WAMBO COAL PTY LIMITED

SOUTH BATES (WHYBROW SEAM) UNDERGROUND MINE

EXTRACTION PLAN LONGWALLS 11 TO 13

APPENDIX F

PUBLIC SAFETY MANAGEMENT PLAN

Peabody ENERGY

WAMBO COAL PTY LIMITED
SOUTH BATES (WHYBROW SEAM) UNDERGROUND MINE

PUBLIC SAFETY MANAGEMENT PLAN
LONGWALLS 11 - 13

PREPARED BY
WAMBO COAL PTY LIMITED AND
RESOURCE STRATEGIES PTY LTD

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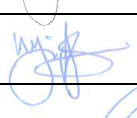
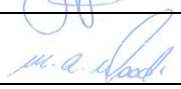
DOCUMENT CONTROL

Document No.	WA-MIN-MP-632 (PSMP LW11-13)
Title	Public Safety Management Plan for South Bates (Whybrow Seam) Underground Mine Longwalls 11 to 13
General Description	A management plan to ensure public safety in the mining area of Longwalls 11 to 13 at the South Bates (Whybrow Seam) Underground Mine
Key Support Documents	Wambo Coal Health and Safety Management System

Revisions

Rev No	Date	Description	By	Checked
A	October 2015	Final for Submission	WCPL and Resource Strategies	S. Peart
B	January 2016	Incorporation of Addendum	WCPL and Resource Strategies	S. Peart

Approvals

	Name	Position	Signed	Date
Originator	S. Peart	Environment and Community Manager		29/01/2016
Checked	T. Britten	Technical Services Manager		29/01/2016
Confirmed	M. Wood	Underground Manager of Mining Engineering		29/01/2016

The nominated Coordinator for this document is	Technical Services Manager

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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 South Bates (Whybrow Seam) Underground Mine is a component of the approved Wambo Coal Mine. The South Bates (Whybrow Seam) Underground Mine is scheduled to commence in February 2016 and involves extraction of coal by longwall mining methods from the Whybrow Seam within Coal Lease (CL) 397 and Mining Lease (ML) 1594 (**Figure 1**).

The potential environmental impacts of the existing Wambo Coal Mine (including the approved South Bates [Whybrow Seam] Underground Mine) were assessed in the *Wambo Development Project Environmental Impact Statement* (the Wambo Development Project EIS) (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*.

Underground mining at North Wambo Underground Mine commenced in 2005 and is scheduled to be complete by early 2016 with the completion of Longwall 8b. Underground mining operations will then move to South Bates (Whybrow Seam) Underground Mine with the commencement of Longwalls 11 to 13 (approved as part of the Development Consent DA 305-7-2003).

This Public Safety Management Plan (PSMP) forms a part of the Extraction Plan being developed for the approved Longwalls 11 to 13.

1.1 PURPOSE AND SCOPE

Purpose: This PSMP for Longwalls 11 to 13 at the South Bates (Whybrow Seam) Underground Mine outlines the management of potential risks to public safety resulting from the proposed secondary workings described in the Extraction Plan for Longwalls 11 to 13.

Scope: This PSMP covers risks to public safety associated with extraction of Longwalls 11 to 13 at the South Bates (Whybrow Seam) Underground Mine (**Figure 1**).

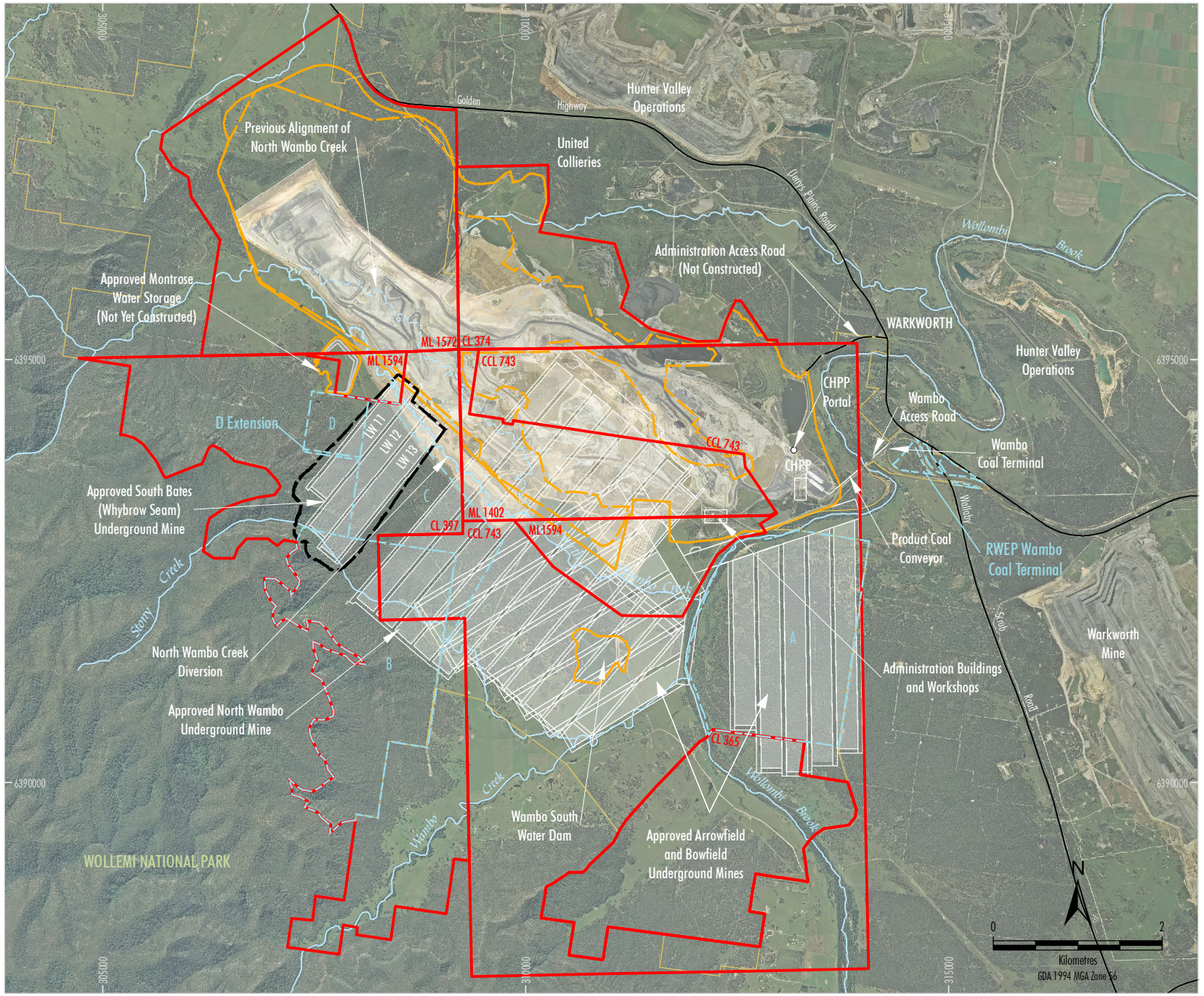
Hazards: The primary hazards associated with the extraction of Longwalls 11 to 13 include:

- surface cracking;
- cliff instability;
- ground deformations; and
- damaged infrastructure (e.g. powerlines, roads and access tracks).

Risks: Members of the general public potentially at risk due to the extraction of Longwalls 11 to 13 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 South Bates (Whybrow Seam) Underground Mine Longwalls 11 to 13 Extraction Plan.

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**.



LEGEND

- Mining and Coal Lease Boundary
- WCPL Owned Land
- Existing/Approved Surface Development Area
- Approved Open Cut Limit
- Approved Underground Development
- Remnant Woodland Enhancement Program (RWEP) Area
- Extraction Plan Application Area

Source: Department of Lands (July 2009); WCPL (2015); WCPL Orthophoto (Apr-Oct 2013)

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WAMBO COAL MINE

Approved Wambo Coal Mine Layout

Figure 1

WAM-09-15_EP Sth Bates_EPA_PSMP_201A

Table 1
Public Safety Management Plan Requirements

Condition	PSMP Section
Condition 22C(g) of Schedule 4 of Development Consent (DA 305-7-2003) *22C. The Applicant shall prepare and implement an Extraction Plan for the second workings within each seam to be mined to the satisfaction of the Secretary. Each Extraction Plan must:* *...* *(g) include the following to the satisfaction of DRE:* *...* • *a Public Safety Management Plan to ensure public safety in the mining area; and* *...*	Management of potential risks to public safety are addressed in **Section 1.3 and 5**.

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 [DP&E] and NSW Trade & Investment – Division of Resources and Energy [DRE], 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 11 to 13 at the South Bates (Whybrow Seam) 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	Stephen Jones	(02) 6570 2309 0427 744 818
	Environment and Community Manager	Steven Peart (24 hours)	(02) 6570 2209 0448 082 987
	Technical Services Manager	Tim Britten	(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
NSW Mine Subsidence Board (MSB)	Emergency Service (24 hour)		1800 248 083
	Singleton District Office		(02) 6572 4344

1.3 STRUCTURE OF THE PUBLIC SAFETY MANAGEMENT PLAN

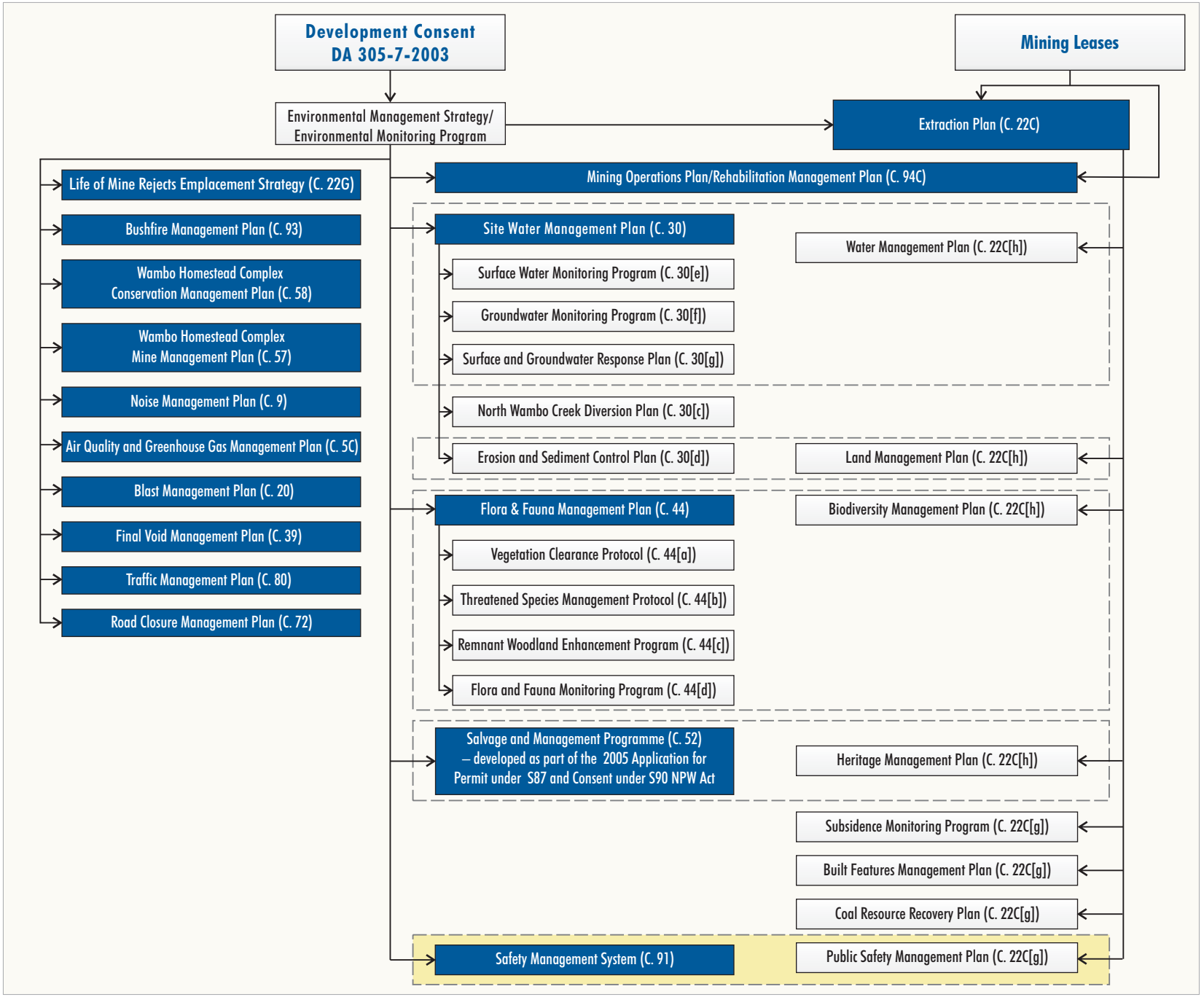
This PSMP forms part of WCPL's Environmental Management System for the Wambo Coal Mine. The relationship of this PSMP to the Wambo Coal Mine Environmental Management System is shown on **Figure 2**.

Longwalls 11 to 13 are located wholly within WCPL-owned land. No privately held land or public roads are located within the Longwalls 11 to 13 Application Area. Therefore, the risks to public safety associated with the extraction of Longwalls 11 to 13 are limited.

A Trigger Action Response Plan (TARP) for this PSMP is provided in **Attachment 1**, 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.

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.



WAM-09-15_EP Sth Bates_Whybrow Seam_PSMP_001B

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WAMBO COAL MINE

Wambo Coal Mine
Environmental Management System

Figure 2

Table 3
Health and Safety Management System Overview - Reference Summary

PSMP Component	H&SMS Overview Reference	Section Description
Management Measures	Section 4.6 – Occupational Health and Safety Policy Statement[1]	Section 4.6 of the H&SMS Overview provides Wambo's commitment in regard to providing a safe, healthy workplace.
	Section 4.6 – Wambo H&SMS Components[1]	Section 4.6 of the H&SMS Overview outlines the process for the development and implementation of policy, standards, management plans and procedures, including adherence to legislation, standards, guidelines and codes of practices and implementation of a risk management process.
	Section 4.7 – H&SMS Structure[1]	Section 4.7 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; • training and competency management; • site introduction; and • site health and safety.

[1] 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 11 to 13.

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 11 to 13 against the performance measure.

3 PREDICTED SUBSIDENCE IMPACTS

Longwalls 11 to 13 are located wholly within WCPL-owned land. No privately held land or public roads are located within the Longwalls 11 to 13 Application Area.

WCPL-owned lands that are not subject to mining operations or reserved as part of the Remnant Woodland Enhancement Program (RWEP) are occasionally utilised for the agistment of stock (WCPL, 2003).

Given the above, it is considered that potential public safety issues resulting from the extraction of Longwalls 11 to 13 are limited to:

- agistees accessing the Longwalls 11 to 13 Application Area to manage stock;
- unauthorised access to the Longwalls 11 to 13 Application Area (e.g. looking for firewood, hunting or horse riding); and
- members of the Rural Fire Service accessing Longwalls 11 to 13 Application Area.

A subsidence risk assessment was undertaken as part of the Extraction Plan process for Longwalls 11 to 13. The subsidence risk assessment did not identify any public safety issues in addition to those listed above (Operational Risk Mentoring, 2015). Potential subsidence impacts are predicted to include surface cracking, changes in stream bed gradients, erosion, cliff instability and ponding (Mine Subsidence Engineering Consultants [MSEC], 2015). Surface cracking, erosion and cliff instability may be considered to pose a safety hazard.

The maximum subsidence, tilts and strains predicted for Longwalls 11 to 13 are summarised in **Table 5** and the location of predicted subsidence is presented in **Figure 3**.

Table 5
Maximum Predicted Subsidence, Tilt and Strains for Longwalls 11 to 13

Subsidence Parameter	Longwall 11	Longwall 12	Longwall 13
Maximum Subsidence (mm)	1,950	1,900	1,900
Maximum Tilt (mm/m)*	90		
Maximum Hogging Curvature (km^{-1})*	> 3.0		
Maximum Sagging Curvature (km^{-1})*	> 3.0		

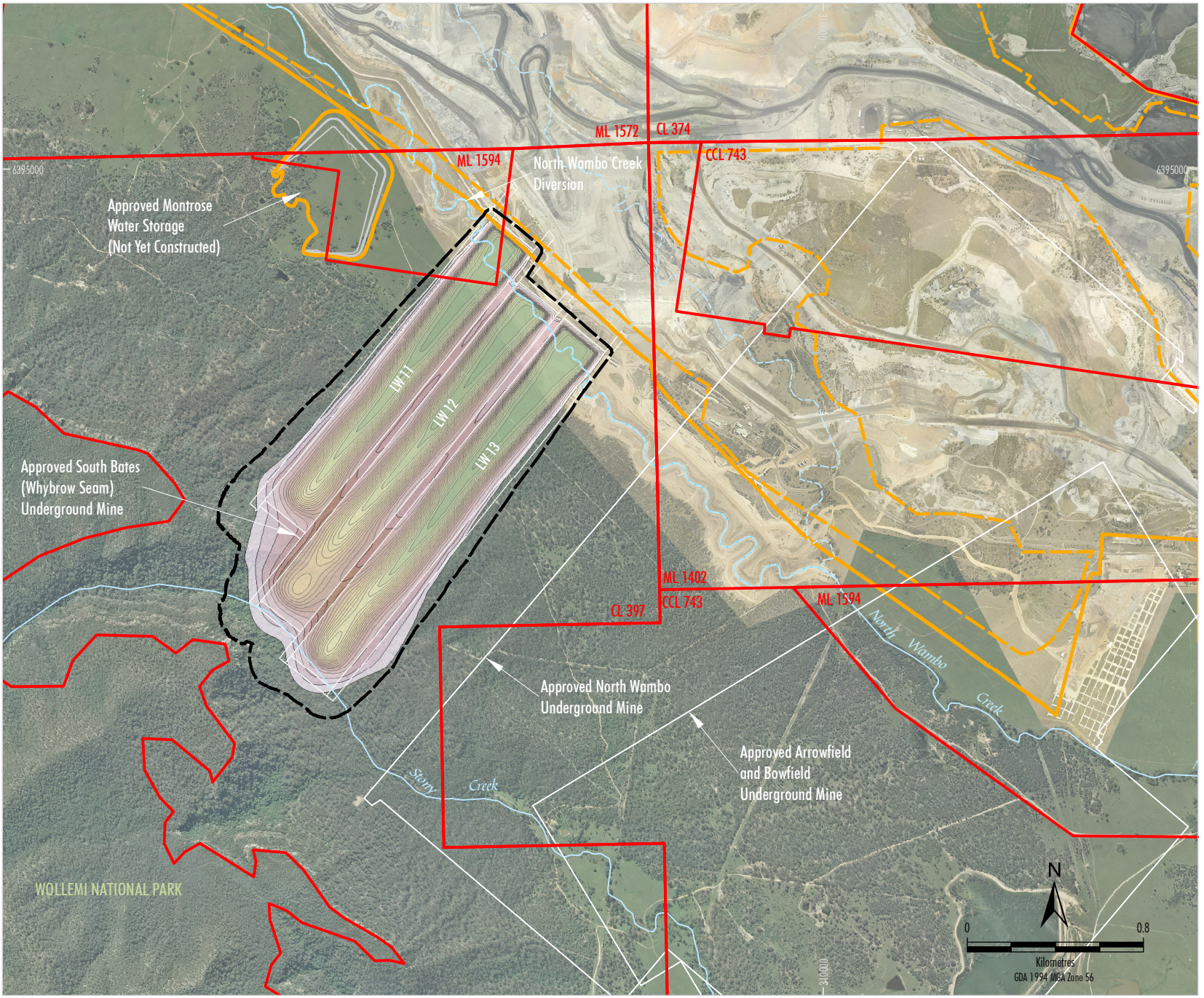
Source: MSEC (2015).

mm = millimetre.

mm/m = millimetres per metre.

km^{-1} = per kilometre.

* Maximum values of tilt and hogging and sagging curvature were calculated for the maximum values anywhere above the longwalls (MSEC, 2015).



LEGEND

- Mining and Coal Lease Boundary
- Existing/Approved Surface Development Area
- Approved Open Cut Limit
- Approved Underground Development
- Extraction Plan Application Area

Subsidence Contour Colour Scale (mm)

- 20
- 50
- 100
- 200
- 300
- 400
- 500
- 600
- 700
- 800
- 900
- 1000
- 1100
- 1200
- 1300
- 1400
- 1500
- 1600
- 1700
- 1800
- 1900

Source: Department of Lands (July 2009); WCPL (2015); WCPL Orthophoto (Apr-Oct 2013) and MSEC (2015)

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WAMBO COAL MINE

Predicted Subsidence from the South Bates (Whybrow Seam) Underground Mine

Figure 3

WAM-09-15_EP Sth Bates_EPA_PSMP_202A

4 MONITORING

A monitoring program will be implemented to monitor the subsidence impacts of Longwalls 11 to 13 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			
South Bates (Whybrow Seam) 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 integrity of cliffs and steep slopes.	Potentially unstable structures and/or rock masses.	Monitoring during secondary extraction in accordance with the Land Management Plan.	Mine Surveyor
Visual inspection of the integrity of fences.	Condition of fences.	Monthly inspections during secondary extraction.	Mine Surveyor
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, cliff instability, erosion and ponding resulting from the extraction of Longwalls 11 to 13 is described in the Land Management Plan for South Bates (Whybrow Seam) Underground Mine Longwalls 11 to 13.

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 Plan for South Bates (Whybrow Seam) Underground Mine Longwalls 11 to 13. 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 Plan for South Bates (Whybrow Seam) Underground Mine Longwalls 11 to 13.

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 11 to 13. 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 are subject to the requirements of: • WA-TRG-MP-302 Wambo Training and Competency Management Plan; and • WA-S&H-PRO 315.6 Site Introduction of Personnel.	Ongoing.	Relevant Area Manager as per the WCPL H&SMS
Posting of warning signs at suitable locations on property boundaries, fences and access tracks. 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.	Technical Services Manager
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
During Mining		
All personnel and visitors accessing the Wambo site are subject to the requirements of: • WA-TRG-MP-302 Wambo Training and Competency Management Plan; and • WA-S&H-PRO 315.7 Site Introduction of Personnel.	Ongoing.	Relevant Area Manager as per the WCPL H&SMS
Management of surface cracking and areas of subsidence troughs in accordance with the Land Management Plan for Longwalls 11 to 13.		
Management of potential cliff or slope instability in accordance with the Land Management Plan for Longwalls 11 to 13.		
Maintenance of warning signs.	Ongoing.	Technical Services Manager
All safety incidents will be handled in accordance with the H&SMS (refer to **Table 3**).	Ongoing.	All staff
Post-Mining		
Repair of fences in accordance with the Land Management Plan for Longwalls 11 to 13.		
Review of warning sign placement and removal if no longer required.	Following completion of secondary extraction.	Technical Services Manager

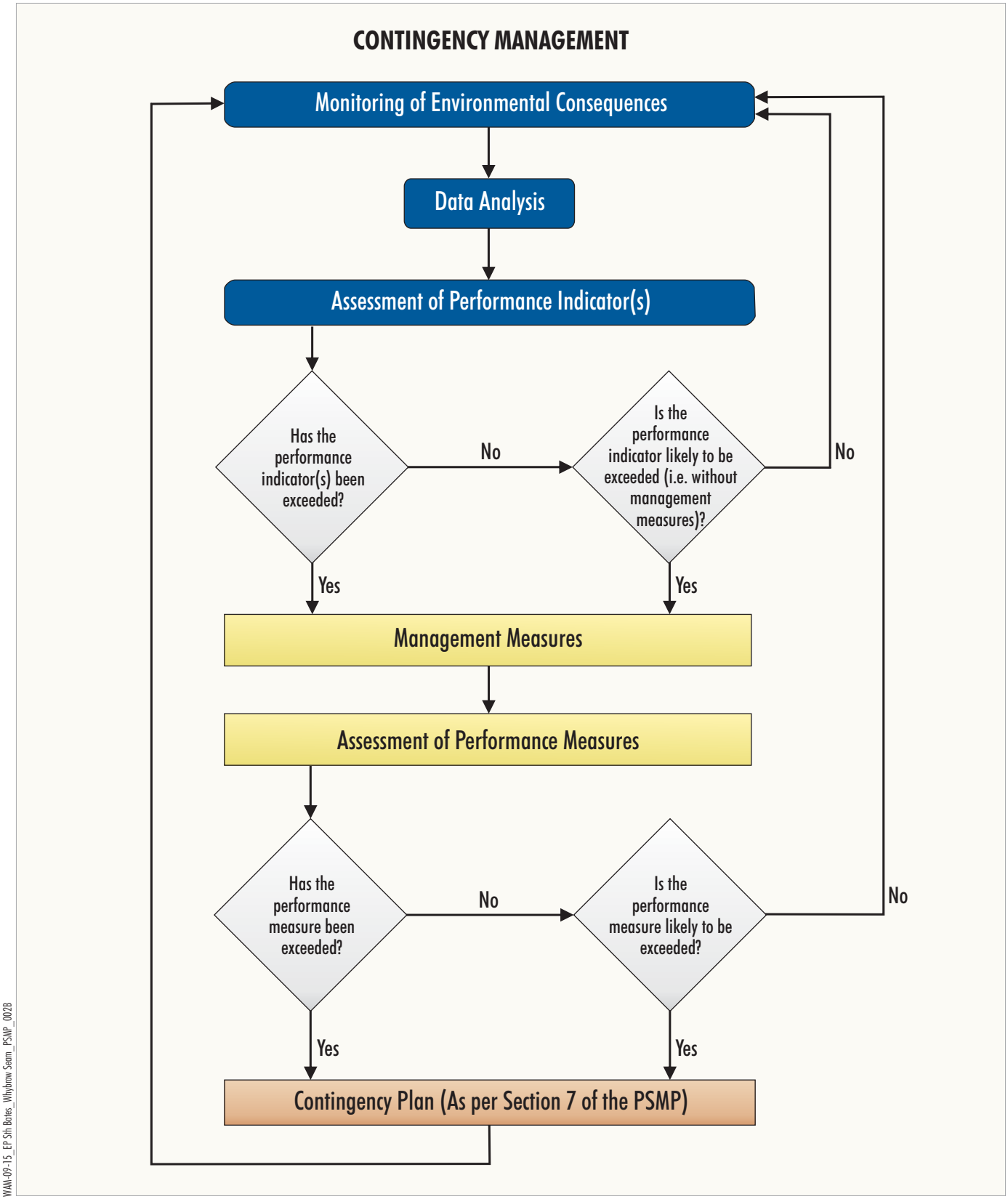
6 ASSESSMENT OF PERFORMANCE INDICATORS AND MEASURES

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 11 to 13 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.



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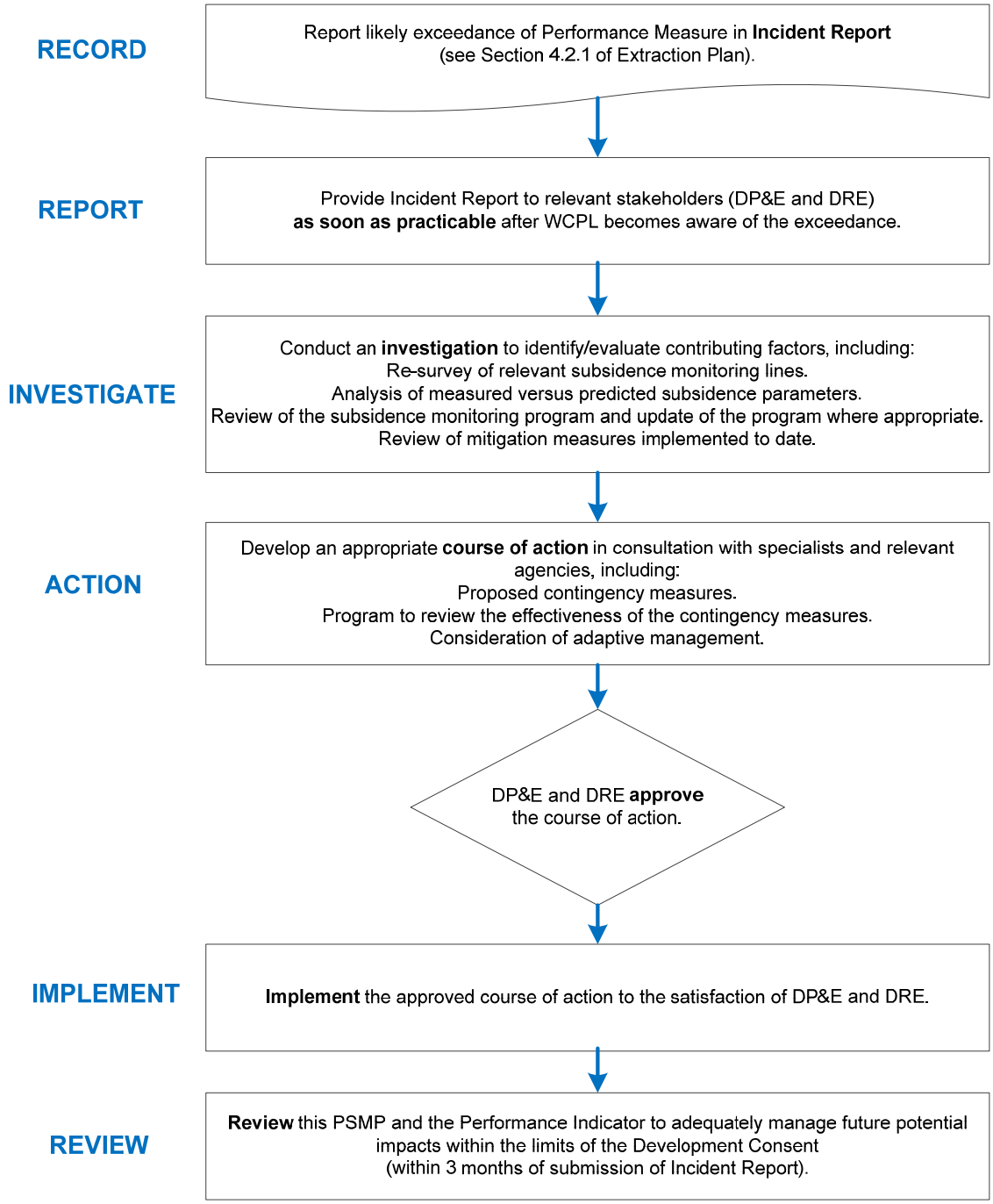
WAMBO COAL MINE

Monitoring of Environmental Consequences against Performance Indicators and Measures

Figure 4

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 Manager of Mining Engineering	• Ensure this PSMP is implemented. • Notify the Regulator as per the NSW *Work Health and Safety (Mines) Regulation, 2014*.
Director: Technical Services and Projects	• Ensure the Subsidence Monitoring Program is implemented. • 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 Training Manager	• Maintain records of training documentation on WCPL's site training system. • Prepare training documentation in association with the Director: Technical Services and Projects and Environment and Community Manager.
Underground Mine Engineer (Subsidence Inspector)	• Undertake relevant monitoring and implementation of management measures summarised in **Tables 6 and 7** respectively. • Take actions to rectify any public safety issues identified. • Complete subsidence impact register as described in the Extraction Plan for Longwalls 11 to 13 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 Inspector)	• Undertake all subsidence monitoring to the required standard within the specified timeframes and ensure data are adequately checked, processed and recorded. • Undertake relevant monitoring summarised in **Table 6.** • Take actions to rectify any public safety issues identified. • Complete subsidence impact register as described in the Extraction Plan for Longwalls 11 to 13 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).

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.

Mine Subsidence Engineering Consultants (2015) *South Bates (Whybrow Seam) Subsidence Assessment.*

Operational Risk Mentoring (2015) *South Bates (Whybrow Seam) Underground Mine – Longwalls 11 to 13 Subsidence Risk Assessment Report*. Report prepared for Wambo Coal Pty Limited.

Wambo Coal Pty Limited (2003) *Wambo Development Project Environmental Impact Statement.*

ATTACHMENT 1

PUBLIC SAFETY MANAGEMENT PLAN
TRIGGER ACTION RESPONSE PLAN

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

Condition	Normal	Level 1	Level 2
	Predicted Impacts	**Implement Management Measures**	**Restoration/Contingency Phase**
Trigger	• Predicted subsidence impacts and associated risks to public safety, described in **Section 3**.	• 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	• Conduct monitoring, consistent with **Table 6** and the Subsidence Monitoring Program (Appendix H of the Extraction Plan). • Assess the subsidence impacts in accordance with **Section 6**. • Assess the need for management measures in accordance with **Table 7**.	• Implement management measures, as required, in accordance with **Table 7**.	• Implement Contingency Plan described in **Section 7**.
Frequency	• Frequency consistent with **Table 7**.	• As required, in accordance with **Section 6**.	• As required, in accordance with **Section 7**.
Position of Decision-Making	• Environment and Community Manager. • Technical Services Manager.	• Underground Manager of Mining Engineering.	• General Manager.

ATTACHMENT 2

WAMBO COAL PTY LIMITED
HEALTH AND SAFETY MANAGEMENT SYSTEM OVERVIEW

WAMBO COAL
Health Safety Management System Overview

PA-WA-SAH-MOP-000
May 2014

Document Owner		Document Approver
Manager Health Safety Training		Manager Health Safety Training
Version	**Approval Date**	**Approver Name**
2	May 2014	Peter Hafey
General Description of Changes from Previous Version		
Minor Updates to comply with Peabody standard		

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4.8 HSMS Planning
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1.0 Purpose

Provide an overview of the Wambo Coal Health Safety Management System (HSMS) for managing the health and wellbeing of all personnel that access the site.

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 the operation, utilising a systematic HSMS.

2.0 Objectives

The Wambo HSMS will:

- Provide an overall site system under which all work processes operate.
- Has a structured alignment to AS4804 and AS4801
- Is developed to demonstrate legislative compliance 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.
- The standard operating procedures and practices are developed, supervised and observed by properly trained, competent, committed and aware people.

3.0 Scope

This document will refer to:

- Wambo Coal: Meaning the whole site including
    - UG: Components specific to the Underground
    - CHPP: Components specific to the Coal Handling and Preparation Plant
    - OC: Components specific to the Open Cut
    - RCH: Remainder of Colliery Holdings

4.0 Requirements

4.1 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.

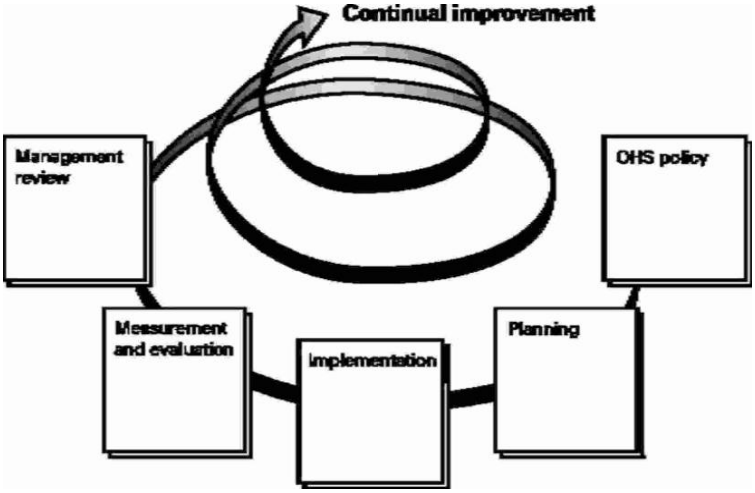
The Wambo HSMS is owned by everyone in the Peabody organisation.

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

HSMS change is consulted and communicated through the following process:

Reference:
WA-S&H-MP-303 Communication and Consultation Management
WA-S&H-PRO-306 Change Management

4.2 Health Safety Management System Approach



4.3 Health and Safety Policy

Wambo is committed to providing a safe, healthy workplace pursuant to Peabody's safety vision.

Reference: WA-S&H-POL-101 Health and Safety Policy

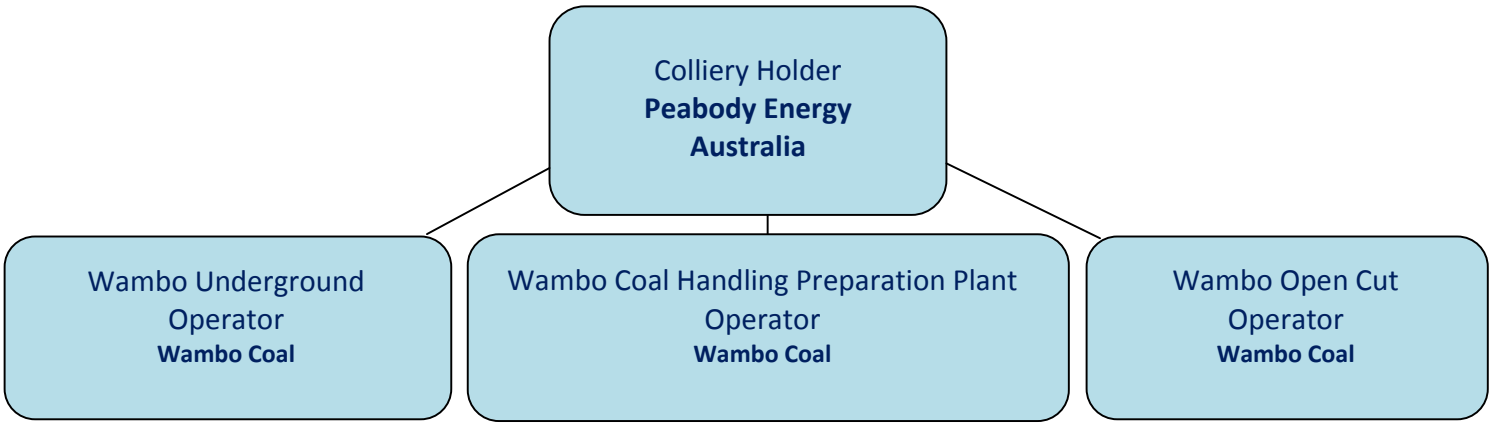
4.3.1 Peabody's Safety Vision

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.

4.4 Company Operational Structure



4.5 Management Structure

Reference:
WA-S&H-GUI-301 Management Organisational Structure and Responsibility

4.6 Wambo HSMS Components

All HSMS components listed that are developed and/or implemented at Wambo are mapped to the Peabody core safety principles

4.6.1 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

4.6.2 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

4.6.3 Management Plans

All management plans and procedures will need to comply with the above standards and developed through the Risk Management process:

- Broad Brush Risk Assessment
- Formal Risk Assessment

Management plans will be compliant to Work Health Safety (WHS) and Coal Mines Health Safety (CMHS) legislation:

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

4.6.4 Procedures

All procedures will be identified by Risk Assessment and developed under the relevant Management Plan:

- Procedures
- Safe Work Procedures

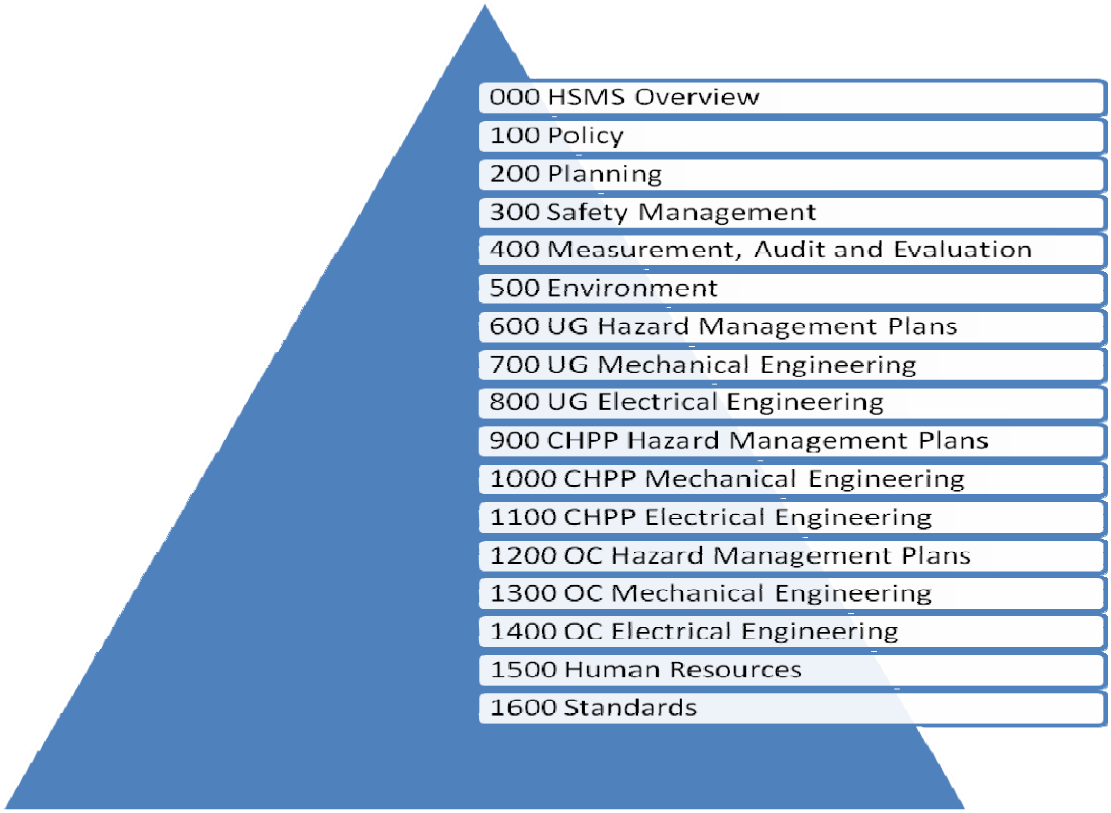
4.6.5 Documents

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

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

4.7 HSMS Structure

The components of the Wambo HSMS are aligned with AS4804 and additional components to cover the operational hazard management plans as required by the legislative framework.



4.7.1 Management Overview Plans

This section covers 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
- Major Hazard Management WA-S&H-MOP-003
- Environment and Community WA-ENV-MOP-004

4.7.2 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:

- 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

4.7.3 Planning

This section of the HSMS is addressed 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
- Clothing and Footwear WA-S&H-PRO-212
- Segregation of Light and Heavy vehicles WA-S&H-MP-213
- Security Management Plan WA-S&H-MP-219
- Inclement Weather Management WA-SAH-MP-220

4.7.4 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:

- Management Structure WA-HRS-GUI-301
- CHPP Management Structure WA-HRS-GUI-302
- 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
- Hazardous Substances and Dangerous Goods WA-S&H-MP-313
- Site Introduction WA-S&H-MP-315
- Work Health and Safety WA-S&H-MP-316
- Record Management WA-S&H-MP-317

4.7.5 Measurement, Audit & Evaluation

This section of the HSMS is addressed in many of the operational plans in regards to inspections of hazardous areas, plant equipment and corrective and preventative actions:

- 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 Management WA-S&H-MP-406

4.7.6 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
- Pollution Incident Response Management Plan WA-ENV-MP-503
- Air Quality WA-ENV-MP-504
- Flora and Fauna Management WA-ENV-MP-506

4.7.7 Underground Major Operational Hazards

This section of the HSMS covers the major operational hazards for the Underground Operations:

- 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
- Isolation Procedures WA-MIN-PRO-629

4.7.8 Underground Mechanical Engineering

The site mechanical engineering is documented in the following;

- Mechanical Engineering Management Plan WA-ENG-MHMP-700
- 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

4.7.9 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-802
- Overhead Arial's WA-ENG-STD-800.1
- Shotfiring Equipment WA-ENG-STD-800.2
- Electric Welders WA-ENG-STD-800.3
- Portable Apparatus Permit WA-ENG-PER-800.4
- LV Testing WA-ENG-STD-800.5
- Functional Safety WA-ENG-STD-800.6
- High Voltage WA-ENG-STD-800.7
- High Voltage Safety Rules WA-ENG-STD-800.8
- Cable Management WA-ENG-STD-800.9
- Software Management WA-ENG-STD-800.10
- Electrical Explosion Protection WA-ENG-STD-800.11
- Bridging and Forcing Permit WA-ENG-STD-800.12
- Bridging and Forcing WA-ENG-STD-800.13
- General Electrical WA-ENG-STD-800.14
- Removal and Restoration WA-ENG-STD-800.15
- Potable apparatus WA-ENG-STD-800.16
- Examination and Testing Scheme WA-ENG-STD-800.17
- Remote Control Management WA-ENG-STD-800.18
- Transportable generator and lighting plant WA-ENG-STD-800.19
- Life Cycle Management Plan WA-ENG-STD-800.20
- New Plant Process WA-ENG-STD-800.21
- Overhaul Process WA-ENG-STD-800.22
- Global Document Register WA-ENG-STD-800.23
- Defect Management System WA-ENG-STD-800.24

4.7.10 CHPP Major Operational Hazards

This area addresses the major operational hazards for the CHPP:

- Stockpile Management WA-CPP-MHMP 906
- Airborne Dust WA-CPP-MHMP 907
- Lightning Management WA-CPP-MHMP 908
- Spontaneous Combustion WA-CPP-MHMP 909
- Reclaim Tunnel WA-CPP-MHMP 910

- Fire and Explosion WA-CPP-MHMP 911
- Withdrawal Conditions WA-CPP-MHMP 912
- Surface Transport WA-CPP-MHMP 916

4.7.11 CH&PP Mechanical Engineering

- Mechanical Engineering Management Plan WA-ENG-MHMP-1000
- Mechanical Engineering Overview WA-CPP-MOP-1000
- Cutting and Welding WA-CPP-MP-1001
- Training WA-CPP-STD-1002
- Conveyor Maintenance WA-CPP-STD-1003
- Mobile Plant WA-CPP-STD-1004
- Structures WA-CPP-STD-1005
- Mechanical Installations WA-CPP-STD-1006
- Pressurised Fluid Power Systems WA-CPP-STD-1007
- Machine Guarding WA-CPP-STD-1008
- Tyres and Rims WA-CPP-STD-1009
- Explosive Power Tools WA-CPP-STD-1010
- Hydraulic & Pneumatic Tools WA-CPP-STD-1011
- Jacks and Stands WA-CPP-STD-1012
- Lifting Equipment WA-CPP-STD-1014
- Oxy-Fuel Gas Cutting, Heating & Welding Equipment WA-CPP-STD-1013
- Safety Critical Equipment WA-CPP-STD-1015
- Plant Registration WA-CPP-STD-1016

4.7.12 CH&PP Electrical Engineering

- Electrical Engineering Management Plan WA-ENG-MHMP-1100
- Electrical Engineering Overview WA-CPP-MOP-1100
- CH&PP Electrical Training Competency & Supervision WA-CPP-STD-1101
- High Voltage Safety Rules WA-CPP-STD-1102
- Electrical Commissioning and Acceptable testing WA-CPP-STD-1103
- CH&PP General Electrical Standards WA-CPP-STD-1104
- Restoration of Power WA-CPP-STD-1105
- Multimetres and Live Testing WA-CPP-STD-1106
- Electrical Protection WA-CPP-STD-1107
- Earthing and Lightning Systems WA-CPP-STD-1108
- Portable Electrical Apparatus WA-CPP-STD-1109
- Lighting Plants and Generators WA-CPP-STD-1110
- Electrical Welding Machines WA-CPP-STD-1111
- PLC & Scada Systems WA-CPP-STD-1112
- Signage of Electrical Equipment WA-CPP-STD-1113
- Auto Electrical WA-CPP-STD-1114
- Lasers WA-CPP-STD-1115
- Lighting WA-CPP-STD-1116
- Electrical Retriculation WA-CPP-STD-1117
- Electrical Motor Standard WA-CPP-STD-1118
- Remote Control WA-CPP-STD-1119
- EM Stop WA-CPP-STD-1120

4.7.13 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
- Fire and Explosion Management Plan WA-MIN-MHMP-1204
- Airborne Dust Management WA-MIN-MHMP-1205
- Inspection and Supervision Management Plan WA-MIN-MP-1209
- Withdrawal Conditions WA-MIN-MP-1213

4.7.14 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

4.7.15 Open Cut Electrical Engineering

- Electrical Engineering Management Plan WA-MIN-MHMP-1401
- Removal and Restoration of Power WA-MIN-MP-1402
- Engineering Standards WA-MIN-MP-1403
- Portable Apparatus WA-MIN-MP-1404
- Software ManagementWA-MIN-MP-1405
- Electric Welding Machines WA-MIN-MP-1409
- Bridging and Forcing WA-MIN-MP-1411
- Low Voltage Testing WA-MIN-MP-1416

4.7.16 Human Resources

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

4.7.17 Wambo Coal Standards

This is additional to any Australian, Corporate or Legislative standard:

- PPE WA-S&H-STD-1604
- Prohibited Articles WA-S&H-STD-1605
- Working at Heights WA-S&H-STD-1608
- Open Cut Lock Out and Isolation WA-S&H-STD-1610
- Cranes, Machinery and Equipment Lifting WA-S&H-STD-1612
- Light Vehicle and Forklift WA-S&H-STD-1614
- Medium/Heavy Vehicle Specifications Standard WA-S&H-STD-1615

- Inclement Weather WA-S&H-STD-1625
- Hygiene WA-S&H-STD-1626
- Pre-Employment Standard WA-S&H-STD-1629
- Confined Space Standard WA-S&H-STD-1630
- Road Construction and Maintenance Standard WA-S&H-STD-1631
- CHPP Isolations Standard WA-S&H-STD-1632
- CHPP Safety Defect Management WA-S&H-STD-1633
- CHPP Inspection Program WA-S&H-STD-1634
- Work Permit Standard WA-S&H-STD-1635
- Bathhouse and Sanitary Facilities WA-S&H-STD-1636
- Radiation Sources Standard WA-S&H-STD-1637

4.8 HSMS Planning

An annual Health Safety Management Plan will be developed and implemented with appropriate actions that incorporate the site initiatives towards Health and Safety

Reference: WA-S&H-PLN-201 Wambo Health and Safety Plan

5.0 References and Supporting Documents

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 4804:2001