

# Financial assurances and stockpiling – who, when, what and how much

Updated September 2020

*EPA 1116/20: This information sheet describes the EPA's approach to requiring financial assurances and stockpile controls as conditions of authorisation under sections 45 and 51 of the Environment Protection Act 1993 (for prescribed activities of environmental significance set out in Schedule 1).*

## Introduction

In recent years, the EPA has embarked on a significant reform program to better support fair and equitable competition, stability, growth and innovation in the waste and resource recovery sector. The reforms involved amendments to the *Environment Protection Act 1993* (EP Act) in November 2017.

Amendments included improved waste stockpiling controls, provisions supporting the assessment and identification of materials as waste or approved recovered resources, additional deterrents for breaches and authorisation conditions, enhanced tools for investigating and prosecuting illegal dumping, and more comprehensive provisions for imposing financial assurances.

Section 51 gives the EPA the power to require a financial assurance as a condition of authorisation, not only where there is the risk of environmental harm but also where there is a risk of unauthorised stockpiling or abandonment of waste or other matter. A financial assurance is a type of financial security that can be required by the EPA to prevent the cost of rehabilitation and clean-up being inappropriately transferred to third parties, including the state government and the community.

## Purpose of financial assurances as a stockpile control measure

Stockpiling can result in environmental harm, for example through stockpile fires and exposing the community to smoke and dust, as well as creating a financial liability that can be passed onto government if a site is abandoned.

Stockpiling poses a significant concern due to the potential for levy avoidance, and the risk of market distortion, through the indefinite holding of material without either recovering or selling the materials, or disposing of the material to landfill. Materials that can be stockpiled include soils, fill and overburden, construction and demolition waste, as well as timber, green waste, residual waste and industry byproducts.

There is a need to balance the reasonable needs of business and local government to undertake some degree of stockpiling against excessive stockpiling that can create environmental, abandonment or unfair competition risks. The EPA's legislative powers to require authorisation-holders to provide a financial assurance is an important measure to encourage authorisation-holders to both improve environmental practices and circulate materials according to the waste management hierarchy, to prevent excessive stockpiling and reduce abandonment risks.



**Uncontrolled burning stockpile**

## Objects of the EP Act (section 10)

To ensure that, as far as is reasonably practicable, the following measures are taken including in section 1(b):

- (iaa) *to promote the circulation of materials* through the waste management process and *to support a strong market for recovered resources* by –
  - (A) programs to encourage and assist industry, public authorities and the community to engage in resource recovery; and
  - (B) regulating resource recovery; and
  - (C) regulating the handling, storage, treatment, transfer, transportation, receipt or disposal of waste or other matter; and
  - (D) *preventing the unauthorised stockpiling of waste or other matter*;
- (vi) to allocate the costs of environment protection and restoration equitably and in a manner that encourages responsible use of, and reduced harm to, the environment with polluters bearing an appropriate share of the costs that arise from their activities, products, substances and services;

## Stockpile controls (section 45)

(3)(b) The Authority may impose or vary a condition of an environmental authorisation at any time –

- (iia) if, in the case of a condition imposing a *maximum allowable stockpile limit*, the Authority considers it necessary to impose or vary the condition in order to promote the circulation of materials through the waste management process

## Financial assurances (section 51)

Section 51(1) establishes that financial assurances may take the form of a bond, a specified pecuniary sum, a policy of insurance, a letter of credit or a guarantee given by a bank, any other form of security approved by the Authority.

Under section 51(2), the Authority may impose or vary a condition under this section at any time.

Under section 51(3) the Authority in determining whether to impose or vary a condition of a financial assurance, must have regard to the following:

- (a) if there is a risk of –
  - (i) environmental harm; or
  - (ii) *unauthorised stockpiling or abandonment of waste or other matter*, associated with the activity authorised under the environmental authorisation or any activity previously undertaken at the place to which the authorisation relates – the degree of that risk;
- (b) the likelihood of action being required to make good any resulting environmental damage, to decommission, dismantle or remove stockpiled or abandoned plant or equipment or to deal with any other stockpiled or abandoned waste or other matter;
- (c) the nature and cost of such action and the length of time such action is likely to take (including following cessation of the activity so authorised);
- (d) whether the holder of the authorisation has previously contravened this Act (whether or not in connection with the activity authorised under the environmental authorisation) and if so, the nature, number and frequency of the contraventions;
- (e) the Authority's reasonable estimate of the total of the likely amounts involved in satisfaction of the purposes for which the financial assurance is required;
- (f) the depreciation of the value of the financial assurance over time;
- (g) any other matters considered relevant by the Authority or prescribed by regulation.

[EPA emphasis]

## Key terms<sup>1</sup>

**Environmental liabilities:** described in non-legal terms as an obligation based on the principle that a polluting party should pay for damage caused to the environment by its activities. The costs of rehabilitating environmental harm, stockpiling (authorised and unauthorised) and abandonment of waste or other matter are environmental liabilities.

**Financial assurances:** for the purposes of the EP Act, financial assurances are a type of financial security that can be include security bonds, bank guarantees or insurance. They can be required by governments to cover the cost of environmental rehabilitation, should a person or business fail to meet their environmental obligations. The EPA can only require a financial assurance as a condition of authorisation under the EP Act.

**Immediate market:** a market with a recognised genuine customer, who has a demonstrated and current beneficial use for the material, and who has the clear intention and capability to take or purchase the material without delay.

**Material flow:** the EPA promotes the circulation of materials through the waste management process, to support a strong market for recovered resources. At licensed sites, the stockpiling of materials must not be a process of continual growth, even with varying markets that the activity is supplying or targeting. Instead for responsible operators, material flow balances material input with the fate of the material (material fate) across reasonable timeframes<sup>2</sup>.

**Material fate:** includes those –

- approved by the EPA for on-site operational use, disposal or cover
- exiting the site as a recovered resource (eg approved recovered resource that meets an Australian Standard, or EPA approved standard, such as the waste derived fill standard) or product that is ready and intended for imminent use, without the need for further treatment to prevent any environmental harm
- transferred to another facility authorised to receive the waste
- approved by EPA for intermediate storage for future genuine customer (eg development projects, trial of new products) and an associated approved stockpile management plan
- approved by EPA to produce a byproduct and its storage (with limits and timeframes) or disposal.

**Maximum allowable stockpile limit:** the EPA may impose or vary a *maximum allowable stockpile limit* as an authorisation condition, to promote the circulation of materials through the waste management process [section 45(3)(b)(ia)].

**Stockpile controls:** conditions of authorisation, including stockpile limits and stockpile management plans imposed under section 45 of the EP Act that relate to the management of materials being stockpiled at licensed sites.

**Stockpile management plan:** a SPMP can be required as a condition of authorisation with the aim of preventing unauthorised stockpiling of materials and preventing or minimising environmental harm for stockpiled materials.

**Unauthorised stockpiling:** for the purposes of the EP Act, unauthorised stockpiling of waste, or other matter, occurs if a *maximum allowable stockpile limit* (stockpile limit) imposed under the EP Act has been exceeded [section 3(5)].

**Waste market distortion:** can occur when a material being stored for recycling or reuse is speculatively stockpiled long term and at volume, either because an immediate market does not exist, or to avoid paying the waste levy. An immediate market means there is an identified and recognised market available as demonstrated by the existence of a known customer with a demonstrated and available beneficial use for the material.

<sup>1</sup> For further information on stockpiling, material flow and market distortion, refer to the EPA website at [https://www.epa.sa.gov.au/environmental\\_info/waste\\_management/waste-depots](https://www.epa.sa.gov.au/environmental_info/waste_management/waste-depots)

<sup>2</sup> *Guideline for stockpile management: waste and waste derived products for recycling* (2017) [https://www.epa.sa.gov.au/files/4771349\\_guidelines\\_stockpile.pdf](https://www.epa.sa.gov.au/files/4771349_guidelines_stockpile.pdf)

## Guiding principles – stockpile controls and financial assurances

Guiding principles have been developed to assist the EPA in setting control measures for stockpiling to prevent or minimise environmental harm, abandonment and/or excessive accumulation (market distortion or levy avoidance) that can result from stockpiling of materials on licensed premises. Based on the Objects of the EP Act and the waste management hierarchy, the EPA will be guided by these principles when determining stockpile controls and financial assurances. The principles seek to improve the environmental performance of authorisation-holders, reduce environmental liabilities and reduce the risk of their costs being transferred to the community and state government through stockpile controls and financial assurances that:

- act as an incentive to improve environmental performance
- support a strong market for recovered resources
- are risk-based, reasonable and practicable
- provide regulatory certainty
- provide a fair and proportionate response to inappropriate stockpiling to ensure that material flows in accordance with the waste management hierarchy
- balance the 'polluter pays' principle with regulatory burden and costs
- are sufficient
- are secure and available when required.

The EPA is using these principles to guide its practices regarding when a financial assurance will be required and how much will be the financial assurance. In accordance with the principle of fairness and supporting a strong market for recovered resources, the EPA will take into account any significant prevailing circumstances, such as COVID-19 or global financial downturns, when determining whether stockpile controls and financial assurances are required.

## Who requires stockpile controls and financial assurances depends on risks

The EPA always undertakes a risk assessment when assessing licence applications under the EP Act. In addition, under section 57, the EPA assesses whether referred development proposals will meet the requirements of the EP Act, including seeking to further the Objects of the EP Act (section 10) such as *to promote the circulation of materials through the waste management process and to support a strong market for recovered resources*. The EPA assesses stockpiles to ensure materials are managed so as to minimise environmental harm and prevent excessive accumulation and abandonment.

For environmental authorisations, the EPA applies a risk-based approach to determine whether stockpile limits and/or financial assurances are required as a condition of authorisation. Stockpile controls are not required unilaterally across the industry. Instead, it is focused on high risk stockpiles. The risk assessment considers the likelihood of an environmental liability becoming the responsibility of the EPA based on the type of material being stockpiled.

For development proposals, the EPA can require information relating to stockpile management at a site to assess the applications both on environmental grounds and to ensure that materials to be stored are circulated in accordance with the Objects of the EP Act. Where higher risk stockpiling is proposed, the EPA may provide a note to the applicant advising that stockpile limits, and/or a financial assurance, may be required as a condition of authorisation.

Financial assurances are unlikely to be required for most authorisation-holders. Financial assurances will not be required where the authorisation-holder undertakes sound environmental practice and represents a low risk of:

- 1 potential environmental harm
- 2 poor material flow
- 3 abandonment of waste or other matter, or
- 4 stockpiles with costly environmental liabilities.

## Material flow

A risk assessment that considers material flow will be used by the EPA in deciding appropriate controls to manage excessive stockpiling of materials and stockpile abandonment risks,.

Good stockpile management is the responsible and sustainable management of materials where there is evidence of material flow (Figure 1) eg material input (x) is less than or equal to material fate (y) over a maximum period of two years, or milestones of stockpile management are met in accordance with an approved stockpile management plan (SPMP).



**Figure 1** Good stockpile management is the responsible and sustainable management of materials where there is evidence of material flow eg material input (x) is less than or equal to material fate (y) over a maximum period of two years,

Poor material flow is where material flowing into a site (x) is greater than material flowing to a 'fate' (y) over a maximum time period of two years and/or milestones are not met in accordance with an approved stockpile management plan (refer to Stockpile Management Plan below).

Poor material flow is a risk indicator of inappropriate stockpiling and abandonment. The stockpiling as a result of poor material flow can be a costly environmental liability if abandoned. Stockpile controls including a financial assurance may be required to manage this risk.

### Stockpile management plan

An authorisation-holder may be required to provide a stockpile management plan (SPMP) to the EPA to demonstrate how stockpiles are being managed. The SPMP will need to include the following information:

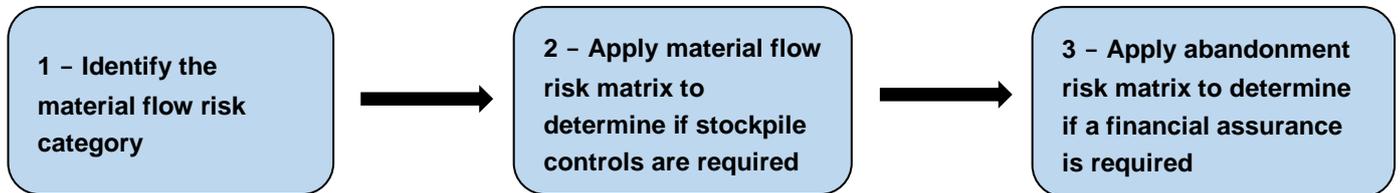
- A detailed list of the materials that are received and stockpiled at the premises and their intended fate.
- Milestones (including timeframes and volumes) for expected stockpile growth and reduction in reference to the baseline volume.
- The quality assurance and control processes that will ensure the materials stockpiled are suitable for their intended fate.
- Demonstrate evidence of immediate markets for all stockpiled material (including market conditions and intended customers or material fates), and
- A contingency plan to be activated if market conditions become unfavourable or in the event of an unsuccessful bid for a development project/trial of new product.

The SPMP will be assessed by the EPA and then used to understand material flow, assess the risk and inform stockpile limits. If in the case that a SPMP is not accepted by the EPA, the authorisation-holder will be asked to revise and resubmit the plan, or the stockpile limit may be refused.

## Risk assessment process

The following sections set out the EPA’s risk assessment process which guides whether stockpile limits and financial assurances will be required as conditions of authorisation. In accordance with the EPA’s risk framework, the risk assessment process involves two specially designed risk matrices to assess the risk of material flow at a licensed site (Figure 2) and risk of abandonment (Figure 3) to inform whether a stockpile control and/or financial assurance is required.

The process is in addition to the environmental harm risk assessment and includes the following steps:



### 1 Material flow risk categories

The level of risk associated with material flow, environmental harm and abandonment, is dependent on the type of material. The risk level for each category of material is summarised in Table 1. Higher risk is assigned to stockpiles of materials that are not recoverable and materials that have untested and unproven markets. The EPA determines the risk category for a stockpiled material and when a change of category may be reasonable.

**Table 1 Category of material and material flow risk**

Material flow risk category	Example materials	Risk description	Risk level
<p><b>A – Material that is not recoverable (may need further processing prior to final disposal)</b></p>	<ul style="list-style-type: none"> <li>• materials for disposal at landfill</li> <li>• materials for other forms of final disposal</li> <li>• hazardous materials (listed waste)</li> </ul>	<p>Risk of illegal dumping and waste levy avoidance</p>	<p>High risk</p>
<p><b>B – Materials that have untested or unproven markets</b></p>	<ul style="list-style-type: none"> <li>• industrial residues</li> <li>• mixed commercial and industrial materials</li> <li>• residual wastes</li> </ul>	<p>Given the lack of established market or clearly identified future market, the abandonment risks are very high for these materials.</p>	
<p><b>C – Materials that cost to recycle without gate fees</b></p>	<ul style="list-style-type: none"> <li>• e-waste</li> <li>• tyres</li> <li>• mixed construction and demolition waste</li> <li>• co-mingled recyclables</li> </ul>	<p>Some of these materials are known to be recyclable and contain recyclable components. However, collection, processing and transport costs exceed any value that will be obtained from the recovery of materials in the wastes, leading to higher abandonment risks.</p>	
<p><b>D – Materials are a product and meet a published or EPA standard* but are being stockpiled and therefore have no immediate fate, there is a market but it is limited or highly variable, or anticipating the market to improve.</b></p> <p>*Evidence of the material's physical or chemical properties provided to the EPA and approved.</p>	<p>Larger volumes of established recyclables such as:</p> <ul style="list-style-type: none"> <li>• sorted plastic</li> <li>• cardboard and paper</li> <li>• compost/mulch</li> <li>• mixed glass</li> <li>• inert construction and demolition or waste soil ready for sale</li> <li>• recyclable metals.</li> </ul>	<p>As there is a market, there is a lower risk of abandonment and lower liability. However, the market may be limited and highly variable. This may lead to speculative stockpiling which can undermine and distort the market. This behaviour is inconsistent with the Objects of the EP Act to promote the circulation of materials through the waste management process and to support a strong market for recovered resources.</p> <p>This behaviour is to be monitored to minimise the environmental liability and to prevent avoidance of regulatory requirements.</p>	
<p><b>E – Materials that meet a published or EPA standard and have an immediate fate</b></p>	<ul style="list-style-type: none"> <li>• pelletised plastics</li> <li>• cardboard and paper</li> <li>• compost/mulch</li> <li>• segregated glass</li> <li>• inert construction and demolition or waste soil ready for sale</li> <li>• recyclable metals</li> </ul>	<p>As there is an established market, there is a lower risk of abandonment and lower liability. At suitable sites, even large volumes of these materials can be stored without posing significant environmental harm or material flow risk.</p>	<p>Low risk</p>



## 2 Material flow risk

Stockpiles of waste with good material flow are unlikely to require stockpile controls. These materials fall into the yellow zone of the matrix (Figure 2).

Stockpiles with low material flow fall into the red zone, and represent high priority risks. Low material flow is where the volume of material flowing into the site is greater than the volume of material flowing to its designated 'fate' (material fate) over a maximum time period of two years, otherwise in accordance with milestones set out in an approved SPMP. These stockpiles are likely to require controls as a condition of authorisation, such as limits and potentially a financial assurance.

Material flow risk matrix		Consequence				
		Material flow >95%	Material flow 65–95%	Material flow 40–64%	Material flow 15–39%	Material flow <15%
Material in (x) > material fate (y) Material flow = (y/x) x 100		Acceptable material flow	Moderate material flow	Low material flow	Very low material flow	Extremely low material flow
Material classification		1	2	3	4	5
Likelihood	A – Material that is not recoverable, destined for disposal	A1	A2	A3	A4	A5
	B – Materials that have untested or unproven markets	B1	B2	B3	B4	B5
	C – Materials that cost to recycle without gate fees	C1	C2	C3	C4	C5
	D – Materials are a product and meet a published or EPA standard but are being stockpiled and have no immediate fate. There is a market but it is limited or highly variable, or anticipating the market to improve	D1	D2	D3	D4	D5
	E – Materials that meet a published or EPA standard and have an immediate fate	E1	E2	E3	E4	E5

Figure 2 Material flow risk matrix

## 3 Abandonment risk

The abandonment risk matrix (Figure 3) is a tool to assess the risk of abandonment based on the category of material and the consequence if the stockpile is abandoned by the authorisation-holder. Processing, clean-up or disposal costs are environmental liabilities that may become the responsibility of the landowner (if the land is leased) or governments (ie the community) if funds cannot be accessed from the authorisation-holder.

Stockpiles of materials that are assessed as high priority (red zone) may require a financial assurance.

Abandonment risk matrix		Consequence (stockpile environmental liability)				
		\$100,000–\$500,000	\$500,001–\$1,000,000	\$1,000,001–\$5,000,000	\$5,000,001–\$10,000,000	>\$10,000,000
		Insignificant	Minor abandonment	Moderate abandonment	Serious abandonment	High level serious abandonment
Likelihood	Material classification	1	2	3	4	5
	A – Material that is not recoverable, destined for disposal	A1	A2	A3	A4	A5
	B – Materials that have untested or unproven markets	B1	B2	B3	B4	B5
	C – Materials that cost to recycle without gate fees	C1	C2	C3	C4	C5
	D – Materials are a product and meet a published or EPA standard but are being stockpiled and have no immediate fate. There is a market but it is limited or highly variable, or anticipating the market to improve	D1	D2	D3	D4	D5
	E – Materials that meet a published or EPA standard and have an immediate fate	E1	E2	E3	E4	E5

Figure 3 Abandonment risk matrix

#### 4 Government facilities and risk

Government-owned facilities face the same environmental risks as private operators, however they have lower financial risks.

The EPA recognises that local government are perpetual body corporates and can raise revenue through rates and levies. As local government entities exists in perpetuity, their landfill sites and waste processing facilities cannot be abandoned. Furthermore in South Australia, all local governments are members of the Local Government Association Mutual Liability Scheme (LGAMLS), which constitutes insurance for the purposes of section 142 of the *Local Government Act 1999* (the LG Act). The LGAMLS provides civil liability cover to meet the cost of settlement of damages by any local council. The EPA also recognises that subsidiary operations are formed under the LG Act and under Schedule 2 (14)(1), *liabilities incurred or assumed by a subsidiary are guaranteed by the council*. Therefore, local government subsidiary operations have an equivalent level of risk to the local government operations.

The EPA will take these and other alternative financial assurance arrangements into consideration when assessing whether government operations will require a financial assurance to address the risks of stockpiling and abandonment.

## 5 Other risk factors

The focus of the approach is on assessing the risk of environmental harm and unauthorised stockpiling in accordance with the Objects of the EP Act and section 51. Under Section 51(3)(d), the EPA takes into account whether the holder of the authorisation has previously contravened the EP Act (whether or not in connection with the activity authorised under the environmental authorisation) and if so, the nature, number and frequency of the contraventions. Further information on the EPA's compliance approach can be found on the EPA website<sup>3</sup>.

Furthermore, under section 51(3)(g) the EPA has the power to take into account any other matters considered relevant by the Authority or prescribed by regulation such as insolvency and other financial risk factors.

## When will stockpile controls and financial assurances be required

There are a number of controls and regulatory tools available for the EPA to consider and select from in order to prevent or minimise abandonment and/or poor material circulation of materials through the waste management process. The controls, typically ranging from minimum expectations set out in guidance documents to mandatory requirements set out in authorisation conditions, are:

- Guideline for stockpile management: Waste and waste derived products for recycling and reuse<sup>4</sup>
- Maximum allowable stockpile limit
- Temporary financial assurance stockpile limit.

Section 45(3)(b)(iia) of the EP Act sets out that the EPA may impose or vary a maximum allowable stockpile limit as a condition of authorisation at any time, to promote the circulation of materials. Under section 47, the EPA must have regard to, and seek to further, the Objects of the EP Act (section 10) when setting authorisation conditions. The Objects also specifically states 'that proper weight should be given to both long and short term economic, environmental, social and equity considerations'.

Stockpile limits are unlikely to be required where authorisation-holders have good environmental practices and stockpiles present a low risk of environmental harm, unauthorised stockpiling or abandonment.

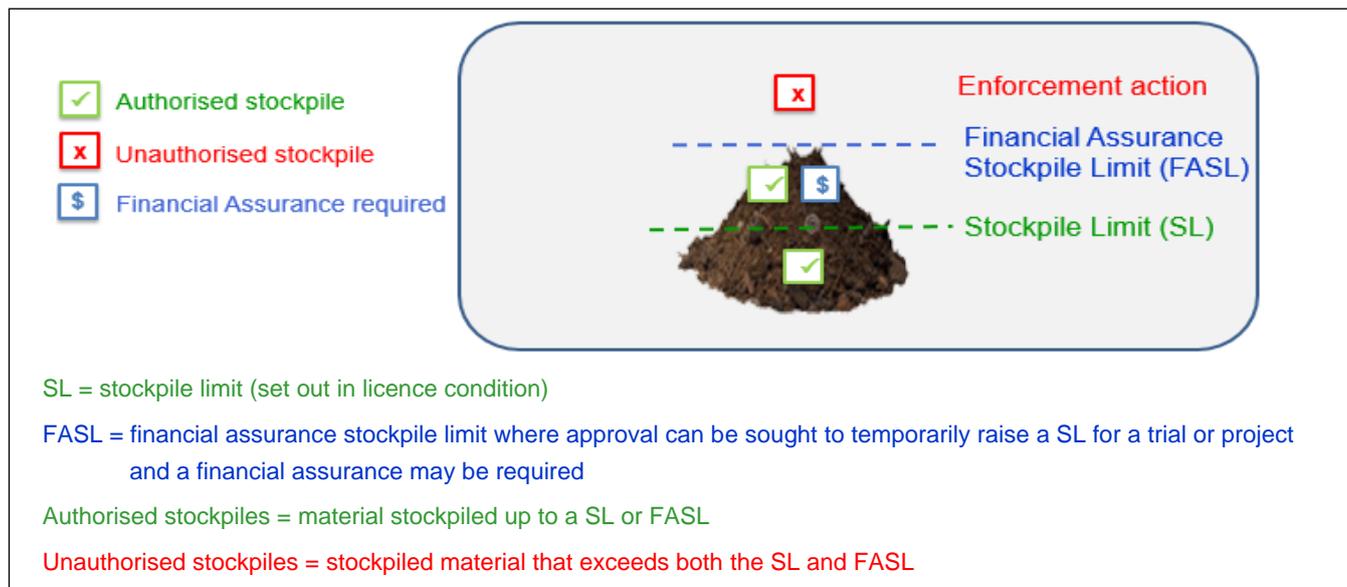
Setting stockpile limits and financial assurances as authorisation conditions will be informed by stockpile management plans (SPMPs) when submitted by the authorisation-holder to the EPA. The SPMP allows the EPA to understand the availability of an immediate market and material flow for the material to be stockpiled.

A maximum allowable stockpile limit can be either a standard stockpile limit (SL) or a temporary financial assurance stockpile limit (FASL).

When the stockpiles are below the SL, these are authorised stockpiles and no financial assurance is required. However, an authorisation-holder may seek approval to temporarily increase their stockpiles for a variety of reasons, for example a trial or expansion for a large upcoming project. When a stockpile increases, the abandonment risk and environmental liability increases (Figure 3). A financial assurance may be required for the amount up to the temporary FASL (Figure 4). The financial assurance will be in place as long as the FASL is in place. Similarly, a financial assurance may be required when the EPA seeks to reduce existing high risk stockpiles to a lower SL.

<sup>3</sup> [https://www.epa.sa.gov.au/business\\_and\\_industry/compliance\\_and\\_enforcement](https://www.epa.sa.gov.au/business_and_industry/compliance_and_enforcement)

<sup>4</sup> [https://www.epa.sa.gov.au/files/4771349\\_guidelines\\_stockpile.pdf](https://www.epa.sa.gov.au/files/4771349_guidelines_stockpile.pdf)



**Figure 4** Financial assurance is an interim measure that allows material to be temporarily stockpiled above the stockpile limit and up to the financial assurance stockpile limit (only when approved by the EPA)

## How is the amount of financial assurance calculated

### Low risk materials

Established recyclables with strong immediate market and high circulation is the lowest risk category (category E). A financial assurance will typically not be required unless there is extremely low material flow and the stockpiled material presents an environmental liability with a high level serious abandonment (Figure 3).

### Higher risk materials

#### Calculation based on information provided by the authorisation-holder

In accordance with the EP Act, the environmental liability and financial assurance calculations will be based on the costs of dealing with stockpiled or abandoned materials. The EPA will seek relevant costs generally through stockpile management plans.

The EPA's default calculation (refer to the following section) is to guide authorisation-holders as to the type of information that will be required. The EPA will ground truth the information provided and may require further verification by a suitable third party.

#### Calculation using the EPA default formula

Where the relevant costs are not provided to the EPA, a default formula will be used (Figure 5) to reasonably estimate the total likely amounts involved to deal with stockpiled and abandoned materials [section 51(3)]. The default formula to calculate the financial assurance amount has two components: the base formula and a risk multiplier (%).

Firstly, the base formula for higher risk materials (categories A, B and C) has regard to the likelihood that the fate of the material will be disposal to landfill (ie the material may not meet a standard nor have an immediate market), plus the cost of transporting the materials to the landfill and treatment costs if required. In the circumstances of hazardous waste stockpiling, the treatment costs would be calculated according to a site-specific assessment made by an appropriate environmental consultant. The risk multiplier is either 90% or 100%.

For lower risk materials (category D), the risk multiplier is more aligned to processing costs. Table 2 shows the sliding scale of risk multipliers (%) for each material category.

	<b>Risk multiplier</b>	
<b>Financial assurance amount</b>	= ____% x	<div style="border-left: 1px solid black; border-right: 1px solid black; padding: 10px; text-align: center;"> <p><b>Base formula</b></p> <p><i>mass/volume of material where the financial assurance applies</i></p> <p>x</p> <p><i>cost to dispose of (waste levy rate)</i></p> <p>+</p> <p><i>transport material to disposal or market* (+ treatment costs if required)</i></p> </div>

**\* Based on third party costs or the following transport costs formula as a default:**

**Transport costs = time (hours) x \$125 per hour x number of loads**

where:

Price per hour = \$125 per hour (rate provided to EPA by industry)

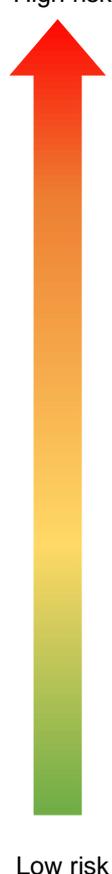
Time = the average travel time (from origin to fate and return trip)

Treatment costs for hazardous materials (Category A) = market rate

Current waste levy rates can be found at [https://www.epa.sa.gov.au/business\\_and\\_industry/waste-levy](https://www.epa.sa.gov.au/business_and_industry/waste-levy)

**Figure 5** Where relevant costs and material flow information are not provided by the licensee, the EPA will use this default formula to calculate environmental liabilities of high risk stockpiles and financial assurances (see Table 2 for risk multiplier)

**Table 2** The sliding scale of risk multipliers (%) for determining financial assurance amount

Material category	Risk multiplier	Risk level
A – Material that is not recoverable (may need further treatment prior to final disposal)	100%	
B – Materials that have untested or unproven markets	100%	
C – Materials that cost to recycle without gate fees	90%	
D – Materials are a product and meet a published or EPA standard but are being stockpiled and have no immediate fate. There is a market but it is limited or highly variable, or anticipating the market to improve. Includes		
<ul style="list-style-type: none"> <li>• sorted plastic</li> <li>• cardboard and paper</li> <li>• compost/mulch</li> <li>• mixed glass</li> <li>• inert construction and demolition or waste soil ready for sale.</li> </ul>	80% 25% 25% 25% 20% 20%	
E – Materials that meet a published or EPA standard and have an immediate fate.	None (unless there is a history of contravention)	Low risk

The calculated amount of financial assurance is to cover the increased environmental liability of the stockpile (above the stockpile limit up to the financial assurance stockpile limit) in the event of abandonment. Having the financial assurance in place means that the level of risk is reduced to an acceptable risk level (no longer in the red zone of the abandonment risk matrix in Figure 3). An example financial assurance calculation is provided in the box below.

### Example of a financial assurance calculation at a metropolitan recovered resource facility using the default financial assurance formula

**Material being stockpiled:** Bricks and concrete

**Existing authorised stockpile limit (SL):** 100,000 tonnes.

**Licence condition change request:** The authorisation-holder seeks to temporarily increase the stockpile of bricks and concrete by 50,000 tonnes in anticipation of winning a contract for a project in the following year.

**Total stockpile with increased limit:** 150,000 tonnes

#### EPA risk assessment

**Material category:** D

**Risk multiplier:** 20% (where 20% of the waste levy represents processing costs and stockpile management costs)

EPA assesses the proposal to ensure that it is appropriate for approval via development approval and environmental authorisation, eg infrastructure and environmental harm controls are appropriate. As part of this assessment, the EPA seeks a stockpile management plan (SPMP) with intended markets and timeframes, to ensure the material will flow to its designated fate in accordance with authorised timeframes and quality assurance requirements. The SPMP informs the EPA's risk assessment, the increased authorised stockpile limit as well as the period it will be in place.

$$\begin{aligned} \text{Total stockpile environmental liability} &= 20\% \times 150,000 \text{ tonnes} \times \$140 \text{ (waste levy)} + \$2,250,000 \text{ (transport costs)} \\ &= \$6,450,000 \end{aligned}$$

where:

$$\text{transport costs} = 6,000 \text{ loads (25 tonne trucks transporting 150,000 tonnes)} \times 3 \text{ hours} \times \$125 = \$2,250,000$$

**EPA risk assessment result:** The material has extremely low material flow (less than 15%) and the material flow risk is high or D5 (Figure 2). The increased stockpile represents a serious risk of abandonment or D4 (Figure 3) and potentially a significant environmental liability for the EPA to deal with.

The EPA authorises a financial assurance to cover the increased stockpile limit (FASL) of 50,000 (tonnes), and based on the high level of risk, a financial assurance is required as a condition of licence to cover the temporary increase.

#### Calculating the financial assurance

**Financial assurance:** Calculated for the material where financial assurance applies (50,000 tonnes)

$$\begin{aligned} \text{Financial assurance amount} &= 20\% \times 50,000 \text{ tonnes} \times \$140 \text{ (waste levy)} + \$750,000 \text{ (transport costs)} \\ &= \$2,150,000 \end{aligned}$$

#### Outcome

With the financial assurance in place, material circulation is encouraged and the residual environmental liability for the 150,000 tonnes of material is:

$$\text{Residual environmental liability} = \$6,450,000 - \$2,150,000 = \$4,300,000$$

This residual environmental liability is a lower risk (D3). If the temporary stockpile of 50,000 tonnes of material is reduced as per SPMP milestones, the EPA will not need to draw on the assurance and it will be released to the authorisation-holder. If the stockpile is not reduced as per the SPMP, then the costs of the EPA dealing with the stockpile are covered.

## Types of financial assurance

Section 51(1) of the EP Act provides that the EPA may require the holder of the authorisation to provide a financial assurance in the form of:

- a bond
- a specified pecuniary sum
- a policy of insurance
- a letter of credit or a guarantee given by a bank
- any other form of security approved by the EPA.

Unconditional bank guarantees will be the preferred form as they are accessible by the EPA when needed and without conditions imposed. This reduces the financial risk for the EPA. In addition, the requirements that operators need to meet to be granted a bank guarantee provides increased certainty that the business is legitimate and financially viable.

## Review

The EPA will review the amount of a financial assurance held at least every five years. The review may coincide with reviews of the authorisation or the authorisation conditions (ie according to the SPMP). The financial assurance may also be reviewed should an authorisation-holder's regular reporting (including mass balance) or audit reports suggest a change in material flow that is inconsistent with the SPMP.

The amount of financial assurance may be adjusted for longer-term agreements based on consumer price index (CPI).

## EPA use of the financial assurance

In the first instance, it is the authorisation-holder's responsibility to remedy unauthorised stockpiling of materials. Section 51(1) provides that the EPA may use, realise or claim against the financial assurance for costs or expenses, or for loss or damage, incurred or suffered by the EPA or any other person in the event of:

- the holder of the authorisation contravening an authorisation condition by or under the EP Act, or
- failure by the authorisation-holder to take specified action within a specified period.

When the specified action has not occurred to deal with an inappropriate stockpile, the EPA will notify the authorisation-holder in writing of the intention to use the financial assurance. At this time, the EPA will seek third party quotes to determine the clean-up costs. Once the decision to claim is confirmed and communicated, the EPA will access the financial assurance and utilise funds to commence work to deal with the stockpiled material.

## Releasing the financial assurance

The EPA will release the financial assurance when it is satisfied that the environmental liabilities are at an appropriate level and that no costs will be incurred by third parties as a result of the stockpiling. This may extend beyond the time authorisation is in force however, the EPA is legally obligated to release a financial assurance when the environmental liability has been appropriately dealt with (ie the stockpile reduced). The EPA cannot hold onto the financial assurance to cover other liabilities on or off site.

Authorisation-holders may also apply for an amendment to the financial assurance amount if the level of risk changes, eg when stockpiles requiring a financial assurance are appropriately disposed of or an immediate market opportunity arose earlier than an authorised timeframe. Applications must be submitted in writing to the EPA.

Applications for the release of a financial assurance must be accompanied by sufficient evidence that all EPA requirements are met. Evidence must demonstrate that milestones for expected stockpile reduction have been met and the environmental liability is reduced to an appropriate level.

## Compliance and enforcement

In the event of an authorisation holder not complying with conditions, for example if an agreed timeframe for submitting a stockpile management plan or financial assurance is not met, then non-compliance will be escalated in line with the EPA guideline *Compliance and enforcement – Regulatory options and tools* (2009)<sup>5</sup>.



Large stockpiles of material at a landfill site

## Further information

### Legislation

[Online legislation](#) is freely available. Copies of legislation are available for purchase from:

Service SA Government Legislation Outlet  
Adelaide Service SA Centre  
108 North Terrace  
Adelaide SA 5000

Telephone: 13 23 24  
Facsimile: (08) 8204 1909  
Website: <https://service.sa.gov.au/12-legislation>  
Email: [ServiceSAcustomerservice@sa.gov.au](mailto:ServiceSAcustomerservice@sa.gov.au)

### General information

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Adelaide SA 5001

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Email: [epainfo@sa.gov.au](mailto:epainfo@sa.gov.au)

<sup>5</sup> [https://www.epa.sa.gov.au/files/4771765\\_cem.pdf](https://www.epa.sa.gov.au/files/4771765_cem.pdf)