**Using this assessment form**

Calculations of landfill financial assurances must be independently assessed by an environmental auditor appointed under the *Environment Protection Act 2017*.

The assessment provides Environment Protection Authority Victoria (EPA) with information to determine whether the financial assurance calculation is acceptable to EPA.

Environmental auditors will use this form to complete their assessment and sign a declaration about the financial assurance calculation.

## EPA guidance:

* [*Financial assurance for permissions and contaminated land*](https://www.epa.vic.gov.au/about-epa/publications/2002) (publication 2002) (https://www.epa.vic.gov.au/about-epa/publications/2002)
* [*Calculation of financial assurance for landfills, reportable priority waste and waste resource recovery facilities*](https://www.epa.vic.gov.au/about-epa/publications/2003) (publication 2003) (https://www.epa.vic.gov.au/about-epa/publications/2003)
* [*Siting, design, operation and rehabilitation of landfills*](https://www.epa.vic.gov.au/about-epa/publications/788-3) (publication 788) (https://www.epa.vic.gov.au/about-epa/publications/788-3).
* [*Closed landfill guidelines*](https://www.epa.vic.gov.au/about-epa/publications/1490-1) (publication 1490)
(https://www.epa.vic.gov.au/about-epa/publications/1490-1)
* [*Landfill licensing*](https://www.epa.vic.gov.au/about-epa/publications/1323-3) (publication 1323) (https://www.epa.vic.gov.au/about-epa/publications/1323-3)
* Information about auditor assessment of financial assurance proposals at [epa.vic.gov.au](https://www.epa.vic.gov.au/for-business/find-a-topic/licences/financial-assurances)

## Requirement to notify EPA

If an environmental auditor is engaged by a duty holder to assess a landfill financial assurance calculation, the auditor is required to notify EPA by email to financial.assurance@epa.vic.gov.au within seven days of receiving the request.

The notification should state the nature of the assessment to be conducted and the EPA reference number for the licence, site management order or environmental action notice issued by EPA under the *Environment Protection Act* 2017, or post-closure pollution abatement notice issued by EPA under the *Environment Protection Act* 1970. The use of a notification pro forma is not required.

EPA may provide the auditor with additional information for their consideration.

## Assessment approach

The auditor should form an opinion as to whether costs and other assumptions in the calculation are reasonable and justified. Professional cost estimation expertise may be beneficial in preparing or assessing costs in calculations but is not required by EPA. More detailed instructions are provided in the relevant sections.

**About the declaration**

This form has a declaration that must be signed by the auditor. The declaration has a narrow focus on the appropriateness of the closure and aftercare activities. It acknowledges assumptions may affect the accuracy of the calculation and excludes costs deemed unjustified from the coverage of the declaration. Unit cost judgements are included in the assessment but are not part of the declaration.

## How the auditor assessment is submitted to EPA

The duty holder is responsible for submitting the auditor’s assessment and signed declaration as part of their financial assurance proposal. Assessments and declarations that are not completed in accordance with the instructions in this form will be rejected and the financial assurance proposal deemed incomplete until an acceptable assessment and declaration are submitted.

## What EPA will do with the assessment

EPA will review the auditor’s assessment and use the proposal and assessment as key inputs for determining the landfill’s financial assurance amount. EPA may ask further questions of the duty holder or the auditor about the proposal and assessment prior to making a determination.

## Further information

Contact EPA at contact@epa.vic.gov.au or on 1300 372 842 (1300 EPA VIC).

EPA publications and forms are available on our website: [epa.vic.gov.au/publications](https://www.epa.vic.gov.au/our-work/publications)

## Site details

|  |
| --- |
| General information |
| Duty holder |       |
| Site address |       |
| EPA reference number for licence, site management order, environmental action notice or post-closure pollution abatement notice[[1]](#footnote-1)  |       |
| Landfill cells included and their operational status |       |

## Supporting documents for financial assurance cost calculation

Table 1 documents the assessment of the supporting documents for the cost calculation. The auditor assessment should note:

* the reference number of documents provided to the auditor
* a summary of any known deficiencies or scope limitations of the document
* a brief summary of the parameters taken from the document that are used in the calculation
* any valid reason for documents not provided
* the alternative source of information used if a document could not be provided or was not adequate.

A determination of ‘Yes’ or ‘No’ should be made as to whether the documents have been provided and contain adequate information to support the cost calculation.

**Table 1: Assessment of adequacy of documents**

| EPA requirement (see publication 2003) | Document reference | Auditor assessment | Adequate (Y/N) |
| --- | --- | --- | --- |
| 1 | A map showing all the cells at the site identifying the current cell(s), cells with intermediate capping, partially rehabilitated cells and/or fully rehabilitated cells including the dates of rehabilitation and approved cell volumes for each cell. |       |       |  |
| 2 | Audit reports containing as-constructed details of landfill cells (i.e. cell designs), identifying cells constructed to the requirements specified in *Siting, design, operation and rehabilitation of landfills* (publication 788). |       |       |  |
| 3 | The most recent audit report that verifies the area of the landfill that has already been filled and the area that is proposed to be filled. |       |       |  |
| 4 | A list of approved variations to *Siting, design, operation and rehabilitation of landfills* (publication 788) requirements for future capping. |       |       |  |
| 5 | Where a Type 3 cap is proposed, evidence supporting this type of cap is appropriate (e.g. evidence of classification of the waste as industrial waste). |       |       |  |
| 6 | Audit reports containing auditor verification of capping and rehabilitation of cells closed after 2011. |       |       |  |
| 7 | The most recent rehabilitation plan. |       |       |  |
| 8 | Any evidence supporting a variation to the default 30-year aftercare period (used for calculation purposes). |       |       |  |
| 9 | Any other information required to adequately substantiate the cost estimate. |       |       |  |

## Amount of financial assurance

Table 2 documents the assessment of the operational component of the financial assurance and calculation of the expected costs of closure and aftercare activities.

Refer to [*Calculation of financial assurance for landfills, reportable priority waste and waste resource recovery facilities*](https://www.epa.vic.gov.au/about-epa/publications/2003)(publication 2003) (https://www.epa.vic.gov.au/about-epa/publications/2003)

### Justified quantity/method

The auditor should state their view on whether the method or quantity used for the calculation of each activity is justified based on the characteristics of the site and requirements of relevant EPA guidelines (‘Yes’, ‘No’ or ‘Uncertain’).

### Justified unit costs

The auditor should state their view on whether the unit costs are justified (‘Yes’, ‘No’ or ‘Uncertain’).
The auditor should form their view on unit costs for each activity from:

1. evidence from the duty holder that unit costs are realistic (for example that similar costs/rates have been achieved on previous rehabilitation works on that site or similar sites)

2. their own understanding of industry rates (relying on various sources of information for example landfill rehabilitation tender documentation, Rawlinsons cost guide).

‘Uncertain’ should be used sparingly, where key information is unavailable and the potential impact on the total calculation is not material. EPA will not accept assessments where the cumulative value of activities that have been marked ‘Uncertain’ is a material part of the overall cost.

### Auditor assessment

For each activity, the auditor should describe the basis of their view about the reasonableness of the cost estimate, key information sources, and the auditor’s opinion of what an appropriate cost or approach would be (where relevant).

If there are assumptions or uncertainties (for example where the standard of rehabilitation has had to be assumed), these should be described in the assessment and comments made about their significance. EPA has more information about auditor assessment of financial assurance proposals
at [epa.vic.gov.au](https://www.epa.vic.gov.au/for-business/find-a-topic/licences/financial-assurances).

### Additional closure and aftercare calculation notes

[*Calculation of financial assurance for landfills, reportable priority waste and waste resource recovery facilities*](https://www.epa.vic.gov.au/about-epa/publications/2003) (publication 2003) (https://www.epa.vic.gov.au/about-epa/publications/2003), advises that the calculation of the closure and aftercare financial assurance should address the costs of complying with *[Siting, design, operation and rehabilitation of landfills](https://www.epa.vic.gov.au/about-epa/publications/788-3)* (publication 788) (https://www.epa.vic.gov.au/about-epa/publications/788-3), [*Closed landfill guideline*](https://www.epa.vic.gov.au/about-epa/publications/1490-1) (publication 1490) (<https://www.epa.vic.gov.au/about-epa/publications/1490-1>) and [*Landfill licensing*](https://www.epa.vic.gov.au/about-epa/publications/1323-3) (publication 1323) (https://www.epa.vic.gov.au/about-epa/publications/1323-3).

Any area that has been signed off by an auditor as fully capped and rehabilitated (or approved in writing by EPA as fully capped prior to 2011) does not need to be included in the closure calculation

**Table 2: Assessment of the amount of financial assurance**

| EPA requirement (see publication 2003) | Auditor assessment | Justified quantity/ method (Y/N/U) | Justified unit costs (Y/N/U) |
| --- | --- | --- | --- |
| Operational component |
| 10 | Operational component for each required cell, calculated using the formula: $0.45/m3 x total cell volume (filled plus approved) + $135,000. |       |  | N/A |
| Closure component |
| 11 | Capping of the uncapped area and any area with temporary or intermediate capping (including material costs as well as installation of the materials)[[2]](#footnote-2). |       |  |  |
| 12 | Any additional works on existing caps as specified in the rehabilitation plan (including material costs as well as installation of the materials). |       |  |  |
| 13 | Haulage and purchase of capping material if the latter is not available onsite. |       |  |  |
| 14 | Vegetation establishment and management. |       |  |  |
| 15 | Implementation of stormwater management control structures. |       |  |  |
| 16 | Final gas and leachate management infrastructure installation. |       |  |  |
| 17 | Decommissioning and removal of redundant operational infrastructure. |       |  |  |
| 18 | Hydrogeological assessment and/or review and update of the hydrogeological assessment[[3]](#footnote-3). |       |  |  |
| 19 | Landfill gas risk assessment and/or review and update of the landfill gas risk assessment. |       |  |  |
| 20 | Environmental monitoring program[[4]](#footnote-4). |       |  |  |
| 21 | Rehabilitation plan for the remaining rehabilitation work required. |       |  |  |
| 22 | Development of an aftercare management plan[[5]](#footnote-5). |       |  |  |
| 23 | Auditor assessment of cap and leachate dam. |       |  |  |
| 24 | Audit of construction of the cap including final rehabilitation. |       |  |  |
| 25 | Auditing of the leachate dam design and construction (if required). |       |  |  |
| 26 | Management supervision, preliminaries and on-costs. |       |  |  |
| 27 | All relevant areas of landfill included in closure calculation. |       |  | N/A |
|  Aftercare component |
| 28 | Operation and maintenance of all structures including capping (and vegetation), wells and bores, and associated pipework. |       |  |  |
| 29 | Capping and vegetation maintenance/augmentation for phytocaps. |       |  |  |
| 30 | Leachate extraction/collection, treatment and disposal. |       |  |  |
| 31 | Landfill gas extraction and treatment. |       |  |  |
| 32 | Environmental monitoring. |       |  |  |
| 33 | Infrastructure and leachate pond decommissioning (at the conclusion of the aftercare period). |       |  |  |
| 34 | Inspection, audit and annual reporting costs. |       |  |  |
| 35 | Stormwater management and surface water monitoring. |       |  |  |

## Overall comments

|  |
| --- |
| List the key elements of the closure and aftercare works where information is not known with certainty, and assumptions have been made, potentially impacting the quality of the calculation estimate: |
|       |

|  |
| --- |
| In light of the above assumptions and any unjustified costs, do you consider the application of a further contingency to be appropriate? If so, what would you consider to be an appropriate contingency amount? |
|       |

|  |
| --- |
| List the primary sources of information used for unit cost rate comparison: |
|       |

|  |
| --- |
| Other comments: |
|       |

|  |
| --- |
| Overall judgement of cost estimate accuracy and reliability: |
|       |

## Declaration

I, [insert full name]
of [insert address],
an environmental auditor (appointed pursuant to the *Environment Protection Act 2017*),

1. having been requested by [insert name of duty holder] to assess the financial assurance calculation for the site located at [insert site address], with regards to EPA licence/site management order/environmental action notice/post closure pollution abatement notice [select one] number [insert EPA reference number] (‘the site’),

and

2. having assessed the duty holder’s attached financial assurance calculation and with reference to the assessment comments provided in this document,

hereby declare that [[6]](#footnote-6) [select one] am of the opinion that the calculation describes the necessary closure and aftercare activities:

i. in accordance with *Calculation of financial assurance for landfills, reportable priority waste and waste resource recovery facilities* (publication 2003),

and

ii. including the costs of complying with the most recent version of *Siting, design, operation and rehabilitation of landfills* (publication 788), *Closed landfill guideline* (publication 1490) and *Landfill licensing* (publication 1323).

and

iii. considering the known environmental characteristics of the landfill site

and

iv. noting that the accuracy of the calculation may be impacted by the assumptions and uncertainties described in the assessment

and

v. with the exception of the unjustified costs described in the assessment.

|  |  |
| --- | --- |
| Full name |        |
| Signature |       | **Date** |  / /  |
|  | Environmental auditor (appointed pursuant to the *Environment Protection Act 2017*) |

EPA acknowledges Aboriginal people as the first peoples and Traditional custodians of the land and water on which we live, work and depend.
We pay respect to Aboriginal Elders, past and present.

As Victoria's environmental regulator, we pay respect to how Country has been protected and cared for by Aboriginal people over many tens of thousands of years.

We acknowledge the unique spiritual and cultural significance of land, water and all that is in the environment to Traditional Owners, and recognise their continuing connection to, and aspirations for Country.



1. Post closure pollution abatement notice issued under the *Environment Protection Act* 1970. [↑](#footnote-ref-1)
2. In areas where clay is not available for capping, the calculation should incorporate the cost of purchasing and hauling clay unless an alternative capping design is approved by EPA. Where the final capping design has not yet been approved by EPA, the capping design used as a basis for calculating financial assurance should be in accordance with *Siting, design, operation and rehabilitation of landfills* (publication 788). [↑](#footnote-ref-2)
3. The cost of a hydrogeological assessment is not required where all cells onsite are fully engineered to the standard in the most recent version of *Siting, design, operation and rehabilitation of landfills* (publication 788). [↑](#footnote-ref-3)
4. The cost of establishing an environmental monitoring program is not required in the closure and aftercare financial assurance estimate if this program is already in place in accordance with *Landfill licensing* (publication 1323). [↑](#footnote-ref-4)
5. The cost of preparing a rehabilitation plan and an aftercare management plan is not required in the closure and aftercare financial assurance estimate if the documents are already in place in accordance with *Siting, design, operation and rehabilitation of landfills* (publication 788). [↑](#footnote-ref-5)
6. Auditors preparing the assessment with expert support may include here ‘with the support of my expert support team’. [↑](#footnote-ref-6)