

WAMBO COAL BLAST MANAGEMENT PLAN

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1.0 Introduction

1.1 Background

The Wambo Coal Mine (the Mine) is situated approximately 15 kilometres west of Singleton, near the village of Warkworth, New South Wales (**Figure 1**). Wambo is owned and operated by Wambo Coal Pty Limited (WCPL), a subsidiary of Peabody Energy Australia Pty Limited.

A range of open cut and underground mine operations have been conducted at WCPL since mining operations commenced in 1969. Mining under the current Development Consent (DA305-7-2003) commenced in 2004 and permits both open cut, underground operations and associated activities to be conducted. The latest modification to DA305-7-2003 (Mod 16), approved by the Independent Planning Commission of NSW on 29 August 2019, requires development at Wambo Coal Mine to be undertaken in the following stages:

- Phase 1 - open cut mining operations at Wambo open cut mine, underground mining operations at Wambo underground mine and the operation of Wambo mine infrastructure (including minor upgrades to this infrastructure) within the green operational area identified in Figure 1 of Appendix 2
- Phase 2 - underground mining operations at Wambo underground mine, the operation of Wambo mine infrastructure within the green operational area identified in Figure 2 of Appendix 2 and associated surface development
- Phase 3 - following the cessation of underground mining operations that includes mine closure.

The operation of WCPL's rail and coal loading infrastructure is undertaken in accordance with DA177-8-2204. The latest modification to DA177-8-2004 (Mod 3) was approved by the Independent Planning Commission of NSW on 29 August 2019.

The approved run-of-mine (ROM) coal production rate is 14.7 million tonnes per annum and all product coal is transported from WCPL by rail, in accordance with the development consents. A summary of the approved Wambo Coal Mine is provided in **Table 1**.

Table 1: Summary of the Approved Wambo Coal Mine

Component	Approved Wambo Coal Mine ¹
Open Cut Mining	Phase 1 – A maximum of 8 Mt of ROM coal may be extracted from the Wambo open cut mine in a calendar year
	Phase 2 – ROM coal from the Wambo open cut mine may be received, processed and/or stockpiled onsite. No open cut mining may take place during Phase 2.
	Open cut mining operations under current approved MOP
Underground Mining	Phase 1 and 2 - A maximum of 9.75 Mt of ROM coal may be extracted from the Wambo underground mine in a calendar year
	Underground mining operations within the approved mine plan until 31 August 2042
Subsidence commitments and management.	The subsidence performance measures listed in Conditions B1-B10 of the Development Consent (DA305-7-2003).

Component	Approved Wambo Coal Mine ¹
ROM Coal Production Rate	Up to 14.7 Mt of ROM coal from the Wambo Mining Complex and United Wambo open cut coal mine in a calendar year
Waste Rock Management	Waste rock deposited in open cut voids and in waste rock emplacements adjacent open cut operations
	Overburden may be transferred to the United open cut mine for emplacement during Phase 2.
Coal Washing	Coal handling and preparation plant (CHPP) capable of processing approximately 1,800 tonnes per hour (tph)
Coal transportation	A maximum of 15 Mt of coal transported from the United Wambo Mining Complex in a calendar year
	A maximum of 8 laden trains may leave site in any 24hr period
	Coal transportation may be carried out until 31 August 2042.
CHPP Reject Management	Coarse rejects and tailings would be incorporated, encapsulated and/or capped within open cut voids in accordance with existing Wambo management practices
	Coal rejects may be transferred to the United open cut mine for emplacement during Phase 2.
Water Supply	Make-up water demand to be met from runoff recovered from tailings storage areas, operational areas, dewatering, licensed extraction from Wollombi Brook and Hunter River
Mining Tenements	Coal Lease (CL) 365, CL374, CL397, Consolidated Coal Lease (CCL) 743, Mining Lease (ML) 1402, ML1572, ML1594, Authorisation (A) 444, Exploration Licence (EL) 7211.

Note: ¹ Development Consents DA305-7-2003 and DA177-8-2004 (as modified August 2019)

In accordance with Condition B38 of DA305-7-2003, WCPL are required to prepare a Blast Management Plan (BMP). In accordance with WCPL's continuous improvement and review processes and Condition D6 of DA305-7-2003, a review of the BMP has been undertaken to ensure that blasting activities at the Mine continue to be undertaken in a manner that ensures compliance and reduces impacts on the local community. This review has been undertaken by suitably qualified and experienced persons in consultation with the EPA (refer to **Appendix A**).

1.2 Purpose

The purpose of this BMP is to ensure that WCPL blast related impacts, including ground vibration, overpressure, fume and dust are minimised on the local community, infrastructure and heritage sites to the extent required by DA305-7-2003 and Environmental Protection Licence (EPL 529). This BMP has been developed to:

- Describe the measures to be implemented to comply with the relevant blast conditions;
- Describe the blast management strategies used to manage impacts from blasting;
- Provide a blast monitoring protocol for evaluating compliance with the blast criteria;
- Describe WCPL's Blast Fume Management Strategy (**Appendix B**);
- Provide a protocol for managing and reporting any blast related incidents, exceedances or non-compliances;
- Communicate with the local community and regulators regarding WCPL's blasting activities;

- Describe and assign responsibilities relating to blast management at WCPL;
- Describe the road closure management procedure for blasting within 500 metres of the Golden Highway (**Appendix D**); and
- Describe how this BMP will be reviewed and updated.

1.3 Scope

This BMP applies to all blasting activities undertaken within WCPL's mining authorisations and approved mining areas (**Figure 2**). This BMP has been prepared to manage blast related impacts including overpressure, ground vibration, dust, and blast fume in accordance with the Blast Fume Management Strategy. This BMP forms part of WCPL's Environmental Management System (EMS) and provides a consistent process for notification and reporting in accordance with the Pollution Incident Response Management Plan (PIRMP).

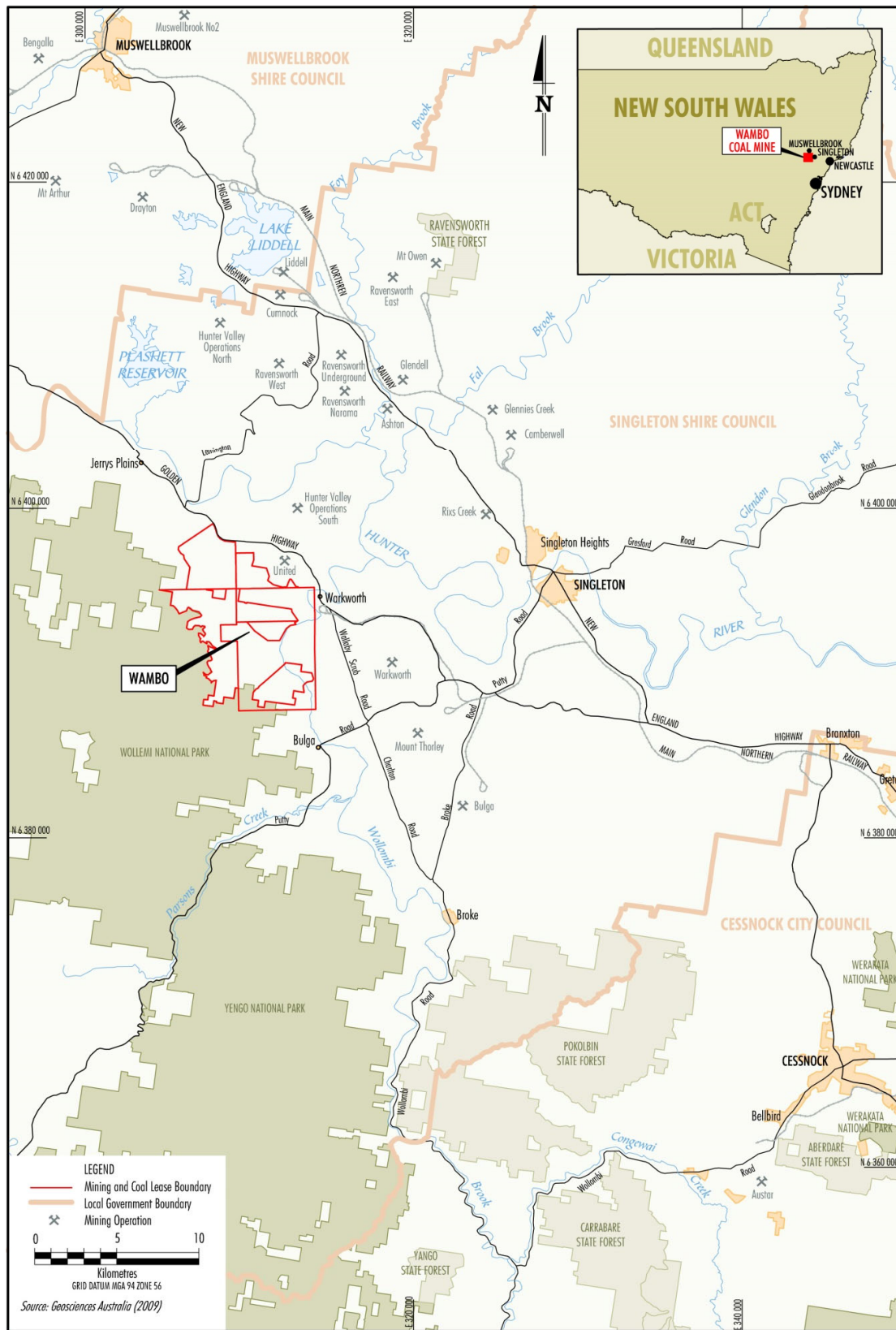


Figure 1: Wambo Coal Regional Location

Peabody
W A M B O C O A L M I N E
Approved Wambo Coal Mine Layout



1.4 Statutory Requirements

This BMP has been prepared to fulfil the requirements of DA305-7-2003 and EPL529, as well as commitments from the *United Wambo Open Cut Coal Mine Project Environmental Assessment* (Umwelt, 2016).

1.4.1 Environmental Planning & Assessment Act 1979

WCPL received Development Consent (DA305-7-2003), in accordance with the *Environmental Planning & Assessment Act 1979* (EP&A Act), from the NSW Department of Planning, Industry and Environment (DPIE), formerly NSW Department of Planning and Infrastructure (DP&I), on 4 February 2004. The most recent modification to DA305-7-2003 was granted by the Independent Planning Commission of NSW on 29 August 2019 (Mod 16). Conditions within the modified DA305-7-2003 regulate blasting activities undertaken at the Mine (**Table 2**).

In addition to the relevant conditions in DA305-7-2003, WCPL has also made a number of commitments relating to blasting in the following documents:

- *United Wambo Open Cut Coal Mine Project Environmental Impact Statement* (Umwelt, 2016); and
- *United Wambo Open Cut Coal Mine Project Blasting Impact Assessment* (Enviro Strata Consulting, 2016).

These commitments are summarised in **Table 3**.

1.4.2 Protection of the Environment Operations Act 1997

WCPL operates under Environmental Protection Licence 529 (EPL 529), issued by the NSW Office of Environment & Heritage (OEH) under the authority of the *Protection of the Environment Operations Act 1997*. Conditions within EPL529 regulate blasting activities undertaken at the Mine (**Table 4**) EPL 529 is administered by the NSW Environmental Protection Authority (EPA).

A Pollution Incident Response Management Plan (PIRMP) has been prepared by WCPL, as holder of EPL 529 in accordance with Part 5.7A of the *Protection of the Environment Operations Act 1997* (POEO Act) and Part 3A of the *Protection of the Environment Operations (General) Regulation 2009 (Regulation)*. For more information regarding WCPL's protocol for reporting environmental incidents please refer to **Section 9.5**.

Table 2: DA305-7-2003 Requirements for the BMP

Schedule/ Part	Condition	DA305-7-2003	BMP Section																																
B	B22	Blasting Criteria The Applicant must ensure that blasting on the site does not cause exceedances of the Criteria in Table 5. <i>Table 5: Blasting criteria</i> <table> <tr> <th>Location</th><th>Airblast overpressure (dB(Lin Peak))</th><th>Ground vibration (mm/s)</th><th>Allowable exceedance</th></tr> <tr> <td>Residence on privately-owned land</td><td>120</td><td>10</td><td>0%</td></tr> <tr> <td></td><td>115</td><td>5</td><td>5% of the total number of blasts over a calendar year</td></tr> <tr> <td>Wambo Homestead</td><td>120</td><td>5</td><td>0%</td></tr> <tr> <td>All other heritage items</td><td>133</td><td>5</td><td>0%</td></tr> <tr> <td>Prescribed dams</td><td></td><td>50¹</td><td>0%</td></tr> <tr> <td>Public roads</td><td></td><td>100</td><td>0%</td></tr> <tr> <td>All other public infrastructure</td><td></td><td>50²</td><td>0%</td></tr> </table> Notes: 1. Unless otherwise directed by the DSC. 2. Or a limit determined by the structural design methodology in AS2187.2-2006, or its latest version, or other alternative limit for public infrastructures, to the satisfaction of the Planning Secretary.	Location	Airblast overpressure (dB(Lin Peak))	Ground vibration (mm/s)	Allowable exceedance	Residence on privately-owned land	120	10	0%		115	5	5% of the total number of blasts over a calendar year	Wambo Homestead	120	5	0%	All other heritage items	133	5	0%	Prescribed dams		50 ¹	0%	Public roads		100	0%	All other public infrastructure		50 ²	0%	Sections 3.1 and 3.2
Location	Airblast overpressure (dB(Lin Peak))	Ground vibration (mm/s)	Allowable exceedance																																
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B	B23	The blasting criteria in Table 5 do not apply if the Applicant has an agreement with the owner/s of the relevant residence or infrastructure to exceed the blasting criteria, and the Applicant has advised the Department in writing of the terms of this agreement.	Section 3.2																																
B	B24	Blasting Hours The Applicant must only carry out blasting on the site between 9 am and 5 pm (Monday to Saturday inclusive). No blasting is allowed on Sundays, public holidays or any other time without the prior written approval of the Planning Secretary.	Section 4.1																																
B	B25	Blasting Frequency The Applicant may carry out a maximum of:	Section 4.2																																

Schedule/ Part	Condition	DA305-7-2003	BMP Section
		a) 3 single blast events ^a a day; and b) 15 single blast events ^a a week, averaged over a calendar year.	
B	B26	Condition B25 does not apply to single blast events^a that generate ground vibration of 0.5 mm/s or less at any residence on privately-owned land, or to blast misfires or blasts required to ensure the safety of the mine, its workers or the general public. ^a Within conditions B25 and B26, 'single blast event' means a blast which involves either a single detonation or a number of individual blasts fired in quick succession in a discrete area of the development. Should an additional blast be required after a blast misfire, this additional blast and the blast misfire are counted as a single blast event.	Section 4.2
B	B27	Property Investigations If the owner of any privately-owned land within 2 km radius of the site or any other landowner where the Planning Secretary is satisfied an investigation is warranted, claims in writing that buildings or structures on their land have been damaged as a result of blasting on the site, then within 2 months of receiving this written claim the Applicant must: a) commission a suitably qualified, experienced and independent person, whose appointment is acceptable to both parties to investigate the claim; and b) give the landowner a copy of the property investigation report.	Section 5.3
B	B28	If this independent property investigation confirms the landowner's claim, and both parties agree with these findings, then the Applicant must repair the damage to the satisfaction of the Planning Secretary.	
B	B29	If there is a dispute over the selection of the suitably qualified, experienced and independent person, or the Applicant or the landowner disagrees with the findings of the independent property investigation, then either party may refer the matter to the Planning Secretary for resolution.	
B	B30	Blast Operating Conditions The Applicant must: a) take all reasonable steps to: i) ensure the safety of people and livestock from blasting impacts of the development; ii) protect public and private infrastructure and property in the vicinity of the site from blasting damage associated with the development; and iii) minimise the dust and fume emissions of any blasting;	Sections 4.3 and 5.0. See also Appendix B (Blast Fume Management Strategy) and Appendix D (Road Closure Management Procedure)

Schedule/ Part	Condition	DA305-7-2003	BMP Section
		b) ensure that blasting on the site does not damage heritage items, and develop specific measures to protect heritage items from any blasting damage associated with the development; c) minimise the frequency and duration of any public road closures for blasting, and use all reasonable efforts to avoid road closures during peak traffic periods; d) operate a suitable system to enable interested members of the public to get up-to-date information on the proposed blasting schedule on the site and associated public road closures, including notification via SMS message of the blasting schedule and associated road closures for that day and any variations to that schedule and closures; e) use all reasonable efforts to co-ordinate the timing of blasting at the site with nearby to minimise cumulative blasting impacts; and f) carry out regular blast monitoring to determine whether the development is complying with the relevant conditions of this consent.	Section 5.10 Section 4.3 and Appendix D Section 5.2 Section 5.1 Section 6.0
B	B31	The Applicant must not carry out more than 1 blast a day within 500 metres of Wallaby Scrub Road or the Golden Highway.	Section 4.2
B	B32	The Applicant must not undertake blasting on the site within 500 metres of any public road or any land outside the site not owned by the Applicant, unless the blast generates ground vibration of 0.5 mm/s or less, or the Applicant has: a) a written agreement with the relevant infrastructure owner or landowner to allow blasting to be carried out closer to the public road or land, and the Applicant has advised the Department in writing of the terms of this agreement, or b) demonstrated, to the satisfaction of the Planning Secretary, that the blasting can be carried out closer to the public road or land without compromising the safety of people or livestock or damaging the road or other buildings and structures, and updated the Blast Management Plan to include specific mitigation measures to be implemented while blasting is being carried out within 500 metres of the road or land.	Section 4.3
B	B33	Wambo Homestead Ground vibration and air blast levels are to be monitored, using a monitoring station established within the Wambo Homestead Complex, and recorded for each blast conducted by the Applicant within 2 km of the Wambo Homestead Complex.	Sections 5.10.2 and 6.2
B	B34	The Applicant must appoint a structural engineer with expertise and experience in vibration and blast monitoring to examine all monitoring records from the Wambo Homestead Complex blast monitoring station. The appointment of the structural engineer is to be approved in writing by the Heritage Branch.	Section 5.10.2

Schedule/ Part	Condition	DA305-7-2003	BMP Section
B	B35	The structural engineer is to report to the Applicant on the monitoring results each month for blasting within 2 km of the Wambo Homestead Complex and 6 monthly for the remainder of open cut mining operations and make recommendations to ensure the conservation and prevention of damage to the significant heritage structures. Copies of these reports are to be forwarded to the Heritage Branch.	Section 5.10.2
B	B36	The structural engineer is to inspect the Wambo Homestead Complex structures annually and as soon as practical, but no later than 3 days after blast monitoring which exceeds the criteria in Table 5. During the period between blast monitoring being recorded which exceeds the criteria in Table 5 and the engineer's inspection, ground vibration from blasting is to be limited to a level which will prevent further blasting damage. The structural engineer is to advise the Applicant and the Heritage Branch of any action required to repair the damage.	Section 5.10.2
B	B37	The structural engineer is to make an assessment of whether blasting within 2km of the Wambo Homestead Complex is to cease or be managed in order to stabilise or repair the damage, and so advise the Applicant and the Heritage Branch. If blasting has been required to cease, it is not to resume until the damage has been stabilised or repaired, and the written approval for resumption has been issued by the Heritage Branch.	Section 5.10.2
B	B38	Blast Management Plan The Applicant must prepare a Blast Management Plan for the development to the satisfaction of the Planning Secretary. This plan must:	Section 1.1 and Appendix A
		a) be prepared by a suitably qualified and experienced person/s;	Section 1.1 and Appendix A
		a) be prepared in consultation with the EPA;	Section 1.1 and Appendix A
		b) describe the measures that would be implemented to ensure compliance with the blasting criteria and conditions of this consent;	Section 5.0
		c) include a Blast Fume Management Strategy for: i) minimising blast fume emissions; ii) rating and recording blast fume events; and iii) reporting significant blast fume events to the Department;	Appendix B
		d) include a Road Closure Management Plan for any blasting within 500 metres of a public road, that has been prepared in consultation with relevant roads authorities and includes provisions for: i) minimising the duration of closures, both on a per event basis and weekly basis; ii) avoiding peak traffic periods as far as reasonable; and iii) co-ordinating closures with nearby mines to minimise the cumulative effect of road closures;	Appendix D
		e) identify any agreed alternative ground vibration limits for public or private infrastructure in the vicinity of the site (if relevant);	Not relevant

Schedule/ Part	Condition	DA305-7-2003	BMP Section
		f) include a strategy to manage potential blast interactions with nearby mines;	Section 5.1
		g) include a strategy to monitor, mitigate and manage the effects of blasting on heritage items, particularly the Wambo Homestead; and	Sections 5.10.2 and 6.0
		h) include a monitoring program for evaluating and reporting on compliance with the relevant conditions of this consent.	Sections 6.0 & 9.0
B	B39	The Applicant must submit the Blast Management Plan to the Planning Secretary for approval within three months of the determination of Modification 16.	This Plan
B	B40	The Applicant must implement the Blast Management Plan as approved by the Planning Secretary.	This Plan
C	C5	Notification of Exceedances As soon as practicable and no longer than 7 days after obtaining monitoring results showing an exceedance of any noise, blasting or air quality criterion in Part B of this consent, the Applicant must provide the details of the exceedance to any affected landowners, tenants and the CCC.	Section 9.5
C	C7	Independent Review If a landowner considers the development to be exceeding any relevant air quality, noise or blasting criterion in Part B of this consent, then they may ask the Planning Secretary in writing for an independent review of the impacts of the development on their residence or land	Section 5.3
C	C8	If the Planning Secretary is not satisfied that an independent review is warranted, the Planning Secretary will notify the landowner in writing of that decision, and the reasons for that decision, within 21 days of the request for a review.	
C	C9	If the Planning Secretary is satisfied that an independent review is warranted, within 3 months, or other timeframe agreed by the Planning Secretary and the landowner, of the Planning Secretary's decision, the Applicant must: a) Commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Planning Secretary, to: i) consult with the landowner to determine their concerns; ii) conduct monitoring to determine whether the development is complying with the relevant criterion in Part B of this consent; and iii) if the development is not complying with the relevant criterion, identify measures that could be implemented to ensure compliance with the relevant criterion; b) give the Planning Secretary and landowner a copy of the independent review; and c) comply with any written requests made by the Planning Secretary to implement any findings of the review.	
D	D4	Adaptive Management The Applicant must assess and manage development-related risks to ensure that there are no exceedances of the criteria and performance measures in this consent. Any exceedance of these criteria or performance measures	Section 7.0

Schedule/ Part	Condition	DA305-7-2003	BMP Section
		constitutes a breach of this consent and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation. Where any exceedance of these criteria or performance measures has occurred, the Applicant must, at the earliest opportunity: a) take all reasonable and feasible steps to ensure that the exceedance ceases and does not recur; b) consider all reasonable and feasible options for remediation (where relevant) and submit a report to the Department describing those options and any preferred remediation measures or other course of action; and c) implement reasonable remediation measures as directed by the Planning Secretary.	
D	D5	Management Plan Requirements Management plans required under this consent must be prepared in accordance with relevant guidelines, and include where relevant: a) summary or relevant background or baseline data; b) details of: i) the relevant statutory requirements (including any relevant approval, licence or lease conditions); ii) any relevant limits or performance measures and criteria; and iii) the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures; c) any relevant commitments or recommendations identified in the documents listed in condition A2(c); d) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria; e) a program to monitor and report on the: i) impacts and environmental performance of the development; ii) effectiveness of the management measures set out pursuant to paragraph (d); f) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible; g) a program to investigate and implement ways to improve the environmental performance of the development over time; h) a protocol for managing and reporting any: i) incident, non-compliance or exceedance of any impact assessment criterion and performance criterion; ii) complaint; or iii) failure to comply with other statutory requirements; and	Section 2.0 Section 1.4 Section 3.0 Section 3.3 Section 1.4.1 Sections 5.0 & 6.0 Sections 6.0 & 9.0 Section 7.1 Section 9.2 Sections 9.5 & 6.6 Section 8.0 Section 7.2

Schedule/ Part	Condition	DA305-7-2003	BMP Section
		i) a protocol for periodic review of the plan. Note: The Planning Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.	Section 9.1
D	D14	Noise, blast and/or air quality monitoring under this consent may be undertaken at suitable representative monitoring locations instead of at privately-owned residences or other locations listed in Part B, providing that these representative monitoring locations are set out in the respective management plan/s.	Section 6.0

Table 3: Blasting Commitments from DA305-7-2003 Mod 16 Environmental Assessment

EA	Reference	Commitment	BMP Section
DA305-7-2003 Mod 16	EA, Appendix 10, Section 3	To avoid any combined impacts of blasting on the adjacent community no simultaneous blasting from the two open cut pits (Wambo Open Cut and United Open Cut) is to be undertaken.	Section 5.13.1
	EA, Appendix 10, Section 8	Periodic monitoring of infrastructure, including the transmission towers and Golden Highway will be required when blasting within a 500 metre radius of the Wambo Open Cut.	Section 6.2
		The Pre-Blast Assessment Protocol will be updated to address the United Open Cut. This protocol will be updated on a regular basis, in line with the advancement of the Wambo and United Open Cut pits.	Section 5.4
		Hunter Valley Gliding Club and Warkworth Shooting Complex will be informed of upcoming blasts.	Section 5.2.1

Table 4: EPL 529 Requirements for the BMP

Section	EPL 529			BMP Section
P1 Location of monitoring/discharge points and areas	P1.4 The following points referred to in the table below are identified in this licence for the purposes of weather and/or noise monitoring and/or setting limits for the emission of noise from the premises.			Section 6.2
	EPA ID No.	Type of monitoring point	Location description	
	10	Air blast overpressure and ground vibration peak particle velocity monitoring	Monitoring location identified as BM02 (Figure 3)	
	11	Air blast overpressure and ground vibration peak particle velocity monitoring	Monitoring location identified as BM05 (Figure 3)	
	12	Air blast overpressure and ground vibration peak particle velocity monitoring	Monitoring location identified as BM07 (Figure 3)	
L5 Blasting	L5.1 Blasting in or on the premises must only be carried out between 0900 hours and 1700 hours, Monday to Saturday. Blasting in or on the premises must not take place on Sundays or Public Holidays without the prior approval of the EPA.			Section 4.1
	.2 The airblast overpressure level from blasting operations in or on the premises must not exceed 115dB (Lin Peak) for more than 5% of the total number of blasts during each reporting period; at either monitoring point 10, 11 or 12 in Condition P1.4.			Section 3.1
	L5.3 The airblast overpressure level from blasting operations in or on the premises must not exceed 120dB (Lin Peak) at any time; at either monitoring point 10, 11 or 12 in Condition P1.4.			Section 3.1
	L5.4 The ground vibration peak particle velocity from blasting operations carried out in or on the premises must not exceed 5mm/sec for more than 5% of the total number of blasts during each reporting period; at either monitoring point 10, 11 or 12 in Condition P1.4.			Section 3.2
	L5.5 The ground vibration peak particle velocity from blasting operations carried out in or on the premises must not exceed 10mm/sec at any time; at monitoring points 10, 11 or 12 in Condition P1.4.			Section 3.2

Section	EPL 529	BMP Section												
	L5.6 Offensive blast fume must not be emitted from the premises. <i>Definition:</i> <i>Offensive blast fume means post-blast gases from the detonation of explosives at the premises that by reason of their nature, duration, character or quality, or the time at which they are emitted, or any other circumstances:</i> <i>are harmful (or likely to be harmful to) a person that is outside the premises from which it is emitted, or</i> <i>interferes unreasonably with (or is likely to interfere unreasonably with) the comfort or repose of a person who is outside the premises from which it is emitted.</i>	Section 5.5 and Appendix B												
M8	Blasting To determine compliance with conditions L5.2, L5.3, L5.4 and L5.5: a) Airblast overpressure and ground vibration levels must be measured and electronically recorded for monitoring points 10, 11 and 12 for the parameters specified in Column 1 of the table below; and b) The licensee must use the units of measure, sampling method, and sample at the frequency specified opposite in the other columns. <table><tr><th>Parameters</th><th>Units of Measure</th><th>Frequency</th><th>Sampling Method</th></tr><tr><td>Airblast Overpressure</td><td>Decibels (Linear Peak)</td><td>All Blasts</td><td>Australian Standard AS 2187.2-2006</td></tr><tr><td>Ground Vibration Peak Particle Velocity</td><td>millimetres/second</td><td>All Blasts</td><td>Australian Standard AS 2187.2-2006</td></tr></table>	Parameters	Units of Measure	Frequency	Sampling Method	Airblast Overpressure	Decibels (Linear Peak)	All Blasts	Australian Standard AS 2187.2-2006	Ground Vibration Peak Particle Velocity	millimetres/second	All Blasts	Australian Standard AS 2187.2-2006	Section 6.0
Parameters	Units of Measure	Frequency	Sampling Method											
Airblast Overpressure	Decibels (Linear Peak)	All Blasts	Australian Standard AS 2187.2-2006											
Ground Vibration Peak Particle Velocity	millimetres/second	All Blasts	Australian Standard AS 2187.2-2006											

1.5 Stakeholder Consultation

As required by Condition B38 of DA305-7-2003, WCPL must prepare the BMP for the Mine in consultation with the EPA and to the satisfaction of the Planning Secretary. This BMP (including all appendices) has been reviewed and updated in consultation with the EPA and NSW Department of Planning and Environment (DPIE). Evidence of this consultation is provided in **Appendix A**.

Previous reviews of the BMP included additional mitigation measures proposed by WCPL (in consultation with the EPA) regarding management and response of blast fume events, including:

- Implementation of a Blast Fume Incident Notification Procedure (**Section 5.2.2**); and
- Use of a mobile weather station (**Section 6.1.1**).

The Road Closure Management Procedure for blasting within 500m of the Golden Highway was prepared in consultation with the RMS and Singleton Shire Council (**Appendix D**).

The Notification Procedure for Blasting within 500m of private property (**Appendix E**) was prepared in consultation with:

- NSW Crown Lands;
- Hunter Local Land Services (LLS);
- Glencore (United); and
- Hunter Valley Operations (HVO).

Version 10 of the BMP was provided to the EPA and DPIE 28 November 2019.

2.0 Baseline Data

WCPL has been monitoring airblast overpressure and ground vibration around the Mine since February 2004. Monitoring locations are shown in **Figure 3 (Section 6.2)**. In the preparation of this review of the BMP, the airblast overpressure and ground vibration results for the period February 2004 to December 2018 were collated. A summary of the results and WCPL's performance against respective blasting criteria is presented below.

2.1 Air Blast Overpressure

Table 5 summarises the review of blast overpressure results for the period 2007/2008 through to the end of the 2018 calendar year.

Table 5: Review of Blast Overpressure Results from June 2007 to end 2018

Period	No. Blasts for Period	Monitoring Location	Criteria		Results	
			>115(dBL) 5%	>120(dBL) 0%	Overpressure (dBL) Ave	Max
2007/2008	109	BM02	1.8%	0%	105.0	115.2
		BM05	0.9%	0%	109.4	117.8
2008/2009	98	BM02	1.0%	1.0%	101.9	120.3
		BM05	0%	0%	107.6	115.0
2009/2010	62	BM02	0%	0%	96.9	107.0
		BM05	0%	0%	102.4	113.6
2010/2011	68	BM02	0%	0%	99.0	107.5
		BM05	1.5%	1.5%	100.7	124.4
2011/2012	76	BM02	0%	0%	99.5	111.0
		BM05	1.3%	0%	102.6	118.5
2012/2013	70	BM02	2.9%	1.4%	99.9	120.6
		BM05	0%	0%	103.5	114.6
		BM07	1.4%	0%	103.3	115.2
2013/2014	73	BM02	0%	0%	98.4	109.5
		BM05	0%	0%	103.2	114.4
		BM07	0%	0%	101.8	111.5
2015	78	BM02	0%	0%	101.3	113.1
		BM05	0%	0%	102.5	113.0
		BM07	0%	0%	102.5	112.4
2016	106	BM02	0.9%	0%	96.4	118.6
		BM05	1.9%	0%	103.7	115.8
		BM07	0.9%	0%	99.8	115.7
2017	96	BM02	2.1%	0%	99.9	119.3
		BM05	3.2%	0%	104.2	118.5
		BM07	0%	0%	92.4	110.5
2018	96	BM02	1.0%	0%	97.5	117.0
		BM05	2.1%	0%	104.4	116.5
		BM07	0%	0%	98.5	111.4

Since February 2004 a total of 1391 blasts have been undertaken across the Mine. There have been no exceedances of the 5% allowable over the 115dBL of the total number of blasts during a twelve-month period/calendar year.

There have been 24 results over 115dBL or approximately 1.7% of all blasts since February 2004. The results over 115dBL included;

- BM02 (Kelly) has recorded 9 results
- BM05 (Muller) has recorded 13 results; and
- BM07 (Thelander) has recorded 2 results.

WCPL has recorded a total of four blasts which exceeded the 0% limit for blasts exceeding the 120dBL. This represents approximately 0.3% of all blasts since February 2004. The results over 120dBL included;

- BM02 (Kelly) has recorded two results; and
- BM05 (Muller) has recorded one result.

There has not been an overpressure result greater than 115dBL recorded by WCPL external blast monitoring units at a private residence since the 2012/2013 reporting period.

2.2 Ground Vibration

Table 6 summarises the review of ground vibration results for the period 2007/2008 through to the end of the 2018 calendar year.

Table 6: Review of Ground Vibration Results from June 2007 to end 2018

Period	No. Blast for Period	Monitoring Location	>5mm/s	>10mm/s	Vibration (mm/s)	
			5%	0%	Ave	Max
2007/2008	109	BM02	0%	0%	0.40	0.90
		BM05	0%	0%	0.52	1.34
2008/2009	98	BM02	0%	0%	0.44	0.97
		BM05	0%	0%	0.40	0.95
2009/2010	62	BM02	0%	0%	0.24	0.38
		BM05	0%	0%	0.40	1.02
2010/2011	68	BM02	0%	0%	0.57	1.74
		BM05	0%	0%	0.51	2.92
2011/2012	76	BM02	0%	0%	0.21	0.72
		BM05	0%	0%	0.35	1.03
2012/2013	70	BM02	0%	0%	0.16	0.55
		BM05	0%	0%	0.48	1.38
		BM07	0%	0%	0.55	1.40
2013/2014	73	BM02	0%	0%	0.15	0.53
		BM05	0%	0%	0.40	1.83
		BM07	0%	0%	0.39	1.86
2015	78	BM02	0%	0%	0.16	0.65
		BM05	0%	0%	0.38	1.37
		BM07	0%	0%	0.43	1.44
2016	106	BM02	0%	0%	0.15	1.79
		BM05	0%	0%	0.43	1.43
		BM07	0%	0%	0.41	1.84

Period	No. Blast for Period	Monitoring Location	>5mm/s	>10mm/s	Vibration (mm/s)	
			5%	0%	Ave	Max
2017	96	BM02	0%	0%	0.2	2.09
		BM05	0%	0%	0.56	2.75
		BM07	0%	0%	0.47	1.87
2018	96	BM02	0%	0%	0.06	0.19
		BM05	0%	0%	0.41	1.77
		BM07	0%	0%	0.39	1.97

There has not been an exceedance for either the >5mm/s and >10mm/s ground vibration limits recorded by WCPL external blast monitoring units at a private residence since DA305-7-2003 was granted.

2.3 Blast Fume

Since blast fume monitoring commenced on 2 July 2012, 95% of all blasts at WCPL have been assessed based on their blast fume ranking (**Table 7**). A total of 99% of all blasts have been assessed as Category 2 or below. One Category 4 blast fume event occurred in 2012.

Table 7: Blast Fume Rankings Results from July 2012 to End 2018

Year	NOx Fume Ranking						Total No of blasts monitored
	0	1	2	3	4	5	
2012	67%	15%	12%	4%	1%	0%	67
2013	85%	5%	6%	3%	0%	0%	62
2014	85%	11%	3%	1%	0%	0%	75
2015	81%	18%	3%	0%	0%	0%	79
2016^	89%	8%	3%	1%	0%	0%	36
2017	81%	18%	0%	1%	0%	0%	114
2018	71%	24%	4%	0%	0%	0%	90
Average %	80%	14%	4%	1%	0%	0%	523

^ 106 blasts recorded however fume ranking results only available for 36 blasts

3.0 Blast Criteria

3.1 Airblast Overpressure Criteria

Table 8 describes WCPL's airblast overpressure criteria from DA305-7-2003 and EPL 529.

Table 8: Airblast Overpressure Assessment Criteria

Location	Airblast Overpressure Level (dBLin Peak)	Allowable Exceedance
Residence on privately-owned land	115	5% of the total number of blasts over a calendar year
	120	0%
Wambo Homestead	120	0%
All other heritage items	133	0%

3.2 Vibration Criteria

Table 9 describes WCPL's ground vibration criteria from the DA305-7-2003 and EPL 529.

Table 9: Ground Vibration Assessment Criteria

Location	Peak Particle Velocity (mm/s)	Allowable Exceedance
Residence on privately-owned land	5	5% of the total number of blasts over a period of 12 months
	10	0%
Wambo Homestead	5	0%
All other heritage items	5	0%
Prescribed dams ¹	50	0%
Public roads	100	0%
All other public infrastructure ²	50	0%

1. Unless otherwise directed by the DSC
2. Or a limit determined by the structural design methodology in AS2187.2-2006, or its latest version, or other alternative limit for public infrastructure, to the satisfaction of the Planning Secretary.

The blasting criteria in **Table 9** do not apply if WCPL has an agreement with the owner/s of the relevant residence or infrastructure to exceed the blasting criteria, and WCPL has advised the DPIE in writing of the terms of this agreement. WCPL currently does not have any alternate criteria for residences or infrastructure. If required, WCPL will review the BMP should the need arise for alternate ground vibration limits.

3.3 Performance Indicators

The following performance indicators will be used to judge the performance of the Mine:

- 100% compliance with the Blast Criteria in **Table 8** and **Table 9**;
- No 'Rating 3' fume events leaving the Approved Surface Development Area (Project Area (**Figure 2**) or closed portion of a public road; and
- No 'Rating 4' or 'Rating 5' fume events.

Section 7.1 details the contingency measures to be implemented to manage any unpredicted impacts. **Section 9.5** details the reporting that will be undertaken by WCPL if the above performance indicators are not met.

4.0 Blasting Restrictions

4.1 Blasting Hours

WCPL will only carry out blasting activities between 9am and 5pm, Monday to Saturday inclusive.

No blasting will be carried out on Sundays, public holidays, or at any other time without the prior written approval of the EPA and Planning Secretary.

4.2 Blasting Frequency

WCPL will comply with the following blast frequency¹ restrictions:

- A maximum of 3 single blast events² a day; and
- A maximum of 15 single blast events³ a week, averaged over a calendar year.

WCPL will not carry out more than 1 blast a day within 500 metres of Wallaby Scrub Road or the Golden Highway.

4.3 Blasting Within 500m of Public Roads or Private Land

WCPL will not undertake blasting within 500 metres of any public road or any land outside the site that is not owned by WCPL, unless the blast generates ground vibration of 0.5 mm/s or less, or WCPL has:

- a written agreement with the relevant infrastructure or landowner to allow blasting to be carried out closer to the public road or land, and WCPL has advised the Department in writing of the terms of this agreement, or
- demonstrated to the satisfaction of the Planning Secretary that the blasting can be carried out closer to the public road or land without compromising the safety of people or livestock or damaging the road or buildings and structures, and updated the BMP to include the specific mitigation measures to be implemented while blasting is being carried out within 500 metres of the road or land.

WCPL has developed a Road Closure Management Procedure for implementation when blasting causes the temporary closure of the Golden Highway (**Appendix D**). This procedure was approved by the RMS and Singleton Council in June 2017 and includes measures to minimise the frequency and duration of any public road closures for blasting, including during peak traffic periods.

WCPL has also developed a notification procedure when blasting is undertaken within 500 metres of a private property. This procedure is included in **Appendix E**.

¹ This condition does not apply to blasts that generate ground vibration of 0.5 mm/s or less at any residence on privately-owned land, or to blast misfires or blasts required to ensure the safety of the mine, its workers or the general public.

² A single blast event¹ means a blast which involves either a single detonation or a number of individual blasts fired in quick succession in a discrete area of the development. Should an additional blast be required after a blast misfire, this additional blast and the blast misfire are counted as a single blast event.

5.0 Blast Management and Control Measures

WCPL will implement best practice blast management procedures to minimise blast overpressure, ground vibration, flyrock, fume, and dust and odour impacts. In addition, the management measures will be undertaken to minimise impacts to Aboriginal heritage and European heritage sites for the duration of the Project. Blast management procedures will be implemented, including:

- Training all relevant personnel on environmental obligations and safe handling of explosives;
- Inspections and preparation of proposed blast areas to ensure all soft, loose or blast damaged material is removed prior to drilling;
- Designing blasts to ensure that ground vibration and airblast overpressure limits are met, and there is no damage to life or property from flyrock, including consideration of wind speed, direction and other meteorological factors prior to blasting to minimise impacts on neighbours;
- Notification of blasting times to Private Receivers and maintenance of a free-call Blasting Information Line;
- Use of adequate stemming, a delay detonation system, and careful drilling and hole loading to ensure that the required blast design is implemented;
- Pre-blast assessment of weather conditions and the potential for fume generation (Fume Incident Notification Procedure (**Appendix C**));
- Monitoring of blasts at the closest private residences (or within a representative location) to determine whether airblast and ground vibration limits are met;
- Completion of the Blast Controller Checklist;
- Review of monitoring results and modification of the blast design, if necessary;
- Documentation of the date and time of the blast, location of blast holes and quantity of explosive used in each blast;
- Maintain all plant and equipment in a proper and efficient condition;
- Operate all plant and equipment in a proper and efficient manner; and
- Periodic review of blast management practices to evaluate performance and identify responsive action, if required.

5.1 Cumulative impacts

To prevent cumulative blasting impacts with surrounding mines, WCPL includes the Drill & Blast Supervisors from Bulga Operations, Mount Thorley Operations, Warkworth Operations, and Hunter Valley Operations on all blast email notifications. These notifications will be extended to the Drill & Blast Supervisor at the United Open Cut mine when it commences blasting, to ensure there are no simultaneous blasts undertaken at the two mines.

In the event of a blast event being rescheduled, further e-mail notification is made alerting neighbouring mining operations of the change.

5.2 Public Notification

5.2.1 Pre-blast notification

WCPL operate a Blasting Hotline and SMS message service³ to enable the public to get up-to-date information on blasting operations at the Mine. The Drill and Blast (D&B) Superintendent (or delegated authority), updates the Blasting Hotline 24hrs prior to the scheduled blast event. If a blast event is rescheduled, a revised schedule is posted. The contact details for the blasting hotline are:

- **24hr Blasting Information Line: (02) 8250 5205**

WCPL operate a Community Enquiries Line and email address to enable the public to either make an enquiry or register a complaint regarding WCPL operations. The contact details for the Community Enquiries Line and email address are:

- **24hr Community Enquiries Line: (02) 6570 2245**
- **E-mail Enquiries** – wambocommunity@peabodyenergy.com

WCPL undertake the following notifications on an annual basis:

- Advertise both the Community Enquiries Line and Blasting Information Line in local newspapers; and
- Notify the occupants of any land within 2km of the site of the Community Enquiries Line and Blasting Information Line.

5.2.2 Fume Incident Notification

In the event that a blast fume event has been identified (as a result of a WCPL blast event) and having the potential to leave the Project Area towards the direction of adjacent neighbouring properties, the Environment and Community (E&C) Manager (or delegate) will initiate the WCPL Fume Incident Notification Procedure (**Appendix C**).

The E&C Manager (or delegate) will notify affected landholders of a potential fume event approaching their property and to proceed with measures to avoid potential exposure to the blast fume. Current contact details for landholders who may potentially be impacted by a blast fume event at the Mine are detailed in Section 3.4 of WCPL's Fume Incident Notification Procedure (**Appendix C**).

In the event the WCPL Fume Incident Notification Procedure is initiated, the E&C Manager will proceed with correspondence to those affected neighbours and government authorities in accordance with **Section 7.0** and **Section 9.5** of this BMP.

³ WCPL provide a blast SMS notification service to members of the community who have registered for the service, as well as to representatives from the nearby Hunter Valley Gliding Club and Warkworth Shooting Complex. The SMS message with blasting details is sent out the day before the scheduled blast event.

5.3 Property Investigations and Independent Review

If the owner of any privately-owned land within a 2 km radius of the site (or any other landowner where the Planning Secretary is satisfied that an investigation is warranted) claims in writing that buildings or structures on their land have been damaged as a result of blasting on the site, then within 2 months of receiving this written claim WCPL will:

- commission a suitably qualified, experienced and independent person, whose appointment is acceptable to both parties, to investigate the claim; and
- give the landowner a copy of the property investigation report.

If this independent investigation confirms the landowner's claim, and both parties agree with these findings, then WCPL will repair the damages to the satisfaction of the Planning Secretary.

If there is a dispute over the selection of the suitably qualified, experienced and independent person or if WCPL or the landowner disagrees with the findings of the independent property investigation, then either party may refer the matter to the Planning Secretary for resolution.

5.4 Pre-Blast Meteorological Assessment

WCPL will only proceed with a scheduled blast event if suitable meteorological conditions exist to minimise the potential for blast generated dust and fume to impact neighbouring properties, and these conditions remain favourable up to the time of firing. Data for the pre-blast meteorological assessment is taken from a range of meteorological monitoring locations, as discussed in **Section 6.1**.

A pre-blast assessment of weather conditions and the potential for fume generation is completed before firing each blast. Meteorological readings are taken and assessed to ensure favourable direction of drift of dust (and any potential fume). Wind direction is physically checked by the release of helium balloons. Readings are recorded on form WA-ENV-FRM-507.3 Blast Checklist.

Where conditions are determined to be unfavourable, the blast will be delayed, postponed or cancelled until favourable meteorological are observed.

There may be circumstances in which a blast event needs to be fired in less than ideal weather conditions. Failure to initiate blasts may indeed increase the potential for fume generation and/or occupational health and safety risks to personnel and community members. In these specific and rare circumstances, the final decision making process will be elevated to the General Manager (or in their absence, to the delegated authority) with relevant input from the D&B Engineer, D&B Superintendent and E&C Manager. The General Manager (or delegate) must approve the blast in writing by signing the appropriate section on the Blast Checklist.

5.5 Fume Management

WCPL have prepared and implemented a Blast Fume Management Strategy (BFMS) in accordance with correspondence received from Department of Planning and Environment outlining the general requirements under Stage 2 of the fume minimisation measures (*Elements of a Blast Fume Management Strategy*). The purpose of the BFMS is to provide fume minimisation measures at WCPL for all surface blasting activities. A copy of the approved BFMS is provided in **Appendix B**.

5.6 Blast Design

Blast design is considered critical in the hierarchy of control measures when considering mitigating blast impacts. The D&B Engineer is responsible for every blast design at WCPL. The following are important blast control measures considered by the D&B Engineer when preparing a blast design, including but not limited to:

Review Historical Blast Results

- The D&B Engineer as part of the blast planning and design process, is to review past blast data to identify and develop appropriate design and mitigation strategies from historical blast events.

Survey Control

- Initial blast designs are produced using recent survey and/or 3D geological modelling technology with specialised mining computer software e.g. Vulcan by Maptek, to define the limits and location of the blast pattern.

Bulk Explosives

- Where water is found to be present, the blastholes will be loaded with a suitable water resistant product as per the manufacturer's recommendations.

Stemming Height

- The D&B Engineer will design the shot with adequate stemming to minimise the chance of flyrock and overpressure, based on the results from previous blasts.

Stemming Material

- Quality aggregate will be used to stem blast holes to provide enhanced confinement over traditional drill cuttings) to prevent explosive ejection.

Face Burden

- Blast holes shall be designed to provide adequate burden to prevent face blow out and thus reduce the possibility of flyrock and airblast overpressure. Where necessary face surveying (laser profiling) techniques may be employed to measure overburden between the blast face and blast holes to ensure sufficient burden is present to prevent blowouts and blast anomalies.

Blast Hole Length/Depth

- This is initially determined from the geological model of the coal seams at WCPL. Holes are drilled from the floor of the coal seam through the interburden to the top of next coal seam. Where the length of the blast hole is deemed to be excessive and there is a risk of exceeding the maximum instantaneous charge (MIC) required to comply with site environmental conditions, the blast shall be redesigned. The D&B Engineer will assess the viability of options such as reducing the depth of the blast by drilling to a chosen reduced level (RL), reducing the diameter of the blasthole or reducing the MIC by deck loading the blasthole with an appropriate in-hole delay.

5.7 Blast Planning

There are several important steps undertaken at WCPL to ensure blast design is implemented correctly in the field to minimise blast impacts. The D&B Superintendent is responsible for carrying out the correct procedures when implementing each blast design at WCPL. The following are essential steps overseen by the D&B Superintendent when preparing a blast. They include, but are not limited to:

Drill Preparation

- The area for the proposed drill pattern is cleaned and then inspected by the D&B Superintendent prior to the setting out of the drill pattern.

Drill Pattern Set Out

- WCPL survey department are provided with the coordinates of the designed drill pattern and this is set out in the field using GPS technology and traditional survey techniques. GPS units are attached to each drilling unit to accurately drill the blast pattern as per design.

Drill Blast Holes

- Daily records are kept by the Drill Operators or Blast Contractors documenting hole depths and anomalies in the predicted geology. This information is then utilised by the D&B Engineer to ensure the holes are not over drilled, thus reducing the possibility of coal damage and overloading of holes with bulk blasting product.

Survey Control

- Where planned face holes are unable to be set out in the correct location the surveyors provide the adjusted positions back to the D&B Engineer to modify the design.

Blast Hole Dipping

- The shot crew dips the holes to test their depth and identify for the possible presence of water. This information is then used by the D&B Engineer to calculate the explosive quantities per hole and make any modifications as required. Where any trace of water is recorded a suitable water resistant bulk explosive is assigned to the hole/s to minimise the generation of fume.
- Where possible holes that have a small amount of standing water at the bottom of the hole are sealed off with a gas bag just above the water level to isolate the explosives from the water.
- Where holes are found to have a substantial amount of water, a dewatering unit will be employed to purge the water from the holes. A check is then made to ensure the holes are not refilling with water before filling with bulk explosives.

Blast Loading

- Field data is used by the D&B Engineer to produce 'load sheets' which stipulate the type and quantity of the explosives and length of stemming to be placed in each hole to achieve the designed powder factor. The load sheets are created on the field tablets or printed off and used by the shot crew to load each hole specific to the requirements of the load sheet. Specially constructed mobile manufacturing units (MMU's) are used by the Blasting Contractor to ensure the correct mix of product is achieved and correct stemming height is obtained.
- Where possible blasts are designed to ensure the prompt loading of drill holes and subsequent firing of the shot to minimise 'sleep time' and exposure to moisture.

Blast Tie Up

- The D&B Engineer in consultation with the D&B Superintendent and Shot Firer creates a 'Tie Up Plan' detailing the method for connecting and firing the shot. A paper plan is produced and given to the Shot Firer who implements the Tie Up in the field.
- Upon completion of the Tie Up and subsequent checking process, the Shot Firer in conjunction with the D&B Supervisor carries out the Pre Blast Checklist prior to detonating the shot.

Fume Assessment

- A pre-shot fume assessment is to be undertaken by the designated Shot-Firer and the D&B Engineer and Blast Controller.

5.8 Blast Exclusion Zones

An appropriate exclusion zone for personnel will be established around each blast site prior to firing a blast. The exclusion zone will be established beyond the expected range of any fly rock with an additional safety margin. The establishment of this zone will minimise the risk of any injuries to people or livestock due to fly rock;

Any unusual level of fly rock generated by blasting, with the potential to cause a safety risk will be noted for each blast. This information will be used to continually re-assess the adequacy of blast design controls in reducing the generation of fly rock. The information will also be used to re-assess the size of the safety exclusion zone established for people and livestock in the vicinity of a blast; and

If fume or dust potential generation is identified, the D&B Superintendent may choose to extend the exclusion zone downwind from the blast to minimise the chance of exposure to personnel.

5.9 Flyrock Management

To ensure WCPL reduce the potential for flyrock generation, the following key mitigation measures will be implemented, including, but not limited to:

- Implement appropriate blast exclusion zones for each blast event. The blast exclusion zone considers the expected range of any fly rock with an additional safety margin that reduces the risk for damage to WCPL owned property, equipment or other infrastructure from flyrock;
- In addition, WCPL landholdings are security patrolled, fenced, sign posted and also provide a sufficient buffer between neighbouring private landholders and their livestock from WCPL blasting activities;
- All designs will clearly identify hole inclination to avoid the possibility of reduced face burden, thus avoiding the potential for flyrock incidents; and
- Any unusual level of fly rock generated by blasting, with the potential to cause a safety risk, will be noted for each blast. This information will be used to continually re-assess the adequacy of blast design controls in reducing the generation of fly rock. The information will also be used to re-assess the size of the safety exclusion zone established for people and livestock in the vicinity of a blast.

5.10 Heritage Sites

5.10.1 Aboriginal Cultural Heritage

A survey and assessment of Aboriginal cultural heritage within the Project Area was conducted during the 2003 Environmental Impact Statement (2003 EIS). No blasting related impacts to Aboriginal heritage were predicted as a result of the Mine's operations.

Disturbance of Aboriginal heritage artefacts located within the Project Area are subject to a Section 90 Permit issued under the *National Parks & Wildlife Act 1976*. An Aboriginal Heritage Impact Permit (AHIP) No. 2222 has been issued to WCPL under the *National Parks & Wildlife Act 1976*, expiring on the 1 March 2025.

Should further Aboriginal cultural heritage artefacts be found, which are not subject to AHIP No. 2222 and determined at risk of impact from blasting activities, then a further assessment will be undertaken in consultation with WCPL archaeological specialists.

5.10.2 Wambo Homestead

WCPL currently monitors and reports on potential ground vibration impacts on the Wambo Homestead Complex (WHC). The following mitigation measures are implemented:

- Monitoring is undertaken at the WHC for all blasts within 2km of the Complex;
- A suitably qualified and experienced structural engineer, with expertise in vibration and blast monitoring has been appointed to examine all monitoring records from the WHC blast monitoring station. The appointment of the structural engineer was approved in writing by the Director of the Heritage Branch (formally the NSW Heritage Office) in November 2005 (**Appendix A**);
- The structural engineer reports to WCPL on the monitoring results each month for blasting within 2km of the WHC and 6 monthly for the remainder of the Mine. Recommendations are made to ensure ongoing conservation and damage prevention. Copies of these reports are forwarded to the Heritage Branch;
- The structural engineer will inspect the WHC structures annually and as soon as practical, but no later than 3 days after blasting monitoring which exceeds the ground vibration level of 5mm/s. During the period between blast monitoring being recorded which exceeds the 5mm/s criteria and the engineer's inspection, ground vibration from blasting will be limited to a level which will prevent further blasting damage. The structural engineer will advise WCPL and the Heritage Branch of any action required to repair the damage; and
- The structural engineer will make an assessment of whether blasting within 2km of the WHC is to cease or be managed in order to stabilise or repair the damage, and advise WCPL and the Heritage Branch. If blasting has been required to cease, it will not resume until the damage has been stabilised or repaired, and written approval for resumption has been received by the Heritage Branch.

6.0 Blast Monitoring Program

WCPL's Blast Monitoring Program includes monitoring of airblast overpressure and ground vibration for all blasts at locations as close as reasonably practical to the nearest private receivers. Monitoring will also be undertaken at relevant public infrastructure, Aboriginal heritage sites and the Wambo Homestead Complex (**Table 10** and **Figure 3**).

The objective of the monitoring program is to obtain assurance that amenity overpressure and vibration limits are being achieved at Private Receivers and that damage criteria are being achieved for public infrastructure, Aboriginal heritage sites and the Wambo Homestead Complex.

6.1 Meteorological Monitoring

WCPL maintains a continuous on-site meteorological monitoring station that complies with the requirements of the *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales* (DEC, 2007). The location of this meteorological monitoring station is identified on **Figure 3**.

The meteorological station is routinely calibrated and maintained by appropriately accredited technicians. The following parameters are monitored:

- Rainfall;
- Relative humidity;
- Temperature – measured at 2, and 10m above ground level;
- Wind speed – horizontal and vertical;
- Wind direction – measured at 10 m above ground level;
- Sigma theta;
- Pasquill stability classification;
- Solar radiation; and
- Temperature lapse rate.

WCPL also maintain 4 remote weather stations for environmental management purposes which are available for use in the pre-blast meteorological assessment.

6.1.1 Mobile Weather Station

WCPL also maintains a mobile weather station to provide localised weather readings for blast events at the northern end of the Mine. This weather station will remain available while blasting occurs at the northern end of the Mine. These readings will be used in addition to the weather readings taken from the meteorological station approved under the EPL 529. Meteorological data from both weather stations will be used during the Pre-Blast Meteorological Assessment to assess dust and fume risks associated with each blast.

6.2 Blast Monitoring Locations

Monitoring locations for overpressure and ground vibration are shown in **Table 10** and **Figure 3**.

Table 10: Blast Monitoring Sites

Location	Site ID	Purpose	Easting	Northing	Justification
Wambo Homestead	BM01	Structural	311524	6393232	Data used to assess damage in accordance with <i>Australian Standard AS 2187.2-1993 "Explosives – Storage Transport and Use" for Sensitive and Heritage Structures</i>
Kelly (Warkworth Village)	BM02	Compliance	314116	6394560	Representative of public roads and infrastructure in Warkworth.
Harris (Wambo Road)	BM03	Performance	311155	6390609	Performance based monitoring on WCPL owned land to the south of the Mine
Muller (Jerrys Plains)	BM05	Compliance	305974	6399599	Located on WCPL owned land north-east of the Mine. Levels exceeding those in Table 9 at this site will be used to model levels at the nearest residence on privately owned-land.
Thelander (Jerrys Plains)	BM07	Compliance	304496	6398655	Representative of the nearest sensitive receiver to north west of the Mine

Periodic monitoring of infrastructure, including the transmission towers and Golden Highway, will be required when blasting is within a 500 metre radius of the Wambo Open Cut. This monitoring will be undertaken in consultation with infrastructure owners, as required. Results of this monitoring will be compared to the blast criteria in **Section 3.0** and reported in accordance with **Section 9.0**.

6.3 Methodology

Instrumentation used to measure and record the airblast overpressure and ground vibration levels will meet the requirements of *Australian Standard AS 2187.2-2006 (Explosives – Storage, Transport and Use - Use of Explosives)*.

Monitoring equipment used on-site will typically include a geophone (e.g. standard 4.5 hertz geophone with a range of up to ± 556 mm/s) and microphone (e.g. with a range of between 80 to 140 decibels). The monitoring equipment will display the due date of upcoming calibration. Calibration of the monitoring units will be undertaken in accordance with manufacturer's specifications.

All blasts will be video recorded to enable a post blast assessment of potential dust and fume impacts.

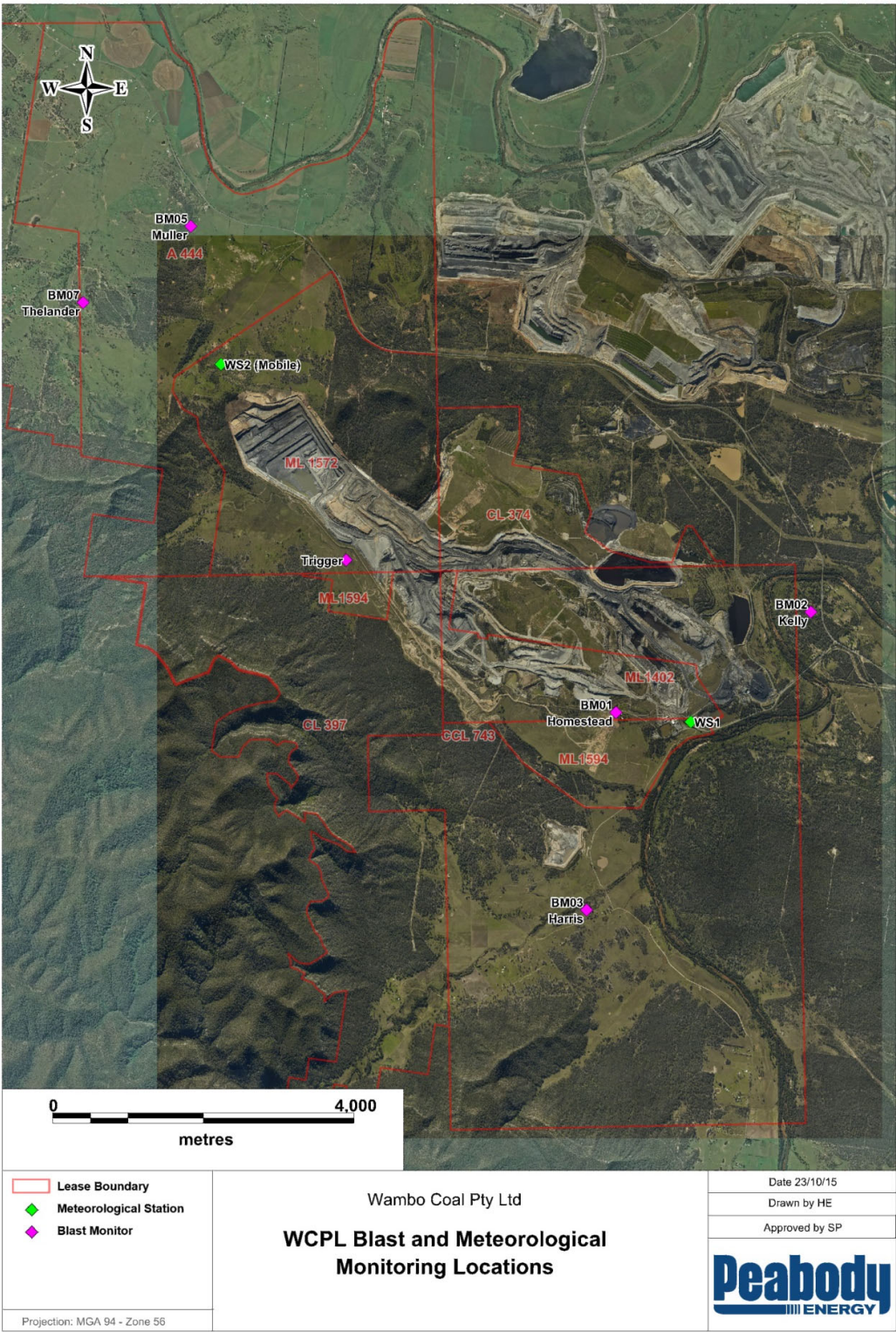


Figure 3: Blast Monitoring Locations

6.4 Data Collection

WCPL utilise both permanent fixed and temporary roaming blast monitoring units to collect relevant blast monitoring data. Fixed units utilise a radio transmitter to enable instantaneous transfer of data to relevant personnel. This data can be immediately accessed to enable an initial compliance assessment. Data from the roaming units is collected and stored within the unit and is available for download upon return to the office. All blast monitoring data is retained in a consolidated data base maintained by WCPL Environmental Department.

6.5 Evaluation of Performance

All blast monitoring results, video recordings of the blast and visual assessments made by relevant WCPL personnel, will be evaluated following the blast to determine compliance with the blast criteria and performance indicators in **Section 3.0**, and to determine whether the best practice measures in **Section 5.0** have been successful.

WCPL will be deemed in non-compliance when airblast overpressure and ground vibration results exceed the blast criteria in **Table 8** and **Table 9** at site BM07 that is representative of privately owned residences in the Redvale Rd area. Any levels recorded exceeding blast criteria (120 dBLin Peak and 10mm/s ground vibration) at the BM05 Muller monitor will be further investigated to determine compliance. Levels recorded at this monitor will be used to model compliance at surrounding residences that are privately owned. BM02 will be used to assess compliance of public roads and infrastructure outlined Table 9.

WCPL will record an incident where a 'Rating 3' blast fume vent is observed leaving the Project Area or closed portion of a public road, or in the event of a 'Rating 4' or 'Rating 5' fume event.

If a blast fume event is observed leaving the Project Area towards a sensitive receiver location, the Fume Incident Notification Procedure (**Appendix C**) will be initiated in accordance with **Section 5.2.2**.

Notification of reportable incidents to the relevant government authorities will be undertaken in accordance with **Section 9.5**.

6.6 Mitigation Strategies to Prevent Reoccurrences

In the event of a reportable environmental incident, all corrective actions identified through an investigation process will be implemented to mitigate the potential for a reoccurrence. Blasting mitigation and corrective management measures will consider:

- Proximity of future blast activities to sensitive receivers;
- Appropriate meteorological conditions;
- A review of the Pre-Blast Decision Procedure; and
- A review of blast design and planning protocols.

7.0 Adaptive Management

7.1 Contingency Plan to Manage Unpredicted Impacts

Blasting controls (**Section 5.0**) and monitoring (**Section 6.0**) have been implemented to minimise blast related impacts and monitor for fume events, ground vibration and airblast overpressure at neighbouring properties and other sensitive locations.

In the event that unpredicted impacts occur as a result of blasting activities at the Mine, WCPL will:

- Initiate the Fume Incident Notification Procedure when a fume event is observed leaving the Project Area in the direction of adjacent neighbouring properties;
- Implement the Fume Incident Notification Procedure (**Section 5.2.2**) to clarify the immediate post-incident responsibilities in regards to a blast fume event leaving the Project Area;
- Review the current blast controls and monitoring, to ensure it is effective and Blast Criteria is being met;
 - If the system is effective and Blast Criteria is being met, continue implementation of blast controls and monitoring;
- If the system is not effective and Blast Criteria is being exceeded, undertake reporting in accordance with **Section 9.0**;
- Develop and implement additional blast management or mitigation measures in consultation with the affected landowners; and
- Undertake follow-up blast monitoring to assess the effectiveness of the additional measures.

WCPL have identified several applicable blasting scenarios that pose a potential risk to achieving the outcomes of the BMP. A Trigger Action Response Plan (TARP) as provided by **Table 11** provides contingency measures, responsibilities and management for unforeseen impacts as a result of blasting activities.

7.2 Failure to Comply with Other Statutory Requirements

Statutory requirements relating to this BMP are summarised in **Section 1.4**. These requirements include compliance with DA305-7-2003 and EPL 529 as well as commitments made in the Environmental Assessment for the United Wambo Open Cut Coal Mine Project (Umwelt, 2016).

WCPL monitors compliance with these statutory requirements on an ongoing basis, including during regular reviews and reporting of blast monitoring data and as part of Annual Environmental Reviews and compliance audits (e.g. Independent Environmental Audits).

In the event that WCPL identifies a failure to comply with a statutory requirement (other than those relating to unpredicted impacts – refer **Section 7.1**), WCPL will:

- Undertake an investigation into the failure;
- Identify suitable strategies or actions to be implemented to address the failure (and avoid a recurrence of the failure); and
- Report the non-compliance in accordance with the requirements of DA305-7-2003 and EPL 529.

Table 11: BMP Trigger Action Response Plan

TARP Code	BMP 'Achieved'	BMP 'Not Achieved'
Unpredicted Impact: Generation of excessive fume		
Trigger	No detectable blast fume	- Any blast fume verified leaving the Project Area in the direction of adjacent neighbouring properties - Blast fume verified Level 3 or above and/or leaving Project Area
Action	No immediate action required other than monitor fume for changes	- Implement the Blast Fume Management Strategy (Appendix B) - Implement Fume Incident Notification Procedure - Implement PIRMP - Record incident as required by Section 9.0
Response	Implement mitigation strategies to prevent reoccurrence after completion of investigation	
Responsible Persons	- E&C Manager - D&B Engineer	
Unpredicted Impact: Exceedance of blast specific criteria		
Trigger	- Blast monitoring reports confirm blast specific criteria were achieved at: - Private Residences - Wambo Homestead Complex (WHC)	- Blast monitoring reports confirm specific criteria was exceeded at: - A Private Residence (Table 8 and Table 9); and - Confirms results are in the reportable range (Section 9.0); and/or - Ground vibration and air blast levels at the WHC exceed the assessment criteria (Table 8 and Table 9).
Action	No immediate action required	- Report exceedances over 120dB_L and 10mm/s at residences on privately-owned land, as required by Section 9.0 and in accordance with the PIRMP - Initiate property investigations or independent reviews at the formal request of property owner/s in accordance with Section 5.3 - E&C Manager to engage WCPL approved structural engineer to inspect the WHC structures as soon as practical, but no later than 3 business days after blast monitoring results (Section 5.10.2) - Advise if action is required to repair damage to WHC in consultation with Heritage Branch

TARP Code	BMP 'Achieved'	BMP 'Not Achieved'
		Record incident as required by Section 9.0
Response	Implement mitigation strategies to prevent reoccurrence after completion of investigation	
Responsible Persons	- E&C Manager - D&B Engineer	
Unpredicted Impact: Failure of Blasting Mitigation Measures		
Trigger	Project specific blast criteria achieved and other blast mitigation measures working to control fly rock and dust generation in accordance with BMP	Project specific blast criteria achieved however other mitigation measures did not adequately control fly rock and/or excessive dust generation in accordance with BMP
Action	No immediate action required	- Implement PIRMP if dust poses threatening material harm to the environment or community - Record incident as required by Section 9.0
Response	Implement mitigation strategies to prevent reoccurrence after completion of investigation	
Responsible Persons	- E&C Manager - D&B Engineer	

8.0 Community Complaint Response

All blasting related community complaints received by WCPL will be recorded within the Community Complaints Register. The E&C Manager or their delegate will investigate the complaint, which will include, where possible, contacting the complainant within 24 hours to discuss the complaint. A review of the effectiveness of the corrective or preventative actions will be conducted within a month of the complaint and the relevant work procedures updated if required.

Preliminary investigations will commence as soon as practicable upon receipt of a complaint to establish if WCPL is responsible. All efforts will be made to determine the likely causes contributing to the complainant's concerns using information such as the climatic conditions at the time of blast, the nature of activities taking place and recent monitoring results.

WCPL will attempt to address the complainant's concerns such that a mutually acceptable outcome is achieved. If a mutually beneficial outcome cannot be reached, WCPL may refer the matter to the Planning Secretary for resolution.

In the event that exceedances of the blasting criteria are detected, any affected landowner or tenant will be notified within 7 days of the confirmation of the exceedance. Details of exceedances will also be provided to the CCC, in accordance with Condition C5 of DA305-7-2003.

Details of all community complaints will be included in the Monthly Environment Monitoring Report. WCPL will retain a copy of the Community Complaints Register for at least four years. The E&C Manager will ensure the latest Community Complaints Register is posted on the WCPL website.

9.0 Review and Reporting

9.1 Review

The performance of the blast monitoring and management programs outlined in the BMP is to be reviewed annually by the E&C Manager and the D&B Engineer or their delegates. A complete review of the BMP will occur:

- Every three years;
- When there are changes to consent or licence conditions relating to blast management or monitoring;
- Following significant blast related incidents at WCPL;
- Following an independent environmental audit which requires BMP review; or
- If there is a relevant change in technology, practice or legislation.

The revised BMP will be re-submitted to the Planning Secretary for approval as required by Conditions B38 and D7 of DA305-7-2003.

9.2 Annual Review

Prior to the end of March each year, WCPL will review the environmental performance of the Mine and submit an Annual Review report to the DPIE. This report will:

- Describe the development (including any rehabilitation) that was carried out in the previous calendar year, and the development that is proposed to be carried out over the current calendar year;
- Include a comprehensive review of the monitoring results and complaints records of the development over the previous calendar year, including a comparison of these results against the:
 - Relevant statutory requirements, limits or performance measures/criteria;
 - Requirements of this BMP (including appendices);
 - Monitoring results of previous years; and
 - Relevant predictions in the EA;
- Identify any non-compliance which occurred in the previous calendar year, and describe what actions were (or are being) taken to rectify the non-compliance and avoid recurrence;
- Evaluate and report on:
 - The effectiveness of the noise and air quality management systems; and
 - compliance with the performance measures, criteria and operating conditions of the consent;
- Identify any trends in the monitoring data over the life of the development;
- Identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and
- Describe what measures will be implemented over the next calendar year to improve the environmental performance of the development.

9.3 EPL Reporting

WCPL will prepare and submit an Annual Return comprising a certified Statement of Compliance and a signed Monitoring and Complaints Summary to the EPA at the end of each EPL 529 reporting period.

WCPL will include the results of all blast monitoring required by EPL 529 as a Blast Monitoring Report within the Annual Return. The Blast Monitoring Report will include the following information relating to each blast carried out within the premises during the reporting period covered by the Annual Return:

- The date and time of each blast;
- The location of each blast on the premises;
- The blast monitoring results (airblast overpressure and ground vibration) and at each blast monitoring location; and
- An explanation for any missing blast monitoring results.

The Annual Return for the reporting period will be supplied to the EPA via *eConnect EPA* or by registered post not later than 60 days after the end of each reporting period. WCPL will retain a copy of the Annual Return for a period of at least four years after the Annual Return was due to be supplied to the EPA.

9.4 Website Updates

A comprehensive summary of the blast monitoring results will be made publicly available at WCPL's website:

<http://www.peabodyenergy.com/content/404/australia-mining/new-south-wales/wambo-mine>)

Information on the website will be updated regularly as required by DA305-7-2003.

WCPL will also ensure that any information relevant to blast management is uploaded to the website (and kept up to date). This includes:

- Current statutory approvals;
- Approved strategies, plans or programs required under the DA305-7-2003;
- A community complaints register;
- Minutes of Community Consultative Committee (CCC) meetings;
- Annual Reviews;
- A copy of any Independent Audits and WCPL's response to any recommendations in any audit; and
- Any other matter required by the Secretary.

9.5 Reportable Environmental Incidents

All reportable incidents will be reported via the EPA's Environmental Line on **131 555** by the E&C Manager or their delegate in accordance with WCPL's Pollution Incident Response Management Plan (PIRMP).

In accordance with the PIRMP, WCPL will notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of *Part 5.7* of the *POEO Act*, for example:

- **Fume generation:** The reporting of fume events is discussed in the Blast Fume Management Strategy (**Appendix B**) (Section 3.3 Reporting of Significant Blast Fume Events);
- **Exceedence of blast specific criteria:** All blast overpressures exceeding 120dBL and ground vibration levels exceeding 10mm/s recorded at any external blast monitor located at a private residence will be notified as soon as practicable to relevant authorities. Internal investigations will be undertaken when blast overpressures exceed 115dBL or ground vibration levels exceed 5mm/s. At blast monitors that are located on mine owned land and record levels in exceedence of blast specific criteria, modelling will be used to determine compliance at residences on privately owned land; and
- **Public Safety & Infrastructure Damage:** A blast event that causes damage to public infrastructure, poses a risk to safety of people or livestock in the surrounding area.

For all other incidents that do not cause threatening material harm to the environment associated with the development, WCPL will notify the Planning Secretary and any other relevant agencies as soon as practicable after WCPL becomes aware of the incident.

Within 7 days of the date of the incident, WCPL will provide the Planning Secretary and any relevant agencies with a detailed report on the incident, including:

- The cause, time and duration of the event;
- Where possible, the type, volume and concentration of every pollutant discharged as a result of the event;
- The name, address and business hours telephone number of employees or agents of the licensee who witnessed the event;
- The name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
- Action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
- Implement remediation measures as directed by the Secretary, to the satisfaction of the Planning Secretary;
- Details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and
- Any other relevant matters.

10.0 Responsibilities

Table 12 below summarises responsibilities documented in the BMP. Responsibilities may be delegated as required.

Table 12: BMP Responsibilities

No	Task	Responsibility	Timing
1	Overpressure and vibration limits as specified in development consent to be met	Open Cut Manager/ D&B Engineer	For each blast event
2	Blasting to be conducted between the hours of 9am to 5pm, Monday to Saturday only	Open Cut Manager/ D&B Engineer	For each blast event
3	No blasting on Sundays or public holidays without the prior written approval of the EPA and the Planning Secretary	Open Cut Manager/ D&B Engineer	As required
4	Where practical, blasting activities will be co-ordinated with surrounding mines to minimise cumulative impacts	D&B Supervisor/ D&B Engineer	As required
5	Airblast overpressure and ground vibration will be monitored at the monitoring locations for each blast event	E&C Manager	For each blast event
6	The Fume Incident Notification Procedure will be implemented	E&C Manager	As required
7	Exceedances of overpressure and/or vibration to be managed in accordance with Section 7.0	E&C Manager	As required
8	Blasting Complaints to be responded to in accordance with Section 8.0	E&C Manager	As required
9	Annual Review to include blast monitoring results, complaints, mitigation measures undertaken and a review of the monitoring undertaken	E&C Manager	Annually
10	Regulator consultation and review to be undertaken of the BMP	E&C Manager	As required
11	Implementation of blast mitigation measures in accordance with Section 5.0	D&B Engineer/ E&C Manager	As required
12	Prepare investigation reports and implementation of corrective actions in accordance with Section 7.0 and Section 9.0	E&C Manager/Open Cut Manager/ D&B Engineer/	As required
13	Implementation of the Road Closure Management Procedure when blasting is within 500m of the Golden Highway (Appendix D)	D&B Engineer/ E&C Manager	As required

11.0 References

- Development Consent (DA305-7-2003)
- Wambo Development Project Environmental Impact Statement (EIS), July 2003
- Resource Strategies Pty Ltd (2003) Wambo Coal Mine Project Environmental Impact Statement. Report prepared for Wambo Coal Pty Ltd
- Umwelt (2016). United Wambo Open Cut Coal Mine Project Environmental Impact Statement
- Umwelt (2017). United Wambo Open Cut Coal Mine Project Response to Submissions (Part A), March 2017
- Enviro Strata Consulting (2016). United Wambo Open Cut Coal Mine Project Blasting Impact Assessment, Report No. UM-1505-230516
- Wambo Environment Protection Licence (529)
- Standards Australia (2006) Australian Standard (AS) 2187.2-2006: Explosives – Storage and Use – Use of explosives
- Work Health and Safety (Mines and Petroleum Sites) Act 2013
- Work Health and Safety (Mines and Petroleum Sites) Regs 2014
- Work Health and Safety Act 2011
- Work Health and Safety Regulations 2017
- Explosives Act 2003
- Explosives Regulations 2013
- AS 2187.1 - 1998: Explosives – Storage, Transport and Use, Part 1 - Storage
- AS 2187.2 – 2006: Explosives – Storage, Transport and Use, Part 2 – Use of Explosives
- AS 2187.0 –1983: Storage transport and use – Terminology
- Australian Explosives Industry and Safety Group Inc (2011) Code of Practice; Prevention and Management of Blast Generated NOx Gases in Surface Blasting

APPENDIX A

CORRESPONDENCE WITH REGULATORY AGENCIES



Ms Nicole Dobbins
Senior Environmental Advisor
Wambo Coal Pty Ltd

By email: ndobbins@peabodyenergy.com

Dear Ms Dobbins,

**Wambo Open Cut Coal Mine (DA 305-7-2003)
Blast Management Plan**

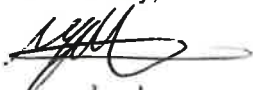
I refer to your letter dated 19 November 2019, requesting the Secretary's endorsement of a suitably qualified and experienced person to update the Blast Management Plan, following the recent modification (Mod 16) to development consent DA 305-7-2003.

The Department has reviewed the credentials of Mr Jeff Hanlon and agrees that he is suitably qualified and experienced.

In accordance with condition B38(a) of Schedule 2 of the above consent, the Secretary endorses the appointment of Mr Hanlon to prepare the plan.

Should you have any enquiries in relation to this matter, please contact Joel Herbert on the details listed above.

Yours sincerely,


06/12/2019

Matthew Sprott

Director

Resource Assessments

as nominee of the Secretary



**Planning &
Environment**

Contact: Scott Brooks
Phone: 6575 3401
Fax: 6575 3415
Email: scott.brooks@planning.nsw.gov.au
Our ref: 305-7-2003

The General Manager
Wambo Mine
PMB 1
SINGLETON NSW 2330

Attention: Steve Peart

Dear Steve

Wambo Coal – Approval of Blast Management Plan

Thank you for forwarding the Wambo Blast Management Plan and the Blast Fume Management Strategy and notification procedure as required under project approval DA 305-7-2003 for the Department's consideration.

The Department has reviewed these plans, and relevant attachments, and is satisfied that they generally address the requirements set out in the relevant conditions of the project approval. Consequently, I would like to advise you that the Secretary has approved the plan.

This Plan comes into force on the 30th November 2015 and remains in force until replaced by any future updated approved Plans.

Could you please forward finalised copies of the above plan (preferably in PDF format with a copy of this approval letter appended) for the Department's records by the end of November 2015.

If you require further information or clarification in this matter please contact Scott Brooks on 6575 3401 or by email to scott.brooks@planning.nsw.gov.au.

Yours sincerely

Scott Brooks

Investigations (Lead), Compliance

27-11-2015
As Nominee for the Secretary, Planning & Environment

From: Scott.Brooks@planning.nsw.gov.au [mailto:Scott.Brooks@planning.nsw.gov.au]
Sent: Wednesday, 18 November 2015 12:12 PM
To: Peart, Steven D
Subject: Wambo Blast Management Plan_Rev.5_DRAFT.docx

Steve,
Please find attached a copy of the Wambo Blast Management Plan with comment.

Scott

DP&E comments on Wambo BMP summarised in the table below

Section	DP&E Comment
5.2.2 Fume Incident Notification	What is the registration process? Details of the Fume Incident Notification System will need to be provided as discussed.
5.4 Property Investigations	All references to the DG should be changed to Secretary
5.5 Pre-Blast Meteorological Assessment	Where is the weather assessed. You will need to outline the sources of the info for the assessment.
	Most mines use a blast permissions page. Whilst this plan may not need the exact permissions list, as it can vary from time to time, we need to know it exists so we can check against it, should an incident occur.
5.11.2 Wambo Homestead	This is ambiguous. Monitoring is undertaken at the WHC for blasts within 2km of the Complex.
6.1 Meteorological Monitoring	Do we now have a weather station at the north end of the Montrose pit? If so it should be stated that it will be available for all blasts.
9.1 Review	Can be 3 years
	Should also refer to Condition 6 Schedule 6.
9.5 Reportable Environmental Incidents	Whilst we do not need to be advised, you should conduct an internal investigation if the blast is over 115dBL

From: Scott.Brooks@planning.nsw.gov.au [mailto:Scott.Brooks@planning.nsw.gov.au]
Sent: Thursday, 19 November 2015 7:53 AM
To: Peart, Steven D
Subject: Wambo Blast Fume Management Strategy_Rev.2_DRAFT.docx

Steve,
Please find attached blast fume management strategy comments.

Scott

DP&E comments on Wambo BFMS summarised in the table below

Section	DP&E Comment
2.3 Blast Fume Factors and Management Strategies	Most mines now choose a suitable blast day based on weather and schedule back from this time to know when to start loading.

Section	DP&E Comment
	You may want to look at the Mt Arthur coal fume management plan, as it has a number of actions found to be successful.
5.0 Emergency Response	Is this the same as the Fume Incident Notification System described in the Blast Management Plan. If so the names should be aligned.
	This section should include the community advice covered in the Blast Plan.
6.0 Audit/Review	To be consistent with our notification requirements this should say 4 or greater



WAMBO COAL PTY LIMITED

ABN 13 000 668 057

JERRY'S PLAINS ROAD, WARKWORTH, VIA SINGLETON NSW 2330
PMB 1 SINGLETON NSW 2330
TELEPHONE: 02 6570 2200
FAX: 02 6570 2290

12 July 2005

The Director-General
Department of Infrastructure Planning & Natural Resources
PO Box 3927
SYDNEY NSW 2001

Attention: Mr David Kitto

Dear Mr Kitto,

WAMBO COAL PTY LIMITED BLAST MONITORING PROGRAM

Pursuant to Development Consent (DA305-7-2003) dated February 2004, Wambo Coal Pty Limited (WCPL) are required to develop a Blast Monitoring Program approved by the Director-General of the Department of Infrastructure Planning and Natural Resources (DIPNR).

The specific requirement for the Monitoring Program is contained in Schedule 4, Conditions 18 and 19, of the above development consent, which state:

"18. The Applicant shall monitor the airblast overpressure and ground vibration impacts of the development at a minimum of four locations around the site.

19. Before carrying out any development, the Applicant shall prepare a Blast Monitoring Program for the development, in consultation with Department of Environment and Conservation, and to the satisfaction of the Director-General."

Please find attached the "Wambo Coal Pty Limited Blast Monitoring Program" dated July 2005 for your consideration.

I look forward to receiving your approval of the attached Monitoring Program at your earliest convenience. If you wish to discuss any aspects of the BMP further, please do not hesitate to contact me on 02 6570 2206.

Yours faithfully
WAMBO COAL PTY LIMITED

Tony Sutherland
Technical Services Manager

N:\Environmental Management System\Management Plans\EMP007 Blast Monitoring Program\Letter DIPNR Approval.doc

APPENDIX B

BLAST FUME MANAGEMENT STRATEGY

WAMBO COAL BLAST FUME MANAGEMENT STRATEGY

Document No. WA-ENV-MNP-507.1
November 2019

Document Control

Document No.	WA-ENV-MNP-507.1
Title	Blast Fume Management Strategy
General Description	Responses and protocols for the minimisation of post blast fume generation
Document Owner	Environment & Community Manager

Revisions

Rev No	Date	Description	By	Checked	Signature
1	Nov 2012	Original Draft	WCPL	TF	
2	Oct 2015	Review and update to ensure consistent with revised Blast Management Plan (BMP) (Version 5)-Draft for Submission to DP&E	WCPL, Palaris	SP	
3	Nov 2015	Updated to address DP&E comments on Rev. 2	WCPL	SP	
4	Nov 2019	Review and update to ensure consistent with revised Blast Management Plan (BMP) (Version 10)	WCPL	PJ	

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1.0 Introduction

1.1 Background

The Wambo Coal Mine (the Mine) is situated approximately 15 kilometres west of Singleton, near the village of Warkworth, New South Wales (**Figure 1**). Wambo is owned and operated by Wambo Coal Pty Limited (WCPL), a subsidiary of Peabody Energy Australia Pty Limited.

A range of open cut and underground mine operations have been conducted at WCPL since mining operations commenced in 1969. Mining under the current Development Consent (DA305-7-2003) commenced in 2004 and permits both open cut, underground operations and associated activities to be conducted.

The approved run-of-mine (ROM) coal production rate is 14.7 million tonnes per annum and all product coal is transported from WCPL by rail. A summary of the approved Wambo Coal Mine is provided in Table 1 of the WCPL Blast Management Plan (BMP).

This Blast Fume Management Strategy (BFMS) has been prepared in accordance with correspondence received from the NSW Department of Planning, Industry and Environment (DPIE), formerly known as the NSW Department of Planning and Infrastructure (DP&I), on 23 August 2012, outlining the general requirements under Stage 2 of the fume minimisation measures (**Attachment A**). Stage 1 of the fume mitigation measures involved the commencement of rating and recording blast fume events following on from the Blast Fume Workshop held in Singleton on 19 June 2012.

1.2 Purpose

The purpose of this BFMS is to detail fume minimisation measures at the Mine for all surface blasting activities. The BFMS is an annexure to WCPL's BMP, a requirement of Condition B38 of DA305-7-2003.

The structure of the BFMS is aligned with the *Elements of a Blast Fume Management Strategy* as provided by DPIE on 23 August 2012, regarding procedures and fume mitigation measures for:

- Monitoring & Reporting
 - Rating and Recording of Blast Fume Events
 - Reporting of Significant fume events
- Fume Mitigation
 - Geology
 - Meteorological Conditions
 - Blast Design
 - Product Selection and Quality
 - Blast Crew Education
 - On bench practices
- Emergency Response Procedures

1.3 Scope

The BFMS applies to all WCPL employees, contractors and sub-contractors, undertaking all or any surface blasting activities within WCPL's mining authorisations and approved mining areas (**Figure 2**).

1.4 Definitions

Definitions of specific technical terms used in the BFMS are detailed in **Table 1** below.

Table 1: Definitions

Term	Definition
ANFO	A mixture of ammonium nitrate and fuel oil with or without a dye colouring agent (Definition from AS2187.0)
Dynamic water	Water that is in motion (i.e. flowing water)
NOx (Oxides of Nitrogen)	A multiple combinations of oxides of nitrogen (N_2O_2 , NO, NO_2 , N_2O_3 , N_2O_4 , N_2O_5) with nitrogen dioxide (NO_2) being the principle hazardous nitrous fume
Post Blast Fume	Gases generated by the detonation of explosives during blasting
Precursor	A material resulting from a chemical or physical change when two or more substances consisting of fuels and oxidisers are mixed is intended to be used exclusively in the production of an explosive. (Definition from AEMSC Code of Good Practice Precursors for Explosives, 1999).
Sleep Time	The time between explosives being loaded into a blast hole and their initiation (Definition from AS2187.0)
Wet holes	Drilled holes that contain water, have been dewatered or moisture is present in the base or walls

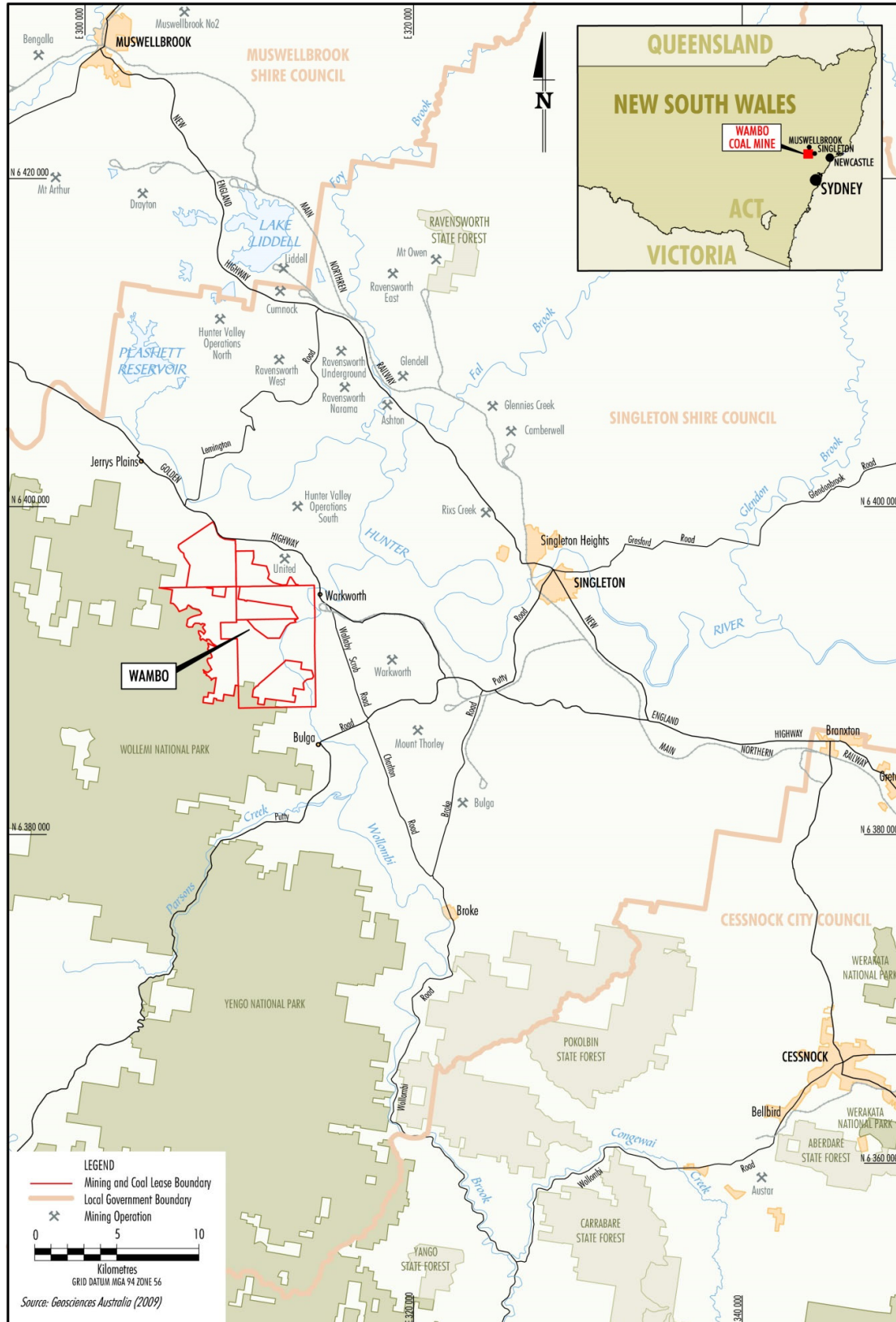


Figure 1: Wambo Coal Regional Location

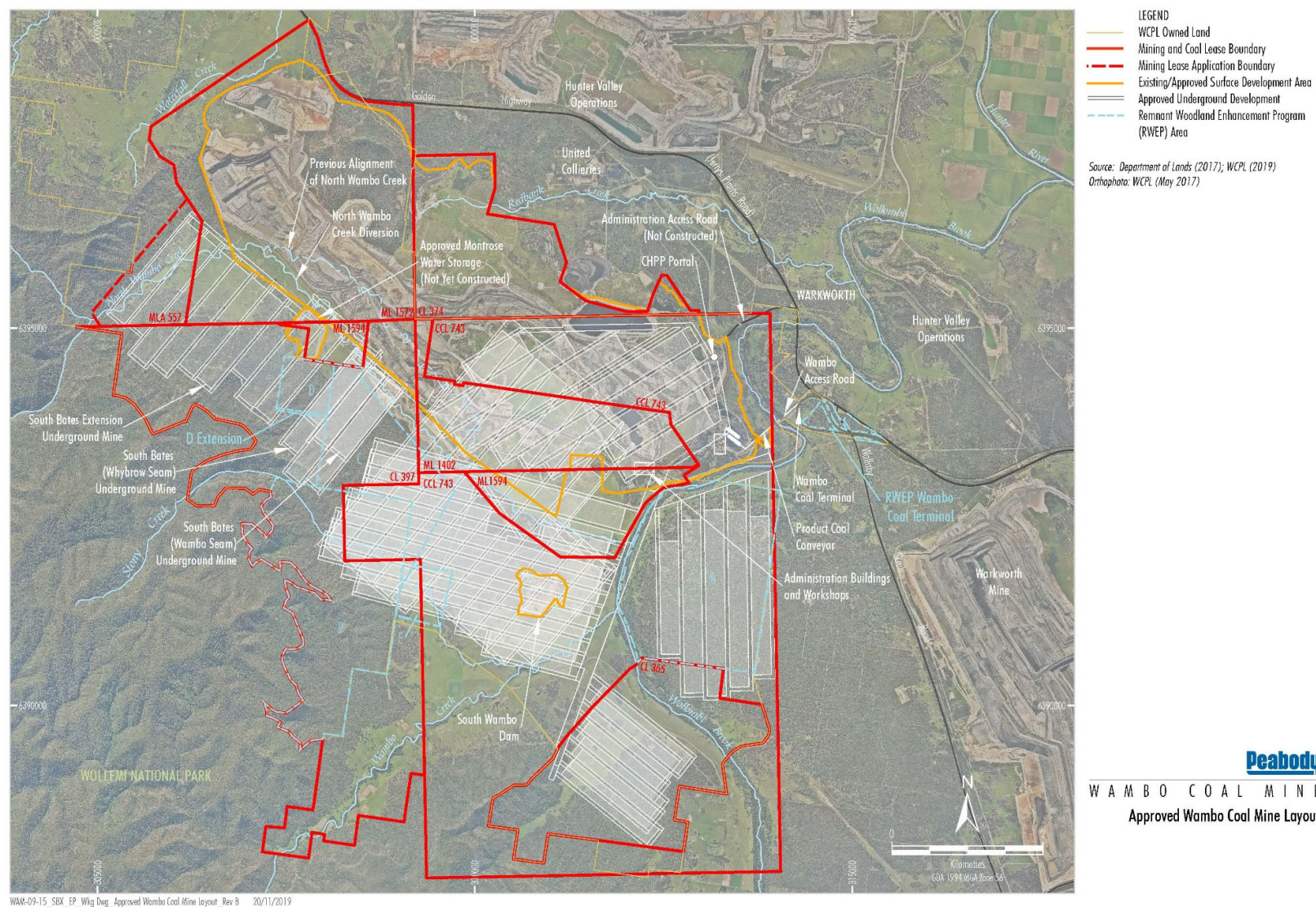


Figure 2: Approved Wambo Coal Mine Layout

2.0 Blast Fume Mitigation

2.1 Blast Process

WCPL has developed a blast process flowchart that summaries the various tasks involved in the blast process, who is responsible for those tasks and what quality assurance processes are in place for the task. This flowchart is provided in **Figure 3**.



Figure 3: Blast Process Flowchart

2.2 Blast Fume Mitigation Matrix

WCPL has developed a blast fume mitigation risk matrix for the Mine, which summarises the fume risk for each seam and the required fume mitigation controls to be implemented for those risks. This matrix is provided in **Table 2**.

Table 2: Fume Mitigation Risk Matrix

Seam	Description	Width (m)	Process	Fume Risk (Low, Med, High)	Fume Mitigation Controls
Whybrow Seam	Waste	30	Blast	High	- Appropriate powder factor - Utilise gassed Titan 9070 with appropriate density - Minimise sleep time
	WWA	1.178	Free Dig	Not Applicable	
	Partings				
	WWC	0.547			
	Waste				
	WWD1	0.2			
	Waste				
	WWD2	0.335			
Redbank Seam	Waste	6.845	Blast	Low	
	RCA	0.338	Free Dig	Not Applicable	
	Waste	1.5			
	Partings				
	RCC	0.711			
	Partings	0.438			
	RCD	1.289			
Wambo/Rider Seam	Waste	12	Blast	Low	
	WRA	0.538	Free Dig	Not Applicable	
	Waste	11.685	Blast	Low	
	WRC	0.442	Free Dig	Not Applicable	
	Waste	17.145	Blast	Med	- Dewatering the holes or use water resistant product - Minimise sleep time
	WMA	2.031	Free Dig	Not Applicable	
Whynot Seam	Waste	15.5	Blast	Med	- Dewatering the holes or use water resistant product - Minimise sleep time
	WTA	2.615	Free Dig	Not Applicable	

2.3 Blast Fume Factors and Management Strategies

Many factors have been identified as contributing to post blast fume. A combination of these factors or any single factor may contribute to the production of post-blast fumes. These factors have been classified under the following categories and management strategies outlined in **Table 3**:

- Geology;
- Meteorological conditions;
- Blast design;
- Product selection and quality;
- Blast crew education; and
- On bench practices.

Table 3: Blast Fume Factors and Management Strategies

Category	Factor	Management Strategy
Geology	Blasting in weak/soft strata (<20m of surface)	Free dig where possible (drilled holes often fail) and the high moisture content in the clay band results in significant degrade of the AN structure)
	Faulted/fractured ground	- General practice is to stand off the faulted fractured ground by 1-4m. This is dependent on many factors. - Geology should be noted and consideration made in the blast design
	High Clay content holes	Load the 70 % emulsion product with appropriate powder factor
	Time between drilling & loading	No correlation noted for holes loaded with varying delays after drilling, this does not include wet weather events or drilling in soft strata as these are considered under separate management strategies.
	Wet holes	- Dewatering drilled holes, check if the water is regenerating. - Gas bag of hole to prevent product contact with wet base - Use blast products suitable for wet conditions.
	Mud/sediment in base of holes	Where feasible gas bag toe of hole to prevent product contact with wet base
Meteorological Conditions ¹	Rain Events and Strong Winds	- A pre-blast meteorological assessment will be completed periodically throughout the course of the day leading up to the scheduled time of the blast. The pre-blast meteorological assessment will consider wind speed and direction, however other meteorological conditions that may influence the impact of blasts on the community such as temperature inversions will also be considered. - A meteorological and dispersion forecasting tool is actively used to identify the most favourable day, and time of day, for blast initiation. Opportunities are identified to reduce impacts on the local community. - Loaded shots affected by rain will be assessed by the Drill and Blast (D&B) Engineer in consultation with the Shotfirers - Where conditions are determined to be unfavourable, the blast will be delayed, postponed or cancelled until favourable meteorological conditions are observed.
Blast Design	Explosives desensitisation	- Depth can contribute to desensitisation and decked loading style applied, however the depth of drilled holes on the site does not exceed 40m and is therefore not considered a contributor to fume. - Tie up <125ms between the holes, no greater than 175ms
	Blast layout	Increased precision through GPS guided equipment.
	Priming	Boosters placed at design depth RL

Category	Factor	Management Strategy
	Blast delays	- Holes deeper than 15m are double primed to ensure full reaction of the column of bulk explosives. - Minimise sleep times of loaded shots where possible based on the manufacturers recommendations - Fume risk when blasting outside of these parameters will be assessed by the D&B Engineer in consultation with the Shotfirers and site management
Product Selection and Quality	Blast contractor selected	- Blast contractor selection included the following criteria: - Local R&D Team of Engineers to provide support on blast design and product selection
	Explosive product selected	Selections based on manufacturer's recommendations and consultation with the Blast Contractor
	Compliance to manufactures specifications	The site D&B Engineer in consultation with the Blast Contractor will continue to monitor and progress product application and management against manufacturer's specifications. This process will result in a defined site specific blast product application.
	Explosives Quality	- Confirmed by the Blast Contractor's Quality Control process inclusive of the following: - MPU calibrations - Product samples collected for every MPU for each shot - Gassing rates and final density recorded on Delivery record
	Mixing of materials	Product mixed by MPU (calibrated and sampled)
	Delivery system	MPU calibrated fortnightly at a minimum or as required.
	Product rotation	- Prill stored in Silos - Pre-delivery inspection - Visual inspection on arrival at site
	Stemming materials & techniques	- Stemming diameter 20 to 30mm (Inspected by Shotfirer) - Stemming depth determined by D&B Engineer dependent on individual blast conditions
	Loading sequence & technique	Loading procedure is driven by product selection and manufacturer's specifications.
	Variation to blast plan	Any irregularities or variations to the blast plan are to be communicated by the shotfirers to the D&B Engineer and, where relevant, in consultation with the Blast Contractor
Blast Crew Education	QA & Auditing	Blast Contractor Auditing and Inspection Schedule
	Qualifications of Blast Crew	- Compliance with site and statutory requirements, certified and appointed - Blast Contractor internal policy. - Training records maintained
	Training requirements of blast crew	- Peabody and Blast Contractor operator training system incorporates the following: - Shotfirers permit - Security Clearance for blasting personnel - Training to open cut site requirements

Category	Factor	Management Strategy
		○ Product development and updates ○ Product Selection ○ Bench practices
On Bench Practices	Bench drainage techniques	• Minimize surface water where possible • Utilise hole savers • Drains for re-directing water
	Sleep time	• Minimise sleep times of loaded shots where possible based on the manufacturers recommendations • Fume risk when blasting outside of these parameters will be assessed by the D&B Engineer in consultation with the Shotfirers and site management
	Shot inspections	• Drill preparation, drilled shot, loading, firing
	Slumping holes	• Loaded holes are checked by the shot crew and any slumping is reported to the D&B Engineer • If dynamic water is present or the holes are slumping the blast plan will be assessed by the D&B Engineer. In this situation it can be decided to fire the shot earlier, not load all the holes or change the product to a more water resistant material. (abnormal circumstances)
	Drill hole location error tolerance	• Drill collar error tolerance 10-50cm • Visual inspection, identify suspect holes and re-check by survey • Re-drills are to be checked and re-drill approved by the D&B Engineer

Notes:

1: There may be circumstances in which blast events need to be fired in less than ideal weather conditions. Failure to initiate blasts may indeed increase the potential for fume generation and or occupational health and safety risks to mine personnel. In these specific and rare circumstances, the final decision making process will be elevated to the General Manager position (or in their absence, to the delegated authority) with relevant input from D&B Engineer, Shot Firer and Environment and Community (E&C) Manager.

3.0 Monitoring and Reporting

Section 6 of WCPL's BMP details WCPL's Blast Monitoring Program, which has been developed in accordance with the requirements of DA305-7-2003 and WCPL's Environment Protection Licence 529. All blasts at the Mine are monitored for overpressure, ground vibration and visually recorded using video equipment (**Section 3.2**). Meteorological conditions are also monitored and assessed prior to and during blasts.

Reporting of blast results, non-compliances and incidents is undertaken in accordance with Section 9 of the WCPL BMP.

3.1 Pre-Blast Fume Risk Assessment

The potential for blast fume will be considered at the following stages of the Blasting Process:

- Preliminary Design;
- Final Design; and
- Blast Clearance Maps.

A Blast Pack will be developed for each blast and contain all relevant records associated with the design and quality assurance process for each individual shot. A Pre-blast Fume Risk Assessment will be completed prior to each blast as part of the Pre-blast Checklist.

3.2 Rating and Recording of Blast Fume Events

In accordance with Stage 1 of fume minimisation measures, all blasts at Wambo are fume rated applying the Fume Ratings in **Attachment B**. In the case of a fume event, video recording of the blast events is utilised to assist in the determination of an appropriate fume ranking for reporting purposes.

All surface blasts in the open cut will be video recorded to capture the post blast environment. The video camera will be manned where possible in order to follow the path of any fume generated. All videos will be a minimum duration of 1 minute following the blast event or until the fume dissipates, leaves the site or the view of the camera. Video footage will be stored for a minimum of 1 year on site.

Each blast will be ranked when fume is at its greatest extent using the Australian Explosives Industry Safety Group (AEISG) ranking provided in **Attachment B** and all written records kept for a minimum of 2 years.

3.3 Reporting of Significant Blast Fume Events

Blast fume events, as identified from the fume ranking table in **Attachment B**, will be reported by WCPL's E&C Manager (or delegate) to the DPIE Singleton Compliance Office in accordance with WCPL's Pollution Incident Response Management Plan (*PIRMP*) for an event which is a:

- **Rating 3** fume event that leaves the project approval boundary or closed portion of public road; or
- All **Rating 4 or 5** fume events.

4.0 Training and Competence

All training associated with the BFMS is undertaken pursuant to WCPL's Training and Competency Management Plan.

Tool box talks are undertaken with relevant employees and contractors as required, including during reviews of the BFMS. Evidence of participation in these tool box talks is documented in accordance with the WCPL Training and Competency Management Plan. Upon scheduled reviews or authorised changes to the BFMS, additional tool box talks and documentation of participants will be undertaken.

5.0 Emergency Response

In the unlikely event of a major fume generation event, site personnel will be notified via the Mine's Emergency Response Procedure. Fume events with a material and not a trivial risk to harm the environment shall be reported immediately without delay as described in the WCPL Fume Incident Notification Procedure (WA-ENV-PRO-507.2) (refer Appendix C of the BMP) and WCPL PIRMP.

The Environment and Community (E&C) Manager (or delegate) will notify affected landholders of the potential fume event approaching their property and to proceed with measures to avoid potential exposure to the blast fume. Current contact details for landholders who may potentially be impacted by a blast fume event at the Mine are detailed in Section 3.4 of WCPL's Fume Incident Notification Procedure (WA-ENV-PRO-507.2).

6.0 Audit/Review

The BFMS will be reviewed:

- During each review of the BMP (refer to Section 9.1 of the BMP); and/or
- Following any blast event:
 - Rated 4 or greater produced from a blast event, or
 - With a rating of 3 which leaves the project approval boundaries or a closed portion of public road.

7.0 Responsibilities

Table 4 below summarises responsibilities documented in the BFMS. Responsibilities may be delegated as required.

Table 4: BFMS Responsibilities

No	Task	Responsibility	Timing
1	Ensure resources are available to WCPL personnel to facilitate the completion of responsibilities under this BFMS	General Manager	As required
2	Ensure that all process and procedures under this BFMS and all other relevant management plans in relation to Blast events are followed	D&B Engineer	As required
3	Ensure that all relevant personnel have reviewed the BFMS and any amendments to the BFMS	D&B Supervisor	As required
4	Ensure BFMS is implemented across all relevant personnel	E&C Manager	As required
5	Liaise with all relevant stakeholders, including external regulatory bodies, regarding all aspects of the BFMS	E&C Manager	As required
6	Ensure that the community is informed via the Blasting Information Hotline and the Peabody Wambo SMS blasting notification messaging service of a blast event	E&C Manager	by COB the day before the blast
7	Investigate and report to all relevant stakeholders of any fume generated events which are required under this BFMS and any other relevant approved management plan	E&C Manager	As required

8.0 References

- Development Consent (DA305-7-2003)
- WCPL Environment Protection Licence (529)
- Australian Explosives Industry and Safety Group (AEISG) Code of Practice - *Prevention and Management of Blast Generated NO_x Gases in Surface Blasting* (Edition 2. August 2011)
- Queensland Government - Queensland Guidance Note - *Management of Oxides of Nitrogen (No₂) in Open Cut Blasting* (QGN 19. Version 1. 31 May 2011)
- Australian Explosives Manufacturers Safety Committee (AEMSC) Code of Good Practice - Precursors for Explosives (Edition 1. 1999)
- NSW DPIE *Elements of a Blast Fume Management Strategy* (23 August 2012)
- AS 2187.0 –1983: Storage transport and use – Terminology
- AS 2187.1 - 1998: Explosives – Storage, Transport and Use, Part 1 - Storage
- AS 2187.2 – 2006: Explosives – Storage, Transport and Use, Part 2 – Use of Explosives
- WCPL Blast Management Plan (WA-ENV-MNP-507)
- WCPL Fume Incident Notification Procedure (WA-ENV-PRO-507.2)
- WCPL Pollution Incident Response Management Plan

ATTACHMENT A CONSULTATION



Planning &
Infrastructure

Contact: Scott Brooks
Phone: (02) 6575 3401
Fax: (02) 6575 3415
Email: scott.brooks@planning.nsw.gov.au

Mr Peter Baker
General Manager
Wambo Mine
PMB 1
Singleton NSW 2330

Dear Mr Baker

Blast Fume Management Strategy

I refer to the Blast Fume Workshop held in Singleton on 19 June 2012 and the Department's letter dated 26 June 2012 requesting the Upper Hunter mines commence rating and recording blast fume events from 2 July 2012 as the first stage of fume minimisation measures.

The purpose of this letter is to now request that mines commence the second stage of the proposed minimisation measures by submitting a Blast Fume Management Strategy for approval, within three months from the date of this letter. The suggested minimum requirements for the Strategy, listed in Attachment 1, have been amended in consideration of industry comments from the above Workshop.

It is intended that each mine's Blast Fume Management Strategy, once approved, would be annexed to the mine's Blast Management Plan or, in the absence of a Blast Management Plan, to an appropriate operational management plan.

I appreciate your co-operation in developing and implementing a strategy to minimise amenity impacts from blast fume.

If you wish to further discuss this matter, please call the Department's Singleton office on 6575 3405.

Yours sincerely

23.6.12

Chris Wilson
Executive Director
Major Projects Assessment

Attachment: Elements of a Blast Fume Management Strategy

cc. Environment Protection Authority
Department of Trade and Investment, Regional Infrastructure and Services
NSW Health
NSW Minerals Council

ATTACHMENT 1: Elements of a Blast Fume Management Strategy

For the Blast Fume Management Strategy to be effective it will need to comprehensively address all the known factors that can affect the generation of fume. Further, it will need to address how post blast fume is rated and reported. Please find below suggestions for sources of information and topics to be included in your Blast Fume Management Strategy. These suggestions form minimum requirements for topics to be included in the Management Strategy. Mines are encouraged to enhance or add to these topics in drafting their Management Strategies based on operational experience and continuing research.

1. Rating and recording of blast fume events (as requested in the Department's 26 June 2012 letter)

- Rate and record the fume characteristics of all shots using the rating system in Appendices 2 and 3 of the Australian Explosives Industry and Safety Group Inc Code of Practice titled "Prevention and Management of Blast Generated NO_x Gases in Surface Blasting, Edition 2, August 2011" (the "AEISG Code") available at <http://aeisg.org.au/index.php/cop.html>. This includes all blasts even if there is no visible post blast fume. The fume is to be rated when it is at its greatest extent. Further information is also available from the Queensland Dept of Employment, Economic Development and Innovation at: <http://mines.industry.qld.gov.au/safety-and-health/631.htm>.
- Records of fume ratings are to be kept on the mine site. The Department may take up the option of reviewing and discussing these results with the mine from time to time. Written records are to be kept for a minimum of 2 years. It is intended that these records would not currently be placed on the company's website.
- Video record each blast where a risk of post blast fume is identified. The forthcoming blast fume management strategy would define when such a risk is likely to occur.
- All video footage is to be stored for at least 1 year. All videos should be a minimum duration of 1 minute following the blast and should capture any post blast fume until the fume dissipates, leaves the site, or leaves the view of the camera.
- The rating and recording of post blast fume is to be kept from 2 July 2012.

Additional suggestions:

- When video recording fume events, suggest keeping the camera in one place and using the zoom to follow the fume, if necessary.
- A camera on the mine boundary could be helpful to confirm whether the fume extends beyond the mine site.

2. *Reporting significant fume events to the Department*

- Notify the Department of Planning and Infrastructure compliance office in Singleton of any blast producing post blast fume that rates 3 at it highest extent and leaves the site (see definition below), and any blast that rates 4 or 5. It is not the intention that all shots required to be reported will require a formal incident report, as this will depend on a number of factors. Within this report the quantity of explosive and / or the number of blast holes should be included. The purpose of this is to provide a guide to size the fume event;
- *Site - includes any active mine site's project approval boundary and any closed portion of public road.*

3. *Developing a management plan to minimise fume emissions by addressing those factors known to contribute to fume generation. The following should be considered.*

Geology

- A risk matrix for the site should be established based on geology and past blasting outcomes, then used as a guide for shot size, sleep time and product selection. The risk matrix will require frequent updating and as such should form a sub set of the Management Strategy;
- Blasting in weak and soft strata (primarily within approx 20m of surface);
- Areas known to contain a high incidence of faulted/fractured ground;
- Holes with high clay content;
- Time between drilling and loading;
- Ground movement/product desensitization;
- Industry has recognised that wet holes should be defined as those which contain water, have been dewatered or holes where moisture is present in the base or walls. The Management Strategy will need to define "wet" and "dry" holes so their different management requirements can be identified;
- Mud/sediment in the base of holes.

Meteorological conditions

- Meteorological forecasting for storms, rain events, strong winds and inversions;
- If rain is forecast what precautions are planned.

Blast Design

- Explosives desensitization;
-

- Blast layout and delays;
- Priming.

Product Selection, Quality and Blast Crew Education

- Choice of explosive product;
- Compliance with manufacturers recommendations and procedure for variations to manufacturers recommendations;
- Education and training on product selection and bench practices;
- How and where the blasting products are used;
- Explosive quality, QA and auditing, mixing of materials, delivery system, contractor, product rotation, etc;
- Stemming materials and techniques;
- Loading sequence and techniques;
- Product variation from approved blast plan.

On Bench Practices

- Bench drainage techniques;
- Sleep time taking into account a number of different hole conditions or forecast weather and a maximum sleep time for each product;
- Process for exceeding recommended or maximum sleep times;
- Inspection regime of sleeping shots;
- Management of slumping of holes;
- Tolerance of error allowable for the location of the drill holes.

Emergency response procedures

- Fume events with a material risk of harm to the environment should be addressed under statutory emergency response procedures, such as a "pollution incident response plan" consistent with EPA Environmental Guidelines; Preparation of pollution incident response management plans (March 2012).



**Planning &
Environment**

Contact: Scott Brooks
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Email: scott.brooks@planning.nsw.gov.au
Our ref: 305-7-2003

The General Manager
Wambo Mine
PMB 1
SINGLETON NSW 2330

Attention: Steve Peart

Dear Steve

Wambo Coal – Approval of Blast Management Plan

Thank you for forwarding the Wambo Blast Management Plan and the Blast Fume Management Strategy and notification procedure as required under project approval DA 305-7-2003 for the Department's consideration.

The Department has reviewed these plans, and relevant attachments, and is satisfied that they generally address the requirements set out in the relevant conditions of the project approval. Consequently, I would like to advise you that the Secretary has approved the plan.

This Plan comes into force on the 30th November 2015 and remains in force until replaced by any future updated approved Plans.

Could you please forward finalised copies of the above plan (preferably in PDF format with a copy of this approval letter appended) for the Department's records by the end of November 2015.

If you require further information or clarification in this matter please contact Scott Brooks on 6575 3401 or by email to scott.brooks@planning.nsw.gov.au.

Yours sincerely

Scott Brooks

Investigations (Lead), Compliance

27-11-2015
As Nominee for the Secretary, Planning & Environment

ATTACHMENT B

AEISG FUME RANKING

Level	Typical Appearance
Level 0 No NOx gas	
Level 1 Slight NOx gas	
1A Localised	
1B Medium	
1C Extensive	
Level 2 Minor yellow/orange gas	
2A Localised	
2B Medium	
2C Extensive	
Level 3 Orange gas	
3A Localised	
3B Medium	
3C Extensive	
Level 4 Orange/red gas	
4A Localised	
4B Medium	
4C Extensive	
Level 5 Red/purple gas	
5A Localised	
5B Medium	
5C Extensive	

APPENDIX C

FUME INCIDENT NOTIFICATION PROCEDURE

WAMBO COAL FUME INCIDENT NOTIFICATION PROCEDURE

Document No. WA-ENV-PRO-507.2
November 2019

Document Control

Document No.	WA-ENV-PRO-507.2
Title	Fume Incident Notification Procedure
General Description	Blast Fume Management at WCPL
Document Owner	Environment & Community Manager

Revisions

Rev No	Date	Description	By	Checked	Signature
1	Nov 2015	Original Draft as part of Blast Management Plan	Steve Peart	Geoff Moore	
2	Nov 2019	Review and update to ensure consistent with revised Blast Management Plan (BMP) (Version 10)	WCPL	PJ	

1.0 Purpose

The purpose of this Fume Incident Notification Procedure is to provide a process for notifying community members who are predicted to be impacted by a fume event following initiation of a blast.

2.0 Scope

This Fume Incident Notification Procedure relates to all blasting activities undertaken at WCPL. The Fume Incident Notification Procedure forms part of WCPL's Blast Management Plan (BMP) and Blast Fume Management Strategy (BFMS).

3.0 Procedure

3.1 Prior to Blast Initiation

1. The Drill and Blast (D&B) Engineer is to nominate and assign responsibility to a designated "Community Response Coordinator" prior to each blast
2. Prior to and during all blasts, the "Community Response Coordinator" must maintain positive communication with the Blast Controller
3. The "Community Response Coordinator" must logon to the Blast Notification System (SMSer) and prepare for initiation of the Fume Incident Notification (**Section 3.2**)

3.2 Following Blast Initiation

1. The Blast Controller is to assess blast fume generation and plume migration
2. Where blast fume is likely to disperse offsite towards neighbouring properties, the Blast Controller must immediately notify the "Community Response Coordinator"
3. The notification should be to effect that "...blast fume has been generated and appears to be migrating in a northerly (or alternate) direction with the potential to impact on neighbouring properties"
4. The "Community Response Coordinator" must immediately send the Fume Incident Notification (**Section 3.3**)
5. The "Community Response Coordinator" must record the date, time and relevant details of both internal and external notifications

3.3 Fume Incident Notification (SMSer)

1. Login into <http://www.smsertech.com>
Username: wambocommunity@peabodyenergy.com
Password: wambocoal
2. Select "Groups"
3. Select the required group based on the predicted direction of travel of the fume.
The predicted direction of travel should be based on the wind direction during the pre-blast weather assessment
4. Select "Compose"
5. Select "Use Message Template"
6. Select "Fume Incident Notification"
7. Update "time" and "date" of the blast, and "direction" of travel of the fume
8. Select "send standard message"
9. Log Out of SMSer once notification has been sent.

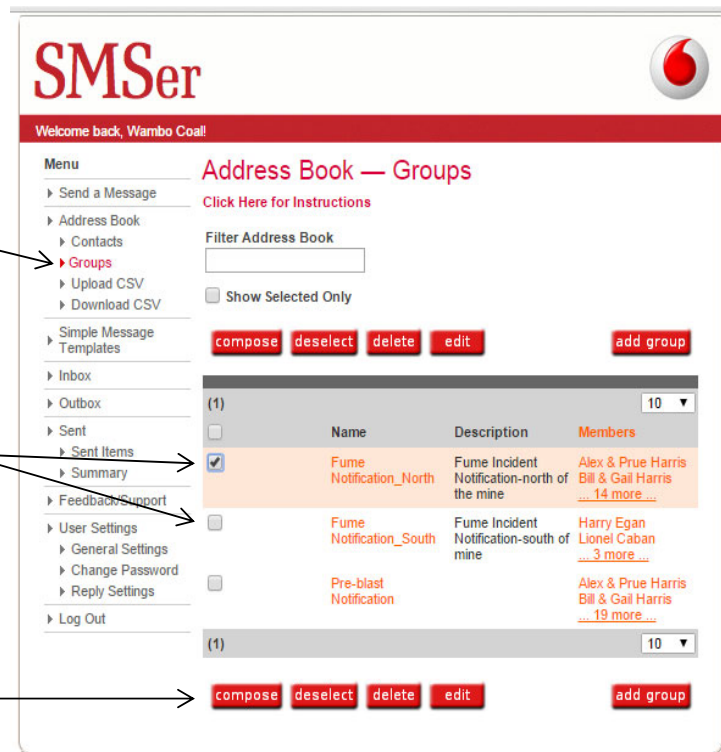
Step 1
Login to SMSer

Step 2
Select "Groups"

Step 3
Check the
required "Group"

Step 4
Select "Compose"

Step 5
Select "Use
Message
Template"



SMSer

Welcome back, Wambo Coal!

Menu

- Send a Message
- Address Book
 - Contacts
 - Groups**
 - Upload CSV
 - Download CSV
- Simple Message Templates
- Inbox
- Outbox
- Sent
 - Sent Items
 - Summary
- Feedback/Support
- User Settings
 - General Settings
 - Change Password
 - Reply Settings
- Log Out

Address Book — Groups

[Click Here for Instructions](#)

Filter Address Book

☐ Show Selected Only

[compose](#) [deselect](#) [delete](#) [edit](#) [add group](#)

(1)	Name	Description	Members
☒	Fume Notification_North	Fume Incident Notification-north of the mine	Alex & Prue Harris Bill & Gail Harris ... 14 more ...
☐	Fume Notification_South	Fume Incident Notification-south of mine	Harry Egan Lionel Caban ... 3 more ...
☐	Pre-blast Notification		Alex & Prue Harris Bill & Gail Harris ... 19 more ...

[compose](#) [deselect](#) [delete](#) [edit](#) [add group](#)



SMSer

Welcome back, Wambo Coal!

Menu

- Send a Message**
- Address Book
 - Contacts
 - Groups
 - Upload CSV
 - Download CSV
- Simple Message Templates
- Inbox
- Outbox
- Sent
 - Sent Items
 - Summary
- Feedback/Support
- User Settings
 - General Settings
 - Change Password
 - Reply Settings
- Log Out

Send a Message

Send to Contacts/Groups:

Contacts/Groups:
Fume Notification_North

Note: Put multiple contacts on separate lines or separate each contact with a comma

☐ Use Message Template

Message:

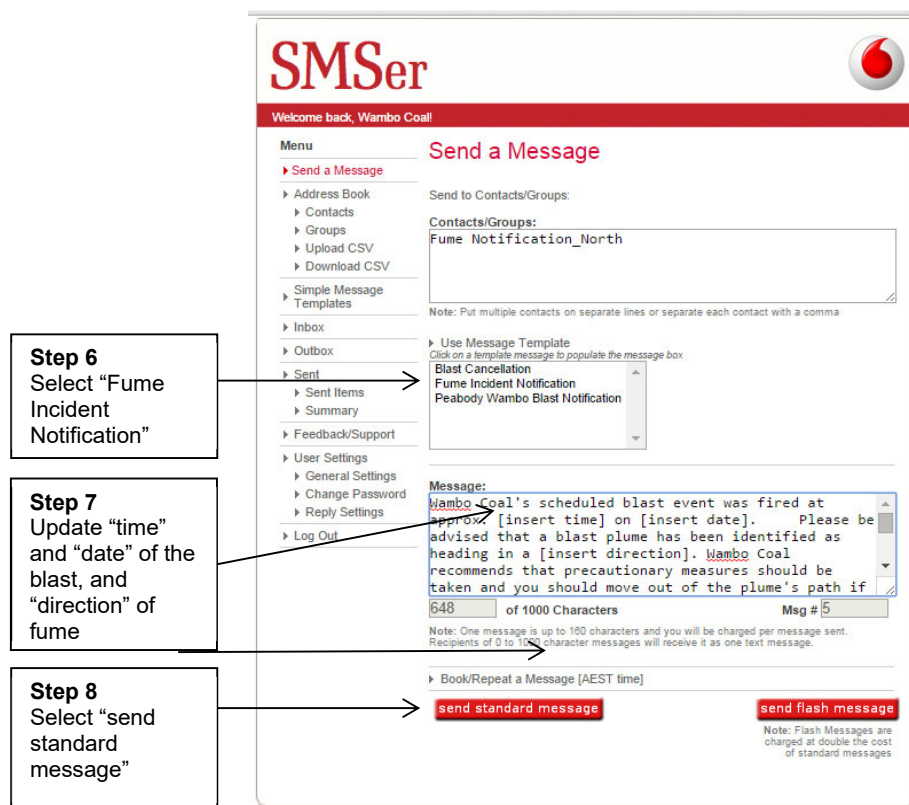
0 of 1000 Characters Msg # 0

Note: One message is up to 160 characters and you will be charged per message sent. Recipients of 0 to 1000 character messages will receive it as one text message.

☐ Book/Repeat a Message [AEST time]

[send standard message](#) [send flash message](#)

Note: Flash Messages are charged at double the cost of standard messages



The screenshot shows the SMSer web interface. On the left is a 'Menu' with options like 'Send a Message', 'Address Book', 'Inbox', etc. The main area is titled 'Send a Message'. It includes a 'Send to Contacts/Groups:' field with 'Fume Notification_North' entered. Below this is a 'Use Message Template' section with a dropdown menu showing 'Blast Cancellation', 'Fume Incident Notification', and 'Peabody Wambo Blast Notification'. The 'Message:' text area contains a template with placeholders for time, date, and direction. At the bottom, there are buttons for 'send standard message' and 'send flash message'. Three boxes on the left indicate the steps: Step 6 points to the 'Send a Message' menu item, Step 7 points to the message template text area, and Step 8 points to the 'send standard message' button.

Step 6
Select "Fume Incident Notification"

Step 7
Update "time" and "date" of the blast, and "direction" of fume

Step 8
Select "send standard message"

3.4 Action to be taken if the SMSer service is unavailable

1. In the event that the SMSer service is inoperable, the "Community Response Coordinator" is to contact affected neighbours in **Table 1** (North) or **Table 2** (South) in descending order, stating the following:

"Wambo Coal has just initiated a blast. A blast plume is potentially headed in your direction. Please take all precautionary measures to move out of the plume's path. We recommend you head indoors, and close all doors and windows until the plume passes. We are in the process of notifying a number of residents and appreciate your understanding. We will be in contact again once the plume has dispersed"

Table 1: Fume Incident Notification_North Contact Details

Contact Order	Name	Contact	Group
1	Sarah Jane Worth	0409528907	Fume Notification_North
1	Erica Torrens	0427438031	Fume Notification_North
1	Garry & Debbie Pevy	0418622130	Fume Notification_North
2	Chantelle LeBrocq	0449058724	Fume Notification_North
2	Jim Rodgers	0412521848	Fume Notification_North
2	Wayne and Tanya Oliver	0410501324	Fume Notification_North
2	Peter Nichols	0427764023	Fume Notification_North
2	Cathy Carmody	0418608571	Fume Notification_North
2	Bill & Gail Harris	0438156399	Fume Notification_North
2	Kaye Atfield	0448130935	Fume Notification_North
2	Nigel Coalfax	0415623829	Fume Notification_North
2	Alex & Prue Harris	0408683770	Fume Notification_North
2	David Thelander	0423667970	Fume Notification_North
2	Di Gee	0448448346	Fume Notification_North
2	John and Helen Carter	0408433249	Fume Notification_North
2	Sarah Williams	0427722705	Fume Notification_North
2	Alison Dunn	0423613371	Fume Notification_North

Table 2: Fume Incident Notification_South Contact Details

Contact Order	Name	Contact	Group
1	Janet Fenwick	(02) 65704512 0427006992	Fume Notification_South
2	Lionel Caban	0427745366	Fume Notification_South
2	David Brosi	0427400977	Fume Notification_South
2	Kevin Pitcher	0437339669	Fume Notification_South
2	Ted and Carol Burley	0418457989	Fume Notification_South

4.0 Responsibilities

No	Task	Responsibility	Timing
1	Nominating and assigning responsibility to a designated "Community Response Coordinator"	D&B Engineer	Prior to and during each blast event
2	Notifying the "Community Response Coordinator" of a blast fume event that is likely to disperse offsite towards neighbouring properties	Blast Controller	Immediately following each blast
3	Sending the Fume Incident Notification	Community Response Coordinator	As required
4	Recording all details including date and time of the Fume Incident Notification	Community Response Coordinator	After sending the Fume Incident Notification
5	Maintaining and updating the contact details in the online Fume Incident Notification System (SMSer) and in Table 1 and Table 2	Environment & Community Manager	As contact details change

APPENDIX D

ROAD CLOSURE MANAGEMENT PROCEDURE

WAMBO COAL ROAD CLOSURE MANAGEMENT PROCEDURE

Document No. WA-ENV-PRO-507.3

November 2019

Document Control

Document No.	WA-ENV-PRO-507.3
Title	Road Closure Management Procedure
General Description	Management procedure for road closure and traffic management plan when blasting is within 500m of the Golden Highway
Document Owner	Environment & Community Manager

Revisions

Rev No	Date	Description	By	Checked	Signature
1	June 2017	Original Draft	Nicole Dobbins	SP	
2	December 2017	Revision to include emergency services contact details and renewed ROL	Nicole Dobbins	SP	
3	September 2018	Renewed ROL and revised flowchart	Nicole Dobbins		
4	March 2019	Renewed ROL and revised figure	Nicole Dobbins	PJ	
5	Nov 2019	Review and update to ensure consistent with revised Blast Management Plan (BMP) (Version 10)	WCPL	PJ	

1.0 Purpose

To provide a management procedure for the temporary closure of public roads whenever blasting is within 500m and may present a risk to road users. Once approved, the procedure will form a component of the Wambo Coal (WCPL) Blast Management Plan.

The procedure is required to address various conditions in relation to blasting within 500m of public roads contained in Part B of the WCPL Development Consent DA305-7-2003 (the Development Consent).

2.0 Scope

This Road Closure Management Procedure relates to the closure of a section of the Golden Highway which has been identified as the only public road within 500 m of blasting activities at WCPL (see **Appendix A**).

3.0 Regulatory Consultation and Approval

Consultation for road closure was undertaken with the Road and Maritime Services (RMS) and Singleton Council as required by the Development Consent. A copy of the Approval for road closure is included in **Appendix B**.

4.0 Procedure

The Drill and Blast Engineer will determine the need for road closure based on the separation distance between the proposed blast location and the Golden Highway. If the Golden Highway is located within the 500m exclusion zone (as outlined in **Appendix A**), then temporary road closure will be required. It is anticipated that delays on the Golden Highway will be approximately 10 minutes.

4.1 Notification

Where blasting is to take place within 500m of the Golden Highway, the following notifications will take place.

1. When timing permits, WCPL (Drill and Blast Engineer) will advertise the temporary road closures in the local newspaper, the Singleton Argus, prior to blasting.

Note: The Singleton Argus is published once per week on Wednesdays, the cut-off for advertisements is 11am Tuesday.

2. WCPL (Drill and Blast Engineer) will email all interested parties (including the community, Emergency Services and neighbouring mines) of a scheduled road closure five days prior to blasting. The contact details for Emergency Services notifications are provided in **Table 1**.

Table 1: Contact Details for Local Emergency Services

Emergency Service	Details for Notification
Singleton Fire and Rescue	bruce.ambrose@fire.nsw.gov.au joseph.adamthwaite@fire.nsw.gov.au jon.deaves@fire.nsw.gov.au
NSW Ambulance Services	AMBULANCE-HNESector@health.nsw.gov.au
Singleton Police	deng1chr@police.nsw.gov.au
State Emergency Services	occ@ses.nsw.gov.au

3. Singleton Council will be notified at least one day prior to the blast at ssc@singleton.nsw.gov.au. Emergency services and neighbouring mines will also be notified one day prior to the blast.
4. WCPL will update the Blasting Hotline 24hrs prior to the scheduled blast event and advise of road closure.
5. Permanent signage will be erected on the Golden Highway, in a format similar to that outlined in **Appendix C**. Signage will be updated to advise regular users of the likely time, date and duration of road closure, not less than five days prior to blasting.
6. Traffic control will be notified at least two days prior to the blast.
7. The Transport for NSW, Transport Management Centre will be notified prior to installing traffic control and after removing it at myrol.transport.nsw.gov.au (or at 1800 679 782). The Road Occupancy Licence number (refer to **Appendix B**) will be quoted at this time.

4.2 Restrictions

The Development Consent (Part B) imposes the following restrictions on blasting:

1. A ground vibration limit of 100mm/sec on public roads and 50mm/sec on all other public infrastructure (Condition B22);
2. A ground vibration limit of 0.5mm/s within 500m of any public road unless a written agreement is in place with the infrastructure or landowner (Condition B32);
3. Blasting may only be carried out between 9am and 5pm Monday to Saturday (Condition B24);
4. Blasting is not permitted on Sundays; public holidays or any other time without the written approval of the Planning Secretary (Condition B24). Approval is also required from the EPA, in accordance with Condition L5.1 of Environment Protection Licence 529;
5. Minimise the frequency and duration of public road closures and use all reasonable efforts to avoid road closures during peak traffic periods (Condition B30c); and
6. One blast per day is allowed within 500 m of Wallaby Scrub Road or the Golden Highway (Condition B31).

Blasting is also restricted during adverse meteorological conditions to minimise potential impacts on private landowners.

Blasting notifications will continue to be sent to neighbouring mines to minimise cumulative blasting impacts to the local community.

4.3 Temporary Road Closure

1. Traffic control will be carried out in accordance with Road and Maritime Services (RMS) approval conditions and the RTA '*Traffic Control at Worksites Version 4*' 2010 (or the latest version). WCPL will also consider the requirements of the *Roads Act 1993 No 33*.
2. Traffic control stations will be established in accordance with the Traffic Control Plan presented in **Appendix C**. The Transport for NSW, Traffic Management Centre to be notified prior to installing traffic control.
3. Traffic controllers will be certified by the RMS and used for all road closures. They will be familiar with the road closure procedures, wear appropriate reflective or protective equipment and carry a hand held radio on the WCPL mine site frequency.
4. Traffic controllers (or sentries) will travel to the road closure points and place all necessary signage in positions in accordance with **Appendix C** at least thirty minutes prior to the anticipated firing time. Once all signage is in place, the traffic controller will inform the Drill and Blast Engineer and await further instruction.
5. Traffic controllers (or sentries) will maintain positive radio contact with the Drill and Blast Engineer until the blast has been cleared. Traffic controllers will be familiar with the site specific WCPL shot firing procedures (as outlined in the Blast Management Plan).
6. The Drill and Blast Engineer will advise the traffic controller when to close the road. All traffic and personnel will be cleared from the affected area and the Drill and Blast Engineer informed when this has been completed.
7. All traffic is to be halted for the duration of the blast. Access by emergency vehicles or inadvertent access is addressed in **Section 4.4**.
8. It is anticipated the road will be closed for approximately 10 minutes on each occasion.
9. Traffic controllers (or sentries) will not reopen the road until informed by the Drill and Blast Engineer that it is safe to do so. Prior to reopening, an inspection of the road will be undertaken by WCPL (or other approved) personnel to check for fly rock and other hazards.
10. Once the blast has been cleared and the road inspected, the road can be reopened and the signage removed.
11. The Transport for NSW, Traffic Management Centre to be notified once the road is reopened.

A summary flowchart for the temporary Road Closure Management Procedure is presented in **Appendix D**.

4.4 Access for Emergency Vehicle or Inadvertent Access

1. Traffic controllers (or sentries) may break radio silence and inform the Drill and Blast Engineer if access is required for emergency (or other) vehicles once shot firing is in progress.
2. If the blast can be halted, emergency (or other) vehicles can be allowed to pass with an escort, and the shot firing recommenced once the road is clear and secured.

3. Alternatively, emergency services vehicles will be escorted through the road closure section, post blast as soon as the route is made safe.

4.5 Shot Firing Procedure

The shot firer will fire the blast in accordance with the WCPL Blast Management Plan and other internal blasting and environmental procedures. The following exceptions apply:

1. Blasting will not take place at times when adverse conditions (or other prevailing conditions) make road closure hazardous.
2. Blasts requiring the closure of the Golden Highway will be tied up on the day of firing and must not be left tied up overnight.
3. If a misfire is identified during the post blast inspection, while the Golden Highway is closed, the following process will be invoked.
 - a. If the blast needs to be immediately re-fired for safety reasons, the road may be re-opened after appropriate inspection to allow traffic flow for the duration of the reset period and closed again to fire the secondary shot; or
 - b. If the misfire is not a threat to safety, it will be treated as a separate blast in order to prevent lengthy road closures.

5.0 Responsibilities

Table 2 below summarises responsibilities documented in this procedure. Responsibilities may be delegated as required.

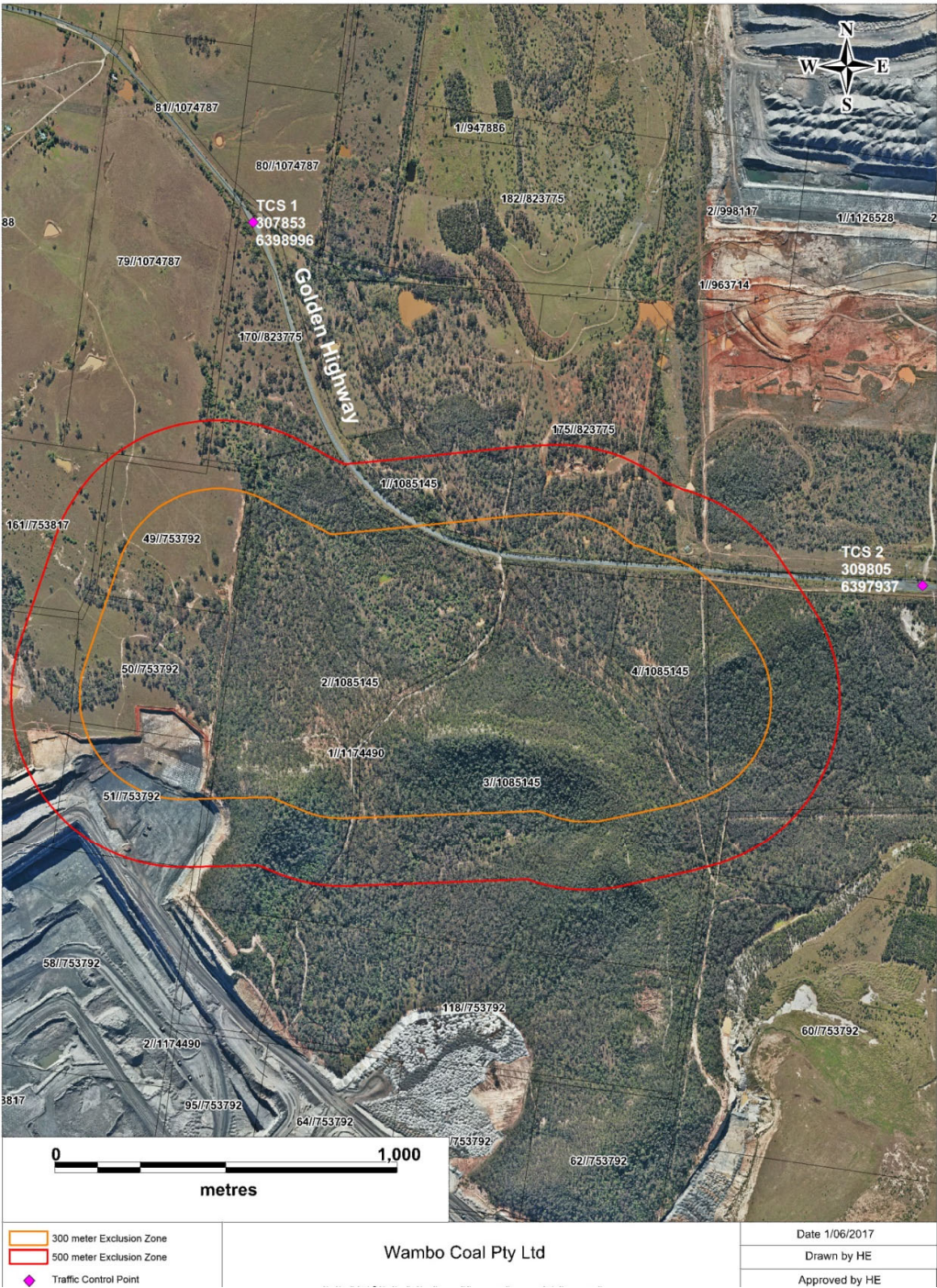
Table 2: Responsibilities

No	Task	Responsibility	Timing
1	Permanent blast signage to be erected on the Golden Highway	Drill and Blast Engineer	One week prior to blasting event within 500 m of public road
2	Ensure road closures are conducted in accordance with the conditions of the Road Occupancy Licence and blasting is conducted: - between 9am and 5pm Monday to Saturday; - not on Sundays or public holidays or any other time without the written approval of the EPA and the DPIE Planning Secretary; and - not during peak traffic periods.	Drill and Blast Engineer and Environment and Community Manager	Ongoing
3	Ensure not more than one blast per day is undertaken within 500m of the Golden Highway.	Drill and Blast Engineer	Ongoing
4	Advertisement in the Singleton Argus of scheduled road closures	Drill and Blast Engineer	Prior to the Singleton Argus publishing – currently once per week

No	Task	Responsibility	Timing
5	Inform neighbouring mines, community and emergency services of scheduled road closure due to blasting	Drill and Blast Engineer	5 days prior to blast
6	Inform neighbouring mines and emergency services of scheduled road closure due to blasting	Drill and Blast Engineer	1 day prior to blast
7	Update permanent signage on the Golden Highway of upcoming road closures	Drill and Blast Engineer	5 days prior to blast
8	Inform traffic control operators of road closure requirements	Drill and Blast Engineer	2 days prior to event
9	Transport for NSW, Transport Management Centre notified of road closure and reopening of road	Road Traffic Controller	Prior to and following blasting
10	Ensure traffic controllers are certified by the RMS	Drill and Blast Engineer	Prior to Engagement

APPENDIX A

Indicative Blasting Exclusion Zones



Wambo Coal - Indicative Blasting Exclusion Zones to December 2020

APPENDIX B

Approval for Road Closure

ROAD OCCUPANCY LICENCE

LICENCE NO : 1154072

ROADS & MARITIME SERVICES (RMS)

Phone: 1300 656 371 Monday To Friday 8.30 AM - 4.30 PM

To activate and deactivate your approved work shift(s) on your Road Occupancy Licence, please visit: myrol.transport.nsw.gov.au. This licence is for the occupation of the road space only. If you are unable to access myrol.transport.nsw.gov.au, please call TMC on 1800 679 782. For further assistance, please refer to the proponent's user manual here: myrol.transport.nsw.gov.au/help.pdf

NON DEVELOPMENT - HAZARD REDUCTION

Project: Not Applicable
This Activity : Temporary road closure for blasting

LOCATION

Subject Road: Golden Highway
From: Pinegrove Road, JERRYS PLAINS
To: Lemington Road, Jerrys Plains
Council: SINGLETON

LICENSEE

Organisation: Wambo Coal Pty Ltd
Ref No:
Name: Dale Harmour
Phone: 0408969988

ONSITE CONTACT

Name: Peter Jaegar
Phone: 0417527585

TRAFFIC MANAGEMENT

Flow Management: Short Term / Intermittent Works; Stop / Slow
Control
Closure Type: All lanes both directions
Closure Lane(s): Shoulder; Median Shoulder
Direction(s): Eastbound and Westbound

LICENCE DURATION

From: 08-Apr-2019
To: 31-Mar-2020

LICENCE CONDITIONS

- 1 YOU MUST USE SHIFT ACTIVATION WEB ADDRESS <https://myrol.transport.nsw.gov.au> TO ACTIVATE AND DEACTIVATE YOUR APPROVED ROAD OCCUPANCY LICENCE(S). (TO CHANGE TRAFFIC CONTROL SIGNALS TO FLASHING YELLOW OR TO ACTIVATE PERMANENT VARIABLE MESSAGE SIGNS DIAL 1800 679 782)
- 2 THIS LICENCE IS NOT AN APPROVAL OF THE PROPONENT'S TRAFFIC CONTROL PLAN. PLEASE NOTE WORKCOVER REQUIRES THAT TRAFFIC CONTROL PLANS COMPLY WITH AS1742.3
- 3 ALL MATTERS RELATING TO NOISE GENERATION OR OTHER ENVIRONMENTAL FACTORS ON SITE ARE UNDER THE JURISDICTION OF THE LOCAL COUNCIL AND/OR THE ENVIRONMENTAL PROTECTION AUTHORITY.
- 4 SHOULD THE PROPOSED WORKS INVOLVE UNDERBORING OR EXCAVATION OF STATE ROAD ASSETS OR THE REMOVAL OF KERB AND GUTTER, DETAILS OF WORKS MUST BE APPROVED BY THE RMS'S ASSEST MANAGEMENT BRANCH.
- 5 NOTIFICATION TO AFFECTED BUSINESSES, RESIDENTS AND OTHER STAKEHOLDERS MUST BE UNDERTAKEN AT LEAST 5 BUSINESS DAYS PRIOR TO WORKS COMMENCING

APPROVED DATES & TIMES

From Shift					To Shift				
From	D	M	Time	-	To	D	M	Time	
Mon	08	Apr	09:00	-	Mon	08	Apr	17:00	
Tue	09	Apr	09:00	-	Tue	09	Apr	17:00	
Wed	10	Apr	09:00	-	Wed	10	Apr	17:00	
Thu	11	Apr	09:00	-	Thu	11	Apr	17:00	
Fri	12	Apr	09:00	-	Fri	12	Apr	17:00	
Sat	13	Apr	09:00	-	Sat	13	Apr	17:00	
Mon	15	Apr	09:00	-	Mon	15	Apr	17:00	
Tue	16	Apr	09:00	-	Tue	16	Apr	17:00	
Wed	17	Apr	09:00	-	Wed	17	Apr	17:00	
Thu	18	Apr	09:00	-	Thu	18	Apr	17:00	
Fri	19	Apr	09:00	-	Fri	19	Apr	17:00	
Sat	20	Apr	09:00	-	Sat	20	Apr	17:00	
Mon	22	Apr	09:00	-	Mon	22	Apr	17:00	
Tue	23	Apr	09:00	-	Tue	23	Apr	17:00	
Wed	24	Apr	09:00	-	Wed	24	Apr	17:00	
Thu	25	Apr	09:00	-	Thu	25	Apr	17:00	
Fri	26	Apr	09:00	-	Fri	26	Apr	17:00	
Sat	27	Apr	09:00	-	Sat	27	Apr	17:00	
Mon	29	Apr	09:00	-	Mon	29	Apr	17:00	
Tue	30	Apr	09:00	-	Tue	30	Apr	17:00	
Wed	01	May	09:00	-	Wed	01	May	17:00	
Thu	02	May	09:00	-	Thu	02	May	17:00	
Fri	03	May	09:00	-	Fri	03	May	17:00	
Sat	04	May	09:00	-	Sat	04	May	17:00	
Mon	06	May	09:00	-	Mon	06	May	17:00	
Tue	07	May	09:00	-	Tue	07	May	17:00	
Wed	08	May	09:00	-	Wed	08	May	17:00	
Thu	09	May	09:00	-	Thu	09	May	17:00	
Fri	10	May	09:00	-	Fri	10	May	17:00	
Sat	11	May	09:00	-	Sat	11	May	17:00	

ROAD OCCUPANCY LICENCE

LICENCE NO : 1154072

ROADS & MARITIME SERVICES (RMS)

Phone: 1300 656 371 Monday To Friday 8.30 AM - 4.30 PM

To activate and deactivate your approved work shift(s) on your Road Occupancy Licence, please visit: myrol.transport.nsw.gov.au. This licence is for the occupation of the road space only. If you are unable to access myrol.transport.nsw.gov.au, please call TMC on 1800 679 782. For further assistance, please refer to the proponent's user manual here: myrol.transport.nsw.gov.au/help.pdf

NON DEVELOPMENT - HAZARD REDUCTION

Project: Not Applicable
This Activity : Temporary road closure for blasting

LOCATION

Subject Road: Golden Highway
From: Pinegrove Road, JERRYS PLAINS
To: Lemington Road, Jerrys Plains
Council: SINGLETON

LICENSEE

Organisation: Wambo Coal Pty Ltd
Ref No:
Name: Dale Harmour
Phone: 0408969988

ONSITE CONTACT

Name: Peter Jaegar
Phone: 0417527585

TRAFFIC MANAGEMENT

Flow Management: Short Term / Intermittent Works; Stop / Slow
Control
Closure Type: All lanes both directions
Closure Lane(s): Shoulder; Median Shoulder
Direction(s): Eastbound and Westbound

LICENCE DURATION

From: 08-Apr-2019
To: 31-Mar-2020

LICENCE CONDITIONS

- 6 * A SHOULDER CLOSURE, THAT IS AT NO TIME A TRAFFICABLE LANE, MAY BE CLOSED DURING THE LICENSED PERIOD(S) ON THE CONDITION THAT THERE IS NEGLIGIBLE IMPACT ON ADJACENT TRAFFIC FLOW AND THAT THE LICENSEE ENSURES THAT WORKSITE TRAFFIC ARRANGEMENTS PROVIDE ADEQUATE FACILITIES FOR PEDESTRIANS AND BICYCLISTS INCLUDING A ROUTE AND/OR SIGNAGE THROUGH OR AROUND THE WORKSITE IN ACCORDANCE WITH THE RMS TRAFFIC CONTROL AT WORKSITES MANUAL.
- * SHORT INTERMITTENT TRAFFIC STOPPAGES OF UP TO 10 MINUTES MAY OCCUR ON THE CONDITION THAT NO STOPPAGE OCCURS WHILE ANY TRAFFIC IS DELAYED BY GENERAL CONGESTION OR ANY TRAFFIC IS STILL DELAYED BY A PREVIOUS STOPPAGE.
- * ALL CLOSURES MUST BE PRE-COMMUNICATED FIVE DAYS IN ADVANCE TO THE DITCHFIELD ROAD CONSTRUCTION PROJECTS OCCURRING AT WINERY HILL AND OGILVIES HILL ON 0447 696 628.
- * YOUR TRAFFIC CONTROL PLAN HAS NOT BEEN ENDORSED BY ROADS AND MARITIME SERVICES. YOUR TRAFFIC CONTROL PLAN MUST COMPLY WITH AUSTRALIAN STANDARD 1742 AND THE RMS TRAFFIC CONTROL AT WORKSITES MANUAL 2010.
- * TRAFFIC CONTROL ARRANGEMENTS MUST SPECIFICALLY ADDRESS END OF QUEUE MANAGEMENT TO ENSURE THAT MOTORISTS ARE ADEQUATELY WARNED BEFORE ARRIVAL AT THE END OF ANY QUEUE ARISING FROM THE TRAFFIC CONTROL.
- * EMERGENCY SERVICES MUST BE INFORMED IN ADVANCE OF EACH DAY THIS LICENSE IS ACTIVATED.
- * LONG TERM SIGNAGE AT THE DESIGNATED CLOSURE POINTS MUST BE INSTALLED WARNING OF DELAYS ASSOCIATED WITH BLASTING TRAFFIC STOPPAGES INCLUDING A CONTACT TELEPHONE NUMBER FOR PUBLIC INQUIRIES.
- * EQUIPMENT TO CLEAR POTENTIAL FLYROCK FROM ROADWAYS MUST ALWAYS BE PROXIMATE TO THE CLOSED PORTION OF ROAD.

APPROVED DATES & TIMES

From Shift					To Shift				
From	D	M	Time	-	To	D	M	Time	
Mon	13	May	09:00	-	Mon	13	May	17:00	
Tue	14	May	09:00	-	Tue	14	May	17:00	
Wed	15	May	09:00	-	Wed	15	May	17:00	
Thu	16	May	09:00	-	Thu	16	May	17:00	
Fri	17	May	09:00	-	Fri	17	May	17:00	
Sat	18	May	09:00	-	Sat	18	May	17:00	
Mon	20	May	09:00	-	Mon	20	May	17:00	
Tue	21	May	09:00	-	Tue	21	May	17:00	
Wed	22	May	09:00	-	Wed	22	May	17:00	
Thu	23	May	09:00	-	Thu	23	May	17:00	
Fri	24	May	09:00	-	Fri	24	May	17:00	
Sat	25	May	09:00	-	Sat	25	May	17:00	
Mon	27	May	09:00	-	Mon	27	May	17:00	
Tue	28	May	09:00	-	Tue	28	May	17:00	
Wed	29	May	09:00	-	Wed	29	May	17:00	
Thu	30	May	09:00	-	Thu	30	May	17:00	
Fri	31	May	09:00	-	Fri	31	May	17:00	
Sat	01	Jun	09:00	-	Sat	01	Jun	17:00	
Mon	03	Jun	09:00	-	Mon	03	Jun	17:00	
Tue	04	Jun	09:00	-	Tue	04	Jun	17:00	
Wed	05	Jun	09:00	-	Wed	05	Jun	17:00	
Thu	06	Jun	09:00	-	Thu	06	Jun	17:00	
Fri	07	Jun	09:00	-	Fri	07	Jun	17:00	
Sat	08	Jun	09:00	-	Sat	08	Jun	17:00	
Mon	10	Jun	09:00	-	Mon	10	Jun	17:00	
Tue	11	Jun	09:00	-	Tue	11	Jun	17:00	
Wed	12	Jun	09:00	-	Wed	12	Jun	17:00	
Thu	13	Jun	09:00	-	Thu	13	Jun	17:00	
Fri	14	Jun	09:00	-	Fri	14	Jun	17:00	
Sat	15	Jun	09:00	-	Sat	15	Jun	17:00	

ROAD OCCUPANCY LICENCE

LICENCE NO : 1154072

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NON DEVELOPMENT - HAZARD REDUCTION

Project: Not Applicable
This Activity : Temporary road closure for blasting

LOCATION

Subject Road: Golden Highway
From: Pinegrove Road, JERRYS PLAINS
To: Lemington Road, Jerrys Plains
Council: SINGLETON

LICENSEE

Organisation: Wambo Coal Pty Ltd
Ref No:
Name: Dale Harmour
Phone: 0408969988

ONSITE CONTACT

Name: Peter Jaegar
Phone: 0417527585

TRAFFIC MANAGEMENT

Flow Management: Short Term / Intermittent Works; Stop / Slow Control
Closure Type: All lanes both directions
Closure Lane(s): Shoulder; Median Shoulder
Direction(s): Eastbound and Westbound

LICENCE DURATION

From: 08-Apr-2019
To: 31-Mar-2020

APPROVED DATES & TIMES

From Shift					To Shift			
From	D	M	Time	-	To	D	M	Time
Mon	17	Jun	09:00	-	Mon	17	Jun	17:00
Tue	18	Jun	09:00	-	Tue	18	Jun	17:00
Wed	19	Jun	09:00	-	Wed	19	Jun	17:00
Thu	20	Jun	09:00	-	Thu	20	Jun	17:00
Fri	21	Jun	09:00	-	Fri	21	Jun	17:00
Sat	22	Jun	09:00	-	Sat	22	Jun	17:00
Mon	24	Jun	09:00	-	Mon	24	Jun	17:00
Tue	25	Jun	09:00	-	Tue	25	Jun	17:00
Wed	26	Jun	09:00	-	Wed	26	Jun	17:00
Thu	27	Jun	09:00	-	Thu	27	Jun	17:00
Fri	28	Jun	09:00	-	Fri	28	Jun	17:00
Sat	29	Jun	09:00	-	Sat	29	Jun	17:00
Mon	01	Jul	09:00	-	Mon	01	Jul	17:00
Tue	02	Jul	09:00	-	Tue	02	Jul	17:00
Wed	03	Jul	09:00	-	Wed	03	Jul	17:00
Thu	04	Jul	09:00	-	Thu	04	Jul	17:00
Fri	05	Jul	09:00	-	Fri	05	Jul	17:00
Sat	06	Jul	09:00	-	Sat	06	Jul	17:00
Mon	08	Jul	09:00	-	Mon	08	Jul	17:00
Tue	09	Jul	09:00	-	Tue	09	Jul	17:00
Wed	10	Jul	09:00	-	Wed	10	Jul	17:00
Thu	11	Jul	09:00	-	Thu	11	Jul	17:00
Fri	12	Jul	09:00	-	Fri	12	Jul	17:00
Sat	13	Jul	09:00	-	Sat	13	Jul	17:00
Mon	15	Jul	09:00	-	Mon	15	Jul	17:00
Tue	16	Jul	09:00	-	Tue	16	Jul	17:00
Wed	17	Jul	09:00	-	Wed	17	Jul	17:00
Thu	18	Jul	09:00	-	Thu	18	Jul	17:00
Fri	19	Jul	09:00	-	Fri	19	Jul	17:00
Sat	20	Jul	09:00	-	Sat	20	Jul	17:00

ROAD OCCUPANCY LICENCE

LICENCE NO : 1154072

ROADS & MARITIME SERVICES (RMS)

Phone: 1300 656 371 Monday To Friday 8.30 AM - 4.30 PM

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NON DEVELOPMENT - HAZARD REDUCTION

Project: Not Applicable
This Activity : Temporary road closure for blasting

LOCATION

Subject Road: Golden Highway
From: Pinegrove Road, JERRYS PLAINS
To: Lemington Road, Jerrys Plains
Council: SINGLETON

LICENSEE

Organisation: Wambo Coal Pty Ltd
Ref No:
Name: Dale Harmour
Phone: 0408969988

ONSITE CONTACT

Name: Peter Jaegar
Phone: 0417527585

TRAFFIC MANAGEMENT

Flow Management: Short Term / Intermittent Works; Stop / Slow Control
Closure Type: All lanes both directions
Closure Lane(s): Shoulder; Median Shoulder
Direction(s): Eastbound and Westbound

LICENCE DURATION

From: 08-Apr-2019
To: 31-Mar-2020

APPROVED DATES & TIMES

From Shift					To Shift			
From	D	M	Time	-	To	D	M	Time
Mon	22	Jul	09:00	-	Mon	22	Jul	17:00
Tue	23	Jul	09:00	-	Tue	23	Jul	17:00
Wed	24	Jul	09:00	-	Wed	24	Jul	17:00
Thu	25	Jul	09:00	-	Thu	25	Jul	17:00
Fri	26	Jul	09:00	-	Fri	26	Jul	17:00
Sat	27	Jul	09:00	-	Sat	27	Jul	17:00
Mon	29	Jul	09:00	-	Mon	29	Jul	17:00
Tue	30	Jul	09:00	-	Tue	30	Jul	17:00
Wed	31	Jul	09:00	-	Wed	31	Jul	17:00
Thu	01	Aug	09:00	-	Thu	01	Aug	17:00
Fri	02	Aug	09:00	-	Fri	02	Aug	17:00
Sat	03	Aug	09:00	-	Sat	03	Aug	17:00
Mon	05	Aug	09:00	-	Mon	05	Aug	17:00
Tue	06	Aug	09:00	-	Tue	06	Aug	17:00
Wed	07	Aug	09:00	-	Wed	07	Aug	17:00
Thu	08	Aug	09:00	-	Thu	08	Aug	17:00
Fri	09	Aug	09:00	-	Fri	09	Aug	17:00
Sat	10	Aug	09:00	-	Sat	10	Aug	17:00
Mon	12	Aug	09:00	-	Mon	12	Aug	17:00
Tue	13	Aug	09:00	-	Tue	13	Aug	17:00
Wed	14	Aug	09:00	-	Wed	14	Aug	17:00
Thu	15	Aug	09:00	-	Thu	15	Aug	17:00
Fri	16	Aug	09:00	-	Fri	16	Aug	17:00
Sat	17	Aug	09:00	-	Sat	17	Aug	17:00
Mon	19	Aug	09:00	-	Mon	19	Aug	17:00
Tue	20	Aug	09:00	-	Tue	20	Aug	17:00
Wed	21	Aug	09:00	-	Wed	21	Aug	17:00
Thu	22	Aug	09:00	-	Thu	22	Aug	17:00
Fri	23	Aug	09:00	-	Fri	23	Aug	17:00
Sat	24	Aug	09:00	-	Sat	24	Aug	17:00

ROAD OCCUPANCY LICENCE

LICENCE NO : 1154072

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NON DEVELOPMENT - HAZARD REDUCTION

Project: Not Applicable
This Activity : Temporary road closure for blasting

LOCATION

Subject Road: Golden Highway
From: Pinegrove Road, JERRYS PLAINS
To: Lemington Road, Jerrys Plains
Council: SINGLETON

LICENSEE

Organisation: Wambo Coal Pty Ltd
Ref No:
Name: Dale Harmour
Phone: 0408969988

ONSITE CONTACT

Name: Peter Jaegar
Phone: 0417527585

TRAFFIC MANAGEMENT

Flow Management: Short Term / Intermittent Works; Stop / Slow Control
Closure Type: All lanes both directions
Closure Lane(s): Shoulder; Median Shoulder
Direction(s): Eastbound and Westbound

LICENCE DURATION

From: 08-Apr-2019
To: 31-Mar-2020

APPROVED DATES & TIMES

From Shift					To Shift				
From	D	M	Time	-	To	D	M	Time	
Mon	26	Aug	09:00	-	Mon	26	Aug	17:00	
Tue	27	Aug	09:00	-	Tue	27	Aug	17:00	
Wed	28	Aug	09:00	-	Wed	28	Aug	17:00	
Thu	29	Aug	09:00	-	Thu	29	Aug	17:00	
Fri	30	Aug	09:00	-	Fri	30	Aug	17:00	
Sat	31	Aug	09:00	-	Sat	31	Aug	17:00	
Mon	02	Sep	09:00	-	Mon	02	Sep	17:00	
Tue	03	Sep	09:00	-	Tue	03	Sep	17:00	
Wed	04	Sep	09:00	-	Wed	04	Sep	17:00	
Thu	05	Sep	09:00	-	Thu	05	Sep	17:00	
Fri	06	Sep	09:00	-	Fri	06	Sep	17:00	
Sat	07	Sep	09:00	-	Sat	07	Sep	17:00	
Mon	09	Sep	09:00	-	Mon	09	Sep	17:00	
Tue	10	Sep	09:00	-	Tue	10	Sep	17:00	
Wed	11	Sep	09:00	-	Wed	11	Sep	17:00	
Thu	12	Sep	09:00	-	Thu	12	Sep	17:00	
Fri	13	Sep	09:00	-	Fri	13	Sep	17:00	
Sat	14	Sep	09:00	-	Sat	14	Sep	17:00	
Mon	16	Sep	09:00	-	Mon	16	Sep	17:00	
Tue	17	Sep	09:00	-	Tue	17	Sep	17:00	
Wed	18	Sep	09:00	-	Wed	18	Sep	17:00	
Thu	19	Sep	09:00	-	Thu	19	Sep	17:00	
Fri	20	Sep	09:00	-	Fri	20	Sep	17:00	
Sat	21	Sep	09:00	-	Sat	21	Sep	17:00	
Mon	23	Sep	09:00	-	Mon	23	Sep	17:00	
Tue	24	Sep	09:00	-	Tue	24	Sep	17:00	
Wed	25	Sep	09:00	-	Wed	25	Sep	17:00	
Thu	26	Sep	09:00	-	Thu	26	Sep	17:00	
Fri	27	Sep	09:00	-	Fri	27	Sep	17:00	
Sat	28	Sep	09:00	-	Sat	28	Sep	17:00	

ROAD OCCUPANCY LICENCE

LICENCE NO : 1154072

ROADS & MARITIME SERVICES (RMS)

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NON DEVELOPMENT - HAZARD REDUCTION

Project: Not Applicable
This Activity : Temporary road closure for blasting

LOCATION

Subject Road: Golden Highway
From: Pinegrove Road, JERRYS PLAINS
To: Lemington Road, Jerrys Plains
Council: SINGLETON

LICENSEE

Organisation: Wambo Coal Pty Ltd
Ref No:
Name: Dale Harmour
Phone: 0408969988

ONSITE CONTACT

Name: Peter Jaegar
Phone: 0417527585

TRAFFIC MANAGEMENT

Flow Management: Short Term / Intermittent Works; Stop / Slow Control
Closure Type: All lanes both directions
Closure Lane(s): Shoulder; Median Shoulder
Direction(s): Eastbound and Westbound

LICENCE DURATION

From: 08-Apr-2019
To: 31-Mar-2020

APPROVED DATES & TIMES

From Shift					To Shift				
From	D	M	Time	-	To	D	M	Time	
Mon	30	Sep	09:00	-	Mon	30	Sep	17:00	
Tue	01	Oct	09:00	-	Tue	01	Oct	17:00	
Wed	02	Oct	09:00	-	Wed	02	Oct	17:00	
Thu	03	Oct	09:00	-	Thu	03	Oct	17:00	
Fri	04	Oct	09:00	-	Fri	04	Oct	17:00	
Sat	05	Oct	09:00	-	Sat	05	Oct	17:00	
Mon	07	Oct	09:00	-	Mon	07	Oct	17:00	
Tue	08	Oct	09:00	-	Tue	08	Oct	17:00	
Wed	09	Oct	09:00	-	Wed	09	Oct	17:00	
Thu	10	Oct	09:00	-	Thu	10	Oct	17:00	
Fri	11	Oct	09:00	-	Fri	11	Oct	17:00	
Sat	12	Oct	09:00	-	Sat	12	Oct	17:00	
Mon	14	Oct	09:00	-	Mon	14	Oct	17:00	
Tue	15	Oct	09:00	-	Tue	15	Oct	17:00	
Wed	16	Oct	09:00	-	Wed	16	Oct	17:00	
Thu	17	Oct	09:00	-	Thu	17	Oct	17:00	
Fri	18	Oct	09:00	-	Fri	18	Oct	17:00	
Sat	19	Oct	09:00	-	Sat	19	Oct	17:00	
Mon	21	Oct	09:00	-	Mon	21	Oct	17:00	
Tue	22	Oct	09:00	-	Tue	22	Oct	17:00	
Wed	23	Oct	09:00	-	Wed	23	Oct	17:00	
Thu	24	Oct	09:00	-	Thu	24	Oct	17:00	
Fri	25	Oct	09:00	-	Fri	25	Oct	17:00	
Sat	26	Oct	09:00	-	Sat	26	Oct	17:00	
Mon	28	Oct	09:00	-	Mon	28	Oct	17:00	
Tue	29	Oct	09:00	-	Tue	29	Oct	17:00	
Wed	30	Oct	09:00	-	Wed	30	Oct	17:00	
Thu	31	Oct	09:00	-	Thu	31	Oct	17:00	
Fri	01	Nov	09:00	-	Fri	01	Nov	17:00	
Sat	02	Nov	09:00	-	Sat	02	Nov	17:00	

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NON DEVELOPMENT - HAZARD REDUCTION

Project: Not Applicable
This Activity : Temporary road closure for blasting

LOCATION

Subject Road: Golden Highway
From: Pinegrove Road, JERRYS PLAINS
To: Lemington Road, Jerrys Plains
Council: SINGLETON

LICENSEE

Organisation: Wambo Coal Pty Ltd
Ref No:
Name: Dale Harmour
Phone: 0408969988

ONSITE CONTACT

Name: Peter Jaegar
Phone: 0417527585

TRAFFIC MANAGEMENT

Flow Management: Short Term / Intermittent Works; Stop / Slow Control
Closure Type: All lanes both directions
Closure Lane(s): Shoulder; Median Shoulder
Direction(s): Eastbound and Westbound

LICENCE DURATION

From: 08-Apr-2019
To: 31-Mar-2020

APPROVED DATES & TIMES

From Shift					To Shift				
From	D	M	Time	-	To	D	M	Time	
Mon	04	Nov	09:00	-	Mon	04	Nov	17:00	
Tue	05	Nov	09:00	-	Tue	05	Nov	17:00	
Wed	06	Nov	09:00	-	Wed	06	Nov	17:00	
Thu	07	Nov	09:00	-	Thu	07	Nov	17:00	
Fri	08	Nov	09:00	-	Fri	08	Nov	17:00	
Sat	09	Nov	09:00	-	Sat	09	Nov	17:00	
Mon	11	Nov	09:00	-	Mon	11	Nov	17:00	
Tue	12	Nov	09:00	-	Tue	12	Nov	17:00	
Wed	13	Nov	09:00	-	Wed	13	Nov	17:00	
Thu	14	Nov	09:00	-	Thu	14	Nov	17:00	
Fri	15	Nov	09:00	-	Fri	15	Nov	17:00	
Sat	16	Nov	09:00	-	Sat	16	Nov	17:00	
Mon	18	Nov	09:00	-	Mon	18	Nov	17:00	
Tue	19	Nov	09:00	-	Tue	19	Nov	17:00	
Wed	20	Nov	09:00	-	Wed	20	Nov	17:00	
Thu	21	Nov	09:00	-	Thu	21	Nov	17:00	
Fri	22	Nov	09:00	-	Fri	22	Nov	17:00	
Sat	23	Nov	09:00	-	Sat	23	Nov	17:00	
Mon	25	Nov	09:00	-	Mon	25	Nov	17:00	
Tue	26	Nov	09:00	-	Tue	26	Nov	17:00	
Wed	27	Nov	09:00	-	Wed	27	Nov	17:00	
Thu	28	Nov	09:00	-	Thu	28	Nov	17:00	
Fri	29	Nov	09:00	-	Fri	29	Nov	17:00	
Sat	30	Nov	09:00	-	Sat	30	Nov	17:00	
Mon	02	Dec	09:00	-	Mon	02	Dec	17:00	
Tue	03	Dec	09:00	-	Tue	03	Dec	17:00	
Wed	04	Dec	09:00	-	Wed	04	Dec	17:00	
Thu	05	Dec	09:00	-	Thu	05	Dec	17:00	
Fri	06	Dec	09:00	-	Fri	06	Dec	17:00	
Sat	07	Dec	09:00	-	Sat	07	Dec	17:00	

ROAD OCCUPANCY LICENCE

LICENCE NO : 1154072

ROADS & MARITIME SERVICES (RMS)

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NON DEVELOPMENT - HAZARD REDUCTION

Project: Not Applicable
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LOCATION

Subject Road: Golden Highway
From: Pinegrove Road, JERRYS PLAINS
To: Lemington Road, Jerrys Plains
Council: SINGLETON

LICENSEE

Organisation: Wambo Coal Pty Ltd
Ref No:
Name: Dale Harmour
Phone: 0408969988

ONSITE CONTACT

Name: Peter Jaegar
Phone: 0417527585

TRAFFIC MANAGEMENT

Flow Management: Short Term / Intermittent Works; Stop / Slow Control
Closure Type: All lanes both directions
Closure Lane(s): Shoulder; Median Shoulder
Direction(s): Eastbound and Westbound

LICENCE DURATION

From: 08-Apr-2019
To: 31-Mar-2020

APPROVED DATES & TIMES

From Shift					To Shift				
From	D	M	Time	-	To	D	M	Time	
Mon	09	Dec	09:00	-	Mon	09	Dec	17:00	
Tue	10	Dec	09:00	-	Tue	10	Dec	17:00	
Wed	11	Dec	09:00	-	Wed	11	Dec	17:00	
Thu	12	Dec	09:00	-	Thu	12	Dec	17:00	
Fri	13	Dec	09:00	-	Fri	13	Dec	17:00	
Sat	14	Dec	09:00	-	Sat	14	Dec	17:00	
Mon	16	Dec	09:00	-	Mon	16	Dec	17:00	
Tue	17	Dec	09:00	-	Tue	17	Dec	17:00	
Wed	18	Dec	09:00	-	Wed	18	Dec	17:00	
Thu	19	Dec	09:00	-	Thu	19	Dec	17:00	
Fri	20	Dec	09:00	-	Fri	20	Dec	17:00	
Sat	21	Dec	09:00	-	Sat	21	Dec	17:00	
Mon	23	Dec	09:00	-	Mon	23	Dec	17:00	
Tue	24	Dec	09:00	-	Tue	24	Dec	17:00	
Wed	25	Dec	09:00	-	Wed	25	Dec	17:00	
Thu	26	Dec	09:00	-	Thu	26	Dec	17:00	
Fri	27	Dec	09:00	-	Fri	27	Dec	17:00	
Sat	28	Dec	09:00	-	Sat	28	Dec	17:00	
Mon	30	Dec	09:00	-	Mon	30	Dec	17:00	
Tue	31	Dec	09:00	-	Tue	31	Dec	17:00	
Wed	01	Jan	09:00	-	Wed	01	Jan	17:00	
Thu	02	Jan	09:00	-	Thu	02	Jan	17:00	
Fri	03	Jan	09:00	-	Fri	03	Jan	17:00	
Sat	04	Jan	09:00	-	Sat	04	Jan	17:00	
Mon	06	Jan	09:00	-	Mon	06	Jan	17:00	
Tue	07	Jan	09:00	-	Tue	07	Jan	17:00	
Wed	08	Jan	09:00	-	Wed	08	Jan	17:00	
Thu	09	Jan	09:00	-	Thu	09	Jan	17:00	
Fri	10	Jan	09:00	-	Fri	10	Jan	17:00	
Sat	11	Jan	09:00	-	Sat	11	Jan	17:00	

ROAD OCCUPANCY LICENCE

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ROADS & MARITIME SERVICES (RMS)

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NON DEVELOPMENT - HAZARD REDUCTION

Project: Not Applicable
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LOCATION

Subject Road: Golden Highway
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Name: Peter Jaegar
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TRAFFIC MANAGEMENT

Flow Management: Short Term / Intermittent Works; Stop / Slow Control
Closure Type: All lanes both directions
Closure Lane(s): Shoulder; Median Shoulder
Direction(s): Eastbound and Westbound

LICENCE DURATION

From: 08-Apr-2019
To: 31-Mar-2020

APPROVED DATES & TIMES

From Shift					To Shift			
From	D	M	Time	-	To	D	M	Time
Mon	13	Jan	09:00	-	Mon	13	Jan	17:00
Tue	14	Jan	09:00	-	Tue	14	Jan	17:00
Wed	15	Jan	09:00	-	Wed	15	Jan	17:00
Thu	16	Jan	09:00	-	Thu	16	Jan	17:00
Fri	17	Jan	09:00	-	Fri	17	Jan	17:00
Sat	18	Jan	09:00	-	Sat	18	Jan	17:00
Mon	20	Jan	09:00	-	Mon	20	Jan	17:00
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Wed	22	Jan	09:00	-	Wed	22	Jan	17:00
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Fri	24	Jan	09:00	-	Fri	24	Jan	17:00
Sat	25	Jan	09:00	-	Sat	25	Jan	17:00
Mon	27	Jan	09:00	-	Mon	27	Jan	17:00
Tue	28	Jan	09:00	-	Tue	28	Jan	17:00
Wed	29	Jan	09:00	-	Wed	29	Jan	17:00
Thu	30	Jan	09:00	-	Thu	30	Jan	17:00
Fri	31	Jan	09:00	-	Fri	31	Jan	17:00
Sat	01	Feb	09:00	-	Sat	01	Feb	17:00
Mon	03	Feb	09:00	-	Mon	03	Feb	17:00
Tue	04	Feb	09:00	-	Tue	04	Feb	17:00
Wed	05	Feb	09:00	-	Wed	05	Feb	17:00
Thu	06	Feb	09:00	-	Thu	06	Feb	17:00
Fri	07	Feb	09:00	-	Fri	07	Feb	17:00
Sat	08	Feb	09:00	-	Sat	08	Feb	17:00
Mon	10	Feb	09:00	-	Mon	10	Feb	17:00
Tue	11	Feb	09:00	-	Tue	11	Feb	17:00
Wed	12	Feb	09:00	-	Wed	12	Feb	17:00
Thu	13	Feb	09:00	-	Thu	13	Feb	17:00
Fri	14	Feb	09:00	-	Fri	14	Feb	17:00
Sat	15	Feb	09:00	-	Sat	15	Feb	17:00

ROAD OCCUPANCY LICENCE

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ROADS & MARITIME SERVICES (RMS)

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NON DEVELOPMENT - HAZARD REDUCTION

Project: Not Applicable
This Activity : Temporary road closure for blasting

LOCATION

Subject Road: Golden Highway
From: Pinegrove Road, JERRYS PLAINS
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Name: Peter Jaegar
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TRAFFIC MANAGEMENT

Flow Management: Short Term / Intermittent Works; Stop / Slow Control
Closure Type: All lanes both directions
Closure Lane(s): Shoulder; Median Shoulder
Direction(s): Eastbound and Westbound

LICENCE DURATION

From: 08-Apr-2019
To: 31-Mar-2020

APPROVED DATES & TIMES

From Shift					To Shift				
From	D	M	Time	-	To	D	M	Time	
Mon	17	Feb	09:00	-	Mon	17	Feb	17:00	
Tue	18	Feb	09:00	-	Tue	18	Feb	17:00	
Wed	19	Feb	09:00	-	Wed	19	Feb	17:00	
Thu	20	Feb	09:00	-	Thu	20	Feb	17:00	
Fri	21	Feb	09:00	-	Fri	21	Feb	17:00	
Sat	22	Feb	09:00	-	Sat	22	Feb	17:00	
Mon	24	Feb	09:00	-	Mon	24	Feb	17:00	
Tue	25	Feb	09:00	-	Tue	25	Feb	17:00	
Wed	26	Feb	09:00	-	Wed	26	Feb	17:00	
Thu	27	Feb	09:00	-	Thu	27	Feb	17:00	
Fri	28	Feb	09:00	-	Fri	28	Feb	17:00	
Sat	29	Feb	09:00	-	Sat	29	Feb	17:00	
Mon	02	Mar	09:00	-	Mon	02	Mar	17:00	
Tue	03	Mar	09:00	-	Tue	03	Mar	17:00	
Wed	04	Mar	09:00	-	Wed	04	Mar	17:00	
Thu	05	Mar	09:00	-	Thu	05	Mar	17:00	
Fri	06	Mar	09:00	-	Fri	06	Mar	17:00	
Sat	07	Mar	09:00	-	Sat	07	Mar	17:00	
Mon	09	Mar	09:00	-	Mon	09	Mar	17:00	
Tue	10	Mar	09:00	-	Tue	10	Mar	17:00	
Wed	11	Mar	09:00	-	Wed	11	Mar	17:00	
Thu	12	Mar	09:00	-	Thu	12	Mar	17:00	
Fri	13	Mar	09:00	-	Fri	13	Mar	17:00	
Sat	14	Mar	09:00	-	Sat	14	Mar	17:00	
Mon	16	Mar	09:00	-	Mon	16	Mar	17:00	
Tue	17	Mar	09:00	-	Tue	17	Mar	17:00	
Wed	18	Mar	09:00	-	Wed	18	Mar	17:00	
Thu	19	Mar	09:00	-	Thu	19	Mar	17:00	
Fri	20	Mar	09:00	-	Fri	20	Mar	17:00	
Sat	21	Mar	09:00	-	Sat	21	Mar	17:00	

ROAD OCCUPANCY LICENCE

LICENCE NO : 1154072

ROADS & MARITIME SERVICES (RMS)

Phone: 1300 656 371 Monday To Friday 8.30 AM - 4.30 PM

To activate and deactivate your approved work shift(s) on your Road Occupancy Licence, please visit: myrol.transport.nsw.gov.au. This licence is for the occupation of the road space only. If you are unable to access myrol.transport.nsw.gov.au, please call TMC on 1800 679 782. For further assistance, please refer to the proponent's user manual here: myrol.transport.nsw.gov.au/help.pdf

NON DEVELOPMENT - HAZARD REDUCTION

Project: Not Applicable
This Activity : Temporary road closure for blasting

LOCATION

Subject Road: Golden Highway
From: Pinegrove Road, JERRYS PLAINS
To: Lemington Road, Jerrys Plains
Council: SINGLETON

LICENSEE

Organisation: Wambo Coal Pty Ltd
Ref No:
Name: Dale Harmour
Phone: 0408969988

ONSITE CONTACT

Name: Peter Jaegar
Phone: 0417527585

TRAFFIC MANAGEMENT

Flow Management: Short Term / Intermittent Works; Stop / Slow Control
Closure Type: All lanes both directions
Closure Lane(s): Shoulder; Median Shoulder
Direction(s): Eastbound and Westbound

LICENCE DURATION

From: 08-Apr-2019
To: 31-Mar-2020

APPROVED DATES & TIMES

From Shift					To Shift			
From	D	M	Time	-	To	D	M	Time
Mon	23	Mar	09:00	-	Mon	23	Mar	17:00
Tue	24	Mar	09:00	-	Tue	24	Mar	17:00
Wed	25	Mar	09:00	-	Wed	25	Mar	17:00
Thu	26	Mar	09:00	-	Thu	26	Mar	17:00
Fri	27	Mar	09:00	-	Fri	27	Mar	17:00
Sat	28	Mar	09:00	-	Sat	28	Mar	17:00
Mon	30	Mar	09:00	-	Mon	30	Mar	17:00
Tue	31	Mar	09:00	-	Tue	31	Mar	17:00

APPENDIX C

Traffic Control Plan

Indicative Permanent Road Sign for Temporary Road Closure



Size: 1200mm x 1200mm

APPENDIX D
Road Closure Procedure Flowchart

WCPL ROAD CLOSURE PROCEDURE FOR BLASTING WITHIN 500M OF THE GOLDEN HIGHWAY

Prior to Road Closure

Notification

Blast Notification Board on Golden Highway

5 days prior to blast

Singleton Argus - Public Notice

Prior to blast

Neighbouring mines, community and emergency services

5 days prior to blast

Singleton Shire Council

By twelve midday at least one day prior to blast

Transport Management Centre

Prior to installing traffic control

30 Minutes Prior to Road Closure

Traffic controller in positive radio contact with Drill and Blast Engineer

Traffic Control Stations (Appendix C)

Positioning of Signage (Appendix C)

At Time of Road Closure

Drill and Blast Engineer advises by radio that blast is ready to be fired

Road is closed and entire route checked to be free of vehicles

Traffic controller communicates with Drill and Blast Engineer

Blast fired in accordance with site procedures

Drill and Blast Engineer announces 'All Clear'

Traffic controller/sentry inspects road to ensure no blast impacts

Emergency Services/ Other Emergency Access

Escorted through the road closure station as soon as the route can be made safe. This may include contacting the blast controller to temporarily delay the firing of the blast.

At Completion of Road Closure

Signage removed, road reopened

Notify Transport Management Centre that traffic control has been removed

APPENDIX E

NOTIFICATION PROCEDURE FOR BLASTING WITHIN 500M OF PRIVATE PROPERTY



**WAMBO COAL
BLASTING WITHIN 500M OF PRIVATE PROPERTY
NOTIFICATION PROCEDURE**

Document No. WA-ENV-PRO-507.4

November 2019

Document Control

Document No.	WA-ENV-PRO-507.4
Title	Blasting Within 500m of Private Property Notification Procedure
General Description	Procedure to ensure the impacts and safety risks created when blasting is within 500m of property not owned by WCPL are appropriately managed.
Document Owner	Environment & Community Manager

Revisions

Rev No	Date	Description	By	Checked	Signature
1	November 2017	Original Draft	Harry Egan		
2	December 2017	Incorporating private landholder feedback and agreements	Harry Egan		
3	September 2019	Updating Figure 1 reflect 2019 blast exclusion zones	Kimberley Hines		
4	Nov 2019	Review and update to ensure consistent with revised Blast Management Plan (BMP) (Version 10) -	WCPL	Jeff Hanlon WCPL	

1.0 Purpose

Wambo Coal Pty. Ltd. (WCPL) is required by Condition B32 of Development Consent DA 305-7-2003 to not undertake blasting within 500 metres of private property unless a written agreement is in place with the landholder.

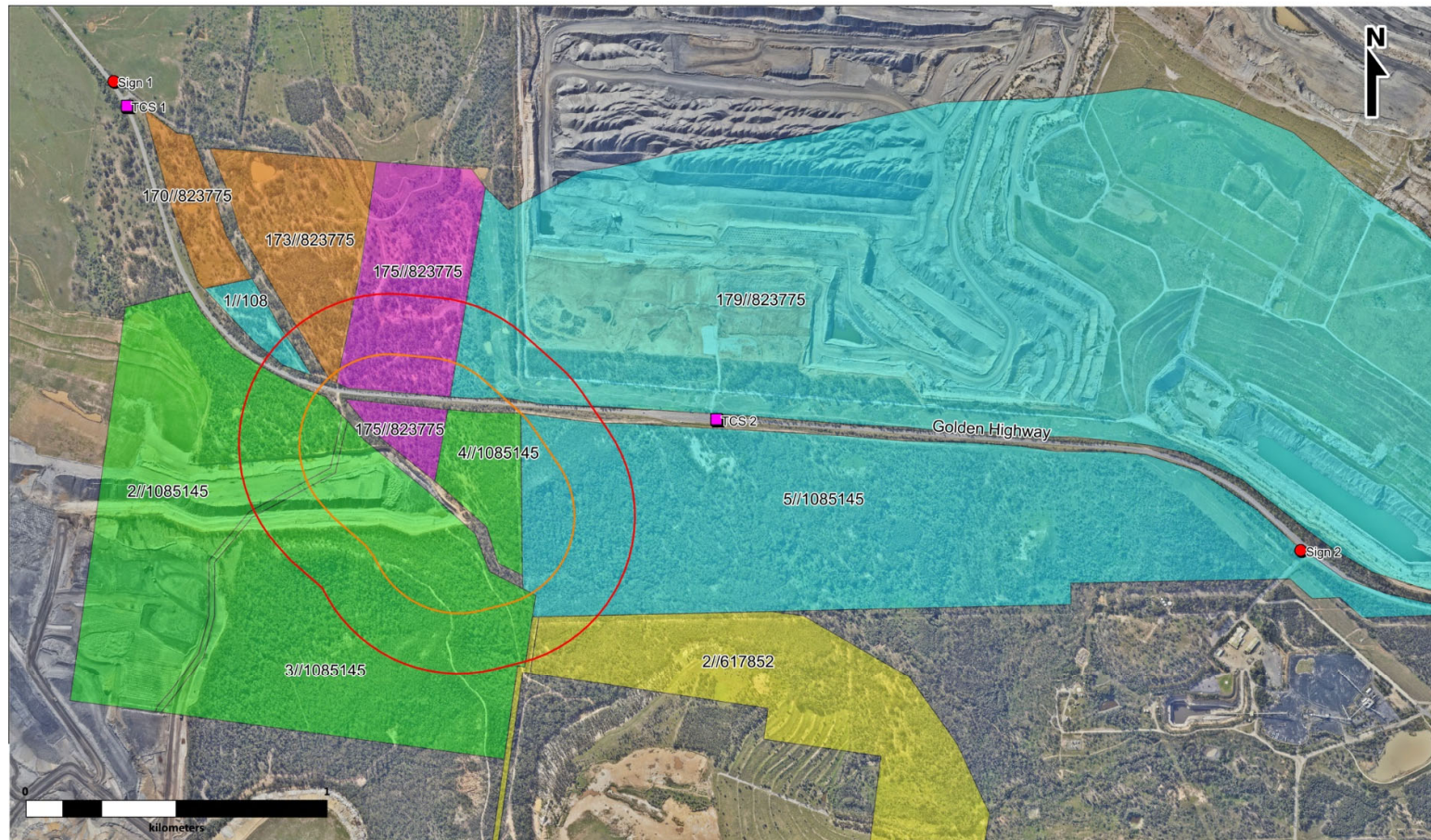
The purpose of this Blasting Within 500m of Private Property Notification Procedure (the Procedure) is to address requirements for blasting within 500 metres of private land. This Procedure has been approved by affected landholders and forms a component of the WCPL Blast Management Plan (BMP). Agreements and correspondence relating to this Procedure are included in **Attachments A** and **B**.

2.0 Scope

The Procedure relates to private land within the 500m exclusion zone for all blasting undertaken at WCPL. Landholders potentially within the exclusion zone consist of:

- Crown Land (NSW Department of Primary Industries – Lands) (DPI - Lands);
- Hunter Local Land Services (LLS);
- Hunter Valley Operations (HVO); and
- Glencore Pty Ltd (United Coal Mine).

Landholder parcels within potential blast exclusion zones for mining during 2019 are shown in **Figure 1**. Note that the Traffic Control Points (TCS) identified in **Figure 1** are indicative only; traffic control points are subject to wind conditions at the time of blasting.



Legend

- Notification Sign
- Traffic Control Point
- 300 metre Exclusion Zone
- 500 metre Exclusion Zone

Land Ownership

- Hunter Valley Operations
- Glencore
- Crown Land
- LLS - Hunter
- Wambo

Wambo Coal Pty Ltd.

Blasting Exclusion Zones

Date: 28/11/2019
 Drawn by: BF
 Approved by: PJ

Figure 1: Indicative Blasting Exclusion Zones to December 2020

3.0 Procedure

The WCPL Drill and Blast Engineer will determine if the Procedure is required to be implemented during blast planning undertaken in compliance with the BMP.

Where private property is identified as falling within the 500m blast exclusion zone the following notification procedure will be implemented.

3.1 Local Land Services and DPI - Lands Notification

- Email LLS and DPI Lands contacts five days prior to the blast with the following text and information;

All,

Scheduled blast notification for Wambo Open Cut. Shot <BLAST ID> is scheduled to be fired in <PIT NAME> on <DATE AND TIME>.

If environmental or production reasons require the blast timing to be modified an update will be forwarded via this distribution list.

<FIGURE SHOWING AERIAL WITH BLAST FOOTPRINT, 300m/500m EXCLUSION ZONES AND DP/LOT NUMBERS>

- Phone the Long-Term Grazing Permit (LGP) holder of Hobdens Reserve and notify them of the blast. If the LGP holder is unable to be reached by phone a recorded message will be left. WCPL will not seek a positive response following notification of blasting.

3.2 HVO Only

- Email HVO contacts with text and information as per **Section 3.1**;
- Email confirmation within 12 hours of the blast occurring (where possible); and
- Phone confirmation that blast is proceeding within 12 hours of the blast occurring.

3.3 Glencore United

- Email Glencore United contacts with text and information as per **Section 3.1**; and
- Email confirmation within 12 hours of the blast occurring (where possible).

Key contacts (provided by the private landholders) to receive blast notifications are provided in **Table 1**. It is the responsibility of the landholder to notify WCPL of any changes to personnel required to be notified including changes to the LGP Holder.

If the blast is cancelled or time changed then all landholders will be notified at the earliest possible opportunity.

Table 1: Blast Notification Contact List

Landholder	Lot and DP	Contact	Position	Phone	Email
Yancoal/HVO	179//823775 4//1085145 5//1085145 1//1085145	Ernie Martin	Senior Drill & Blast Engineer	0428 600 286	ernest.martin@hvo.com.au
Local Land Services	175//823775	Warrick Nairne and Matt Kennedy	Senior Field Assistant and Biosecurity Officer	0428721864 (WN) 0428686178 (MK)	warwick.nairne@lls.nsw.gov.au and matt.kennedy@lls.nsw.gov.au
LGP Holder	175//823775	Jade Bowen & Shaye Lancaster	LGP Holder	0438450023 0428331879	-
DPI - Lands	170//823775 172//823775 173//823775	David Baber	Projects Manager, Regional Projects West	02 6883 3326	david.baber@crowland.nsw.gov.au
Glencore United	2//617852	Gary Wills	Operations Manager	0429900814	UnitedBlastNotifications@glencore.com.au gary.wills@glencore.com.au

3.4 Site Access and Exclusion Zone Clearance

The following clearance procedure will be completed for affected land as identified in **Figure 1** and **Table 1**.

3.4.1 Local Land Services and DPI - Lands

A WCPL sentry will undertake a clearance inspection of property owned by DPI - Lands and LLS to confirm no landholder representatives are present prior to the blast.

On confirmation that no personnel are within the cleared areas the WCPL sentry will remain at the property access to prevent entry until the Golden Highway is closed in compliance with WCPL's Road Closure Management Procedure (WA-ENV-PRO-507.3).

All access will be undertaken in accordance with the LLS P19/003 Reserve Use Application Permit and DPI – Lands Letter of Authority (Blasting Access Agreement) (**Attachment A**).

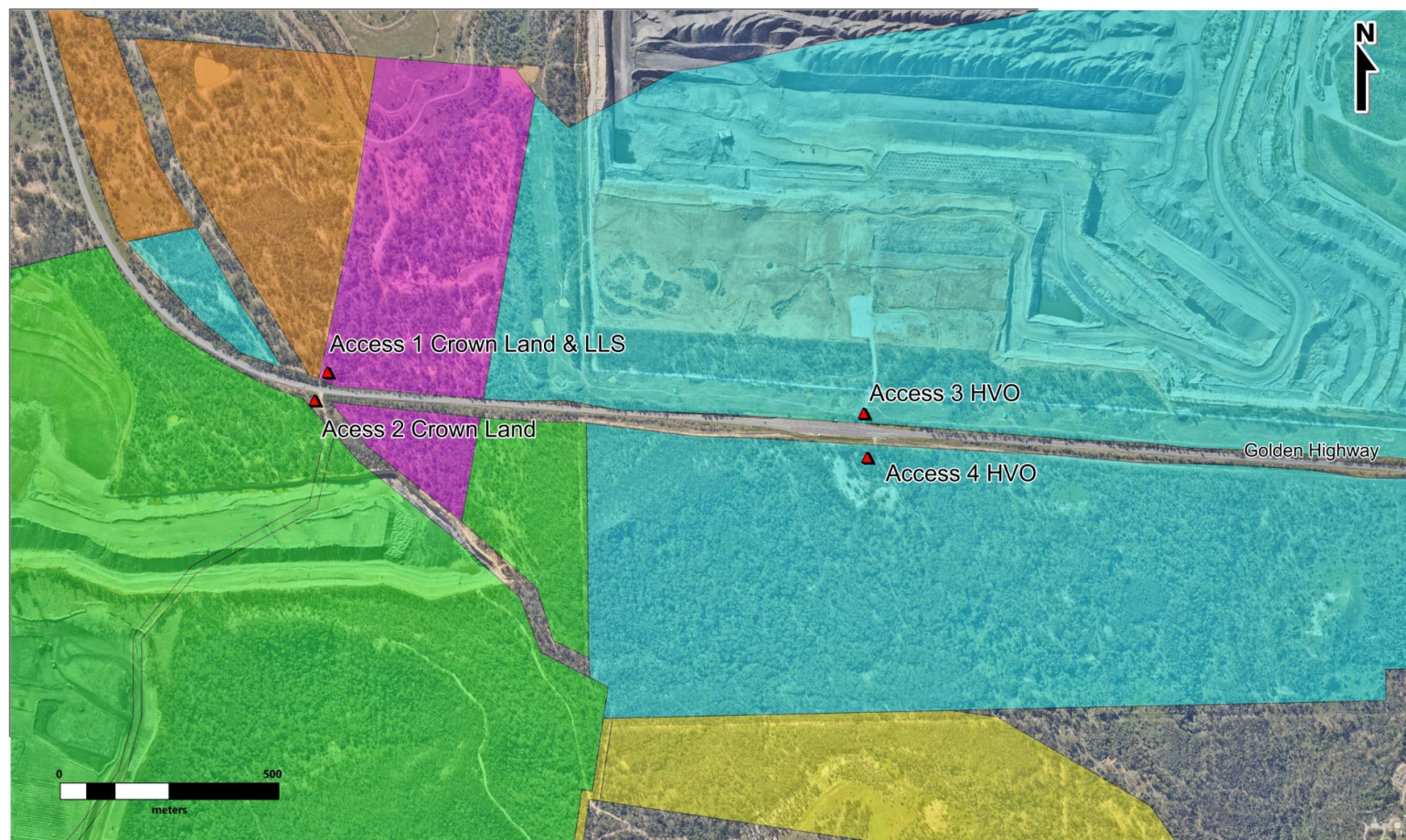
3.4.2 HVO

The following procedure will be implemented to undertake clearance inspections of HVO property within the 500m exclusion zone of WCPL blasting:

- On the morning of the blast the WCPL Blast Coordinator will call the identified HVO contact and confirm blast time and sentry coordination;

- At least 30 minutes prior to the blast a WCPL sentry, in possession of a WCPL two way radio, will meet with a designated HVO representative at the Golden Highway heavy vehicle stop;
- The WCPL sentry and HVO representative will conduct a sentry sweep of the affected area. The HVO representative will provide confirmation to the WCPL sentry that the area is clear; and
- The WCPL sentry will communicate to the WCPL Blast Coordinator that the area is clear and will remain in position with the HVO representative until they are released from their duties by the WCPL Blast Coordinator.

Access to the affected properties is shown in **Figure 2**.



Legend

- ▲ Access Location
- Land Ownership
 - Hunter Valley Operations
 - Local Land Services
 - Glencore
 - Wambo Coal
 - Crown Land

Wambo Coal Pty Ltd.

Land Access Points

Date: 28/11/2019
 Drawn by: BF
 Approved by: PJ

Figure 2: Land Access Points

4.0 Consultation and Approval

Consultation was undertaken with affected landholders DPI – Crown Lands, Local Land Services – Hunter, Yancoal (HVO) and Glencore United as required by DA 305-7-2003. Copies of the agreed access agreements and permits are included in **Attachment A** and relevant correspondence is included in **Attachment B**.

WCPL advised the NSW Department of Planning, Industry and Environment (DPIE) of the terms of the agreements on 13 December 2017.

5.0 Responsibilities

No	Task	Responsibility	Timing
1	Ensure notification procedure is followed for; - HVO - DPI Lands - Local Land Services - Hunter - LGP Holder - Glencore United - Other (if required)	Drill and Blast Superintendent	5 days prior to blasting event and 12 hours prior to blasting event
2	Coordinate clearance of private land	Drill and Blast Superintendent	For each blast event
3	Identification of requirement to monitor vibration and overpressure at public and private infrastructure	Drill and Blast Superintendent	For each blast event
4	Consultation with private landholders and regulators	E&C Manager	Annually

Attachment A - Access Agreements



Planning,
Industry &
Environment

Our Ref: 16/04049
Your Ref:

5 December 2019

Nicole Dobbins
Senior Environment Advisor
Wambo Coal Pty Ltd
Peabody Australia
PMB 1
Singleton NSW 2330

Dear Nicole

Blasting Access Permit

This Permit issued under Section 5.3 of the *Crown Land Management Act 2016* provides authority for subsidiaries, employees, contractors and consultants engaged by **Wambo Coal Pty Ltd** (hereafter "the Proponent") to enter the Crown land described below for activities as detailed in this cover letter and attachment:

- Crown Land identified as Lots 170, 172 & 173 DP823775.

The permitted activities include the following:

1. Access (specifically for the purposes of ensuring public safety and prevention of injury to the public during blasting activity in accordance with *Schedule 2, Condition B32 Development Consent 305-7-2003 Environmental Planning & Assessment Act 1979*. Access to the Crown land located within 500m of the blast site will be required by the Proponent to notify any members of the public, which may be located on the Crown land, of the pending blast.

The Permit is provided subject to the Proponent agreeing to the Schedule of Conditions described in Annexure A.

The Permit is not valid until Annexure A is signed and dated by the Proponent. Please return a signed copy of Annexure A by email to david.baber@crownland.nsw.gov.au.

The Permit will be valid for the period from 31 December 2019 to 31 December 2020.

If you have any further questions I can be contacted on 6883 3326.

Regards,

A handwritten signature in black ink, appearing to read "David Baber".

David Baber
Projects Manager, Regional Projects West
Department of Industry – Lands
(Mobile 0427 629 288)

ANNEXURE A**SCHEDULE OF CONDITIONS**

**PERMIT FOR TEMPORARY OCCUPATION OF CROWN LAND FOR THE PURPOSE OF
Access to Crown Land Lots 170, 172 & 173 DP823775 (hereafter "the Land") at
Warkworth**

Issued under Section 5.3 of the *Crown Land Management Act 2016*

specifically for the purposes of ensuring public safety and prevention of injury to the public during blasting activity in accordance with *Schedule 2, Condition B32 Development Consent 305-7-2003 Environmental Planning & Assessment Act 1979*. Access to the Land located within 500m of the blast site will be required by the Proponent to notify any members of the public, which may be located on the Land, of the pending blast.

FOR THE PERIOD FROM 31 December 2019 to 31 December 2020

1. For the purposes of this clause the term Minister shall include Her Majesty the Queen, Her Heirs and Successors the State of New South Wales, the Minister and the agents, servants, employees and contractors of Her Majesty, Her Heirs and Successors, the State of New South Wales and the Minister.
 - a) The Proponent agrees that they will indemnify and keep indemnified the Minister from and against all actions suits claims and demands of whatsoever nature and all costs charges and expenses in respect of any accident or injury to any person or property which may arise out of the use of the subject Land for the purpose of Access as may be authorised under this Permit notwithstanding that the conditions of this Permit shall in all respects have been observed by the Proponent or that any such accident or injury shall arise from any act or thing which may be authorised or compelled to do hereunder.
 - b) The Proponent expressly agrees that the obligations under this clause shall continue after the expiration or other determination of this Permit in respect of any act, deed, matter or thing happening before such expiration or determination.
2. The Proponent shall obtain all necessary consents which are required by law to be issued by or obtained from any authority in connection with the access to the Land and shall comply with all conditions that are the subject of such Consents.
3. The Proponent holds appropriate insurances sufficient to ensure the Minister is suitably indemnified against any action, suit or claim that may result as a consequence of access to the Land by the Proponent and/or its contractors. All costs to be the responsibility of the Proponent and/or its contractors.
4. The Proponent is responsible for safety induction of all persons onto the Land. The Proponent or contractor is responsible at all times for ensuring safe systems of work and that the work site poses no occupational, health or safety risks to workers or the public. All persons engaged in any work relative to this Permit must be qualified, trained or appropriately experienced in the work involved and the safe operation of associated tools or machinery. Relevant advice should be obtained from NSW WorkCover Authority.

To activate this Authority please sign below and return this document (Annexure A) by email to david.baber@crowmland.nsw.gov.au.



Signature of Proponent:

Peter Jaeger

Name of Proponent (Authorised Officer):

Date: 5/12/19

Dobbins, Nicole

From: Martin, Ernie <Ernie.Martin@coalandallied.com.au>
Sent: Monday, 27 November 2017 2:46 PM
To: Egan, Harry D.; David Baber; jamie.Maddocks@lls.nsw.gov.au
Cc: brett.miners@lls.nsw.gov.au; Peart, Steven D; O'Brien, Brendan
Subject: RE: Wambo Coal Private Property Blasting Notification Procedure

Harry,

This Draft agreement reflects the discussion that we had at Hunter Valley Operations on the 31st October 2017.

Regards

Ernie Martin | Senior Drill & Blast Engineer

Yancoal Australia Ltd

SITE: Hunter Valley Operations, 1011 Lemington Road, Ravensworth, NSW, 2330, Australia
POSTAL: 1011 Lemington Road, Ravensworth, NSW, 2330, Australia
PHONE: +61 2 700 286
MOBILE: +61 428 600 286
EMAIL: ernest.martin@coalandallied.com.au
WEBSITE: www.yancoal.com.au



From: Egan, Harry D. [<mailto:HEgan@peabodyenergy.com>]
Sent: Monday, 13 November 2017 11:59 AM
To: David Baber; jamie.Maddocks@lls.nsw.gov.au; Martin, Ernie
Cc: brett.miners@lls.nsw.gov.au; Peart, Steven D
Subject: Wambo Coal Private Property Blasting Notification Procedure
Importance: High

Gents,

Wambo Coal Pty. Ltd. (WCPL) is required by *Schedule 4, Condition 19 Development Consent 305-7-2003* to not undertake blasting within 500 meters of private property unless a written agreement is in place with the landholder.

As previously discussed WCPL has scheduled approximately 12 shots for the 2018 within 500m of privately owned land as identified in the *WA-ENV-PRO-507 4 Blasting Within 500m of Private Property Notification Procedure*.

We are seeking to finalise this procedure prior to the end of 2017 to prevent delays to production in early 2018.

Could you please complete the following:

- Review the attached procedure
- Provide contact details for blasting notification in Table 1
- Provide draft access agreement if necessary (Crown Land and LLS)

If you have any queries please feel free to contact me on the below or Steve Peart Manager: Environment and Community on 6570 2209 or speart@peabodyenergy.com.

Thanks for your assistance to date.

Harry Egan

Environmental Advisor – Peabody

Wambo Coal

Jerry's Plain Rd, Warkworth Via Singleton, NSW, 2330

Office: +61 (0)2 6570 2217 | Mobile: +61 (0)439 219 552 | hegan@peabodyenergy.com

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APPENDIX B - Correspondence

Dobbins, Nicole

From: Jamie Maddocks <jamie.maddocks@lls.nsw.gov.au>
Sent: Tuesday, 14 November 2017 11:40 AM
To: Egan, Harry D.
Cc: David Baber; Martin, Ernie; brett.miners@lls.nsw.gov.au; Peart, Steven D
Subject: Re: Wambo Coal Private Property Blasting Notification Procedure
Attachments: WA-ENV-PRO-507 4 BLASTING WITHIN 500M OF PRIVATE PROPERTY NOTIFICATION PROCEDURE JM Edits Nov 17.docx; Reserve Use - Application Wambo Nov 17 DRAFT.docx

Dear Harry,

Please find comments and suggestions in track changes for your Notification Procedure.

In similar situations where TSRs are impacted by mine blasting activities, a Reserve Use Permit is issued under the Local Land Services Act 2013, which i suspect will be a better option than developing an Access Agreement. I have prepared a draft Permit application with special conditions that meet your specific requirements for your review, comment and consideration.

Please let me know what you think. Feel free to give me a call on the mobile to discuss at some stage.

Regards

Jamie

On 13 November 2017 at 11:58, Egan, Harry D. <HEgan@peabodyenergy.com> wrote:

Gents,

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Harry Egan

Environmental Advisor – Peabody

Wambo Coal

Jerry's Plain Rd, Warkworth Via Singleton, NSW, 2330

Office: [+61 \(0\)2 6570 2217](tel:+610265702217) | Mobile: [+61 \(0\)439 219 552](tel:+610439219552) | hegan@peabodyenergy.com

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--

Jamie Maddocks
Travelling Stock Reserve and Emergency Management Officer
Hunter Local Land Services

816 Tocal Road PATERSON NSW 2421

t: 02 49384927 | f: 02 49301013 | m: 0429 924365

w: www.lls.nsw.gov.au/hunter

<https://www.facebook.com/HunterLLS>



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landscapes



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protects
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production

Service • Collaboration • Innovation • Trust

Dobbins, Nicole

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Sent: Monday, 27 November 2017 2:46 PM
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Subject: RE: Wambo Coal Private Property Blasting Notification Procedure

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Regards

Ernie Martin | Senior Drill & Blast Engineer

Yancoal Australia Ltd

SITE: Hunter Valley Operations, 1011 Lemington Road, Ravensworth, NSW, 2330, Australia
POSTAL: 1011 Lemington Road, Ravensworth, NSW, 2330, Australia
PHONE: +61 2 700 286
MOBILE: +61 428 600 286
EMAIL: ernest.martin@coalandallied.com.au
WEBSITE: www.yancoal.com.au



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Sent: Monday, 13 November 2017 11:59 AM
To: David Baber; jamie.Maddocks@lls.nsw.gov.au; Martin, Ernie
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