

# NORTH WAMBO UNDERGROUND MINE EXTRACTION PLAN LONGWALLS 8 TO 10A

APPENDIX F
PUBLIC SAFETY MANAGEMENT PLAN



# WAMBO COAL PTY LTD NORTH WAMBO UNDERGROUND MINE

# PUBLIC SAFETY MANAGEMENT PLAN LONGWALLS 1 - 10A



PREPARED BY
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# **DOCUMENT CONTROL**

Document No.	WA-MIN-MP-628 (PSMP LW1-10A)	
Title	Public Safety Management Plan for North Wambo Underground Mine Longwalls 1 to 10A	
General Description  A management plan to ensure public safety in the mining Longwalls 1 to 10A at the North Wambo Underground Min		
Key Support Documents	Wambo Coal Health and Safety Management System	

### Revisions

Rev No	Date	Description	Ву	Checked
А	November 2012	Original Draft WCPL and - Resource Strategies		-
В	December 2012	2 Final for Submission WCPL and P. Resource Strategies		P. Fletcher
С	May 2013	Revised to Address DRE Comments	WCPL and Resource Strategies	M. Alexander
D	February 2014	2014 Revised to include WCPL and M. Alexand Longwalls 9 and 10 Resource Strategies		M. Alexander
Е	April 2015	Revised to include Longwall 10A	WCPL and Resource Strategies	M. Millgate

# **Approvals**

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### 1 INTRODUCTION

The Wambo Coal Mine is an open cut and underground coal mining operation located approximately 15 kilometres west of Singleton, near the village of Warkworth, New South Wales (NSW). The Wambo Coal Mine is owned and operated by Wambo Coal Pty Limited (WCPL), a subsidiary of Peabody Energy Australia Pty Limited.

The North Wambo Underground Mine is a component of the approved Wambo Coal Mine. The North Wambo Underground Mine commenced in 2005 and involves extraction of coal by longwall mining methods from the Wambo Seam within Mining Lease (ML) 1402, ML 1594, Coal Lease 397 and Consolidated Coal Lease 743 (**Figure 1**).

The potential environmental impacts of the existing Wambo Coal Mine were assessed in the *Wambo Development Project Environmental Impact Statement* (WCPL, 2003). Development Consent DA 305-7-2003 for the Wambo Coal Mine was granted on 4 February 2004 by the then NSW Minister for Urban Affairs and Planning under Part 4 of the NSW *Environmental Planning and Assessment Act*, 1979.

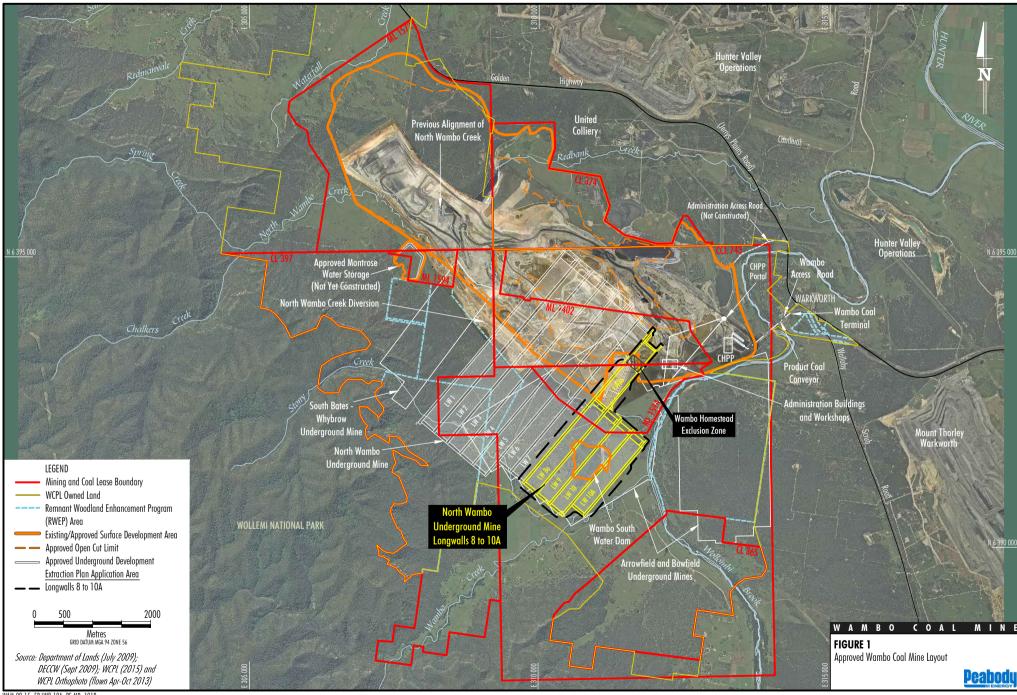
An application to modify the Development Consent (DA 305-7-2003 MOD 2) was lodged in January 2005 to facilitate the re-orientation of the North Wambo Underground Mine longwall panels and allow access to the Wambo Seam via the open cut highwall and was approved on 4 May 2005. The application was accompanied by the *Wambo Development Project – Wambo Seam Underground Mine Modification Statement of Environmental Effects* (WCPL, 2005).

A subsequent application to modify the Development Consent (DA 305-7-2003 MOD 13) was lodged in December 2012 to allow an extension to the approved North Wambo Underground Mine to include two additional longwalls (Longwalls 9 and 10) and was approved on 8 July 2013. The application was accompanied by the *North Wambo Underground Mine Modification Environmental Assessment* (WCPL, 2012).

An application to modify the Development Consent (DA 305-7-2003 MOD 14) was lodged in September 2014 to allow a minor extension to the approved North Wambo Underground Mine to include an additional longwall (Longwall 10A). The application was accompanied by the North Wambo Underground Mine Longwall 10A Modification Environmental Assessment (WCPL, 2014).

A Subsidence Management Plan (SMP) for Longwalls 1 to 6 at the North Wambo Underground Mine (WCPL, 2006) was approved by the NSW Department of Primary Industries – Mineral Resources on 11 December 2006. An Extraction Plan for Longwalls 7 and 8 was approved by the NSW Department of Planning and Infrastructure for Longwall 7 on 16 May 2013 and for Longwall 8 on 24 September 2013. Subsequently, a revised Extraction Plan for Longwalls 7 to 10 was approved by the Department of Planning and Environment (DP&E) on 4 July 2014.

The approved Extraction Plan for Longwalls 7 to 10 has been revised to include the remaining longwall within the North Wambo Underground Mine extent (Longwalls 10A) for a consolidated Extraction Plan for Longwalls 8 to 10A (**Figure 1**).



### 1.1 PURPOSE AND SCOPE

Purpose: This Public Safety Management Plan for Longwalls 1 to 10A at the North Wambo

Underground Mine (PSMP) outlines the management of potential risks to public safety resulting from the proposed secondary workings described in the Extraction Plan for Longwalls 8 to 10A, previous Extraction Plan for Longwalls 7 to 10 and the SMP for

Longwalls 1 to 6.

Scope: This PSMP covers risks to public safety associated with extraction of Longwalls 1 to 10A

at the North Wambo Underground Mine (Figure 1).

Hazards: The primary hazards associated with the extraction of Longwalls 1 to 10A include:

surface cracking;

· ground deformations; and

damaged infrastructure (e.g. power lines, roads and access tracks [including a right-of-wav¹]).

**Risks:** Members of the general public potentially at risk due to the extraction Longwalls 1 to 10A are limited to those accessing WCPL-owned land.

This PSMP has been prepared in accordance with Condition 22C(g) of Schedule 4 of the Development Consent (DA 305-7-2003) as a component of the North Wambo Underground Mine Longwalls 8 to 10A Extraction Plan, Condition 20 of Approval Conditions and Exclusions of the SMP for Longwalls 1 to 6 and Condition 15 of the Approval Conditions of the SMPs for Longwalls 7, 8, 9 and 10 at the North Wambo Underground Mine (dated 22 May 2013, 18 October 2013 and 30 July 2014).

Management plan requirements applicable to the preparation of this PSMP, and where each of these requirements is addressed within this PSMP, are summarised in **Table 1**.

Table 1
Public Safety Management Plan Requirements

	Condition	PSMP Section
Conditio	n 22C(g) of Schedule 4 of Development Consent (DA 305-7-2003)	
sec	e Applicant shall prepare and implement an Extraction Plan for the cond workings within each seam to be mined to the satisfaction of the cretary. Each Extraction Plan must:	
(g)	include the following to the satisfaction of DRE:	
	<ul> <li>a Public Safety Management Plan to ensure public safety in the mining area; and</li> </ul>	Management of potential risks to public safety are addressed in <b>Section 1.3 and 5</b> .

A right-of-way in favour of several private properties (the route of which may be varied on reasonable notice) across WCPL-owned land is situated within the Longwalls 8 to 10A Application Area.

# Table 1 (Continued) Public Safety Management Plan Requirements

		Condition	PSMP Section
		n 20 of the Approval Conditions and Exclusions of the SMP for Is 1 to 6	
20.	20. Public Safety – The Leaseholder must implement a public safety management plan to ensure public safety in any surface areas that may be affected by subsidence arising from longwall mining. This plan must include, but not be limited to, regular monitoring or areas or infrastructure/structures posing safety risks, erection of warning signs, entry restrictions, backfilling of dangerous surface cracks and securing of unstable built structures or rockmass where required and appropriate, and the provision of timely notification of mining progress to the community and any other relevant stakeholders where management of public safety is required. The plan must be developed and implemented to the satisfaction of the District Inspector of Coal Mines.		Monitoring is described in <b>Section 4</b> .  Management of potential risks to public safety are addressed in <b>Section 1.3 and 5</b> , including erection of warning signs, entry restrictions, management of surface cracking and notification to agistees.
Long	gwal	n 15 of the Approval Conditions of the SMPs for Longwall 7, I 8 and Longwalls 9 and 10 (dated 22 May 2013, 18 October 2013 uly 2014)	
15.	15. Public Safety – The Leaseholder must prepare and implement a public safety management plan to ensure public safety in any structures, houses and surface areas that may be affected by subsidence, to the satisfaction of the Director, Mine Safety Operations.  The plan must include, but not be limited to:		Monitoring is described in <b>Section 4</b> .  Management of potential risks to public safety are addressed in <b>Section 1.3 and 9</b> including erection of warning signs, entry restrictions, management of surface
	a)	identification of any areas, man-made structure, facilities and infrastructure, which are hazardous or could become hazardous due to subsidence impacts;	cracking and notification to agistees.
	b)	regular monitoring of areas or infrastructure/structures posing safety risks	
	c)	regular monitoring of stability of any areas with cliff formations and/or steep slopes that may be affected by subsidence	
	d)	measures to prevent, mitigate and promptly remediate hazards and safety risks referred to in (a) above;	
	e)	erection of warning signs;	
	f)	entry restrictions	
	g)	backfilling of dangerous surface cracks;	
	h)	securing of unstable built structures or rockmass where required and appropriate; and	
	i)	provision of timely notification of proposed mining progress to the community and any other relevant stakeholders where management of public safety is required.	
		seholder must not cause subsidence impacts prior to the Public Safety ment Plan being approved.	

In addition to the requirements summarised in **Table 1**, the Draft *Guidelines for the Preparation of Extraction Plans Required under Conditions of Development Consents, Project Approvals and Mining Lease Conditions for Underground Coal Mining* (Version 5) (Department of Planning and Environment and NSW Trade & Investment – Division of Resources and Energy, 2015) requires:

The Public Safety Management Plan must address all potential safety hazards to the public. The scope of the Plan should include management of health and safety risks due to:

- potential subsidence impacts on built features;
- potential instability of cliff formations or steep slopes caused by subsidence;
- deformations or fracturing of any land caused by subsidence, and
- any other impacts of subsidence.

This Plan should address management measures such as:

- monitoring of areas posing safety risks;
- erection of warning signs and possible entry or use restrictions;
- backfilling of surface cracks and/or re-profiling of humps and swales on tracks and roads;
- infilling of pot holes;
- securing of potentially unstable structures and rock masses;
- identification of potential flood-related impacts that may pose a risk to public safety; and
- provision of regular updates regarding mining progress to the community where management of public safety is a significant issue.

The relevant management measures addressing these requirements are described in **Section 5**. As described above, this PSMP covers the extraction of Longwalls 1 to 10A at the North Wambo Underground Mine.

This PSMP has been prepared by WCPL, with assistance from Resource Strategies. The appointment of the team of suitably qualified and experienced experts (which includes representatives from WCPL and Resource Strategies) has been endorsed by the Secretary of the DP&E.

### 1.2 KEY PERSONNEL

Contact details for key personnel in relation to this PSMP are summarised in Table 2.

Table 2
Public Safety Management Plan Key Personnel Contact Details

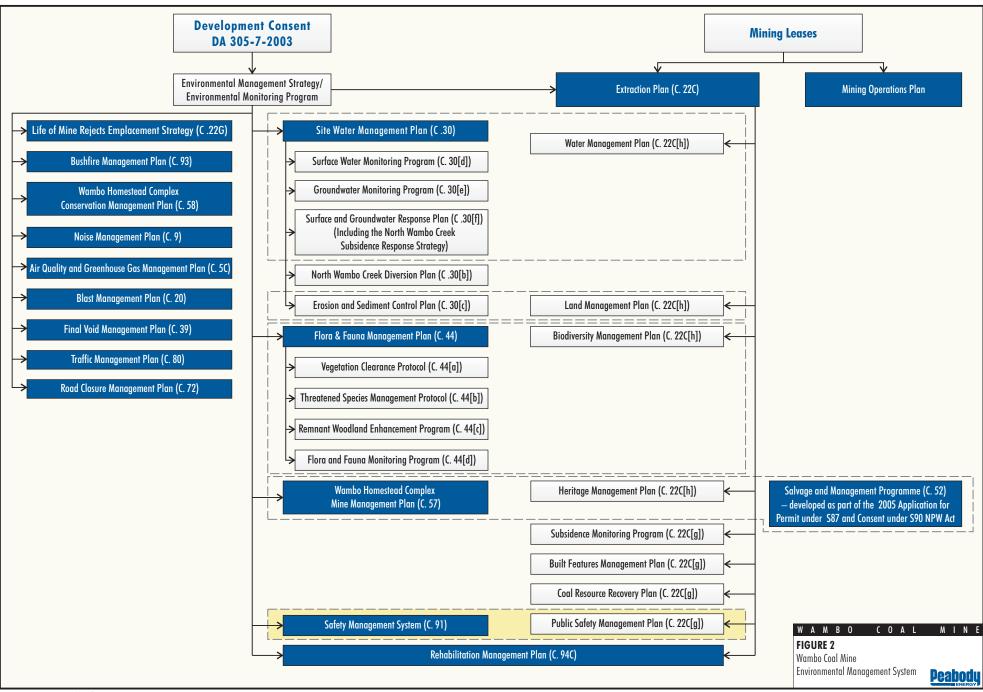
Organisation	Position	Contact Name	Phone Number
WCPL	Health Safety Training Manager	Peter Hafey	(02) 6570 2309 0488 417 230
	Environment and Community Manager	Troy Favell (24 hours)	(02) 6570 2209 0407 802 206
	Technical Services Superintendent	Michael Millgate	(02) 6570 2330
	Director: Technical Services and Projects	Micheal Alexander	
	General Manager	Ernest Johnson	
	Underground Manager of Mining Engineering	Murray Wood	
	Control Room (24 hours)		(02) 6570 2240
	Community Hotline		(02) 6570 2245
MSB	Emergency Service (24 hour)		1800 248 083
	Singleton District Office		(02) 6572 4344

### 1.3 STRUCTURE OF THE PUBLIC SAFETY MANAGEMENT PLAN

This PSMP forms part of WCPL's Environmental Management System for the Wambo Coal Mine. The relationship of this PSMP to the Wambo Coal Mine Environmental Management System is shown on **Figure 2**.

Longwalls 1 to 10A are located wholly within WCPL-owned land. A right-of-way in favour of several private properties (the route of which may be varied on reasonable notice) across WCPL-owned land is situated within the Longwalls 8 to 10A Application Area. No privately held land or public roads are located within the Longwalls 1 to 10A Application Areas. Therefore, the risks to public safety associated with the extraction of Longwalls 1 to 10A are limited.

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A Trigger Action Response Plan (TARP) for this PSMP which is a simple and transparent snapshot of the monitoring of subsidence impacts and corresponding public safety hazards, and where required the implementation of management and/or contingency measures is provided in **Attachment 1**.

WCPL's approach to health and safety on-site is outlined in the Health and Safety Management System (H&SMS) and is summarised in the H&SMS Overview. To avoid duplication of existing Management Plans, this PSMP references components of the existing H&SMS as summarised in the H&SMS Overview.

The sections of the H&SMS Overview relevant to the PSMP are summarised in **Table 3**. The H&SMS Overview is included as **Attachment 2**. If the H&SMS is revised separately, **Attachment 2** of this PSMP will be updated with the most recent H&SMS Overview.

Table 3
Health and Safety Management System Overview - Reference Summary

PSMP Component	H&SMS Overview Reference	Section Description
Management Measures	Section 6 – OHS Policy Statement <sup>1</sup>	Section 6 of the H&SMS Overview provides Wambo's commitment in regard to providing a safe, healthy workplace.
	Section 9.1 – Policy <sup>1</sup>	Section 9.1 of the H&SMS Overview summarises Wambo's site policies in relation to Health and Safety. Section 10 of the H&SMS Overview provides a reference to the relevant sections of the H&SMS.
	Section 9.3 – Approach to Risk Management <sup>1</sup>	Section 9.3 of the H&SMS Overview summarises WCPL's approach to risk management.
	Section 10.4 –Implementation <sup>1</sup>	Section 10.4 of the H&SMS Overview provides a reference to the relevant sections of the H&SMS that outline the standards and procedures developed to ensure the successful implementation of the H&SMS including:
		risk management;
		incident and hazard management and reporting;
		site introduction; and
		work health and safety.

<sup>&</sup>lt;sup>1</sup> Not a specific requirement of this PSMP under Condition 22C(g) of Schedule 4 of the Development Consent (DA 305-7-2003).

### 2 PERFORMANCE MEASURES

This PSMP has been developed to manage the potential risks to public safety of the proposed secondary workings described in the Extraction Plan for Longwalls 8 to 10A, previous Extraction Plan for Longwalls 7 to 10 and the SMP for Longwalls 1 to 6.

In accordance with Condition 22 and 22A of Schedule 4 of the Development Consent (DA 305-7-2003), WCPL must ensure that there is no exceedance of the subsidence impact performance measures listed in Tables 14A and 14B of Schedule 4 of the Development Consent (DA 305-7-2003). The performance measure specified in Table 14B of Schedule 4 of the Development Consent (DA 305-7-2003) relevant to public safety is listed in **Table 4**.

Table 4
Public Safety Performance Measure

Feature	Subsidence Impact Performance Measure
Public Safety	No additional risk.

Source: Table 14B of Schedule 4 of the Development Consent (DA 305-7-2003).

**Section 6** provides a summary of the analysis of monitoring data that will be undertaken to assess the impact of Longwalls 1 to 10A against the performance measure.

### 3 PREDICTED SUBSIDENCE IMPACTS

Longwalls 1 to 10A are located wholly within WCPL-owned land. No privately held land or public roads are located within the Longwalls 1 to 10A Application Areas.

WCPL-owned lands that are not subject to mining operations are utilised for the agistment of stock (WCPL, 2003). In addition, a right-of-way in favour of several private properties (the route of which may be varied on reasonable notice) across WCPL-owned land is situated within the Longwalls 8 to 10A Application Area (**Figure 1**).

Given the above, it is considered that potential public safety issues resulting from the extraction of Longwalls 1 to 10A are limited to:

- agistees accessing the Longwalls 1 to 10A Application Areas to manage stock;
- authorised access of private properties via the right-of-way across WCPL-owned land;
- unauthorised access to the Longwalls 1 to 10A Application Areas (e.g. looking for firewood or hunting);
- members of the public visiting the Wambo Homestead Complex (inducted visitors of WCPL); and
- members of the Rural Fire Service accessing Longwalls 1 to 10A Application Areas.

Subsidence risk assessments were undertaken as part of:

- the Extraction Plan process for Longwalls 8 to 10A;
- the Extraction Plan process for Longwalls 7 to 10;
- the Extraction Plan process for Longwalls 7 and 8; and
- the SMP process for Longwalls 1 to 6.

The subsidence risk assessments did not identify any public safety issues in addition to those listed above. Potential subsidence impacts are predicted to include surface cracking, changes in stream bed gradients, erosion and ponding (Ditton Geotechnical Services, 2012; Mine Subsidence Engineering Consultants (MSEC), 2014a; MSEC 2014b). Surface cracking, erosion and ponding may be considered to pose a safety hazard.

The maximum tilts and strains predicted for Longwalls 8 to 10A are summarised in **Table 5** and the location of predicted subsidence is presented in **Figure 3**.

Table 5
Maximum Predicted Incremental Subsidence, Tilt and Strains for Longwalls 8 to 10A

Subsidence Parameter	Longwall 8	Longwall 9	Longwall 10	Longwall 10A
Maximum Subsidence (m)	2.4	2.3	2.6	2.55
Maximum Tilt (mm/m)	75	50	50	50
Maximum Hogging Curvature (km <sup>-1</sup> )	> 3.0	2	2	2
Maximum Sagging Curvature (km <sup>-1</sup> )	> 3.0	2	2	2

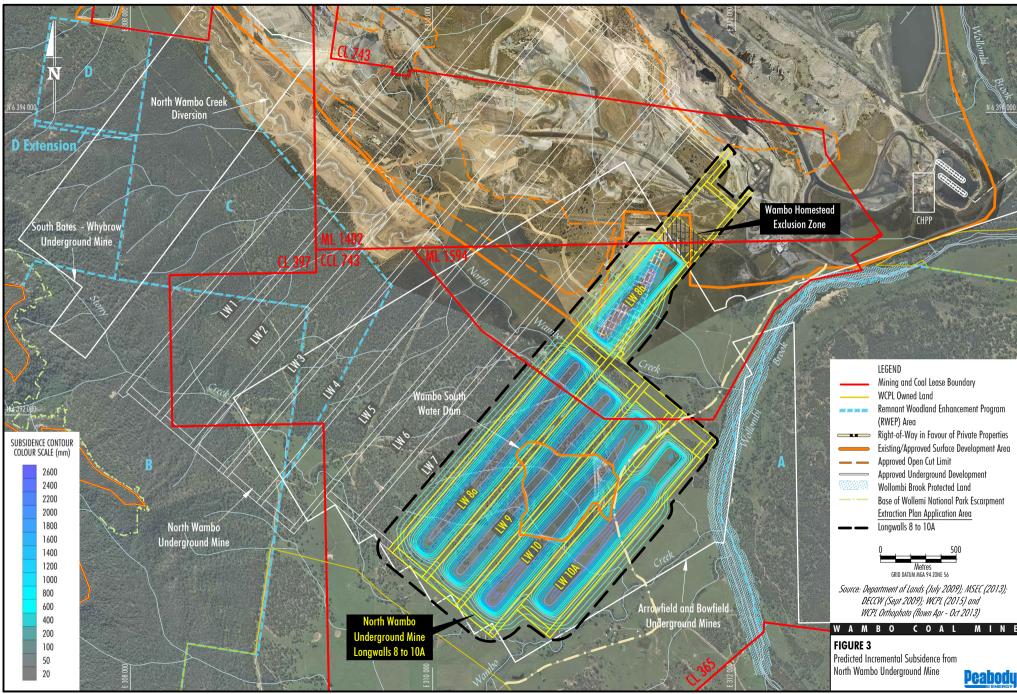
Source: After MSEC (2014a), MSEC (2014b).

m = metre.

mm/m = millimetres per metre.

km<sup>-1</sup> = per kilometre.

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### 4 MONITORING

A monitoring program will be implemented to monitor the subsidence impacts of Longwalls 1 to 10A in consideration of risks to public safety. Key components of the monitoring program are summarised in **Table 6**.

Table 6
Public Safety Management Plan Monitoring Program Overview

Monitoring Component	Parameter	Timing/Frequency	Responsibility
Pre-Mining			
Visual inspection of the integrity of fences.	Initial condition of fences.	Prior to secondary extraction of each longwall.	Mine Surveyor
Visual assessment of existing warning signs.	Condition of existing warning signs (e.g. legibility).	Prior to secondary extraction of each longwall.	Underground Mine Engineer
During Mining			
North Wambo Underground Mine subsidence monitoring lines as described in the Subsidence Monitoring Program.	Monitoring parameters include:  • subsidence;  • tilt;  • tensile strain;  • compressive strain; and  • absolute horizontal translation.	Monitoring during secondary extraction in accordance with the Subsidence Monitoring Program.	Mine Surveyor
Visual inspection of the integrity of fences.	Condition of fences.	Monthly inspections during secondary extraction.	Mine Surveyor
Visual inspection of the integrity of right-of-way across WCPL land.	Condition of road surface.	Weekly inspections during secondary extraction.	Environment and Community Manager
Visual assessment of the effectiveness of warning signs.	Condition of warning signs (e.g. legibility).	Monthly inspections during secondary extraction.	Underground Mine Engineer
Post-Mining			
Visual inspection of the integrity of fences.	Condition of fences following extraction.	Following completion of secondary extraction.	Mine Surveyor

In addition to the monitoring summarised in **Table 6**, monitoring of surface cracking, erosion and ponding resulting from the extraction of Longwalls 8 to 10A is described in the Land Management Plan for Longwalls 8 to 10A.

Details of any subsidence impacts observed in relation to public safety will be recorded in the Subsidence Impact Register and relevant assessment forms as provided in Attachment 2 of the Subsidence Monitoring Program for North Wambo Underground Mine Longwalls 8 to 10A. The Subsidence Impact Register will be maintained as an electronic spreadsheet on-site, with hard copies of assessment forms filed in a folder. The Subsidence Impact Register is discussed further in the Subsidence Monitoring Program for North Wambo Underground Mine Longwalls 8 to 10A.

### 5 MANAGEMENT MEASURES

A number of potential management measures are available to mitigate/remediate potential risks to public safety resulting from the extraction of Longwalls 1 to 10A. The key management measures are summarised in **Table 7**.

Table 7
Public Safety Management Plan Key Management Measures

Management Measure	Timing/Frequency	Responsibility
Pre-Mining		
Restricted access (i.e. the general public are not allowed on WCPL-owned land used for mining purposes). Permanent signage located at the entrance to WCPL-owned land will be maintained.	Ongoing.	Relevant Area Manager as per the WCPL H&SMS
All personnel and visitors accessing the Wambo site (including the Wambo Homestead Complex) are subject to the requirements of:	Ongoing.	Relevant Area Manager as per the WCPL H&SMS
WA-TRG-MP-302 Wambo Training and Competency Management Plan; and		
WA-S&H-PRO 315.6 Site Introduction of Personnel.		
Notification to agistees of areas of longwall mining and active subsidence, and exclusion of agistment grazing from areas where surface cracking presents a reasonable risk to people and/or livestock.	Prior to secondary extraction of each longwall.	Environment and Community Manager
Posting of warning signs at suitable locations on property boundaries, fences and access tracks, including the right of way across WCPL owned land. The signs will indicate that underground mining (with surface subsidence) is being undertaken on WCPL owned land and will prohibit entry by unauthorised persons.	Prior to secondary extraction of each longwall.	Director: Technical Services and Projects
During Mining		
All personnel and visitors accessing the Wambo site (including the Wambo Homestead Complex) are subject to the requirements of:	Ongoing.	Relevant Area Manager as per the WCPL H&SMS
WA-TRG-MP-302 Wambo Training and Competency Management Plan; and		
WA-S&H-PRO 315.7 Site Introduction of Personnel.		
Management of surface cracking and areas of subs Plan for Longwalls 8 to 10A.	idence troughs in accordance v	vith the Land Management
Management of the right-of-way across WCPL-own Plan for Longwalls 8 to 10A.	ed land in accordance with the	Built Features Management
Maintenance of warning signs.	Ongoing.	Director: Technical Services and Projects
All safety incidents will be handled in accordance with the H&SMS (refer to <b>Table 3</b> ).	Ongoing.	All staff
Post-Mining		
Repair of fences in accordance with the Land Mana	gement Plan for Longwalls 8 to	10A.
Review of warning sign placement and removal if no longer required.	Following completion of secondary extraction.	Director: Technical Services and Projects

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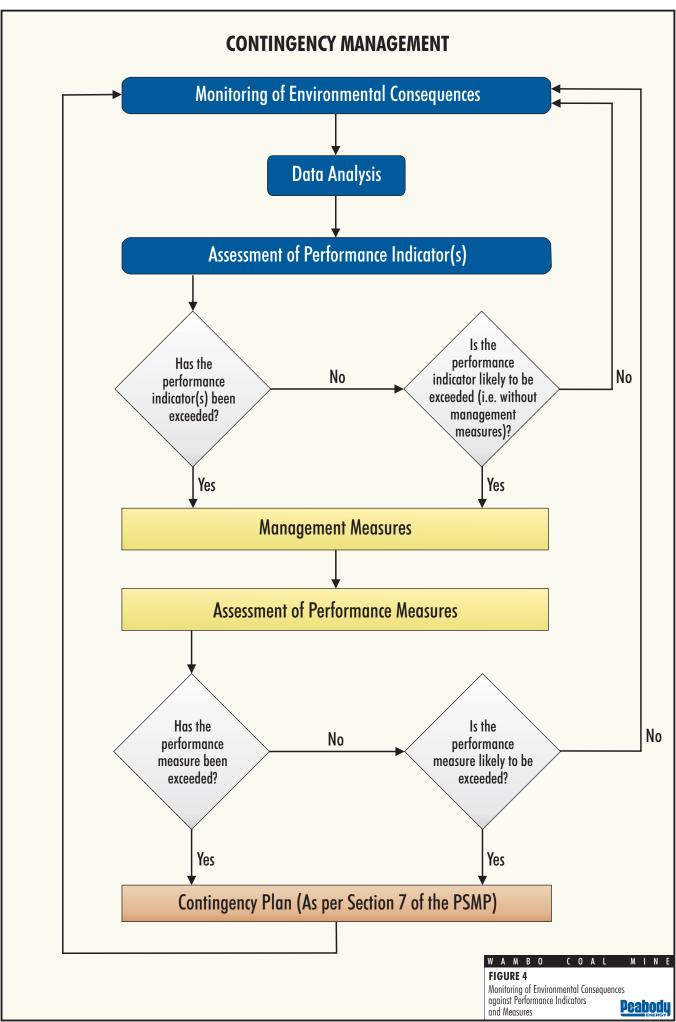
### 6 ASSESSMENT OF PERFORMANCE INDICATORS AND MEASURES

In accordance with Condition 22C(d) of Schedule 4 of the Development Consent (DA 305-7-2003), performance indicators have been developed for the performance measure listed in **Table 4**.

The performance indicator for the public safety performance measure will be considered to have been exceeded if a hazard to the general public arising from subsidence effects, not previously identified and mitigated accordingly, becomes evident.

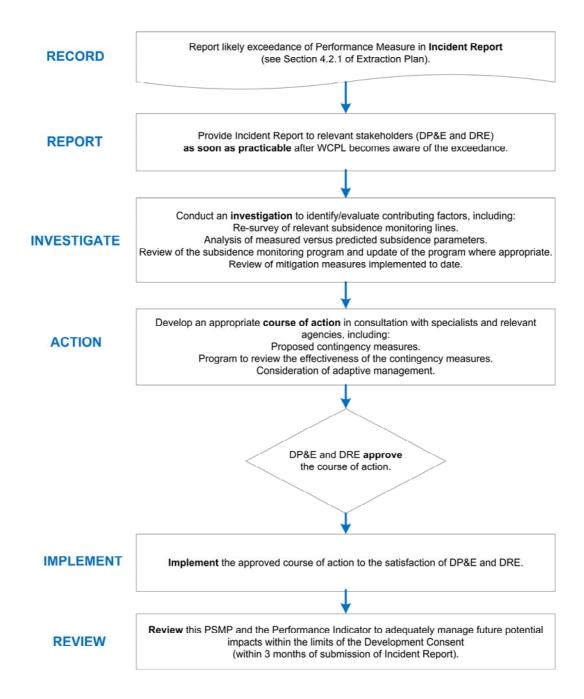
Monitoring conducted to inform the assessment of the secondary extraction of Longwalls 1 to 10A against the performance indicator for the performance measure relevant to public safety is outlined in **Section 4** of this PSMP. The monitoring process and subsequent assessment of performance indicators and measures is outlined in **Figure 4**.

If data analysis indicates the performance indicator has been exceeded or is likely to be exceeded, an assessment will be made against the performance measure (i.e. additional risk to public safety). If the performance measure is considered to have been exceeded, the Contingency Plan will be implemented (**Section 7**). If data analysis indicates that the performance measure has not been exceeded, WCPL will continue to monitor.



### 7 CONTINGENCY PLAN

In the event the public safety performance measure is considered to have been exceeded or is likely to be exceeded, in accordance with the schematic presented in **Figure 4**, WCPL will implement the following Contingency Plan:



The framework for the various components of the PSMP are summarised in the PSMP TARP which is included as **Attachment 1**. The PSMP TARP illustrates how the various predicted subsidence impacts, monitoring components and responsibilities are structured to achieve compliance with the relevant statutory requirements, and the framework for management and contingency actions.

# **8 ROLES AND RESPONSIBILITIES**

Key responsibilities of WCPL personnel in relation to this PSMP are summarised in **Table 8**. Responsibilities may be delegated as required.

Table 8
Public Safety Management Plan Responsibilities Summary

Responsibility	Task
All	Ensure the safety of WCPL employees and the public in relation to WCPL operations.
General Manager	Ensure resources are available to WCPL personnel to facilitate the completion of responsibilities under this PSMP.
Underground	Ensure this PSMP is implemented.
Manager of Mining Engineering	Notify the Regulator as per the NSW Work Health and Safety (Mines) Regulation, 2014.
Director: Technical	Ensure the Subsidence Monitoring Program is implemented.
Services and Projects	Ensure monitoring and reporting required in accordance with this PSMP is carried out within specified timeframes, are adequately checked and processed and are prepared to the required standard.
	Notify the Underground Manager of Mining Engineering of any safety incidents reported during safety inspections.
	Prepare training documentation in association with the Health Safety Training     Manager and Environment and Community Manager.
Environment and Community Manager	Liaise with relevant stakeholders regarding subsidence impact management and related public safety hazards (e.g. notify the Division of Resources and Energy within the NSW Department of Trade and Investment, Regional Infrastructure and Services [Principal Subsidence Engineer] and DP&E of any significant public safety incidents).
	Notify agistees of areas of longwall mining and active subsidence, and ensure agistment is excluded from areas where surface cracking presents a reasonable risk to people and/or livestock.
	Prepare training documentation in association with the Director: Technical Services and Projects and Health Safety Training Manager.
Health Safety	Maintain records of training documentation on WCPL's site training system.
Training Manager	Prepare training documentation in association with the Director: Technical Services and Projects and Environment and Community Manager.
Underground Mine Engineer	Undertake relevant monitoring and implementation of management measures summarised in <b>Tables 6 and 7</b> respectively.
(Subsidence Inspector)	Take actions to rectify any public safety issues identified.
	Complete subsidence impact register as described in the Extraction Plan for Longwalls 8 to 10A and notify the Director: Technical Services and Projects and Environment and Community Manager of public safety breaches (i.e. an exceedance of the public safety performance measure).
Mine Surveyor (Subsidence	Undertake all subsidence monitoring to the required standard within the specified timeframes and ensure data are adequately checked, processed and recorded.
Inspector)	Undertake relevant monitoring summarised in <b>Table 6.</b>
	Take actions to rectify any public safety issues identified.
	Complete subsidence impact register as described in the Extraction Plan for Longwalls 8 to 10A and notify the Director: Technical Services and Projects and Environment and Community Manager of public safety breaches (i.e. an exceedance of the public safety performance measure).

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### 9 TRAINING

All personnel who conduct inspections and have responsibilities in accordance with this PSMP will be trained in the requirements of this PSMP and other management plans associated with the Extraction Plan.

### 10 REFERENCES

- Department of Planning and Environment and NSW Trade & Investment Division of Resources and Energy (2015) Guidelines for the Preparation of Extraction Plans Required under Conditions of Development Consents, Project Approvals and Mining Lease Conditions for Underground Coal Mining. Version 5. Draft.
- Ditton Geotechnical Services (2012) Revised Predictions of Subsidence Effects and Subsidence Impacts for Longwalls 7 and 8 at North Wambo Underground Mine, Warkworth.
- Mine Subsidence Engineering Consultants (2014a) *North Wambo Underground Longwalls 7 10 Extraction Plan Subsidence Assessment.*
- Mine Subsidence Engineering Consultants (2014b) North Wambo Underground Longwall 10A Subsidence Assessment.
- Wambo Coal Pty Limited (2003) Wambo Development Project Environmental Impact Statement.
- Wambo Coal Pty Limited (2005) Wambo Development Project Wambo Seam Underground Mine Modification Statement of Environmental Effects.
- Wambo Coal Pty Limited (2006) Wambo Development Project North Wambo Underground Mine Subsidence Management Plan.
- Wambo Coal Pty Limited (2012) North Wambo Underground Mine Modification Environmental Assessment.
- Wambo Coal Pty Limited (2014) North Wambo Underground Mine Longwall 10A Modification Environmental Assessment.

# **ATTACHMENT 1**

PUBLIC SAFETY MANAGEMENT PLAN TRIGGER ACTION RESPONSE PLAN

PSMP LW1-10A Rev E April 2015

Table A1-1
Public Safety Management Plan Trigger Action Response Plan

0	Normal	Level 1	Level 2
Condition	Predicted Impacts	Implement Management Measures	Restoration/Contingency Phase
Trigger	Predicted subsidence impacts and associated risks to public safety, described in <b>Section 3</b> .	Management measures implemented.     (With regard to the specific circumstances of the subsidence impact [e.g. the location, nature and extent of the impact] and the assessment of subsidence impacts in accordance with Section 6).	If the public safety performance measure has been exceeded, or is likely to be exceeded.
Action	<ul> <li>Conduct monitoring, consistent with <b>Table 6</b> and the Subsidence Monitoring Program (Appendix H of the Extraction Plan).</li> <li>Assess the subsidence impacts in accordance with <b>Section 6</b>.</li> </ul>	Implement management measures, as required, in accordance with <b>Table 7</b> .	Implement Contingency Plan described in Section 7.
	<ul> <li>Assess the need for management measures in accordance with Table 7.</li> </ul>		
Frequency	Frequency consistent with <b>Table 7</b> .	As required, in accordance with Section 6.	As required, in accordance with <b>Section 7</b> .
Position of Decision-Making	<ul> <li>Environment and Community Manager.</li> <li>Director: Technical Services and Projects.</li> </ul>	Underground Manager of Mining Engineering.	General Manager.

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Public Safety Management Plan – North Wambo Underground Mine Longwalls 1-10A	

# ATTACHMENT 2

# WAMBO COAL PTY LTD HEALTH AND SAFETY MANAGEMENT SYSTEM OVERVIEW

PSMP LW1-10A Rev E April 2015





# WAMBO COAL PTY LTD Health and Safety Management System WA-S&H-MOP-000 HSMS Overview





### **Document Control**

<b>Document</b> WA-S&H-MOP-000	
Title Health Safety Management System Overview	
General Description Broad Outline of Wambo HSMS system components	
<b>Support Documents</b>	All HSMS documents

### **Revisions**

Version	Date	Description	Ву	Position
1	Dec 2008	Development	Rob Lowe	HST Manager
2	Sept 2012	Update to HSMS	Peter Hafey	HST Manager
3	Oct 2012	Open Cut Mine Transition	Peter Hafey	HST Manager
4	Dec 2012	Addition of UG Public Safety MP	Peter Hafey	HST Manager

# **Approvals**

Ī	Version	Date	Person	Position	Signature
	3	Oct 2012	Peter Hafey	HST Manager	

The nominated Coordinator for this document is	Manager Health Safety Training
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# 1.0 Purpose

Provide an overview/outline of the Wambo HSMS for managing health, safety, training and welfare of all persons that work or visit the site. This document will refer to:

- Wambo site meaning as applies to the whole site including Remainder of Colliery Holdings (RCH)
- UG components specific to Underground
- CH&PP components specific to CH&PP
- OC components specific to Open Cut

The legislation under which Coal Mining is governed utilises a risk based approach. The overview will outline the approach taken at Wambo to ensure risk management is an integral process for all parts of the operation and uses a systematic HSMS.

# 2.0 Objectives

The Wambo HSMS is a systematic approach that will:

- Provides an overall site system under which all work processes operate.
- Has a structure alignment to AS4801
- Is developed to demonstrate legislative compliance and through development has referred to relevant standards, guidelines and codes of practice.

A well implemented HSMS bring together human and managerial aspects of risk and incorporates the:

- Commitment of all levels of management;
- Setting of clear health and safety objectives;
- Effective consultation and communicating of information.
- Establishment of safe systems of work that ensure machinery, equipment, chemicals, work premises and the local work environment are safe and fit for the purpose they serve, that standard operating procedures and practices are developed, supervised and observed by properly trained, competent, committed and aware people.

# 3.0 Health Safety Management System Ownership

System ownership refers to those persons who are interested in the perceived system for the purposes of design, improvement, implementation, study, etc.

The Wambo HSMS is owned by everyone in the organisation.

The system is maintained at senior management levels that are in a position to facilitate significant system change.

The HSMS change is consulted and communicated through the following process; Refer to WA-S&H-MP-303 Communication and Consultation Management Plan





# 4.0 Health Safety Management System Compliance

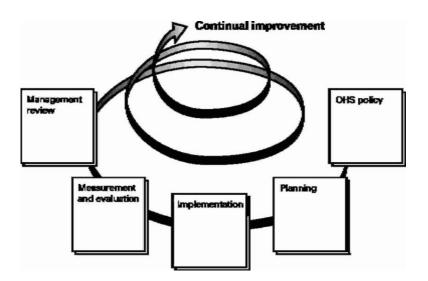
The Wambo Health Safety Management System is compliant to the following legislation;

- WHS Act 2011
- WHS Regulation 2011
- CMHS Act 2002
- CMHS Regulation 2006

The Wambo Health Safety Management System structure is aligned with;

Australian Standard AS/NZS 4801:2001

# 5.0 Health Safety Management System Approach



# 6.0 Health and Safety Policy

Wambo is committed to providing safe, healthy workplace pursuant to Peabody's safety vision. WA-S&H-POL-101 Health and Safety Policy

# 6.1 Peabody's Safety Vision

# Peabody's vision is to operate safe workplaces that are incident free.

The following governing principles for safety and health apply to everyone at a Peabody workplace:

- The safety and health of our most important asset, our employees, is a core value that is integrated into all areas of our business;
- All workplace incidents can be eliminated, including injuries, occupational illnesses, property damage and near misses;
- Management has the overall accountability for employee safety and health;
- Employees are responsible for their own safety and health, as well as promoting the safety of their co-workers;





- Employees must be empowered with the skills and authority to perform their jobs in a safe manner:
- All employees must comply with established safety rules and regulations;
- Open, honest and effective safety communication is essential;
- All safety and health efforts must be sustainable and will be continuously reviewed and improved; and
- The workplace is anywhere a Peabody employee is on the job.

# 7.0 Company Operational Structure

Colliery Holder
Peabody Energy
Australia

Wambo Underground
Operator
Wambo Coal

Wambo Coal Handling Preparation Plant
Operator
Wambo Coal

Wambo Open Cut
Operator
Wambo Coal

# 8.0 Management Structure

Refer to Wambo Coal WA-S&H-GUI-301 – Management Organisational Structure and Responsibility

# 9.0 Wambo HSMS Components

The components of the Wambo HSMS are aligned to **PP-S&H-STD-010.1 Document Control.** All HSMS components listed that are developed and/or implemented at Wambo are mapped to the Peabody core safety principles

# 9.1 Policy

Wambo will define all Health & Safety policies that demonstrate a clear direction for the organisation to follow and facilitate commitment to its HSMS. This includes but not limited to the following;

- Corporate Policy
- Operation Site Policy
- Legislative compliance

### 9.2 Standards

Wambo will adhere to all Standards, Guidelines and Codes of Practices that are developed and implemented by the following;

Corporate Standards and Guidelines





- Operation Site Standards and Guidelines
- Australian Standards
- Mine Design Guidelines
- WorkCover NSW and Safe Work Australia Codes of Practices

Standards will be developed as identified by the following processes;

- Broad Brush Risk Assessment
- Formal Risk Assessment
- Incident and Hazard Investigation
- Legislative Changes

# 9.3 Management Plans

All management plans and procedures will need to comply with the above standards and will be developed from the Risk Management process;

- Broad Brush Risk Assessment
- Formal Risk Assessment

Management plans will be compliant to WHS and CMHS legislation and include the following;

- Management Plans
- Major Hazard Management Plans
- Management Overview Plans

### 9.4 Procedures

All procedures will be identified by Risk Assessment and developed under the relevant Management Plan and consist of the following;

- Procedures
- Safe Work Procedures

### 9.5 Documents

All documents that are used under the Wambo HSMS are to comply with the corporate standard **PP-S&H-STD-010.1 Document Control.** Wambo Coal will incorporate the following documents into the HSMS;

- Guides
- Registers
- Permits
- Forms
- Templates
- Manuals
- JSA's







# 10.0 HSMS Structure

The components of the Wambo HSMS are aligned with AS4801 and additional components to cover the operational hazard management plans as required by legislative framework.

000 HSMS Overview
100 Policy
200 Planning
300 Safety Management
400 Measurement, Audit and Evaluation
500 Environment
600 UG Hazard Management Plans
700 UG Mechanical Engineering
800 UG Electrical Engineering
900 CHPP Hazard Management Plans
1000 CHPP Mechanical Engineering
1100 CHPP Electrical Engineering
1200 OC Hazard Management Plans
1300 OC Mechanical Engineering
1400 OC Electrical Engineering
1500 Human Resources
1600 Standards

# 10.1 Management Overview Plans

This section covers any overviews of any systems in place under the Health Safety Management System (HSMS) including the following;

- Health Safety Management System WA-S&H-GUI-000
- Mechanical Engineering Management WA-S&H-GUI-001
- Electrical Engineering Management WA-S&H-GUI-002

# 10.2 Policy

Wambo will define a Health & Safety policy that demonstrates a clear direction for the organisation to follow and facilitates commitment to its HSMS. This section contains overarching site Policies relating:

- Health and Safety WA-S&H-POL-101
- Smoking on Site WA-S&H-POL-102
- Mobile Phones in the Workplace WA-S&H-POL-103
- Injury Management and Return to Work WA-S&H-POL-104
- Risk Management WA-S&H-POL-105
- Environment WA-ENV-POL-106
- Discipline and Fair Treatment WA-HRS-POL-107





Fitness for Work WA-S&H-POL-108

# 10.3 Planning

This section of the HSMS is covered within other components and specifically outlines the following:

- Site Health and Safety Plan WA-S&H-PRO-201
- Fitness for Work Procedure WA-S&H-PRO-202
- Counselling and Disciplinary Procedure WA-HRS-PRO-203
- Drug and Alcohol Testing Procedure WA-S&H-PRO-204
- Fatigue Management Plan WA-S&H-MP-205
- Health Wellbeing and Workplace Injury Management Plan WA-S&H-MP-206
- Manual Handling WA-S&H-MP-207
- Noise Management WA-S&H-MP-208
- Emergency Preparedness and Response WA-S&H-MP-209
- Communication and Consultation WA-S&H-PRO-210
- Fair Treatment Procedure WA-HRS-PRO-211
- Clothing and Footwear WA-S&H-PRO-107

# 10.4 Safety Management Implementation

This section contains all the essential operating procedures and management plans to ensure the successful implementation of the HSMS to provide a healthy and safe work environment. Specifically this section outlines the:

- Management Structure WA-HRS-GUI-301
- Training and Competency Management Plan WA-TRG-MP-302
- Document Control WA-S&H-MP-304
- Risk Management WA-S&H-MP-305
- Change Management WA-S&H-PRO-306
- Contractor Management WA-S&H-MP-307
- Incident & Hazard Management and Reporting WA-S&H-MP-308
- First Aid Management WA-S&H-MP-309
- Isolation Procedures WA-S&H-PRO-312
- Hazardous Substances and Dangerous Goods WA-S&H-MP-313
- Confined Space Management WA-S&H-MP-314
- Site Introduction WA-S&H-MP-315
- Work Health and Safety WA-S&H-MP-316
- Record Management WA-S&H-MP-317

# 10.5 Measurement, Audit & Evaluation

This section of the HSMS is covered in many of the operational plans in regard inspections of hazardous areas, plant equipment and corrective and preventative actions. Specifically this section outlines the:

- Health Monitoring WA-S&H-PRO-401
- Implementation and Management of PIMS WA-S&H-MP-402
- Audit Monitoring and Measurement WA-S&H-MP-403





- Critical Controls WA-S&H-MP-405
- Compliance WA-S&H-MP-406

### 10.6 Environment

The environment section outlines all requirements to ensure environments conditions are maintained for the short and long term of the mine.

- Environmental Management Plan WA-ENV-MP-501
- Waste Water Management Plan WA-ENV-MP-502

# 10.7 Underground Major Operational Hazards

This section of the HSMS covers the major operational hazards for the Underground Operations and the components are as follows:

- Monitoring Arrangements WA-MIN-MP-601
- Ventilation Management WA-MIN-MP-602
- Underground Transport Rules WA-MIN-MHMP-603
- Interaction with Open Cut Blasting WA-MIN-PRO-604
- Strata Management WA-MIN-MHMP-605
- Inrush Management WA-MIN-MHMP-606
- Fire & Explosion Management WA-MIN-MHMP-607
- Airborne Dust Management WA-MIN-MHMP-608
- Spontaneous Combustion WA-MIN-MP-609
- Dust Explosion Management WA-MIN-MHMP-610
- Slope Stability WA-MIN-MHMP-611
- Inspection Program WA-MIN-MP-614
- Supervision Arrangements WA-MIN-PRO-615
- Withdrawal Conditions WA-MIN-PRO-616
- Auxiliary Fan Management WA-MIN-MP-617
- Wind Blast Management WA-MIN-MP-618
- Survey and Plan Arrangements WA-MIN-PRO-619
- Underground Shotfiring WA-MIN-MHMP-620
- Self Escape WA-MIN-MP-621
- Outburst Management WA-MIN-MP-622
- Subsidence Management WA-MIN-MP-623
- Life cycle WA-MIN-MP-624
- Sealed goaf WA-MIN-MP-625
- Surface transport WA-MIN-MHMP-626
- Emergency response WA-MIN-MP-627
- Public Safety Management Plan WA-MIN-MP-628

# 10.8 Underground Mechanical Engineering

The site mechanical engineering is documented in the following;

- Mechanical Engineering Management Plan WA-MIN-MP-627
- Life Cycle Management WA-ENG-MP-701
- Engineering Standards WA-ENG-MP-702





- Conveyor Maintenance WA-ENG-MP-703
- Mobile Plant WA-ENG-MP-704
- Diesel Management WA-ENG-MP-705
- Hydraulics Management WA-ENG-MP-706
- Tyre and Rim Management WA-ENG-MP-707
- Cutting and Welding Management WA-ENG-MP-708
- Lifting Equipment WA-ENG-MP-709
- Examination and Testing WA-ENG-MP-710
- Defects Management WA-ENG-MP-711

# 10.9 Underground Electrical Engineering

The site mechanical engineering is documented in the following;

- Electrical Engineering Management Plan WA-ENG-MP-800
- Life Cycle Management WA-ENG-MP-801
- Engineering Standards WA-ENG-MP-802
- Examination and Testing WA-ENG-MP-803
- Defects Management WA-ENG-MP-804

# 10.10 CH&PP Major Operational Hazards

This area covers the major operational hazards for the CH&PP and the components are as follows:

- Stockpile Management
- Inspection System
- Spontaneous Combustion
- Airborne Dust
- Lightning Management
- Emergency Management
- Fire and Explosion

# 10.11 CH&PP Mechanical Engineering

- Mechanical Engineering Management Plan
- Life Cycle Management
- Engineering Standards
- Conveyor Maintenance
- Mobile Plant
- Diesel Management
- Hydraulics Management
- Cutting and Welding Management
- Lifting Equipment
- Examination and Testing
- Defects Management



# 10.12 CH&PP Electrical Engineering

- Electrical Engineering Management Plan
- Life Cycle Management
- Engineering Standards
- Examination and Testing
- Defects Management

# 10.13 Open Cut Major Operational Hazards

Open Cut operations are documented in the following;

- Explosives Management WA-MIN-MHMP-1201
- Slope Stability Management WA-MIN-MHMP-1202
- Surface Transport Management WA-MIN-MHMP-1203
- Stockpile Management WA-MIN-MHMP-1204
- Airborne Dust Management WA-MIN-MHMP-1205
- Fire and Explosion Management WA-MIN-MHMP-1206
- Emergency Response Management WA-MIN-MHMP-1207
- Inrush Management Plan WA-MIN-MHMP-1208
- Inspection and Supervision Management Plan WA-MIN-MP-1209
- Spontaneous Combustion Management WA-MIN-MP-1210
- Strata Control Management WA-MIN-MP-1211
- Drill and Blast Management WA-MIN-MP-1212
- Withdrawal Conditions WA-MIN-MP-1213

# 10.14 Open Cut Mechanical Engineering

- Mechanical Engineering Management Plan WA-MIN-MHMP-1301
- Life Cycle Management WA-MIN-MP-1302
- Engineering Standards WA-MIN-MP-1303
- Mobile Plant WA-MIN-MP-1304
- Diesel Management WA-MIN-MP-1305
- Hydraulics Management WA-MIN-MP-1306
- Cutting and Welding Management WA-MIN-MP-1307
- Examination and Testing WA-MIN-MP-1308
- Defects Management WA-MIN-MP-1309
- Tyres and Rims Management WA-MIN-MP-13010
- Cranes and Lifting Equipment Management WA-MIN-MP-1311

# 10.15 Open Cut Electrical Engineering

- Electrical Engineering Management Plan WA-MIN-MHMP-1401
- Life Cycle Management WA-MIN-MP-1402
- Engineering Standards WA-MIN-MP-1403
- Examination and Testing WA-MIN-MP-1404
- Defects Management WA-MIN-MP-1405



### 10.16 Human Resources

Peabody Energy Australia considers people its greatest asset. All Policy and Procedures are developed by the Peabody energy corporate and available on the Peabody Intranet.

### 10.17 Wambo Coal Standards

Wambo Coal has developed a Standards Management Plan **WA-S&H-MP-1601** to ensure compliance and the health and safety of its people. This is additional to any Australian, Corporate or Legislative standards;

- Musculoskeletal Disorder WA-S&H-STD-1602
- Login Onsite Track Easy WA-S&H-STD-1603
- PPE WA-S&H-STD-1604
- Prohibited Articles WA-S&H-STD-1605
- Lighting in Mining Areas WA-S&H-STD-1606
- Tree Clearing WA-S&H-STD-1607
- Working at Heights WA-S&H-STD-1608
- Open Cut Electrical Installations Machinery WA-S&H-STD-1609
- Soft Tissue Injury Management WA-S&H-STD-1610
- Fire Suppression on Machinery WA-S&H-STD-1611
- Cranes, Machinery and Equipment Lifting WA-S&H-STD-1612
- Fire Management WA-S&H-STD-1613
- Light Vehicle and Forklift WA-S&H-STD-1614
- Housekeeping WA-S&H-STD-1615
- Work Areas and Buildings WA-S&H-STD-1616
- Storing and Packing WA-S&H-STD-1617
- Selection and Use of Hand Tools WA-S&H-STD-1618
- Machine Guarding WA-S&H-STD-1619
- Pressurised Liquid, Air & Gas Equipment WA-S&H-STD-1620
- Selection and Introducing Equipment to Site WA-S&H-STD-1621
- Land Management WA-S&H-STD-1622
- Haul Road Design, Construction and Maintenance WA-S&H-STD-1623
- Working In or Around Bodies of Water WA-S&H-STD-1624
- Inclement Weather WA-S&H-STD-1625
- Hygiene WA-S&H-STD-1626
- Permit to Work WA-S&H-STD-1627

