

ANCILLARY RULES
USE OF MINE SITE
ECOLOGICAL
REHABILITATION AS AN
OFFSET

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NSW MINERALS COUNCIL



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1 Introduction

The NSW mining industry supports the NSW Government's initiative to allow ecological mine rehabilitation to generate offset credits. Official recognition of mine rehabilitation through offsetting was introduced in NSW on 2014 through the Biodiversity Offsets Policy for Major Projects and the Framework for Biodiversity Assessment (FBA).

Despite a significant volume of reform in the area of Biodiversity Conservation over the past seven years the draft *Ancillary Rules: Use of ecological mine rehabilitation as an offset* (the Ancillary Rules) indicates that there is still much to be done in this area before a properly functional and certain system for identifying the credits for mine rehabilitation is up and running. This includes how those commitments are assessed during the life of the mine.

The Office of Environment and Heritage (OEH) and the Department of Planning and Environment (DPE), Division of Resources and Geoscience (DRG) to their credit acknowledge the gaps in the current rules, in particular the need to work with industry to provide detail around the completion criteria and performance indicators for ecological rehabilitation.

In order to properly progress this work, which has been anticipated for many years, NSWMC and our members would like to see a detailed commitments by OEH (and where relevant DRG), to address the following:

- Updating and improving the BioNet database
- Working with industry to identify completion criteria for ecological mine rehabilitation
- Working with industry to identify the appropriate performance indices for ecological mine rehabilitation

In addition there are areas of the Ancillary Rules where better delineation between the role of the Environmental Impact Statement (EIS) and the planning consent, and conditions under the Mining Lease and Mining Operations Plan (MOP) need to be clarified. Detailed design of rehabilitation including where particular areas of rehabilitation are to be sited should not be fixed in through the planning approval. These issues need to be clarified and addressed in the final Ancillary Rules.

NSWMC look forward to working with OEH and DRG on further developing the application of the Ancillary Rules.

2 Section 2.2 Like for like ecological rehabilitation

2.1 Impacts on Threatened Ecological Communities

The Ancillary Rules provide that the Plant Community Type (PCT) that is established through the rehabilitation must be associated with the Threatened Ecological Communities (TEC) in the BioNet database. Although this approach is suitable in principle, in practice the BioNet database, for many PCTs, is simplistic in terms of data and out of date. The BioNet database has an incomplete list of PCT-TEC associations. Furthermore, BioNet does not necessarily cover the full range of likely PCTs that occur in the environment, so if a mining proposal maps a 'new' PCT, the challenge that will be faced will be significant (in relation to having it recognised and assessed by OEH).

2.2 Impacts on native vegetation that does not represent a TEC

In the like for like requirements for impacts on native vegetation (that does not represent an impact on a threatened ecological community (TEC)), that the fourth dot point refers to 'any IBRA subregions within 100km of the mining project '.

This should be amended to 'any IBRA subregions within 100km of the outer boundary of the mining project ' to be consistent with clause 6.3 of the *Biodiversity Conservation Regulation 2017*, and to clarify where the 100km limit is to be measured from (particularly given most mining projects are hundreds of hectares in size so there can be a significant difference between measuring from the middle of a mine site compared to the outer boundary of a mine site).

Recommendations

1. OEH needs prioritise a program to review and update the BioNet database, including ensuring that the PCT/TEC allocations are fully assessed and recorded. OEH should be making public commitments about this and providing transparency over their BioNet/PCT review program.
2. Amend section 2.2.1 of the Ancillary Rules to provide that for impacts on native vegetation that is not a TEC, the PCT created must occur naturally within 'the adjacent IBRA subregion or any IBRA subregions within 100km of the outer boundary of the mining project '.
3. The Ancillary Rules should acknowledge the limitations of BioNet and specify that the OEH assessment officers of ecological rehabilitation BAM calculations should have some latitude to accept PCTs/TEC allocations that are not covered by the BioNet database, based on suitable justification.

3 Section 2.3 Biodiversity Assessment Report Requirements

3.1 What should be addressed in the BDAR

The Ancillary Rules provide for the proponent to propose the following with regard to the ecological rehabilitation:

- Rehabilitation objectives
- Completion criteria
- Performance indicators.

Section 2.1 (7) provides that the rehabilitation objectives need to be included in the conditions of consent. NSWMC members agree that this is necessary and appropriate, and this commitment should be made during the assessment process and be fixed through the planning consent.

Section 2.3 of the draft Ancillary Rules sets out the additional information that is to be provided in the Biodiversity Assessment Report (BDAR), where it is proposed that rehabilitation will gain offset credit. The BDAR forms part of the Environmental Impact Statement (EIS). As mining projects are generally required through their conditions of consent to operate 'generally in accordance' with the EIS, it is important that the commitments made in the BDAR are only those that can be fixed at the time of the approval of the development.

Mining is a dynamic form of development, which takes place over long time frames. During the life of a mine there will be factors that are unknown at the time of the development assessment that will require changes to rehabilitation. This will include weather such as excessive rain or drought, commodity cycles, emerging information about geology, new technology and changing expectations. For this reason the detailed plans with regard to rehabilitation are captured not in the EIS and planning consent, but in the Mining Operations Plan (MOP), which is a requirement of the Mining Lease. This is appropriate as the MOP is reviewed and approved by the regulator of the *Mining Act 1992* (Mining Act) (at this time, DRG), every seven years.

Matters that can and should be fixed through the BDAR and conditions of consent are:

- The rehabilitation objectives
- Any information required under section 13 of the BAM (with the interpretations and changes set out in Section 4 of the ancillary rules)
- The number and type of biodiversity credits from the credit obligation for the development that are proposed to be met through the ecological rehabilitation
- Justification that the proposed ecological rehabilitation works and the achievement of the completion criteria is feasible and achievable
- The plant community type(s) that are the target of the proposed ecological rehabilitation works
- The area (size) of land that will be rehabilitated to each plant community type
- The threatened species, which are the target of the proposed ecological rehabilitation works
- The area of land (size) where threatened species habitat is proposed to be created or the number of individual threatened species proposed to be created.
- The value of the proposed ecological rehabilitation in species credits for each species, calculated in accordance with these ancillary rules.

Matters that are not appropriately dealt with in the BDAR and the conditions of consent (other than as “conceptual”) are:

- Completion criteria and performance indicators for the rehabilitation site for each plant community type and species credit species (where relevant), which must be developed in accordance with the Ancillary Rules
- A map(s) showing the location where each plant community type is proposed to be rehabilitated
- A map(s) showing the location where the threatened species habitat or threatened species individuals are proposed to be rehabilitated.

It is appropriate that detailed completion criteria and performance indicators are developed during the life of the mine. The exact location of each PCT and species habitat proposed will need to be flexible in order to adapt to the changing circumstances that may impact the mine during the approval (see above).

3.2 Justification that the proposals are reasonable and feasible

As noted above, the Ancillary Rules require the proponent to justify that the proposed ecological rehabilitation works and the completion criteria are reasonable and feasible. There is no detail about the type information and level of justification that will need to be provided. While there are advantages to this being a relatively open requirement, there needs to be some guidance to set the expectations of proponents, assessment officers and the consent authority.

Some broad general, but not exhaustive/prescriptive guidance about the level of justification and the types of information that will be acceptable would be useful to all parties. Proposals for guidance to be included in the Ancillary Rules should be subject to consultation with industry before being included in the Ancillary Rules.

Recommendations

4. Amend section 2.3 of the Ancillary Rules to remove the requirement to include the following in the BDAR:
 - a) Completion criteria
 - b) Performance indicators
 - c) Maps showing where each PCT is proposed to be rehabilitation
 - d) Maps showing the location where threatened species habitat or threatened species individuals are proposed to be rehabilitated

The proponent should provide conceptual information on the above matters, but it should be clear that these details are to be finalised in the MOP as is the current practice.

5. After consultation with industry, provide broad, but not exhaustive guidance on the level of justification required and the types of information/evidence that should be included in the BDAR to justify the that the proposed ecological rehabilitation works and completion criteria are reasonable and feasible.

4 Section 3 Ecological Rehabilitation Objectives, Completion Criteria and Performance Indicators

OEH and DRG acknowledge that the completion criteria set out in the draft Ancillary Rules, are at a preliminary stage and that these will be developed in collaboration with industry. NSWMC welcome this approach by OEH and DRG. Given the length of time that this guidance has been anticipated, NSWMC seek a commitment for this work to be given a high priority.

The industry seeks commitment to a clear plan to undertake this work including timeframes and allocated resources. Industry is willing to leverage current research projects, provide in kind support and consider other resources that might support the work of the agencies.

4.1 Objectives and completion criteria

Objective 1 is potentially redundant in that it would be met by addressing objectives 2, 3 and 4, depending on the specific completion criteria and performance indicators that are settled on for these.

Some of the key aspects of the rehabilitation objectives are the terms 'recognisable' and 'self-sustainable'. In addition, terms such as 'characteristic of', 'trending towards' and 'suitable' are used in the completion criteria. All of these terms will require appropriate definition and the ability to be measured and compared against standards/benchmarks. Likewise, the application of the BioNet Vegetation Classification will at times prove difficult until it is properly populated and maintained (see above).

OEH has suggested that:

- 'Recognisable' (part of the composition objective 2) be defined as comprising the flora species listed in the PCT's scientific description in BioNet.
- 'Characteristic of' could be taken to mean a certain proportion of the species recorded for the relevant PCT (based on OEH's floristic plot database); in this the certain proportion might be a percentage of the benchmark value (in BAM) for the PCT. Similar suggestions were made for structure and function objectives.

However it is noted that benchmarks are not currently set at PCT level; rather they are set at the class by IBRA Region level, which means that the true benchmark for a particular PCT could be significantly different to the current Biodiversity Assessment Method (BAM) benchmark and therefore entirely irrelevant, or mostly by chance, it could be representative. All of this has merit, and in principle is probably an appropriate way in which to address this matter, however there is a significant body of work that will be required to ascertain if this is an appropriate pathway and then to undertake the necessary work.

Other issues with regard to Table 1 of the draft Ancillary Rules are as follows:

- The ability to use local reference sites/local data should be incorporated into the Ancillary Rules/table.
- Objective 2 might benefit from including the term 'trending towards' along with 'is recognisable'.
- Objective 4, completion criterion "Animal biodiversity (resources) is characteristic of the target plant community type(s)". It is not clear what this assessed against. The Ancillary Rules need to identify the 'benchmark' list of animal species/resources.

- The Ancillary Rules (including the table) should clearly state that translocation and propagation, under appropriate circumstances, are not prohibited and that such species-credit-species can be included in the generation of credits.
- Objective 6 should have ‘from fixed monitoring plots’ terminology in the performance indicators reassessed. If the threatened flora species is occurring outside of a fixed plot this is still a good outcome. The need for it to occur in a fixed monitoring plot is only of relevance in relation to tracking its growth/establishment.

4.2 Performance indicators

In all cases the performance indicators appear to be a ‘grab-bag’ of attributes/measures that could be implemented to help ascertain whether the PCT was performing/growing as required. The table will ultimately require firmer guidance on performance measures (or at least suggested measures) to ensure trends can be tested and measured properly and the standards/levels for the performance indicators that need to be achieved to meet the completion criteria.

There is probably more consultation that is warranted over this, and indeed it might be best that for now this document provides a draft list of completion criteria and performance indicators, but the detail is developed over the coming 12-18 months as part of further OEH/government analysis, industry investigation and leveraging existing industry research projects.

Recommendations

6. In consultation with industry OEH should resolve a final list of objectives and completion criteria. OEH should develop a plan for carrying out this work including:
 - a. What additional information is necessary and how this will be obtained
 - b. What OEH data needs to be updated in order to support this work and a plan to do this
 - c. Timelines and commitment of resources.
7. The following issues should be addressed in Table 1:
 - a. Explicitly acknowledge the ability to use reference sites/appropriate local data
 - b. Add ‘trending towards’ to Objective 2
 - c. Identify the ‘benchmark’ list of animal species/resources required to be addressed through Objective 4.
 - d. Explicitly acknowledge that translocation and propagation are not prohibited and that such species-credit-species can be included in the generation of credits.
 - e. Reassess the terminology in Objective 6, ‘from fixed monitoring plots’.
8. OEH and DRG should commit to working with industry over a period of time to better define performance indicators and performance measures/standards.

5 Section 4 Method to calculate the biodiversity credit value of mine site ecological rehabilitation

The method that is proposed in Section 4 of the Ancillary Rules is suitable in principle, and readily followed and applied.

5.1 Proponents to specify gain levels

The method allows proponents to specify higher or lower gain levels (and therefore credit generation) for rehabilitation. There would be merit in this approach, as the proponent can be more, or less, ambitious in relation to the gain/improvement of rehabilitation over time, if that was reflected in different completion criteria. However, OEH noted in a recent workshop that rehabilitation would still need be measured against whether or not the PCT is recognisable and self-sustaining, no matter what the gain values are. The way in which this is likely to be (and should be) done will be through an assessment against criteria that are not BAM criteria, that is, they will relate to other data collected such as floristic data, and other biophysical data.

NSWMC's understanding is that the election of the level of gain should have allowed proponents to manage risk. However this is not the outcome of the Ancillary Rules and the only way to reduce risk is by dedicating less area of land to ecological rehabilitation. In these circumstances setting a standard maximum credit gain from ecological rehabilitation would be the most appropriate outcome.

Recommendation

9. OEH consider setting a standard credit per hectare gain from ecological rehabilitation and consult further with industry regarding a proposed approach.

6 Section 4.2 Application of the BAM

6.1 Biodiversity Stewardship Agreement following completion of rehabilitation

Section 4.2 of the Ancillary Rules contains a number of amendments to section 13 of the BAM that are to be applied in determining the credit value of proposed mine site ecological rehabilitation. The amendment to section 13.2 of the BAM states that 'once the ecological rehabilitation is complete and the mining lease is relinquished the landowner (which may continue to be the proponent), can seek to secure the site under a Biodiversity Stewardship Agreement'.

The eligibility to enter into a Biodiversity Stewardship Agreement over rehabilitated land should not be linked to relinquishment of a mining lease. Ecological rehabilitation of certain areas within a mining lease may be completed years before a mining lease is relinquished. Therefore the eligibility to enter into a Biodiversity Stewardship Agreement should arise following successful completion of rehabilitation activities on land (that is, by achieving the rehabilitation objectives applicable to that land/domain) as reported in the MOP, irrespective of the status of the mining lease.

Recommendation

10. Amend section 4.2 to ensure that areas of rehabilitation are eligible to be secured under a Biodiversity Stewardship Agreement prior to relinquishment of a mining lease over the area.

7 Other issues

7.1 The Ancillary Rules and the Environment Protection and Biodiversity Conservation Act 1999 (Cth)

Definition of threatened species and threatened ecological community Section 5 of the Ancillary Rules ('Glossary') defines a number of terms used throughout the Ancillary Rules including 'threatened species' and 'threatened ecological community'. The definitions of threatened species and threatened ecological community are broader than the BC Act as they include not only the species/ communities listed in the BC Act, but also include any additional species or communities listed under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth)(EPBC Act). We note that the BAM definitions also include EPBC Act listed ecological communities and species.

We assume given the inclusion of EPBC Act listed species/communities that the Commonwealth is satisfied that compliance with the Ancillary Rules will also be sufficient to offset (in full or in part) the impacts of a development on any Commonwealth listed species/communities in the event that a development is a 'controlled action' under the EPBC Act.

Recommendation

11. OEH should seek the Commonwealth's approval of the Ancillary Rules and address as soon as possible any challenges that might arise in applying the rules.