



WAMBO COAL NOISE 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 (DA 305-7-2003) commenced in 2004 and permits both open cut, underground operations and associated activities to be conducted. Rail transport of coal is approved under Development Consent DA 177-8-2004.

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

In accordance with Condition 9, Schedule 4 of DA305-7-2003, WCPL is required to prepare a Noise Management Plan (NMP). This NMP has been prepared in accordance with:

- Development Consent DA 305-7-2003, Conditions 13 & 14, Schedule 3;
- Development Consent DA 305-7-2003, Conditions 6, 7, 8 & 9, Schedule 4;
- Development Consent DA 305-7-2003, Conditions 3, 4, 6, 12 & 13, Schedule 6;
- Development Consent DA 177-8-2004, Conditions 3, 6, 7, 7A & 7B, Schedule 4; and
- Environment Protection Licence 529 (EPL 529) Condition L4.

The applicable consent conditions and where they are addressed within the corresponding sections of this NMP are outlined in **Appendix A**. All regulatory correspondence related to the NMP is included in **Appendix B**.

Table 1: Summary of the Approved Wambo Coal Mine

Component	Approved Mine ¹
Life of Mine	Wambo Coal may carry out mining operations at the Wambo Mining Complex until 31 December 2039, except for open cut coal extraction, which may only be undertaken until 31 December 2020.
Open Cut Mining	Open cut mining at a rate of up to 8 Mtpa of ROM coal from the Whybrow, Redbank Creek, Wambo and Whynot Seams An estimated total open cut ROM coal reserve of 98 Mt Open cut mining operations under current approved MOP Open cut mining operations up to 31 December 2020
Underground Mining	Underground mining of up to 9.75 Mtpa of ROM coal from the Whybrow, Wambo, Woodlands Hill and Arrowfield Seams Underground ROM coal reserves are estimated at 143.3 Mt Underground mining operations up to 31 December 2039
Subsidence commitments and management.	The subsidence performance measures listed in Conditions 22 and 22A of the Development Consent (DA 305-7-2003)
ROM Coal Production Rate	Up to 14.7 Mtpa of ROM coal
Total ROM Coal Mined	241.3 Mt
Waste Rock Management	Waste rock deposited in open cut voids and in waste rock emplacements adjacent open cut operations

Component	Approved Mine ¹
Total Waste Rock	640 million bank cubic metres (Mbcm)
Coal Washing	Coal handling and preparation plant (CHPP) capable of processing approximately 1,800 tonnes per hour (tph)
Product Coal	Production of up to 11.3 Mtpa of thermal coal predominantly for export
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
Total CHPP Rejects	Approximately 36.6 Mt of coarse rejects and approximately 22.4 Mt of tailings
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 Consent DA 305-7-2003 (as modified December 2017).

A number of changes have been made to the NMP as part of this revision (Version 8), to address comments received from DP&E on Version 7 and following approval of the modification application for DA 305-7-2003 (MOD17) in December 2017. These changes include:

- Updated relevant information relating to low frequency noise following the introduction of the NSW Noise Policy for Industry (NPfI);
- Reviewed use of imprecise language throughout the plan and replaced with specific commitments and actions, where appropriate;
- Rectified minor referencing and grammatical errors;
- Included Conditions 6, 12 and 13 of Schedule 6 and Conditions 13 and 14 of Schedule 3 (DA305-7-2003) in **Appendix A** and updated relevant sections of the plan, where required;
- Updated **Figure 2** and **Figure 5** to reflect the approved mine plan from MOD17;
- Included a table in **Appendix B** showing how stakeholder comments have been addressed in this NMP; and
- Included evidence of recent stakeholder consultation in **Appendix B**.

1.2 Purpose

The purpose of this NMP is to describe WCPL noise management and mitigation strategies, procedures, controls and monitoring programs that are to be implemented for the management of mining and associated activities for the Mine.

1.3 Scope

This NMP applies to all activities undertaken within WCPL's mining authorisations and approved mining areas (**Figure 2**) that may result in noise impacts. This NMP has been prepared to address the requirements detailed in WCPL's statutory approvals for noise management and provides management actions to be implemented to minimise WCPL's impact on the local community and environment.



This NMP 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).

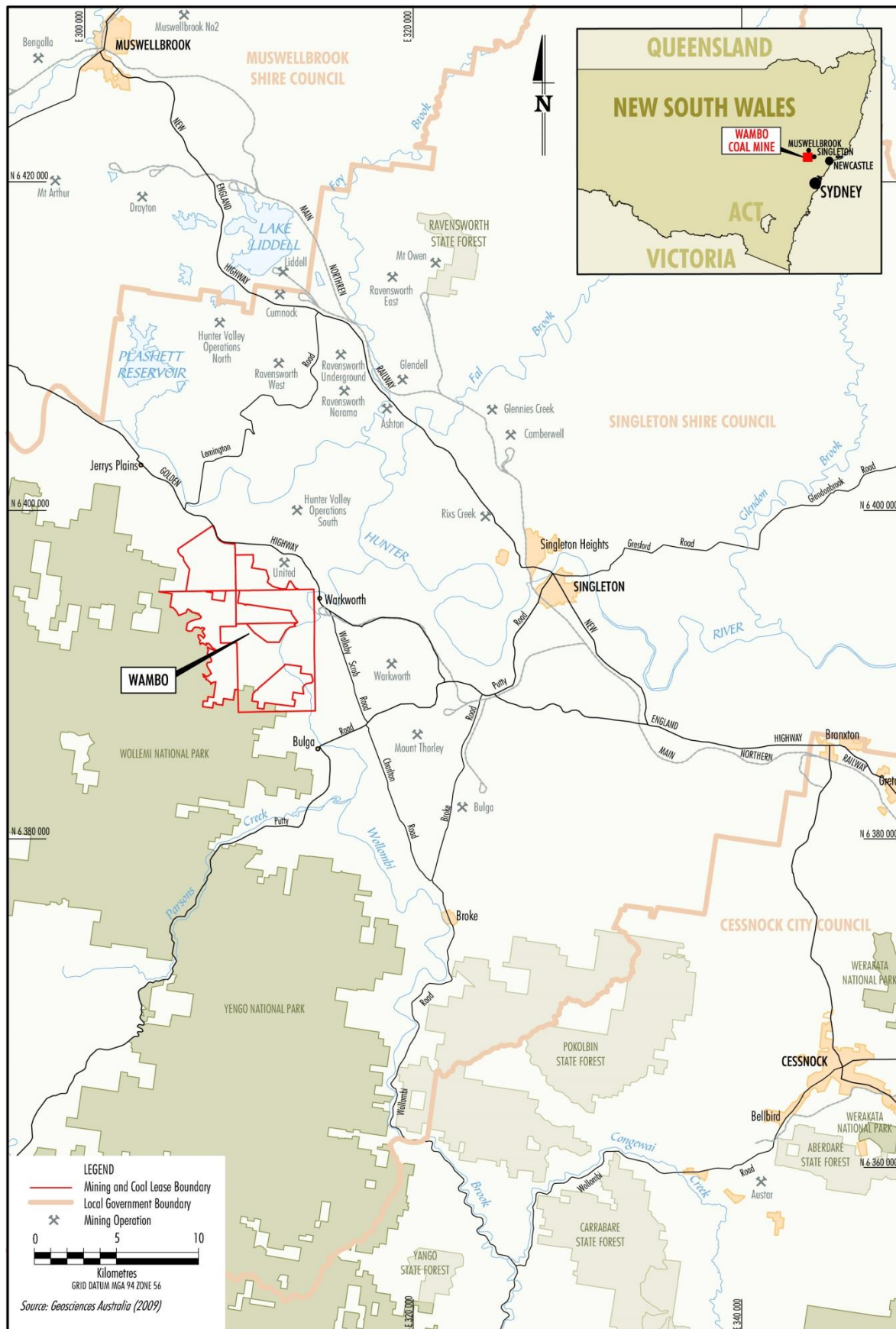


Figure 1: Wambo Coal Regional Location

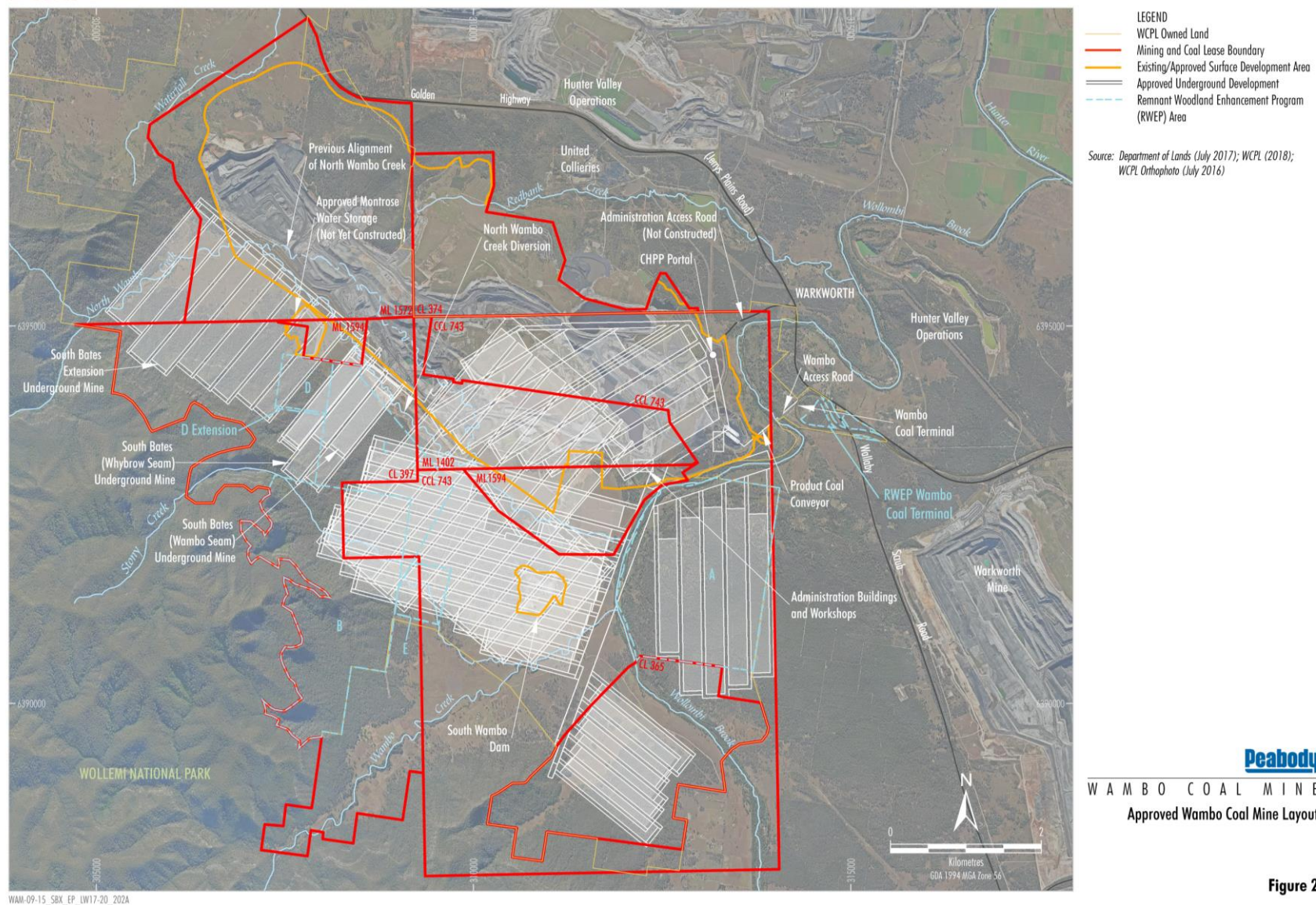


Figure 2: Approved Wambo Coal Mine Layout

1.4 Statutory Requirements

This NMP has been prepared to address the relevant Development Consent conditions within DA 305-7-2003 and DA 177-8-2004 and the requirements of WCPL's EPL 529 (**Appendix A**).

This NMP also complies with the following legislation:

- *Environmental Planning and Assessment Act 1979* (EP&A Act); and
- *Protection of the Environment Operations Act 1997* (POEO Act).

The NSW Industrial Noise Policy (INP) and recently released Noise Policy for Industry (NPfI) are also discussed below.

1.4.1 Environmental Planning and Assessment Act 1979

WCPL received Development Consent (DA 305-7-2003) in accordance with the EP&A Act on 4 February 2004. Conditions within DA 305-7-2003 relevant to noise are summarised in **Appendix A**.

DA 177-8-2004 was granted on 16 December 2004 for the Wambo Rail Development. Conditions within DA 177-8-2004 relevant to noise are summarised in **Appendix A**.

1.4.2 Protection of the Environment Operations Act 1997

WCPL operates under EPL 529 issued by the NSW Environment Protection Authority (EPA) under the authority of the POEO Act. EPL 529 is administered by the EPA. Conditions within EPL529 relevant to noise are summarised in **Appendix A**.

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 POEO Act and Part 3A of the *Protection of the Environment Operations (General) Regulation 2009* (POEO Regulation). For more information regarding WCPL's protocol for reporting environmental incidents refer to **Section 8.5**.

1.4.3 Industrial Noise Policies

The NSW Noise Policy for Industry (NPfI) was released in October 2017 and it supersedes the NSW Industrial Noise Policy (INP).

However, Development Consents (DA 305-7-2003 and DA 177-8-2004) reference the INP in relation to exemptions (including certain meteorological conditions) from the noise impact assessment criteria.

The NPfI outlines a revised approach to determining noise with dominant low frequency content using a modified UK Department of Environment, Food and Rural Affairs (DEFRA) method (as described in Downey and Parnell [2017]). The EPA have issued a document detailing implementation and transitional arrangements for the NPfI which states:

The NSW Industrial Noise Policy (2000) will continue to apply where it is referenced in existing statutory instruments (such as consents and licences), except for the NSW Industrial Noise Policy Section 4 modifying factors, which will be transitioned to the Noise Policy for Industry (2017) Fact Sheet C through a NSW Industrial Noise Policy application note. This approach has been taken because the Noise Policy for Industry

(2017) modification factor approach reflects more recent understanding of the impact of tonal and low-frequency noise on the community.

Accordingly, modifying factors will be applied in accordance with the NPfI.

1.5 Stakeholder Consultation

Version 6 of the NMP was approved by the DP&E on 27 March 2014. The NMP was updated in September 2017 and a copy of Version 7 was provided to DP&E and EPA for comment. Comments received from DP&E have been addressed in this Version of the NMP. EPA have declined to comment on the NMP (Version 7).

A copy of correspondence in relation to stakeholder consultation undertaken for the NMP is included in **Appendix B**, along with a table showing how matters raised by stakeholders have been addressed in this version of the NMP.

2.0 Background

2.1 Baseline Noise Data

Ambient noise surveys to characterise the acoustic environment surrounding the existing mine were conducted in December 2002 as a component of the EIS. Eight unattended noise loggers were positioned at selected locations for a period of 12 days. The objective of the monitoring program was to establish background noise levels in the absence of any significant influence from activities at the Mine.

In order to supplement the unattended logger measurements and to assist in identifying the character and duration of ambient noise sources, operator-attended day-time and night-time surveys were also conducted at all eight monitoring locations. The operator attended measurement results are summarised in **Table 2**.

Table 2: Operator Attended Background Noise Environment dBA (2002)

General Locality	Land Owner	L _{A90} (15 minute) Ambient Level			L _{Aeq} (15 minute) Mine in 2002*			L _{Aeq} (15 minute) Industrial Noise (Non Mine*)		
		Day	Evening	Night	Day	Evening	Night	Day	Evening	Night
Wambo Road	2 Lambkin (WCM* Boundary)	31	32	32	N/D			N/D		
		31	31	34						
	25 Fenwick (Property)	27	34	30	N/D	N/D	32	N/D		
		27	36	33	N/D	< 35	N/D			
Warkworth Village	19(A) Kelly (WCM* Boundary)	56	43	39	< 40	< 35	38	N/D		
		38	45	45	N/D	N/D	46			
	51 Hawkes (WCM* Boundary)	-	39	-	-	43	-	N/D		
		34	-	-	-	-	-			
	56 Haynes (WCM* Adjacent)	42	43	35	N/D	N/D	34	N/D		
		42	43	43	N/D	N/D	44			

General Locality	Land Owner	L _{A90} (15 minute) Ambient Level			L _{Aeq} (15 minute) Mine in 2002*			L _{Aeq} (15 minute) Industrial Noise (Non Mine*)		
		Day	Evening	Night	Day	Evening	Night	Day	Evening	Night
Redmanvale /Pinegrove Roads	15(B) McGowan / Caslick (Property)	36	31	30	N/D			N/D		
		35	41	-						
Golden Highway	31D Fisher (Property)	39	39	34	N/D			N/D		
		39	38	-						
	31 (A,B,C,D) Fisher (20m from road)	37	47	36	N/D			N/D		
		40	37	-						

Notes: N/D – not discernible.

* Wambo Coal Mine as operating in 2002.

Source: Table 3.1.1, Noise and Blasting Assessment (Heggies, 2003).

2.2 Meteorological Conditions

WCPL owns and operates a meteorological station (WS1) which is located within the project boundary approximately 350 m east of the WCPL administration building.

Temperature varies throughout the year, with cooler conditions in winter and warmer conditions in summer. Annual rainfall (2011-2016) has ranged from 430mm in 2012 to 787mm in 2011 (**Table 3**).

Table 3: Annual Rainfall (mm) (2011-2016)

2011	2012	2013	2014	2015	2016
787	430	635	559	738	721

Figure 3 shows the annual wind patterns for 2011 – 2015 for the Wambo meteorological monitoring station. It can be seen from these wind-roses that the most common winds in the area are from the south-southeast, south-east and west-northwest. This pattern of winds is common for many parts of the Hunter Valley and reflects the northwest-southeast alignment of the valley.

It is also clear from **Figure 3** that wind patterns were similar throughout the five year period. This suggests that wind patterns do not vary significantly from year to year.

Figure 4 shows the seasonal wind patterns for 2014 for the Wambo meteorological monitoring station. During summer, winds are typically from the south-east quadrant dominated by winds from the east-southeast, south-east and east. The autumn wind distribution is similar to the annual pattern and shows overall lower wind speeds and fewer winds from the west-northwest. The winter distribution is dominated by winds from the west-northwest, with relatively few winds from other directions. Spring has a varied wind distribution pattern with winds occurring from the south-southwest ranging to the east-northeast and other winds from the west-northwest and north-west sectors.



Figure 3: Annual Wind-Roses (2011-2015)

Source: Jacobs (2017).

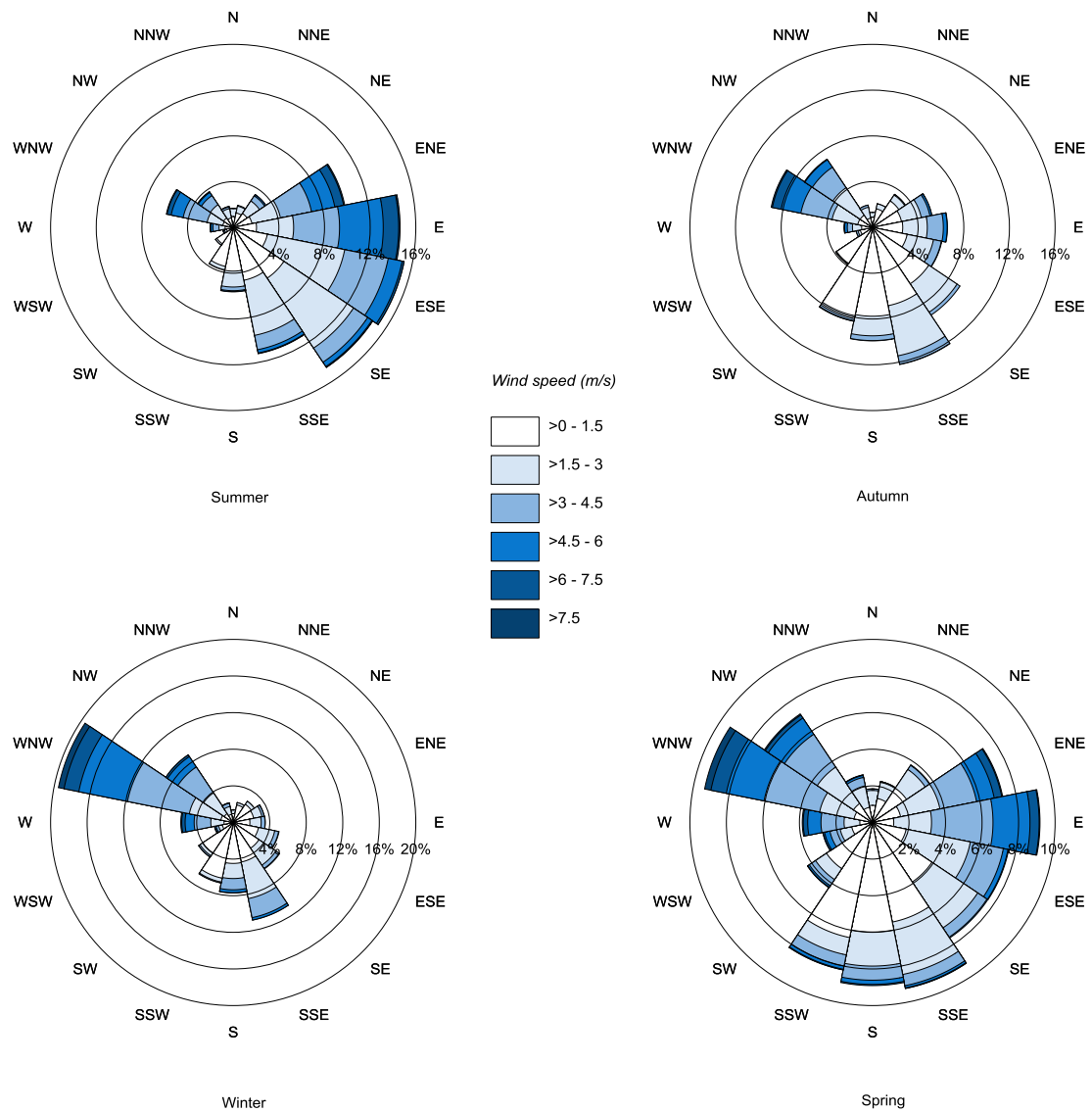


Figure 4: Seasonal Wind-Roses (2014)

Source: Todoroski Air Sciences (2017).

3.0 Noise Compliance Requirements

3.1 Noise Impact Assessment Criteria

In accordance with Condition 6, Schedule 4 of DA 305-7-2003, WCPL will ensure that all reasonable and feasible avoidance and mitigation measures are employed so that noise emissions generated by the Mine do not exceed the impact assessment criteria listed in **Table 4**.

Table 4: Noise Impact Assessment Criteria dBA

Day [#] L _{Aeq} (15 minute)	Evening/Night [#] L _{Aeq} (15 minute)	Night [#] L _{A1} (1 minute)	Land Number ^
35	41	50	94 - Curlewis
			3 - Birrell
35	40	50	4B - Circosta
			15B - McGowen / Caslick (inc. Colefax*)
			16 - Cooper
			23C-Kannar
			25 - Fenwick
			28A & B - Garland
			33 - Thelander / O'Neill
			39 - Northcote
			40 - Muller
			254A - Algie
35	39	50	5 - Strachan
			6 - Merrick
			7 - Maizey
			37 - Lawry
35	38	50	48 - Ponder
			1 - Brosi
			17 - Carter
			18 - Denney
			38 - Williams
			49 - Oliver
			63 - Abrocuff
			75 - Barnes
35	37	50	91 - Bailey
			27 - Birrale
			43 - Carmody
			137 - Woodruff
			163 - Rodger / Williams
35	36	50	246 - Bailey
			13B - Skinner
			178 - Smith
			188 - Fuller
			262A, B & C - Moses

Day [#] L _{Aeq} (15 minute)	Evening/Night [#] L _{Aeq} (15 minute)	Night [#] L _{A1} (1 minute)	Land Number [^]
35	35	50	<i>All other residential or sensitive receptors, excluding the receptors listed in Condition 1, Schedule 4 of DA 305-7-2003</i>

Note: Noise generated at Wambo Mining Complex is to be measured in accordance with the relevant requirements and exemptions (including certain meteorological conditions) of the INP.

[#] Day is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sundays and Public Holidays; Evening is defined as the period from 6pm to 10pm; Night is defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sundays and Public Holidays.

[^] For more information on the numbering and identification of properties, see Attachment 1 of the EIS for the Wambo Development Project.

* The Colefax residence formed part of Property 15 at the time of grant of DA 305-7-2003. The property was subdivided in May 2004, and Development Consent for construction of the dwelling was granted in 2011.

Under the exemptions of the INP, the noise impact assessment criteria in DA 305-7-2003 do not apply under meteorological conditions of:

- Wind speeds greater than 3 m/s at 10 metres above ground level;
- During rain; and/or
- Temperature inversion conditions with atmospheric stability class G.

Condition L4.1 of EPL 529 includes similar noise emission limits to those identified in DA 305-7-2003. Condition L4.5 of EPL 529 specifies that the noise emission limits identified in Condition L4.1 do not apply under meteorological conditions of:

- Wind speeds greater than 3 m/s at 10 metres above the ground level; and/or
- Temperature inversion conditions of greater than 3°C/100m and wind speeds greater than 2 m/s at 10 metres above the ground.

3.2 Land Acquisition Criteria

If the noise generated by the Mine exceeds the criteria in **Table 5**, WCPL shall, upon receiving a written request for acquisition from the landowner, acquire the land in accordance with the procedures in Conditions 9 to 11, Schedule 5 of DA 305-7-2003 (**Section 4.6.3**).

Table 5: Land Acquisition Criteria dBA

Day / Evening / Night L _{Aeq} (15 minute)	Land Number [^]
43	94 - Curlewis
	23C - Kannar
	254A - Algie
40	<i>All other residential or sensitive receptors, excluding the receptors listed in Condition 1, Schedule 4 of DA 305-7-2003</i>

Note: Noise generated by the Wambo Mining Complex is to be measured in accordance with the notes presented below Table 4 above. Property 23C - Kannar has been acquired and is now mine owned.

4.0 Mitigation and Management Measures

4.1 Noise Mitigation and Management Measures

WCPL has implemented a number of noise management controls in order to mitigate any potential noise impacts from the operation. These noise management controls are typically classified into design controls and operational controls which are detailed further in **Section 4.1.1** and **Section 4.1.2**. Generally noise emissions generated by mining operations are low frequency, usually less than 1000Hz. Therefore, WCPL is committed, where practicable and feasible to proactively manage noise propagation and emissions from the Mine by the amelioration of low frequency noise as they arise through the same methods employed to control overall operational noise emissions.

4.1.1 Design Control Measures

WCPL has designed and implemented a range of mine design features with consideration to the mitigation of noise for its operations. The following is a summary of existing and proposed design control measures:

- Construction of noise and visual bunds in strategic operational locations, including:
 - A noise/visual bund along the southern portion of the product coal stockpile area adjacent to the coal handling preparation plant (CHPP);
 - A noise/visual bund along the south eastern portion of the rail loop/rail load out area; and
 - Waste rock emplacement areas that have been designed to minimise noise impact on sensitive receivers to the west and south.
- Waste rock emplacement areas will be designed in a manner to enable mining equipment to operate in protected areas during adverse weather conditions which may increase the propagation of noise emissions from the Mine;
- Implementation of a CHPP with the following design considerations:
 - A largely enclosed plant that effectively contains noise generated within the coal processing facility;
 - Conveyor drives that are placed low to the floor level; and
 - Key components for the CHPP that were procured with specific noise criteria.
- WCPL owns and manages considerable land around its operation to provide a buffer between sensitive receivers to the south and to the north-west (refer to **Figure 5**);
- WCPL currently and will continue to implement low level dumping procedures where available when conditions indicate possible increased noise propagation and/or when real time noise monitor trigger alarms indicate that noise is sourced from the Mine;
- WCPL will investigate the installation of acoustic barriers around work areas where required. WCPL has implemented this for all exploration drill rigs which are located close to sensitive receivers;
- Ventilation fans and coal conveyors for the existing South Bates Underground Mine have been installed in pit to mitigate noise propagation; and
- WCPL will undertake an acoustic design review prior to the construction of the two most southern ventilation shafts required for the South Wambo Underground Mine and will

implement noise mitigation if required to achieve compliance with the relevant noise criteria at nearby privately-owned receivers.

4.1.2 Operational Control Measures

WCPL is committed to implementing best practice noise management measures to minimise noise impacts, particularly low frequency noise and traffic noise from its operations. A number of proactive management measures are implemented to minimise noise generation from WCPL operations, including:

- Maintenance of plant and equipment and pre-start up inspections;
- Operation of all machinery and potential noise emitting plant and equipment by experienced and trained personnel;
- Installation of an inaudible horn system (“Hornless Horns”) across the entire open cut fleet to eliminate the use of audible horns (Note: In cases of Emergency, audible horns may be required);
- Installation of broadband reverse alarms (“quackers”) to mitigate noise propagation from reversing fleet vehicles;
- Positioning of portable generators and/or machinery to take advantage of barriers to mitigate sound travel and/or positioned at the greatest distance from the noise-sensitive area where practical;
- Turning off or throttling plant and equipment down when not in use;
- Scheduling the use of noisy equipment at the least sensitive time of day wherever practical;
- Orienting equipment so that noise emissions are directed away from any sensitive areas to achieve the maximum attenuation of noise;
- During adverse conditions restricting heavy vehicle traffic on exposed haul roads and access tracks where noise can propagate over a wide area, especially at night;
- Where there are several noisy pieces of equipment, scheduling operations so they are used separately rather than concurrently;
- Parking haul trucks in pit during crib breaks;
- During site inductions, providing employees and contractors with information and training on:
 - potential noise impacts on neighbouring residents;
 - reporting excessive noise to WCPL management; and
 - carrying out quiet work practices.
- Providing employees and contractors with toolbox talks on slowing down when driving to and leaving site to minimise traffic noise;
- Conducting specific noise management training for key WCPL operational personnel;
- Procuring all new equipment to site (purchased or hired) in line with EIS plant and mobile sound power level (SWL) specifications for noise emissions to meet noise criteria at the residences nearest the Mine and to ensure that operations are generally in accordance with the EIS modelled noise footprint;

- Where feasible, examining engineering controls including noise attenuation for trucks, drills and diggers that are potentially generating significant noise and which may impact on sensitive receivers;
- Monitoring of WCPL's real time noise monitoring network by key operational personnel to assist in identifying when site noise levels are approaching or have exceeded a relevant criterion so that proactive measures can be implemented as per the Trigger Action Response Plan (TARP);
- Non mine related construction activities will generally be undertaken between 7.00 am and 7.00 pm daily. Construction activities may occur outside these hours when WCPL is satisfied that such activities are inaudible at nearest private residences on advice from a WCPL appointed acoustic specialist; and
- Implementation of a proactive noise management system based on predictive meteorological forecasting (**Section 4.2**) and a reactive noise management system based on real-time noise monitoring (**Section 4.3**).

4.1.3 Rail Noise

In accordance with Condition 6, Schedule 4 of DA 177-8-2004, the rail spur will only be accessed by locomotives that are approved to operate on the NSW rail network in accordance with noise limits L6.1 to L6.4 in RailCorp's EPL (No. 12208) and ARTC's EPL (3142) or a Pollution Control Approval issued under the former *Pollution Control Act 1970*.

4.2 Proactive Noise Management Measures

Proactive noise management at WCPL is implemented by reviewing predictive meteorological forecasting. This information is used to evaluate the likely risk of noise impacts during upcoming sensitive periods. In the event that unfavourable meteorological conditions are identified, contingency measures (such as those discussed in **Section 4.1.2**) will be implemented by WCPL to mitigate adverse noise propagation.

4.2.1 Predictive Meteorological Forecasting

The Environment and Community Manager (E&C Manager), Production Superintendent Open Cut and Drill and Blast Superintendent receive detailed 7 day meteorological forecasts from Weatherzone. The meteorological forecasts are reviewed for upcoming predicted temperature inversion conditions and wind speeds that may trigger operational responses.

The Weatherzone Noise Risk Forecast system utilises the EPA approved Pasquill-Gifford atmospheric classification system. This system essentially predicts the height and strength of inversion layers above the ground and the resulting enhancements of noise.

In addition to the predictive forecasts, actual measured temperature and wind speeds from the WCPL meteorological station (WS1) are monitored to identify if operational responses may be required.

The Production Superintendent Open Cut is responsible for communicating meteorological forecasts to relevant operation unit managers in Pre-Start-Information (PSI) sessions.

4.3 Real Time Noise Monitoring

WCPL has a network of real time noise monitors providing continuous real time noise data that allows key operational personnel to monitor noise from the operations. Additional controls will be implemented in accordance with the TARP.. The unattended continuous noise monitoring network at WCPL has the ability to notify WCPL personnel via an SMS message system when monitoring results indicate noise levels at surrounding sensitive receivers are approaching, or have exceeded, relevant noise criteria in **Section 3.1**. For further details regarding the real time noise monitoring network and operation, refer to **Section 5.2**.

4.4 Continuous Improvement

WCPL will implement all reasonable and feasible best practice noise mitigation measures during the life of the operation. The basis for continuous improvement will consider implementation of new noise mitigation measures. Any new noise mitigation measures that are implemented as a result of these reviews will be reported in the Annual Review as required by Condition 5, Schedule 6 of DA305-7-2003.

4.5 Training and Awareness

To ensure the effective implementation of this NMP, all WCPL personnel and contractors receive noise awareness information during the general introduction to site training. Additional information regarding noise management can also be provided via toolbox talks, pre start meetings and at the senior management meeting level as required.

Specific noise management training is also provided to key WCPL employees. This includes the use of sound level meters. The training is provided by a WCPL appointed acoustic specialist and allows WCPL to verify noise levels at sensitive receivers to confirm the status of the operations noise compliance and thus implement contingency measures if required.

4.6 Additional Noise Management Measures

4.6.1 Landowner Notification

If the results of compliance monitoring identify that noise levels generated by the development are greater than noise impact assessment criteria in **Section 3.1**, then WCPL will notify relevant landowners and/or tenants as soon as practicable after identifying the exceedance.

4.6.2 Independent Review

If a landowner considers WCPL to be exceeding noise impact assessment criteria listed in **Section 3.1** at his/her dwelling, or at any proposed dwelling on his/her vacant land, then he/she may ask WCPL for an independent review of the noise impacts of the development on his/her dwelling, or proposed dwelling.

If the Secretary is satisfied that an independent review is warranted, WCPL will:

- Consult with the landowner to determine his/her concerns; and
- Commission a suitably qualified person – whose appointment has been approved by the Secretary – to conduct noise monitoring at the relevant dwelling to determine whether WCPL is complying with relevant impact assessment criteria, and identify the source(s) and scale of any noise impact at the dwelling, and the development's contribution to this impact.

Within 14 days of receiving the results of this independent review, WCPL shall give a copy of these results to the Secretary and landowner.

If the independent review determines that the WCPL is complying with relevant impact assessment criteria at the dwelling, then WCPL may discontinue the independent review with the approval of the Secretary.

If the independent review determines that the development is not complying with relevant impact assessment criteria at the dwelling, and that the development is primarily responsible for this non-compliance, then WCPL shall:

- Take all practicable measures, in consultation with the landowner, to ensure that the development complies with relevant impact assessment criteria; and conduct further noise monitoring at the dwelling to determine whether these measures ensure compliance; or
- Secure a written agreement with the landowner to allow exceedances of noise impact assessment criteria listed in **Section 3.1**.

If the additional monitoring referred to above subsequently determines that the development is complying with relevant impact assessment criteria at the dwelling, then the Applicant may discontinue the independent review with the approval of the Secretary.

If the measures referred do not ensure compliance with noise land acquisition criteria at the dwelling, and the Applicant cannot secure a written agreement with the landowner to allow exceedances of noise impact assessment criteria, then WCPL shall, upon receiving a written request from the landowner, acquire all or part of the landowner's land in accordance with the procedures below.

If the independent review determines that the development is not complying with noise impact assessment criteria at the dwelling, but that several mines are responsible for this non-compliance, then WCPL shall, with the agreement of the landowner and other mine(s) prepare and implement a Cumulative Noise Impact Management Plan for the land to the satisfaction of the Secretary. This plan must provide the joint approach to be adopted by WCPL and other mine(s) to manage cumulative noise impacts at the landowner's dwelling, and the acquisition of any land.

If WCPL is unable to finalise an agreement with the landowner and/or other mine(s), and/or prepare a Cumulative Noise Impact Management Plan, then WCPL or landowner may refer the matter to the Secretary for resolution.

If the matter cannot be resolved within 21 days, the Secretary shall refer the matter to an Independent Dispute Resolution Process.

If, following the Independent Dispute Resolution Process, the Secretary decides that WCPL shall acquire all or part of the landowner's land, then WCPL shall acquire this land in accordance with the land acquisition procedures detailed in **Section 4.6.3**.

If the landowner disputes the results of the independent review, either WCPL or the landowner may refer the matter to the Secretary for resolution.

If the matter cannot be resolved within 21 days, the Secretary shall refer the matter to an Independent Dispute Resolution Process.

4.6.3 Land Acquisition

Within 6 months of receiving a valid written request for acquisition from a landowner, WCPL shall pay the landowner:

- the current market value of the landowner's interest in the land at the date of this written request, as if the land was unaffected by the development the subject of the DA, having regard to the:
 - existing and permissible use of the land, in accordance with the applicable planning instruments at the date of the written request; and
 - presence of improvements on the land and/or any approved building or structure which has been physically commenced at the date of the landowner's written request, and is due to be completed subsequent to that date;
- the reasonable costs associated with:
 - relocating within the Singleton local government area, or to any other local government area determined by the Secretary;
 - obtaining legal advice and expert advice for determining the acquisition price of the land, and the terms upon which it is required; and
- reasonable compensation for any disturbance caused by the land acquisition process.

However, if within 6 months of receiving this written request, WCPL and landowner cannot agree on the acquisition price of the land, and/or the terms upon which the land is to be acquired, then either party may refer the matter to the Secretary for resolution.

Upon receiving such a request, the Secretary shall request the President of the NSW Division of the Australian Property Institute to appoint a qualified independent valuer or Fellow of the Institute, to consider submissions from both parties, and determine a fair and reasonable acquisition price for the land, and/or terms upon which the land is to be acquired. If either party disputes the independent valuer's determination, then the independent valuer must refer the matter back to the Secretary.

Upon receiving such a referral, the Secretary shall appoint a panel to determine a fair and reasonable acquisition price for the land, and/or the terms upon which the land is to be acquired, comprising the:

- (i) appointed independent valuer,
- (ii) Secretary or nominee, and
- (iii) President of the Law Society of NSW or nominee.

Within 14 days of receiving the panel's determination, WCPL make a written offer to purchase the land at a price not less than the panel's determination.

5.0 Noise Monitoring Program

5.1 Noise Monitoring Network

WCPL has established a noise monitoring network to assess the noise performance of the operation against the noise impact assessment criteria provided in **Section 3.1**. The noise monitoring network (refer to **Table 6** and **Figure 5**) consists of:

- Four real time noise monitors (unattended noise monitoring); and
- Six attended noise monitoring locations.

The location and type of monitoring equipment in the noise monitoring network has been strategically chosen and positioned around the operation to provide noise monitoring coverage.

Table 6: Attended and Unattended Noise Monitoring Locations

Site Ref	Residence	Type	Location	Frequency	Approximate Co-ordinates (MGA 94, z56)	
					Northing	Easting
N01	Wambo Road Residence	Attended	Mine & Rail Spur	Monthly	6388696	313352
N03	Kelly Residence	Real-Time & Attended	Mine & Rail Spur	Continuous & Monthly	6394362	314207
N16	Jerrys Plains Road	Attended	Mine	Monthly	6399670	305806
N20A	Redmanvale Road Central	Attended	Mine	Monthly	6399092	304677
N20	Redmanvale Road Central	Real-Time	Mine	Continuous	6398504	304518
N21	Wambo South	Real-Time & Attended	Mine & Rail Spur	Continuous & Monthly	6390149	310586
N26	Redmanvale Road South	Attended	Mine	Monthly	6398199	304070

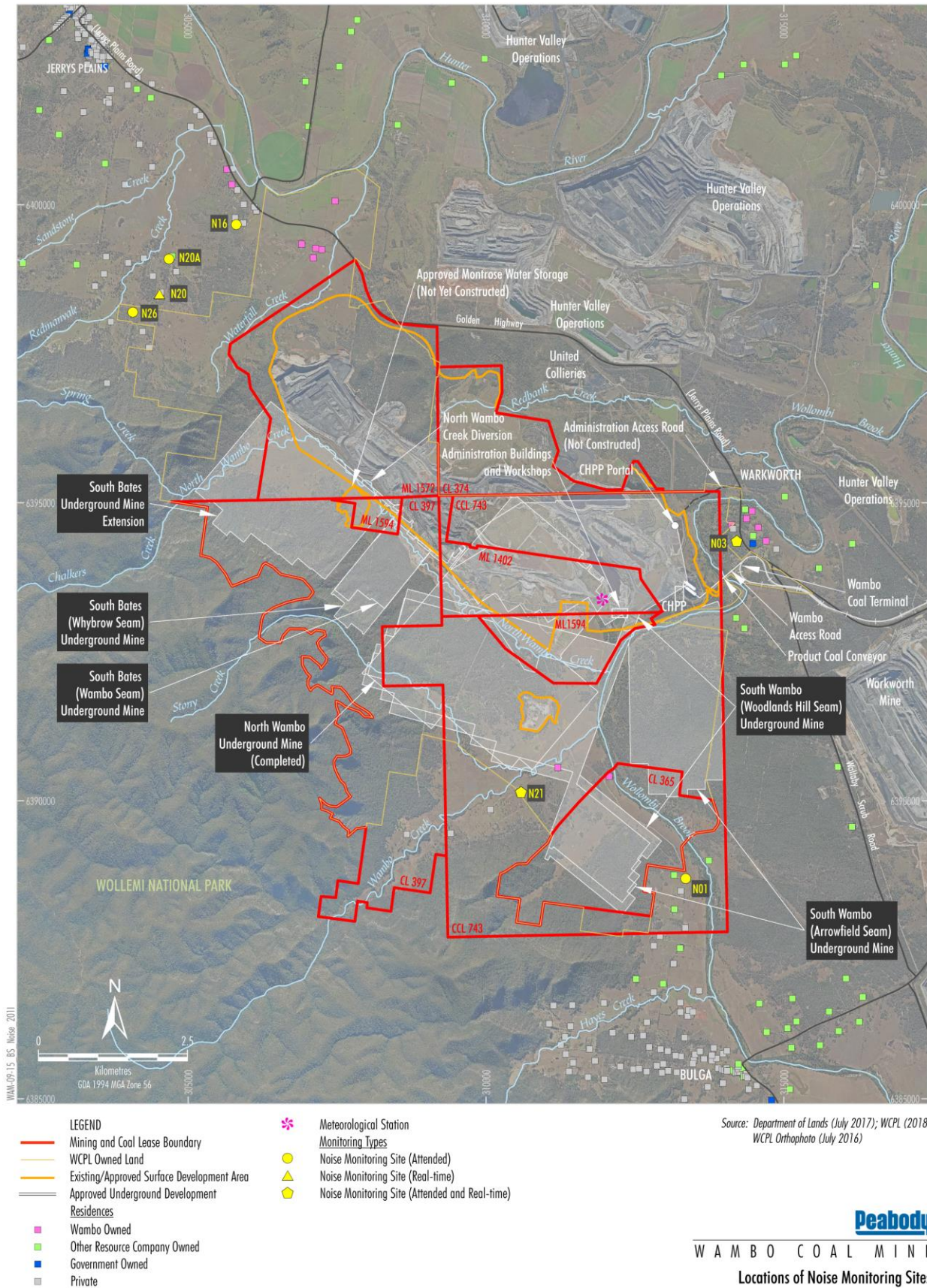


Figure 5: Noise Monitoring Locations

5.2 Real Time Noise Monitoring

WCPL has a network of real time noise monitors (**Figure 6**) providing continuous real time noise data that allows key operational personnel to monitor noise from the operations. Additional controls will be implemented in accordance with the TARP.. The unattended continuous noise monitoring network has the ability to notify relevant WCPL personnel via an SMS conditional alarm messaging system when monitoring results indicate noise levels at surrounding sensitive receivers are approaching, or have exceeded, relevant noise impact assessment criteria in **Section 3.1**.



Figure 6: Real Time Noise Monitoring Unit at N20

The real time noise monitors provide 15 minute statistical data (LA_1 , LA_{10} and LA_{90}) and $LA_{eq,15min}$ and $LA_{eq,period}$ noise levels. The real time monitors are also fitted with weather stations which measure wind speed, direction and rainfall that provide information on the weather conditions at the time of the recording.

Non-mining noise sources at a receptor location can often be considerably louder than mining noise. This is particularly true for noise events (dogs, cows, cars, etc.) that may influence the measured L_{Aeq} .

The real time noise monitors have one-third octave frequency filtering capabilities that allow measurement of noise in the range of 12.5 Hz to 630 Hz (referred to as “low pass” [LP] noise). For real time noise management purposes, the LP data is used to estimate total mining L_{Aeq} ($LP L_{A90} + 3$ dB). Other sources can also generate a constant lower frequency noise, such as pumps and tractors, and so all alarms are investigated to identify the source of the noise.

The SMS alarm is conditional and allows noise monitoring data to be combined with alarm rules which consider wind speed, rainfall, frequency, time of day and criteria. Alarms are

transmitted via SMS and are sent to the WCPL database repository along with the noise monitoring results from each unit.

The real time noise monitors record audio MP3 files of the noise being monitored. The audio files can also be viewed via a dashboard display (see **Figure 7**) and downloaded from the database repository to provide:

- Supplemental data for noise investigations initiated in response to community complaints or noise exceedances; and
- Data that can be used to determine correlations between mining operations, meteorological conditions and environmental noise levels.

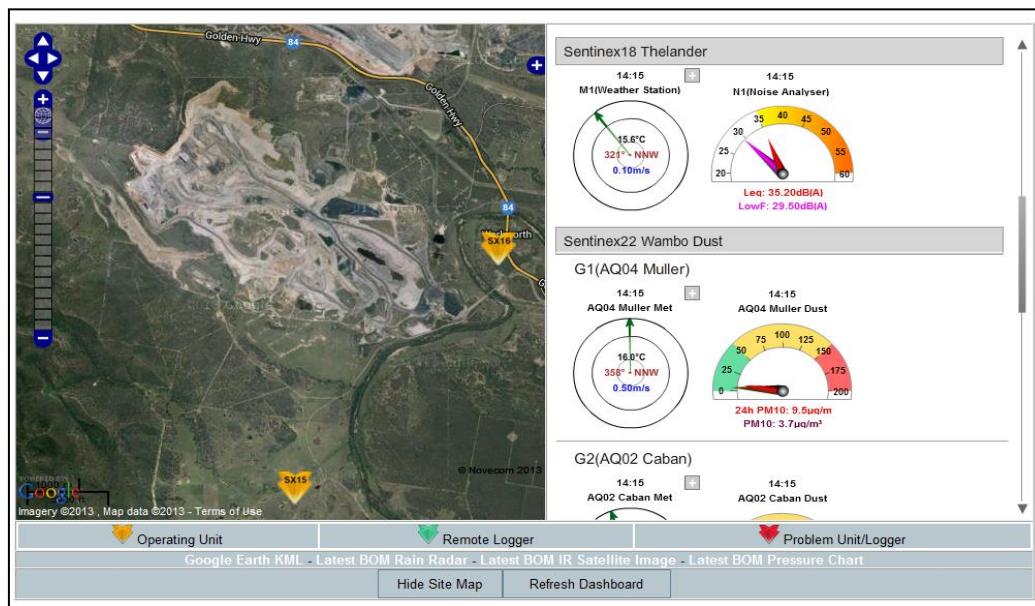


Figure 7: Real Time Noise & Dust Dashboard Display

5.2.1 Real Time Noise Monitoring Trigger Levels

SMS alarms from the real time noise monitoring network will be triggered based on an estimated total mining L_{Aeq} that is 2 dB below the relevant night time criterion¹ as displayed in **Section 3.1**.

WCPL operate a three tier SMS alarming system based on the estimated total mining L_{Aeq} based on the LP L_{A90} measured at N20, N21 and N26A. The alarm system and associated noise trigger levels are outlined in **Table 7**.

The noise trigger levels are displayed in **Table 8**.

¹Based on historical baseline data and community complaints in relation to operation noise, WCPL have not set day time SMS alarms. In general, weather enhancing conditions are more likely to occur at night which has the greatest potential to cause an exceedance. This approach is consistent with the *NSW Draft Guidelines: Mining Noise Monitoring Application Note*. However WCPL will review the data in accordance with this Noise Management Plan to determine if there are compelling reasons to set day time SMS alarms. Please note that evening and night time noise level criteria are the same.

Table 7: WCPL Noise Warning Alarm System

Trigger Level	Alert	Detail
LEVEL 1	Green	No alerts
LEVEL 2	Amber	WCPL receive a noise warning alert SMS from Sentinex Units, registering 2 dB below the relevant noise criterion and sustained for more than 15 mins
LEVEL 3	Red	WCPL receive a noise warning alert SMS from Sentinex Units, registering the relevant noise criterion has been reached and sustained for more than 15 mins

Table 8: Real Time Level 2 Trigger Levels – Estimated Total Mining L_{Aeq}

Site Ref	Site Location	Night (dBA)
N20	Redmanvale Road Central	38
N21	Wambo South	39
N26A	Redmanvale Road South	38

WCPL has developed a Trigger Action Response Plan (TARP) (see **Section 6.4.1**) that provides contingency measures, responsibilities and management actions in response to Level 2 and Level 3 SMS alarms.

5.3 Attended Noise Monitoring

WCPL attended noise monitoring has been carried out monthly since January 2014. The monitoring is conducted by a WCPL appointed acoustic specialist who measures and describes the acoustic environment at each attended monitoring location. The attended noise monitoring results are compared with noise impact assessment criteria (as defined in **Section 3.1**) to assess compliance. Attended noise monitoring is considered the preferred method for determining compliance with prescribed limits because it allows for an accurate determination of the contribution, if any, made by industrial noise sources to measured ambient noise levels.

Operator attended noise measurements are conducted during night period² operations to quantify noise emissions from WCPL as well as the overall level of ambient noise.

Noise levels (LA_{max} and LA_{eq}) from the Mine are quantified over a 15 minute measurement period. In addition, the overall levels of ambient noise (i.e. LA_{max} , LA_1 , LA_{10} , LA_{50} , LA_{90} , and LA_{eq}) over the 15 minute period will be quantified and characterised.

Attended noise monitoring will be conducted at a representative location in accordance with the NPfI and Australian Standard AS 1055 'Acoustics, Description and Measurement of Environmental Noise'.

²In general, weather enhancing conditions are more likely to occur at night which has the greatest potential to cause an exceedance. This approach is consistent with the *NSW Draft Guidelines: Mining Noise Monitoring Application Note*. However WCPL will review the data in accordance with this Noise Management Plan to determine if there are compelling reasons to revert back to day time attended monitoring. Please note that evening and night time noise level criteria are the same.

In accordance with Condition 7B, Schedule 4 of DA 177-8-2004, quarterly attended monitoring at the Kelly residence (N03) was undertaken to coincide with train refuelling, during the first 12 months of operation of the Wambo rail loop³ locomotive provisioning facility. Following a demonstrated history of compliance, the monitoring has ceased. Monitoring will be reactivated if triggered by a resident complaint or a significant change or amendment to the approved operations at the locomotive provisioning facility.

Measurement of rail pass-by noise levels was removed from the monitoring program in Version 5 of the NMP, following a demonstrated history of compliance. Monitoring will be recommenced if triggered by complaint, or change in rolling stock used to transport coal from WCPL.

Meteorological data from the WCPL meteorological station will be utilised to correlate atmospheric parameters and measured noise levels. Ground level atmospheric condition measurement is also undertaken during attended monitoring. Noise criteria only apply in meteorological conditions specified in the conditions (**Section 3.1**).

The modified DEFRA method (as described in Downey and Parnell [2017]) will be used to identify noise from the Mine with dominant low frequency content. Modifying factors will be applied in accordance with the NPfI.

5.4 Survey Noise Monitoring

WCPL will conduct survey noise monitoring in response to complaints and/or in response to triggered alarms from the WCPL real time noise monitoring network in the event that verification is needed to determine if the noise recorded is predominantly mining noise from WCPL.

Survey noise monitoring at WCPL will be undertaken by trained WCPL personnel utilising industry standard sound level meters.

The results from survey noise monitoring will be used by the operations to verify the noise contribution from the Mine at sensitive receiver locations and assist relevant site personnel in determining the course of action if noise levels are approaching or are at WCPL noise criteria levels.

Noise monitoring will usually be for a short duration of 3 – 5 minutes to allow multiple sites to be visited or revisited. Acoustic techniques such as low pass filtering may be employed to assist in quantifying the contribution of noise from a particular mine to the overall noise environment.

5.5 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 station has been sited in accordance with sampling method AM-1 i.e. AS 2922-1987 Ambient Air – Guide for the Siting of Sampling Units.

The meteorological station is routinely calibrated and maintained by accredited technicians. Meteorological monitoring will be undertaken in accordance with Condition M4 of EPL 529, as summarised in **Table 9**.

³Nil history of audibility of train refuelling – therefore no attended monitoring required during train loading.

Table 9: Meteorological Monitoring

Parameter	Sampling Method ¹	Units of Measure	Averaging Period ²	Frequency
Rainfall	AM-4	mm	1 hour	Continuous
Wind Speed at 10 metres	AM-2 & AM-4	m/s	15 minutes	Continuous
Wind Direction at 10 metres	AM-2 & AM-4	Degrees	15 minutes	Continuous
Temperature at 2 metres and 10 metres	AM-4	Celsius	15 minutes	Continuous
Sigma Theta (at 10 metres)	AM-2 & AM-4	Degrees	15 minutes	Continuous
Total Solar Radiation (at 10 metres)	AM-4	Watts/m ²	15 minutes	Continuous
Lapse Rate ³	-	°C /100m	-	-

Notes:

1. DEC, 2007. *Approved Methods for the Sampling and Analysis of Air Pollutants in NSW*.
2. For the purposes of assessing air quality consistent with the PM monitoring, meteorological data will be recorded in 10 minute intervals. However, 1 hourly averages will also be calculated as per Condition 10, Schedule 4 of DA305-7-2003.
3. Lapse rate (required to be calculated in accordance with Condition 10, Schedule 4 of DA305-7-2003) will be calculated from measurements made at 2m and 10m.

5.6 Cumulative Impact Protocol

If a real time monitor measures a Level 3 alarm as per **Section 5.2.1**, and upon investigation and validation of the alarm the source of noise mining noise found to be another site (i.e. Hunter Valley Operations [HVO South and HVO North] and/or Mount Thorley Warkworth Mines), WCPL will provide notification to the relevant operation.

5.7 Monitoring Records

Monitoring records are maintained in accordance with Condition M1 of EPL 529:

- In a legible form, or in a form that can readily be reduced to a legible form;
- Kept for at least 4 years after the monitoring or event to which they relate took place; and
- Produced in a legible form to any authorised officer of the EPA who asks to see them.

5.8 Data Handling

Data collected during attended noise monitoring and from real time noise monitoring stations will be handled in accordance with the procedures described in **Table 10**.

Table 10: Data Handling Methodology

Parameter	Procedure
Meteorology	<ul style="list-style-type: none"> • Summary data obtained from the monitoring instrumentation. • Data entered into an electronic database (or similar) for analysis and tracking.
Acoustic Data	<ul style="list-style-type: none"> • Data obtained from the monitoring instrumentation. • Data maintained as an electronic spread sheet for analysis and tracking.

6.0 Evaluation of Performance

6.1 Attended Noise Methodology

WCPL attended noise monitoring is carried out monthly (monitoring was formerly conducted on a quarterly basis) by a WCPL appointed acoustic specialist to measure and describe the acoustic environment at each attended monitoring location in accordance with the methodology in **Section 5.3**. The attended noise monitoring results are compared with noise impact assessment criteria defined in **Section 3.1** to assess compliance and/or modelled EIS noise levels.

Attended noise monitoring is considered the preferred method for determining compliance with prescribed limits because it allows for an accurate determination of the contribution made by industrial noise sources, if any, to measured ambient noise levels.

WCPL's attended noise monitoring program will involve the following actions in accordance with the *NSW Draft Guideline: Mining Noise Monitoring Application Note*.

A 15 minute reading at each location shall be taken and assessed against applicable criteria. If the reading is below all criteria, the WCPL appointed acoustic specialist will record the result, note the location has passed and move on to the next monitoring site.

If the noise level exceeds any criterion, is attributable to WCPL's operation and is taken in valid meteorological conditions then the following steps are to be followed:

1. The WCPL appointed acoustic specialist records the reading and advises the E&C Manager (or delegate) a reading has exceeded a criterion and proceeds to Step 2.
2. Within 75 mins after the first reading (and no earlier than 10.00 pm) a second 15 minute reading is to be taken. If this reading exceeds any criterion then proceed to Step 3 otherwise proceed to Step 4.
3. If the reading exceeds a criterion, is attributable to WCPL's operation and is taken in valid meteorological conditions then proceed to Step 5.
4. The WCPL appointed acoustic specialist records the result, notes the site has passed, schedules an additional monitoring test to be undertaken at the site within 1 week, and moves on to the next monitoring site.
5. The WCPL appointed acoustic specialist records the result, notes the site has failed and is deemed a 'noise affected night' at that site. An additional monitoring test should be scheduled to be undertaken at the site within 1 week, and move on to the next monitoring site.

6.2 Noise Exceedance Investigation

Should an exceedance of any criterion (as described in **Section 3.1**) be determined from attended noise monitoring (i.e. is deemed a 'noise affected night') or a noise complaint is received by WCPL, the noise exceedance/complaint will be recorded as an environmental incident and documented in the Environmental Incident Register. All reportable incidents will trigger an investigation led by the E&C Manager and other relevant personnel. Notification of reportable incidents to the relevant government authorities will be in accordance with **Section 8.5**. The following details will be recorded within the incident form and subsequent investigation, but not limited to:

- Time of the noise exceedance;

- Location where attended monitoring identified exceedance;
- Meteorological conditions at the time;
- Potential contributing factors;
- Outcomes of preliminary site investigations;
- Proposed corrective measures; and
- Determination of whether it is a reportable or non-reportable incident.

6.3 Mitigation Strategies to Prevent Exceedance Re-occurrences

In the event of a reportable noise exceedance, all corrective actions identified from the investigation process (as described in **Section 6.2**) will be implemented to mitigate the potential for a reoccurrence. Noise mitigation and corrective management measures will consider:

- Proximity of future operational activities to potential sensitive receivers;
- Incorporating any identified improvements into noise mitigation measures as detailed in **Section 4.0** as a result of investigations; and
- Avoiding possible contributors to the exceedance of the noise criteria for example adverse meteorological conditions.

In an effort to avoid future exceedances, the Open Cut Mine Manager, in consultation with the E&C Manager, will assess and if necessary revise operational protocols. Any identified noise mitigation measures that can be implemented to avoid a re-occurrence of a reportable environmental incident and/or an exceedance of the noise criteria will be implemented as soon as practicable.

6.4 Adaptive Management

6.4.1 Trigger Level and SMS Alarm System

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

Table 11: Noise Trigger Action Response Plan

	Normal State	Community Complaint	Level 2 Response	Level 3 Response
Trigger	No alerts.	<ul style="list-style-type: none"> Community complaint received. 	<ul style="list-style-type: none"> WCPL receives SMS alarm from Sentinex Unit, registering an estimated total mining L_{Aeq} within 2 dB of the relevant noise criterion sustained for more than 15 mins (Section 5.2). 	<ul style="list-style-type: none"> WCPL receives SMS alarm from Sentinex Unit, registering an estimated total mining L_{Aeq} above the relevant noise criterion sustained for more than 15 mins (Section 5.2).
Action		<ul style="list-style-type: none"> E&C Manager to contact complainant for further clarification. Based on information regarding area of complaint, investigate closest Sentinex Monitor real time data & audio files. Review meteorological conditions. Contact OCE / Production Supervisor to verify fleet operations. 	<ul style="list-style-type: none"> Review meteorological conditions for alarm validation (i.e. no rainfall, wind speeds below 3 m/s and applicable temperature inversion conditions) and complete the following actions if criteria are applicable. Download real time audio files and data for alarm validation. Contact OCE / Production Supervisor to validate fleet operations. Verify potential noise propagation source by conducting survey monitoring (Section 5.4). 	<ul style="list-style-type: none"> Review meteorological conditions for alarm validation (i.e. no rainfall, wind speeds below 3 m/s and applicable temperature inversion conditions) and complete the following actions if criteria are applicable. Download real time audio files and data for alarm validation. Contact OCE / Production Supervisor to validate fleet operations. Verify potential noise propagation source by conducting survey monitoring (Section 5.4). If noise impact assessment criteria are not applicable due to meteorological conditions, consider whether any fleet operations can be modified.

	Normal State	Community Complaint	Level 2 Response	Level 3 Response
Response		<ul style="list-style-type: none"> If noise verification determines an exceedance, an operational review will be undertaken of fleet locations will be undertaken. The outcomes of the investigation will be provided to the complainant. Systemic noise complaints will trigger a review of noise results by an acoustic specialist where warranted. 	<ul style="list-style-type: none"> If alarm verification finds WCPL to be responsible for trigger – an operational review will be commissioned by the Open Cut Manager, E&C Manager, Open Cut Operations Manager and Production Supervisor. Identify problem noise source. Review to investigate possible alternate operational work procedures. 	<ul style="list-style-type: none"> If alarm verification finds WCPL to be responsible for trigger – an operational review will be commissioned by the Open Cut Manager, E&C Manager, Open Cut Operations Manager and Production Supervisor. Identify problem noise source and cease operations until above review is completed. Review to investigate possible alternate operational work procedures. Monitor and review alternate operational work procedures to verify noise levels are satisfactory. Where systemic, independent review which may include attended noise monitoring.

7.0 Community Complaint Response

All noise related community complaints received by WCPL will be recorded within the Community Complaints Register. The E&C Manager will investigate the complaint, which will include contacting the complainant within 24 hours to discuss the complaint. A review of the effectiveness of any 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 meteorological conditions, the nature of activities taking place and recent monitoring results. It should be noted that a complaint does not necessarily mean an exceedance has occurred.

WCPL will attempt to address the complainant's concerns such that a mutually acceptable outcome is achieved. However if required, the Independent Dispute Resolution Process will be referred to (**Appendix C**).

In the event that any exceedances of noise criteria are identified during compliance monitoring any affected landowner will be notified within fourteen days of confirmation of that exceedance.



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.

8.0 Review and Reporting

8.1 Review

The performance of the noise monitoring and management strategies outlined in the NMP is to be reviewed annually by the E&C Manager and the Open Cut Mine Manager (or delegate). A complete review of the NMP will occur:

- Every two years;
- When there are changes to consent or licence conditions relating to noise management or monitoring;
- Following significant noise related incidents at WCPL;
- Following the submission of an Annual Review;
- Following an independent environmental audit under Consent Condition 6, Schedule 6 which requires NMP review; or
- If there is a relevant change in technology, practice or legislation.

The revised NMP will be re-submitted to the Secretary for approval as required by Condition 20, Schedule 4 of DA 305-7-2003.

8.2 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 DP&E. This report will:

- Describe the development (including any rehabilitation) that was carried out in the past year, and the development that is proposed to be carried out over the next year
- Include a comprehensive review of the monitoring results and complaints records of the Mine over the past year, which includes a comparison of these results against the:
 - Relevant statutory requirements, limits or performance measures/criteria
 - Monitoring results of previous years; and
 - Relevant predictions in the EA;
- Identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance
- Identify any trends in the monitoring data over the life of the Project
- Identify any discrepancies between the predicted and actual impacts of the Project, and analyse the potential cause of any significant discrepancies; and
- Describe what measures will be implemented over the next year to improve the environmental performance of the Project.

A copy of the Annual Review will be forwarded to relevant government agencies.

8.3 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.

The Annual Return for the reporting period will be supplied to the EPA by registered post no 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.

8.4 Website Updates

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

<https://www.peabodyenergy.com/Operations/Australia-Mining/New-South-Wales-Mining/Wambo-Approvals,-Plans-Reports>

Information on the website will be updated regularly as required by DA 305-7-2003.

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

- Current statutory approvals;
- Approved strategies, plans or programs required under the DA 305-7-2003;
- 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.

8.4.1 Online Reporting

To address Condition 13, Schedule 6 of DA 305-7-2003, WCPL proposes to make the following information publicly available on its website:

- Daily weather forecasts for the coming week, including an assessment of the associated noise risk;
- Real-time noise and air quality monitoring data (subject to any necessary caveats); and
- Any operational responses that were taken in response to the noise monitoring data.

WCPL will make provision on its website for the provision of online and/or email comments by members of the community regarding this information.

8.5 Reportable Environmental Incidents

All reportable incidents will be reported via the EPA's Environmental Line on **131 555** by the E&C Manager in accordance with WCPL's PIRMP.

In accordance with the PIRMP, WCPL must 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 all other incidents that do not cause threatening material harm to the environment associated with the Project, WCPL will notify the 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 Secretary and any relevant agencies with a detailed report on the incident to include:

- the cause, time and duration of the event;
- 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 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.

8.6 Community Consultative Committee (CCC) Briefings

In accordance with Condition 5C (e), Schedule 4 of DA 305-7-2003, WCPL will provide summary reports and specific briefings at CCC meetings on issues arising from noise monitoring, as and when required.

9.0 Responsibilities

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

Table 12: NMP Responsibilities

No	Task	Responsibility	Timing
1	Coordinate noise monitoring program in accordance with Section 5.0	Senior Environmental Advisor	Ongoing
2	Assess noise monitoring data against relevant criteria outlined in Section 3.1	E&C Manager	Ongoing
3	Manage exceedances of noise criteria in accordance with the protocol outlined in Section 6.2	E&C Manager	As required
4	Implement the noise management measures detailed in Section 4.0	Various	As required
5	Respond to noise complaints in accordance with Section 7.0	E&C Manager	As required
6	Organise for independent reviews of noise impacts at private dwellings as required.	E&C Manager	As requested by landowners
7	Ensure Annual Review includes noise monitoring results, complaints, mitigation measures undertaken and a review of the monitoring undertaken	E&C Manager	Annually
8	Arrange regulator review of the NMP	E&C Manager	As required

10.0 References

- Development Consent (DA 305-7-2003).
- Development Consent (DA 177-8-2004).
- Environment Protection Authority (2000) NSW Industrial Noise Policy.
- Environment Protection Authority (2017) Noise Policy for Industry
- Environment Protection Licence (529).
- Environmental Planning and Assessment Act 1979.
- Downey, Gordon and Parnell, Jeffrey (2017) Assessing low frequency noise from industry – a practical approach. 12th ICBEN Congress on Noise as a Public Health Problem.
- Protection of the Environment Operations Act 1997.
- Protection of the Environment Operations (General) Regulation 2009.
- Resource Strategies Pty Ltd (2003) Wambo Coal Mine Project Environmental Impact Statement. Report prepared for Wambo Coal Pty Ltd.
- Richard Heggie and Associates Pty Ltd (2003) Wambo Coal Project Construction, Operation and Transportation Noise and Blasting Impact Assessment RHA Report 10-2470-R1 Revision 2.

APPENDIX A

NMP STATUTORY REQUIREMENTS

Approval	Condition	Requirement	Section																																																																																							
305-7-2003	S3, C13	Evidence of Consultation Where consultation with any stakeholder identified in the conditions of this approval is required by any conditions of this approval, the Applicant must: <ul style="list-style-type: none"> A) Consult with the relevant stakeholder prior to submitting the required document to the Secretary for approval; B) Submit evidence of such consultation as part of the relevant document; C) Describe how matters raised by the stakeholder have been addressed and identify any matters that have not been resolved; and d) Include details of any outstanding issues raised by the stakeholder and an explanation of disagreement between any stakeholder and the Applicant. 	1.5 and Appendix B																																																																																							
	S3, C14	Compliance The applicant must ensure that all employees, contractors and sub-contractors are aware of, and comply with, the conditions of this approval relevant to their respective activities.	4.1.2																																																																																							
	S4, C6	Noise Impact Assessment Criteria The Applicant must ensure that the noise generated by the Wambo Mining Complex does not exceed the noise impact assessment criteria presented in Table 9. <i>Table 9: Noise impact assessment criteria dB(A)</i> <table border="1"> <thead> <tr> <th>Day L_{Aeq} (15 minute)</th><th>Evening/Night L_{Aeq} (15 minute)</th><th>Night L_{A1} (1 minute)</th><th>Land Number ^</th></tr> </thead> <tbody> <tr> <td>35</td><td>41</td><td>50</td><td>94 - Curlewis</td></tr> <tr> <td></td><td></td><td></td><td>3 - Birrell</td></tr> <tr> <td></td><td></td><td></td><td>4B - Circosta</td></tr> <tr> <td></td><td></td><td></td><td>15B - McGowen / Caslick</td></tr> <tr> <td></td><td></td><td></td><td>16 - Cooper</td></tr> <tr> <td></td><td></td><td></td><td>23C - Kannar</td></tr> <tr> <td></td><td></td><td></td><td>25 - Fenwick</td></tr> <tr> <td></td><td></td><td></td><td>28A & B - Garland</td></tr> <tr> <td></td><td></td><td></td><td>33 - Thelander / O'Neill</td></tr> <tr> <td></td><td></td><td></td><td>39 - Northcote</td></tr> <tr> <td></td><td></td><td></td><td>40 - Muller</td></tr> <tr> <td></td><td></td><td></td><td>254A - Algie</td></tr> <tr> <td></td><td></td><td></td><td>5 - Strachan</td></tr> <tr> <td></td><td></td><td></td><td>6 - Merrick</td></tr> <tr> <td></td><td></td><td></td><td>7 - Maizey</td></tr> <tr> <td></td><td></td><td></td><td>37 - Lawry</td></tr> <tr> <td></td><td></td><td></td><td>48 - Ponder</td></tr> <tr> <td></td><td></td><td></td><td>1 - Brosi</td></tr> <tr> <td></td><td></td><td></td><td>17 - Carter</td></tr> <tr> <td></td><td></td><td></td><td>18 - Denney</td></tr> <tr> <td></td><td></td><td></td><td>38 - Williams</td></tr> </tbody> </table>	Day L _{Aeq} (15 minute)	Evening/Night L _{Aeq} (15 minute)	Night L _{A1} (1 minute)	Land Number ^	35	41	50	94 - Curlewis				3 - Birrell				4B - Circosta				15B - McGowen / Caslick				16 - Cooper				23C - Kannar				25 - Fenwick				28A & B - Garland				33 - Thelander / O'Neill				39 - Northcote				40 - Muller				254A - Algie				5 - Strachan				6 - Merrick				7 - Maizey				37 - Lawry				48 - Ponder				1 - Brosi				17 - Carter				18 - Denney				38 - Williams
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S4, C7		<p>Land Acquisition Criteria</p> <p>If the noise generated by the Wambo Mining Complex exceeds the criteria in Table 10, the Applicant must, upon receiving a written request for acquisition from the landowner, acquire the land in accordance with the procedures in conditions 9-11 of schedule 5.</p> <p>Table 10: Land acquisition criteria dB(A)</p> <table><tr><th>Day/Evening/Night LAeq(15 minute)</th><th>Property</th></tr><tr><td>43</td><td>94 - Curlewis 23C – Kannar 254A - Algie</td></tr><tr><td>40</td><td>All other residential or sensitive receptor, excluding the receptors listed in condition 1 above</td></tr></table> <p>Note: Noise generated by the Wambo Mining Complex is to be measured in accordance with the notes presented below Table 9 above. Property 23C - Kannar has been acquired and is now mine owned.</p>				Day/Evening/Night LAeq(15 minute)	Property	43	94 - Curlewis 23C – Kannar 254A - Algie	40	All other residential or sensitive receptor, excluding the receptors listed in condition 1 above	3.1 and 4.6
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S4, C8		<p>Operating Conditions</p> <p>The Applicant must:</p> <p>(a) implement best management practice to minimise the operational, low frequency and traffic noise of the Wambo Mining Complex:</p>				4.1						

Approval	Condition	Requirement	Section
		<p>(b) operate a comprehensive noise management system for the Wambo Mining Complex that uses a combination of predictive meteorological forecasting and real-time noise monitoring data to guide the day to day planning of mining operations and the implementation of both proactive and reactive noise mitigation measures to ensure compliance with the relevant conditions of this consent;</p> <p>(c) maintain the effectiveness of noise suppression equipment (if fitted) on plant at all times and ensure defective plant is not used operationally until fully repaired;</p> <p>(d) ensure that noise attenuated plant (if used) is deployed preferentially in locations relevant to sensitive receivers;</p> <p>(e) minimise the noise impacts of the Wambo Mining Complex during meteorological conditions when the noise limits in this consent do not apply;</p> <p>(f) co-ordinate the noise management for the Wambo Mining Complex with the noise management at nearby mines (including HVO South, HVO North and Mt Thorley Warkworth mines) to minimise the cumulative noise impacts of these mines and the Wambo Mining Complex, to the satisfaction of the Secretary.</p>	<p>4.1 to 4.3</p> <p>4.1</p> <p>4.1</p> <p>6.4</p> <p>5.6</p>
	S4, C9	<p>Noise Management Plan</p> <p>The Applicant must prepare and implement a Noise Management Plan for the Wambo Mining Complex to the satisfaction of the Secretary. This plan must:</p> <p>(a) be prepared in consultation with the EPA, and submitted to the Secretary for approval by the end of June 2013;</p> <p>(b) describe the measures that would be implemented to ensure:</p> <ul style="list-style-type: none"> • best management practice is being employed; • the noise impacts of the Wambo Mining Complex are minimised during meteorological conditions when the noise limits in this consent do not apply; and • compliance with the relevant conditions of this consent; <p>(c) describe the proposed noise management system in detail;</p> <p>(d) include a monitoring program that:</p> <ul style="list-style-type: none"> • uses a combination of real-time and supplementary attended monitoring measures to evaluate the performance of the Wambo Mining Complex; • adequately supports the proactive and reactive noise management system for the Wambo Mining Complex; • includes a protocol for determining exceedances of the relevant conditions in this consent; • evaluates and reports on the effectiveness of the noise management system for the Wambo Mining Complex; • provides for the annual validation of the noise model for the Wambo Mining Complex; and <p>(e) include a protocol that has been prepared in consultation with the owners of nearby mines (including HVO South, HVO North and Mount Thorley Warkworth mines) to minimise the cumulative noise impacts of these mines and the Wambo Mining Complex.</p> <p>The Applicant must implement the approved plan as approved from time to time by the Secretary.</p>	<p>1.5 and Appendix B</p> <p>4.0, 5.0 and 6.4</p> <p>4.0 and 5.0</p> <p>5.0, 6.0 and 8.0</p> <p>5.6</p>
	S6, C3	<p>Adaptive Management</p> <p>The Applicant must assess and manage project-related risks to ensure that there are no exceedances of the criteria and/or performance measures in schedule 4.</p>	6.0

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		<p>Any exceedances of these criteria and/or performance measures constitutes a breach of this consent and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation.</p> <p>Where any exceedance of these criteria and/or performance measures has occurred, the Applicant must, at the earliest opportunity:</p> <ul style="list-style-type: none"> (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 remediation measures as directed by the Secretary, to the satisfaction of the Secretary. 	
	S6, C4	<p>Management Plan Requirements</p> <p>The Applicant must ensure that the management plans required under this consent are prepared in accordance with any relevant guidelines, and include:</p> <ul style="list-style-type: none"> (a) detailed baseline data; (b) a description of: <ul style="list-style-type: none"> - the relevant statutory requirements (including any relevant consent, licence or lease conditions); - any relevant limits or performance measures/criteria; - the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the project or any management measures; (c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/ criteria; (d) a program to monitor and report on the: <ul style="list-style-type: none"> - impacts and environmental performance of the Wambo Mining Complex; - effectiveness of any management measures (see c above); (e) a contingency plan to manage any unpredicted impacts and their consequences; (f) a program to investigate and implement ways to improve the environmental performance of the Wambo Mining Complex over time; (g) a protocol for managing and reporting any: <ul style="list-style-type: none"> - incidents; - complaints; - non-compliances with statutory requirements; and - exceedances of the impact assessment criteria and/or performance criteria; and (h) a protocol for periodic review of the plan. 	<p>2.0</p> <p>1.5</p> <p>3.0</p> <p>0</p> <p>4.0</p> <p>5.0 and 0</p> <p>0</p> <p>4.4</p> <p>7.0 and 8.0</p> <p>8.1</p>

Approval	Condition	Requirement	Section
	S6, C6	<p>REVISION OF STRATEGIES, PLANS AND PROGRAMS</p> <p>Within 3 months of:</p> <p>(a) the submission of an annual review under Condition 5 above;</p> <p>(b) the submission of an audit report under Condition 7 below;</p> <p>(c) the submission of an incident report under Condition 10 below; or</p> <p>(d) any modification to the conditions of this consent, (unless the conditions require otherwise), the Applicant must review, and if necessary revise, the strategies, plans, and programs required under this consent to the satisfaction of the Secretary.</p> <p><i>Note: This is to ensure the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the development.</i></p>	8.1
	S6, C12	<p>ACCESS TO INFORMATION</p> <p>From the end of June 2011, the Applicant must:</p> <p>(a) make copies of the following publicly available on its website:</p> <ul style="list-style-type: none"> the documents referred to in Condition 2 of Schedule 3; all current statutory consents for the development; all approved strategies, plans and programs required under the conditions of this consent; a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs; a complaints register, updated on a monthly basis; minutes of CCC meetings; the annual reviews of the development; any independent environmental audit of the development, and the Applicant's response to the recommendations in any audit; any other matter required by the Secretary; and <p>(b) keep this information up-to-date,</p> <p>to the satisfaction of the Secretary.</p>	8.4

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	S6, C13	<p>Online Communication of Operational Responses and Noise and Air Quality Monitoring</p> <p>The Applicant must, by the end of June 2013:</p> <p>(a) make the following information for the Wambo Mining Complex publicly available on its website, on a daily basis and in a clearly understandable form:</p> <ul style="list-style-type: none">daily weather forecasts for the coming week;proposed operational responses to these weather forecasts;real-time noise and air quality monitoring data (subject to any necessary caveats); andany operational responses that were taken in response to the noise and air quality monitoring data, and <p>(b) make provision on its website for the provision of on-line and/or email comments by members of the community regarding this information, to the satisfaction of the Secretary.</p>	8.4.1										
177-8-2004	S4, C3	<p>The Applicant shall ensure that noise generated by the development, combined with noise generated by any development in the Wambo Mining Complex, does not exceed the noise criteria provided in Table 2, unless higher noise criteria are specified in the consent for the Wambo Coal Mine (DA 305- 7-2003).</p> <p><i>Table 2: Noise impact assessment criteria dB(A)</i></p> <table><tr><th><i>Day L_{Aeq} (15minute)</i></th><th><i>Evening/Night L_{Aeq} (15 minute)</i></th><th><i>Night L_{A1} (1 minute)</i></th><th><i>Land Number</i></th></tr><tr><td>35</td><td>35</td><td>50</td><td><i>All private residential or sensitive receptors, excluding the receptors listed in Table 1</i></td></tr></table> <p><i>Notes:</i></p> <ul style="list-style-type: none">Noise generated by the project is to be measured in accordance with the relevant requirements, and exemptions (including certain meteorological conditions), of the NSW Industrial Noise Policy.For this condition to apply, the exceedance of the criteria must be systemic. <p><i>Table 1: Land Subject to Acquisition Upon Request</i></p> <table><tr><td>19 – L Kelly</td><td>55 - E & C Burley</td></tr></table>	<i>Day L_{Aeq} (15minute)</i>	<i>Evening/Night L_{Aeq} (15 minute)</i>	<i>Night L_{A1} (1 minute)</i>	<i>Land Number</i>	35	35	50	<i>All private residential or sensitive receptors, excluding the receptors listed in Table 1</i>	19 – L Kelly	55 - E & C Burley	3.1
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S4, C6	<p>Rail Noise</p> <p>The Applicant shall seek to ensure that its rail spur is only accessed by locomotives that are approved to operate on the NSW rail network in accordance with noise limits L6.1 to L6.4 in RailCorp's EPL (No. 12208) and ARTC's EPL (No. 3142) or a Pollution Control Approval issued under the former <i>Pollution Control Act 1970</i>.</p>	4.1.3											
S4, C7, 7A-7B	<p>Noise Monitoring</p> <p>7. The Applicant shall monitor the noise generated by the development, and noise generated by the Wambo Mine, in general accordance with the Noise Management Plan for the Wambo Mining Complex and the <i>NSW Industrial Noise Policy</i>.</p> <p>7A. By 31 May 2012, the Applicant shall review and update the Noise Management Plan for the Wambo Mining Complex, including a noise monitoring protocol for evaluating compliance with the criteria in condition 3 above.</p> <p>7B. During the first 12 months of operation of the Rail Refuelling Facility, the Applicant must conduct attended noise monitoring at the nearest private receptor during refuelling events, no less often than every three months.</p>	5.3											

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EPL 529	L4 Noise Limits	<p>L4.1 Noise generated at the premises must not exceed the noise limits presented in the table below. The noise limits in the table below represent the noise contribution from the premises.</p> <p>Noise Limits dB(A)</p> <table> <tr> <th>Day L_{Aeq} (15 minute)</th><th>Evening/Night L_{Aeq} (15 minute)</th><th>Night L_{A1} (1 minute)</th><th>Receiver Land Number</th></tr> <tr> <td>35</td><td>41</td><td>50</td><td>94 - Curlewis</td></tr> <tr> <td></td><td></td><td></td><td>3 - Birrell</td></tr> <tr> <td></td><td></td><td></td><td>4B - Circosta</td></tr> <tr> <td></td><td></td><td></td><td>15B - McGowen / Caslick</td></tr> <tr> <td></td><td></td><td></td><td>16 - Cooper</td></tr> <tr> <td>35</td><td>40</td><td>50</td><td>25 - Fenwick</td></tr> <tr> <td></td><td></td><td></td><td>28 - Garland</td></tr> <tr> <td></td><td></td><td></td><td>33 - Thelander / O'Neill</td></tr> <tr> <td></td><td></td><td></td><td>39 - Northcote</td></tr> <tr> <td></td><td></td><td></td><td>40 - Muller</td></tr> <tr> <td></td><td></td><td></td><td>254 - Algie</td></tr> <tr> <td>35</td><td>39</td><td>50</td><td>5 - Strachan</td></tr> <tr> <td></td><td></td><td></td><td>6 - Merrick</td></tr> <tr> <td></td><td></td><td></td><td>7 - Maizey</td></tr> <tr> <td></td><td></td><td></td><td>37 - Lawry</td></tr> <tr> <td></td><td></td><td></td><td>48 - Ponder</td></tr> <tr> <td>35</td><td>38</td><td>50</td><td>1 - Brosi</td></tr> <tr> <td></td><td></td><td></td><td>17 - Carter</td></tr> <tr> <td></td><td></td><td></td><td>18 - Denney</td></tr> <tr> <td></td><td></td><td></td><td>30 - Williams</td></tr> <tr> <td></td><td></td><td></td><td>49 - Oliver</td></tr> <tr> <td></td><td></td><td></td><td>63 - Abrocuff</td></tr> <tr> <td></td><td></td><td></td><td>75 - Barnes</td></tr> <tr> <td></td><td></td><td></td><td>91 - Bailey</td></tr> <tr> <td>35</td><td>37</td><td>50</td><td>27 - Birralee</td></tr> <tr> <td></td><td></td><td></td><td>43 - Carmody</td></tr> <tr> <td></td><td></td><td></td><td>137 - Woodruff</td></tr> <tr> <td></td><td></td><td></td><td>163 - Rodger / Williams</td></tr> <tr> <td></td><td></td><td></td><td>246 - Bailey</td></tr> <tr> <td>35</td><td>36</td><td>50</td><td>13B - Skinner</td></tr> <tr> <td></td><td></td><td></td><td>178 - Smith</td></tr> <tr> <td></td><td></td><td></td><td>188 - Fuller</td></tr> <tr> <td></td><td></td><td></td><td>262 - Moses</td></tr> <tr> <td>35</td><td>35</td><td>50</td><td>All other residential or sensitive receptors</td></tr> </table>	Day L _{Aeq} (15 minute)	Evening/Night L _{Aeq} (15 minute)	Night L _{A1} (1 minute)	Receiver Land Number	35	41	50	94 - Curlewis				3 - Birrell				4B - Circosta				15B - McGowen / Caslick				16 - Cooper	35	40	50	25 - Fenwick				28 - Garland				33 - Thelander / O'Neill				39 - Northcote				40 - Muller				254 - Algie	35	39	50	5 - Strachan				6 - Merrick				7 - Maizey				37 - Lawry				48 - Ponder	35	38	50	1 - Brosi				17 - Carter				18 - Denney				30 - Williams				49 - Oliver				63 - Abrocuff				75 - Barnes				91 - Bailey	35	37	50	27 - Birralee				43 - Carmody				137 - Woodruff				163 - Rodger / Williams				246 - Bailey	35	36	50	13B - Skinner				178 - Smith				188 - Fuller				262 - Moses	35	35	50	All other residential or sensitive receptors	3.1
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Approval	Condition	Requirement				Section
					excluding the receptors listed above and also excluding those listed in Table 1 of Schedule 4 of the Wambo Coal Mine Development Consent (DA 305-7-2003).	
		<p>L4.2 For the purpose of Condition L4.1:</p> <p>a) Day is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sundays and Public Holidays,</p> <p>b) Evening is defined as the period from 6pm to 10pm</p> <p>c) Night is defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sundays and Public Holidays</p> <p>d) The Receiver Land Owner locations are as detailed in the Environmental Impact Statement titled "<i>Wambo Development Project</i>", Volumes 1-5 dated July 2003 and prepared by Resource Strategies Pty Ltd.</p> <p>L4.3 Noise from the premises is to be measured at the most affected point or within the residential boundary or at the most affected point within 30m of the dwelling (rural situations) where the dwelling is more than 30m from the boundary to determine compliance with the LAeq(15 minute) noise limits in condition L4.1.</p> <p>Where it can be demonstrated that direct measurement of noise from the premises is impractical, the EPA may accept alternative means of determining compliance. See Chapter 11 of the NSW Industrial Noise Policy.</p> <p>The modification factors presented in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured noise levels where applicable.</p> <p>L4.4 Noise from the premises is to be measured at 1m from the dwelling façade to determine compliance with the LA1(1minute) noise limit in condition L4.1.</p> <p>L4.5 The noise emission limits identified in condition L4.1 apply under meteorological conditions of:</p> <p>a) Wind speeds of up to 3m/s at 10 metres above the ground level; or</p> <p>b) Temperature inversion conditions of up to 3°C/100m and wind speeds of up to 2m/s at 10 metres above the ground.</p>				<p>3.1</p> <p>5.3</p> <p>5.3</p> <p>3.1</p>

APPENDIX B

CORRESPONDENCE WITH REGULATORY AGENCIES

Date	Stakeholder	Consultation Method	Matter Raised	How addressed in this NMP
8 Jan 2018	DP&E	Email	1. In Table 1 (pg 1) please update the life of mine to reflect the different cessation dates of the underground and open cut operations.	Table 1 updated to reflect the different cessation dates of the underground and open cut operations.
			2. In late October 2017 <i>the Noise Policy for Industry</i> was introduced. There are transitional arrangements in place and for now the NSW Industrial Noise Policy (2000) continues to apply to the Wambo Complex with the exception of the INP Section 4 modifying factors (i.e. low frequency noise). Please review all discussion of low frequency noise and update to reflect the approach discussed in Fact Sheet C of the <i>Noise Policy for Industry 2017</i> .	Section 1.4 updated to reflect changes to policies for industrial noise. Sections 5.3 and 6.1 updated to reflect changes to attended noise monitoring requirements.
			3. Imprecise language used in the plan such as “where possible”, “regular” and “appropriate” must be replaced by specific commitments and actions.	Imprecise language has been reviewed and replaced as required.
			4. There are a couple referencing errors/typos on pages 12 and 18.	Errors on pages 12 and 18 have been rectified.
			5. I note that while condition 4 of Schedule 6 is listed in Appendix A, however conditions 6, 12 and 13 are also relevant to the Noise Management Plan. Please include these conditions and ensure they are addressed in the relevant sections of the Noise Management Plan.	Conditions 6, 12 and 13 of Schedule 6 have been included in Appendix A and relevant sections of the NMP have been revised to address these conditions.
17 Jan 2018	DP&E	Telephone and Email	Submission and approval of the Wambo Noise Management Plan given the recent approval of Wambo Mod 17: <u>Option A:</u> Continue with the review/approval of Revision 8 of the Wambo Noise Management Plan, and review/submit a revision by 20 March 2018 to accommodate changes as a result of Mod 17. <u>Option B:</u> Submit a revised Wambo Noise Management Plan that incorporates a review/update as a result of Mod 17.	Option B: WCPL has reviewed/revised the NMP to ensure it addresses the conditions of the recently modified DA305-7-2003 (MOD17). All relevant DA conditions are included in Appendix A and addressed in this version of the NMP.



**Planning &
Environment**

Planning Services

Resource Assessments

Contact: Melanie Hollis

Phone: 8217 2043

Email: melanie.hollis@planning.nsw.gov.au

Merri Bartlett
Environmental Advisor - Peabody
Wambo Coal Pty Ltd
PMB 1
Singleton NSW 2330

Dear Ms Bartlett,

**Wambo Coal Mine (DA 305-07-2003)
Noise Management Plan**

I refer to your correspondence of 15 February 2018 requesting the Secretary's approval of an updated Noise Management Plan (Revision 8, dated 25 January 2018) for the Wambo Coal Mine (DA 305-07-2003).

The Department has reviewed the revised Noise Management Plan and is satisfied that the plan meets the requirements of condition 9 of Schedule 4 of DA 305-07-2003. As such, I wish to advise that the Secretary approves this plan.

Please ensure a finalised copy of this plan is made available on your website.

Should you have any enquiries in relation to this matter, please contact Melanie Hollis at the details listed above.

Yours sincerely,

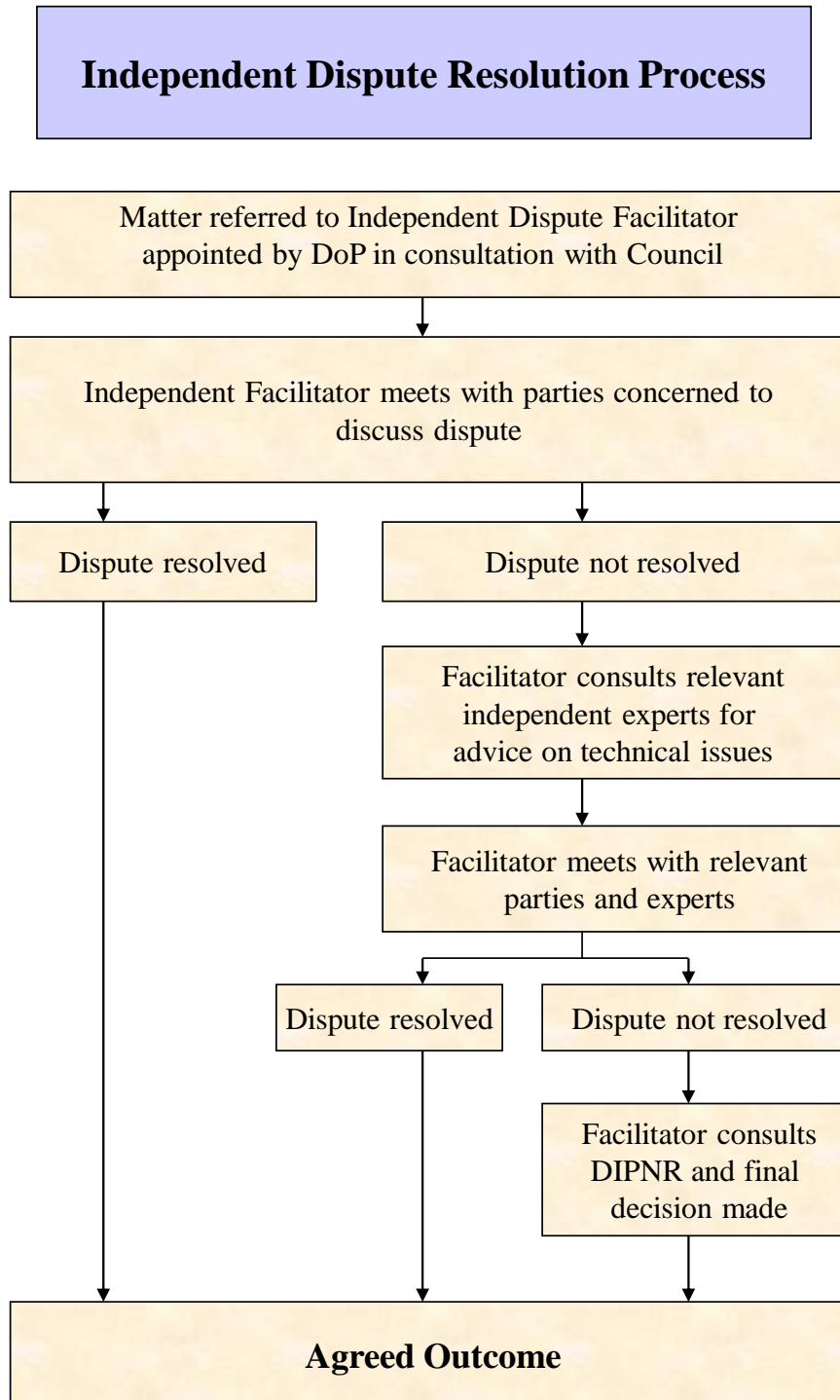


15/2/18

Megan Dawson
Acting Director
Resource Assessments
As nominee of the Secretary

APPENDIX C

INDEPENDENT DISPUTE RESOLUTION PROCESS



APPENDIX D

SUMMARY OF NMP COMMITMENTS

Note: The list of commitments in this appendix is in addition to those explicitly required by Development Consent or EPL conditions.

NMP Section	Commitment	Timing
4.1.1	Design waste rock emplacement areas in a manner to enable mining equipment to operate in protected areas during adverse weather conditions which may increase the propagation of noise emission from the Mine.	As required
4.1.1	Implement low level dumping procedures where available when conditions indicate possible increased noise propagation and/or when real time noise monitor trigger alarms indicate that noise is sourced from the Mine.	Ongoing
4.1.1	Investigate the installation of acoustic barriers around work areas where required (e.g. exploration drill rigs which are located close to sensitive receivers).	Ongoing
4.1.1	Undertake an acoustical design review prior to the construction of the two most southern ventilation shafts required for the South Wambo Underground Mine and implement noise mitigation to achieve compliance with the relevant noise criteria at nearby privately-owned receivers.	When required
4.1.2	Maintenance of plant and equipment and pre-start up inspections.	Ongoing
4.1.2	Operation of all machinery and potential noise emitting plant and equipment by experienced and trained personnel.	Ongoing
4.1.2	Installation of an inaudible horn system ("Hornless Horns") across the entire open cut fleet to eliminate the use of audible horns.	As required
4.1.2	Installation of broadband reverse alarms ("quackers") to mitigate noise propagation from reversing fleet vehicles.	As required
4.1.2	Positioning of portable generators and/or machinery to take advantage of barriers to mitigate sound travel and/or positioned at the greatest distance from the noise-sensitive area where practical.	As required
4.1.2	Turning off or throttling plant and equipment down when not in use.	Ongoing
4.1.2	Scheduling the use of noisy equipment at the least sensitive time of day wherever practical.	Ongoing
4.1.2	Orienting equipment so that noise emissions are directed away from any sensitive areas to achieve the maximum attenuation of noise.	Ongoing
4.1.2	During adverse conditions restricting heavy vehicle traffic on exposed haul roads and access tracks where noise can propagate over a wide area, especially at night.	As required
4.1.2	Where there are several noisy pieces of equipment, scheduling operations so they are used separately rather than concurrently.	As required
4.1.2	Parking haul trucks in pit during crib breaks.	Ongoing
4.1.2	During site inductions, providing employees and contractors with information and training on: potential noise impacts on neighbouring residents; reporting excessive noise to WCPL management; and carrying out quiet work practices.	Ongoing
4.1.2	Providing employees and contractors with toolbox talks on slowing down when driving to and leaving site to minimise traffic noise.	As required (e.g. following a complaint or incident)
4.1.2	Conducting specific noise management training for key WCPL operational personnel.	As required
4.1.2	Procuring all new equipment to site (purchased or hired) in line with EIS plant and mobile sound power level (SWL) specifications for noise emissions to meet noise criteria at the residences nearest the Mine and to ensure that operations are generally in accordance with the EIS modelled noise footprint.	As required
4.1.2	Where feasible, examining engineering controls including noise attenuation for trucks, drills and diggers that are potentially generating significant noise and which may impact on sensitive receivers.	As required

NMP Section	Commitment	Timing
4.1.2	Non mine related construction activities will generally be undertaken between 7.00 am and 7.00 pm daily. Construction activities may occur outside these hours when WCPL is satisfied that such activities are inaudible at nearest private residences on advice from a WCPL appointed acoustic specialist.	As required
4.2	7 day meteorological forecasts from Weatherzone to be reviewed and operational responses implemented where unfavourable meteorological conditions are identified.	Ongoing
4.2	Production Superintendent Open Cut to communicate meteorological forecasts to relevant operation unit managers in Pre-Start-Information (PSI) sessions.	Ongoing
5.2 and 6.4.1	Key operational personnel to monitor the real time noise monitoring network and implement the Trigger Action Response Plan (TARP) for Level 2 and Level 3 alarms and in response to community complaints.	Ongoing
5.1	Undertake attended noise monitoring locations at six monitoring locations (N01, N03, N16, N20A, N21, N26A).	Monthly
5.6	If a real time monitor measures a Level 3 alarm, and upon investigation and validation of the alarm the source of noise mining noise found to be another site (i.e. HVO South, HVO North and/or Mount Thorley Warkworth Mines), provide notification to the relevant operation.	As required
6.4.1 and 7.0	Respond to community complaints in accordance with the NMP procedures.	As required