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Director Resources Policy
GPO Box 39
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Dear Sir/Madam,

Re: MINE REHABILITATION DISCUSSION PAPER

Thank you for the opportunity to make a submission on the Mine Rehabilitation Discussion Paper (**MRDP**).

Proposal 1 – Adopt policy principles to guide the regulation of mine rehabilitation

Discussion questions

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

1. *Rehabilitation outcomes and proposed post-mining land uses must minimise the sterilisation of land and maximise beneficial social, economic and environmental outcomes for the locality and region.*

Any outcome, however minimal, that results in the sterilisation of important agricultural land is considered unacceptable. The policy principle need to recognise that mining occurs on prime agricultural land and the importance of returning this land to productive agricultural land use is paramount.

Draft principle 1 should be strengthened to “*Rehabilitation outcomes and proposed post-mining land uses must **not** result in 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 post-mining land use.*

Walters (2016) suggests that there are 6,050ha of voids either planned or approved in NSW. The Narrabri Shire community via the Community Strategic Plan *Narrabri Shire 2027* consider minimising the environmental impact of extractive industries on agricultural land to be paramount and have identified final void management as a critical issue. Lakes in final voids having typically poor water quality and draw down local groundwater. Were these lakes to overfill, the water would have a detrimental impact on surrounding land (Walters, 2016). Narrabri Shire is predominantly located on a floodplain and relies heavily on irrigation from the Great Artesian Basin to support its agricultural sector which employs 1,124 persons or 21.6% of the total workforce (ABS, 2011 Census) as such Council does not support any final void for mining projects in the Narrabri Shire.

The MRDP states:

“Backfilling a final void is likely to involve significant financial costs to industry and in some cases may 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.”

Draft principle 2 when read in conjunction with the above, particularly the statements that back filling a void “... in some cases may not be economic. However, in other cases there may be scope to backfill without affecting the overall economic case for a project...”, is of concern to Council. The statements seem to indicate that the decision to require backfilling of a final void is purely an economic assessment rather than giving weight to the environmental benefits of backfilling and the environmental risks of not backfilling.

Further, it is not realistic that backfilling a void is possible “...without affecting the overall economic case...” because there will always be an additional cost for backfilling as compared with not backfilling. Walters (2016) suggests that mining companies often present cost and future mining as barriers to backfilling final voids and Council is concerned that draft principle 2 as drafted may enable this to continue.

Council agrees that backfilling should be “*incorporated in the mine design from project inception*” as retrospectively filling in voids after mining is finished is more expensive.

Draft principle 2 should be strengthened to “*Rehabilitation and closure proposals must consider future stages of the project, be economically and environmentally feasible, based on best practice, and capable of returning land to pre-mine use.*”

Backfilling final voids can mitigate many of their social and environmental risks, and presents the opportunity to return land to a form that supports pre-mine use (Walters, 2016). Where a proponent adopts an incremental approach to project approvals then backfilling of final void at each stage should be mandatory.

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.*

Council agrees that there is a need for certainty regarding rehabilitation and post-mining land uses as well as a need to ensure that the costs of rehabilitation and monitoring are accurately calculated to ensure that the state holds sufficient financial assurance to cover the estimated costs of rehabilitation. The Queensland Audit Office (2014) found that this is often not the case, and this is of particular concern due to the potential for unplanned closure of mines in periods of decline. According to Laurence (2006), a “study of more than 800 mine closures from 1981 to 2005 in Australia found that 75% of the closures were unplanned”. In this regard ensuring that the state holds sufficient financial assurance to cover the estimated costs of rehabilitation is imperative.

Draft principle 3 should be strengthened to *“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 **and the state should hold sufficient financial assurance to cover the estimated costs of rehabilitation.**”*

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

4. *Mining land must be:*
- a) *progressively rehabilitated*
 - b) *subject to an agreed forward program of progressive rehabilitation unless it is being:*
 - *actively mined; or*
 - *used for operating mining infrastructure.*

Council supports progressive rehabilitation of mined land once it is no longer required for operational purposes. Progressive rehabilitation should be subject to performance monitoring by a public regulatory authority.

Draft principle 4 is supported.

5. *Information on mine rehabilitation and associated activities must be public available.*

Draft principle 5 is supported.

6. *The proponent is responsible for meeting all costs associated with their rehabilitation obligations.*

Draft principle 6 is supported.

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.*

Draft principle 7 is supported.

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

The following Principle 8 should be included.

8. *Where mining occurs on prime agricultural land the mined land will be considered rehabilitated when it is demonstrated to be returned to pre-mine use.*

Proposal 2 – Develop a policy framework for the assessment of final voids

Discussion questions

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

Council does not support final voids in mines in the Narrabri Shire for the reasons outlined above. Council also has concerns regarding appropriateness of final voids in general and whether this approach

is inter-generationally equitable. Final voids have been banned in the US since the 1970s (Walters, 2016) and it is therefore questionable as to why they are appropriate in NSW.

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 be otherwise be too high?*

The MRDP gives consideration to “*final void pit lakes*” as a potential beneficial re-use of final voids. According to Doupé & Lymbery (2005), “recreation and tourism, wildlife conservation, aquaculture, irrigation, livestock water source, potable water source, industrial water source and chemical extraction” have all been proposed or implemented as beneficial re-use of mine lakes. There are considerable risks associated with all of the above uses and of particular concern to Narrabri:

- Livestock water source - Public health implications due to accumulation of heavy metals or other chemicals in edible tissues (Harper, King, Hill, Harper & Hunter, 1997)
- Recreation and tourism – Increase in the potential for land, water, and atmospheric pollution due to increased human traffic (Chapman 2002). Health issues arise through human contact with water pathogens or untreated chemical contaminants (Geldreich 1996; Tchobanoglous and Angelakis 1996).
- Irrigation - Salinisation due to increased groundwater recharge, affecting biodiversity in terrestrial and aquatic ecosystems (Annandale et al. 2001; Johnson and Wright 2003). Heavy metal deposition and accumulation in soil and crop plants, leading to pollution and public health concerns (Al Jamal et al. 2002; Karathanasis and Johnson 2003; Mays and Edwards 2001; Ramirez and Rogers 2002).

Having considered the above environmental impacts Council questions, the validity of considering “*final void pit lakes*” as a potential beneficial re-use particularly given that it is estimated that it would take 300-400 years for a void pit lake at the Maules Creek void to reach equilibrium (WRM Water Environment Pty Ltd, 2011). Council considers that backfilling of final voids should always be the goal for mined land.

2.3 Should other final landform options be considered in a policy framework for the assessment of final voids?

Puhlovich & Coghill (2011), suggest that “... long term management of environmental risks and return of land to an acceptable post mining land use can in some circumstances only be achieved by pit backfilling.” Council considers backfilling of final voids should be a fundamental requirements of the majority of mining approvals.

Proposal 3 – Improve consideration of rehabilitation and closure in the early stages of mine planning

Discussion questions

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

Council considers that requiring comprehensive information and plans for the rehabilitation and closure of major mining projects in the documentation required at the pre-lodgement and lodgement stages of the development application process as the most effective way of improving the consideration of rehabilitation and closure in the early stages of mine planning. This should incorporate information on rehabilitation for all future stages of the mining project and not adopt a piecemeal approach to rehabilitation that mirrors the incremental approach to project approvals that mining companies regularly adopt.

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

Council considers requiring proponents to consult with the local community on rehabilitation and closure options, as well as post-mining landform/land use as part of the preparation of their documentation as an effective way of involving the community, and local Councils, in the mine planning process. Such issues need to be addressed up front in the pre-lodgement and lodgement stages of the development application process and requirements stipulated as conditions of consent as SEARs are not required for applications to modify an existing development consent.

Proposal 4 – Ensure rehabilitation requirements are clear and enforceable

Discussion questions

4.1 What aspects of rehabilitation are appropriate to include as ‘binding rehabilitation outcomes’?

Council considers that the only acceptable “... land use rehabilitation and closure objective and criteria...” acceptable for mining on agricultural land and environmentally important land is to **return land to pre-mine use**.

Council considers that defining binding, measurable and enforceable rehabilitation outcomes in the form conditions of development consent for major mining projects is the most appropriate way to ensure rehabilitation commitments are fulfilled by mining companies. Compliance needs to be independently monitored and enforced by a public regulatory authority with compliance reports widely publicised to ensure public confidence.

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

Council considers that requiring comprehensive information and plans for the rehabilitation and closure of major mining projects in the documentation at assessment phase is essential. This should incorporate information on rehabilitation for all future stages of the mining project and not adopt a piecemeal approach to rehabilitation that mirrors the incremental approach to project approvals that mining companies regularly adopt.

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

Discussion questions

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

Council supports the proposals to improve regulatory processes once a mine has been approved and considers that compliance needs to be independently monitored and enforced by a public regulatory authority with compliance reports widely publicised to ensure public confidence.

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

Council considers that period review of progressive rehabilitation of mining projects by a public regulatory authority and confirmation that the state holds sufficient financial assurance to cover the estimated costs of rehabilitation as essential during the operational phase. Given the proposal in the MRDP to adopt *"an agreed forward program of progressive rehabilitation"* the financial assurances should be mandatorily increased where companies fail to deliver of the agreed forward program to ensure that the public is not required to contribute to rehabilitation should unplanned closure of mines occur.

Post closure phase

Compliance with conditions and rehabilitation commitments needs to be independently monitored and enforced by a public regulatory authority with compliance reports widely publicised to ensure public confidence. The state needs to hold sufficient financial assurance to cover the real costs of rehabilitation where proponents fail to meet their obligations.

General comments

In addition to the above Council requests that all new applications for, and applications to modify, major mining projects within the Narrabri Shire:

- require the submission of a Rehabilitation and Mine-Closure Assessment concurrently with the required Environmental Impact Statement.
- stipulate that no final void is to be left at the closure of any mine as a condition of consent.
- stipulate a bond to the amount necessary to backfill the final void and return the land to pre-mine use.

If you require any further clarification please do not hesitate to me on (02) 6799 6882 or danielb@narrabri.nsw.gov.au.

Yours faithfully,



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MANAGER PLANNING AND REGULATORY SERVICES

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