

Executive summary

This audit was undertaken when the Department of Industry, Skills and Regional Development was responsible for ensuring land disturbed by mining activities is rehabilitated in accordance with the relevant development approval, including the administration of mining rehabilitation security deposits. On 1 April 2017, this responsibility was transferred to the Department of Planning and Environment (the Department).

This audit assessed whether the Department maintains adequate security deposits to cover the liabilities associated with mine closures, including rehabilitation. Companies authorised by the Department to undertake mining activities must provide a security deposit to cover the full costs of rehabilitation in the event of default by the company. Rehabilitation is the treatment of disturbed land or water to establish a safe, stable, non-polluting and sustainable environment.

Mining companies must provide an estimate of rehabilitation costs for each site. The Department provides a Rehabilitation Cost Calculation tool to assist companies calculate the deposit amount. Companies are also required to ensure that the cost estimate is in accordance with the approved Mining Operations Plan (MOP). The MOP is intended to be a mine rehabilitation and closure plan, and forms the basis for the estimation of the security deposit. The Department reviews the estimates and determines the deposit for each site.

Security deposits are an option of last resort. The Department has other legislative and regulatory tools which it normally uses to promote compliance with rehabilitation requirements before accessing a security deposit. It can direct action by the mining company, issue fines and even have the Minister revoke a mining lease. To date, the Department has never had to access a security deposit for a state significant development mine site.

Conclusion

The Department holds security deposits for mining rehabilitation consistent with the amounts it has requested from mining companies, and it should be able to claim on a deposit if a mining company defaults on its rehabilitation obligations. The total value of deposits has increased from \$500 million in 2005 to around \$2.2 billion in 2016, covering around 450 mine sites. The Department's management of the security deposit process has improved in recent years, and it has well advanced plans for further improvement, including a revised cost calculation tool.

The Department's policy is that each mine's security deposit should cover the full costs of rehabilitation for that mine. The security deposits the Department holds are not likely to be sufficient to cover the full costs of each mine's rehabilitation in the event of a default. The rates and allowances in the current cost calculation tool have not been updated since 2013 and some activities required for effective rehabilitation are not covered, or not covered adequately.

Security deposits also do not include sufficient contingency given the substantial risks and uncertainties associated with mine rehabilitation and closure, particularly in the absence of a detailed closure plan. This risk is exacerbated by the limited independent verification of mining company claims about the size of the outstanding rehabilitation task, which remains the case despite recent improvements to monitoring and review procedures and practices.

There is also no financial assurance held over the risk of significant unexpected environmental degradation in the long-term after a mine is deemed to be rehabilitated and the security deposit is returned. A security deposit is not an appropriate vehicle for covering this risk.

Security deposits are close to calculated value and should be accessible if needed

The value of securities held by the Department aligns with the latest approved rehabilitation cost estimates. This contrasts with the situation found by investigations in Victoria and Queensland, where deposit amounts held fell below the calculated costs.

The security deposits are usually in the form of a bank guarantee or cash. The Department has obtained legal advice indicating that it should be able to claim on these bank guarantees if the need arises. As the guarantee is between the financial institution and the Department, if a mining company goes into liquidation the Department should still be able to access the funds.

When the latest estimate of rehabilitation costs is higher than the existing deposit, the Department will request additional security. It has experienced extensive delays in obtaining additional security for some sites, increasing the risk that available funds will be insufficient if needed.

Rehabilitation cost estimates are not yet adequate, but improvements are planned

The Department's policy is for security deposits to cover the full cost of rehabilitation. No discounts are provided to mining companies for past good behaviour or low likelihood of default, unlike in some other states. Discounting could undermine the policy position.

Current security deposits are unlikely to cover the full cost of rehabilitation on each mine site. The Department provides a rehabilitation cost calculation tool to help mining companies calculate the cost of rehabilitation and the required deposit amount, but:

- several activities required to effect closure are not included and others underestimated
- it does not make provision for industry cost changes over time
- the rates used in the tool have not been updated since 2013
- it was not able to provide the basis for the rates and allowances in the tool.

The Department reviews cost estimates provided by mining companies, but its verification of the extent of rehabilitation work on which these estimates are based is limited. It relies instead on section 387C of the *Mining Act 1992* which makes it an offence for mining companies to provide false or misleading information. It is not evident how the Department would establish that information provided was false or misleading without more verification work, and six of the 14 cost estimates we reviewed were not signed by the mine manager, making enforcement more difficult.

The Department has developed a new calculation tool, and recently released it for industry consultation. The new tool should improve rehabilitation estimates. It updates rates and allowances, and includes additional items to better cover required rehabilitation tasks. While a substantial improvement, the new tool could be further improved by providing additional coverage for stakeholder engagement, additional planning approvals, insurance costs, and any additional design, research and verification work required for successful closure.

There is no financial assurance over long-term environmental risks

The Department does not hold any financial assurance to cover the costs associated with mitigating any future environmental degradation once a mine closes and the security deposit is relinquished to the mining company. Security deposits are probably not the appropriate mechanism to cover these long-term risks but the risk of potential post-closure environmental degradation still needs to be costed and covered. A fund to cover the state-wide risk, to which all mines would contribute, is a possible mechanism.

Rehabilitation and closure outcomes are vague, particularly for unplanned closure

Rehabilitation outcomes in the MOPs we reviewed were generally not specific. Any lack of specificity in MOPs translates into uncertainty about rehabilitation work required if a mining company defaults. Part of the problem is that rehabilitation outcomes established in planning approvals are usually not specific and may not address all closure requirements. The Department has recognised there is scope to improve the clarity and specificity of rehabilitation requirements in planning approvals, and has started a review focusing on open-cut mines.

Rehabilitation outcomes are even less specific in the event of an unexpected early closure because they will probably be different from that achievable from a planned closure.

MOP guidelines do not cover management of some key closure matters, such as the requirements of environment protection licences issued by the Environment Protection Authority and the management of heritage sites during closure.

There were significant variations in quality of MOPs we reviewed and the way closure risks and uncertainties were identified and addressed. The Department plans to improve the quality of rehabilitation programs through enhanced guidance and oversight.

Monitoring is not adequate to effectively gauge rehabilitation progress

The Department was not able to show it has been monitoring operational mine sites effectively to gauge the progress of ongoing site rehabilitation and the management of closure risks. There was no protocol for site inspections and limited evidence of inspections for the sites we reviewed.

The Department receives annual environmental management reports from mining companies, with most describing the areas of disturbance and rehabilitation occurring at each mine site. The Department recently established procedures for reviewing these annual reports, and has developed a risk-based process for prioritising reviews.

Most annual reports we reviewed did not explain environmental changes over time, nor the risks to mine closure and the measures required to mitigate them. For example, analysis of changes to surface water and groundwater quality was limited despite its relevance for assessing future contamination risks.

The Department does not currently have adequate processes in place to effectively verify the reported areas of disturbance and rehabilitation. It is developing geographic information system-based tools to better measure areas of disturbance and rehabilitation, new rehabilitation guidelines, and a procedure for determining whether rehabilitation has been successful. These initiatives should improve the monitoring and reporting of rehabilitation progress at mine sites.

There is no mechanism to prevent a mine being in 'care and maintenance' indefinitely

The Department does not have a clear policy on the length of time and circumstances under which a mine can remain in 'care and maintenance'. Indefinite postponement of rehabilitation and closure is therefore possible. 'Care and maintenance' is the period following temporary cessation of operations when infrastructure remains largely intact and the site continues to be managed. There are a range of valid reasons for a mining company to put a mine in 'care and maintenance', but it is also reasonable for the community to expect a limit to how long it has to wait for proper rehabilitation.

Recommendations

We recommend that the Department should, by January 2018:

1. Improve the quality of rehabilitation and closure plans by:
 - ensuring plans submitted by mining companies include robust mine rehabilitation and closure risk assessments
 - clarifying the level of detail required in plans at each stage of a mine's operation
 - specifying how requirements set under other legislative instruments (e.g. environment protection licences, heritage assets) should be addressed.
2. Improve assurance that security deposits are sufficient by:
 - ensuring its new cost calculation tool adequately covers all works needed for rehabilitation and closure
 - increasing the contingency for uncertainties associated with mine rehabilitation and closure, at least until the mining company provides a detailed closure plan
 - verifying the cost estimates for a sample of high risk sites annually
 - ensuring that when mining companies are required to provide increased security deposits, they do so with minimal delay.

3. Enhance oversight of mine rehabilitation by:
 - developing a protocol to ensure sufficient and adequate site inspections
 - ensuring mining companies report performance against rehabilitation targets and environmental changes clearly, including an analysis of long-term surface water and groundwater trends in terms of levels, flow and quality
 - improving how it determines the progress and success of mine rehabilitation
 - developing clear policy and procedures for ensuring a mine cannot be put into 'care and maintenance' indefinitely.
4. Collaborate with relevant agencies to establish a financial assurance mechanism, such as a sinking fund, to cover the risk of long-term environmental degradation after mines are closed and security deposits returned.