NSW GOVERNMENT

Improving mine rehabilitation in NSW

Discussion paper

November 2017

November 2017

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Introduction

The Department of Planning and Environment is committed to making New South Wales (NSW) a great place to live and work. We help to provide homes and services, build great communities, create jobs and protect the environment.

The Department is always exploring ways to strengthen the effectiveness of the regulation of mining in NSW to ensure that industry practices are consistent with best practice and deliver good environmental, social and economic outcomes.

Purpose

This Discussion Paper provides an overview of how mine rehabilitation is currently regulated in NSW, and seeks public feedback on proposals to improve rehabilitation outcomes for State significant mining developments[1] such as coal, mineral sands and large metalliferous mines.

In particular, the Discussion Paper seeks feedback on:

- proposals to better integrate best practice rehabilitation requirements into the assessment and operational phases of mining
- options for how final voids should be managed.

This Discussion Paper does not apply to:

- exploration activities under the *Mining Act 1992*
- mining developments that are not State significant development
- petroleum exploration or production activities under the *Petroleum (Onshore) Act 1991*.
- extractive industries

A key aim of the proposed improvements is to ensure mine rehabilitation is consistent with best practice and delivers appropriate social, economic and environmental outcomes.

This Discussion Paper is intended to inform the development of policy and regulatory improvements and as such the proposals in this paper should not be taken to be current NSW Government policy.

Key sources

Issues relevant to the effectiveness of the existing mine rehabilitation regulatory framework in NSW have been identified from the following sources:

[1] Clause 5, Schedule 1 of the State Environmental Planning Policy (State and Regional Development) 2011 specifies the types of mining developments that have been declared to be State significant development.

- NSW Auditor General's Report - Performance audit - Mining rehabilitation security deposits
- review and determination reports by the independent Planning Assessment Commission
- NSW Government agencies
- public submissions to DPE (for instance, on mining applications and reviews of planning instruments)
- the Queensland Government's Better mine rehabilitation for Queensland discussion paper
- submissions to the Commonwealth Senate inquiry on Rehabilitation of mining and resources projects as it relates to Commonwealth responsibilities.

Have your say

You are invited to respond to the questions in this Discussion Paper, or any additional matters you think should be considered to improve the current regulatory framework, **by 16 February 2018**. Details for how to make a submission are available at planning.nsw.gov.au/minerehabilitation.

All submissions on this Discussion Paper will be considered by the NSW Government in finalising the proposed improvements.

Mine rehabilitation in NSW

Mining and its contribution to NSW

NSW is home to a vibrant and prosperous minerals industry that continues to deliver rural and regional jobs and investment to the NSW economy. In 2016-17, the mining sector:

- produced resources worth approximately $24.7 billion
- generated export revenues of $22.9 billion, which is around 50 per cent of the State's merchandise export revenue
- employed more than 27,600 people directly and approximately 110,000 people indirectly
- contributed $1.6 billion in royalties, which was used to fund infrastructure and services for the benefit of all people in NSW.

Mining brings significant economic benefits and employment opportunities to people living in regional and rural areas of the State. Coal production also supports the State's electricity needs, meeting around 80 per cent of the State's supply requirements.

Commented [RC1]: Add stats for the areas of metalliferous and coal disturbance and final voids. In reality, the area of final voids is infinitesimal to the area of mining and agricultural activities.

How is mine rehabilitation regulated in NSW?

Mining can involve significant disturbance of land. The *Mining Act 1992* defines rehabilitation as the treatment or management of disturbed land or water for the purpose of establishing a safe and stable environment. Mine rehabilitation includes considering consequential environmental, social and economic impacts of mining disturbance and is a key commercial and regulatory consideration. Both the Department of Planning and Environment (DPE) and the Division of Resources and Geoscience (DRG) play key regulatory roles at different points in the mining life cycle (see Figure 1)[2].

To develop a mining project in NSW, a proponent must apply for a development consent under the *Environmental Planning and Assessment Act 1979* (EP&A Act). In the case of State significant development (most large mining proposals), the proponent must lodge a development application with DPE.

During the **assessment phase**, the consent authority (generally the independent Planning Assessment Commission) must evaluate the potential environmental, social and economic impacts associated with the development application. A description of the rehabilitation proposal and post-mining land use outcomes are included in the Environmental Impact Statement (EIS) which accompanies the development application. The acceptability of the proposal and outcomes are carefully considered by both DPE and the consent authority.

If the development application is approved, rehabilitation outcomes are incorporated into the conditions of the development consent. Generally, these conditions will include requirements for:

[2] DRG, through its approval, compliance and enforcement processes, is responsible for ensuring that land disturbed during the exploration phase is properly rehabilitated. The exploration phase is outside the scope of this Discussion Paper.

- rehabilitation to be generally consistent with the rehabilitation plans and works set out in the EIS
- rehabilitation to comply with specific objectives, which may differ depending on each feature within the mine site (e.g. rehabilitation objectives may be developed for the entire mine site, final voids, and areas of decommissioned surface infrastructure)
- the preparation of a Rehabilitation Strategy and Rehabilitation Management Plan
- rehabilitation to be carried out progressively, that is, as soon as practical following disturbance.

If a development consent is issued, the proponent is also required to obtain a mining lease under the *Mining Act 1992* before mining can commence. The mining lease is administered by DRG and must be consistent with the development consent.

During the **operational phase**, the holder of the development consent and mining lease must construct, operate and rehabilitate the mine in a manner generally consistent with the development application and mining lease, including any conditions relevant to the rehabilitation of the site.

The holder of the mining lease is also required to submit a Mining Operations Plan (MOP) to DRG for approval, which the lease holder is legally held accountable to comply with. The MOP builds on the information submitted as part of the development application[3] and includes more detailed descriptions of the rehabilitation objectives and completion criteria for the mine site. It also describes what rehabilitation works will be undertaken and when. A costing of these works forms the basis for the Rehabilitation Cost Estimate (RCE) submitted to DRG prior to the commencement of mining operations or at regular intervals throughout the life of the mine.

DRG regulates mine rehabilitation throughout the life of a project by assessing whether the lease holder is meeting the commitments in the MOP and whether rehabilitation is on track to achieve the post-mining land use. As a part of this process, lease holders are required to undertake progressive rehabilitation during the life of the mine and report annually to DRG on progress and compliance with the commitments in the MOP. In addition, DRG and the Resources Regulator have a range of powers under the *Mining Act 1992* to undertake compliance and enforcement activities to ensure compliance with the mining lease and MOP. DPE also has a compliance and enforcement function to ensure compliance with the development consent conditions, including those conditions pertaining to rehabilitation.

A key component of the overall regulatory framework for mine rehabilitation is the requirement for the holder of the mining lease to lodge a rehabilitation security deposit with DRG. The amount of the security deposit is informed by the RCE and must cover the full cost of all rehabilitation works that may be required to be undertaken by the NSW Government in the event that the lease holder does not fulfil their rehabilitation obligations. If required, DRG can use the security deposit to rehabilitate the mine.

Progressive rehabilitation is supported in the current framework through the partial release of the security deposit if successful rehabilitation is demonstrated. If the rehabilitation obligations have not been met, then part or all of the security deposit will be retained until the rehabilitation obligations are met. In the event that a mine is sold or ownership transferred, the rehabilitation obligations, including the requirement to submit the security deposit, are transferred to the new owner.

Commented [RC2]: Explain that at present, a RMP is standard a consent condition for a mine. This needs to change given the emphasis now required in a MOP is upon rehabilitation.

Please consider dispensing with the requirement to prepare both documents and require only one document be prepared.

Commented [RC3]: This is not consistent with recent introduced DRG unwritten policy whereby RCEs are being requested prior to the grant of a mining lease.

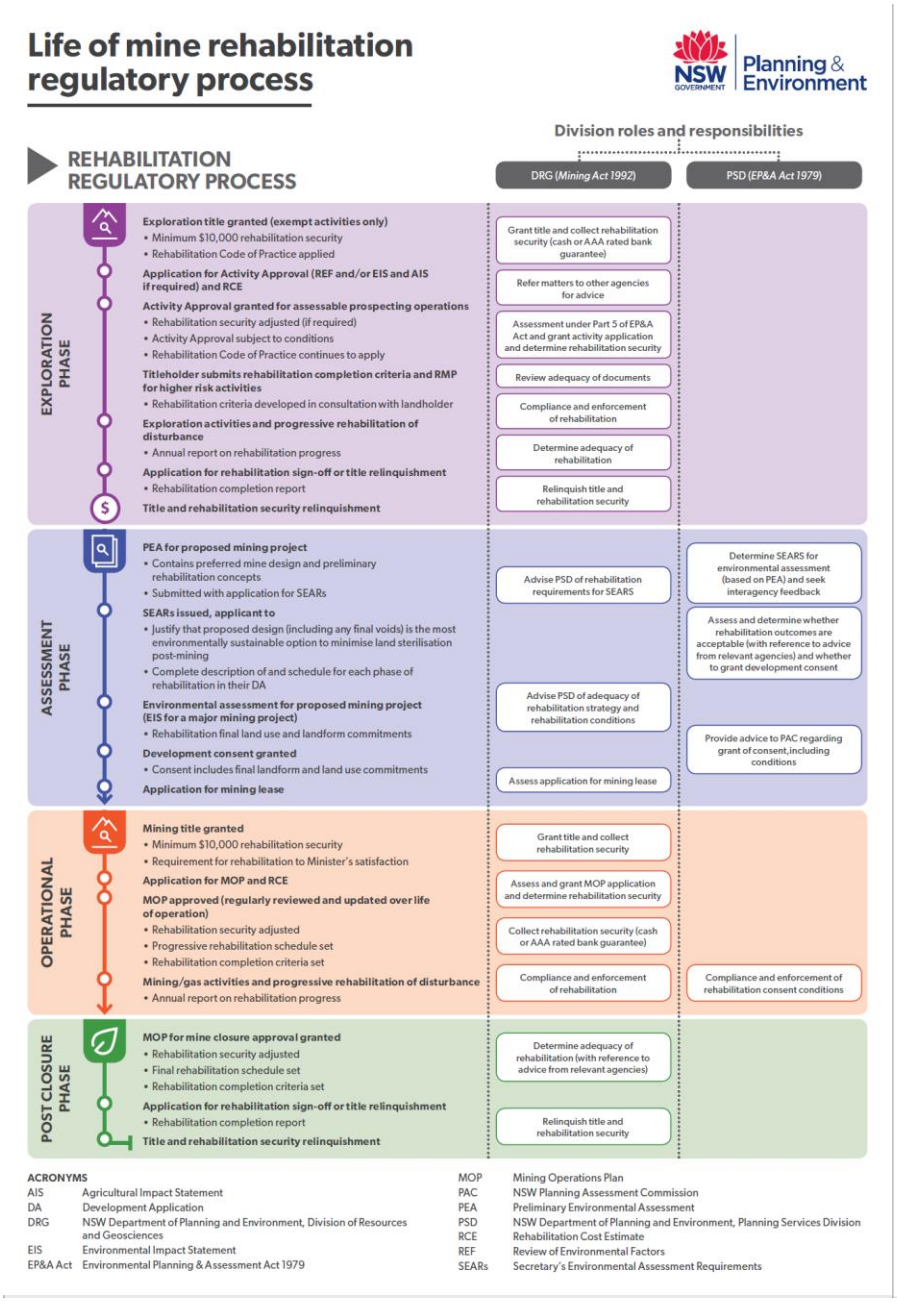
Commented [RC4]: Explain role somewhere in the document – how many masters does a miner need to answer to – please try and consolidate government agencies involved rather than spread it across numerous bureaucracies.

Commented [RC5]: More detail required to explain overlap with DRG. -ideally there shouldn't be overlap

[3] Lease holders can prepare a single plan that fulfils the requirements of both a Rehabilitation Management Plan and a MOP.

As part of the **post-closure phase**, the holder of the mining lease must demonstrate that the rehabilitation objectives and completion criteria have been met as part of any request to relinquish the lease. The full rehabilitation security deposit will only be discharged and returned when the rehabilitation objectives and completion criteria have been met.

Figure 1. Life of mine rehabilitation regulatory process



Commented [RC6]: Remove "Exploration Phase" Operational Phase – fix "Application for MOP and RCE" as DRG has changed their requirements – now requiring the RCE before a lease is granted! The new system is not supported. It should revert to the previous system – far more appropriate.

Add Management Plans, Annual Reviews, etc. to "grant MOP" in operational phase.

Acronyms – "Planning Services Division" – explain their role in rehabilitation
- Update "NSW Planning Assessment Commission"

NOTE explor phase is outside the scope of this Discussion Paper

Assessment phase

Exploration phase > **Assessment phase** > Operation phase > Post closure phase

Key issues

Various stakeholders, including the Independent Planning Commission and the NSW Audit Office, have identified that development applications for mining projects often do not contain sufficient information on rehabilitation or proposed post-mining land uses and lack rigorous justifications and risk assessments[4]. For example, development applications generally contain limited information on final voids and how any water in that void is to be managed post-closure. This is inconsistent with best practice and is likely to increase the risk of poor environmental outcomes and cumulative impacts. For instance, the Leading Practice Sustainable Development Program for the Mining Industry's handbook on Mine Rehabilitation (Commonwealth of Australia, September 2016) states that:

- opportunities and threats should be identified early so that mining operations do not reduce rehabilitation options (p. 5)
- effective and early planning helps to minimise rehabilitation costs (p. 6).

Final voids

What is a 'final void'?

Because open cut mining involves the displacement of material to access an underground resource, it often results in the formation of large pits or voids where that material has been removed. Where a void is left after mining, it is typically referred to as a 'final void'.

Many mining projects have been approved to leave a final void. However, there have been growing concerns about the impacts of final voids. People living in areas where mining occurs and the broader community are concerned that mining companies are externalising costs by leaving final voids and other potential residual liabilities[5]. The independent Planning Assessment Commission has also stated that there is a need for policy guidance or criteria to help in determining the acceptability of rehabilitation proposals and final voids.

Currently there is no State-wide approach regarding the assessment of final voids in State significant mining proposals. The acceptability of a final void is determined by individual merit-based assessment of the

[4] For example, the NSW Auditor-General's Report – Performance audit – Mining rehabilitation security deposits, May 2017.

[5] For example, see submissions to the Commonwealth Senate inquiry on Rehabilitation of mining and resources projects as it relates to Commonwealth responsibilities.

proponent's rehabilitation proposal. Communities are increasingly highlighting that opportunities for beneficial use and backfilling should be considered in determining the acceptability of a final void management proposal.

Commented [RC7]: Comment needed to distinguish coal-v-metalliferous final voids and different mining methods. The reference to communities' views need to be attributed to those in coal mining areas and not in metalliferous areas. Different views are held in Orange regarding Cadia's void compared to residual voids near Singleton.

Opportunities for beneficial re-use of mine sites including final voids

Mine sites can provide opportunities for a range of beneficial land uses once mining operations end. These sites are often large parcels of land containing existing infrastructure (including utilities, access roads, buildings and hardstands) which can be used to commercial advantage by other industries and can reduce upfront capital investment costs. Beneficial uses of mine sites might include intensive and extensive agriculture, renewable energy developments, biodiversity offset areas, residential developments and recreational activities. Such uses may deliver net economic benefits to the local area and to NSW after mining operations have ceased.

Repurposing disturbed land for beneficial use has the potential to reduce the incremental environmental impacts of future development projects, as these projects would not require further land clearing approvals which may be required on other sites. Mines are often surrounded by biodiversity offset areas which may provide a biosecurity buffer, an important consideration for intensive agricultural industries such as poultry meat farms.

Final voids are a feature of many post-mining landforms and may provide opportunities for a number of beneficial uses. These include re-use for pumped-storage hydroelectricity (particularly where mine sites are located near existing power stations and infrastructure), and waste disposal (including waste to energy facilities). For example, the Woodlawn bioreactor south of Goulburn uses the final voids of a former copper, lead and zinc open cut mine to store household waste as landfill. Methane gas produced by the waste is converted into energy.

Backfilling final voids to restore the pre-mining landform may also deliver significant social, environmental and economic benefits. These include:

- improved visual amenity
- reduced risk of cumulative impacts to groundwater and surface water quantity and quality
- reduced health and safety risks
- improved biodiversity outcomes
- reduced ongoing management and monitoring costs.

Backfilling a final void is likely to involve significant financial costs to industry and in some cases will not be economic. However, in other cases there may be scope to backfill without affecting the overall economic case for a project, particularly where backfilling is incorporated in the mine design from project inception, rather than retrofitting to an existing mine design.

Commented [RC8]: Again, please recognize the difference between coal and metalliferous mines.

Furthermore, open cut voids in metalliferous mines provide opportunities development of portals for ongoing underground mines.

Actions underway

The Department's Indicative Secretary's Environmental Assessment Requirements (SEARs) and Mine Assessment Guideline (under the 2015 Integrated Mining Policy) made substantive steps towards requiring proponents to address these issues as part of their development application, however further improvements may be required.

Proposed improvements

PROPOSAL 1: Adopt policy principles to guide the regulation of mine rehabilitation

This proposal aims to establish a more consistent and transparent framework for regulating mine rehabilitation in NSW. The policy principles identified in Table 1 are intended to clearly set out expectations for mine rehabilitation and guide the actions of consent authorities, regulators and industry. This will increase certainty for all stakeholders and help ensure quality rehabilitation is delivered on the ground.

Table 1. Draft policy principles for mine rehabilitation in NSW

#	Draft principle
	For application to new State significant mining projects
1.	Rehabilitation outcomes and proposed post-mining land uses should endeavor to minimise the sterilisation of land and maximise beneficial social, economic and environmental outcomes for the locality and region.
2.	Rehabilitation and closure proposals must be feasible, based on best practice, and capable of supporting the proposed post-mining land use. a) Rehabilitated land must integrate and be compatible with the surrounding landscape and landforms. b) Disturbed areas must be returned to conditions that are safe, stable, non-polluting, and environmentally sustainable.
3.	To provide certainty about rehabilitation and post-mining land use outcomes, development applications for new mining projects must include detailed descriptions of mine rehabilitation and closure and any associated risks. This information could: a) be developed through a process of community engagement b) identify suitable post-mining land uses having regard to: ▪ community views and any preferred use expressed in local and regional plans ▪ adjacent and surrounding landforms and land uses ▪ the proposed rehabilitation outcomes of any neighbouring mines c) demonstrate the feasibility of the proposed land use as related to needs, projected land use trends, and markets d) specify the rehabilitation objectives and completion criteria[6] e) include binding milestones that ensure that rehabilitation is achieved within a reasonable timeframe f) include an assessment of costs associated with rehabilitation, closure and post-closure monitoring and management. g) the resources to be used to undertake the rehabilitation

[6] Completion criteria represent milestones in the biophysical processes of rehabilitation that provide a high degree of confidence that the rehabilitated mine will eventually reach the desired sustainable state (the rehabilitation objective). Completion criteria indicate the success of rehabilitation and enable the operator to determine when its liability for the area ceases (see Commonwealth of Australia, 2016, Mine Closure - Leading Practice Sustainable Development Program for the Mining Industry).

Commented [RC9]: Recognition of area of final void ___ its economic benefit of ag. land

Commented [RC10]: See Point 4. In "Key Issues - Improving Mine Rehabilitation Guideline"

Commented [RC11]: Generally applicable to coal mines

Commented [RC12]: "Mine Closure - Leading Practice Sustainable Development Program for the Mining Industry" – this document is inappropriately being relied upon in the assessment phase for this guideline. It should be referred to and relied upon in operations.

Commented [RC13]: Clear definition of what is being costed needs to be provided. It is inappropriate to expect proponents to proceed with this level of detail at an application stage – it takes too long now to get a new mine underway in NSW. This requirement will only increase timeframes and reduce support for miners.

Commented [RC14]: Assessment no. ??

Commented [RC-B15]: A common feature of rehabilitation planning is the clear definition of the range of resources that will be relied upon for rehabilitation activities, i.e. topsoil, subsoil, mulch, logs, etc.

#	Draft principle
	For application to new State significant mining proposals and existing State significant mining projects seeking modifications that have implications on rehabilitation
4.	Mined land must be: a) progressively rehabilitated, where practical and economically feasible, particularly where sequential mining and progressive backfilling can be adopted. b) subject to an agreed forward program of progressive rehabilitation unless it is being: ▪ actively mined; or ▪ used for operating mining infrastructure.
5.	Information on mine rehabilitation and associated activities must be made publicly available.
6.	The proponent is responsible for meeting all costs associated with their rehabilitation obligations.
7.	Mined land will be considered to be rehabilitated when it is demonstrated to be safe, stable, non-polluting and able to sustain the approved post-mining land use.

Mining projects often have a lifespan which can span decades. Throughout this period, community expectations can change significantly. Developments in technology may also mean the impacts of mining can be managed more effectively or avoided altogether, compared to when a mine was initially approved. The proposed policy principles would be regularly reviewed to ensure they keep pace with changing technologies, economic conditions and community priorities over time.

Discussion questions

1.1 Are the proposed policy principles for application to new State significant mining projects appropriate?

1.2 Are the proposed policy principles for application to all State significant mining projects appropriate?

1.3 Are there other policy principles that should be included? What are they?

PROPOSAL 2: Develop a policy framework for the assessment of final voids

This proposal aims to develop a policy framework for the assessment of final voids in State significant mining proposals. A range of options could be considered, including:

- Allow final voids to be included in a State significant mining proposal only if the proponent can demonstrate:
  - it is not feasible or appropriate to backfill the final void
  - the proposed design and associated rehabilitation will minimise short-term and long-term impacts on the environment, the community and visual amenity
  - the mine site can accommodate retention of the final void as part of an identified post-mining beneficial land use, and/or

Commented [RC16]: Sequential mining and progressive backfilling

Commented [RC17]: This information is provided in an EIS and Application for new mines – what else is envisaged?

Commented [RC18]: How and by whom - refer

Commented [RC19]: Number from 1 to 3 ??

Commented [RC20]: See separate document

Commented [RC21]: Please avoid reference to “remove”

- the void could be beneficially re-used in the future.

- Allow final void pit lakes to be included in a State significant mining proposal only if the proponent can demonstrate:
  - the water quality is compatible with the post-mining land use
  - there is sufficient licensed water available for that use
  - designs are of the highest standard for public safety
  - the water accumulating in the final void will not result in the substantive diminution of the quality and quantity of water used by adjacent or surrounding landowners.

Alternatively, the framework could provide that final voids cannot be included in a State significant mining proposal in areas where the environmental and social costs are too great.

Discussion questions

2.1 Is the policy framework for determining the acceptability of final voids appropriate?

2.2 A number of final landform options could be considered in a policy framework for the assessment of final voids. What are the benefits and costs of:
- Requiring final voids to be beneficially re-used?
- Requiring backfilling of final voids in areas where the environmental and social costs would otherwise be too high?

2.3 Should other final landform options be considered in a policy framework for the assessment of final voids? What are the benefits and costs?

PROPOSAL 3: Improve consideration of rehabilitation and closure in the early stages of mine planning

This proposal aims to ensure projects adequately consider rehabilitation and closure in the early stages of mine planning, consistent with best practice. In addition, it recognises the benefits of earlier community engagement in understanding local values and informing the community of the indicative design and completion criteria for the proposed rehabilitation.

The inclusion of an appropriate level of information on mine rehabilitation and closure (including assessment of risks) as part of the development application will ensure that the consent authority and the broader community are properly informed about the full implications of the application and the activities and outcomes to be approved under the consent. Any proposed changes to rehabilitation and closure activities or outcomes over the life of the mine which could result in inconsistencies with the development consent would continue to be managed by the modification process under the EP&A Act.

Other potential improvements might include:

- development of guidance for industry on how to incorporate mine rehabilitation and closure into project design to facilitate sustainable post-mining land use outcomes
- requirements to provide information on preferred and alternative mine design options as part of the Scoping Report (formerly the Preliminary Environmental Assessment) submitted to DPE with the request for SEARs

Commented [RC22]: Not for all – for some metalliferous mines where mineralization remains exposed in the wall of the open-cut, there is no opportunity to achieve water quality for a subsequent use

Commented [RC23]: Please avoid the use of the term “lake”

Commented [RC24]: Determined when ? in Secretary’s Environmental Assessment Requirements ?

Commented [RC25]: e.g. Gloucester

Commented [RC26]: See separate document

Commented [RC27]: Really need to review some case histories, .e.g. Peak Hill, Cadia, Cobar

Commented [RC28]: Developed through EIS not that early

- requirements for proponents to consult with the community on the possible options for post-mining landform/land use as part of the preparation of the Scoping Report.

Discussion questions

3.1 What is the most effective way of improving consideration of rehabilitation and closure in the early stages of mine planning?

3.2 Are there any other changes in the early stages of mine planning required? What are they?

PROPOSAL 4: Ensure rehabilitation requirements are clear and enforceable

This proposal aims to develop a more integrated and enforceable approach to setting development consent and mining lease conditions under the existing regulatory framework, specifically in developing conditions which set clear, measurable and enforceable requirements about rehabilitation outcomes. This proposal also aims to establish when, where and how rehabilitation and closure objectives and criteria are defined, as well as to provide guidance on how objectives and criteria should be refined over time.

Potential improvements might include:

- development of high-level standard landform and land use rehabilitation and closure objectives and criteria for consideration in development applications
- defining binding, measurable and enforceable rehabilitation outcomes (including progressive rehabilitation milestones) in the conditions of the development consent
- guidance on the development of more detailed rehabilitation and closure objectives and criteria in management plans required under the mining lease to assist in tracking progress and measuring success
- clarification of roles and responsibilities in the development and implementation of rehabilitation and closure objectives and criteria.

Discussion questions

4.1 What aspects of rehabilitation are appropriate to include as 'binding rehabilitation outcomes' (particularly for progressive rehabilitation)?

4.2 Are any other changes at the assessment phase required? What are they?

Commented [RC29]: 3.1 – Expectation Scoping Layout

Commented [RC30]: See separate document

Commented [RC31]: Please avoid – a "one approach for all" is totally inappropriate

Commented [RC32]: Based on design (not outcomes defined by Government)
Must relate to stages of development

Commented [RC33]: Operational phase

Commented [RC34]: Operational phase

Commented [RC35]: Please stop requiring so much detail up front

Commented [RC36]: See separate document

Operational phase

Exploration phase > Assessment phase > **Operation phase** > Post closure phase

Key issues

The NSW Audit Office found that security deposits held by DRG are not likely to be sufficient to cover the full costs of mine rehabilitation in the event of a default[7]. However, it acknowledged that DRG's security deposit processes had improved in recent years and that plans for further improvement were well advanced, including a revised security calculation tool. DRG released a revised Rehabilitation Cost Estimation Tool on 1 June 2017.

The NSW Audit Office also identified that there are:

- deficiencies in operator annual environmental reporting
- issues regarding the ability of Government to effectively gauge rehabilitation progress and management of closure risks
- a lack of processes to assess rehabilitated areas and verify the quality of rehabilitation.

Additionally, some mining projects are not carrying out adequate progressive rehabilitation over the course of mine operations. This is inconsistent with best practice and increases the risk that rehabilitation obligations will not be met. For instance, the Leading Practice Sustainable Development Program for the Mining Industry's handbook on Mine Closure (Commonwealth of Australia, September 2016) states that:

- planning for closure should start before mining, and rehabilitation and its monitoring should be progressive throughout the life of the mine (p. 44)
- failure to start rehabilitation early in the life of the operation can create obstacles to building knowledge necessary to deliver sustainable outcomes (p. 5).

Actions underway

In addition to the ongoing improvements in security deposit processes mentioned above, DRG is currently well progressed in the development of its Rehabilitation Reform Project which will improve the regulation of progressive rehabilitation, ensure consistency with the development consent and provide greater accountability. Actions include:

- requirements for leaseholders to:
    - submit detailed rehabilitation objectives and completion criteria, which includes a Final Landform & Rehabilitation Map for approval

Commented [RC37]: + MOP – this is duplication !!!!

[7] NSW Auditor-General's Report – Performance audit – Mining rehabilitation security deposits, May 2017.

    - conduct a robust rehabilitation risk assessment and manage those risks
    - undertake progressive rehabilitation
    - submit an Annual Rehabilitation Report and Program
    - submit a Rehabilitation Management Plan
    - maintain records to demonstrate compliance
- a rehabilitation assessment protocol for mine inspections
- a rehabilitation performance 'dashboard' to improve monitoring, auditing and reporting of compliance
- a geographic information system to track rehabilitation progress, which will be linked to the NSW Government's publicly accessible SEED Portal
- supporting guidance and codes for industry.

More information on DRG's Rehabilitation Reform Project can be found here.

Proposed improvements

PROPOSAL 5: Ensure that regulatory processes that occur once a mine has been approved are transparent and deliver consistent rehabilitation outcomes

This proposal aims to ensure that regulatory processes that occur once a mine has been approved are transparent and consistent with the approved rehabilitation proposal, post-mining landform and land use.

Potential improvements might include:

- greater accountability by improving public access to information on rehabilitation performance and future planned (based on experience)
- strengthening the Department's assessment and decision-making processes relating to rehabilitation management plans and strategies required by the development consent and mining lease
- better communication between Government agencies, proponents and the community on assessment and decision-making relating to rehabilitation management plans and strategies required by the development consent and mining lease
- greater accountability by improving public access to rehabilitation management plans and strategies required by the development consent and mining lease.

Discussion questions

5.1 Are the proposals to improve regulatory processes once a mine has been approved appropriate?

5.2 Are any other changes at the operational phase required? What are they?

Commented [RC38]: MOPs?

Commented [RC39]: Clarifying role of public – surely an annual review with past progress and future plans will be sufficient

Commented [RC40]:

Post closure phase

Exploration phase > Assessment phase > Operation phase > **Post closure phase**

Key issues

The NSW Audit Office identified a number of issues relating to the post closure phase of mining[8]. These include:

- lack of a clear policy on the length of time and circumstances under which a mine can remain in 'care and maintenance'[9]
- no financial assurance is 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.

The independent Planning and Assessment Commission has also identified a lack of transparency and clarity regarding the management of long term impacts following mine closure.

Actions underway

DRG's Rehabilitation Reform Project aims to ensure processes for releasing mine lease holders from their rehabilitation responsibilities are effective, transparent and improve public confidence. Actions include:

- developing new requirements for mines under care and maintenance
- improving the quality of rehabilitation and closure plans to reduce uncertainty about outcomes, ensure consistency with the rehabilitation and closure requirements of the development consent and more accurately inform the costing of security deposits
- enhancing regulatory tracking of mine rehabilitation
- reviewing mechanisms to address residual risk and potential long term environmental degradation post mining, in collaboration with other relevant agencies
- documenting and publishing the mine closure and relinquishment process.

Proposed improvements

Discussion questions

6.1 Are other regulatory reforms required to the post closure phase required? Why? What would they look like?

6.2 Are there any other opportunities or challenges relating to mine rehabilitation and closure that should be considered?

Commented [RC41]: Define – period from cessation of mining and lease relinquishment

Commented [RC42]: Same processes should apply as for operations

Further reading

If you would like further information on mine rehabilitation and closure, a selection of useful references is provided below:

- Strategic Framework for Mine Closure, Australian and New Zealand Minerals and Energy Council (ANZMEC) and Minerals Council of Australia (2000)
- Planning for Integrated Mine Closure: Toolkit, International Council on Mining and Minerals & Metals (2008)
- Guidelines for Preparing Mine Closure Plans, Government of Western Australia (2015)
- Mine Rehabilitation - Leading Practice Sustainable Development Program for the Mining Industry, Commonwealth of Australia (2016)
- Mine Closure - Leading Practice Sustainable Development Program for the Mining Industry, Commonwealth of Australia (2016)
- Better Mine Rehabilitation for Queensland, Queensland Government (2017)