

Our Ref: Mining Submission/1602A

16 February 2018

Director
Resources Policy
Department of Planning & Environment
GPO Box 39
Sydney NSW 2001

Dear Sir/Madam

Re Improving mine rehabilitation in NSW - submission

We have reviewed the discussion paper on Improving mine rehabilitation in NSW noting that its main purpose is to form a policy framework to inform the assessment of final mining voids. The discussion paper seeks feedback on:

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

In general we support the proposals put forward in the discussion paper. However, there are a number of areas where we believe a number of actions need to be undertaken on a regional basis and not on an individual mine basis. For example, successful biodiversity outcomes can only be achieved if rehabilitation plans take into consideration adjoining properties and potential to link rehabilitation plans across a broader area. This also applies to locations of final land forms and final voids in relation to adjoining boundaries.

Our submission is based on our experience in The Hunter Valley over the past 25 years looking into the impacts and relationships between mining, tourism, the wine industry and urban development for State Government agencies, Local Government and private developers.

Work done by us during the late 1990s for the then Department of Urban Affairs and Planning and Department of Mineral Resources in the Upper Hunter specifically addressed these issues (The Upper Hunter Cumulative Impact Study and Action Strategy 1997, and the Synoptic Plan Integrated Landscapes for Coal Mine Rehabilitation, 1999). These documents have broader application to other mining areas in NSW. In addition as part of our recent work into mitigation measures for villages impacted by mining in Singleton LGA we have done further research into overseas practice, specifically in Europe and the UK. Again these examples have relevance to places such as the Hunter Valley where open cut mining has been carried out close to urban areas.

We provide the following submission on improving mine rehabilitation for the Department's consideration.

It is noted from the discussion paper that communities are increasingly highlighting that opportunities for beneficial use and backfilling should be considered in determining the acceptability of a final void management proposal. It is also noted that best practice is required for the proposed rehabilitation of the final void.

Mining is a complex operation. By its nature, most mining operations can have long-term impacts on the surrounding community. A more integrated approach that looks at potential ways of mitigating those impacts during mining and post mining is required.

Mining operations generally propose a rehabilitation plan for the site based on the most cost effective rehabilitation. This is generally due to a number of issues including:

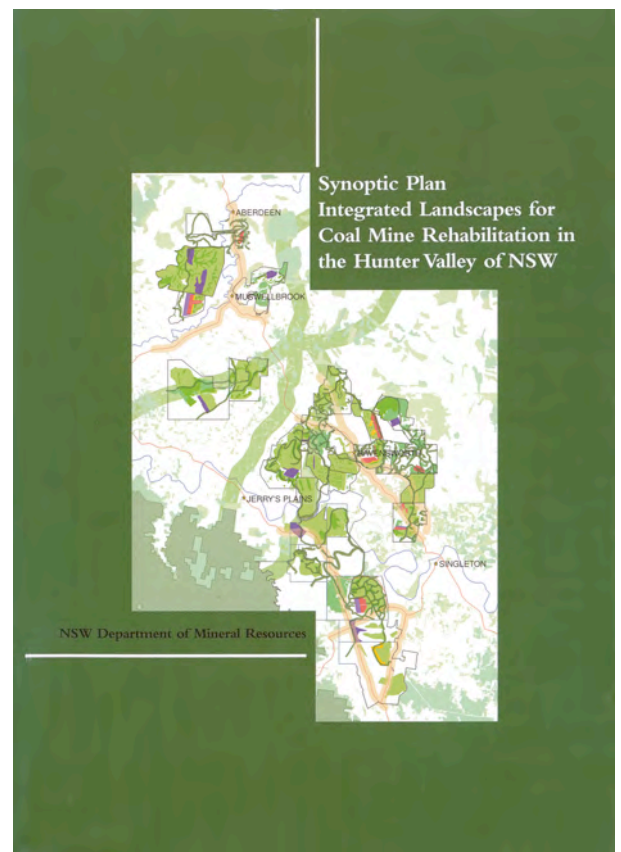
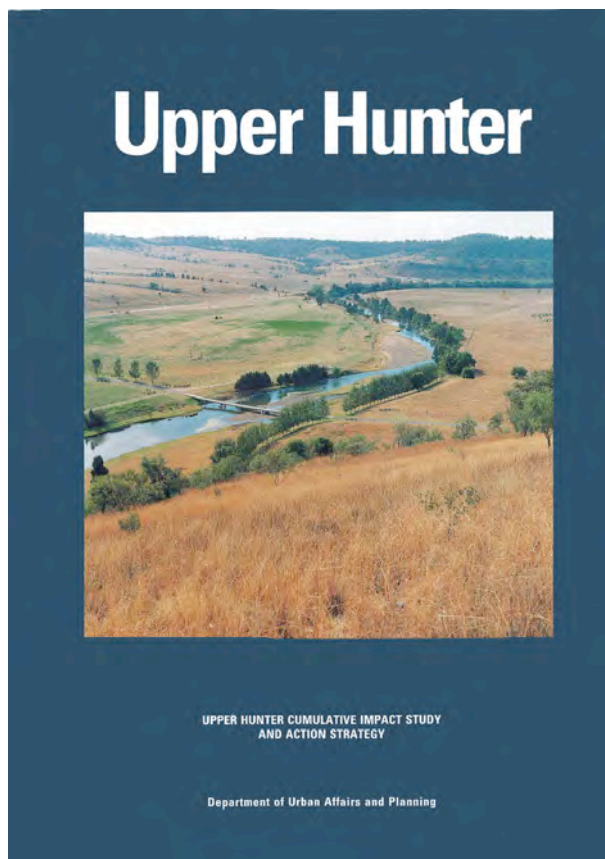
- Mining operators are in the business of mining and not rehabilitation.
- Mining approvals generally extend over a long time frame.
- Because of the long time frames, best practice can significantly change from the time of the approval to the rehabilitation stage.
- Processes required to amend approval conditions for mining operations.
- Current thinking is just to rehabilitate the site to its generally former agricultural or primary land use.
- Possible higher costs associated with providing a different end use.

The Upper Hunter Cumulative Impact Assessment (1996) previously mentioned and shown below was the first attempt to address possible impacts from open cut mining on a regional basis and establish a number of regional indicators and actions that should be implemented including processes for consultation between stakeholders.

The Synoptic Plan (1999) also previously mentioned and shown below provides a basis for community and industry debate on opportunities for enhancement of the regional landscape. The plan was based on plotting proposed end use mining plans for all approved mines at that time into a coordinated GIS and then reviewing potential to create environmental corridors across that area. This was then used as a base for mining operators and the Department of Mineral Resources to coordinate mining rehabilitation plans. Importantly, the plan also recommended rehabilitating land back to Woodland forest rather than pasture grass, noting that grazing land had been the previously standard approach. The report was able to demonstrate rehabilitating to Woodland was cost effective and could lead to improving environmental outcomes.

There are numerous stakeholders involved in the management throughout a region. However, the rehabilitation of mine sites has been dealt with on an individual basis without regard to consider regional opportunities. The Synoptic Plan states that an integrated approach can determine optimum end land use strategies for mine holdings with regard to the location and characteristics of the particular mine site.

Further, the Synoptic Plan (1999) states that there must remain in any prescription for the treatment of mining landscapes, some provision for flexibility. Such flexibility is necessary in order to realise alternative afteruse potential. Guidelines must be used for the treatment of final voids to address the priority issue of risk/safety for the public and for after-use operators.



There are a number of successful overseas examples where mining restoration has successfully incorporated interpretive, heritage, biodiversity and visual landscape on a relatively large scale, and apparently lead to improved relations between mining interests and other community interests.

These examples of successful rehabilitation of mines have used different techniques and created facilities for its communities contributing towards its visual amenity and regional economy.

America has legislative requirements that mining companies must restore the land affected to a condition of supporting uses of which it was capable of supporting prior to any mining or higher or better uses. The final void must be as small as possible. There are other rehabilitation works overseas that has shown if it is undertaken with innovation and skill, the void can ultimately be turned into an asset. The final mine landscape could incorporate features such as a sculpture park, recreational facilities including walking trails, boardwalks and edible forests to name a few and become community assets.

Some examples from around the world that have incorporated various approaches to rehabilitation providing significant social and environmental benefits include (source – PAA Design – Singleton Village Master Plan):

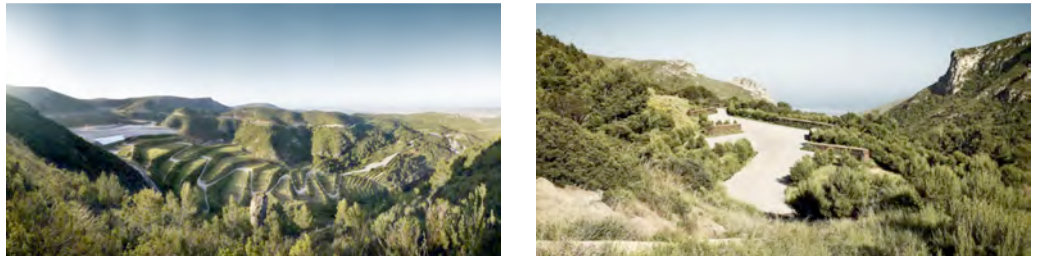
Eden project -
Cornwall, UK



Garden Quarry -
Chenchan, China



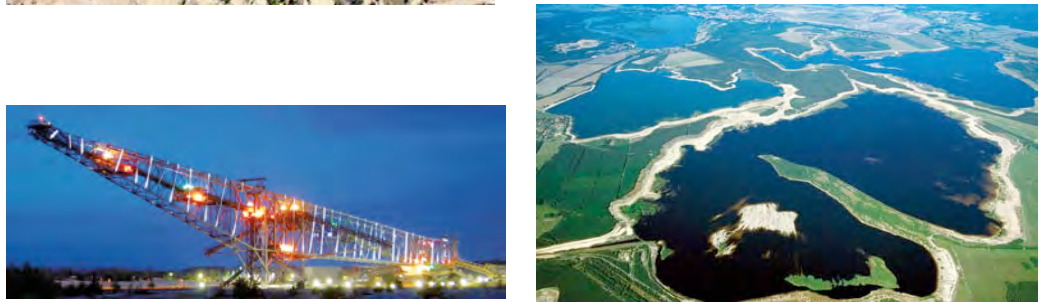
Garraf National
Park - Barcelona,
Spain



Lake Zwenkau -
Zwenkau
Germany



Knappensee a
lake near
Hoyerswerda
and the
Senftenberger
See in Germany



Another successful example is Northumberlandia (the "Lady of the North"), which is a huge land sculpture in the shape of a reclining female figure, which was completed in 2012, near Cramlington, Northumberland, northern England designed by landscape architect Charles Jencks for a cost of 2.5 million pounds. The cost was borne by the Blagdon Estate (adjoining landowner) and the Banks Group, owner of the adjoining open cut mine. The project has become a world-renowned visitor attraction and demonstrates that for a relatively modest investment, major community benefits can be achieved.

The proposal came about as part of a planning application for a new surface mine. The Banks Group and the landowner Blagdon Estate decided to create something unique which would enhance the positive social and economic impact of the project on the surrounding area. The company adopted a "Restoration First" strategy to the scheme, taking an extra piece of land donated by the landowner, adjacent to the mine and providing a new landscape for the community to enjoy while the mine is still operational. It was built from carefully selected material taken from the open cut mine.

The site comprising the large sculpture and walks is a tourist attraction. It also provides information and a viewing platforms of the adjoining working open cut mine. Responsibility for managing the sculpture and the land form is now with the Land Trust, a national organisation. The cost to visit is the donation of a gold coin.





(Source: 2017 PAA Design image library)

In conclusion, we support the proposals outlined in the discussion paper. In response, we also feel that land rehabilitation, treatment of final voids and post mining land uses should be developed within a regional framework rather than on a mine by mine basis. This should consider integrating land rehabilitation across multiple land ownerships, for example in creating regional and local biodiversity corridors. In the case of the Synoptic Plan (1999), this included mining rehabilitation and biodiversity corridors through adjoining power station sites. This provided continuity in the corridor and at the same time, created a source for power stations to meet their biofuel targets.

In general, rehabilitation needs to consider:

- Final voids - back filling is supported where feasible, however there should be attempts to link voids, partially filling with more natural landscapes with reshaped engineering water courses should also be encouraged.
- Integration of rehabilitation should be undertaken on site and on adjoining sites.
- Be part of a strategic approach across the whole region and not on a case by case basis.
- Incorporate principles based on reducing visual landscape impacts and restoring landscape character, at the same time integrating visual landscape improvements with environmental and safety outcomes.
- Alternative end uses post mining e.g. uses that will benefit the community and not just what was there previously or what are permissible on the adjoining lands.
- An integrated approach to rehabilitation / complimentary land uses during the life of the mine and not at the closure of the mine.

Opportunities that could be considered:

- Be part of a strategic approach across the whole region and not on a case by case basis. Rehabilitation to be brought back onto the agenda as being a multi agency and community strategic matter.
- Implement best practice but should be subject to the time of the rehabilitation and not only at the approval stage.
- Sell the site with options to rehabilitate for social benefit.
- Bonus options for rehabilitation undertaken on a staged basis that provides social benefits.
- Consideration of the rehabilitation as part of the community benefit. Instead of one off VPAs to provide community facilities such as playgrounds, shade structures, incorporate this community benefit as part of a staged rehabilitation program, i.e. providing larger community assets as part of the rehabilitation and within a reasonable time frame.
- Focus on key outcomes for the region and strategically identifying possible end land uses subject to the surrounding land uses and what would be beneficial for the region and local community as a whole.
- A portion of royalties paid by mine operators to State Government to be incorporated into a Mine Restoration Fund that could be used to assist the rehabilitation of mine sites with the mine operator for a better unique community benefit.

We believe this is an important opportunity to broaden the positive outcomes from mining activities. Successful case studies can be seen from overseas as outlined above and the Synoptic Plan.

Yours faithfully,

Vanessa Colclough
Director

Peter Andrews
Director

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