

# Upper Hunter Mining Dialogue

Final and Temporary Rehabilitation Principles and Commitments

REPORT BY MACH ENERGY  
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## Final and Temporary Rehabilitation Principles and Commitments

### Introduction

The nine coal producers of the Upper Hunter, through the Upper Hunter Mining Dialogue have agreed to this set of principles and commitments with regard to final and temporary rehabilitation. The Principles and Commitments have been developed with advice and guidance from the UHMD Joint Working Group – Land Management which is a stakeholder and industry group.

The Upper Hunter Mining Dialogue has two five-year goals with regard to land management:

- *Goal 1 To decrease the time that disturbed areas are left without final or temporary cover, recognising that different mining operations are at different points in rehabilitation.*
- *Goal 2 To achieve a consistent level of best practice, quality, integrated rehabilitation – both within the industry and with future land uses - across the Upper Hunter and to be a responsible steward of the land.*

The primary focus of the Rehabilitation Principles and Commitments is to contribute to Goal 1. A number of other projects are underway to progress Goal 1. The industry participants in the UHMD acknowledge the importance of clear goals for rehabilitation developed through consultation with community and regulators, continuing to improve rehabilitation techniques and sharing innovative and successful rehabilitation techniques within the industry. Projects under Goal 2 focus on continuous improvement of rehabilitation practices.

### Principles and Commitments

The Upper Hunter coal producers will publicly report against the Principles and Commitments on an annual basis. The reporting will be aggregated by the NSW Minerals Council and shared with the community. Table 1 sets out the six principles and provides a description of how each will be reported against.

**Table 1 – Principles and Commitments**

Principle	Reporting
<p><b>Principle 1 – Include rehabilitation planning in mine planning</b></p>	<p>MACH Energy has undertaken a review of the final landform design as a result of preparation of Modification 3. This review has been undertaken in consultation with MSC, the community and other stakeholders including the Mining Services Contractor. MACH Energy plan to engage qualified and experienced rehabilitation/biodiversity experts to review the proposed final landform.</p>
<p><i>Planning for rehabilitation should be integrated into the mine planning process and should include allocating adequate and dedicated resources to achieve the planned rehabilitation outcomes.</i></p>	
<p><b>Principle 2 – Undertake progressive rehabilitation</b></p>	<p>Mining commenced in November 2017. No mine rehabilitation was undertaken during the reporting period. Progressive rehabilitation is planned for 2018 as the overburden emplacement is constructed.</p>
<p><i>Companies should undertake rehabilitation progressively, with the objective of ensuring that rehabilitation is as close as possible to active mining.</i></p>	
<p><b>Principle 3 – Minimise time that disturbed areas are left without vegetation</b></p>	<p>Temporary rehabilitation, including hydro mulching and seeding of temporary landforms (e.g. mine access roads) is undertaken at Mount Pleasant. This is done across the site to minimise dust and reduce erosion and sediment management.</p>
<p><i>Companies should actively seek to minimise the time that land is left without cover during mining. This should include:</i></p> <ul style="list-style-type: none"> <li>▪ <i>Taking steps to ensure that rehabilitation is commenced within 12 months of land becoming available for rehabilitation</i></li> <li>▪ <i>Utilising methods of temporary rehabilitation<sup>1</sup>, such as aerial seeding of over burden and other disturbed areas where permanent rehabilitation has not commenced.</i></li> </ul>	
<p><b>Principle 4 – Prioritise areas of rehabilitation and temporary cover to reduce impacts</b></p>	<p>Temporary rehabilitation, including hydro mulching and seeding of temporary landforms (e.g. mine access roads) is undertaken at Mount Pleasant. This is done across the site to minimise dust and reduce erosion and sediment management.</p>
<p><i>Companies should prioritise rehabilitation and temporary cover in those areas where leaving land exposed will have the most impact. The following areas should be considered to have priority:</i></p> <ul style="list-style-type: none"> <li>▪ <i>Areas that have the greatest impact</i></li> </ul>	

<sup>1</sup> Temporary rehabilitation describes reshaping, revegetation and other rehabilitation techniques that are used for purposes other than final rehabilitation. This includes such initiatives as seeding overburden emplacement areas to reduce erosion, which are only temporary.

Principle	Reporting
<p><i>on visual amenity, such as areas that face townships, residences, or the highway</i></p> <ul style="list-style-type: none"> <li>▪ <i>Areas that have the potential to generate dust leaving the site</i></li> <li>▪ <i>Areas that are important for biodiversity, such as rehabilitation adjoining or providing connectivity to remnant vegetation.</i></li> </ul>	
<p><b>Principle 5 – Meet target for rehabilitation progress identified in the Mining Operations Plan</b></p>	<p>Mining commenced in November 2017. No mine rehabilitation was undertaken during the reporting period.</p>
<p><i>Each company should meet the annual target for rehabilitation quantity (area) set in the Mining Operations Plans for each of its mines.</i></p>	<p>In 2018, rehabilitation is proposed to commence on areas of the overburden emplacement as they become available. 33.5 ha is planned for the MOP term.</p>
<p><b>Principle 6 – Set quality targets for rehabilitation in the Mining Operations Plan and implement a monitoring program to measure performance</b></p>	<p>No rehabilitation or monitoring has commenced at Mount Pleasant.</p> <ul style="list-style-type: none"> <li>• <i>In 2018, MACH Energy plan to undertake field investigations to identify appropriate control/reference sites for each secondary rehabilitation domain and collect monitoring data from which completion criteria will be developed. Parameters to be investigated in the identified control/reference sites would be subject to input from a suitably qualified and experienced rehabilitation/biodiversity expert but may include:</i> <ul style="list-style-type: none"> <li>- <i>Composition of key overstorey and ground cover species.</i></li> <li>- <i>Recruitment and succession of long-lived and short-lived species.</i></li> <li>- <i>Vegetation community structures.</i></li> <li>- <i>Canopy cover.</i></li> <li>- <i>Weed presence.</i></li> <li>- <i>Water quality (where relevant).</i></li> <li>- <i>Chemical properties of soil profile (e.g. pH, salinity, nitrogen, potassium, phosphorous).</i></li> <li>- <i>Biological properties of soil profile (e.g. organic carbon, presence of A horizon).</i></li> </ul> </li> <li>• <i>Development of an appropriate monitoring programme and TARPs based on the SMART completion criteria developed.</i></li> </ul>
<p><i>Each company should include quality targets for the various types of rehabilitation in the Mining Operations Plan for each of its mines. A monitoring program to measure the performance of rehabilitation areas against the quality targets should be implemented at each of its mines.</i></p>	

### Contextual information

<p><i>This section provides an opportunity for each company to provide some commentary or contextual information regarding their reported results. Such information could include advice on:</i></p> <ul style="list-style-type: none"><li>- <i>Any material changes to the site (i.e. expansions, acquisitions, or divested assets);</i></li><li>- <i>Why any figures may have changed since the last reporting period</i></li></ul>	Not applicable
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### Future rehabilitation priorities

<p><i>This section provides an opportunity for each company to provide details on rehabilitation activities at their site/s for the upcoming year.</i></p>	<p>MACH Energy has undertaken a review of the final landform design as a result of preparation of Modification 3. This review has been undertaken in consultation with MSC, the community and other stakeholders. In conjunction with this review, MACH Energy has engaged qualified and experienced rehabilitation/biodiversity experts to review the MPO area and proposed final landform to identify appropriate final land uses and rehabilitation objectives.</p>
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