Supplementary Submission No 66a

INQUIRY INTO INTEGRITY OF THE NSW BIODIVERSITY OFFSETS SCHEME

Organisation: NSW Minerals Council

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Inquiry into the Integrity of the Biodiversity Offsets Scheme

Additional Information on ecological mine site rehabilitation provided by the NSW Minerals Council, 11 January 2022

The NSW Minerals Council gave evidence to the Legislative Council's Portfolio Committee No. 7 - Planning and Environment (the Committee) inquiry into the Integrity of the Biodiversity Offsets Scheme on 9 December 2021.There were some questions about ecological mine site rehabilitation which were not able to be fully answered due to the time restrictions.

The NSW Minerals Council (NSWMC) would like to provide additional information in relation to ecological mine site rehabilitation. We hope this information will be useful for the Committee members.

We would be grateful if this short document could be circulated to all the members of the Committee.

Why does the Biodiversity Offsets Scheme (BOS) permit ecological rehabilitation of mine sites to generate biodiversity credits when there are already legislative requirements to rehabilitate the site?

All mine sites are required to be rehabilitated. Impacts on biodiversity from the development are required to be offset. However, there is no requirement that mine sites be rehabilitated to the ecological community disturbed. The appropriate rehabilitation outcomes are considered as part of the environmental impact assessment and conditioning of the mine.

There are competing pressures on mining proponents to propose different types of rehabilitation. Many mining communities want to see a return to grazing land or other forms of rehabilitation that will directly drive economic benefits, and employment opportunities.

In many cases land which has been disturbed is the derived native grassland version of a community and has been grazed in the past. Requiring land to be rehabilitated to an ecological community is not be the best outcome for every proposal.

There are several good reasons to incentivise the establishment of ecological mine site rehabilitation through the BOS:

- Ecological rehabilitation is complex and requires a significant commitment of resources to succeed. It is appropriate that it is undertaken by companies which have the appropriate knowledge and expertise.
- It allows the mine site to use ecological rehabilitation to aid strategic conservation efforts, including joining up offset areas, remnants, and existing conservation lands as well as contributing to corridors and initiatives such as the Great Eastern Ranges.

- Many regional stakeholders are reluctant to see further land being set aside for offsets. Generating credits through mine site rehabilitation provides a way of generating credits while allowing other land to remain productive.

Is there a time lag between the development and the rehabilitation?

It is recognised that there will be a delay in achieving the benefits of ecological rehabilitation. Consideration of the delay needs to be part of the balanced judgement of the decision maker on each project.

All offsets that propose active management include a period of delay before benefits are realised. Importantly, the credits that can be generated by ecological mine site rehabilitation are significantly discounted.

Some submissions and evidence to the Committee appear to suggest that the rehabilitation will not commence until the end of mining. In practice rehabilitation is undertaken progressively. Ecological rehabilitation cannot be signed off until it meets the completion criteria, which in terms of self-sustainability could take up to twenty years (plus a possible 5-year extension). Any delay in meeting the criteria is costly because financial assurance[1] needs to remain in place until rehabilitation has been assessed by the regulator to meet the completion criteria.

Have mines been able to successfully re-establish ecological communities with mine site rehabilitation?

Evidence to the Committee expressed some concerns that mine site rehabilitation can't achieve recognisable, self-sustaining ecological communities.

As an industry in NSW, we've recognised that while we have been achieving good results, there is a lack of published research in this area. In 2018 the industry supported the commencement of a research project to assess ecological rehabilitation in the Hunter Valley and compare this to state-based Plant Community Types (PCTs), the associated Commonwealth listed *Central Hunter Valley Eucalypt Forest and Woodland* Critically Endangered Ecological Community (CEEC), and three related threatened ecological communities (TECs) listed under the NSW *Biodiversity Conservation Act 2016* (BC Act).

The research is being funded by the Australian Coal Association Research Program (ACARP) and undertaken by experienced ecological consultants, Umwelt. The Department of Planning, Infrastructure and Environment undertook a separate but complementary piece of work to look at sustainability of the sites.

We have provided a summary of the findings below. A final report has been submitted by Umwelt to ACARP. After publication by ACARP Umwelt intend to produce a condensed version for publication in a peer reviewed journal. It is likely that the report will be published by ACARP before the Committee reports and the NSW Minerals Council can provide the report to the Committee when available.

Summary of the ACARP Research Project

The research project sampled 45 rehabilitation sites and 48 reference sites in the Hunter Valley between March and May 2019. It considered whether the rehabilitation sites could support recognisable and self-sustaining ecological communities.

Importantly the rehabilitation sites assessed were located at five different mines and they varied in age, with the oldest site established around 1992 and the youngest site established in 2016. As such the sites had varied requirements for successful completion. None were established with the goal of

[1] Where ecological rehabilitation generates biodiversity credits, the operator is required to provide financial assurance for the cost of securing the credits in the event that the rehabilitation is unsuccessful.

reinstating the current NSW based PCTs, NSW TECs or the Commonwealth CEEC that they were assessed against. These specific entities did not exist at the time the mines were approved and rehabilitation targets were established. In addition, these sites did not benefit from the strict completion criteria, KPIs and rehabilitation objectives that will be required by the Ancillary Rules.

The research assessed compositional recognisability at several different levels including:

- At the PCT level. At this level, 53% of rehabilitation sites were found to be strongly or very strongly recognisable
- At the EPBC Act Approved Conservation Advice level – for the *Central Hunter Valley Eucalypt Forest and Woodland* CEEC. At this level 40% of rehabilitation sites were assessed as recognisable.

At the BC Act level, the research found the assessment of TEC recognisability to be more complex than assessing at the EPBC Act level, the latter being supported by more prescriptive diagnostic criteria and condition thresholds. Using one of the assessment approaches investigated, 53% of rehabilitation sites were found to be recognisable as one of three TECs listed under the BC Act.

In a separate but complementary piece of work, not funded by ACARP, the NSW Department of Planning, Infrastructure and Environment assessed the self-sustainability of both the reference sites and the rehabilitation sites and found that:

- Two rehabilitation sites, both 21 years old were considered to be self-sustaining to the same extent as the reference sites
- A third site at 12 years old was found to be approaching sustainability.

Given the lack of clear and robust completion criteria for the sites investigated, and the less sophisticated rehabilitation techniques used at the time of establishment, these results point to the very significant opportunities that well designed, well executed, and well managed ecological rehabilitation can provide.