability

The introduction of an upfront solid waste levy liability scheme is being explored by the EPA to help address the following issues:

- static or growing stockpiles
- waste promoted as 'product' and ensuring environmental risks are reliably tested
- balancing risk-based flexibility and clarity/certainty for reuse of wastes.

The main aim of an upfront levy liability is to reduce the long-term stockpiling of wastes that should be processed or disposed in a timely manner by reducing economic benefits for operators conducting long-term or speculative stockpiling. It would place an obligation upon, and a significant incentive for, all waste industry operators to demonstrate that waste material has become a genuine product so the liability can be extinguished.

5.2.1 Legislative basis

Section 113 of the EP Act requires waste depot licensees to pay the prescribed waste levy to the EPA in respect of waste received at the depot[45]. The EP Regulations prescribe the fee units applicable in different circumstances the monetary value of the fee unit[46].

Currently, under Part 6 of the EP Regulations, around 60 licensed landfill operators and one licensed waste incinerator in South Australia are required to report tonnes of solid waste disposed each month to calculate the waste levy payable. The levy is payable monthly by the licensee for all waste received that is to be disposed of at that depot.

The EP Regulations would need amendment to cater for the proposed upfront levy liability scheme.

5.2.2 Draft upfront levy liability proposal

The upfront levy liability proposal would be modelled closely upon the NSW approach effective from 1 August 2015[47]. The implementation of any upfront liability scheme would be dependent upon the use of an effective mass balance reporting scheme as proposed in section 5.1.

As currently applies, the waste levy would continue to fall at monthly intervals on waste that is disposed of at a licensed waste depot by landfilling or incineration. In summary, the upfront levy liability proposal would also involve making other waste and resource recovery facility operators potentially liable for the waste levy, including those that store, recover, recycle or process waste. Exclusions from the levy liability could be allowed for facilities only required to be licensed for clinical and related waste, liquid waste, composting or other organic waste treatment.

A liability would be created for all waste entering into a relevant licensed facility. This liability would be extinguished when facilities send material off-site for lawful reuse, processing or disposal. The liability would fall due and the levy become payable:

- when material is stockpiled for more than 12 months, or
- immediately for any material that exceeds the stockpile limits set as a condition of licence for the site, or
- when material is disposed at the licensed site, or
- unauthorised disposal (including transport for unauthorised disposal).

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45 'waste depot' means a waste depot as described in Part A of Schedule 1.

46 Refer to regulations 4 and 70.

47 Refer to www.epa.nsw.gov.au/wasteregulation/reform-waste-levy.htm for additional information on the NSW scheme.

The liability could be extinguished for any component of waste that is deemed a genuine product (rather than waste) under the EP Act. The levy liability would not be extinguished on residual waste resulting from any process used to turn waste into a product and the 12-month limit would not restart at processing, but would apply to any such waste based on the time it arrived at the site. In such circumstances, clarity of the status of material as a product rather than 'waste' would remain essential (refer to sections 3.2.1, 5.4 and 5.9). Alternatively, regulating all material, whether 'waste' or 'product' so that it gives rise to a liability after the material has been static for 12 months would avoid debate on this issue and support a robust, competitive industry.

The liability would also be extinguished if material were to be used for (measured) lawful reuse on the site[48]. However, if material were transferred to another facility for reuse, then that operator will take on a liability (as relevant). Also, if waste were to be transported to another site for legal disposal, the initial facility's liability would be extinguished and the levy would fall due at the disposal site.

In cases where resource recovery and disposal is carried out at the same site, for any stockpiled waste disposed on-site, the levy for the disposed waste would fall due for that month.

The proposal is outlined visually in Figure 6.

Notably, the exceedence of any stockpile limit provided for by licence condition would also remain a contravention of a licence condition (as well as remaining subject to general environmental offences), with penalties and orders regarding such a contravention available.

5.2.3 Key discussion points

Your views are sought on the likely effectiveness of this proposal for deterring stockpiling, the reasonableness of proposed timing and on whether the liability should apply to all materials that remain on-site after 12 months or to 'waste' only.

Similarly to mass balance reporting, the costs and implications of an upfront levy liability scheme will be influenced by its scope. Your views on whether any minimum thresholds or other exclusions should apply is sought.

In addition to industry implications, the adoption of this system will require government to develop and implement a supporting information system (interactive with mass balance reporting) together with additional data analysis and audit staff to administer the new levy system.

Questions

11 How effectively do you think an upfront levy liability will reduce speculative or long-term stockpiling of wastes?

12 Should South Australian regulation align with and be consistent with the NSW upfront levy liability scheme?

13 Noting that impacts may be disproportionate between large and very small facilities, how might any threshold be determined (eg similar to NSW)? Should the threshold be the same level in metropolitan and regional areas? Alternatively, should it apply only to a defined geographic area in the state?

14 Are the activity types proposed to be excluded from the scheme appropriate (ie facilities only required to be licensed for clinical and related waste, liquid waste, composting or other organic waste treatment)?

15 Do you think 12 months is an appropriate length of time for an upfront levy liability to fall due? Should any wastes or facilities have a different timeframe applicable (eg should electronic wastes and tyres require shorter time and soils longer)? Should there be any ongoing exceptions to this?

[48] Note section 5.5.3 for discussion around levy application for reuse at landfills.

16 Do you have any views on what the approach of the EPA should be if an exemption from the proposed general 12-month levy liability requirement is sought in respect of any stockpile? What level of justification would be required, eg evidence of impact of a financial crisis on sales, case by case if a financial assurance is used?

17 What views do you have about whether the liability should apply to products available at waste and resource recovery facilities as well as 'waste' to support regulation of material flow?

18 Will holding a liability on stockpiled material present a barrier to the conduct of your business in general and the financial management of your business specifically?

19 What are the ways that an upfront levy liability system could be undermined by operators?

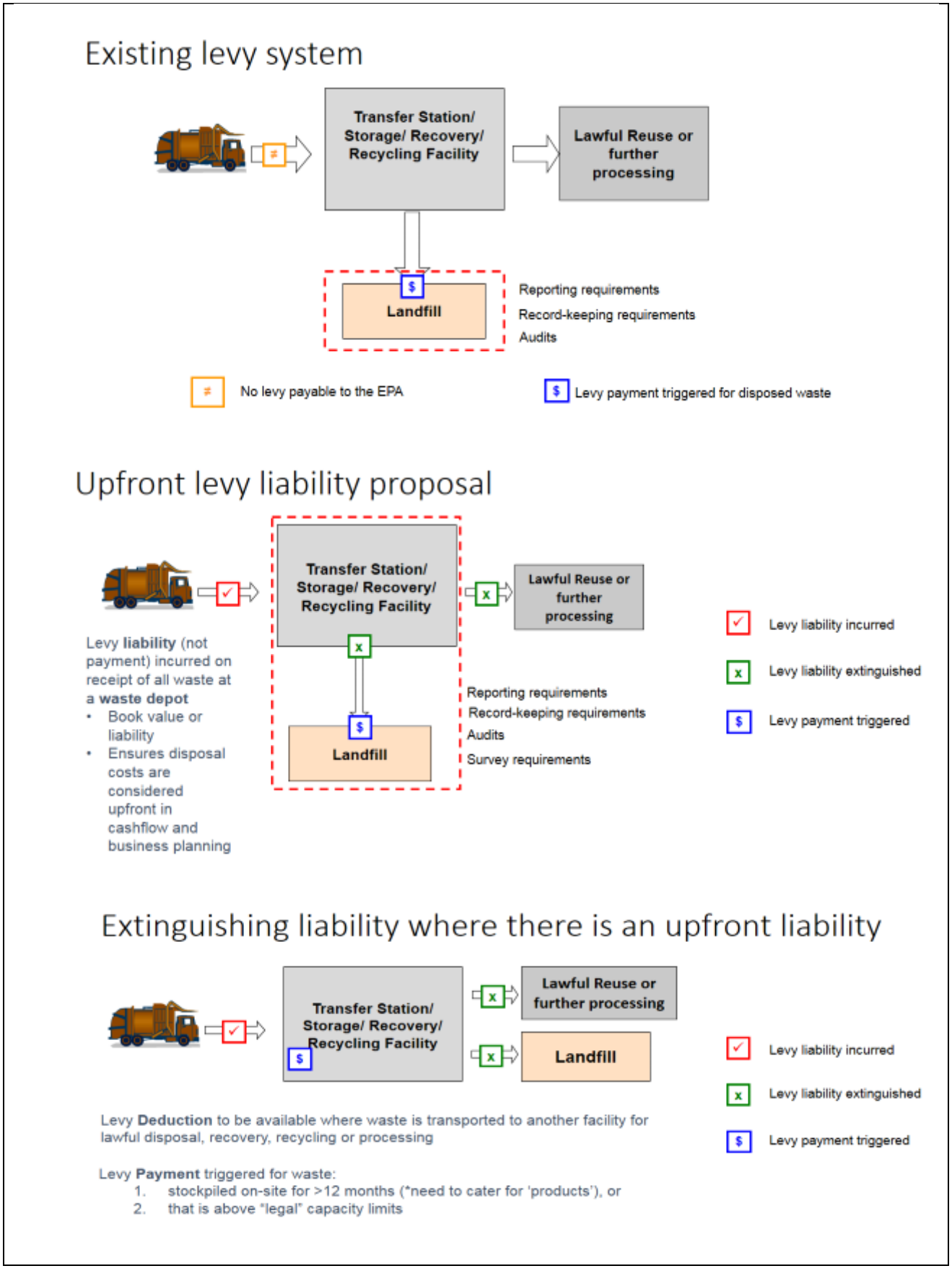

Figure 6 **A depiction of the existing levy system and the upfront levy liability proposal (closely derived from NSW communication materials)**

5.3 Improving stockpiling controls

Additional stockpiling controls, including controls to help support proposed upfront levy liability scheme needs, are proposed to help address:

- static or growing stockpiles
- waste promoted as 'product' and ensuring environmental risks are reliably tested
- potential 'fill' materials end up at landfill due to development pressure
- dealing with problematic wastes
- further developing safe resource recovery
- balancing risk-based flexibility and clarity/certainty for reuse of wastes.

The effective control of excessive waste and recovered material stockpiles continues to be presented to the EPA as a matter of significant and ongoing concern within the waste and resource recovery industry. Excessive stockpiling of any materials may pose risks of potential environmental harm, risk of abandonment upon company failure or site abandonment, and/or excessive accumulation of material causing potential harm to business (as set out in Table 2). It is proposed to implement improved stockpiling controls using the most efficient mechanism(s) possible to address excessive stockpiling for any reason.

5.3.1 Legislative basis

Licences are used as a key tool to manage risks of environmental harm and abandonment at licensed sites.

The 'conduct of a depot for the reception, storage, treatment or disposal of waste' requires licensing under the EP Act[49]. In determining licence conditions, the EPA must seek to further the objects of the Act and have regard to any relevant environment protection policies, the general environmental duty and the waste strategy for the state, among other matters[50]. It is an offence a licence holder to contravene a licence condition[51].

The Objects of the Act include:

> (b) to ensure that all reasonable and practicable measures are taken to protect, restore and enhance the quality of the environment having regard to the principles of ecologically sustainable development, and—
>
> (i) to prevent, reduce, minimise and, where practicable, eliminate harm to the environment—
>
> (A) by programmes to encourage and assist action by industry, public authorities and the community aimed at pollution prevention, clean production and technologies, reduction, re-use and recycling of material and natural resources, and waste minimisation; and
>
> (B) by regulating, in an integrated, systematic and cost-effective manner—
>
> - activities, products, substances and services that, through pollution or production of waste, cause environmental harm; and
> - the generation, storage, transportation, treatment and disposal of waste;[52]

49 Environment Protection Act section 36 and Schedule 1 clause 3(3).

50 Section 47.

51 Section 46.

52 Section 10(1)(b)(i).

Environmental harm is defined as being 'any harm, or potential harm to the environment (of whatever degree or duration)'[53].

5.3.2 Options to identify and manage excessive stockpiling

The different types of risks posed by excessive stockpiling can give rise to different options for their resolution. Notably, maximum stockpile controls imposed for any reason have the potential to be assisted by an upfront levy liability scheme (refer to section 5.2) due to the strong, clear financial incentive it would create to avoid exceeding maximum waste stockpile limits.

Addressing environmental harm risks

The EPA seeks to regulate similar entities equitably regarding the timing for the processing and dispersal of waste and products from a site on environmental grounds. In respect of possible environmental harm at sites, an option for further risk mitigation would involve expanding on the fire risk audit undertaken in late 2013 and existing internal licence management plans for key sites by arranging for the conduct of a further extensive EPA stockpiling audit. This audit could involve investigation of key identified licensed facilities in relation to all potential risks arising in respect of pollution from leachate, fire risk, litter, dust, odour, biogas, vermin, adverse visual amenity and, potentially, instability issues, having regard to the discussion, factors and suggested measures given in the EPA's stockpiling guideline[54] for these matters.

If such an audit identified that conditions need updating to successfully implement appropriate control measures, new or amended licence conditions dictating stockpile measurements, volumes, layout and/or management could then be applied. Importantly, the EPA has the ability to impose or vary a licence condition at any time where the EPA considers it necessary in consequence of risk of material or serious environmental harm[55]. Other desired changes could be made with the licensee's consent or otherwise at renewal of licence[56].

In some cases, potential harm impacts may be contested by a licensee through appeal. The EPA proposes to clearly establish its ability to regulate material flows to avoid any doubt of its ability to regulate material movements through legislative amendments.

Addressing abandonment risk

Resource recovery operations necessarily accumulate certain volumes of waste ('raw material') that are to be subjected to resource recovery processes and may also seek to stockpile 'products' generated. If an operation ceases to operate due to insolvency or other reasons, large quantities of material can be left on-site. Depending upon the materials' character, this can become a financial risk for the EPA if it becomes involved in the clean up of a site without any real potential for subsequent cost recovery from the former operator. Sometimes, such materials can pose potential environmental harm risks (eg tyres, asbestos containing material) but other times costs could arise simply because there is no established market for materials present (eg novel proposed aggregate), the product is of poor quality and not marketable, or potential products sales income is not enough to offset processing costs (eg electronic wastes).

Using licence conditions to control the maximum limits to be present at any given time could help control the scale of this risk. Limits may be sought for both materials received and processed materials, noting that presently there are restrictions to simply do this under the EP Act for material that poses no environmental risks or where the potential risk is contested. It is proposed to create clear power in the EP Act to regulate on the basis of material flows for the waste and resource recovery industry to assist with this (refer to section 6.1.1).

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53 Section 5(1).

54 EPA, *Guideline for stockpile management: waste and waste derived products for recycling and reuse* (2010).

55 Section 45(3)(b).

56 Section 45(3).

Another option (either with or instead of direct licence controls on stockpiling) is to explore the expanded use of financial assurances to cater for abandonment risks where no particular environmental harm is posed by the material handled. This idea is discussed in section 6.1.5 and would then need to be catered for in the development of the proposed financial assurances policy discussed in section 5.6.

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

Addressing other excessive accumulation of material

Excessive accumulation of materials at selected sites is a matter of strong concern within the waste sector. The EPA is advised that such stockpiling poses a significant threat to a robust and prosperous industry, undermining the viability of other resource recovery operations due to the drivers influencing the industry (rather than environmental harm risks) as discussed in section 3.2 and Table 2.

The upfront levy liability proposal (section 5.2) supported by mass balance reporting (section 5.1) would bring a natural boundary to waste accumulation for all licensees by introducing a time limit to how long material may remain on-site before the waste levy becomes payable, proposed to be a 12-month period.

The EPA also proposes that attempts should be made towards seeking to implement maximum stockpile limits to support material flows and prevent excessive accumulation of material, whether processed or not. To support this, the EPA is nominating legislative amendments to support a clear ability to act in this area including regulation of material movements and improved abilities in classifying material as ‘waste’ or ‘product’—including if processed materials have remained static for an excessive time. Beyond proposed changes to the Act (section 6) and the classification of materials within landfill (section 5.5), the EPA may investigate complementary changes to clause 4 of the Waste to Resources EPP.

Another alternative, non-regulatory option that may voluntarily, positively influence stockpiling and business planning could involve the EPA exploring whether the state government, as a major customer for recovered products such as road aggregate and fill for infrastructure developments, could possibly release forecasts of its likely demand on a regular, periodic basis and establish processes (eg auction methods) to determine the price at which material will be purchased for a defined period of time. This could give operators greater certainty about government pricing and encourage them to process waste within that period to take advantage of the fixed pricing rather than risking accumulating excessive materials with uncertain saleability.

5.3.3 Key discussion points

Clear data regarding the stockpiling levels for either received materials or processed materials across the whole industry is not available to the EPA given the limitations to information that is currently collected from licensees (as discussed in section 5.1 on mass balance reporting). The EPA monitors and assesses particular stockpile requirements and stockpiling trends at key facilities through licences and its inspection regime. From this, it is generally estimated that many 100,000s of tonnes of both unprocessed and processed material is stockpiled at licensed sites around the state. Your advice on stockpiling trends will further assist with assessment of the scale of the issue.

Assuming that measures such as an upfront levy liability, further 'material flow' based licence controls and other options effectively remove the incentives for excessive stockpiling, it should result in increased volumes of waste being directed to timely resource recovery or landfill. In assessing the desirability of pursuing any reform option, the EPA will consider the benefits arising from likely greater resource recovery. Your views on the likelihood of stockpiles of which you are aware being recovered are welcome.

In considering the options for addressing excessive stockpiling and determining the circumstances, if any, in which the EPA should nominate maximum stockpile requirements for materials where environmental harm and/or abandonment risks are already adequately managed is a particularly complex matter, given:

- there is a need to balance the genuine need for many businesses to undertake some degree of stockpiling (since waste is a necessary 'raw material' for subsequent 'products' and must be sought when available, which may not align directly with demand/desirable commodity prices for 'products')
- the need to support fair competition between resource recovery facilities and quarries (with many years' supply of material available and the general ability to mine it when demand requires it)
- certain materials processed into 'product' have their quality degrade through exposure if manufactured too far in advance of use (but which may not otherwise warrant undercover storage)
- normal competitive business differences arising from scale, location, site management measures (eg sealed surfaces and bunding), customer base, the nature of materials received and processed, and differing processing efficiencies (eg comparable to a large supermarket vs a corner shop).

However, distorted competition through excessive accumulation of materials can have impacts that are detrimental to the resource recovery sector as a whole and waste management objectives by:

- driving gate prices (income stream A) so low that most facilities cannot afford to process recoverable materials and dispose of residual wastes appropriately—meaning that there is an increased likelihood of operators seeking to use potentially harmful materials or poorly recovered materials as 'products' as well as increased illegal dumping risks (as discussed in section 3)
- reducing the exploration of and investment in better technologies to safely recover more materials due to excessively low profit margins
- potentially (especially if environmental standards and illegal dumping are well enforced by the EPA) driving competitors out of business to the extent that the total resource recovery services available in South Australia decline – meaning that the significant environmental benefits of recycling (energy, water, carbon emissions, natural resource conservation) would be lost to the extent of such service reduction.

Your views on options that will help most fairly and consistently address this area of concern are welcomed.

Questions

20 How has the level of stockpiling changed in recent years?

21 Have increases in the waste levy had any noticeable impacts on stockpile volumes? Do you consider any apparent trends would continue with further levy changes?

22 What are the factors that you view as most significant in driving fluctuations in the amount of stockpiling? For example:

- a the general level of economic activity and/or major projects such as the RAH, Adelaide Oval, major road upgrades
- b trends in particular sectors, eg construction, particular commodity prices
- c other factors affecting the profitability of facilities, including competition amongst different operators
- d minimum scale requirements for cost-efficient transport of materials for further recovery or treatment (eg hazardous wastes, tyres, recyclables in regional areas).

23 What types of benefit do you expect would arise from reducing the amount of material that is currently being stockpiled and to whom would these benefits accrue?

24 Do you have information that can help us quantify the likely scale of benefits from reduced stockpiling?

25 What are your views about the options presented in section 5.3.2 for helping to address stockpiling?

26 Do you have any comments on the EPA routinely setting site-specific stockpile limits at waste and recycling depots through licence conditions? Do you consider that the EPA should first be able to require operators to submit proposed limits with justified reasoning for approval?

27 Do you believe appropriate maximum stockpile limits should be set for excessive accumulation of material on a 'material flow' basis rather than solely on the basis of environmental risks? If yes, what are the key elements that you believe could be used to define such limits?

5.4 Better managing waste soils, fill and related products

Options to better manage waste soils and fill are proposed to help address the following issues:

- waste promoted as 'product' and ensuring environmental risks are reliably tested
- potential 'fill' materials end up at landfill due to development pressure
- balancing risk-based flexibility and clarity/certainty for reuse of wastes.

Every year in South Australia, significant amounts of fill materials are moved around as development activity generates either excess waste soils or the need for fill. The state government promotes the sustainable management of waste and recognises that particular waste streams may be suitable for beneficial reuse as fill. However, potentially significant risks to the environment and human health may arise from the use of inappropriate waste materials or the filling of land in inappropriate locations. Poor quality products that are not market based can also cause issues.

The costs of inappropriate soil management can be very high. For example, in an Environment Resources and Development Court case (*Pallaras v Downer EDI Works Pty Ltd* [2008]), the defendent company spread inadequately tested fill sourced from land adjoining an industrial site onto a separate residential redevelopment site resulting in site contamination. The company pleaded guilty and had to pay penalties, costs and levies totalling nearly $190,000. In addition, a civil claim against the company for remediation costs of approximately $3.8 million was foreshadowed. Without consistent, sound processes for managing waste soils and fill, other similar cases could occur.

5.4.1 Legislative basis

The reuse of waste soils and fill is strongly influenced by site contamination responsibility risks as well as environmental licensing requirements, illegal dumping provisions, and general offences relating to causing environmental harm[57]. These offences extend to those who cause or allow pollution or the disposal of waste meaning that waste transporters and culpable waste generators can be held liable where evidence allows.

It is recognised that there are circumstances in which soils and manufactured fill materials may be suitable for reuse through the definition of waste and standards on the use of certain recovered resources as outlined in section 3.

The EPA's *Standard for the production and use of Waste Derived Fill* (WDF Standard[58]) establishes the circumstances in which a range of waste soils, as well as materials derived from construction and demolition wastes and industrial residues, will be suitable for reuse as fill. The WDF Standard has enabled significant savings to be realised for numerous projects, include state infrastructure projects and large-scale private developments. Key factors of the current WDF Standard include:

- support for the waste hierarchy
- an immediate market
- employment of a risk-based approach
- prevention and minimisation of environmental harm
- demonstration of beneficial reuse rather than a means of convenient disposal and the associated avoidance of regulation and costs.

The key factors are considered of particular relevance in demonstrating that a material is no longer a waste and highlight that there is no single factor that can be applied to determine if a material is a waste or recovered product.

If a waste material has been handled in accordance with the WDF Standard and also meets certain chemical and other criteria, it can cease to be regulated as a waste. The non-waste status of the fill provides greater certainty and flexibility for industry when compared with interstate regulatory approaches noting that the obligations to avoid causing environmental harm through the use of any fill material will always remain.

5.4.2 Overview of the proposed improvement approach[59]

Review of the WDF Standard and its use

The EPA recognises that the current WDF Standard remains a complex document to interpret and use, and is currently developing a revised series of standards to simplify terminology and structure. The current risk-based approach to the management of waste soils and other materials being used as fills, will be retained in the revised standards. The materials will be supported by guidance and educational materials to improve understanding.

Early stakeholder engagement on revising the WDF Standard has begun including at the Waste Summit 2015 and subsequent feedback received. Early engagement has focused on possible options for managing risk while further promoting development opportunities. The draft revised standards will be released for consultation later in 2015.

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57 Environment Protection Act Part 10A, section 36 and Part 9. Waste to Resources EPP clause 10.

58 EPA, *Standard for the production and use of waste derived fill* (2010, revised 2013).

59 The EPA notes that broader government regulations, such as planning assessment regimes, are also significant influences and it is continuing to work with other government bodies on refinements to these to assist waste soil and other fill management.

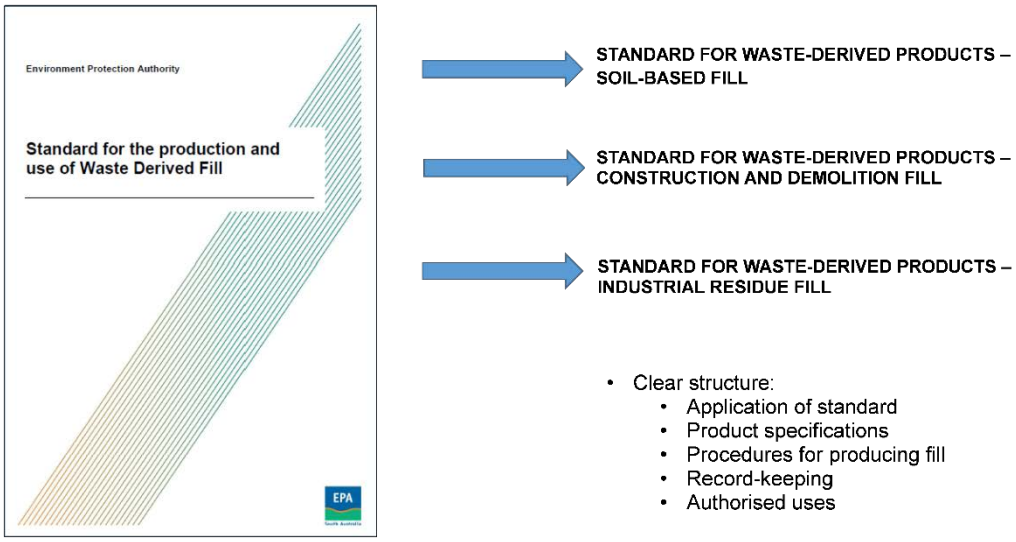

Figure 7 Intended outcomes from the review of the WDF Standard

Government procurement practices

The effective management of waste soils and the use of fill and related products is strongly influenced by the procurement practices of state government as a major infrastructure provider. The EPA proposes to work closely with GISA to investigate which elements of current tender practices that could be improved to better support safe resource recovery of materials and to then seek to influence consideration of these matters across government.

In response to concern about the use of waste materials received at licensed sites, a further option that could be considered is, for significant waste generators, expanding existing checks on whether a proposed waste service provider is licensed to receive the relevant type(s) of waste[60] to also consider whether a proposed service provider has the capacity to properly handle the volumes of waste proposed to be directed to any given facility.

Better facilities to support soil reuse

A number of facilities in South Australia are licensed to receive waste soils. Typically, by way of licence condition, assessment and classification of most soils is required prior to their arrival at the facility.

The EPA is considering whether 'soil banks' that allow the more streamlined delivery of waste soils to the bank, followed by detailed assessment prior to its reuse should be promoted.

Figure 8 demonstrates how a 'soil bank' might operate.

60 As is effectively required under clause 10 of the Waste to Resources EPP to avoid potential liability as a waste generator and explicitly for listed wastes under clause 14 of the Waste to Resources EPP.

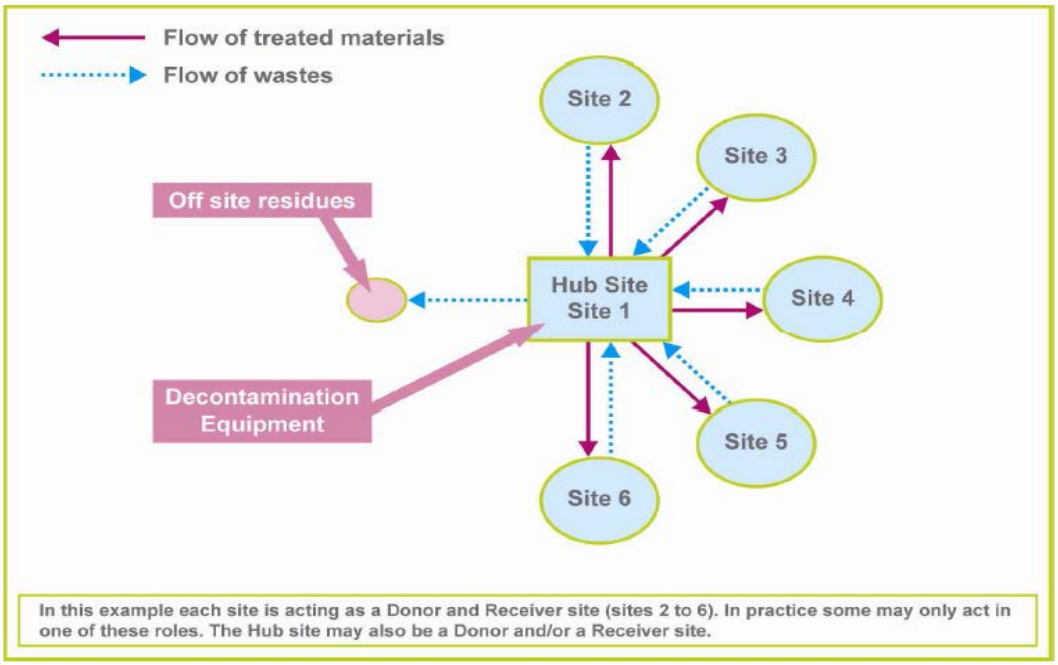

Figure 8 Soil bank operation

5.4.3 Key discussion points

Your views are sought on whether it could be practicable or desirable for any exploration of an expanded duty of care about the handling of waste to be applied to significant waste generators—either government or businesses generating specified volumes of waste.

Questions

28 Would it potentially be practicable or desirable an expanded duty of care about the handling of waste to be applied to significant waste generators such that they are required to inquire whether a proposed service provider has the capacity to properly handle the volumes of waste proposed to be directed any given facility? What threshold(s) may be appropriate to be a 'significant waste generator'—either government or businesses generating specified volumes of waste in a defined period?

29 Would it be most appropriate for any such inquiries to be directed to the tendering waste service providers (with offences available for the provision of false or misleading information)?

30 Should there be a duty upon government agencies (and their contractors) to seek advice from the EPA regarding the compliance history of businesses tendering for significant waste service provision, including the provision of recovered products?

31 What other steps do you think could assist in improving government procurement practices for the management of waste from, and use of recovered products in, infrastructure projects?

32 Are there instances that you are aware of where potentially reusable soil has been disposed of by the waste generator?

5.5 Changes to the waste levy

The EPA is seeking to ensure the waste levy operates optimally to drive innovation and investment in the resource recovery sector while addressing the following key issues:

- waste promoted as 'product' and ensuring environmental risks are reliably tested
- potential 'fill' materials end up at landfill due to development pressure
- dealing with problematic wastes
- illegal dumping
- increasing interest in 'Energy from Waste' schemes
- further developing safe resource recovery
- balancing risk-based flexibility and clarity/certainty for reuse of wastes
- inability to identify detailed resource recovery requirements.

5.5.1 Legislative basis

Section 113 of the EP Act requires waste depot licensees to pay the prescribed waste levy to the EPA in respect of waste received at the depot and also allows for differential levies to be prescribed[61]. The EP Regulations prescribe the fee units applicable in different circumstances the monetary value of the fee unit[62]. There is currently no levy applied for waste fill material[63].

The EP Regulations do not clearly envisage and cater for resource recovery processes of materials at landfill (including on-site reuse of materials) and how waste levy should be collected in such circumstances. Amendments to the regulations could be made to improve clarity in this area.

5.5.2 The current levy and how it is distributed

The waste levy is an important economic instrument for promoting waste minimisation and resource recovery in South Australia since the disposal of waste to landfill has historically been the cheapest waste management option for most waste. The waste levy provides an incentive to reduce the amount of waste sent to landfill and is critical to ensure resource recovery activities remain viable. It also continues to provide a financial incentive for industry to seek alternatives for the disposal of waste and to facilitate investment into future technologies, processes and resource recovery systems in South Australia. Further, the waste levy can be used to help support investment in the sector that drives further improvements in resource recovery performance.

The EPA has been estimated that total solid waste levies of around $41.7 million were collected for the 2014–15 year, with about $20.8 million to be transferred to the Waste to Resources Fund[64].

South Australia solid waste levy for 2015–16 is similar to Victoria and Western Australia at $57 per tonne (metropolitan) and $28.50 per tonne (non-metropolitan)[65]—refer to Figure 9. In contrast, New South Wales has waste levies ranging

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61 'Waste depot' means a waste depot as described in Part A of Schedule 1 of the Environment Protection Act.

62 Refer to regulations 4 and 70.

63 'Waste fill' means waste consisting of clay, concrete, rock, sand, soil or other inert mineralogical matter (but does not include waste consisting of or containing asbestos or bitumen) in pieces not exceeding 100 millimetres in length and containing chemical substances in concentrations less than the concentrations set out in regulation 3 of the Environment Protection Regulations.

64 Estimates only as actual not available at the time of writing.

65 It is currently nominated to increase to $62 per tonne (metropolitan) and $31 per tonne (non-metropolitan) in 2016–17.

from $76.70 (regional) to $133.10 (metropolitan) while Queensland, Tasmania and the Northern Territory currently apply no levy. Comparative recycling rates are then presented in Figure 10.

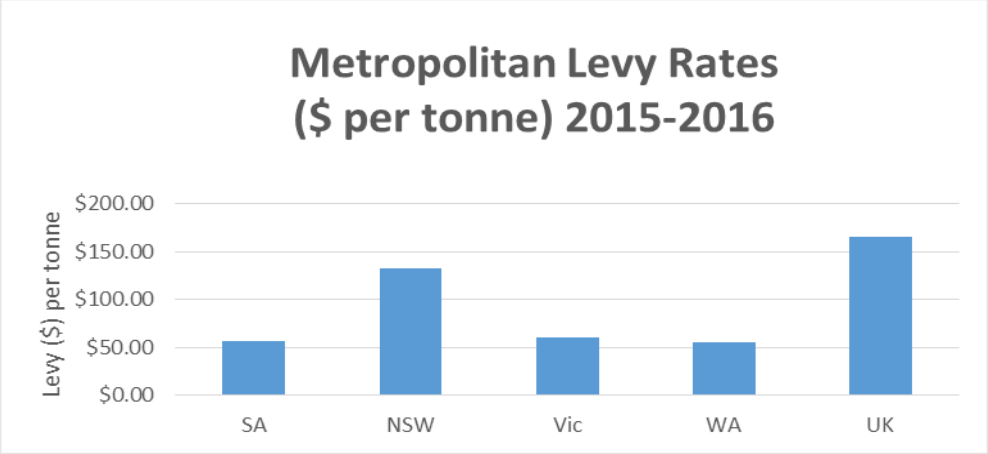

Figure 9 **Comparison of metropolitan waste levy rates 2015–16**[66]

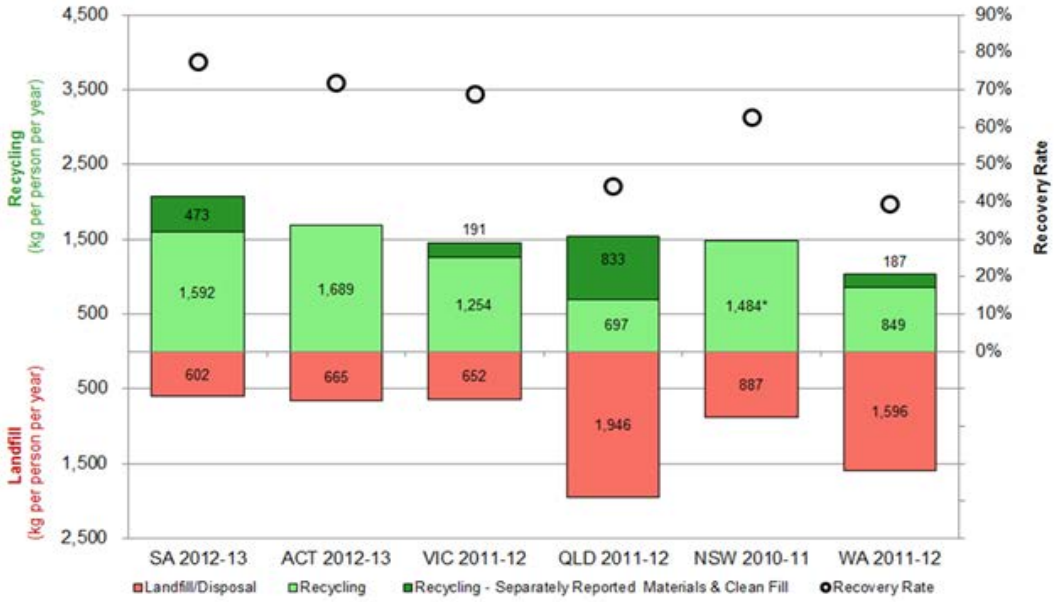

Figure 10 **Comparison of recycling rates between states and territories**[67]

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[66] **Levy rates ($/tonnes) 2015–16 [**Metropolitan = (M), Regional = (R)]

Note: The graph has mapped the following metropolitan waste levy rates: **SA:** $57, **NSW:** $133.10, **Vic:** $60.52, **WA:** $55, **UK**: £82.60 ($165). However the following levies apply:

- **SA** Solid Waste: $28.50 (R), $57 (M)
- **NSW** Waste Levy: $133.10 (M), $76.20 (R), Concessional levy rate for virgin excavated natural material $69 (M), $119.80 (R), concessional levy rate for shredder floc is: $38.40 (M), $66.60 (R)
- **Vic:** Rural municipal $29.30, Industrial $51.30.
- **WA:** Putrescible rate $55, Inert rate $40.
- **ACT:** Special Wastes only (meat, fish or other animal processing wastes, low level radioactive waste, sewage ash or grit, asbestos, hydrocarbons), $34.20–$153.20.

[67] Sourced from Report for ZWSA: Rawtec, *South Australia's Recycling Activity Survey 2012-13 Financial Year Report* (2014) for ZWSA.

Waste levy income distribution

The solid waste levy is distributed in the following manner each year:

1 Waste to Resources Fund receives 50%
The Waste to Resources Fund is established by section 17 of the Zero Waste SA Act 2004 and requires 50% of the waste levy to be paid into it. The Fund was able to be applied by ZWSA, and now by GISA, in accordance with the business plan or in any other manner authorised by the Minister for the purposes of the Zero Waste SA Act 2004.

2 Environment Protection Fund (under the EP Act) receives 5%
The Environment Protection Fund is established by the EP Act. Section 24 of the Act sets out the income sources to be paid into the Fund and Regulation 8 of the EP Regulations provides the prescribed percentage of fees to be paid into the Fund.

3 The EPA separately receives the 45% balance
The remaining waste levy income (45%) is paid into EPA's deposit account, separate from the Environment Protection Fund deposit account.

Funding and expenditure by the EPA

The EPA operates to a cost-recovery model. The largest component of EPA expenditure funding is the waste levy, comprising nearly 72% of total income. Other income sources are licensing cost-recovery fee revenue associated with both the EP Act and the Radiation Protection and Control Act (approximately 25% of income) and interest, grants and other external funding (approximately 3% of income). Any increase in revenue collected by the EPA, either through increased activity or an increase in fees or levies, does not result in a correlating increase in expenditure authority without Cabinet approval. The EPA's approved expenditure through income sources and government appropriation occurs as described below:

- General EPA funding (95%)
Its income mix is used for the EPA's licensing regime and other broader services, including site investigations, site contamination, development assessment and other public good services such as ambient air and water quality monitoring, public register, other information services and policy advice.
- Environment Protection Fund (5%)
The 5% share of the waste levy contributes over half of the income that comprises the Environment Protection Fund, with other income coming from sources such as a percentage of licence fees, fines, penalties and expiations and interest. The Fund makes up around 5.8% of the EPA's expenditure budget and is used specifically for the purposes set out in section 24(4) of the EP Act, such as education and training programs, investigations, research, pilot programs or other projects relating to the protection, restoration or enhancement of the environment.

Funding and expenditure by Zero Waste SA/Green Industries SA – the Waste to Resources Fund

From the Waste to Resources Fund, GISA has government expenditure approval for $4.1 million in 2015–16. Using these funds, it will seek to promote the objectives of the upcoming Waste Strategy 2015–2020 alongside other initiatives set out in an annual Business Plan. The scope of GISA will be determined through Parliament, with a draft Bill to be consulted on in 2015.

5.5.3 Key discussion points

Considering differential waste levies for problematic wastes

The current landfill levy structure seeks to accommodate regional differences. It does not however reflect the difference in the magnitude of environmental risk posed by different waste streams or whether the price signal is effectively reaching the waste generator (eg householders). Lower differential waste levies could potentially be applied to problematic wastes that are of great concern if illegally dumped, such as asbestos, or to specific residual wastes from resource recovery operations to promote their safe disposal in landfill.

EPA Victoria has applied differential levies to reflect the level of hazard posed by different categories of waste. For packaged waste asbestos, which has limited treatment options and should be disposed to landfill, the levy is comparatively lower ($30 per tonne) compared with industrial waste ($70–$250) to encourage safe handling and disposal.

The state government could, for example, consider applying a lower levy to asbestos that cannot be recovered to incentivise appropriate and safe disposal. Despite any reduced levy price, it is possible the gate fee would remain unchanged however due to the hazardous nature of asbestos and the limited number of facilities licensed to receive asbestos for disposal. An alternative to a lower levy could be involve a rebate system for defined asbestos products to be applied higher in the waste handling, removal and transportation chain. This would ensure that the price signal would work at the right level to effectively to incentivise safe handling and removal of asbestos for households, business and government. Similar consideration could potentially be given for other wastes that cannot be recovered and must be directed to landfill for safe disposal.

Another option is providing a concession or reduced waste levy for particular residual wastes to support specified recovery activity. NSW EPA has recently granted a temporary concession on shredder floc for metal recyclers[68] who have argued that residual waste from the recycling process should be exempt from the levy, as this is waste that cannot be recycled further and the levy on disposal is a comparatively high proportion of business costs. In combination with the concession on the levy a pool of grant money was made available under the NSW EPA 'Waste Less, Recycle More' initiative to promote innovation in business practices and technology to reduce the amount of shredder floc. A similar approach could be considered by the EPA, although it is noted that reducing the levy for residual wastes could undermine the incentive to reduce residuals (eg through better source separation) or to find new ways of recycling residual waste or, in some cases, its potential for use in energy from waste proposals and that alternative options may be appropriate to ensure that gate prices recover the full cost for processing and reuse or disposal of certain materials.

Conceptually, it is possible to envisage a system where material that must be disposed to landfill is exempt from the levy (with potential incentives for its safe disposal) while material with high recovery potential is subject to higher levy.

The Waste Management Association of Australia (WMAA) has previously discussed the option of differential levies for different types of waste, but has stated that this was 'generally not supported as an acceptable alternative to the current model'. WMAA cited issues such as confusion for business and the community and 'hidden' waste leading to contamination.

One of the critical issues with a differential levy system is the definition of different waste types or streams and subsequent compliance with those definitions, including through mass balance reporting processes. Waste can be inappropriately mixed/disguised or inappropriately classified in order to rort the waste levy and ensuring compliance with such a system can be difficult and costly. These scenarios, in addition to any impacts on administration and compliance costs, would need to be factored into any further development of this proposal.

Collection of the levy from landfills engaged in resource recovery

Disagreement can currently arise over levy application where landfills undertake on-site recovery operations or use recovered materials at the landfill (eg road-base and cover materials). The EP Regulations could be updated to explicitly provide that all materials received at landfill are 'waste' with levy applicable and then specify the circumstances in which materials are excluded from attracting the levy or for which rebates or discounts may be applied for. By way of example, New South Wales has extensive provisions in the *Protection of the Environment Operations (Waste) Regulations 2014* on how levy contributions are to be calculated together with applicable deductions and exemptions, as follows:[69]

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68 *Protection of the Environment Operations (Waste) Regulation 2014 (NSW)* regulation 12.

69 Divisions 3–5.

- The occupier of a NSW waste facility may apply to the EPA for approval to use waste at the facility for an operational purpose such as EPA-approved road or other construction works[70], leachate and liner systems, landfill gas, stormwater and groundwater management systems. If approved, the occupier will be issued with a certificate which specifies the operational purpose, the amount of waste approved and conditions relating to its use. Further, the occupier may deduct from the contribution payable an amount in respect of waste received at the facility that has been recovered, recycled or processed and transported from the facility or transported from the facility for lawful recovery, recycling, processing or disposal.
- When accompanied by the required records, spoil generated by dredging activities or EPA approved waste collected in accordance with a community service or activity arising from a biological outbreak or natural disaster waste received at a scheduled waste facility are exempted from the calculation of the contribution payable.

Considering increases to the waste levy

Delegates at the recent Waste Summit 2015[71] identified waste levy reform as a key priority to pursue. The general feedback received at the summit was that the levy should be used as an effective economic instrument to promote reduced disposal, increased recycling, waste innovation and projects. A significant number of submissions were made suggesting that the levy should be increased.

Changes to the solid waste levy could have widespread implications on economic activity in South Australia and careful consideration of the implications for all stakeholders is needed. Increases in the waste levy can positively influence the financial viability of resource recovery activities relative to disposal of waste to landfill, eg energy from waste proposals. If disposal to landfill costs become higher, it may act as an incentive for improved outcomes from 'fill' to be sought by developers of land. However, waste levy increases where there are limited opportunities for waste stream modification can also have significant cost impacts on waste generators or waste managers, eg local government, both through legitimate disposal costs and the potential for increased illegal dumping if public disposal fees increase. Waste levy increases could also negatively affect the residual waste disposal from existing resource recovery operations that have limited opportunities to achieve better waste management through contamination control, potentially placing increased pressure on the balance between what is considered a 'product' or 'waste'. If South Australia's waste levy was to differ significantly from other jurisdictions, then large volume waste movements between states could arise.

The effectiveness of waste levy increases in promoting resource recovery activity can strongly support further industry development dependent upon whether and how funds raised are redistributed to support the industry through infrastructure investment and related programs. The Review of South Australia's Waste Strategy 2011–2015 highlighted the significant net benefits arising from investments made using the levy through the implementation of that strategy[72].

The government is keen to hear views about what may be the optimal level for the waste levy to satisfy different stakeholder concerns with recent developments in the waste industry. Further investigation of this issue by the EPA, with GISA, would also consider:

- previous research about implications arising from waste levy changes
- the views that have been put forward by the LGA and WMAA regarding the levy and its use in the previous reviews of the waste levy in recent years
- submissions made on the establishment of GISA
- Submissions made on the new draft State Waste Strategy.

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70 Of a kind specified in the EPA *Waste Levy Guidelines*.

71 Available at: www.epa.sa.gov.au/files/10893_waste_summit_2015_final.pdf

72 Report for ZWSA: Resources and Waste Advisory Group, *Review of South Australia's Waste Strategy 2011–2015* (2014).

Questions

33 What, if any, waste types do you think should attract a differential levy to promote waste minimisation and resource recovery in South Australia?

34 Do you think a differential levy or rebate system on defined asbestos products would be an appropriate incentive to encourage safe handling and disposal of asbestos for households?

35 Are there other options that could better promote the appropriate management of residual wastes or poor quality recovered products from recovery processes than a differential levy?

36 What, if any, unintended consequences do you think may arise from the implementation of any differential levy system in South Australia?

37 What advantages or disadvantages do you consider may arise from requiring all material received at landfill to be subject to the levy, with a clear set of permissible exemptions set out in the EP Regulations (comparable to the NSW levy collection process)?

38 How would an increased solid waste levy impact on your business or your community?

39 Do you have any views on the expenditure of any increased solid waste levy?

5.6 Use of financial assurances

Financial assurances are proposed to be used to help to address the following key issues in the waste and resource recovery sector:

- static or growing stockpiles
- waste promoted as 'product' and ensuring environmental risks are reliably tested
- dealing with problematic wastes
- increasing interest in 'Energy from Waste' schemes
- balancing risk-based flexibility and clarity/certainty for reuse of wastes.

Financial assurances ensure that adequate environmental protections are in place to cover environmental liabilities that may occur during the operating life, closure or post closure of a licensed premises.

The EPA can currently use financial assurances on sites where there is a risk that the license holder will not meet site remediation obligations or other environmental requirements and therefore potentially expose government or other parties to liabilities associated with their operations.

The use of financial assurances on licensed premises ensures that the costs of remediation, site closure and post-closure liabilities for licensed premises are not borne by state government and the community in the event that a licence-holder defaults on their environmental obligations.

Financial assurances are frequently used by environmental regulators[73] to ensure that licence-holders have appropriate funds to manage potential environmental liabilities which may occur as a result of their licensed activities.

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[73] *Contaminated Land Management Act 1997 (NSW)* as amended by the *Protection of the Environment Legislation Amendment Act 2014 (NSW)*, www.epa.nsw.gov.au/legislation/poelegisamend2014.htm;
EPA Victoria, *Licences and Approvals: Financial Assurances* 23 February 2015 (2015), www.epa.vic.gov.au/our-work/licences-and-approvals/financial-assurances;
Department of Environment and Heritage Protection, Queensland, *Guideline: Financial assurance under the Environmental Protection Act 1994 (QLD)* February 2014 (2014), www.ehp.qld.gov.au/management/non-mining/documents/fa-

Despite its power to impose financial assurances, the EPA has made relatively limited use of financial assurances in recent years. The EPA proposes that a policy to help guide and support the use of financial assurances, most particularly in the waste sector, to achieve better environmental outcomes and maintain regulatory control.

5.6.1 Legislative basis

Section 51 of the EP Act currently provides:

> (1) Subject to this section, the Authority may, by conditions of an environmental authorisation, require the holder of the authorisation to lodge with the Authority a financial assurance in the form of a bond (supported by security approved by the Authority), or a specified pecuniary sum, the discharge or repayment of which is conditional on the holder of the authorisation—
>
> (a) not committing any contravention of this Act of a specified kind during a specified period; or
>
> (b) taking specified action within a specified period to achieve compliance with this Act.

The circumstances in which a financial assurance may currently be issued and proposed changes to clearly support the use of financial assurances to cater for excessive stockpiling in all cases irrespective of environmental harm risks is discussed in section 6.1.5.

5.6.2 Overview of the proposed Financial Assurances Policy

It is proposed to develop a policy on when and how financial assurances should be applied to properly protect against environmental and financial risks associated with licensed premises, focusing on the waste and resource recovery. The financial assurances policy will set out the EPA's approach and provide guidance to address:

- EPA principles in relation to financial assurances

  The policy will describe the key principles that financial assurance requirements should meet. For example:

  - ***Secure:*** The financial assurance must be secure for the duration of the licence-holder's obligations under a licence so that funds are available to discharge the obligations of the licence-holder and must be secure in the event of insolvency.
  - ***Sufficient:*** The financial assurance must be sufficient to meet all of the obligations of the licence-holder under the licence (where possible).
  - ***Available when required:*** The funds must be available when required to discharge the obligations of the licence-holder under the licence at the relevant time.

- Types of financial assurances

  The policy will detail the types of financial assurances (bond or pecuniary sum) and supporting security that can be required by the Authority, and the implications for each.

- Components of financial assurance

  The policy will describe each component of financial assurance for the waste and resource recovery sector that address different aspects of the site operation, closure and post closure liabilities.

- Process for putting financial assurances in place

  The policy will detail how the application of financial assurance to an authorisation is determined based on risk and scope of environmental harm or the compliance history of the licence holder.

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guideline.pdf; EPA Ireland, *Draft Guidance on Financial Provision* (2014), www.epa.ie/pubs/consultation/draftguidanceonfinancialprovision.html#.VZsl7p3SUdV.

The policy will also establish the processes required to establish a financial assurance, including the security of finances, how each component of financial assurance is calculated, what assurances can be used for, and how assurances can be either forfeited by, or released to the licence holder.

- Process for reviewing financial assurances

  The policy will provide guidance for when and how financial assurances will be reviewed, including whenever the licence is amended in a way that affects the amount of financial assurance required, for example if waste storage limits change or if additional landfill cells are approved.

5.6.3 Key discussion points

Different forms of financial assurance may be considered more or less appropriate by the waste and resource recovery industry. Advice on any industry preferences as well as issues that may have been faced by industry operators in relation to their experiences of the establishment and operation of financial assurances is sought.

Questions

40 What type(s) of financial assurance do you consider to be appropriate to cover environmental or financial liabilities (including from excessive material stockpiling) that may occur during the operation, closure or post-closure of an activity of environmental significance?

41 Should the Environment Protection Act be amended to prescribe the different types of financial assurance that may be used?

42 Are there any other elements that should be considered in the policy to provide guidance on when and how financial assurances should be applied?

5.7 Expanded licensing of waste transporters

There may also be value in expanding the licensing of commercial waste transporters to potentially help address:

- dealing with problematic wastes safely
- further developing safe resource recovery.

This option could potentially be used to help support effective mass balance reporting (refer to section 5.1).

5.7.1 Legislative basis

Currently, the Schedule 1 of the EP Act operates to provide that the following waste transport activities require a licence[74]:

> 3(5) **Waste transport business (category A)**
>
> the collection or transport for fee or reward of—
>
> (a) waste substances or things listed in Part B of this Schedule; or
>
> (b) liquid waste (not being such waste lawfully disposed of to a sewer) arising from any commercial or industrial premises or from any teaching or research institution.

[74] Per section 36 and Schedule 1.

3(6) **Waste transport business (category B)**

the collection or transport for fee or reward of—

(a) waste from domestic premises where the waste is collected or transported for or on behalf of a council; or

(b) solid waste from any commercial or industrial premises or from any teaching or research institution (other than building or demolition waste); or

(c) septic tank effluent; or

(d) waste soil containing substances or things listed in Part B of this Schedule in a concentration above that naturally occurring in soil in the area.

5.7.2 Expanded licensing proposal

The scope of the clauses means that the private, commercial collection of waste from domestic premises (excluding listed or liquid wastes) does not require a licence—domestic skip bins, residential construction and demolition waste collection, and also private companies that regularly service certain medium and high density residential developments. This is in contrast to collection of such waste by or on behalf of a council. Also, the commercial transport of 'building or demolition waste' does not require a licence. This is in contrast to waste collected for fee or reward from any commercial or industrial premises or from any teaching or research institution.

Amendment of these provisionsmay include the following:

- broadening the scope and clarity of 3(6)(a) such that it clearly includes all domestic waste collection and transport (where it occurs for fee or reward) other than only council kerbside and hard waste (campaign) collection; and
- removing the current exclusion for building or demolition waste from 3(6)(b) where it is collected and transported from industrial or commercial premises or research or teaching institutions.

5.7.3 Key discussion points

Such changes could:

- assist the waste industry by providing a more equitable regulatory environment whereby all waste transport stakeholders operate under the same rules, and
- enable the EPA to clearly delineate contraventions and breaches impacting on safety, amenity, levy avoidance (and possibly illegal dumping) and where necessary show that an operator is not a fit and proper person to hold a licence.

Early high-level engagement has indicated that sectors of the waste industry would strongly support such changes.

Questions

43 Do you have any issues with broadening the clauses to ensure that the collection and transport of all domestic waste and/or all waste from domestic premises is licensed?

44 Do you have any issues with the building and demolition waste exclusion in clause 3(6)(b) being removed?

45 Should any such changes be supported by the EPA having an ability to determine that a licence is not required in limited circumstances—something similar to 'excluding the collection or transport of waste that the Authority is satisfied poses a negligible risk of environmental harm having regard to the prescribed factors' (such that the EPA would have regard to the nature and purpose of the activity, the scale and duration of the activity, the nature and amount of any waste or pollution produced by the activity, the manner of conduct of the activity, and any other factors considered relevant by the EPA—to clearly exclude landscape gardeners, tradesmen and the like).

46 Do you have any information available to help the EPA assess the number of operators who could be affected any such changes to the scope of licensing?

5.8 Proximity principle

New South Wales has a 'proximity principle' in place. It is of interest to evaluate whether there may be value in introducing a 'proximity principle' in South Australia to help address:

- dealing with problematic wastes
- further developing safe resource recovery.

The 'proximity principle' is a concept based on the notion that waste should be managed (treated/disposed) as close as possible to its place of origin or generation. The principle is one of a number of principles accepted internationally for guiding national policy on waste management[75].

5.8.1 Legislative basis

The transport of a range of wastes into and within South Australia is tracked. However, the EP Act does not currently restrict the transport of wastes within the state or between jurisdictions.

Safe transport of waste is regulated through the requirement that all transport of listed wastes for fee or reward requires a licence to be held[76] and the mandatory requirements for general waste transport contained in the Waste to Resources EPP[77].

Legislative amendments would be required to implement any proximity principle in South Australia.

5.8.2 Overview of adoption of the proximity principle in other jurisdictions

Examples of overseas use

A land of limited land mass, Japan has had a proximity principle for dealing with its municipal solid waste (MSW) stream for nearly 40 years. It is seemingly deeply woven into Japan's waste management policy and remains a central value in its management of MSW[78].

The European Union promotes the proximity principle through the European Union's *Waste Framework Directive 2008/98/EC of 2008*[79].

Similarly, England's waste management plan also contains regulatory content relating to the proximity principle[80]. An analysis of UK waste minimisation in 2001 cited the proximity principle as one of the three key principles for sustainable waste management, alongside the best practicable environmental option (BPEO) and the recognised waste hierarchy[81].

Ireland has also confirmed that one of the fundamental components of policy in regard to the regulation of the movement of waste is the application of the proximity principle. However, it also stated that, the application of the proximity principle does not entail interpreting administrative waste management planning boundaries in such a manner as to inhibit the

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75 United Nations Environment Program, *Guidelines for national waste management strategies* (2013).

76 Refer to section 36 and Schedule 1 clause 3(5).

77 Clause 14.

78 Itaru, Okuda/Vivian E Thomson, *Regionalisation of Municipal Solid Waste Management in Japan: Balancing the Proximity Principle with Economic Efficiency* (24th May 2007), http://link.springer.com/article/10.1007%2Fs00267-006-0194-x

79 Refer to Article 16 'Principles of self-sufficiency and proximity'.

80 Department for Environment, Food & Rural Affairs, *Waste Management Plan for England* (2013).

81 ZeroWin Wiki: www.4980.timewarp.at/sat/ZeroWIN/wiki/index.php/Proximity_principle.

development of waste infrastructure which will support the attainment of national waste management policy objectives through the rational development and use of such infrastructure[82].

Australian adoption

New South Wales' recently introduced *Protection of the Environment Operations (Waste) Regulation 2014* contains proximity principle clauses which prohibit a person, in the course of business, transporting waste generated in NSW (other than restricted solid waste) to any place that can be lawfully used for the disposal of that waste (versus resource recovery) unless:

- the place is within 150 km of the origin of the waste, or
- the place is more than 150 km from the origin of the waste but is the closest or second closest place that can be lawfully used for the disposal of that waste.

The new regulations state that transporting waste includes causing or permitting waste to be transported.

The NSW government has indicated that it believes that the proximity principle will particularly help reduce the risks and social costs associated with the long distance transportation of waste and has tightened its rules to better protect people's health and the environment, and make the system fairer for operators who do the right thing. It is also important to note that waste can be transported across the NSW border if it is generated with 150 km of the border or if it is further than 150 km to the border but the border is closer than the closest or second closest facility within NSW that can lawfully receive that waste for disposal, the waste may be taken to any lawful facility in the closest state or territory.

In analysing the NSW proposal, the Centre for International Economics (CIE) found that long distance movement of waste was becoming prevalent due to the rigorous regulatory framework for licensed landfills in NSW, including a high waste levy (especially as Queensland has no levy)[83]. It is predicted that the new regulations will bring an end to interstate waste material trucking for cheaper disposal. The CIE report also identified a number of major risks associated with long-haulage waste transportation such as heavy vehicle traffic and congestion, fuel consumption, carbon emissions, traffic accidents, waste spillages and contamination.

Victoria uses Prior Approval requirements in relation to the transport of waste in order to ensure the designated regulatory authority and industry has appropriate oversight in relation to the movement of high-risk waste and other waste over long distances.

Queensland has also identified the proximity principle as being one of four key policy principles that will assist the state in achieving the objects of its *Waste Reduction and Recycling Act 2011*.

5.8.3 Key discussion points

The EPA currently has limited data regarding waste being transported interstate, which inhibits its capacity to develop effective waste policy and calculate likely costs and benefits.

South Australia does not experience the same mass interstate export of waste as NSW. It is known however that there are some instances of contaminated wastes being moved into South Australia from other jurisdictions for safe treatment and disposal. Although figures are not available, anecdotal evidence indicates that electronic waste is being trucked interstate from South Australia for either recycling or disposal (in avoidance of the Waste to Resources EPP's landfill ban). Apart from the transport of these problematic wastes, there is also now regular transport of household recyclable collections interstate for subsequent recovery.

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82 Refer to Policy Direction (May 2005) issued under section 60 of the Waste Management Act 1996–2005.

83 Report for NSW EPA: The Centre for International Economics, *NSW waste regulation: cost benefit analysis (final report)* (2014).

Certain wastes, due to their chemical composition and other characteristics, can be of high risk to the environment and human health if disposed or transported inappropriately. The adoption of a proximity principles tends to have application where it can play a role in mitigating potential environmental and human health impacts through avoiding the risks associated with the transportation of such waste ahead of its safe treatment and disposal, especially where it occurs over long distances.

Depending upon the scope of waste handling to which it applies, a proximity principle could provide positive flow-on effects for the sustainability of existing waste management and recovery industries within a jurisdiction by helping maintain predictable supply (through restricting the exodus of waste from the State).

Conversely, the introduction of a proximity principle may be viewed as having an overly narrow perspective by not readily allowing for the best course of action for individual waste streams and individual circumstances—whether relating to hazardous wastes or recyclable wastes, especially since effective recovery of materials produces significant energy savings even where lengthy transport is involved. Adoption of such a principle has potential to ignore economic development opportunities for both the waste industry and customers which can be better achieved through the transport of waste to a place where it can be better or more efficiently managed or recovered.

If a proximity principle were to be adopted, new administrative duties would be likely to apply to waste sector participants and additional administrative and compliance efforts would need to undertaken by the EPA. Therefore, the most efficient means for managing such a scheme would need to be explored.

Questions

47 Do you transport wastes long distances? If yes, how often and why?

48 Should the EPA further explore the introduction of a proximity principle given other options being explored to address issues faced? If yes, for hazardous wastes only or for waste generally?

49 What would be a reasonable maximum distance to allow in a proximity principle? Would there need to be exceptions (or different distances) for some regional or remote areas?

50 What advantage or disadvantages, if any, would the introduction of a proximity principle have for you?

5.9 Enhanced recovered product plans

It is proposed to enhance requirements for the preparation and use of recovered product plans to help to address the following key issues in the waste and resource recovery sector:

- static or growing stockpiles
- waste promoted as ‘product’ and ensuring environmental risks are reliably tested
- potential ‘fill’ materials end up at landfill due to development pressure
- balancing risk-based flexibility and clarity/certainty for reuse of wastes
- dealing with problematic wastes
- increasing interest in ‘Energy from Waste’ schemes
- further developing safe resource recovery
- inability to identify detailed resource recovery requirements.

Type of material recovered under Recovered Products Plans

5.9.1 Legislative basis

As discussed in section 3.2.1, the EP Act and clause 4 of the Waste to Resources EPP operate to distinguish between waste and recovered resources.

Recovered Product Plans may be required as part of satisfying a particular standard published by the EPA[84] or, alternatively, sought for individual recovery proposals that may be approved in writing by the EPA for the purposes of clause 4 of the Waste to Resources EPP.

The requirements of Recovered Product Plans may currently be enforced by:

- Inclusion in licence conditions and subsequent enforcement of those conditions under the Act.
- Requiring the handling of material as 'waste' if all requirements of an EPA Standard or approval have not been complied with.

The EPA will be seeking to clarify its legislative powers to regulate resource recovery on a market-based approach (versus environmental harm only) to ensure that Recovered Product Plans can be fully enforced in all circumstances (refer to section 6.1.1)

5.9.2 Overview of desired approach for Recovered Product Plans

The SA Government is supportive of the development and recovery of materials in accordance with strategic waste objectives and recognises that there are acceptable and beneficial recovered products that can be derived from waste, which may involve deposition of material to land.

It is widely recognised as good practice for a producer of a recovered material to develop a quality protocol such as a Recovered Products Plan or Materials Management Plan. These plans aid in classing material as waste or not. The EPA[85], United Kingdom Environment Agency[86], Contaminated Land: Applications in Real Environments[87] and other

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84 See for example, EPA, *Standard for the production and use of Waste Derived Fill* (2010, revised October 2013).

85 EPA, *Standard for the production and use of Waste Derived Fill* (2010, revised October 2013).

86 Environment Agency, *Turn your waste into a new non-waste product or material* (2014), www.gov.uk/turn-your-waste-into-a-new-non-waste-product-or-material.

87 CL:AIRE, *The Definition of Waste: Development Industry Code of Practice, v2* (2011), www.claire.co.uk/cop

national and international agencies recognise and support the need for quality protocols and require their development when recognising a recovered product.

EPA principles and requirements for recovering material

The following factors are important to demonstrate that a material is no longer a waste:

1 support for the waste hierarchy

2 an immediate market

3 employment of a risk-based approach,

4 prevention and minimisation of environmental harm

5 demonstration of beneficial reuse.

The production of recovered products must not be speculative and an immediate market must exist. Furthermore, appropriate materials balance and flow management need to be in place to ensure there is a systematic approach to production. Undesirable outcomes arise where stockpiling occurs without consideration being given to the capacity of the site, maintaining the integrity of the recovered product, storage time and market availability. This speculative stockpiling can lead to a risk of environmental harm and a risk of abandonment.

The EPA expects proponents to demonstrate that products are safe and effective prior to transport and reuse. When delivered to the user the recovered product must be able to be used without further processing and it must be fit for purpose.

There is no single factor that can be used to determine if a material is a waste or has become a recovered product. The EPA requires parties to demonstrate robust quality assurance and quality control methods through a scientifically sound risk assessment including representative sampling and characterisation and monitoring to differentiate recovered products from waste.

The production of a Recovered Products Plan (either under an EPA standard or for individual proposals) helps to ensure that the risk of environmental harm and a risk of abandonment are addressed and a correct determination is made on the nature of the materials. The RRP formally marshals all the relevant information to validate that all five factors demonstrating that a material is no longer a waste will be met and includes a tracking system and contingency arrangements.

To assist consideration of the status of material, the EPA proposes that RPPs should consistently address the following types of elements[88]:

1 Details of the ‘product’ producer including full legal name, registered address and authorised contact personnel.

2 Details of the specific wastes to be used to produce the recovered product at the facility including their receipt, segregation, sorting, processing and storage.

3 Details of the chemical and physical product specification for recovered product produced at the facility including a representative sampling and analysis program.

4 Specification of permitted use(s) of the product, including the details of any restriction on reuse applications.

5 Details of the methodologies for QA/QC processes to be implemented to ensure no unacceptable waste are included in final product supported by a contingency plan should unsuitable wastes or products be identified..

6 Sampling and assessment to confirm physical and chemical quality of the product meets specified criteria.

88 Noting that additional details and controls can be required for mixed waste-derived material relative to homogenous material.

5.9.3 Key discussion points

Existing requirements for RPPs are outlined in EPA standards and may be implemented through conditions of EPA licence.

Currently, the EPA receives RPP submissions that do not address all of the necessary factors and are inconsistent for similar sites and recovered products. A lack of understanding and appreciation of the value of a RPP to differentiate waste from recovered products can lead to protracted approval processes resulting in wasted resources and frustrated parties.

Also, licence conditions that require RPPs are dependent upon Development Approval conditions, site characteristics and on-site processes and proximity to sensitive receptors. As a result of these influences, variation can exist between the licence conditions regarding the stockpiling of waste, recovered products and associated RPPs. In these circumstances, the EPA advice outlining the value and requirements of a recovered products plan provided to the Industry is not always currently seen as consistent or clear as is ideal.

Requiring that RPPs meet a consistent standard, potentially including template guidance on form, content and typical management measures, will allow greater certainty that recovered products meet the EPA's principles and objectives, provide greater certainty for consumers of recovered products and assist in avoiding speculative stockpiling of material.

Refined and more transparent EPA assessment processes for RPPs would also help support the effective and timely assessment of submissions received, including any requests for further information that may be required. The refined assessment process will aim to build industry confidence in the role of the EPA in facilitating innovative solutions to waste management by:

1 defining the risk assessment framework that the EPA will apply when assessing proposals, and

2 defining the minimum information required to be submitted to enable a timely assessment.

Notably, the consideration of the appropriate use of materials under RPPs is often complex and necessitates the use of greater EPA regulatory resources than is required for other waste activities. Other waste and resource recovery activities are therefore potentially cross-subsidising the more complex aspects of resource recovery operations. As part of this reform, the EPA will consider the distribution of costs and work to ensure a better cost recovery approach to reflect effort required, most particularly for more novel or unique 'product' development (refer also to section 6.1.7).

Questions

51 What has helped or hindered you from successfully completing a RPP that satisfies all of the elements listed in section 5.9.2?

52 What steps could the EPA take to help support you in submitting and abiding by RPPs that meet all elements listed in section 5.9.2?

53 What would you like to see the EPA do to improve its assessment processes for RPPs?

5.10 Certificates of compliance

Certificates of compliance are proposed to be used to help support the following key issues in the waste and resource recovery sector being addressed:

- static or growing stockpiles
- waste promoted as 'fill' and ensuring environmental risks are reliably tested
- balancing risk-based flexibility and clarity/certainty for reuse of wastes

- increasing interest in 'Energy from Waste' schemes.

Currently the EPA's inspections program is the primary tool to assess the compliance of waste and resource recovery operators with their licences[89]. Certificates of compliance require a licence holder to self assess compliance with their conditions of licence annually and report this to the EPA. Their use will provide an additional, formal review of compliance and ensure that licence holders understand and focus on the environmental responsibilities laid out in their licence. Where a licensee has contravened a condition of licence they will be required to explain the reasons and outline a plan to return to compliance. Certificates of compliance could be used to help the EPA to target its inspection regime to focus more on areas of greater risk.

Box 4

Certificates of compliance can be used to:

- Assist the EPA in providing targeted information on how to improve compliance.
- Recognise good performance.
- Identify operators who require more compliance monitoring.

5.10.1 Legislative basis

For some years, section 54B of the EP Act has allowed the EPA to, by conditions of an environmental authorisation (licence), require the holder of the authorisation (licensee) to supply to the Authority certificates of compliance that include any of the following information:

- the extent to which the conditions of the authorisation have or have not been complied with
- particulars of any failure to comply with the conditions and the reasons for such failure
- any action taken, or to be taken, to prevent any recurrence of that failure or to mitigate the effects of that failure.

Information provided in a certificate of compliance cannot be used to incriminate the person or make the person liable to a penalty, however there are significant penalties for making a false or misleading statement (whether by reason of the inclusion or omission of any particular) in any information furnished, or record kept, under the EP Act[90]. If a body corporate contravenes the Act, a person who is an officer of the body corporate may also be guilty of a contravention subject to the requirements of section 129 of the Act. Notably, the general defence contained in section 124 of the Act is available to officers.

The supporting systems, guidance, policies and procedures have not yet been developed to support the systematic use of certificates of compliance and the EPA has not routinely used this existing power to date.

5.10.2 Proposed approach for the use of certificates of compliance

It is proposed that the necessary tools, protocols and systems for the use of certificates of compliance be developed and that certificate of compliance requirements be introduced as a condition of all authorisations under the EP Act.

The proposed approach is detailed in Figure 11. An example of how a certificate of compliance may look is contained in Appendix 3.

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89 Third-party complaints can also alert the EPA to non-compliance and licence-holders are already obliged by law to report events that may lead to serious or material harm.

90 Refer to sections 119 and 120A.

5.10.3 Key discussion points

Various applications of certificates of compliance are currently used in other jurisdictions across Australia as an additional tool to monitor compliance with the conditions of authorisations[91].

The EPA will use the information provided in certificates of compliance to report and track compliance with licence conditions across all licence-holders, including within the waste and resource recovery sector. Certificate of compliance data will assist the EPA to provide targeted information to licence-holders on how to improve compliance performance, recognise good performance and identify operators that require higher levels of compliance monitoring by the EPA. There are a couple of key options available to the EPA in how to seek certificates of compliance.

Option 1

The submission date and reporting period for certificates of compliance could be aligned with the current annual return process. This would require licence-holders to submit their certificate of compliance at the same time as their annual return (90 days prior to the licence anniversary date). The reporting period would cover the previous 12 months. Consolidating certificates of compliance with the annual return may provide a more streamlined approach for licence-holders by reducing the frequency of submissions made each year.

Option 2

The reporting period for certificates of compliance could be based on a calendar year or financial year, independent of the current annual return process. The submission dates would be three months following each reporting period:

- financial year (due 30 September)
- calendar year (due 31 March).

Submitting certificates of compliance at the end of the financial or calendar year may better align internal processes for data management and environmental monitoring practices with required submissions. The advantage would be that all the information relates to the same 12-month period, so is more up to date and timely to use for future planning.

Your feedback is sought to identify the best approach to the implementation of certificate of compliance use by the EPA to minimise the administrative burden it could place on licence holders.

In addition to industry implications, the adoption of this system will require government to develop and implement a supporting information system together with additional data analysis and audit staff to administer the new system.

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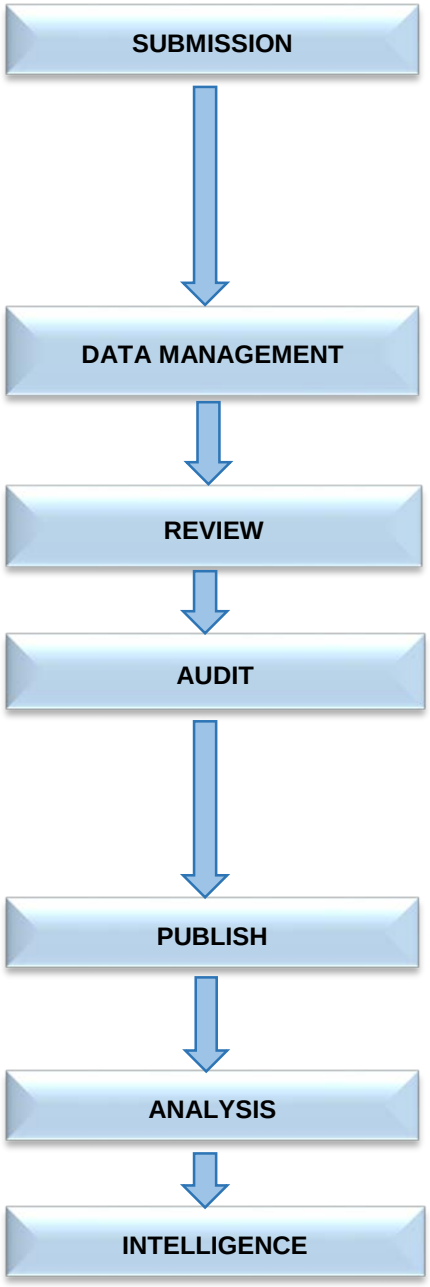
91 New South Wales' EPA, *Annual Returns and Load Data,* 9 September 2013 (2013), www.epa.nsw.gov.au/licensing/lbl/annualreturn.htm**;** EPA Victoria, *Annual Performance Statement Reporting,* 3 June 2013 (2013), www.epa.vic.gov.au/business-and-industry/guidelines/licensing-and-works-approvals/aps-reporting; Australian Government, Department of Environment, *Annual Compliance Report Guidelines* (2014), www.environment.gov.au/epbc/publications/annual-compliance-report-guidelines; EPA Tasmania, *Annual Environmental Review Template and Calculation Tool* (2013), http://epa.tas.gov.au/regulation/annual-environmental-review-template.



A completed certificate of compliance will be submitted to the EPA annually, within a specified timeframe, through e-ELF (the EPA's online licence management system). This will streamline administrative procedures for licensees while fulfilling the objectives of the state government's 'Digital by Default Declaration'.

A certificate of compliance should be completed in full and signed (by the inclusion of an electronic signature) by the most senior Australian-based officer of the licensed premises.

Completed certificates of compliance will be processed by the EPA's data management system to identify any anomalies in the information submitted and highlight non-compliances for review.

The EPA will review the certificates of compliance for completeness and compare the non-compliance incidents reported in the certificates of compliance with internally held information.

Submissions will be subject to random and targeted audits that compare the information provided by the licence-holder with EPA records.

Information provided by licence-holders will be compared to public reports of pollution, records of compliance inspections, and enforcement actions. This comparison helps us detect those that may not be correctly disclosing their compliance status.

Certificates of compliance will be made publicly available on the EPA's website, with the omission of commercially sensitive information. This will increase transparency and accountability by allowing the community and other stakeholders to understand the environmental performance of licence-holders.

The data submitted in certificates of compliance will allow the EPA to identify and understand trends of non-compliance.

The EPA will use the information provided in certificates of compliance to track environmental performance and compliance across all licence-holders and within the waste and resource recovery sector. Certificate of compliance data will assist the EPA to provide targeted information to licence holders on how to improve compliance performance and identify sites that require higher levels of compliance monitoring by the EPA.

Figure 11 The proposed approach for administering certificates of compliance

Questions

54 Would you like to submit annual returns and certificates of compliance at the same time?

55 Do you have a preference for a submission date or reporting period for certificates of compliance?

56 Do you have any comments on the character of the proposed certificate of compliance structure as set out in Appendix 3?

57 What impact, if any, would it have on your company to require the most senior Australian-based officer to certify the information in the certificate of compliance is true and correct?

58 Do you have any concerns with the proposal to make certificates of compliance publicly available on the EPA website (with the omission of commercially sensitive information)?

59 Are there any other elements that should be considered in the proposed approach to administer certificates of compliance?

60 What sort of guidance or technology would make it easier for you to complete and submit a certificate of compliance?

61 How would this proposed approach to use certificates of compliance impact on your business or community?

5.11 Recovering illegally obtained economic benefit

The EPA intends to commence using its existing powers to recover illegally obtained economic benefit for contravention of the EP Act to help to address the following key issues in the waste and resource recovery sector:

- static or growing stockpiles
- waste promoted as ‘product’ and ensuring environmental risks are reliably tested
- illegal dumping
- balancing risk-based flexibility and clarity/certainty for reuse of wastes.

The EPA has the ability to ask the Environment Resources and Development Court to order a person who has contravened the EP Act to pay to the Authority an amount of economic benefit acquired by the person as a result of the contravention in addition to a penalty. This existing power has not been exercised by the EPA due to a lack of guidance on how economic benefits can be reasonably calculated.

The EPA intends to develop a policy to assist in calculating and recovering illegally obtained economic benefit. The policy will explain the principles of recovering illegally obtained economic benefit, the methods used to calculate economic benefit, and the circumstance in which recovery will be sought.

5.11.1 Legislative basis

Section 133 of the EP Act specifies court orders in respect of contraventions includes:

1a Where a person is found by a court to have contravened this Act, the court may, in addition to any penalty it may impose, order the person to pay to the Authority an amount not exceeding the court's estimation of the amount of the economic benefit acquired by the person, or accrued or accruing to the person, as a result of the contravention.

1b For the purposes of subsection (1a), an economic benefit obtained by delaying or avoiding costs will be taken to be an economic benefit acquired as a result of a contravention if the contravention can be attributed (in whole or in part) to that delay or avoidance.

5.11.2 Overview of the proposed policy

The EPA has commenced working with other jurisdictions to develop policy that will promote a nationally consistent approach in recovering illegally obtained economic benefits. It is proposed that South Australia's policy will address the following matters:

1 Principles of recovering illegally obtained economic benefit

- ***Remove competitive advantage of non-compliance***: the removal of economic benefit from offenders will appropriately penalise offenders, deter future non-compliance and assist compliant operators who are currently disadvantaged by investing in compliant operation while non-compliant competitors are gaining economic benefits.
- ***Promote compliance***: currently, those businesses that avoid complying with environmental obligations gain an economic benefit from the use of the avoided costs of compliance. The policy will ensure that this benefit is measured during the enforcement process and recovered where possible. This in turn will act as a better general deterrent to contravene environmental laws.

2 Methods used to calculate illegally obtained economic benefit

The policy will outline the process used to quantify the economic benefit that may accrue to a business from delayed or avoided compliance with environmental laws. It will also outline the evidence that might be gathered and used to provide the basis of quantifying economic benefit.

3 Process of recovering illegally obtained economic benefit

The policy will provide an explanation of when the EPA will seek the recovery of economic benefit in conjunction with an offence under the Act and how this will be presented to a court or judicial body.

5.11.3 Key discussion points

Within the waste and resource recovery sector, significant economic benefits can accrue from contraventions of the EP Act. Within the waste sector, due to the costs associated with the safe handling and lawful disposal of waste, the benefits of illegal dumping, excessive stockpiling and promotion of waste as 'product' can significantly outweigh the likely penalties available upon successful prosecution for matters such as a contravention of a condition of licence or even causing environmental harm.

The policy will assist the EPA to create a level playing field for business between those who comply with environmental laws and those who do not by removing the benefits of offending and promoting greater compliance with environmental laws. The policy can be expected to also benefit licensees and the courts by providing a transparent and consistent basis for action.

Questions

62 Do you think that increasing the EPA's efforts to recover illegally obtained economic benefit will be useful in promoting compliance and deterring contraventions of the Act?

63 Are there areas of your industry that you think the EPA should focus on in seeking the recovery of illegally obtained economic benefit?

5.12 Energy from waste technical and policy guidance

The EPA proposes to develop additional Energy from Waste technical and policy guidance to help address the issues of:

- dealing with problematic wastes
- increasing interest in 'Energy from Waste' schemes
- further developing safe resource recovery.

Energy from Waste facilities recover energy in the form of electricity or heat, typically involving the thermal and/or biological treatment of a waste source including processes such as direct combustion, anaerobic digestion, gasification and pyrolysis. Related activity involves physical/mechanical production to manufacture of refuse derived fuel (RDF).

Working closely with government, Australia's first RDF manufacturing plant was established in Adelaide, with RDF being developed from commercial and industrial waste streams. The RDF is used as a partial replacement of fossil fuels in a local cement manufacturing plant and further opportunities are being explored. Other industrial users of fossil fuels such as natural gas are also interested in potential reuse opportunities involving RDF to reduce operational costs and their ecological footprint.

The potential for the Energy from Waste sector to further develop in South Australia is outlined in the draft SA Waste Strategy[92]. The EPA has an important role in delivering clear and effective regulation that supports this form of resource recovery while protecting our community.

5.12.1 Legislative basis

As Energy from Waste facilities and depots manufacturing RDF are prescribed activities of environmental significance, development applications for such proposals will be referred to the EPA for direction and subsequently require a licence as a 'waste or recycling depot' under the EP Act[93].

In considering these proposals, the EPA must seek to further the objects of the Act and have regard to relevant environment protection policies (EPPs), the general environmental duty and SA's Waste Strategy[94]. During the regulatory consideration and assessment process the EPA will generally take into account matters such as air quality including odour and noise, siting including separation/buffer distances, and other environmental and amenity issues.

The Waste to Resources EPP defines 'resource recovery' as including 'recovering energy or other resources from waste'[95], meaning that proposals that the EPA accepts as generating suitable energy will constitute resource recovery operations for the purposes of the EPP.

Requirements for the manufacture of RDF are set out in the *Standard for the production and use of Refuse Derived Fuels* (2010). Notably, the standard requires clear arrangements between the producer and intended user of the fuel: speculative creation of a technically adequate fuel is not enough for material to become viewed as a 'product'.

5.12.2 Overview of the proposed policy

It is therefore proposed that technical and policy guidance be developed that will enhance understanding of the relevant regulatory framework to support investment decisions being made on energy from waste developments and to avoid unintended or unnecessary regulatory impediments, for example:

- enhance clarity regarding any waste levy application

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92 Zero Waste SA, consultation draft *Waste Strategy 2015–2020* (2015), pp 25–26.

93 Environment Protection Act 1993, section 36 and Schedule 1 clause 3(3).

94 Sections 4, 10(2) and 57.

95 Clause 3.

- develop relevant technical specifications and assessment criteria for energy from waste proposals (particularly anaerobic digestion and thermal treatment)
- support the dissemination of sound information for stakeholders on the environmental and health implications of relevant modern energy from waste technologies to support evidence-based evaluation of proposal risks and benefits.

The EPA intends to develop this policy having close regard to interstate policies[96] and European requirements for energy from waste proposals and European compliance experience. The Zero Waste SA commissioned Waste to Energy Background Paper[97] will also inform the EPA's proposed position.

Once it is developed, the EPA will consult with industry, local government and the community on the draft policy.

5.13 Improved site monitoring

The EPA is proposing selected improved monitoring techniques for consideration at this time relating to:

- The use of approved tracking devices (such as GPS) – refer to section 6.2.3.
- Annual volumetric and topographical survey requirements – refer to section 5.1.2.
- Video camera use – refer to section 5.1.2.

Further technological developments have the potential to create additional new opportunities for the EPA to more efficiently regulate licensed premises, eg through the potential for remote log-in to review weighbridge data or camera feeds in real-time, the use of drones for survey work and more. Later in the reform process, the EPA proposes to undertake a project exploring potential efficiency opportunities and then consult with stakeholders regarding the viability, benefits and risks associated with various options.

5.14 Simplifying waste taxonomy and definitions

Waste taxonomy and definitions vary between states and also across EPA documentation, especially due to incremental nature of changes of waste or recycling depot licences over extended periods of time. This can be confusing and time consuming for all parties as well as making comparable waste data hard to collect.

The Australian Government has supported extensive research in this field in endeavouring to further the objectives of the National Waste Policy[98], including commissioning reports such as:

- *Waste Classifications in Australia*[99]
- *Department of Sustainability, Environment, Water, Populations and Communities, Australian Waste Classifications: Roles in decision making*[100]
- *Australian Waste Definitions: Defining waste related terms by jurisdiction in Australia*[101].

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96 For example, EPA Victoria, *Energy from Waste* (2013); NSW EPA, *NSW Energy from Waste Policy Statement* (2014); WA EPA, *Environmental and health performance of waste to energy technologies* (2013); WSP Environmental, *An Investigation into the Performance of (Environmental and Health) of Waste to Energy Technologies Internationally – Summary Report* (2013).

97 Ricardo–AEA, *Waste to Energy Background Paper Zero Waste SA* (2013).

98 Australian Government, *National Waste Policy: Less Waste, More Resources* (2009).

99 Hyder, *Waste Classifications in Australia* (2011).

100 Hyder, *Department of Sustainability, Environment, Water, Populations and Communities, Australian Waste Classifications: Roles in decision making* (2011).

101 Sustainable Resource Use, *Australian Waste Definitions: Defining waste related terms by jurisdiction in Australia* (2012).

For national waste data reporting purposes, the Australian Government has come to the conclusion that given how terminology differs between jurisdictions, including being embedded in different statutory structures, it is not possible to seek consistent term usage. Instead, a 'translation document' that informs how terms used in each jurisdiction relate to terms used in national waste data reports is being prepared in consultation with state governments.

It is considered essential that clear definitions be used for the proposed introduction of mass balance reporting, upfront levy liability, energy from waste scheme technical and policy guidance and any differential levy categories. Clearer terminology and definitions will also assist in the clarity of application and assessment under EPA documentation to determine whether certain wastes may constitute a 'product' and hence in certainty about reuse opportunities.

As part of pursuing other changes, the EPA will review the national work undertaken on definitions, definitions used for recycling activity data collection, and differences that occur within our documentation to improve consistency and clarity of language use. Consultation will be undertaken with key stakeholders regarding definitional usage where needed.

The development of clear terminology upfront in emerging fields such as WMAA's *A Glossary for the Australian Energy from Waste Industry Sector* (currently undergoing consultation) is integral to this work.

6 Options for changes to the Environment Protection Act 1993

Some of the challenges identified in this paper may require legislative solutions and involve changes to the EP Act. Submissions are sought on what changes could be made to the Act to provide South Australia with the most effective tools to manage the waste and resource recovery sector and to make it easier for the EPA and relevant authorities to reduce the prevalence of illegal dumping across South Australia.

Outlined below for discussion and comment are some suggested options for changes to the EP Act 1993 to provide the EPA with more effective and efficient tools to manage the waste and resource recovery sector and to enable the EPA and other relevant authorities to identify who is responsible for the offence of illegal dumping, to collect evidence as to the offence and therefore successfully prosecute offenders.

6.1 Tools to manage the waste and resource recovery sector

Comments are sought on how changes to the EP Act could provide South Australia with the most effective tools to manage the waste and resource recovery sector.

6.1.1 Amendment to the Objects – section 10

The EPA proposes to pursue amendments to the EP Act (including, potentially, the Objects in section 10) to support the implementation of maximum stockpile limits and controls on material flows to prevent excessive accumulation of material, irrespective of direct environmental harm risks and whether or not material meets the physical and chemical criteria of a 'product'.

Excessive accumulation of materials at selected sites is a matter of strong concern within the waste sector due to the drivers influencing the industry. Section 5.3 identifies the detrimental impacts of excessive stockpiling, including distorted competition through excessive accumulation of materials and to overall EPA objectives. It is noted that the development of such legislative amendments to allow effective and explicit stockpiling control would require careful consideration to avoid any unnecessary or undesirable restrictions on business, working within the framework of Australian consumer and competition laws.

Questions

64 Do you support amendment to the EP Act to clearly allow implementation of maximum stockpile limits and material flow controls to prevent excessive accumulation of material?

6.1.2 Definition of 'waste' – section 3

Amendment is proposed to section 3 of the EP Act to specifically exclude from the definition of 'waste' anything declared to be a 'product' (ie not a waste).

The current model of determining when material is, or ceases to be, a waste is set out in section 3.2.1. It is considered that there are advantages to also specifically being able to declare when a particular material constitutes a 'product' for improved clarity and certainty for both the waste and resource recovery sector and the EPA as regulator.

Complementary amendment to the Waste to Resources EPP may also be sought to further support such an amendment.

Questions

65 What advantages or disadvantages do you consider could arise from amendment of the EP Act to clearly allow declaration of particular material as a 'product'?

6.1.3 New expiation for breaches of licence conditions – section 45

Amendment is proposed to section 45 of the EP Act to create an expiation for the offence of a contravention of a condition of an environmental authorisation (including a licence) in section 45(5) to allow for prompt punishment of less significant offences.

Efficient punishment of breaches of licence conditions is important in the effective regulation of the waste and resource recovery industry and provides a cost-effective and timely regulatory tool to control environmental pressures.

Expiation is a monetary fee or penalty applied for offences that contain an expiation provision. An expiation notice may be issued directly by an EPA authorised officer or an administrating agency to the individual or corporation responsible for a contravention or offence and is an alternative to prosecution or civil penalty. Expiations are used for low threshold non-compliance with the EP Act.

The current offence of contravening a condition of environmental authorisation is stated in section 45 and attracts a maximum penalty that a court may order of $120 000 if the offender is a body corporate or Division 1 fine ($60,000) if the offender is a natural person. However, there is no expiation available to punish a breach of environmental authorisation condition.

Providing an option of pursuing an expiation for breach of licence condition allows the EPA to implement its stated regulatory approach '*When responding to any identified non-compliance, our approach is risk based, proportionate to the actual or potential environmental harm, and considers the attitude and compliance history of the alleged offender*[102]*.'*

Examples of typical licence conditions for the waste and resource recovery industry that may be suitable for an expiation of breaches are:

- failure to submit a monitoring report (ie groundwater)
- failure to submit an environmental management plan or landfill environmental management plan
- failure to notify under administrative provisions
- failure to display adequate signage at the gate.

Additionally, expiation for breach of licence condition would provide an effective tool to encourage compliance with certificates of compliance as referred to in this paper. By way of comparison in Victoria the EPA has the ability under section 31D of the *Environment Protection Act 1970* (Vic) to issue a Penalty Infringement Notice in the amount of $7,380 for not submitting an annual performance statement (equivalent to a certificate of compliance) on time.

A considerable expiation is proposed for the offence of failing to comply with a condition of licence, noting that the maximum expiation in the EP Act is $500.

Since the formation of the EPA in 1995 there has been 15 successful prosecutions for breach of licence conditions, one court imposed civil penalty and three negotiated civil penalties. Only two of the penalties have been awarded for breaches of administrative licence conditions:

- failing to complete details of waste tracking forms as required where the offender was fined $6,000 and was required to pay technical costs of $3,343
- failing to submit an environment improvement program by the due date where the offender was fined: $16,325 and was required to pay costs of $1,675.

This may highlight the limited enforcement options available for breaches of administrative licence conditions.

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102 *EPA Annual Compliance Plan 2014–15* (2014).

It is noted that the SA *Environment Protection General Regulations 2009* do prescribe penalty for failure to lodge an annual return or pay an annual authorisation fee which are standard conditions of authorisations. Regulation 22 specifies the penalty for failure to lodge an annual return or pay an annual authorisation fee which is—

(a) if the default occurs up to or including 30 June 2010 – $20 plus 1% of the annual authorisation fee for the first month (or part of a month) for which the default continues and 2% of the annual authorisation fee for each further month (or part of a month) for which the default continues; and

(b) if the default occurs after 30 June 2010 – $300 or 5% of the annual authorisation fee (whichever is higher) for each month (or part of a month) for which the default continues.

The NSW *Protection of the Environment Operations Act 1997* and regulations provides significant penalties through a system of penalty notices including for failure to comply with condition of a licence (except for the late or non-submission of an annual return) in the amount of $7,500 for a natural person or $15,000 for a body corporate.

Questions

66 Do you consider that an expiation is a suitable tool to punish an offender who contravenes a condition of licence?

67 Do you think the application of expiations, as opposed to criminal prosecutions, will deter non-compliance with the conditions of a licence?

68 Should an expiation be limited to administrative breaches of licence condition or be applied to all breaches of licence conditions?

69 What is an appropriate expiation amount for a person who contravenes a condition of licence?

70 Should there be a new requirement that before the EPA pursues an expiation for a breach of licence condition the EPA must have regard to the seriousness of the contravention, the previous record of the offender and any other relevant factors?

71 How would such a power impact on your community or business?

6.1.4 Insurance requirement for a licence – section 45

Amendment is proposed to Part 6 Division 5 – 'special conditions of the Environment Protection Act' to clearly set out the EPA's ability to require a licence0holder to take out insurance for the payment of costs for clean-up action, and for claims for compensation or damages, resulting from pollution in connection with the activity or work authorised or controlled by the licence.

Section 45 allows the EPA to impose conditions of licence with respect to such matters as are contemplated by the Act or as the EPA considers necessary or expedient for the purpose of the Act. Amended is proposed that the EP Act specifies the EPA's ability to include a licence condition to require the holder of the licence to take out and maintain a policy of insurance for the payment of costs for clean-up action, and for claims for compensation or damages, resulting from pollution in connection with the activity or work authorised or controlled by the licence.

Amendment to the EP Act is further proposed to provide the EPA with the discretion of requiring insurance before a licence can be issued (section 40), require as a condition of licence the continued insurance coverage (section 45) and require details of insurance in annual returns to the EPA (section 48).

By way of comparison section 72 of the NSW Protection of the Environment Operations Act 1997 contains provision for 'pollution insurance' as a condition of licence and clause 15 of the Victorian *Environment Protection (Industrial Waste Resource) Regulations 2009* regulates the transport and management of waste and requires as a condition of permit that associated insurance is maintained. Other jurisdictions have the ability to require insurance be taken out by a licensee as a financial assurance.

Questions

72 Do you consider that the EPA should require a licence-holder to take out insurance for the payment of costs for clean-up action, and for claims for compensation or damages, resulting from pollution in connection with the activity or work authorised or controlled by a licence?

73 How would such a requirement impact on you?

74 Would there be insurers to insure such activities?

75 What costs would the requirement to hold such insurance place on operators?

76 Should insurance requirement be imposed as a financial assurance?

77 Do you think that many operators would already be insured for the clean-up costs or compensation resulting from an activity of environmental significance controlled by a licence, under their current insurance policies?

78 Are there other methods that you would prefer to be used to insure for the clean-up costs or compensation resulting from an activity of environmental significance controlled by a licence?

6.1.5 Application of financial assurances – section 51

Amendment is proposed to section 51 of the EP Act to ensure that financial assurances can be applied to stop operators abandoning sites where there is costly remediation work that may be required because of activities under the licence regardless of whether there is a risk of environmental harm. Section 51(2)(a) limits when the EPA may impose conditions requiring the lodgement of a financial assurance stating that:

(2) The Authority may not impose conditions requiring the lodgement of a bond or pecuniary sum unless satisfied—

(a) that imposition of the conditions is justified in view of the degree of risk of environmental harm associated with the activities that may be undertaken pursuant to the environmental authorisation, or activities previously undertaken at the place to which the authorisation relates, or the likelihood of action being required to make good resulting environmental damage; or

(b) that—

(i) the holder of the authorisation has on one or more occasions contravened this Act in relation to the activity undertaken pursuant to the authorisation; and

(ii) the imposition of the conditions is justified in view of the nature of the contravention, or the nature, number or frequency of the contraventions; or

(c) as to any other matters prescribed by regulation.

While there is an opportunity to prescribe the risk of financial harm to the government to clean up the site by way of regulation under section 51(2)(c), the question is asked whether the Act should be amended to best clarify that the EPA may impose conditions requiring the lodgement of a financial assurance where costly remediation work may be required because of activities under the licence (including in the event of abandonment of a site).

By way of comparison the NSW Protection of the Environment Operations Act places the following restrictions on the issuing of financial assurances:

299 Restriction on requiring financial assurance

The appropriate regulatory authority cannot impose a condition on a licence requiring a financial assurance to be provided unless it is satisfied that the condition is justified having regard to:

(a) the degree of risk of environmental harm associated with the activities under the licence, or

(b) the remediation work that may be required because of activities under the licence, or

(c) the environmental record of the holder or former holder of the licence or proposed holder of the licence, or

(d) any other matters prescribed by the regulations.

Questions

79 Should the EP Act be amended to clarify that the EPA may impose conditions requiring the lodgement of a financial assurance where remediation work may be required because of activities under the licence irrespective of the potential for environmental harm (including in the event of abandonment of a site)?

80 Are there any other methods that could be applied to licence-holders to ensure there are adequate funds available for necessary remediation of a polluted site?

6.1.6 Improve evidentiary provisions regarding waste – section 139

Amendment is proposed to section 139 of the EP Act to improve the EPA's ability to take action for non-compliance with the regulation of waste by placing the burden of proving a material not to be a waste on the alleged offender.

Section 139 identifies evidentiary provisions for proceedings under the Act and section 139(3) states that 'an allegation in a complaint that specified matter was a pollutant constitutes proof, in the absence of proof to the contrary, of the matters so alleged'. Similar amendment is proposed such that if the EPA asserts a material is a waste then it will be taken to be so unless the alleged offender proves otherwise.

Several offences in the EP Act and the Waste to Resources EPP require proof by the EPA that a material is waste. For example, section 113 requires the holder of a licence to conduct a waste depot to pay the prescribed waste levy to the EPA in respect of waste received at the depot, regulations 70 and 71 of the EP Regulations further prescribes the levy payable and clause 10 of the Waste to Resources EPP prescribes the offence of unlawful disposal of waste.

Clause 4 of the Waste to Resources EPP declares certain material to be waste and states:

> For the purposes of the definition of waste in section 3(1) of the Act, waste or material resulting from the treatment of waste continues to be waste except insofar as—
>
> (a) it constitutes a product that meets specifications or standards published from time to time or approved in writing by the Authority; or
>
> (b) if no specification or standard published or approved in writing by the Authority applies to such waste or treatment of waste—it constitutes a product that is ready and intended for imminent use without the need for
>
> further treatment to prevent any environmental harm that might result from such use.

Amendment to the EP Act would put it beyond doubt that if someone wants to rely on the definition of waste in clause 4 of the Waste to Resources EPP to assert that a material is not a waste, that it is their burden to provide that the material is not a waste.

By way of comparison section 143 of the NSW Protection of the Environment Operations Act 1997 creates the offence of unlawful transporting or depositing of waste, subsection 143(2) contains a proof of lawfulness provision whereby the defendant bears the onus of proving that the place to which the waste was transported can lawfully be used as a waste facility for that waste.

Questions

81 Should the burden of proving a material is not a waste be on the alleged offender?

82 What impact would this change have on your business or community?

6.1.7 Potential ability to charge for the assessment of new product proposals – new section

The assessment of whether a material can safely be used as a new product is often complex and, for efficient and thorough assessment, requires drawing upon significant EPA resources. It involves the use of greater EPA regulatory resources than is required for the management of various other waste activities. Other waste and resource recovery activities are potentially cross-subsidising the more complex aspects of resource recovery operations. As part of this reform, the EPA will consider the distribution of costs and work to ensure a better cost-recovery approach to reflect effort required, particularly for more novel or unique 'product' development. If necessary, the EPA may propose that a new section be developed for the EP Act to cater for appropriate cost recovery in this area.

Question

83 Do you have any objections or comments to cost-recovery measures being adopted to support the efficient and thorough assessment of new product proposals by the EPA?

6.2 Tackling illegal dumping

Amendment to the EP Act may be considered to make it easier for the EPA and relevant authorities to identify who is responsible for the offence of illegal dumping, to collect evidence as to the offence and therefore successfully prosecute offenders and reduce the prevalence of illegal dumping across South Australia.

Illegal dumping is a significant concern to the government and community due to the environmental, health and amenity impacts and the resulting resource strain on state and local government and private land owners due to the associated clean-up costs.

6.2.1 Registered owner responsibility for pollution – section 4

Amendment is proposed to section 4 of the EP Act to address the difficulty faced by the EPA and relevant authorities in establishing the person responsible for pollution from a vehicle by holding the registered owner responsible for the pollution from the vehicle unless they can establish they were not the person in charge of the vehicle.

The EPA has experienced difficulty in establishing the occupier or person in charge of a vehicle in events where pollution has been released to the environment and evidence of the vehicle registration that has been used in the illegal dumping of waste is not sufficient to prove the person responsible for the offence.

Section 4 of the EP Act states that the occupier or person in charge of a place or vehicle from which a pollutant escapes will be taken to have polluted the environment. Amendment to section 4 is proposed such that the offence of pollution from a vehicle would rest with the registered owner of a vehicle unless the owner can establish that they were not the driver. An accompanying defence to the offence is proposed if a natural person or company can prove they were not in charge of the vehicle at the time of the alleged offence, and that they did all that was reasonable and practical to ensure the proper use of the vehicle by the driver of the vehicle at that time. An additional defence is proposed for a natural person if they can prove that they were not in charge of the vehicle and did not know who was driving the vehicle. It is proposed that this provision provide the ability for a statutory declaration to state someone else is responsible for the offence.

Illegal dumping usually occurs in isolated areas however the use of surveillance cameras in known illegal dumping hotspots combined with the ability to determine the owner of a vehicle as responsible for the offence will provide a significant deterrent.

By way of comparison section 174A of the *Road Traffic Act 1961* provides that if a vehicle is involved in a prescribed offence, the owner of the vehicle is guilty of an offence and liable to the same penalty as is prescribed for the principal offence and the expiation fee that is fixed for the principal offence. Section 45G of the Victorian Environment Protection Act 1970 provides a litter specific version of such a provision.

Questions

84 Should the EPA have the power to hold the registered owner of a vehicle responsible for the offence of pollution from their vehicles unless they can establish that they were not the driver?

85 What other methods could be applied to ensure that the person responsible for the offence is identified?

6.2.2 Clarifying that illegal dumping includes the illegal disposing of waste – section 4

Amendment is proposed to section 4 of the EP Act to ensure that the offence of illegal dumping includes the illegal disposing of waste.

As discussed above, section 4 states:

> 4—Responsibility for pollution
>
> For the purposes of this Act, the occupier or person in charge of a place or vehicle at or from which a pollutant escapes or is discharged, emitted or deposited will be taken to have polluted the environment with the pollutant (but without affecting the liability of any other person in respect of the escape, discharge, emission or depositing of the pollutant).

Amendment to section 4 is proposed such that the wording ‘discharged, emitted or deposited’ specifically includes all instances of disposing of waste, to ensure that it covers illegal dumping occurring from the disposing of waste.

Question

86 Should section 4 be amended such that the wording in section 4 ‘discharged, emitted or deposited’ specifically includes all instances of disposing of waste, to ensure that it covers illegal dumping occurring from the disposing of waste?

6.2.3 Require nominated waste transporters to install approved tracking devices

A new provision and amendment to section 52 of the EP Act is proposed to enable the EPA by notice in writing, or by a new licence condition to require the owner of a vehicle used for transporting waste to install and operate an approved vehicle tracking device (such as a GPS). The requirement would include that approved tracking devices are installed, used and maintained, in the manner specified in the condition or notice, on any motor vehicles that are used by the person (or an employee, subcontractor or agent of the person) to transport waste, and such devices are not tampered with.

It is proposed that the requirement not be placed on all waste transporters, only those identified by the EPA as required to manage the risk imposed by the transport of waste and the likelihood of illegal dumping of waste. It would be the responsibility of the relevant transporter to ensure the approved vehicle tracking device in the vehicle was operating.

This proposal has been developed based on the NSW Protection of the Environment Operations Act 1997 section 144AC that enables the NSW EPA, by notice in writing, to require a person who is engaged in the transportation of waste to ensure that:

(a) approved GPS tracking devices are installed, used and maintained, in the manner specified in the notice, on any motor vehicles that are used by the person (or an employee, subcontractor or agent of the person) to transport waste, and

(b) such devices are not tampered with.

The cost of installing GPS tracking units could potentially be borne by either industry or government and the state government would also incur a cost to set up and maintain the tracking system.

Questions

87 What impact would a requirement to install GPS on vehicles have on business?

88 Who should bear the cost of installing GPS tracking units?

89 Should the proposed system of tracking devises be extended to all waste transporter vehicles?

6.2.4 Increased powers of entry for authorised officers – section 87

Amendment is proposed to section 87 of the EP ct to provide authorised officers with a power of entry on a premises at any time if something may be found in the premises that is intended to be used in a contravention of the Act and also to allow the marking of something that an authorised officer reasonably suspects is intended to be used in a contravention of the Act.

EPA Investigations officers are limited in their powers to carry out proactive work in the investigation of illegal dumping of material generated from non-commercial premises.

Section 87 provides powers of entry for authorised officers and is limited by subsection (2) that states:

(2) An authorised officer may not exercise the power of entry under this section in respect of premises except where—

(a) the premises are business premises being used at the time in the course of business; or

(b) the authorised officer reasonably suspects that—

(i) a contravention of this Act has been, is being, or is about to be, committed in the premises; or

(ii) something may be found in the premises that has been used in, or constitutes evidence of, a contravention of this Act; or

(c) the exercise of the power is reasonably required for the purposes of assessing the existence or causes of known or suspected site contamination.

Section 87 has limited use in the investigation of illegal dumping in circumstances where the waste is generated from a site that is not a business premises. For example it cannot be utilised on a demolition site if the premises are not business premises or being used in the course of a business and as the offence of illegal dumping is not about to be committed on the premises and the contravention of illegal dumping has not yet occurred.

Amendment is proposed to section 87(2)(b) such that power of entry may be exercised on a premises at any time if something may be found in the premises that is about to be used in a contravention of the Act.

Further amendment is proposed to section 87 of the Environment Protection Act to allow an authorised officer to mark anything that they reasonably suspect is intended to be used in a contravention of the Act. This new power would assist the investigation of illegal dumping by allowing the use of micro dot technology. Microdots can be sprayed onto material, such as construction and demolition waste, that can then be identified after the illegal dumping of the material by the application of UV lights, enabling proof of the origin of the material illegally dumped.

Questions

90 Should authorised officers have the power of entry on a premises at any time if something may be found in the premises that is intended to be used in a contravention of the EP Act?

91 Should authorised officers have the power to allow the marking of something that an authorised officer reasonably suspects is intended to be used in a contravention of the EP Act?

7 Innovative change ideas

Changing product and packaging trends create new waste issues and the EPA is seeking to assess the impacts of materials of concern and monitor potential ideas to manage these more effectively. Your feedback is sought on where regulatory action could assist with further developing safe resource recovery options and to better address illegal dumping beyond the impetus provided through the current Waste to Resources EPP.

This section highlights a number of waste reform initiatives that aim for enhanced resource recovery outcomes in South Australia, some based on successful examples in other parts of the world. The proposals are presented as high level concepts, which have not been subjected to detailed analysis of the problem or the costs and benefits of alternative options for their adoption.

The purpose of their inclusion in this discussion paper is to gauge the level of stakeholder support for these initiatives, to invite stakeholders' views on the problems and on the costs and benefits of alternative options to address them. Feedback received is intended to guide more detailed investigation and analysis of these initiatives. Stakeholders will be engaged during any further development of these initiatives.

You are also welcome to nominate other innovative ideas that you consider should be investigated to better regulate our state's waste.

Question

92 Do you have any innovative ideas that you consider should be investigated to better regulate our waste through promoting resource recovery, addressing illegal dumping or managing particular problematic wastes?

7.1 Banning microplastics

Since their first appearance in cosmetics 50 years ago, plastics have become widespread in cosmetic and personal care products and clothing fibres.

Microplastics are too small to be filtered by municipal wastewater and sewage treatment plants. They are often washed down the drain and end up in lakes, rivers and oceans. Composition of microplastics and relatively large surface area make them prone to adhering to waterborne organic pollutants, and to leaching plasticisers that are toxic.

Box 5

What are microplastics?

Microplastics are small plastic particles with an upper size limit of 5 mm in diameter, but can be as small as 0.04 µm.

There are two sources, primary and secondary. Primary microplastics are manufactured to be of microscopic size, typically found in personal care products such as cosmetics. Secondary microplastics are fragments derived from the breakdown of larger plastic debris over time.

Microplastics are considered bio-available to organisms throughout the food web. Marine species have been shown to uptake these particles either via ingestion or filtration potentially introducing toxins to the base of the food chain. Microplastics then have the potential for bio-magnification up the food chain, with potential for consumption by humans.

There are viable alternatives to microplastics in cosmetic products (like crushed coconut shells, bamboo, walnut shells, pecan shells, rice and apricot seeds). However, it might take several years for major cosmetic companies to transition to natural alternatives to microbeads. Alternatives, may also be more expensive to source and the supply chains of natural products might not be sustainable.

7.1.1 International approaches

The United Nations Environment Programme (UNEP) report *Plastic in Cosmetics: Are We Polluting the Environment Through Our Personal Care?* recommends a precautionary approach toward microplastic management, with an eventual phase-out and ban of their use in personal care products and cosmetics.

There has been a move for companies to take a proactive approach, with many companies pledging to phase out microbeads from their own-brand cosmetic and beauty products. Almost all of Britain's major retailers and a number of manufacturers in the US have pledged to phase out harmful microbeads from their own-brand cosmetic and beauty products in the coming years. The compliance date for microbead-free products varied between companies, but most had targeted 2017 or sooner.

In 2014, the Belgian, Dutch, Austrian and Swedish delegates of the Council of the European Union issued a joint statement on the urgent need to eliminate the use of microplastics in products. While providing a strong environmental rationale for a ban, the delegates also highlighted the need to ensure a level playing field for innovative businesses who are not using microplastics in products.

Illinois was the first American state to ban plastic beads from personal care products in June 2014. New Jersey have since followed, with a ban on microbeads from cosmetics and a penalty of $500 per violation. More recently the Bill, Microbead-Free Waters Act of 2015 was introduced to the US Congress to prohibit the sale or distribution of cosmetics containing synthetic plastic microbeads through amendment of the Federal Food, Drug, and Cosmetic Act, proposed to begin nationwide on January 1 2018.

In addition to formal regulation by governments, environmental organisations have developed awareness campaigns on personal care and cosmetic products that contain microplastics to change purchasing behaviours by consumers. *Beat the Microbead* and *The Good Scrub Guide* are just two examples, which provide information to consumers about which products contain microplastics.

7.1.2 Development of a national approach to address the impact of microplastics in the environment

One regulatory option to effectively prevent microplastics entering the marine and other aquatic environments would be to implement a ban on the sale of products containing microplastics. However, in Australia, it is required, through the *Mutual Recognition Act 1992 (Cth)* that a product, which is sold in one state or territory, must be allowed to be sold in other Australian states or territories. As such, it would not be possible to ban the sale or production of products containing microplastics in only one state or territory unless an exemption is issued. The NSW government has called for a national ban on the sale and production of shampoos and other products containing microplastics.

The EPA plans to work with NSW and other Australian jurisdictions to explore options for a national approach to address the impact of microplastics in the environment. This could involve taking a similar approach to those taken overseas such as imposing a ban on microbeads in personal care and cosmetic products or a voluntary arrangement with retailers and producers.

Questions

93 Is a national ban on microplastics in personal care and cosmetic products a viable option for addressing the negative impacts of microplastics in the environment?

94 Are there any other policy options that would assist in phasing out microplastics in personal care products?

95 How would a ban on microplastics in personal care products impact your business or community?

96 Should South Australia seek to act independently in the absence of a nationally agreed approach (as South Australia did in the case of banning single use lightweight plastic bags)?

More information on phasing out microplastics can be found at:

- 114th Congress, United States of America, Microbead-Free Waters Act of 2015
- Belgian, Dutch, Austrian and Swedish delegates of the Council of the European Union, Joint statement on the Elimination of micro-plastics in products - an urgent need
- European Commission, Green Paper on a European Strategy on Plastic Waste in the Environment
- United Nations Environment Assembly, Resolutions and decisions adopted by the United Nations Environment Assembly of the United Nations Environment Programme at its first session on 27 June 2014
- United Nations Association of Australia, Victoria Division, UN environment agency urges ban of microplastics in cosmetics and personal care products
- United Nations Environment Programme, Press Release: Dutch Rally Support for a Europe Wide Microplastic Ban
- North Sea Foundation, Marine Conservation Society, Seas At Risk, Plastic Soup Foundation, Microplastics Position Paper

7.2 Managing expanded polystyrene food packaging

Food service and retail food industries currently use substantial quantities of polystyrene to package ready-to-eat, prepared, and uncooked food and beverages, often in expanded or foam form. Most polystyrene food packaging products are single use, non-recyclable and slow to breakdown. They have a low recovery rate and take up a comparatively large amount of landfill space per tonne. The majority of polystyrene consumed in the state is landfilled with less than 5% being recovered for reuse or recycling[103].

Expanded polystyrene foam can cause significant environmental issues. For example, it can clog storm drains and also end up on beaches and in waterways. When it breaks down to smaller, non-biodegradable pieces, they can be ingested by marine life and other wildlife, injuring or killing them.

Under the Waste to Resources EPP, polystyrene is banned in South Australia from going to landfill if aggregated for resource recovery. However, the product typically finds its way to landfill as part of mixed domestic and other wastes, especially given the limited availability of recycling opportunities for this material. According to a 2012 study commissioned by ZWSA, polystyrene makes up about 12% of plastic packaging disposed of to landfill[104]. Polystyrene packaging is currently subject to a voluntary product stewardship arrangement under the *Australian Packaging Covenant*[105]. It is considered that there are further opportunities to reduce the environmental risks from polystyrene food packaging and enhance resource recovery of this waste stream.

A targeted campaign and trial promoting a switch from the use of conventional polystyrene packaging to better alternatives by local businesses in the Adelaide CBD (where high density cafes and take-away restaurants are located) will help to inform the barriers for market uptake of more sustainable substitutes and can also support the State Government's Carbon Neutral Adelaide initiative.

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103 Rawtec for Zero Waste SA, *Study on the South Australian Plastics Packaging Resource Recovery Sector - Stage 1 Final Report* April 2012 (2012), www.zerowaste.sa.gov.au/upload/resource-centre/publications/plastics/Plastics%20Packaging%20Recovery%20Study%20-%20FINAL%20REPORT%20-%20ISSUE%20April%202012_cbc%2005062012.pdf. This study did not distinguish between polystyrene and expanded polystyrene.

104 As above.

105 Expanded Polystyrene Australia, *Expanded polystyrene Australia: Australian Packaging Covenant, Action Plan 2011–2015* (2011), www.packagingcovenant.org.au/data/ActionPlans/Expanded%20Polystyrene%20Australia%20Inc%20%28EPSA%29_AP.pdf.

Depending upon the success of such a campaign and trial, one option could be to ban certain polystyrene products, similar to single-use plastic bags.

Polystyrene packaging is banned in a number of US and European cities, with some limited to specific types of products or to limited circumstances. New York City is the most recent city to implement a ban. As of 1 July 2015, a ban on single use expanded polystyrene foam products, will take effect[106]. In Australia, ACT is currently considering a ban on polystyrene foam packaging such as single-use cups and food containers[107]. Investment in development of local collection and resource recovery infrastructure will be required to support such a ban.

A significant voluntary reduction in expanded polystyrene products would rely on sustainable supply of suitable and cost-effective alternatives, and incentives for users and suppliers to transition to the alternatives. While there are alternative substitutes available in the market (biodegradable and compostable food packaging), its use is not an industry norm at the present.

Questions

97 What are the barriers to replacing expanded polystyrene products with better alternatives?

98 How would a ban impact on producers, suppliers and users of expanded polystyrene products, both in terms of costs and benefits?

99 What alternative options are there to an expanded polystyrene product ban, and how could such alternatives be implemented?

More information on the New York City bans can be found at:

- www1.nyc.gov/office-of-the-mayor/news/016-15/de-blasio-administration-bans-single-use-styrofoam-products-new-york-city-beginning-july-1-2015
- www.scientificamerican.com/article/nyc-bans-expanded-polystyrene-food-containers-opens-market-to-alternatives
- www.washingtonpost.com/news/post-nation/wp/2015/01/08/new-york-officially-banned-those-plastic-foam-food-containers/

7.3 Save as you throw (variable rate pricing)

In New York City, a Save-As-You-Throw[108] program is a usage-pricing model being implemented for disposing of municipal solid waste. It is common amongst many USA states and cities. It rewards those who waste less and recycle more and has been shown to reduce waste generation by as much as 30%. If successful, the program would represent the largest potential contribution toward New York's Zero Waste goal[109].

Clearly, the population and high density urban form of New York City is different from metropolitan Adelaide. However, the idea that residents are charged for the collection of municipal solid waste based on the amount they throw away creates a direct economic incentive to recycle more and to generate less waste.

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106 City of New York, Officer of the Mayor, *De Blasio Administration Bans Single-use Styrofoam Products in New York City Beginning July 1, 2015*, 8 January 2015 (2015), www1.nyc.gov/office-of-the-mayor/news/016-15/de-blasio-administration-bans-single-use-styrofoam-products-new-york-city-beginning-july-1-2015.

107 Walmsley H & Shirley A, *ACT Government to consider polystyrene packaging ban*, ABC News 10 February 2015, www.abc.net.au/news/2015-02-10/act-government-to-consider-polystyrene-foam-packaging-ban/6082224.

108 Also referred to as Pay-As-You-Throw, unit pricing, variable rate pricing or user-pay.

109 www1.nyc.gov/office-of-the-mayor/news/257-15/mayor-de-blasio-releases-one-new-york-plan-strong-just-city#/0

Household bin collections could be considered for a Save-As-You-Throw scheme

Currently in South Australia, municipal solid waste (MSW) and commercial and industrial (C&I) wastes are not charged on the basis of weight generated (ie the actual amount of waste generated and collected). South Australian households generally pay for waste collection services via their council rates bill on a flat fee basis, regardless of the actual quantity of waste generated and personal recycling efforts made by each household. Most businesses have their waste collected and charged on a volume basis (eg per bin lift or empty).

The *Review of South Australia's Waste Strategy 2010-2015*[110] suggested that the 2015 targets for municipal solid waste could be 'stretch' targets in the absence of sustained improvements in waste reduction.

One policy instrument that could be considered to enhance resource recovery is to introduce variable rate pricing which charges waste in a similar manner as other utilities such as water and electricity where households and businesses pay a variable amount depending on the quantity of waste they actually generate and the corresponding services provided. Variable rate pricing is based on the guiding principles of environmental policy, ie the polluter pays and the shared responsibility concept. Its potential for changing behavior will be influenced by its proportion as a cost driver relative to necessary service charges however, such as the provision of a collection service in an area.

Variable rate pricing increases the transparency of the price differential between recycling and landfill disposal as charges are usually imposed on the residual waste set out for collection in combination with an adjusted or lower charge for the collection of recyclables which often have a market value and/or where the costs for managing are already covered by extended producer responsibility. This can provide a more direct market based price signal and economic incentive for behavioral change towards resource recovery.

An effective variable rate pricing system builds on three key pillars:

- identification (for reasons of accountability of the waste generator)
- measurement (of the generated amount of waste and/or services obtained for it)
- unit pricing (for individual charging according to the availed service).

Experience from countries who have implemented variable charging systems to MSW and/or C&I waste management suggests that the system needs to be based in legislation and in a policy framework in which polluters' responsibility, waste avoidance and material recycling take priority.

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110 Report for ZWSA: Resources and Waste Advisory Group, *Review of South Australia's Waste Strategy 2011–2015* (2013), Zero Waste SA, Adelaide.

A variable rate pricing system can take various forms such as weighing the amount of waste in collection bins or using pre-paid bags, tags or stickers or prescribed sizes of waste bins. Technical specifications depend on the specific situation in the collection area, provisions made in legislation and other waste policy. While they operate differently from one another, these systems share one defining characteristic—person/business who throws away more, pay more.

The following potential benefits and barriers have been reported for adopting variable rate pricing.

Potential benefits	Potential barriers
• Potentially significant waste diversion from landfill with reported 25–45% less amount of waste to landfill	• Misperception of increased illegal dumping or burning of waste in the area—illegal dumping was proved to be less of a concern than anticipated
• Reduced overall waste management costs	• Increased administrative costs associated with the variable rate pricing system
• Increased waste prevention as residents typically modify their traditional purchasing and consumption patterns to reduce the amount of waste they place at the curb. These behavioural changes have beneficial environmental effects beyond reduced waste generation, often including reduced energy usage and materials conservation.	• Recovering expenses to sustain the operation of variable rate pricing due to uneven cash flow—prices must be set at the appropriate level to ensure that on average, sufficient funds are raised to pay for waste collection, complementary composting and recycling programs and special services
• Increased participation in composting and recycling programs, using Save-As-You-Throw in tandem with recycling and composting programs have found these programs increase each other's effectiveness	• Perception of increased costs to some
• Support of the waste management hierarchy	• Challenges of its implementation to multi-family housing
• More equitable waste management fee structure	• Building public consensus to overcome resistance to change
• Increased understanding of environmental issues in general	

There are a significant number of examples of variable rate pricing for household waste collections in the US, Europe and Asian countries. For example, Flanders (in Belgium) has a three-stream collection of general waste, recycling and organics and has introduced variable rate pricing where bins have electronic chips to identify household and are weighed upon collection using scales on the collection vehicle lifting arm and reports back to households on their waste charge and behaviour via a web application.

One example for variable rate pricing in the UK for C&I waste was used on rear loader collection vehicles which appeared to be an approved systems compliant with the local legislation.

A study undertaken for the National Waste Policy C&I Working Group found that:

- There is limited weight based charging related to C&I waste (eg in UK using rear-loader collection vehicles) and there does not appear to be a full shift to weight based charging for C&I waste worldwide.
- Measurement of the weight of waste within the C&I sector has been occurring for over 10 years in Australia and primarily undertaken using front-lift vehicles fitted with either load cells on the lift arms or under the body of the truck.

However most of the systems installed are not Licensed for Trade (LFT) as required by the National Measurement Institute and cannot be used for weight-based charging.

- There appears to be a high demand for LFT weighing of waste in Australia for C&I waste among business community to stimulate better waste management practices.

European Commission research[111] found that public support for variable rate pricing is significantly higher among those who have actually experienced them. The study indicates that there is less resistance to such schemes once they have been introduced. The findings also suggest that factors such as attitudes regarding fairness, reciprocity and trust, as well as knowledge of variable rate pricing, also play a role in people's acceptance of such schemes. As such, investing resources in engaging with stakeholders, rather than passive informational campaigns, may help build support for variable rate pricing schemes.

To evaluate this policy further and develop a fair, equitable framework for waste reduction would require consultation with a wide range of stakeholders, including councils, affordable housing advocates, property managers, government agencies and many others.

Questions

100 Is variable price charging a viable option to enhance resource recover for municipal solid waste and/or commercial and industrial waste streams? What other options should be considered as alternatives to variable price charging (eg enhanced education)?

101 What would need to be considered as the main factors for planning and implementation of variable price charging in South Australia?

102 What role do you think state government should play in supporting the development of weight based waste charging in the South Australian commercial and industrial waste services market?

More information on variable rate pricing can be found:

- EU Waste Management: http://web.tu-dresden.de/intecuspayt/
- US Environment Protection Agency: www.epa.gov/osw/conserve/tools/payt/

7.4 Commercial food waste – should it be mandatory for all food waste generated in the CBD to be recycled?

Food waste is a significant contributor to waste streams, as well as greenhouse gas emissions, both at the end of its life cycle when it produces methane, and as a result of 'lost' embodied energy and water.

Food waste creates greenhouse gas in landfill. As it breaks down, it emits methane, which is over 20 times more powerful a greenhouse gas than carbon dioxide.

In South Australia, waste audits have revealed that food waste is the largest component of the commercial waste stream, comprising 26% of the total waste by weight. Estimated annual emissions to atmosphere greenhouse gases from SA landfills are 594,000 tonnes of CO2-e (2006–07). Estimated gas capture for energy generation for the same year is 226,000 tonnes of CO2-e, or 28% of estimated total production of landfill gas[112].

111 http://ec.europa.eu/environment/integration/research/newsalert/pdf/375na5_en.pdf

112 www.scew.gov.au/system/files/resources/020c2577-eac9-0494-493c-d1ce2b4442e5/files/wastemgt-nat-waste-report-final-20-fullreport-201005-0.pdf, pg 109.

The 2010 Federal Government *National Waste Report*[113] estimated that nationally, 21.5% of commercial and industrial waste is food, which is the equivalent of 1.38 million tonnes annually.

Use of a dedicated food waste bin to support recycling

Food waste is a cost to business. It is not just the cost of disposal, but the cost of purchasing food which is then wasted. Wasted food also means the enormous energy and water inputs of its production are lost. In 2008–09, 77% of South Australia's water use was for agricultural production.[114] Removing food waste from the rest of the commercial waste stream also creates the opportunity for significantly improved recycling of other materials with accompanying environmental and social benefits given the practice of many depots to consider that recyclables contaminated with food waste cannot be safely separated and hence sending such contaminated materials to landfill.

Notably, although Australia produces enough food to feed approximately 60 million people annually[115], two million Australians still rely on food relief every year. Globally, about one third of the food produced in the world for human consumption every year—approximately 1.3 billion tonnes[116]—gets lost or wasted.

7.4.1 Improving food waste diversion

Zero Waste SA has offered commercial food waste incentives in Adelaide over recent years, which has increased the number of businesses recycling (now 640 in total) and helped improve collection densities. Large customers including shopping centres, hospitals, aged care facilities, food manufacturers, restaurants and facilities management services which have engaged food waste collection services from the participating contractors under the incentive programs.

It is also important that other options are in place for diversion of food waste. There are now two well-established food donation options. Oz Harvest has increased its fleet with three trucks (two funded by Zero Waste SA) now collecting

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113 www.scew.gov.au/system/files/resources/020c2577-eac9-0494-493c-d1ce2b4442e5/files/wastemgt-nat-waste-report-final-20-fullreport-201005-0.pdf, pg 143.

114 www.abs.gov.au/AUSSTATS/abs@.nsf/Previousproducts/4610.0Main%20Features12008-09?opendocument&tabname=Summary&prodno=4610.0&issue=2008-09&num=&view=#SA

115 http://c.ymcdn.com/sites/www.agrifoodskills.net.au/resource/resmgr/resource_library/national-food-plan-green-pap.pdf, pg 55.

116 www.fao.org/docrep/014/mb060e/mb060e.pdf Executive summary.

edible surplus food and Foodbank SA has expanded its capacity to two locations taking food and grocery items that are fit for consumption, but unsaleable.

Besides consideration of options to legislate for how packaged food waste is dealt with, particularly by supermarkets, other initiatives to help reduce food waste could include increased training in food waste reduction at source, lean production, register of excess food or waste suitable for animal feed, support for new products or end markets of recycled food waste.

7.4.2 Where has food waste diversion already been mandated

Mandated commercial food waste recycling has been legislated across North America, the EU and parts of Asia, with some jurisdictions banning all food waste from commercial premises going to landfill, and others establishing a threshold (ie, if they produce more than a certain amount of tonnes of waste per week) and others by type of facility and/or building size.

- Food waste diversion mandated completely in US cities such as San Francisco and Seattle.
- Food waste diversion mandated according to threshold of material generated and/or facility type/size:
  - US states such as Massachusetts, California, Connecticut, Vermont and Rhode Island
  - US cities such as New York City and Austin
  - Canadian provinces such as Nova Scotia and Vancouver (phase in)
  - Countries such as Ireland, Scotland, Germany (food industry), France (ban on supermarkets throwing away food) and South Korea
  - Austria, Belgium, Germany, Switzerland, Italy, Norway, Luxembourg, Netherlands and Sweden have separate food waste collection systems policies that are implemented nationally.

8 Next steps

During the consultation period, the EPA will host:

- A public information session (as advertised).
- Meetings with WMAA and Waste Industry Reference Group.
- Direct discussions with key stakeholders, including in regional areas.

Views and submissions received by 2 October 2015 on the options and questions presented in this paper will then be reviewed by government, along with resourcing considerations, to determine the options to be pursued for the reform program.

Implementation of some of the proposals canvassed in the discussion paper will be reliant on additional resources. These would include the need for the development and implementation of an information system, contemporary technologies for monitoring waste, and additional data analysis and audit staff to administer mass balance reporting, upfront levy liability and certificates of compliance. As part of this reform, the EPA will also consider the distribution of costs and work to ensure a better cost recovery approach to reflect effort required, for example, for the assessment of potential products and, potentially, increased auditing requirements.

Amendments to the EP Act and the EP Regulations will be drafted on the basis of the state government's assessment of feedback received. Further, targeted stakeholder consultation will be undertaken in respect of the amendments pursued.

Concurrently, with these legislative reforms, staged work will continue on policy improvements and new policy generation as discussed in the paper.

The EPA will continue to engage with all stakeholders during the reform process.

9 Questions asked in the discussion paper

Page	Section	Topic	Question
28	**5**	**Options to address issues**	
28	5	Options to address issues	1 Are there other options to address any of the issues faced in the waste management and resource recovery industry that you believe should be explored (either as alternatives or in addition to the proposals discussed here)?
28–35	5.1	Mass balance reporting – reporting and recording the movement and fate of waste	2 Noting that impacts may be disproportionate between large and very small facilities, how might a threshold quantity for mass balance reporting and weighbridge requirements be determined? Should the threshold be the same level in metropolitan and regional areas? Should it be similar to the threshold set under the NSW scheme? Alternatively, should it apply only to a defined geographic area in the state? 3 If you are a waste operator, do you already collect the information on amounts and types of waste that these provisions require? If yes, do you store it electronically? 4 If you are a waste operator, do you already have a weighbridge or access to a weighbridge? 5 What scale of cost increases do you anticipate incurring to comply with the data collection, electronic record keeping and electronic data reporting requirements of this proposal? 6 Noting that these provisions would not only be used to collect mass-balance data, but would also be used to secure the upfront waste levy liability scheme (section 5.2), do you think the proposals in Appendix 2 are reasonable? If you have concerns please respond about specific provisions or requirements: a record keeping b weighbridge requirements c volumetric surveys d potential topographic surveys e recording of all vehicles f vehicle movement plan g recording of materials imported for operational purposes h stockpile management identification details

Page	Section	Topic	Question
			i potential use of video cameras 7 Do you think the proposals in Appendix 2 would be adequate to secure compliance with mass balance reporting, including for the purpose of determining waste levy liability? 8 Generally, and given that these provisions would not only be used to collect mass-balance data, but would also be used to underpin the upfront waste levy liability scheme (section 5.2) and other proposed reforms, do you think the benefits that would arise from this proposal outweigh the costs of implementing the provisions? Why or why not? 9 If waste mass balance data and statistics collected under these provisions were to be published would you or your organisation be able to use it to better manage waste or identify and exploit business opportunities? (Note that if publication were to be pursued, the EPA would ensure that any information published met confidentiality obligations with respect to individual operators). 10 Would you have any concerns if required to use WasteTracker (vs maintaining a paper-based option) for wastes that are already tracked?
36–39	5.2	Upfront levy liability	11 How effectively do you think an upfront levy liability will reduce speculative or long-term stockpiling of wastes? 12 Should South Australian regulation align with and be consistent with the NSW upfront levy liability scheme? 13 Noting that impacts may be disproportionate between large and very small facilities, how might any threshold be determined (eg similar to NSW)? Should the threshold be the same level in metropolitan and regional areas? Alternatively, should it apply only to a defined geographic area in the state? 14 Are the activity types proposed to be excluded from the scheme appropriate (ie facilities only required to be licensed for clinical and related waste, liquid waste, composting or other organic waste treatment)? 15 Do you think 12 months is an appropriate length of time for an upfront levy liability to fall due? Should any wastes or facilities have a different timeframe applicable (eg should electronic wastes and tyres require shorter time and soils longer)? Should there be any ongoing exceptions to this? 16 Do you have any views on what the approach of the EPA should be if an exemption from the proposed general 12-month levy liability requirement is sought in respect of any stockpile? What level of justification would be required, eg evidence of impact of a financial crisis on sales, case by case if a financial assurance is used? 17 What views do you have about whether the liability should apply to products available at waste and resource recovery facilities as well as ‘waste’ to support regulation of material flow?

Page	Section	Topic	Question
			18 Will holding a liability on stockpiled material present a barrier to the conduct of your business in general and the financial management of your business specifically? 19 What are the ways that an upfront levy liability system could be undermined by operators?
40–44	5.3	Improving stockpiling controls	20 How has the level of stockpiling changed in recent years? 21 Have increases in the waste levy had any noticeable impacts on stockpile volumes? Do you consider any apparent trends would continue with further levy changes? 22 What are the factors that you view as most significant in driving fluctuations in the amount of stockpiling? For example: a the general level of economic activity and/or major projects, such as RAH, Adelaide Oval, major road upgrades b trends in particular sectors, eg construction, particular commodity prices c other factors affecting the profitability of facilities, including competition amongst different operators d minimum scale requirements for cost-efficient transport of materials for further recovery or treatment (eg hazardous wastes, tyres, recyclables in regional areas). 23 What types of benefit do you expect would arise from reducing the amount of material that is currently being stockpiled and to whom would these benefits accrue? 24 Do you have information that can help us quantify the likely scale of benefits from reduced stockpiling? 25 What are your views about the options presented in section 5.3.2 for helping to address stockpiling? 26 Do you have any comments on the EPA routinely setting site-specific stockpile limits at waste and recycling depots through licence conditions? Do you consider that the EPA should first be able to require operators to submit proposed limits with justified reasoning for approval? 27 Do you believe appropriate maximum stockpile limits should be set for excessive accumulation of material on a ‘material flow’ basis rather than solely on the basis of environmental risks? If yes, what are the key elements that you believe could be used to define such limits?

Page	Section	Topic	Question
44–47	5.4	Better managing waste soils, fill and related products	28 Would it potentially be practicable or desirable an expanded duty of care about the handling of waste to be applied to significant waste generators such that they are required to inquire whether a proposed service provider has the capacity to properly handle the volumes of waste proposed to be directed any given facility? What threshold(s) may be appropriate to be a 'significant waste generator'—either government or businesses generating specified volumes of waste in a defined period? 29 Would it be most appropriate for any such inquiries to be directed to the tendering waste service providers (with offences available for the provision of false or misleading information)? 30 Should there be a duty upon government agencies (and their contractors) to seek advice from the EPA regarding the compliance history of businesses tendering for significant waste service provision, including the provision of recovered products? 31 What other steps do you think could assist in improving government procurement practices for the management of waste from, and use of recovered products in, infrastructure projects? 32 Are there instances that you are aware of where potentially reusable soil has been disposed of by the waste generator?
48–53	5.5	Changes to the waste levy	33 What, if any, waste types do you think should attract a differential levy to promote waste minimisation and resource recovery in South Australia? 34 Do you think a differential levy or rebate system on defined asbestos products would be an appropriate incentive to encourage safe handling and disposal of asbestos for households? 35 Are there other options that could better promote the appropriate management of residual wastes or poor quality recovered products from recovery processes than a differential levy? 36 What, if any, unintended consequences do you think may arise from the implementation of any differential levy system in South Australia? 37 What advantages or disadvantages do you consider may arise from requiring all material received at landfill to be subject to the levy, with a clear set of permissible exemptions set out in the EP Regulations (comparable to the NSW levy collection process)? 38 How would an increased solid waste levy impact on your business or your community? 39 Do you have any views on the expenditure of any increased solid waste levy?

Page	Section	Topic	Question
53–55	5.6	Use of financial assurances	40 What type(s) of financial assurance do you consider to be appropriate to cover environmental or financial liabilities (including from excessive material stockpiling) that may occur during the operation, closure or post-closure of an activity of environmental significance? 41 Should the Environment Protection Act be amended to prescribe the different types of financial assurance that may be used? 42 Are there any other elements that should be considered in the policy to provide guidance on when and how financial assurances should be applied?
55–56	5.7	Expanded licensing of waste transporters	43 Do you have any issues with broadening the clauses to ensure that the collection and transport of all domestic waste and/or all waste from domestic premises is licensed? 44 Do you have any issues with the building and demolition waste exclusion in clause 3(6)(b) being removed? 45 Should any such changes be supported by the EPA having an ability to determine that a licence is not required in limited circumstances—something similar to 'excluding the collection or transport of waste that the Authority is satisfied poses a negligible risk of environmental harm having regard to the prescribed factors' (such that the EPA would have regard to the nature and purpose of the activity; the scale and duration of the activity; the nature and amount of any waste or pollution produced by the activity; the manner of conduct of the activity; and any other factors considered relevant by the EPA—to clearly exclude landscape gardeners, tradesmen and the like) 46 Do you have any information available to help the EPA assess the number of operators who could be affected any such changes to the scope of licensing?
57–59	5.8	Proximity principle	47 Do you transport wastes long distances? If yes, how often and why? 48 Should the EPA further explore the introduction of a proximity principle given other options being explored to address issues faced? If yes, for hazardous wastes only or for waste generally? 49 What would be a reasonable maximum distance to allow in a proximity principle? Would there need to be exceptions (or different distances) for some regional or remote areas? 50 What advantage or disadvantages, if any, would the introduction of a proximity principle have for you?
59–62	5.9	Enhanced recovered product plans	51 What has helped or hindered you from successfully completing a RRP that satisfies all of the elements listed in section 5.9.2?

Page	Section	Topic	Question
			52 What steps could the EPA take to help support you in submitting and abiding by RRPs that meet all elements listed in section 5.9.2? 53 What would you like to see the EPA do to improve its assessment processes for RRPs?
62–66	5.10	Certificates of compliance	54 Would you like to submit annual returns and certificates of compliance at the same time? 55 Do you have a preference for a submission date or reporting period for certificates of compliance? 56 Do you have any comments on the character of the proposed certificate of compliance structure as set out in Appendix 3? 57 What impact, if any, would it have on your company to require the most senior Australian-based officer to certify the information in the certificate of compliance is true and correct? 58 Do you have any concerns with the proposal to make certificates of compliance publicly available on the EPA website (with the omission of commercially sensitive information)? 59 Are there any other elements that should be considered in the proposed approach to administer certificates of compliance? 60 What sort of guidance or technology would make it easier for you to complete and submit a certificate of compliance? 61 How would this proposed approach to use certificates of compliance impact on your business or community?
66–67	5.11	Recovering illegally obtained economic benefit	62 Do you think that increasing the EPA's efforts to recover illegally obtained economic benefit will be useful in promoting compliance and deterring contraventions of the Act? 63 Are there areas of your industry that you think the EPA should focus on in seeking the recovery of illegally obtained economic benefit?
71	**6**	**Options for changes to the Environment Protection Act**	
71	6.1.1	Amendment to the Objects – section 10 of the Environment Protection Act	64 Do you support amendment to the EP Act to clearly allow implementation of maximum stockpile limits and material flow controls to prevent excessive accumulation of material?

Page	Section	Topic	Question
71	6.1.2	Definition of 'waste' – section 3 of the Environment Protection Act	65 What advantages or disadvantages do you consider could arise from amendment of the Environment Protection Act to clearly allow declaration of particular material as a 'product'?
72–73	6.1.3	New expiation for breaches of licence conditions – section 45 of the Environment Protection Act	66 Do you consider that an expiation is a suitable tool to punish an offender who contravenes a condition of licence? 67 Do you think the application of expiations, as opposed to criminal prosecutions, will deter non-compliance with the conditions of a licence? 68 Should an expiation be limited to administrative breaches of licence condition or be applied to all breaches of licence conditions? 69 What is an appropriate expiation amount for a person who contravenes a condition of licence? 70 Should there be a new requirement that before the EPA pursues an expiation for a breach of licence condition the EPA must have regard to the seriousness of the contravention, the previous record of the offender and any other relevant factors? 71 How would such a power impact on your community or business?
73–74	6.1.4	Insurance requirement for a licence – section 45 of the Environment Protection Act	72 Do you consider that the EPA should require a licence-holder to take out insurance for the payment of costs for clean-up action, and for claims for compensation or damages, resulting from pollution in connection with the activity or work authorised or controlled by a licence? 73 How would such a requirement impact on you? 74 Would there be insurers to insure such activities? 75 What costs would the requirement to hold such insurance place on operators? 76 Should insurance requirement be imposed as a financial assurance? 77 Do you think that many operators would already be insured for the clean-up costs or compensation resulting from an activity of environmental significance controlled by a licence, under their current insurance policies? 78 Are there other methods that you would prefer to be used to insure for the clean-up costs or compensation resulting from an activity of environmental significance controlled by a licence?

Page	Section	Topic	Question
74–75	6.1.5	Application of financial assurances – section 51 of the Environment Protection Act	79 Should the EP Act be amended to clarify that the EPA may impose conditions requiring the lodgement of a financial assurance where remediation work may be required because of activities under the licence irrespective of the potential for environmental harm (including in the event of abandonment of a site)? 80 Are there any other methods that could be applied to licence-holders to ensure there are adequate funds available for necessary remediation of a polluted site?
75–76	6.1.6	Improve evidentiary provisions re waste - section 139 of the Environment Protection Act	81 Should the burden of proving a material is not a waste be on the alleged offender? 82 What impact would this change have on your business or community?
76	6.1.7	Potential ability to charge for the assessment of new product proposals – new section	83 Do you have any objections or comments to cost-recovery measures being adopted to support the efficient and thorough assessment of new product proposals by the EPA?
76	**6.2**	**Options for changes to the Environment Protection Act to tackle illegal dumping**	
76–77	6.2.1	Registered owner responsibility for pollution	84 Should the EPA have the power to hold the registered owner of a vehicle responsible for the offence of pollution from their vehicles unless they can establish that they were not the driver? 85 What other methods could be applied to ensure that the person responsible for the offence is identified?
77	6.2.2	Clarifying that illegal dumping includes the illegal disposing of waste – section 4 of the Environment Protection Act	86 Should section 4 of the EP Act be amended such that the wording in section 4 ‘discharged, emitted or deposited’ specifically includes all instances of disposing of waste, to ensure that it covers illegal dumping occurring from the disposing of waste?
77–78	6.2.3	Require nominated waste transporters to	87 What impact would a requirement to install GPS on vehicles have on business? 88 Who should bear the cost of installing GPS tracking units?

Page	Section	Topic	Question
		install approved tracking devices	89 Should the proposed system of tracking devises be extended to all waste transporter vehicles?
78–79	6.2.4	Increased powers of entry for authorised officers – section 87 of the Environment Protection Act	90 Should authorised officers have the power of entry on a premises at any time if something may be found in the premises that is intended to be used in a contravention of the EP Act? 91 Should authorised officers have the power to allow the marking of something that an authorised officer reasonably suspects is intended to be used in a contravention of the EP Act?
80	**7**	**Innovative change ideas**	
80	7	Innovative change ideas	92 Do you have any innovative ideas that you consider should be investigated to better regulate our waste through promoting resource recovery, addressing illegal dumping or managing particular problematic wastes?
80–83	7.1.1	Banning microplastics	93 Is a national ban on microplastics in personal care and cosmetic products a viable option for addressing the negative impacts of microplastics in the environment? 94 Are there any other policy options that would assist in phasing out microplastics in personal care products? 95 How would a ban on microplastics in personal care products impact your business or community? 96 Should South Australia seek to act independently in the absence of a nationally agreed approach (as South Australia did in the case of banning single use lightweight plastic bags)?
82–83	7.1.2	Managing expanded polystyrene food packaging	97 What are the barriers to replacing expanded polystyrene products with better alternatives? 98 How would a ban impact on producers, suppliers and users of expanded polystyrene products, both in terms of costs and benefits? 99 What alternative options are there to an expanded polystyrene product ban, and how could such alternatives be implemented?
83–86	7.1.3	Save as you throw (variable rate pricing)	100 Is variable price charging a viable option to enhance resource recover for municipal solid waste and/or commercial and industrial waste streams? What other options should be considered as alternatives to variable price charging (eg enhanced education)? 101 What would need to be considered as the main factors for planning and implementation of variable price charging in South Australia?

Page	Section	Topic	Question
			102 What role do you think state government should play in supporting the development of weight based waste charging in the South Australian commercial and industrial waste services market?

Appendix 1 Strategic outcomes sought

The EPA will regulate waste:

1 To minimise the risk of environmental harm occurring, and

2 To support the highest and best, safe available use of recovered materials in accordance with the waste management hierarchy.

To support achievement of these strategic waste objectives, the EPA seeks:

3 Promotion of best practice and accountable waste management, taking into account regional differences within the state

4 Resource recovered materials that:

   a are safe,

   b result in materials that market normally expects and purchases,

   c are used for a genuine, beneficial purpose,

   d have an immediate and proven end use (and are not inappropriately stockpiled).

5 No dilution used to manage re-use of contaminated wastes

6 Effective recording, monitoring and reporting systems with respect to waste transport, resource recovery and waste disposal

7 Promotion of environmental responsibility and involvement in waste avoidance, waste minimisation and waste management within the community.[117]

In pursuing its regulatory approach, the EPA will be:

- ***Proportional:*** We will ensure that any measure taken is proportional to the risks posed to the environment and the conduct of legitimate industry. We may pursue the use of financial assurances and certificates of compliance.
- ***Consistent:*** We will be fair, equitable and apply consistent processes in all cases. We will take account of long and short term economic, environmental, social and equity considerations in setting our approach. We will routinely seek to recover financial benefits of illegal activity as well as clean-up and other costs.
- ***Transparent:*** We will openly share information about our decisions and actions using the public register and in accordance with the Code of Ethics. We will assist waste and resource recovery operators to understand what is required of them and what they should expect from the EPA.
- ***Targeted:*** We will ensure that our regulatory effort is directed primarily to those activities that pose the greatest risks, cause the greatest environmental damage or undermine the regulatory regime.
- ***Timely:*** We will work in a timely manner to identify, manage, inform and progress regulatory actions without delay.[118]

[117] Outcomes 1, 4, and 5 are from Waste to Resources EPP clause 7(2). Points 2 and 3 derive generally from *Waste-derived materials—guiding principles for determining approval processes and product standards* (2007).

[118] These elements have been adapted from those expressed in the *Annual Compliance Plan 2014–15*.

Appendix 2 Mass balance reporting – detailed proposal

The detailed proposal presented here derives closely from NSW reporting and record-keeping provisions under the *Protection of the Environment Operations (Waste) Regulations 2014*. The intent expressed in this proposal will be modified further following consultation and to best fit the *Environment Protection Regulations 2009*.

Reports and surveys

Waste contribution monthly reports

The occupier of a waste or recycling depot[119] must, within 28 days after the end of each month, provide the EPA with:

1 the quantity of waste received at the depot during the previous month

2 the waste types (determined in accordance with the Waste Reporting and Record-Keeping Guidelines) received at the depot during the previous month.

Information must be submitted in the form and manner approved by the EPA.

Periodic volumetric surveys of landfill depots

The occupier of a landfill depot must have a volumetric survey of the depot carried out by a qualified surveyor during June and December in each year, and provide the results to the EPA before the end of the following month.

If required and specified in writing at any other time by the EPA, the occupier of a landfill depot must also have a volumetric survey of the landfill depot carried out by a qualified surveyor and provide the results to the EPA as specified.

The occupier of any other waste or recycling depot must have a volumetric survey of the depot carried out by a qualified surveyor during June each year, and provide the results to the EPA before the end of the following month.

The survey must be carried out in accordance with any requirements specified in the Waste Reporting and Record-Keeping Guidelines. Survey results must be provided in the form and manner specified by the EPA.

The occupier must keep a copy of the results of each survey for a period of at least six 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.

EPA may require topographical survey of a waste or recycling depot

If required and specified in writing by the EPA, the occupier of a waste or recycling depot must have a topographical survey of the depot carried out by a qualified surveyor and provide the results to the EPA as specified.

The survey must be carried out in accordance with any requirements specified in the Waste Reporting and Record-Keeping Guidelines. Survey results must be provided in the form and manner specified by the EPA.

The occupier must keep a copy of the results of each survey for a period of at least six 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.

[119] The scope of these provisions will be framed to relate to activities currently classed as ‘waste or recycling depots’ [clause 3(3)], ‘scrap metal recovery’ [clause 2(11)], ‘composting works’ [clause 6(3)) and incineration (clause 3(1)] under Schedule 1 of the EP Act. Appropriate thresholds for inclusion in the scheme is to be determined following consultation.

Record keeping

Waste types and waste streams

The **waste type** is to be determined in accordance with the Waste Reporting and Record-Keeping Guidelines.

The **waste stream** is a reference to the waste stream and (if applicable) waste sub-stream that best describes the source of the waste and is to be determined in accordance with the Waste Reporting and Record-Keeping Guidelines.

Waste and other material received at depot

The occupier of a waste or recycling depot must record the following information in relation to each delivery of waste or other material received at the depot:

1 the amount of any waste delivered, its waste type and its waste stream

2 the amount of any other material delivered and a description of the nature of that other material

3 the amount of any waste delivered has been collected in accordance with a community service or activity, or arising from a biological outbreak or natural disaster, and approved for this purpose by the EPA

4 the date and time the delivery is made

5 the registration number of the vehicle used to make the delivery

6 in the case of waste transported to the waste depot from another waste depot:

   a the name and address of the other depot

   b the code or number of any environment protection licence for the other depot.

7 particulars of where any waste or other material delivered is placed at the depot.

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

The occupier of a waste or recycling 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 amount of any waste contained in the load, its waste type and its waste stream

2 the amount of any other material contained in the load and a description of the nature of that other material

3 the amount of any waste delivered has been collected in accordance with a community service or activity, or arising from a biological outbreak or natural disaster, and approved for this purpose 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 code or 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 a unique identification number—the unique identification number[120]

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.

[120] See section headed 'Waste and other materials stockpiled at depot' for details.

Other records relating to vehicles

The occupier of a waste or recycling 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

5 the weight of the vehicle.

Material used for operational purpose at depot

The occupier of a waste or recycling depot must record the following information in relation to any material used for prescribed operational purposes:

1 the amount of waste and its waste type

2 the nature of the purpose

3 the date the waste is used

4 particulars of any EPA approval relating to the use of waste for the purpose.

(Note that this provision could be developed further to cater for potential changes discussed in section 5.5.)

Waste and other material stockpiled at depot

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

1 a unique identification number for each stockpile

2 the quantity of any waste (and its waste type) or other material held in each stockpile as at 30 June and 31 December of each year

3 the quantity of any waste (and its waste type) or other material that is added to or removed from each stockpile each day.

Keeping, retention and availability of records[121]

The occupier of a scheduled waste or recycling depot who is required to record information under this Division must:

1 record and keep the information in accordance with any requirements of the Waste Reporting and Record-Keeping Guidelines

2 ensure that each record is retained for at least 6 years after the record is made

3 make any of the records available for inspection and copying by an authorised officer on request.

[121] The necessity for all of this provision would be considered in line with existing statutory record-keeping requirements.

Measurement of waste

Measurement of waste at depots required to have weighbridges

The occupier must:

1 submit to the EPA, with specified timeframes, a plan of the waste or recycling 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 occurs in relation to those vehicle flow controls, submit a revised vehicle flow control plan to the EPA no later than 30 days after the relevant change occurs

3 keep a copy of the latest vehicle flow control plan on the depot and make the plan available for inspection and copying by an authorised officer on request

4 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
- b during any period that the weighbridge is out of operation, an alternative method that is specified in the Waste Levy Guidelines is used to measure and record the quantity of waste and other material transported into or out of the waste depot.
- c take all reasonable steps to ensure that the weighbridge is maintained in proper working order
- d ensure that the weighbridge is verified at least once a year
- e ensure that the weighbridge has related software that records quantities of waste in any form and manner specified in the Waste Reporting and Record-Keeping Guidelines
- f 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).

5 comply with any other requirement relating to the installation or operation of the weighbridge that the EPA may specify by written notice to the occupier.

Monitoring

EPA may require video monitoring system

1 The EPA may, by written notice to an occupier of a waste or recycling depot, require the occupier:

- 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 occupier must:

- a comply with the requirements specified in the notice within the period specified in the notice
- b ensure that video monitoring records made under this clause are kept for at least one year after being made
- c make those recordings available for inspection and copying by an authorised officer on request.

The Waste Reporting and Record-Keeping Guidelines are proposed to be developed by the EPA to harmonise with the NSW EPA's Waste Levy Guidelines. NSW Waste Levy Guideline 3 identifies waste streams and waste types.

Appendix 3 Example of a completed certificate of compliance

Enquiries

Telephone Freecall (outside metro): 1800 623 445
Direct Phone: (08) 8204 2058
Facsimile: (08) 8124 4672
Email: licensing.epa@epa.sa.gov.au
Website: www.epa.sa.gov.au

Preamble

The Environment Protection Authority (EPA) is South Australia's independent environment protection regulator. Our environmental goals are:

- good quality land
- good quality water
- good quality air
- safe use of radiation
- protection from unacceptable noise
- sustainable use of resources.

Responsible management of prescribed activities through licensing is integral to achieving our environmental goals. This Certificate of Compliance form is for the prescribed activities licensed by the EPA.

Certificates of compliance

Section 54B allows the Authority to, by conditions of an environmental authorisation (licence), require the holder of the authorisation (licensee) to supply certificates of compliance that includes the following information:

- the extent to which the conditions of the authorisation have or have not been complied with
- particulars of any failure to comply with the conditions and the reasons for such failure
- any action taken, or to be taken, to prevent any recurrence of that failure or to mitigate the effects of that failure.

Any information provided to the EPA in a certificate of compliance is not admissible evidence in any proceedings for an offence against the Act, apart from matters relating to provision of false or misleading information.

All information provided to EPA as part of a certificate of compliance will be made publicly available (except where indicated).

A certificate of compliance should be completed in full and signed (by the inclusion of an electronic signature) by the most senior Australian-based officer of the licensed premises.

Note: A maximum penalty of up to $60,000 applies for providing false or misleading information.

The EPA has made available *Certificate of compliance guidelines* to assist licensees in the preparation and submission of their Certificate of Compliance. If you are unsure of the requirements in completing and submitting a certificate of compliance, contact the EPA on (08) 8204 2058.

01 July 2014 – 30 June 2015

Green text: Information will auto fill on digital form.
Blue text: to be completed by licensee.
Purple text: Dropdown (pre-populated) text

Licence: **0123456**

Section 1: Applicant details

1.1 Your current EPA Licence No. 0123456

Commence Date: 01/01/2014

Expiry Date: 01/01/2016

1.2 Full name of Applicant(s) to hold licence (the name to appear on the licence)

Wayne Doe

Do you have a Trading or Business name? (which has an ABN)

Wayne's Waste Services Pty Ltd

1.3 Body corporate or company details (if applicable)

ACN: 0123456

Address of registered office:

10010 Smith Street

Suburb: Adelaide **Postcode:** 5000

1.4 Postal address for all correspondence

PO Box 10010

Suburb: Adelaide **Postcode:** 5000

1.5 Licensed activities

The Licensee(s) – Wayne's Waste Services is (are) authorised to undertake the following activities of environmental significance under

Schedule 1 Part A of the *Environment Protection Act 1993* (the Act), subject to the conditions of licence:

- 3(3) Waste or Recycling Depot

1.6 Are your licence details different from those listed above?

☐ **Yes** ☒ **No**

– If No, continue with certificate and confirm existing details.

– If Yes for Postal Address only, continue with certificate and confirm details.
If Yes for Name of Licence – DO NOT CONTINUE – contact the Regulatory Support Branch: (08) 8204 2058

Section 2: Assessment of compliance with licence conditions

The following is an assessment against Wayne's Waste Services conditions of licence.

Condition 'area'	Condition reference	Type	Condition description	Condition complied with?	NC #
CONTROL OF EMISSIONS	(S-69)	LITTER PREVENTION	The Licensee must take all reasonable and practicable measures to prevent litter escaping from the Premises.	☒ Yes ☐ No	–
OPERATIONAL MANAGEMENT	(S-57)	DEVELOP, SUBMIT & IMPLEMENT MONITORING PLAN	The Licensee must develop and submit to the EPA by [1 November 2014], a Monitoring Plan to the satisfaction of the EPA. NOTE. The EPA will assess the Monitoring Plan against the EPA Guideline *Regulatory monitoring and testing Monitoring plan requirements*.	☐ Yes ☒ No	1
WASTE MANAGEMENT	(S-33)	NO DISPOSAL OF WASTE	The Licensee must not dispose of any waste at the Premises.	☒ Yes ☐ No	–
WASTE MANAGEMENT	(S-145)	RECEIPT OF WASTE SOILS – WASTE FILL	The Licensee must ensure that Waste Fill received at the Premises that exceeds 100 tonne from a single source site is accompanied by written, signed and dated certification from a suitably qualified consultant, site contamination consultant or site contamination auditor stating that the waste complies with the definition of Waste Fill unless otherwise approved by the EPA in writing.	☒ Yes ☐ No	–
WASTE MANAGEMENT	(S-145)	RECEIPT OF WASTE SOILS – WASTE FILL	The Licensee must keep all certification records for a period of not less than 12 months from the date of receipt.	☒ Yes ☐ No	–
WASTE MANAGEMENT	(S-15)	PREMISES STORMWATER MANAGEMENT	The Licensee must take all reasonable and practicable measures to prevent contamination of stormwater at the Premises.	☒ Yes ☐ No	–
WASTE MANAGEMENT	(S-15)	PREMISES STORMWATER MANAGEMENT	The Licensee must implement appropriate contingency measures to contain any contaminated stormwater at the Premises unless and until the	☒ Yes ☐ No	–

Condition 'area'	Condition reference	Type	Condition description	Condition complied with?	NC #
			contaminated stormwater is treated to remove the contamination, or is disposed of at an appropriately licensed facility.		
OPERATIONAL MANAGEMENT	(S-119)	ASBESTOS STORAGE MANAGEMENT	The Licensee must only receive asbestos that has been wrapped and sealed in thick plastic, or in sealed containers.	☒ Yes ☐ No	–
OPERATIONAL MANAGEMENT	(S-130)	WASTE FIRE MANAGEMENT & REPORTING	The Licensee must not cause or permit any waste to be burned at the Premises.	☐ Yes ☒ No	2
WASTE MANAGEMENT	(S-148)	TREATMENT & STORAGE OF LOW LEVEL CONTAMINATED WASTE SOIL	The Licensee must ensure that all Low Level Contaminated Waste Soil is received, stored and treated within an undercover storage shed.	☒ Yes ☐ No	–
WASTE MANAGEMENT	(S-148)	TREATMENT & STORAGE OF LOW LEVEL CONTAMINATED WASTE SOIL	The Licensee must not treat any Low Level Contaminated Waste Soil unless a treatment plan has been approved in writing by the EPA.	☒ Yes ☐ No	–
ADMINISTRATION	(A-3)	CHANGE OF LICENSEE DETAILS	If the Licensee's name or postal address (or both) changes, then the Licensee must inform the EPA within 28 days of the change occurring.	☒ Yes ☐ No	–

Section 3: Summary of non-compliance

This information will not be made publicly available.

NC#	Condition	Quarter incident occurred [DROP DOWN LIST] Q1: Jul–Sep Q2: Oct–Dec Q3: Jan–Mar Q4: Apr–Jun	Level of environmental harm or contravention [DROP DOWN LIST] Environmental Harm Level 1 - Minor consequence Level 2 - Environmental nuisance Level 3 - Material environmental harm Level 4 - Serious environmental harm Level 5 - High-level serious environmental harm Contravention (Administrative only) Level 1 – Low level non-compliance Level 2 – Medium level contravention Level 3 – High level contravention Level 4 – Very high level contravention	Cause [DROP DOWN LIST] • Emergency incident • Legacy contamination • Maintenance • Plant malfunction • Procedural • Investigation could not determine cause • Variation in feedstock • Plant unable to meet standard	Environmental Impact [DROP DOWN LIST] • Administrative non-compliance • Amenity impact • Land or groundwater impact • Waterway or stormwater impact • Private property impact • Employee health impact • Flora or fauna impact • Public health impact • Public nuisance • Uncontrolled prescribed industrial waste • Investigation(s) revealed no offsite impact • Unknown impact due to inadequate monitoring
1	(S–57)	Q1: Jul–Sep	Level 1 – Low level non-compliance	Procedural	Administrative non-compliance
2	(S–130)	Q3: Jan–Mar	Level 5 – High-level serious environmental harm	Emergency incident	Amenity impact Land or groundwater impact Waterway of stormwater impact
Total incidents			**2**		

Details of non-compliance with licence conditions

This information will not be made publicly available.

Non-compliant Incident: 1	**Non-compliance with condition: (S–57)**
a) Date(s) when the non-compliance occurred (If applicable)	
1 August 2014	
b) Summary of particulars of non-compliance	
We failed to submit a Monitoring Plan to the EPA by the required date as the staff member responsible for managing external reporting requirements unexpectedly resigned in July 2014. As we don't have other staff with the technical ability to develop a Monitoring Plan, we were unable to submit a Plan until a replacement staff member was appointed. We submitted a Monitoring Plan to the EPA in September 2014.	
c) What is your assessment of environmental impact as a result of non-compliance?	
No environmental impact occurred as a result of this non-compliance incident. The impact was administrative only.	
d) Cause of non-compliance	
Unavailability of staff member equipped to develop Monitoring Plan.	
e) Action taken or that will be taken to mitigate any adverse effects of the non-compliance	
The report was submitted later in 2014 when we had staff available to complete the Monitoring Plan.	
f) Action taken or that will be taken to prevent reoccurrence of the non-compliance	
After consulting with the EPA on the non-compliance, we became aware that it is possible to use contracted service providers to develop a monitoring Plan to the necessary standards required by the EPA. If ever we do not have our designated staff member available to carry out a Monitoring Plan, we will use a contractor.	

Details of non-compliance with licence conditions (continued)

This information will not be made publicly available.

Non-compliant Incident: 2	**Non-compliance with condition: (S–130)**
a) Date(s) when the non-compliance occurred (If applicable)	
15 February 2015	
b) Summary of particulars of non-compliance	
On 15 February, one of the stockpiles on our premises caught fire (we suspect through self combustion). Despite, our efforts to contain and eliminate the fire, we were unable to extinguish the blaze. The fire was alight for 12 hours before being successfully extinguished by the Metropolitan Fire Service.	
c) What is your assessment of environmental impact as a result of non-compliance?	
As a result of the fire and resultant smoke there was an impact to amenity in the area, while runoff from the fire affected the surrounding land and groundwater. In addition, some of the runoff from the extinguished fire entered the stormwater drains.	
d) Cause of non-compliance	
We suspect that the conditions of the stockpile, in particular excessive stockpile height was a factor in the fire's occurrence. Temperatures had not been recorded from this particular stockpile for several weeks as access had been difficult.	
e) Action taken or that will be taken to mitigate any adverse effects of the non-compliance	
When the fire started, we used our on-site fire equipment to try to extinguish the fire as expediently as possible. When we realised that runoff was entering the stormwater drains, we tried to block the drain to prevent further pollution.	
f) Action taken or that will be taken to prevent reoccurrence of the non-compliance	
To prevent the reoccurrence of an incident like this, we have improved our management practices to ensure that stockpile heights met the requirements of our licence conditions. We also ensured that stock is turned over frequently. We will ensure the daily monitoring of stock temperatures. We will also ensure adequate fire-fighting equipment and water is kept on site, in case of reoccurrence.	

Section 4: Enforcement

This information will not be made publicly available.

4.1 Has any enforcement action been taken against you in the past 12 months by another organisation?

☐ Yes ☒ No

Name of Organisation: _____NA_____

When did the enforcement action occur? _____ NA _____

What was the outcome? ____ NA____

Section 5: Declaration

Authorised signatory

The authorised signatory for Certificates of Compliance is the most senior Australian-based officer of your company.

I/we hereby declare that the information provided in this certificate and accompanying documents, to the best of my knowledge, is true and correct.

Name: Wayne Doe **Position:** Director, Wayne's Waste Service Pty Ltd.

Signature: **Date:** 1 August 2015

Note that a penalty of up to $60,000 applies for providing false or misleading information.