

# **MINING OPERATIONS (RIX'S CREEK MINE)**

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## **LANDSCAPE MANAGEMENT PLAN**

<b>Ver</b>	<b>Date</b>	<b>Description</b>	<b>By</b>	<b>Chk</b>	<b>App</b>
1	17/2/10	Original Draft	JH	KH	SD
2	18/3/10	Draft Rix's Creek	JH	KH	SD

# BLOOMFIELD COLLIERIES Pty Ltd

## Landscape Management Plan

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<b>CONTENTS</b>	CONTENTS	2
	INTRODUCTION	2
	PURPOSE	3
	SCOPE	3
	REGULATORY ASPECTS	3
	LANDSCAPE MANAGEMENT PLAN	3
	REHABILITATION MANAGEMENT PLAN	5
	FINAL VOID MANAGEMENT PLAN	5
	MINE CLOSURE PLAN	5
	CONSULTATION	5
	AUDIT AND REVIEW	6
	GENERAL CONDITIONS OF REVIEW	6
	APPENDIX 1 – QUALIFIED EXPERTS	
	APPENDIX 2 – LETTER OF APPROVAL- DPE	
	APPENDIX 3- EVIDENCE OF CONSULTATION	

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### **INTRODUCTION**

This landscape management plan (LMP) has been prepared in response to Notice of Modification to Development Consent (DA 49/94 MOD 4) granted under Section 96(2) of the Environmental Planning and Assessment Act, 1979 (EP&A).

The LMP takes into consideration the Environmental Impact Assessment for the Proposed Modification of Mining Operations – Rix’s Creek Coal Mine ( 1995) and Environmental Assessments for previous modifications, along with various conditions outlined in schedule 2 of the consolidated 1995 consent as modified.

The Bloomfield Colliery and Rix’s Creek Colliery are separate operations which collectively operate under the Bloomfield Group Mining Operations Management System (BGMOMS). Under the BGMOMS, systems are put in place to cover all operations. The LMP will comply with concept with any site specific requirements added to the management plans as required and included in an attachment to the document.

The preparation of a LMP is a development consent requirement of both operations. There are three (3) key components to the LMP. These components include the following management plans:

- Rehabilitation Management Plan
- Final Void Management Plan
- Mine Closure Plan

The LMP has been prepared in consultation with key government departments and agencies and addresses issues raised during the environmental assessment process.

The LPM has been prepared by qualified experts whose appointment was approved by the Department of Planning (DoP). A copy of the approval letter from DoP is attached as Appendix 1.

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# BLOOMFIELD COLLIERIES Pty Ltd

## Landscape Management Plan

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### PURPOSE

The purpose of the Land Management Plan is to:

- Address the relevant conditions of the development consent;
  - Address the relevant commitment made within the Environmental Assessment;
  - Address legislative requirements and guidelines relevant to the LMP and related management plans; and
  - Provide Bloomfield Group with a clear and concise description of their responsibilities in relation to Landscape Management (including Rehabilitation, Final Void Management & Mine Closure) during the operation and subsequent closure of the Bloomfield group mining operations.
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### SCOPE

The Landscape Management Plan outlined in this document applies to Bloomfield Group mining operations which include both Bloomfield and Rix's Creek Collieries.

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### REGULATORY ASPECTS

Approval was granted by the Minister for Planning on 19 October 1995 for the Construction and Operation of Surface Coal Mine Extensions at Rix's Creek Coal Mine. The Minister approved a modification to the above approval on 27 August 2009 for the Rix's Creek Mine Cut and Cover Tunnel, under Part 4 of the Environmental Planning and Assessment Act, 1979. The relevant conditions from Schedule 2 relating to landscape management are reproduced below:

#### *Landscape Management*

*16A. The Applicant shall prepare and implement a detailed Landscape Management Plan for the development to the satisfaction of the DII and the Director-General. This plan must:*

- (i) be prepared in consultation with DECCW, the Office of Water and Singleton Shire Council by suitably qualified expert/s whose appointment/s have been approved by the Director-General;*
  - (ii) include a:*
    - Rehabilitation Management Plan to be submitted for approval by the Director-General by 31 March 2010;*
    - Final Void Management Plan to be submitted for approval by the Director-General by 31 December 2011; and*
    - Mine Closure Plan to be submitted for approval by the Director-General by 31 December 2011.*
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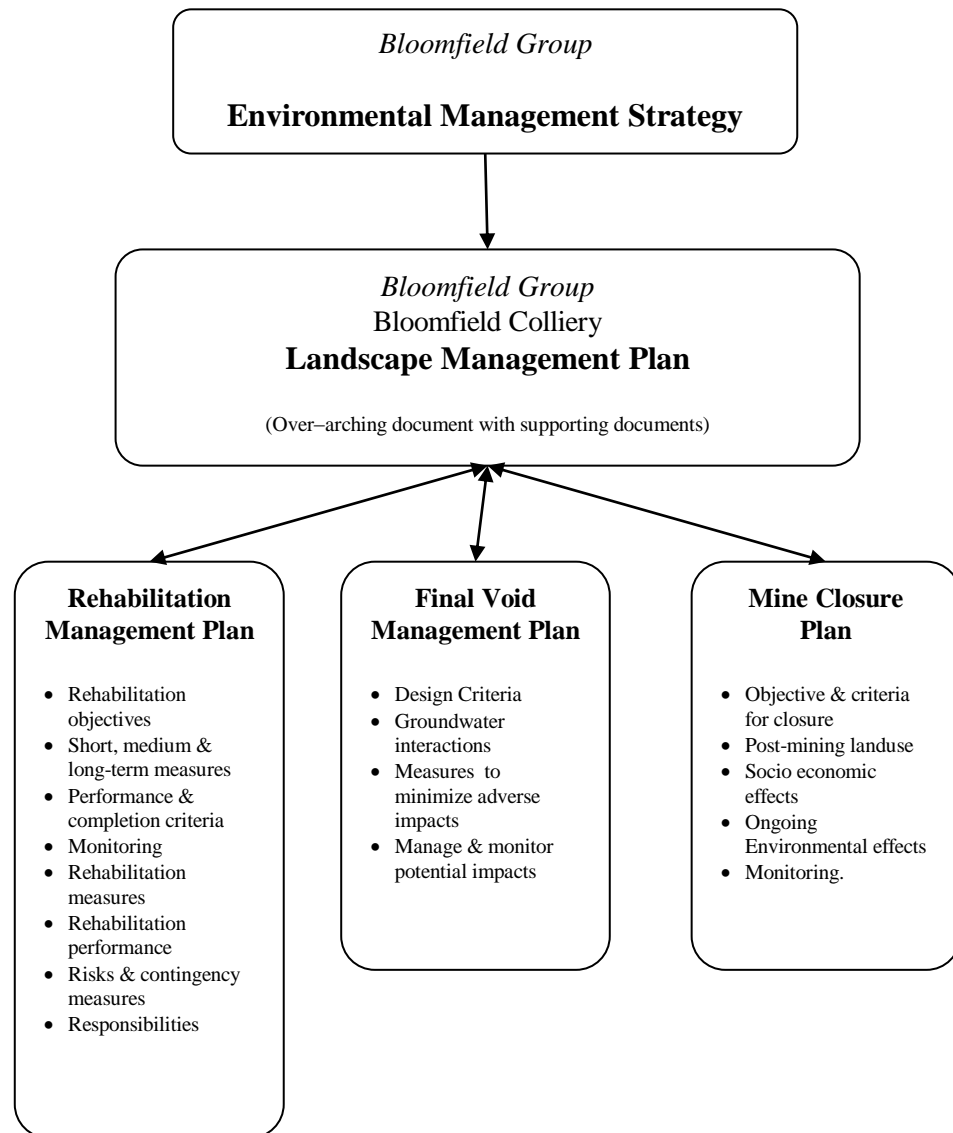
### LANDSCAPE MANAGEMENT PLAN

The LMP establishes a framework for all rehabilitation and mine closure related issues. It includes the development and implementation of management plans, procedures and reporting requirements.

The LMP is made up of three (3) separate management plans including:

- Rehabilitation Management Plan - (to be submitted for approval by Director General (Planning NSW) by 31 March 2010)
  - Final Void Management Plan - (to be submitted for approval by Director General (Planning NSW) by 31 December 2011)
  - Mine Closure - (to be submitted for approval by Director General (Planning NSW) by 31 December 2011)
- 
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The Bloomfield Group Environmental Management Strategy provides a framework for environmental management of the mining operations. Figure 1, shows the relationship between the various components of the LMP.



**Figure 1. Landscape Management Plan structure.**

The following summarises the key aspects addressed in each of the management plans.

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### *Rehabilitation Management Plan*

The Bloomfield Group mining operations will use the current *Land Rehabilitation Management System (LRMS)* document as the basis of the Rehabilitation Management Plan. The Land Rehabilitation Management System (LRMS) was implemented during 2008 by the Bloomfield Group (Bloomfield) to facilitate the preparation, management and sign-off of rehabilitated lands at Bloomfield mining operations.

The LRMS document has been updated as the *Rehabilitation Management Plan (RMP)* to comply with Planning approval requirements for the operations to prepare a *Rehabilitation Management Plan* containing the following:

- Objectives for rehabilitation
  - Short, medium & long-term measures to rehabilitation the development
  - Performance and completion criteria for rehabilitation
  - Monitoring of rehabilitation performance
  - Design measures to be implemented over the next three (3) years to rehabilitate the site
  - Contingencies for risks to successful rehabilitation
  - Outline responsibilities with regard to monitoring, reviewing and implementation of the RMP.
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### *Final Void Management Plan*

Final void management will be managed through the implementation of a Final Void Management Plan (FVMP). The FVMP will include the following:

- Design criteria based on groundwater modelling
  - Interactions between creeks and final voids
  - Propose measures monitor and mitigate potential impacts associated with final voids
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### *Mine Closure Plan*

Mine Closure Plan will:

- Provide objective and criteria for closure
  - Provide options for future use of the site after closure, including final voids
  - Investigate socio-economic effects associated with mine closure
  - Propose measures to manage the environmental impacts of mine closure
  - Outline performance criteria for long-term management of the site.
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### **CONSULTATION**

Rehabilitation planning processes and procedures adopted by the Bloomfield Group have been developed over time in consultation with Department Industry and Investment (and the predecessors). The intent is to ensure that approaches to rehabilitation remain relevant and reflect appropriate standards.

This LMP was developed/ reviewed in consultation with key members of the workforce from both work sites. Table 1 below shows those involved in the development of the LMP.

# BLOOMFIELD COLLIERIES Pty Ltd

## Landscape Management Plan

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**Table 1 Management Team**

<b>Bloomfield Group</b>	<b>Bloomfield Colliery</b>	<b>Rix's Creek Mine</b>
John Richards (Director)	Luke Murray (Deputy Manager)	Garry Bailey (Manager)
Steve Dunn (General Manager Technical Services)	Keren Halliday (EO)	John Hindmarsh (EO)

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### **AUDIT AND REVIEW**

The ongoing effectiveness and efficiency of the landscape management system is monitored as part of the day-to-day operations management. This document will be reviewed in response to changes in operational planning, or in response to changes in regulatory requirements. Feedback from this and other reviews and audits, form the basis for system improvement and re-design.

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#### *General Conditions of Review*

In general Management Systems are reviewed and up-dated conditional as follows:

- Every three years; or
  - Whenever there is a significant change to relevant legislative or regulatory requirements; or
  - Whenever there is a significant change to the operations;
  - If required (in writing) to do so by relevant government departments or through consultation with relevant stakeholders; or
  - Whenever control measures are found to be ineffective either through:
    - ◆ changes to the working environment or
    - ◆ changes to operating systems; or
    - ◆ subsequent risk assessments; or
    - ◆ the findings of an audit; or
    - ◆ following a significant accident/ incident; or
    - ◆ following an assessment of a related safety alert.
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**Appendix 1**

**QUALIFIED EXPERTS**



Planning

Major Projects Assessment  
Mining

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Email: [alison.oreilly@planning.nsw.gov.au](mailto:alison.oreilly@planning.nsw.gov.au)  
Room 305  
23-33 Bridge Street  
GPO Box 39  
SYDNEY NSW 2001

Mr John Hindmarsh  
Environmental Officer  
Rix's Creek Coal Mine  
PO Box 4  
EAST MAITLAND NSW 2323

Our Ref: S03/00462-19

Dear Mr Hindmarsh

**Rix's Creek Coal Mine (DA 49/94)  
Revision of Land Rehabilitation Management System and  
Appointment of Suitably Qualified Experts**

I refer to your correspondence dated 13 October 2009 and 29 October 2009. The Department approves your request to amend your current Land Rehabilitation Management System (LRMS) to reflect the requirements of the Rehabilitation Management Plan, required under 16B of the recent Cut and Cover Modification (DA 49/94 MOD 4).

In addition, the Department is satisfied that the in-house personnel requested, including yourself and Mr Lachlan Crawford, are suitably qualified and experienced to amend the LRMS, and approves these appointments on the basis set out in your correspondence.

If you have any queries, please contact Alison O'Reilly on 9228 6339.

Yours sincerely

David Kitto  
Director  
Major Development Assessment  
as delegate for the Director-General



## **Appendix 2**

### **Letter of Approval – DPE**



Contact: Scott Brooks  
Phone: 6575 3402  
Fax: 6575 3415  
Email: [scott.brooks@planning.nsw.gov.au](mailto:scott.brooks@planning.nsw.gov.au)  
Our ref: DA 49/94

Mr John Hindmarsh  
Environmental Officer  
Rix's Creek Pty Limited  
PO Box 4  
EAST MAITLAND NSW 2323

Dear John

**Rix's Ck – Approval of Management Plans**

Thank you for forwarding a number of management plans for review as required by your mine Approval DA 49/94. We have reviewed the following management plans.

Traffic Management Plan (Condition 9, Schedule 2);  
Water Management Plan (Condition 15, Schedule 2);  
Erosion and Sediment Control Plan (Condition 15a, Schedule 2);  
Landscape Management Plan (Condition 16, Schedule 2), this includes;  
    Rehabilitation Management Plan (Condition 16b, Schedule 2);  
    Final Void Management Plan (Condition 16c, Schedule 2);  
    Mine Closure Plan (Condition 16d, Schedule 2).

The Department has reviewed the management plans identified above and can advise they have been approved by the Director General.

Accordingly, the Department requests that a copy of the management plans marked "final" are forwarded to the Singleton office, by the end of January 2014, as a soft copy for our records.

If you require further information please contact Ann Hagerthy on 6575 3403 or by email to [ann.hagerthy@planning.nsw.gov.au](mailto:ann.hagerthy@planning.nsw.gov.au).

Yours sincerely

Scott Brooks  
**Team Leader Compliance**

*22-1-2014*  
As nominee for the Director-General