NSW EDO
DEFENDING THE ENVIRONMENT
ADVANCING THE LAW

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Director Resources Policy
Department of Planning & Environment
GPO Box 39
Sydney NSW 201

Online submission: planning.nsw.gov.au/minerehabilitation

Dear Director,

Improving mine rehabilitation in NSW – Discussion Paper

Thank you for the opportunity to comment on *Improving mine rehabilitation in NSW – Discussion Paper* (**Discussion Paper**) and for granting EDO NSW an extension until 23 February 2018 to make this submission. As you are aware, as a community legal centre specialising in public interest environmental law, EDO NSW has made extensive comment on the management of mining in NSW. Mine rehabilitation should be considered as an integrated component in the overall management regime, and we make these comments in the context of our previous recommendations on improving management of mining in NSW.

This submission broadly responds to the proposals outlined in the Discussion Paper but in our view, these proposals are insufficient to ensure appropriate management and regulation of mine rehabilitation. We therefore also provide comment on areas where further work is required.

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

EDO NSW submits that while adopting policy principles on the regulation of mine rehabilitation can be useful, what is proposed is insufficient to achieve adequate and appropriate rehabilitation.

Rehabilitation requirements should be fundamentally strengthened, as a minimum by improving the rehabilitation outcomes required by the *Mining Act 1992* (NSW) (**Mining Act**). Currently, the most relevant object of the Mining Act is "*to ensure effective rehabilitation of disturbed land and water*", with rehabilitation defined as "*the treatment or management of disturbed land or water for the purpose of establishing a safe and stable environment*". EDO NSW strongly supports rehabilitation being considered an important object of the Mining Act but submits that the type of rehabilitation expected by the community and required to ensure ongoing environmental protection exceeds the concept of 'safe and stable'.

We acknowledge that decision making under the *Environmental Planning and Assessment Act 1979* (NSW) (**EP&A Act**) provides for the creation of specific conditions of consent regarding rehabilitation and that Mine Operations Plan (**MOP**) guidelines expand the recommended minimum rehabilitation outcome to safe, stable, non-polluting and sustainable; but both these processes are discretionary, with no minimum legal standard or expectation on companies granted mining approvals. It should be made clear to any company seeking approval to exploit the resources of NSW for private profit, that a consequence of any such approval is that they will be held to a high standard of rehabilitation.

We therefore recommend that the definition of rehabilitation within the Mining Act is expanded to include, as a minimum "*a safe, stable, non-polluting and geomorphologically, hydrologically and ecologically functional environment*". The proposed policy principle in the Discussion Paper should be amended accordingly. In applying this requirement, any approvals for mining projects under the EP&A Act must include conditions that specify the minimum, objectively measured, geomorphological, hydrological and ecological rehabilitation requirements to be achieved through rehabilitation. Such an approach would provide for far greater certainty in rehabilitation outcomes compared to the current approach of basing completion criteria on biophysical activities and modelled trajectories of recovery.

This approach would also necessitate significantly different conditions of consent to those currently seen. Instead of relying on an assumption that re-creation of landforms and vegetation will lead to geomorphological, hydrological and ecological outcomes (as is currently the case), it would require conditions of consent that specify what these outcomes should be over the timeframes that such processes will be restored (which in many cases will take tens or hundreds of years). The detail of how these outcomes will be progressively achieved could appropriately be discussed in a MOP, however much stronger monitoring frameworks covering longer timeframes would be required to ensure that the proposed rehabilitation trajectories are being met and functional systems are ultimately achieved.

In relation to the specific policy principles proposed in the Discussion Paper, a key policy principle should be to commit NSW to world's best practice mine rehabilitation, without limitation. We nonetheless support the proposal to require rehabilitation proposals to be feasible. It is clear from the scientific evidence that this test is not currently applied, with many approved rehabilitation proposals committed to biodiversity outcomes that are not likely to arise. For example, there is currently no evidence that it is possible to restore Warkworth Sands Woodland, an endangered ecological community, despite the fact that the approval for the Warkworth Extension Project relies on the ability to do so.

Consideration of the feasibility of rehabilitation proposals, should also consider the timelines required for adequate rehabilitation. The 2017 *NSW Auditor-General's Report Performance Audit - Mining Rehabilitation Security Deposits* (**Auditor-General's Report**)[1] notes (p 11):

[1] Report available at: https://www.audit.nsw.gov.au/news/mine-rehabilitation-security-deposits.

> *A review of 73 mine closure plans dating from 2007 to 2013 showed that, on average, relinquishment of the mining lease is proposed to be achieved in 11 years. A separate review of 57 mines in actual closure shows that only five have so far achieved relinquishment with an average closure period of 14 years after production ceased. The remaining 91 per cent of sites in closure had an average closure duration of over 21 years and counting.*

If adopted, the proposed policy principles must also be supported by more objective guidance on how they would be applied.

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

In our view, it is insufficient for DPE to simply propose developing a policy framework for final voids. Instead, DPE must immediately state a policy position that no new mines or new major extension projects will be permitted to include final voids.

In 2016, research by Energy & Resource Insights (**ERI**) identified that in NSW "*there are at least 45 voids with a total of 6,050ha of voids either planned or approved*".[2] These voids will sterilise significant areas, particularly in the Hunter Valley, and take hundreds, if not thousands, of years to reach a new dynamic equilibrium. During this time the water accumulating in the voids will become increasingly saline, some pit lakes will involve permanent water take, and some will risk overtopping and spills into adjacent waterways. Communities, scientific bodies and decision makers have all expressed concern about the ongoing legacy of pollution that will be left by these final voids.

There is long-standing precedent from other jurisdictions to prohibit the creation of new final voids, including the *Surface Mining Control and Reclamation Act 1977* (USA). While not without its limitations and despite industry arguments that the costs are prohibitive, the fact that this legislation has been in place for many years demonstrates that mining can continue to operate effectively and profitably in such a legislative environment. ERI further argue that if it were an upfront legislative requirement for mines to avoid the creation of final voids, than mine plans would be developed accordingly, which would significantly reduce the cost of achieving the required final landform.[3] Requiring such an approach is consistent with the polluter pays principle.

The management of currently approved final voids should also be strengthened. Companies should be required to consult with local communities and, as part of any new MOP, identify future beneficial uses for already approved final voids. New MOPs should include the actions necessary at each stage of mining to realise the final proposed beneficial use. Any proposed beneficial use must clearly identify the costs associated with ongoing management of that use (particularly in relation to water management), identify who will bear the ongoing management costs, and how those management costs will be funded (see also our comments on strengthening rehabilitation bonds below).

[2] Energy & Resource Insights (2016) *The Hole Truth* commissioned by the Hunter Communities Network, p4.
[3] Ibid.

We note that there are significant environmental risks associated with a number of potential beneficial uses identified in the Discussion Paper (e.g. energy to waste facilities). These proposals and their associated risks must be discussed with local communities and considered as part of the mine rehabilitation framework. Proposed future proposed beneficial uses must be supported by the local community, provide clear environmental outcomes, and continue to conform with the polluter pays principle. Proposals should provide meaningful benefits and not simply be a way of transferring ongoing costs of management from mining companies to third parties, including government.

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

EDO NSW strongly supports a requirement for a life of mine plan, including detailed rehabilitation proposals, to be provided as part of feasibility studies and initial development assessment, the details of which would be included in the conditions of consent and subsequent management plans. Such an approach will help to ensure that decision makers and the community have a more in-depth understanding of the expected outcomes and long-term impacts arising from mining, and ensure that mining companies build in appropriate operational procedures to minimise costs of eventual rehabilitation. Detailed information at the assessment phase will also help to avoid situations, as seen during the Ashton South East Open Cut mine approval process, where changes made to general rehabilitation commitments during the different assessment phases meant that the project has effectively committed to achieving conflicting goals in relation to water and biodiversity management as part of the rehabilitation.

We provide further comment on improving consideration of rehabilitation and closure in the early stages of mine planning below.

PROPOSAL 4: Ensure rehabilitation requirements are clear and enforceable

EDO NSW supports the list of proposed improvements to rehabilitation requirements, but again submits that they are insufficient. As EDO NSW has stated previously:[4]

> *The Mining Act currently provides the rehabilitation conditions following mining that may be attached on a discretionary basis. To improve environmental outcomes, the legislation needs to be amended to ensure that rehabilitation of mine sites is a standard mandatory practice that forms an integral part of the overall mining process. The legislation should also be amended to ensure that rehabilitation operations are completed to specified standards in the opinion of an independent accredited auditor. These standards and criteria by which rehabilitation efforts are to be measured, should be set out in accompanying regulations... off-title impacts should also be*

[4]EDO NSW (2011) *Mining Law in NSW – Discussion Paper*, available at: http://d3n8a8pro7vhmx.cloudfront.net/edonsw/pages/285/attachments/original/1380667551/110628mining_law_discussion_paper.pdf?1380667551.

> *addressed in rehabilitation conditions to ensure that the full range of potential environmental impacts is adequately addressed.*

While there has been some progress in regard to off-title impacts, these comments remain relevant, particularly in light of the information identified in the Auditor-General's Report (p 23) that:

> *In late 2015, the Department ranked 312 mine sites from critical to low risk based on their environmental and rehabilitation performance and any issues of public concern. Of these, 45 were ranked as critical and 73 were ranked as high.*

In addition to the proposals in the Discussion Paper, clear and enforceable rehabilitation requirements should include, but not be limited to, specific commitments to reinstate new dynamic equilibriums in groundwater (including information on how these systems would be expected to function), to maintain water quality equivalent to current background levels in any final voids or retained dams, to re-establish ecological processes (whether it be for biodiversity conservation or alternative uses), and to re-establish sustainable biogeophysical processes.

There is clear evidence from around the country, including NSW, that the current approach to security deposits is an insufficient guarantee that the NSW community will not be left to foot the bill for mine rehabilitation. Inadequacies have been identified in terms of insufficient security deposits being held, the fact that mines can be placed in indefinite care and maintenance (thereby avoiding rehabilitation obligations), and the sale of mines nearing the end of production from major companies to 'minnows' who may not have the capacity to undertake the necessary rehabilitation works. Further, as noted in the Auditor-General's Report (p 2):

> *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.*

The fact that most mine closures are unplanned[5] emphasises the need for full closure to be planned before the commencement of mining, and for mines to progressively plan and implement rehabilitation.

To ensure that the NSW Government and community are not left with more derelict mine liabilities in the future, a significant change is required to the way security deposits are managed in NSW to include a more encompassing mine rehabilitation bond. As a minimum, the ability for mines to pay an unrealistically small minimum deposit must be immediately removed. Also, the Auditor-General's Report (p 3) recommendations should be included, namely:

> *additional coverage for stakeholder engagement, additional planning approvals, insurance costs, and any additional design, research and verification work required for successful closure*.

[5] Auditor-General's Report, p 11.

However, we submit that mine rehabilitation bonds must go further. Specifically, NSW should implement a system of rehabilitation bonds covering the full cost of rehabilitation, where the definition of rehabilitation is expanded to include the restoration of a geomorphologically, hydrologically and ecologically functional environment, with sufficient contingency to cover uncertainty.[6] Such an approach would require a significant change from the calculations currently used to determine security bonds, as described in the Rehabilitation Cost Estimation Tool. This would include consideration of ongoing monitoring requirements, and contingency for future works (or residual risk payments) required to ensure ecological and biophysical processes are restored. Such bonds should also be expanded to require ongoing water treatment for final voids to a level of existing background water quality.

Mine rehabilitation bonds should be held as cash in a newly established, legislated Mining Rehabilitation Trust (**Trust**). The Trust would be responsible for holding cash bonds until rehabilitation has been completed and bonds are returned, or a company has failed to implement its rehabilitation requirements and funds must be drawn down from the Trust. In effect, a comprehensive mine rehabilitation bond would consist of two components, namely:

1. an expanded version of the current security deposit, that could be returned at mine closure, subject to the primary rehabilitation work being completed; and
2. a long-term rehabilitation bond based on the need to restore a geomorphologically, hydrologically and ecologically functional environment with appropriate an management and risk contingency, held to cover any long-term risks including future environmental degradation once a mine was closed was maintained until a new dynamic equilibrium is achieved.

To ensure that the costs of rehabilitation are incurred as environmental harm is caused (and the profits from the extracted minerals are received), mine rehabilitation bonds should be adjusted annually. In practice, this means that a bond would grow in the initial years of a project, as the profits from the mining operation grow, and then reduce as progressive rehabilitation is undertaken. Any proposed bond needs to be subject to an independent cost review, rather than a DPE review of the current company driven spreadsheet approach.

Interest gained on funds held by the Trust must be made available to undertake rehabilitation of derelict mines, previously acknowledged as potentially the largest contamination liability in NSW.[7] The Trust should be required to have annual audited accounts and report to Parliament to ensure transparency. Such a Trust could fulfil the 'sinking fund' role recommended by the Auditor-General's Report (p 15).

[6] The Auditor-General's Report (p 19) notes that contingencies should range from 25-50%, significantly more than currently required, especially in the absence of a detailed plan to achieve closure.

[7] New South Wales Auditor-General's Report (2011) *Financial Audit Volume Six 2011 Focusing on Environment, Water and Regional Infrastructure*, p 13.

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

EDO NSW strongly supports improved transparency around mine rehabilitation. Such an approach should be supported by increased objectivity in decision making. For example, conditions of consent regularly include the need to meet a condition 'to the satisfaction of the Secretary'. This is inappropriate where objective, scientifically based targets can be set.

One significant area of concern that must be addressed is the ability of mines to use 'care and maintenance' to avoid rehabilitation. The ability to enter care and maintenance, and the timeframes over which it can be applied, are highly subjective and there is strong evidence that companies are currently using care and maintenance as a way to avoid rehabilitation liability. Entering care and maintenance should only be permitted in exceptional circumstances and any approval to enter care and maintenance must be based on a transparent assessment process against predesigned criteria and provide clear timeframes for the length of the care and maintenance arrangements.

Post closure phase

As outlined above, EDO NSW has significant concerns regarding what currently constitutes adequate mine rehabilitation and by association the point at which mine closure is considered to have been achieved. Consistent with our comments above, a distinction must be made between mine operators completing superficial physical rehabilitation processes compared to achieving the re-establishment of geomorphological, hydrological and ecological outcomes.

If implemented, the changes proposed in this submission would significantly reduce the risk of rehabilitation bonds being insufficient to meet rehabilitation requirements. Nonetheless, there should be ongoing mechanisms in place to ensure mining companies retain responsibility for any unforeseen issues that arise post closure. This could be achieved by the introduction of clear chain of responsibility legislation, as implemented by the Queensland Government.[8]

For further information, please contact Dr Megan Kessler, EDO NSW Scientific Director on 9262 6989.

Yours sincerely,
EDO NSW

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Policy & Law Reform Director

[8] In April 2016, the Queensland Government enacted the *Environmental Protection (Chain of Responsibility) Amendment Act 2016* (Qld) which amended the environmental protection order (**EPO**) provisions in the *Environmental Protection Act 1994* (Qld) by inserting new heads of power, enabling an EPO to be issued to a related person of a company, where a related person is one who has significantly benefitted financially from the carrying out of a relevant activity by a company, or are in a position to influence the company's conduct. A Guideline *Issuing 'chain of responsibility' environmental protection orders under Chapter 7, Part 5, Division 2 of the Environmental Protection Act 1994* is at: https://www.ehp.qld.gov.au/assets/documents/compliance/cm-gl-cora-env-protect-order.pdf.