

**RECOMMENDATIONS ON THE ENVIRONMENTAL
ASSESSMENT AND REGULATION OF MINE SITES**

March 2014

Recommendations on the Environmental Assessment and Regulation of Mine Sites

1	Introduction.....	1
2	Legacy mine sites.....	1
3	Lessons that can be learnt from the Redbank Mine.....	2
	3.1 Environmental impact assessment	2
	3.1.1 Inadequate information.....	2
	3.1.2 Project viability	3
	3.2 Environmental regulation.....	3
	3.2.1 Mining approvals	3
	3.2.2 Enforcement activities	4
	3.3 Due diligence and disclosure.....	5
4	Recent improvements	6
	4.1 Environmental impact assessment	6
	4.2 Mining Management Act.....	6
	4.3 Other regulatory tools.....	7
5	Recommendations for further improvement.....	7
	5.1 Amendments to the Environmental Assessment Act	7
	5.2 Further guidance and support for proponents.....	8
	5.3 Use of regulatory tools	8
	5.3.1 Public reporting	8
	5.3.2 Enforcement action	8
	5.4 Administrative processes.....	8
	5.5 Further investigation.....	8
6	Consultation.....	9
	References.....	10

1 Introduction

Section 25 of the *Northern Territory Environment Protection Authority Act* (the NTEPA Act) provides the Northern Territory Environment Protection Authority (NT EPA) may, on its own initiative or at the request of the Minister, advise the Minister about the following matters:

- (a) achieving appropriate and effective environmental policy and management for the Territory;
- (b) legislation related to the environment and its administration;
- (c) issues affecting the Territory's capacity to achieve ecologically sustainable development;
- (d) emerging environmental issues;
- (e) the cumulative impacts of development on the environment;
- (f) any other matter related to the objectives of the NT EPA.

The NT EPA is concerned about ongoing environmental damage caused by legacy mining issues in the Northern Territory, and has prepared an environmental quality report about the Redbank Copper Mine ("Redbank") under section 28 of the NTEPA Act. This case study to aid understanding of the environmental impacts legacy sites can cause and how legacy mining issues arise.

The NT EPA has developed this advice under section 25(b) of the NTEPA Act to make recommendations on improvements to legislation and processes and further investigations that could reduce the risk of future instances of inadequate management of mining operations and mine closure and contribute to the appropriate management of legacy mine sites.

2 Legacy mine sites

For the purpose of this advice, the NT EPA has adopted the following definition of "legacy mine" advised by the Department of Mines and Energy (DME): "a mine for which the party or parties responsible for the environmental impacts cannot be found, or are unwilling or financially unable to carry out the required remediation measures within an acceptable time frame".

Legacy mine sites can arise from:

- owner economic failure;
- an inadequate regulatory regime;
- resource depletion without provision for rehabilitation;
- seizure of lands through non-payment of taxes, royalties or rent;
- transient small-scale mines; or
- political unrest leading to abandonment.

In the Northern Territory, most legacy sites have arisen because of failures in the regulatory system, including:

Recommendations on the Environmental Assessment and Regulation of Mine Sites

- failures to appropriately identify, assess and manage environmental risks when mining activities commence, including situations when, at the time mining commenced, there was no general requirement to fully assess such risks;
- failures by operators to meet the requirements of regulatory approvals, compounded by failures by regulators to take action; and
- financial constraints of operators, including a regulatory system that has supported the commencement of mining to generate an income in order to complete environmental impact assessment studies or to enable remediation activities to be undertaken.

Of 51 mine proposals developed in the Northern Territory since commencement of the *Environmental Assessment Act* (EA Act) in 1984, 21 can now be considered as legacy mines (41%).

There is no easy solution to address the impacts of legacy mining sites. Community expectations, and knowledge and understanding of the impacts of mining activities have all improved over time resulting in changes in the way regulators approach regulation of mining activities.

Redbank was chosen as a case study because it is generally considered by the NT EPA to be 'typical' of legacy mine sites in the Northern Territory and because of heightened community interest in the site. By stating that Redbank is 'typical', the NT EPA does not intend to infer that the situation at the Redbank Mine is completely analogous to all other legacy mine sites. Nor, by using the Redbank Mine as a case study, does it seek to imply that the matters raised through a consideration of the Redbank Mine are the only grounds on which it makes the following recommendations and comments.

3 Lessons that can be learnt from the Redbank Mine

3.1 Environmental impact assessment

3.1.1 Inadequate information

Operators of the Redbank Mine were required to complete environmental impact assessments in 1993, prior to the commencement of large scale mining activities at the site, and 2010, prior to a proposed expansion of mining operations.

During both assessment processes, the respective proponents were able to conduct environmental impact assessment processes that failed to provide sufficient information to enable an adequate assessment of respective project risks. In both cases significant outstanding matters from the assessment were carried over to the mining approvals stage, to be addressed in management plans approved by the Department of Mines and Energy (DME).

For the 1993 assessment, key environmental risks associated with tailings dam construction, waste rock management and water control infrastructure were identified but not adequately responded to in the assessment. The failure to effectively address these risks during the project assessment phase contributed to the offsite contamination that has occurred from the site.

The 2010 assessment concluded that the information provided in the Environmental Impact Statement (EIS) was not sufficient to enable a comprehensive assessment of the proposal. Uncertainties remained with the management of legacy contamination, ground and surface water, the tailings facility and waste rock; the same broad issues that had not been addressed during, or as a result of, the 1993 assessment. The 2010 assessment was completed on the expectation that these uncertainties would be

Recommendations on the Environmental Assessment and Regulation of Mine Sites

addressed through the mining approval process, with some recommendations to be met while the mine was operating and generating an income. The project has not progressed to mining approvals and this information is largely outstanding.

The provision of inadequate information during an assessment process is not unique to the Redbank example. For Northern Territory projects that are assessed under the bilateral agreement between the NT and Commonwealth Governments, the Commonwealth Government reports that NT assessment reports do not generally contain sufficient information for the Commonwealth Environment Minister to make an informed approval decision under the *Environment Protection and Biodiversity Conservation Act 1999*. Of the projects that have proceeded to approval under the bilateral agreement, the Commonwealth has had to seek further information from the proponent after the NT assessment has been completed on 75% of occasions (Department of Sustainability, Environment, Water, Population and Communities, Northern Territory Environment Protection Authority 2013).

Inadequate information during an assessment process makes it difficult to rigorously assess risks and make appropriate, targeted recommendations to address them. It does not allow for public scrutiny of information during the assessment process, and places significant pressure on the responsible Minister and his or her agency to appropriately deal with unresolved issues through mining approvals.

Environmental Management Plans (EMPs), or Mining Management Plans (MMPs), should not be used to gather information that was actually needed to inform an approval decision (Hawke 2009).

3.1.2 Project viability

Assessment of the Redbank project in 2010 anticipated the generation of income to address further studies and site remediation works within the short term and made conclusions on acceptability of the project on this assumption. Assessment of the project did not consider the environmental risks associated with the project not proceeding as scheduled, or not proceeding at all, which is the case to date. As a consequence commitments and recommendations addressing existing environmental concerns at the site have not been progressed.

Environmental impact assessment is intended to integrate economic, social and environmental (or biophysical) considerations to inform decision making. A greater focus on project viability and company financial and other capacity to meet obligations prior to environmental approvals would identify and allow for enhanced management of risks associated with financial capacity. Assessment of the environmental risks associated with projects not proceeding or experiencing significant delays to commencement would provide for the identification and assessment of contingency measures for management of those risks.

3.2 Environmental regulation

3.2.1 Mining approvals

The recent history of the Redbank Mine reveals the continuing failure of mining companies to meet the requirements of mining approvals.

The operator failed to provide an acceptable Environmental Management Plan (EMP) to DME within the required timeframe and it wasn't until five months before operations at the Redbank Mine ceased in 1996, two years after the commencement of mining, that an EMP was able to be approved by DME, albeit conditionally. Environmental monitoring did not commence until after operations commenced.

Recommendations on the Environmental Assessment and Regulation of Mine Sites

Since mining commenced there have been repeated failures to meet environmental monitoring and reporting requirements and to respond to formal directions given by a Mining Officer.

Public reporting on compliance with approvals for the Redbank Mine has been limited. Public reporting is essential for transparency to the market and interested parties and can increase the accountability of industry and regulators.

Companies with insufficient resources to appropriately manage the Redbank Mine site and inadequately defined mineral resources to procure investment have been able to gain approvals to operate the site. A lack of financial capacity has often been cited as contributing to non-compliance.

Past and current emphasis has been on exploration to sure up a resource to enable investment and mining to provide funds to deal with legacy issues. While this objective has been pursued, with regulators providing relief from immediate remediation objectives, the legacy issues have remained and the site has not been appropriately managed, or has been managed in a way that has exacerbated existing issues (e.g. poorly documented mitigation measures such as the use of the tailings dam for evaporation has caused additional environmental impact).

3.2.2 Enforcement activities

The regulatory framework has failed to effectively manage environmental impacts at the Redbank site¹.

Mining was allowed to commence prior to an approved EMP. This may have been a more acceptable practice under the regulatory regime at the time, but it is a key contributing factor to the current issues at Redbank and demonstrates the risks involved in relying on a weak approvals system to resolve issues outstanding from an inadequate environmental assessment.

Mining regulation has changed since mining commenced at Redbank with the introduction of the *Mining Management Act (MMA)* in 2002. Under the MMA an application for authorisation to mine must be accompanied by an MMP for approval.

Since mining commenced there has been sporadic oversight from regulators and a failure to hold operators to account for violations of approval conditions regardless of the legislation that has applied.

Recommendations from assessment reports and commitments in MMPs have not been acted upon. MMPs for care and maintenance and waste discharge licences under the *Water Act* have done little to fix problems at the site and surrounding environment.

No enforcement action has been taken by regulators against operators of the Redbank Mine for environmental harm or breaches of approvals, other than a fine imposed on Redbank Copper Limited by DME for late submission of a security application in 2013.

The inability of operators to develop a financially viable operating model has left the Government with the choice between bearing the full cost of managing the Redbank Mine site or working with an existing operator to progress limited options. Choosing the latter option, it appears that regulators have recognised the difficulties faced by

¹ For a full discussion on these failures refer to section 8.2 of the Redbank Environmental Quality Report.

Recommendations on the Environmental Assessment and Regulation of Mine Sites

operators who have little financial capacity to fix environmental problems and have therefore “cut some slack” for the operator on the basis of commitments made, or actively assisted operators either financially or in-kind.

Government agencies may have been challenged by the tension that can exist between supporting development and ensuring appropriate environmental management, and agencies have operated with little strategic guidance on how best to achieve an appropriate economic and environmental balance.

For legislation to achieve its objectives it must be effectively implemented and enforced (Gunningham 2011). The NT EPA acknowledges the argument that imposing financial penalties on companies with limited financial capacity may ultimately be counter-productive to scarce resources being spent on environmental improvements. It is apparent, however, that the strategies employed by regulators of the Redbank Mine have failed to ensure compliance. Regulators do not appear to have been given clear guidance on when enforcement decisions ought to be considered.

Enforcement capacity under the *Water Act* for breach of licence conditions is limited to the prosecution of an offence. There is no capacity to issue infringements. This deters enforcement action for minor breaches of licence conditions and limits the capacity of the regulator to pursue compliance.

3.3 Due diligence and disclosure

There have been a number of companies responsible for the Redbank Mine site since environmental issues were first identified. Management of the site has suffered from a lack of continuity and long term planning.

The review of environmental and regulatory issues ought to be a key step in project due diligence (Tinsley 2007). In the case of Redbank, there appears to have been a lack of due diligence by operators in gaining the information required to make an informed decision to take ownership of the site.

As identified above, there has been limited public disclosure from companies on environmental issues and compliance.

Due diligence and disclosure in the transfer of mineral leases for legacy sites, or the purchase of a company authorised to mine a site by another company, is primarily the responsibility of the companies involved. Yet for sites such as Redbank, it is the NT Government and the community that potentially bear the cost of making good the environmental damage that has occurred. There is a legitimate role for the NT Government to play in ensuring that the transfer of titles occurs with full knowledge of site conditions and associated environmental risks. Security bond requirements and their transfer with title will assist, but only when an adequate security bond is in place which is not the case for Redbank. It is far more preferable to ensure environmental risks are appropriately understood and managed and rehabilitation is completed by mine operators than for Government to rely on a security to undertake necessary works.

Applications for a mineral title under the *Mineral Titles Act*, or a transfer of title, must be in an approved form. Application forms developed by DME require information on the technical and financial resources available to the applicant to carry out a proposed technical work program or develop and mine a mineral deposit. The DME website provides guidance on the type of evidence required to support an application.

The application process provides certain information to government decision-makers, but does not specifically require an assessment of an applicant’s financial capacity to manage environmental risks, such as those associated with a legacy site, or a demonstration that site environmental risks are well understood.

Recommendations on the Environmental Assessment and Regulation of Mine Sites

To avoid doubt as to a potential operators understanding of site risks, the transfer of legacy mines should only occur when DME is satisfied that there has been adequate disclosure of risks by the transferor, and if not, by DME, and due diligence by the transferee.

4 Recent improvements

4.1 Environmental impact assessment

Recent improvements in the environmental impact assessment process in the NT may assist in avoiding these issues. Improvements include:

- The establishment of the NT EPA as the responsible authority for environmental assessment. The Productivity Commission recently stated its support for the independent environmental assessment of major projects (Productivity Commission 2013). The independence of the NT EPA should provide it with greater capacity to ensure that project risks are adequately assessed and not left unresolved at the end of an assessment.
- Amendments to the *Environmental Assessment Act* (EA Act) that came into effect on 1 January 2013 increase transparency and accountability in how the environmental assessment process informs mining and other approvals. In particular, if the Minister for Mines and Energy makes a decision on a mining proposal that is contrary to the NT EPA's assessment, the Minister must notify the NT EPA and table a notice of his or her decision in the Legislative Assembly.

A further measure that the NT EPA is taking to support the assessment of projects is the provision of a greater level of guidance to project proponents and the community on expectations for the assessment of development proposals. Related to mining proposals, the NT EPA has commenced the development of a suite of assessment guidelines, including Environmental Assessment Guidelines for Mine Rehabilitation and Closure. The guidelines will provide proponents with a greater understanding of the information required by the NT EPA during project assessment and are expected to assist in ensuring an adequate assessment is completed before mining approvals.

4.2 Mining Management Act

Recent amendments to the MMA may assist in addressing some of the issues identified above. Improvements include:

- The MMA now enables the Minister for Mines and Energy to require an operator to make an environmental mining report available to the public. The intention is that the reporting requirement will be applied to mining operations with high environmental risk. Legacy sites such as the Redbank Mine, with significant environmental concerns and stakeholder interest, should be required to publically report.
- The introduction in 2013 of an annual 1% levy on mining securities to generate revenue to address legacy issues. The revenue granted will support the establishment of a Mining Remediation Fund to be used to reduce the level of impact mining sites have on the environment.

DME's existing 100% rehabilitation security policy and the establishment of a Mining Remediation Fund are important measures in addressing the risks associated with inadequate mine closure and legacy sites. The security policy provides an incentive to operators to appropriately manage a site and ensure closure to an acceptable level, but it is not effective for legacy sites such as Redbank where the existing security is inadequate and there is no guarantee of a future mining approval on which to base a

Recommendations on the Environmental Assessment and Regulation of Mine Sites

new security calculation. It is in the best interests of government, industry and the community to prevent the occurrence of situations such as that at the Redbank Mine.

4.3 Other regulatory tools

Since 2012 the NT EPA and its predecessor (the Department of Natural Resources, Environment, The Arts and Sport) has required companies holding a waste discharge licence to submit an annual audit and compliance report. The report is a company's self-assessment of compliance with its licence. The report is audited by NT EPA officers for accuracy. Licence compliance reports are intended to be made publically available on the NT EPA website, however this practice has not been consistently implemented.

The NT EPA endorsed its Compliance and Enforcement Policy in 2013. The policy aims to ensure a transparent and targeted approach to compliance and enforcement and provides an overarching policy statement and principles to inform decision-making. No publicly available policy exists for regulation of mine sites under the MMA.

5 Recommendations for further improvement

The NT EPA makes the following recommendations on improvements to legislation and processes and further investigations that could reduce the risk of future instances of inadequate management of mining operations and mine closure and contribute to the appropriate management of legacy mine sites.

5.1 Amendments to the Environmental Assessment Act

Recommendation 1

That the *Environmental Assessment Act* be amended to address the following requirements:

- provisions that provide regulatory status to guidance material developed by the NT EPA (i.e. guidelines have a basis in legislation);
- capacity for the NT EPA to determine that an Environmental Impact Statement (EIS) is inadequate for public exhibition and direct a proponent to undertake further work prior to resubmitting the EIS for exhibition;
- a requirement that a proposal that has been assessed be resubmitted for consideration under the EA Act if works have not commenced within an established timeframe, such as five years;
- extending the review powers within the current Environmental Assessment Administrative Procedures by allowing the NT EPA to direct a proponent or responsible Minister to report on, or undertake an audit of, matters associated with the assessment of a proposal. This would allow audits to be conducted on the incorporation of assessment report recommendations into project approvals, or the implementation of recommendations by a proponent;
- establishing an independent environmental approval requirement at the end of the environmental assessment process, reducing reliance on post assessment information gathering in response to unresolved issues and ensuring that all environmental risks have been adequately addressed at the time of approval;
- establishing an obligation on proponents to abide by conditions of an environmental approval; and
- establish an offence for commencing operations prior to receipt of relevant approvals.

5.2 Further guidance and support for proponents

Recommendation 2

That the NT EPA develop guidelines for the assessment of mining and other proposals that identify requirements for considering contingency site management and/or rehabilitation measures should projects experience significant delays to commencement.

Recommendation 3

That the NT EPA modifies the guidelines on preparation of environmental impact assessments to include disclosure of the proponent's financial capacity to implement the development proposal, the significance of potential risks to project implementation and associated proposed mitigation measures.

5.3 Use of regulatory tools

5.3.1 Public reporting

Recommendation 4

That the Minister for Mines and Energy / Department of Mines and Energy use section 37 of the *Mining Management Act* to require operators of legacy mines and other mine sites in the Northern Territory to accurately and comprehensively report to the public on environmental risks and compliance with environmental approvals.

5.3.2 Enforcement action

Recommendation 5

That DME develop a compliance and enforcement policy for the regulation of mining activities in the NT and make the policy available to industry and the community.

Recommendation 6

That the NT EPA pursue, through the Controller of Water Resources, the establishment of an infringement notice scheme for relevant offences under the *Water Act*.

5.4 Administrative processes

Recommendation 7

That the NT EPA review its procedures to ensure that company annual compliance reports are made available to the public within reasonable timeframes.

Recommendation 8

That DME extend the information requirements for mineral title application and transfer processes to ensure that the granting or transfer of a mineral title occurs in the presence of adequate information regarding the risks associated with the site and financial resources commensurate with honouring all commitments.

5.5 Further investigation

Recommendation 9

That further investigations are undertaken to inform Government policy on achieving an appropriate economic, social and environmental balance in the management of legacy mines. Investigations should include, but not necessarily be limited to, examination of the implications of Government's current approach to managing legacy mines and the relative costs and benefits of alternative approaches.

6 Consultation

Under section 8 of the NTEPA Act, in exercising its powers and performing its functions the NT EPA must encourage community involvement and engagement, and ensure transparent processes and provide certainty to business.

In preparing the Redbank Environmental Quality Report, the NT EPA consulted with the Aboriginal Areas Protection Authority, DME and the existing owner and operator of Redbank, Redbank Copper Limited. Changes were made to the draft Report in response to comments received from those entities and, where appropriate, comments have informed this advice.

In responding to the draft Report, DME identified that the Redbank site would benefit from a technical report that would support decision making in relation to future remedial action. DME identified that the technical report could consider matters such as:

- Knowledge gaps about the site and further action needed to fill the gaps;
- Short and long term recommendations in respect of remediation planning;
- Baseline or other studies of the surrounding environment;
- Interjurisdictional matters impacting on decision making such as national agreements or protocols and Queensland legislation (a reference to the Queensland *Wild Rivers Act 2005*); and
- Any other technical matters leading to a better understanding of the site and potential future planning.

The NT EPA fully supports the development of a technical report of the nature envisaged by DME, however does not consider development of such a report to be the role of the NT EPA. It is the view of the NT EPA that development of such a report most appropriately sits with the mine owner, in the first instance, or the regulator in the event the mine operator is unable to develop such a report.

DME raised concerns about the use of one “historical” case study to support ‘wide sweeping’ changes to the existing regulatory regime; and considered the Redbank Environmental Quality Report demonstrated insufficient analysis of today’s regime as opposed to the regime in place when mining at Redbank first commenced.

The NT EPA recognises that legislative changes have occurred within the mining arena since mining began at Redbank and key changes are briefly discussed in this advice. The most recent of these changes, being the introduction of a mining levy and obligations on some proponents to make publically available annual environmental reports, are so new as to not have had an observable impact.

To the extent that those changes address the issues and recommendations contained in this advice, the NT EPA supports them and considers the Northern Territory Government, and DME, should be congratulated for their foresight in implementing such changes.

The NT EPA concurs with a DME comment that legacy mine management would benefit from further examination of policy issues. Recommendation 9 of this advice has been included in response to DME’s comment.

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