

# Upper Hunter Mining Dialogue

Final and Temporary Rehabilitation Principles and Commitments

REPORT BY GLENCORE  
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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><i>Narrative</i> – how has this been done in the last period</p>   |
| <p>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.</p> | <p>Each operational Glencore mine site in NSW prepares and Annual Rehabilitation and Land Management Plan (ARLMP), which aligns with statutory requirements such as those outlined in Project Approvals and Mining Operations Plans.</p> <p>The ARLMP details the current status of rehabilitation at each site, a proposed rehabilitation program for the following budget (calendar) year, and how the mine’s annual rehabilitation program integrates with longer term (life-of-mine) plans and aligns with the approved final landform and land use for the site.</p> <p>The preparation of the ARLMP commences as part of the annual budget cycle. As part of the annual budget process, sites develop rehabilitation targets (areas) and allocate sufficient resources (human, capital and equipment) in the site’s budget to meet targets.</p> <p>Each site’s ARLMP outlines the interaction between the environmental and other mining departments, such as mine planning and operations (production) to work co-operatively to achieve rehabilitation targets and projects.</p> <p>Progress against rehabilitation targets for each site is tracked monthly throughout the year by Glencore and Key Performance Indicators (KPI’s) have been established for rehabilitation planning, progress and performance. Rehabilitation KPI’s apply to all relevant mining departments including mine planning, environment and production.</p> |

| Principle  | Reporting   |
|--|---|
| <b>Principle 2 – Undertake progressive rehabilitation</b>  | <i>Narrative</i> – how has this been implemented in the last twelve months  |
| <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>Glencore’s life of mine and annual rehabilitation planning processes place strong emphasis on minimising the area of disturbance at any one time, recognising that sufficient area is required to provide for safe and efficient mining operations.</p> <p>As part of annual life of mine planning and preparation of the ARLMP, each mine is required to calculate the area of land available for rehabilitation (i.e. land that is no longer required for mining purposes). For the upcoming budget year, a greater level of detail is provided and available areas are identified across disturbance categories, including inactive/unshaped dumps, shaped dumps, redundant infrastructure areas and tailings or reject emplacement areas. Rehabilitation targets are then established in consideration of identified available areas. However, as minimum each mine is required to meet commitments specified in the mine’s Mining Operations Plan.</p> <p>During 2013 a total of 498ha was seeded across Glencore’s mines in NSW. This exceeded our NSW group seeded target by 40ha. Approximately 446ha (90%) of this seeded total was completed at Glencore’s Upper Hunter Valley mines, including Mt Owen, Glendell, Liddell, Ravensworth, Bulga and Mangoola.</p> |
| <b>Principle 3 – Minimise time that disturbed areas are left without vegetation</b>  | <i>Narrative</i> – how has this been implemented in the last twelve months  |
| <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>Rehabilitation is scheduled and targets set to provide for final (permanent) rehabilitation to commence as soon as practicable after disturbed areas become available (refer to comments for Principles 1 and 2).</p> <p>In accordance with Principle 4 below, temporary rehabilitation methods are applied in some cases to areas that are not yet available for final rehabilitation.</p> <p>Glencore undertook aerial seeding across 215ha of disturbed land at its Hunter Valley mine’s in 2013 to establish a temporary vegetation cover on overburden dumps.</p>   |

<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><b>Principle 4 – Prioritise areas of rehabilitation and temporary cover to reduce impacts</b></p>  | <p><i>Narrative</i> – how has this been implemented in the last twelve months</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 on visual amenity, such as areas that face townships, residences, or the highway</i></li> <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>Glencore aims to rehabilitate disturbed areas as soon as practicable to assist in improving amenity and reducing dust impacts.</p> <p>As part of the ARLMP, each mine is required to outline its strategy and progress to date to mitigate visual impacts of its mining and infrastructure areas, including details of rehabilitation and revegetation programs inside and outside mining lease areas.</p> <p>Examples of measures undertaken across Glencore mines in 2013 to complement existing measures in place and reduce impacts on priority areas included:</p> <ul style="list-style-type: none"> <li>- Progressive rehabilitation on outer slopes of overburden dumps at Mangoola mine, which are visible from public roads to the north of the mine.</li> <li>- 134ha of temporary rehabilitation (aerial seeding) of overburden dumps at Bulga Mine for visual and dust mitigation</li> <li>- Installation of tree screens at Ravensworth Complex to screen views from the surrounding road network including the New England Highway and Lemington Road.</li> </ul> |
| <p><b>Principle 5 – Meet target for rehabilitation progress identified in the Mining Operations Plan</b></p>  | <p><i>Quantitative</i> – report MOP target and actual rehabilitation</p> <p><i>Narrative</i> – explanation of performance</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>The combined 2013 MOP target for Glencore's Upper Hunter Valley mines, including Mt Owen, Glendell, Liddell, Ravensworth, Bulga and Mangoola was 437 ha. This target was exceeded with 446 ha being seeded across these sites in 2013.</p> <p>All individual mines met or exceeded MOP targets, with the exception of Ravensworth open cut. Ravensworth fell short of its MOP commitments due to changes in the mine plan, which meant that all planned rehabilitation areas did not become available during the year. An amendment to the MOP will be made to incorporate changes to the mine plan (progression of mining).</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><i>Narrative</i> – summary of quality targets for the various rehabilitation types; and summary of monitoring program scope and status.</p>  |

| Principle  | Reporting  |
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| <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> | <p>Mining Operations Plans and/or rehabilitation management plans for each mine include rehabilitation objectives and performance criteria.</p> <p>As required by Approval conditions, monitoring programs are in place to measure landform, flora and fauna attributes over time. This provides a means to assess the quality of rehabilitation works and continually assess performance against rehabilitation criteria.</p> |