UNITED WAMBO
JOINT VENTURE

GLENCORE

Noise Management Plan (draft v7)

Executive Summary

This Noise Management Plan (NMP) has been developed to address noise related requirements of ***SSD 7142*** and ***Environment Protection Licence (EPL) 3141*** as relevant to open cut mining operations associated with the United Wambo Open Cut Coal Mine Project (United Wambo).

The key management and mitigation measures contained within the NMP are included in ***Table ES - 1***.

Table ES -1

No	Mitigation Measure	Timing
1	United Wambo will incorporate reasonable and feasible noise attenuation on key items of plant and equipment that will be reused from the current Wambo Open Cut operations or other controls achieving the same overall noise outcome.	As required
2	United Wambo will include reasonable and feasible noise attenuation measures on new plant and equipment that has the potential to contribute to the Project's noise level.	As required
3	United Wambo will use 'silent horns' or equivalent technology when practicable to communicate with trucks and smart broadband 'Quacker' reversing alarms.	Ongoing
4	United Wambo will include bunds in strategic locations along haul roads, where practicable, to shield trucks and equipment on exposed sections of the haul road ramps.	Ongoing
5	United Wambo will locate key haul roads below ground surface or topographical features to maximise shielding to surrounding receiver areas, where practicable.	Ongoing
6	United Wambo will design emplacement areas to create sheltered dumping locations that can be used during adverse weather conditions where feasible and practicable.	Ongoing
7	United Wambo will manage the drop height of the first load into truck bodies to minimise impact noise from the material.	Ongoing
8	United Wambo will provide noise management training for key employees to facilitate effective noise management (***Section 10.6***).	As required
9	United Wambo will offer reasonable and feasible noise mitigation measures, which may include measures such as double glazing, insulation or air conditioning, to landowners in the active noise management zone (***Section 10.2***).	As required
10	United Wambo will undertake regular inspection and maintenance of noise attenuation systems	Ongoing

No	Mitigation Measure	Timing
11	United Wambo will implement a process for periodic review of noise performance of the equipment fleet	3 year rolling period
12	United Wambo will implement systems that identify adverse meteorological conditions which are likely to result in elevated noise impacts	Ongoing
13	United Wambo will implement an appropriate real time meteorology and noise monitoring program that will enable real time management of operations during adverse noise propagating conditions.	Ongoing
14	United Wambo will relocate or shut down acoustically significant equipment during adverse meteorological conditions if real time noise monitoring indicates potential noise impact (***Section 11.1.2***).	As required
15	United Wambo will limit the activities of ancillary equipment in exposed locations under adverse meteorological conditions if real time noise monitoring indicates potential noise impact.	As required
16	United Wambo will progressively shut down or relocate production machines in elevated locations under adverse meteorological conditions if real time noise monitoring indicates potential noise impact.	As required

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1. Project Description

The United Wambo Open Cut Coal Mine (United Wambo) is situated approximately 15 kilometres west of Singleton, near the village of Warkworth, New South Wales (***Figure 1-1***). United Wambo is a 50:50 joint venture between:

- United Collieries Pty Limited (United) - owned 95 per cent by Abelshore Pty Limited, a wholly owned subsidiary of Glencore Coal Pty Limited (Glencore) and five per cent by the Construction, Forestry, Maritime, Mining and Energy Union (CFMMEU); managed by Glencore; and
- Wambo Coal Pty Limited (Wambo), a subsidiary of Peabody Energy Australia Pty Limited (Peabody).

The United Wambo Open Cut Coal Mine is approved to extract up to 10 million tonnes per annum (Mtpa) of run-of-mine (ROM) coal from the combined operations of the United and Wambo Open Cuts up until 31 August 2042. The open cut delivers ROM coal to the Wambo coal handling and preparation plant (CHPP), along with coal deliveries from the Wambo underground. A maximum of 15 Mtpa of product coal is approved to be transported by rail from Wambo to the Port of Newcastle for export.

United Wambo operates under the State Significant Development Consent (SSD 7142) approved by the Independent Planning Commission of NSW on 29 August 2019. United Wambo subsequently received Controlled Action Approval EPBC 2015/7600 from the former *Department of Environment and Energy* (now the *Department of Climate Change, Energy, the Environment and Water, DCCEEW*) on 5 December 2019.

Approval for a modification to SSD 7142 was granted on 24 November 2021 by the former *Department of Planning, Industry and Environment* (now the *Department of Planning and Environment*, DPE). This modification included changes to the ROM coal stockpile and administrative changes.

Open cut mining at United Wambo is managed by Glencore on behalf of the JV. The Wambo Underground, CHPP and train loading facilities are managed by Peabody under Development Consents DA 305-7-2003 and DA 177-8-2004.

Figure 1-1: Project Locality

2. Purpose

The purpose of this Noise Management Plan (NMP) is to describe the noise management and mitigation strategies, procedures, controls and monitoring programs that will be implemented to manage noise emissions from open cut operations at United Wambo in accordance with relevant regulatory requirements.

The NMP is intended to meet statutory and internal requirements, particularly the Glencore Coal Assets Australia (GCAA) Standards, ***Development Consent SSD 7142*** and the ***Environment Protection Licence (EPL) 3141***, as documented in ***Section 4***.

The NMP has been prepared with consideration of the ***Department of Planning, Industry and Environment (DPIE) draft Post Approval Environmental Management Plan Requirements (DPIE, October 2017).***

This NMP helps to demonstrate Glencore's commitment to minimising impacts on the environment and community in which it operates.

3. Scope

The NMP applies to all United Wambo employees, and contractors working for, or on behalf of, United Wambo within the project approval boundary. This NMP forms part of United Wambo's Environmental Management System (EMS) and should be read in conjunction with the United Wambo ***Environmental Management Strategy.***

This Noise Management Plan (NMP) applies to Phase 2 operational activities at United Wambo and addresses the relevant conditions of ***SSD 7142*** and ***EPL 3141*** as detailed in ***Section 4***.

This NMP excludes the operations at the Wambo underground mine, CHPP, and train loading facility. These activities will continue to be managed by Wambo in accordance with the relevant development consent conditions. This NMP contains a protocol for the allocation of individual noise contributions to the United Wambo and Wambo mines.

4. Statutory Requirements

This NMP has been prepared to fulfil the noise related requirements of ***SSD 7142*** and ***EPL 3141***.

4.1 Environmental Planning and Assessment Act 1979

United Wambo received ***SSD 7142*** in accordance with Part 4 of the *Environmental Planning & Assessment Act 1979 (EP&A Act)* from the Independent Planning Commission (IPC) on 29 August 2019 and modified as per Modification 1 approved on 24 November 2021. Conditions within ***SSD 7142*** relating to noise management are provided in ***Table 4-1***.

Table 4-1: SSD 7142 Requirements for Noise Management

Condition	Condition Details	NMP Section
B4	a) take all reasonable steps to minimise all noise from construction and operational activities, including low frequency noise and other audible characteristics, as well as road noise associated with the development, particularly during Phase 1B;	***Section 10***
B4	b) implement reasonable and feasible noise attenuation measures on all new plant and equipment that will operate in noise sensitive areas;	***Table 10-1***
B4	c) monitor and record all major equipment use and make this data readily available at the request of the Department or the EPA;	***Section 10.4.1***
B4	d) operate a comprehensive noise management system that uses a combination of predictive meteorological and noise forecasting and real-time monitoring 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;	***Section 10*** ***Section 11***
B4	e) take all reasonable steps to minimise the noise impacts of the development during noise-enhancing meteorological conditions when the noise criteria in this consent do not apply (see ***Appendix 4*** of ***SSD 7142***); and	***Section 10.3*** ***Table 10-1***
B4	f) carry out regular attended noise monitoring (at least once a month, unless otherwise agreed by the Planning Secretary) to determine whether the development is complying with the relevant conditions of this consent.	***Section 11.2***
B5	Noise Management Plan The Applicant must prepare and implement a Noise Management Plan for the development to the satisfaction of the Secretary. This plan must:	
B5	a) be prepared by a suitably qualified and experienced person/s;	***Section 7***
B5	b) be prepared in consultation with the EPA,	***Section 6***
B5	c) describe the measures that would be implemented to ensure:	
B5	i compliance with the noise criteria and operating conditions of this consent;	***Section 10*** ***Section 11***
B5	ii best practice management is being employed; and	***Section 10***
B5	iii noise impacts of the development are minimised during noise-enhancing meteorological conditions under which the noise criteria in this consent do not apply (see ***Appendix 4*** of ***SSD 7142***);	***Section 10.3***

Condition	Condition Details	NMP Section
B5	d) seek to minimise road traffic noise generated by employee commuter vehicles on public roads	***Section 10.6***
B5	e) describe the proposed noise management system in detail; and	***Section 10*** ***Section 11***
B5	f) include a monitoring program that:	
B5	i uses a combination of real-time and supplementary attended monitoring to evaluate the performance of the development;	***Section 11***
B5	ii includes a program to calibrate and validate the real-time noise monitoring results with the attended monitoring results over time	***Section 11.1.3***
B5	iii adequately supports the noise management system;	***Section 11***
B5	iv includes a protocol for distinguishing noise emissions of the development and the Wambo Mining Complex; and	***Section 11.3***
B5	v includes a protocol for identifying any noise-related exceedance, incident, or non-compliance and for notifying the Department and relevant stakeholders of any such event.	***Section 13.2***
C2	The Applicant must ensure that the construction noise from Phase 1A does not exceed the operational noise criteria in Table 1, except where an alternative temporary limit has been approved by the Planning Secretary for specific works or where the Applicant has an agreement with the owner/s of the relevant residence/land to generate higher noise levels, and the Applicant has advised the Department in writing of the terms of this agreement.	***Section 9.1*** ***Construction Environmental Management Plan***
E5	**Management Plan Requirements** The Applicant must ensure that the management plans required under this consent are prepared in accordance with any relevant guidelines, and include where relevant:	
E5	a) summary of relevant background or baseline data;	***Section 9***
E5	b) details of:	
E5	i the relevant statutory requirements (including any relevant approval, licence or lease conditions);	***Section 4***
E5	ii any relevant limits or performance measures and criteria; and	***Section 9***
E5	iii the specific performance indicators that are proposed to be used to judge the performance of, or guide the	***Section 9***

Condition	Condition Details	NMP Section
	implementation of, the development or any management measures;	
E5	c) any relevant commitments or recommendations identified in the document/s listed in condition A2(c) of ***SSD 7142***;	***Section 10***
E5	d) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria;	***Section 10***
E5	e) a program to monitor and report on the:	
E5	i impacts and environmental performance of the development	***Section 11*** ***Section 14***
E5	ii effectiveness of the management measures set out pursuant to paragraph "d)";	***Section 11*** ***Section 14***
E5	f) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;	***Section 12.1***
E5	g) a program to investigate and implement ways to improve the environmental performance of the development over time;	***Section 12.2***
E5	h) a protocol for managing and reporting any:	
E5	i incident, non-compliance or exceedance of any impact assessment criterion and performance criterion;	***Section 13.2***
E5	ii complaint; or	***Section 13.1***
E5	iii failure to comply with other statutory requirements; and	***Section 13.2***
E5	iv a protocol for periodic review of the plan.	***Section 14.2***
E5	*Note: The Planning Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans*.	

4.2 Protection of the Environment Operations Act 1997

United Wambo operates under the ***Environment Protection Licence (EPL) No. 3141*** issued by the EPA under the authority of the ***Protection of the Environment Operations Act 1997 (POEO Act)***. Conditions within ***EPL 3141*** that regulate noise at the United Wambo are provided in ***Table 4-2*****.**

Table 4-2: EPL 3141 Requirements for Noise Management

Condition	Condition Details	NMP Section
Schedule 5 Condition M2	M2.4 The Licensee must use real-time data from the meteorological station (EPA Point 3) to calculate real-time stability class for the purpose of managing noise generated on the premises and for noise compliance monitoring against noise limits, in accordance with the ***EPAs Noise Policy for Industry (2017).***	***Section 11.1***
Schedule 5 Condition M9	M9 Noise monitoring M9.1 To assess compliance with condition L3.1, attended noise monitoring must be undertaken in accordance with Conditions L3.2 to L3.4: a) at the EPA points 12,13,14,15,16 and 17 identified in P1.3; and b) occur every calendar month in a reporting period; and c) occur during one night time period as defined in ***the Noise Policy for Industry 2017*** for a minimum of 15 minutes at each location from a), and when relevant b) during the night. M9.2 For the purposes of compliance monitoring and determining the noise generated at the premises the modification factors in the EPA's Fact Sheet C of the ***Noise Policy for Industry (2017)*** must be applied, as appropriate, to the noise levels measured by noise monitoring equipment. *Definitions* Noise refers to 'sound pressure levels' for the purpose of conditions L3.1 to L.3.4 and condition M9 M9.3 Where required in writing by the EPA, the Licensee must carry out attended monitoring at sensitive receivers in addition the monitoring required by Condition M9.1.	***Section 11***
Schedule 8 Condition E2	E2 Noise Compliance Methodology E2.1 The Licensee must develop and implement a noise compliance methodology for distinguishing the noise emissions of the Premises from Wambo Mine and Hunter Valley Operations. The methodology must: a) be prepared by an appropriate qualified and experienced acoustic specialist; and b) be provided to the EPA for an inclusion as a Licence condition, by 30 June 2020.	***Section 11.3***

<table>
<tr><th>Condition</th><th>Condition Details</th><th>NMP Section</th></tr>
<tr><td>Schedule 3 Condition P1</td><td>Location of monitoring/discharge points and areas
P1.1 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.
P1.2 The following points referred to in the table below are identified in this licence for the purposes of monitoring and/or the setting of limits for the emission of pollutants to the air from the point.
P1.4 The following points referred to in the table below are identified in this licence for the purposes of weather and/or noise monitoring and/or setting limits for the emission of noise from the premises.
Noise/Weather
<table>
<tr><th>EPA identi-fication no.</th><th>Type of monitoring point</th><th>Location description</th></tr>
<tr><td>3</td><td>Meteorological Station – to determine meteorological conditions for noise monitoring</td><td>Meteorological Station at co-ordinates 321259, 6397526 (Easting, Northing) identified as WS2 on Figure 2.</td></tr>
<tr><td>12</td><td>Noise monitoring</td><td>Noise Monitoring Point in NMG1 at co-ordinates 313354, 6388694 (Easting, Northing) identified as NM01 on Figure 1.</td></tr>
<tr><td>13</td><td>Noise monitoring</td><td>Noise Monitoring Point in NMG2 at co-ordinates 310491, 6390223 (Easting, Northing) identified as NM02 on Figure 1.</td></tr>
<tr><td>14</td><td>Noise monitoring</td><td>Noise Monitoring Point in NMG4 at co-ordinates 3318616, 6398438 (Easting, Northing) identified as NM04 on Figure 1.</td></tr>
<tr><td>15</td><td>Noise monitoring</td><td>Noise Monitoring Point in NMG5 at co-ordinates 306001, 6399786 (Easting, Northing) identified as NM05 on Figure 1.</td></tr>
<tr><td>16</td><td>Noise monitoring</td><td>Noise Monitoring Point in NMG6 at co-ordinates 304172, 6398160 (Easting, Northing) identified as NM06 on Figure 1.</td></tr>
<tr><td>17</td><td>Noise monitoring</td><td>Noise Monitoring Point in NMG7 at co-ordinates 304666, 6399100 (Easting, Northing) identified as NM07 on Figure 1.</td></tr>
<tr><td>18</td><td>Air blast overpressure & ground vibration peak particle velocity monitoring</td><td>Blast Monitoring Point at co-ordinates 314120, 6394560 (Easting, Northing) identified as BM02 on Figure 1.</td></tr>
</table></td><td>Section 11
Figure 11-1</td></tr>
</table>

<table>
<tr><th>Condition</th><th>Condition Details</th><th>NMP Section</th></tr>
<tr><td></td><td>
<table>
<tr><td>19</td><td>Air blast overpressure & ground vibration peak particle velocity monitoring</td><td>Blast Monitoring Point at co-ordinates 311155, 6390609 (Easting, Northing) identified as BM03 on Figure 1.</td></tr>
<tr><td>20</td><td>Air blast overpressure & ground vibration peak particle velocity monitoring</td><td>Blast Monitoring Point at co-ordinates 305999, 6399768 (Easting, Northing) identified as BM05 on Figure 1.</td></tr>
<tr><td>21</td><td>Air blast overpressure & ground vibration peak particle velocity monitoring</td><td>Blast Monitoring Point at co-ordinates 304496, 6398655 (Easting, Northing) identified as BM07 on Figure 1.</td></tr>
<tr><td>22</td><td>Air blast overpressure & ground vibration peak particle velocity monitoring</td><td>Blast Monitoring Point at co-ordinates 317931, 6397826 (Easting, Northing) identified as BM08 on Figure 1.</td></tr>
</table>
</td><td></td></tr>
<tr><td>Schedule 3 Condition L3</td><td>
L3 Noise limits

L3.1 Noise generated at the premises must not exceed the noise limits presented in the table below.
<table>
<tr><th>Location</th><th>Day LAeq(15min)</th><th>Evening LAeq(15min)</th><th>Night LAeq(15min)</th><th>Night LA1(1min)</th></tr>
<tr><td>EPA Point 12 in NAG1</td><td></td><td>36</td><td>36</td><td>46</td></tr>
<tr><td>EPA Point 13 in NAG2</td><td></td><td></td><td>38</td><td>48</td></tr>
<tr><td>EPA Point 14 in NAG4</td><td></td><td></td><td>41</td><td>51</td></tr>
<tr><td>EPA Point 15 in NAG5</td><td></td><td></td><td>46</td><td>56</td></tr>
<tr><td>EPA Point 16 in NAG6</td><td></td><td></td><td>39</td><td>49</td></tr>
<tr><td>EPA Point 17 in NAG7</td><td></td><td></td><td>40</td><td>50</td></tr>
<tr><td>Residence 003 in NAG1</td><td>38</td><td>36</td><td>36</td><td>46</td></tr>
<tr><td>Residence 006 in NAG1</td><td>37</td><td>35</td><td>35</td><td>45</td></tr>
<tr><td>Residence 007 & 379 in NAG1</td><td>36</td><td>35</td><td>35</td><td>45</td></tr>
<tr><td>All other private residences in NAG1, NAG2 & NAG6</td><td>35</td><td>35</td><td>35</td><td>45</td></tr>
<tr><td>Residence 025 in NAG2</td><td>39</td><td>38</td><td>38</td><td>48</td></tr>
<tr><td>All private residences in Area 3</td><td>44</td><td>44</td><td>43</td><td>53</td></tr>
<tr><td>All private residences in NAG4</td><td>42</td><td>42</td><td>41</td><td>51</td></tr>
<tr><td>Residence 039</td><td>46</td><td>46</td><td>46</td><td>56</td></tr>
</table>
</td><td>Section 9.1</td></tr>
</table>

Condition	Condition Details					NMP Section
	in NAG5					
	Residence 016 in NAG5	45	45	45	55	
	Residence 017 in NAG5	44	44	44	54	
	Residence 043 in NAG5	43	43	43	53	
	Residence 050C in NAG5	41	41	41	51	
	Residence 050A in NAG5	41	40	40	50	
	Residence 044 in NAG5	41	40	39	49	
	All other private residences in NAG5	41	40	38	48	
	Residence 320 in NAG6	40	40	40	50	
	Residence 033 & 343 in NAG6	40	40	39	49	
	Residence 042 in NAG6	40	40	38	48	
	Residence 029 & 345 in NAG6	40	40	37	47	
	Residence 048 in NAG6	39	39	39	49	
	Residence 030, 049 & 163 in NAG6	39	39	38	48	
	Residence 075 in NAG6	39	39	37	47	
	Residence 041B in NAG6	38	38	38	48	
	Residence 344 & 346 in NAG6	38	38	37	47	
	Residence 348 in NAG6	38	38	36	46	
	Residence 041A in NAG6	37	37	37	47	
	All privately owned residences in NAG7	40	40	36	46	
	L.3.2 For the purposes of condition L3.1: a) Residences referenced in this table are from consent ***SSD-7142*** United Wambo Open Cut Coal Mine dated 29 August 2019 EPA Reference DOC19/1043296 and the document titled ***"United Wambo Open Cut Coal mine Project noise Impact Assessment"***: by ***UMWELT*** dated July 2016 EPA Reference DOC19/1079039; and b) Noise Monitoring Groups in this table are referenced in ***Figure 1*** titled ***"United Wambo Joint Venture*** Project Environmental Protection Licence 3141 Plan of Premises" dated 4/12/2019 EPA Reference DOC19/1043296-5 and shape files EPA Reference DOC19/1043296-1.					

Condition	Condition Details	NMP Section
	L3.3 For the purposes of Condition L3.1: a) Day is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sundays and Public Holidays, b) Evening is defined as the period from 6pm to 1Opm, and c) Night is defined as the period from 1Opm to 7am Monday to Saturday and 1Opm to 8am Sundays and Public Holidays L3.4 The noise limits set out in condition L3.1 apply under all meteorological conditions except for the following: a) Wind speeds greater than 3 metres/second at 10 metres above the ground level; b) Stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level; or c) Stability category G temperature inversion conditions. L3.5 For the purposes of condition L3.3: a) Data recorded by the meteorological station installed on the premises at EPA Identification Point 3 must be used to determine meteorological conditions; and b) Temperature inversion conditions (stability category) are to be determined by the methods referred to in ***Fact Sheet D of the Noise Policy for Industry (2017).***	
Schedule 6 Condition R5	Noise Compliance Assessment Report RS.6 A report containing the monitoring results of noise compliance monitoring specified in this Licence must be submitted annually with the Annual Return.	***Section 11.5***
Schedule 8 Condition E2	E2 Noise Compliance Methodology E2.1 The Licensee must develop and implement a noise compliance methodology for distinguishing the noise emissions of the Premises from Wambo Mine and Hunter Valley Operations. The methodology must: a) be prepared by an appropriate qualified and experienced acoustic specialist; and b) be provided to the EPA for an inclusion as a Licence condition, by 30 June 2020.	***Section 11.3*** ***Appendix C -***

5. Corporate Requirements

5.1 Glencore Standards

Glencore has developed a set of group Health Safety Environment and Community (HSEC) and Human Rights (HR) standards which all Glencore operations must adhere to. A number of these standards described in detail in the ***Environmental Management Strategy*** were applied to the development of this management plan.

5.1.1 Social Performance Standard

The ***Social Performance Standard*** requires operations to identify and engage with relevant stakeholders on identified social impacts, risks, and opportunities and the controls.

Relevant stakeholders were identified during the environmental assessment phase of the United Wambo Open Cut Project. Details of this identification process and the stakeholders consulted during the assessment phase are available in the Environmental Impact Statement (EIS) (Umwelt 2016) for the Project. Engagement and consultation with these stakeholders have been, and continues to be, undertaken in accordance with ***Section 6*** of this NMP and the United Wambo ***Social Impact Management Plan/Social Performance Management Plan*** (SIMP/SPMP).

Evidence of consultation with respect to the development and review of this NMP is provided in ***Appendix A - - Stakeholder Consultation***.

Social impacts, risks, controls and opportunities are reviewed with relevant internal stakeholders, on an annual basis as part of the Annual E&C Risk Assessment process.

5.1.2 Environment Standard

The ***Environment Standard*** requires operations to:

- develop, implement and monitor relevant management plan(s) eg. this NMP;
- document in management plans the identified risks, impacts and preventative measures following a hierarchy of control (minimum requirements for management plans summarised in ***Table 5-1***);
- undertake stakeholder engagement in the development of management plans, in accordance with the requirements of the Social Performance Standard (see ***Section 0***); and
- review and, if required, update environmental management plan(s) at a suitable frequency based on risk, consistent with the Enterprise Risk Management Standard (see ***Section 5.1.3***), or as directed by new data, in alignment with the principles of adaptive management and continuous improvement.

Table 5-1: Environment Standard – Minimum Requirements

Minimum Requirement	Relevant Section(s) of Plan
a) a clear commitment to minimising impacts on the environment	***Section 2***
b) a summary of risks, opportunities, preventative actions, and critical controls (including nature-based solutions, where appropriate)	***Sections 5.2.1 and 5.2.2***

Minimum Requirement	Relevant Section(s) of Plan
c) targets	***Section 9.1***
d) defined roles and accountabilities	***Section 16***
e) legal and corporate requirements	***Sections 4 and 5***
f) listing of pollutants of interest (specifically for air quality and water)	***N/A to this BFMP***
g) data management systems	***Section 11.8***
h) assurance	***Section 14.3***
i) internal and external communication protocols	***Section 6***

5.1.3 Enterprise Risk Management Standard

The ***Enterprise Risk Management Standard*** requires operations to develop a risk management culture that identifies, assesses and manages risks in accordance with the standard. The Standard requires that risk registers are reviewed at a "suitable frequency" for any material changes.

The annual site E&C Risk Assessment includes risks of noise across the operation (refer ***Section 5.2.1***). This risk register is reviewed annually.

If required, the NMP may be reviewed and updated in response to changing or new risks (refer ***Section 5.2.1***).

5.2 GCAA Requirements

All GCAA operations must implement a risk management framework. This framework includes risk assessments, to identify risks and opportunities to be addressed/managed onsite.

United Wambo identifies and reviews noise risks and opportunities, as part of the annual risk assessment and planning processes. Identified risks and opportunities are integrated into business decision-making, where required, and managed effectively and consistently across the operation. The NMP will be revised, as required, to incorporate/address any new or changed risks or opportunities relating to noise management at United Wambo.

5.2.1 Risks

Table 5-2 summarises the risks relevant to noise, identified in the latest Environment and Community (E&C) Risk Assessment, and where they are addressed in this NMP.

Table 5-2: Risks Relating to Noise

Identified Risk	Controls	Relevant Section(s) of Plan
Mining operations generate unacceptable noise levels (including low frequency) that results in a non-compliance with licence criteria or results in a complaint	Noise Modelling and Monitoring, Community Mitigation Agreements, Maintenance and inspection regime, Environmental delays in operational budget, Training Needs Analysis, Protocols, Plans, Procedures and Permits, GCAA Equipment Procurement Process, Infrastructure Location and Mine Design and Community Stakeholder Engagement	***Sections 10, 11 and 12***

5.2.2 Opportunities

Opportunities relating to noise at United Wambo were identified in the EIS for the project (Umwelt 2016) and incorporated into this NMP (refer to ***Sections 10, 11*** and ***12***).

5.2.3 GCAA Noise Management Guideline

The Glencore Coal Assets Australia (GCAA) 11.11 Guideline for ***Noise Management (GCAA-625378177-16332)*** outlines the following principles, which focus on effective noise management that is critical to supporting operations. Noise management planning assists in managing a number of aspects, such that:

- noise is effectively managed at GCAA operations;
- noise management controls are identified and effective during the mine planning, assessment and operational phases;
- minimum requirements for noise management are implemented to reduce the potential for impacts, including the implementation of activity specific noise controls and site-wide management systems and procedures;
- automated systems for early identification of adverse meteorological conditions are in use to minimise noise impacts, i.e. gradient winds and temperature inversions;
- monitoring and reporting requirements are implemented for noise management at GCAA operations;
- noise awareness training is implemented for employees to facilitate effective noise management; and
- noise management is integrated into the entire life of mine, from mine planning to mine rehabilitation and closure.

6. Stakeholder Consultation

6.1 External Stakeholders

Condition B5 of ***SSD 7142*** requires this NMP to have been prepared in consultation with the EPA and submitted to the Planning Secretary for approval.

The EPA was contacted and provided with the opportunity to provide comment and feedback on the management plans prepared for ***SSD 7142***, including the NMP, on 21 September 2018 and 11 September 2019. The EPA noted that they do not undertake consultation for management plans and, as such, offered no comment in relation to these plans apart from ensuring that the plans consider the conditions of any Environment Protection Licence conditions in force at the time. The ***EPL 3141*** conditions relating to noise are described in ***Section 4.2***.

Feedback and correspondence in relation to the NMP is attached in ***Appendix A - Stakeholder Consultation***.

6.2 Internal Stakeholders

Internal stakeholders include contractors and employees working at the United Wambo Coal Mine and GCAA employees. Records of relevant internal communication and consultation are maintained onsite.

6.2.1 Contractors and Employees

Consultation and communication is undertaken with internal stakeholders in accordance with the United Wambo ***Communication and Consultation Procedure (UWOC-1689771511-49).***

Communication methods include:

- Daily communication eg. GCOM (pre-start instruction) and handovers between supervisors
- Meetings - Daily planning meetings, Weekly meetings (Senior Leadership Meeting), monthly HSEC Committee meetings
- Communication forums eg. Contractor forums and meetings, Noticeboards, Safety Alerts
- HSEC Alerts, Annual HSEC Plans and Safety Management System Reviews

6.2.2 GCAA Personnel

United Wambo communicates with GCAA personnel on a regular basis, including during monthly reporting processes. Most communication is undertaken via phone, email or via online reporting. United Wambo personnel also participate in face to face and online meetings with GCAA personnel, as required.

7. Preparation of the Noise Management Plan

In recognition of the requirements of Condition B5 (a) of ***SSD 7142***, the original NMP prepared by United Wambo has been reviewed by a suitably experienced and qualified person, Tony Welbourne from Global Acoustics. A letter of confirmation from Global Acoustics is provided in ***Appendix B - Correspondence from Global Acoustics*.**

8. Baseline Data

8.1 Assessment of Environmental Aspects

A comprehensive list of environmental impact assessments undertaken for United Wambo is provided in the ***Environmental Management Strategy***.

The original Noise Impact Assessment (NIA) is the ***United Wambo Open Cut Coal Mine Project – Noise Impact Assessment (Umwelt, 2016a),*** included as ***Appendix 9*** of ***United Wambo Open Cut Coal Mine Project – Environmental Impact Statement (EIS***) ***(Umwelt 2016b)*** and summarised in ***Section 6.6*** of the ***EIS***.

The most recent NIA is ***United Wambo Open Cut – ROM Stockpile Modification Noise Assessment***, Umwelt, 13 July 2021, undertaken for Modification 1.

Additional noise impact assessment and information is also provided in the Project's response to requests for further information from the Department of Planning, Industry and Environment (DPIE) and responses to the Independent Planning Commission (IPC) review of the Project and requests for further information.

These documents are available at:

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=7142

https://www.ipcn.nsw.gov.au/projects/2018/11/united-wambo-open-cut-coal-mine-project-ssd-7142

8.2 Pre-Existing Noise Environment

An assessment of the noise environment of the area surrounding United Wambo prior to Project Approval was undertaken during the preparation of the ***United Wambo Open Cut Coal Mine Project – Environmental Impact Statement (EIS) (Umwelt 2016***) and subsequently the ***United Wambo Open Cut – ROM Stockpile Modification Noise Assessment***, Umwelt, 13 July 2021. The background assessment utilised monitoring data from:

- the existing Wambo continuous noise monitoring network (Sentinex 15, 16, 17 and 18);
- an additional mobile continuous noise monitor (Sentinex 122);
- the Hunter Valley Operations (HVO) continuous noise monitor in Mason Dieu; and
- four supplementary noise loggers.

The locations of the current noise monitoring sites are shown on ***Figure 11-1***. The noise monitoring locations were representative of the nearest and/or most potentially affected residences surrounding the project area. The locations of previously monitored sites are kept on file and available in the EIS.

A summary of the baseline noise monitoring results, as presented in Section 4 of the ***United Wambo Open Cut Coal Mine Project – Noise Impact Assessment (Umwelt, 2016)*** is provided in ***Table 8-1***.

Existing continuous noise monitoring locations are located at allocated positions as indicated as part of the ***United Wambo Open Cut Coal Mine Project – Environmental Impact Statement*** (EIS) (Umwelt 2016) and subsequently the ***United Wambo Open Cut – ROM Stockpile Modification Noise Assessment***, Umwelt, 13 July 2021. Monitoring data comes from:

- South Wambo (Sentinex 15)
- Moses Crossing (Sentinex 17)

- Redmanvale (Sentinex 18)
- Maison Dieu (Sentinex 19)
- Montrose East (Sentinex 20)
- Montrose (Sentinex 24)
- Portable Monitor (Sentinex 16)

Table 8-1: Baseline Data, dB(A)

Monitoring Location	Time Period	RBL[1]	Mean LAeq Total Measured (All sources)	Mean LAeq Excluding Wambo Open Cut
N01 – Sentinex 15 South Wambo	Day	30.0[2]	44.9	37
	Evening	33.4	43.5	35
	Night	31.6	42.6	33
N02 – Sentinex 16 Warkworth	Day	39.2	53.6	46
	Evening	39.3	50.5	46
	Night	38.3	49.0	46
N03 – Sentinex 17 Moses Crossing	Day	35.9	51.1	40
	Evening	35.1	48.6	39
	Night	33.3	46.6	39
N04 – Sentinex 18 Redmanvale	Day	30.0[2]	46.4	32
	Evening	32.3	47.9	32
	Night	30.0[2]	43.9	30
N05 Mason Dieu	Day	36.6	52.0	41
	Evening	36.9	50.3	41
	Night	35.8	44.0	40
N06 – Sentinex 122 North Bulga	Day	30.0[2]	41.0	37
	Evening	30.0[2]	38.3	35
	Night	30.0[2]	37.3	33
N07 South Wambo	Day	30.0[2]	42.5	35
	Evening	30.0[2]	38.0	34
	Night	30.0[2]	35.5	31
N09 Redmanvale	Day	30.0[2]	52.2	<30
	Evening	30.0[2]	46.2	<30
	Night	30.0[2]	45.1	<30
N10 – Sentinex 122	Day	34.4	49.8	<35

Monitoring Location	Time Period	RBL[1]	Mean LAeq Total Measured (All sources)	Mean LAeq Excluding Wambo Open Cut
Jerrys Plains	Evening	35.1	47.4	<35
	Night	31.1	45.9	<35

1 Rating Background Level
2 Where the RBL is less than 30 dB(A), the RBL is set at 30 dB(A)

8.3 Sensitive Receiver Locations

Properties likely to experience noise impacts from United Wambo were identified and assessed in the ***United Wambo Open Cut Coal Mine Project Noise Impact Assessment (Umwelt, 2016)*** and refined in associated noise assessment documentation submitted to DPIE and the IPC. As summarised in ***Table*** 8-2, the overall noise assessment for the Project found that 38 receptors were predicted to experience an exceedance of the Project-Specific Noise Level (PSNL) at some stage during the life of the project.

Table 8-2: Residences Predicted to Exceed PSNL

Residual Noise Level Above PSNL	Number of Residences	Receiver ID	Classification of Impact
0-2 dB(A)	13	R6, R7, R41,R44, R46, R133, R379, R485, R487, R493, R495, R496	Noise Management Zone – negligible impact
3-5 dB(A)	18	R3, R25, R29, R30, R33, R41, R42, R48, R49, R50, R75, R163, R320, R343, R344, R345, R346, R348	Active Noise Management Zone – moderate impact
>5 dB(A)	7	R16, R17, R19*, R39, R40*, R43	Noise Affectation Zone

** Residence since purchased by United Wambo*

9. Planning

9.1 Noise Criteria

The operational noise criteria as described in Condition B1 of ***SSD 7142*** and Condition L3 of ***EPL 3141*** are provided in ***Table 9-1***.

Table 9-1: Operational Noise Criteria

Noise Assessment Location	Noise Assessment Location	Day	Evening	Night	Night
		LAeq (15 min)	LAeq (15 min)	LAeq (15 min)	LA1 (1 min)
Area 1 - North Bulga	R003	38	36	36	46
	R006	37	35	35	45
	R007, R379	36	35	35	45

Noise Assessment Location	Noise Assessment Location	Day	Evening	Night	Night
		LAeq (15 min)	LAeq (15 min)	LAeq (15 min)	LA1 (1 min)
	All other privately-owned residences	35	35	35	45
Area 2 - South Wambo	R025	39	38	38	48
	All other privately-owned residences	35	35	35	45
Area 3 - Warkworth Village	All privately-owned residences	44	44	43	53
Area 4 - Maison Dieu	All privately-owned residences	42	42	41	51
Area 5 - Moses Crossing	R039	46	46	46	56
	R016	45	45	45	55
	R017	44	44	44	54
	R043	43	43	43	53
	R050C	41	41	41	51
	R050A	41	40	40	50
	R044	41	40	39	49
	All other privately-owned residences	41	40	38	48
Area 6 – Redmanvale	R320	40	40	40	50
	R033, R343	40	40	39	49
	R042	40	40	38	48
	R029, R345	40	40	37	47
	R048	39	39	39	49
	R030, R049, R163	39	39	38	48
	R075	39	39	37	47
	R041B	38	38	38	48
	R344, R346	38	38	37	47
Area 6 - Redmanvale	R348	38	38	36	46
	R041A	37	37	37	47

Noise Assessment Location	Noise Assessment Location	Day	Evening	Night	Night
		LAeq (15 min)	LAeq (15 min)	LAeq (15 min)	LA1 (1 min)
	All other privately-owned residences	35	35	35	45
Area 7 - Jerrys Plains	All privately-owned residences	40	40	36	46
All other areas	All privately-owned residences	35	35	35	45

9.2 Further Studies

No further studies or surveys regarding noise are required by ***SSD 7142***.

10. Implementation

10.1 Noise Mitigation and Management Measures

A combination of proactive and reactive/adaptive controls has been included in the Project Design. Noise Management and mitigation measures which will be implemented at United Wambo are listed in ***Table 10-1***.

Table 10-1: Noise Management and Mitigation Measures

No.	Mitigation Measure	Source	Timing	Responsibility	Evidence
Proactive Controls					
1	United Wambo will incorporate reasonable and feasible noise attenuation on key items of plant and equipment that will be reused from the current Wambo Open Cut operations or other controls achieving the same overall noise outcome.	EIS Section 8	As required	Operations Manager	Equipment register
2	United Wambo will include reasonable and feasible noise attenuation measures on new plant and equipment that has the potential to contribute to the Project's noise level.	EIS Section 8	As required	Operations Manager	Equipment register
3	United Wambo will use 'silent horns' to communicate with trucks and smart broadband 'Quacker' reversing alarms.	EIS Section 8	Ongoing	Operations Manager	Equipment register

No.	Mitigation Measure	Source	Timing	Responsibility	Evidence
4	United Wambo will include bunds in strategic locations along haul roads, where practicable, to shield trucks and equipment on exposed sections of the haul road ramps.	EIS Section 8	Ongoing	Operations Manager/ Mine Planner	Mine plan
5	United Wambo will locate key haul roads below ground surface or topographical features to maximise shielding to surrounding receiver areas, where practicable.	EIS Section 8	Ongoing	Operations Manager/ Mine Planner	Mine plan
6	United Wambo will design emplacement areas to create sheltered dumping locations that can be used during adverse weather conditions where feasible and practicable.	EIS Section 8	Ongoing	Operations Manager	Mine plan
7	United Wambo will manage the drop height of the first load into truck bodies to minimise impact noise from the material.	EIS Section 8	Ongoing	Operations Manager / Excavator operators	Workplace observations
8	United Wambo will provide noise management training for key employees (***Table 16-1***) to facilitate effective noise management (refer ***Section 10.6***); and	EIS Section 6.6.11	As required	Environment and Community Manager	Refer ***Section 10.6***
9	United Wambo will offer reasonable and feasible noise mitigation measures, which may include measures such as double glazing, insulation or air conditioning, to landowners in the active noise management zone (refer ***Section 10.2***).	EIS Section 8	As required	Environment and Community Manager	Refer ***Section 10.2***
10	United Wambo will undertake regular inspection and maintenance of noise attenuation systems	EIS Section 6.6.11	Ongoing	Maintenance Manager	Work orders
11	United Wambo will implement a process for periodic review of noise performance of the equipment fleet. Noise performance will be reviewed	EIS Section 6.6.11	Ongoing	Environment and Community Manager	Sound power testing reports

No.	Mitigation Measure	Source	Timing	Responsibility	Evidence
	as per manufacture specifications or on a 3-year rolling average				
Adaptive Management					
12	United Wambo will implement systems that identify adverse meteorological conditions which are likely to result in elevated noise impacts	EIS Section 8	Ongoing	Environment and Community Manager	Refer ***Section 10.3***
13	United Wambo will implement an appropriate real time meteorology and noise monitoring program that will enable real time management of operations during adverse noise propagating conditions.	EIS Section 8	Ongoing	Environment and Community Manager	Refer ***Section 10.3***
14	United Wambo will relocate or shut down acoustically significant equipment during adverse meteorological conditions if real time noise monitoring indicates potential noise impact (see ***Section 11.1.2***).	EIS Section 6.6.11	As required	Operations Manager	Operations log/Noise monitoring results
15	United Wambo will limit the activities of ancillary equipment in exposed locations under adverse meteorological conditions if real time noise monitoring indicates potential noise impact.	EIS Section 6.6.11	As required	Operations Manager	Operations log/Noise monitoring results
16	United Wambo will progressively shut down or relocate production machines in elevated locations under adverse meteorological conditions if real time noise monitoring indicates potential noise impact.	EIS Section 6.6.11	As required	Operations Manager	Operations log/Noise monitoring results

10.2 Additional Receiver Noise Management Measures

As outlined in ***Section 8.3***, 38 properties were predicted to experience an exceedance of the project specific noise level at some stage during the life of the project. Depending on the level of exceedance, the additional noise management measures detailed below will be considered.

10.2.1 Noise Management Zone (0 – 2 dB Exceedance)

- Respond to any issues of concern raised by community within 24 hours.
- Noise monitoring on-site and within the community.
- Making changes to operational noise mitigation measures, where practicable, to further reduce noise impacts.

10.2.2 Active Noise Management Zone (3 – 5 dB Exceedance)

In accordance with Condition D2 of ***SSD 7142***, upon receiving a written request from the owner of any residence on the privately-owned land listed in ***Table 7*** or ***Table 8*** of ***SSD 7142***, United Wambo must implement additional mitigation measures at or in the vicinity of the residence in consultation with the landowner. These measures must be consistent with the measures outlined in the ***Voluntary Land Acquisition and Mitigation Policy for State Significant Mining, Petroleum and Extractive Industry Developments (VLAMP) (NSW Government, 2018).*** They must also be reasonable and feasible, proportionate to the level of predicted impact and directed towards reducing the relevant noise and/or air quality impacts of the development.

United Wambo is responsible for the reasonable costs of ongoing maintenance of these additional mitigation measures until the cessation of mining operations.

All residences listed in ***Table 7*** or ***Table 8*** of ***SSD 7142*** have been notified of their rights in accordance with Condition D4 of ***SSD 7142***.

10.2.3 Noise Affectation Zone (>5 dB Exceedance)

In accordance with Condition D1 of ***SSD 7142***, upon receiving a written request for acquisition from the owner of the privately-owned land listed in ***Table 7*** of ***SSD 7142***, United Wambo must acquire the land in accordance with the procedures in Conditions D11 to D18 of ***SSD 7142.***

All residences listed in ***Table 7*** or ***Table 8*** of ***SSD 7142*** have been notified of their rights in accordance with Condition D4 of ***SSD 7142.***

10.3 Predictive Meteorological Forecasting

United Wambo personnel (***Table 16-1***), including Environment and Community personnel and Mining Supervisors, receive noise enhancement forecasts. These forecasts are reviewed for upcoming predicted enhancements that may trigger operational responses.

Operational responses to noise enhancing forecasts may include:

- the strategic relocation or shut down of acoustically significant equipment during adverse meteorological conditions that could result in noise propagation towards sensitive receivers;
- limiting the activities of ancillary equipment in exposed locations; and
- progressive shut down of production machines in elevated locations.

The enhancement forecasts will be communicated to United Wambo personnel (***Table 16-1***), responsible for planning work activities and to the workforce in pre shift meetings.

In addition to the predictive forecasts, real time meteorological data (***Table 11-4***) from the United Wambo meteorological station will be monitored to identify if operational responses may be required.

10.4 Real Time Noise Monitoring

United Wambo will utilise a network of real time noise monitors to allow key operational personnel (i.e. Mining Supervisors and Environment & Community Personnel) to monitor noise from the operations and, if necessary, undertake appropriate mitigation measures. The real time noise monitors will notify appropriate 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 9.1***. For further details regarding the real time noise monitoring network and operation, refer to ***Section 11.1***.

10.4.1 Equipment Monitoring

Condition B4(c) of ***SSD 7142*** requires United Wambo to monitor and record all major equipment use and make this data readily available at the request of the Department or the EPA.

United Wambo will implement a fleet monitoring system for all major equipment used in the mining operations. During Phase 1A and Phase 1B, equipment used will be monitored manually and will record the hours of use and location of the equipment for each shift.

During Phase 2, United Wambo will implement a GPS based electronic fleet monitoring system that will record the location and activity of all major equipment in real time. The electronic fleet monitoring system in combination with the real time noise monitoring program (***Section 11.1)*** will facilitate the implementation of appropriate noise mitigation measures.

Should DPIE or the EPA request data relating to equipment use, United Wambo will provide the required data within 72 hours of receiving the request.

10.5 Continuous Improvement

United Wambo 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 E11 of ***SSD 7142.***

10.6 Training and Awareness

The United Wambo site induction to be provided to all employees and contractors will include information on noise management. The site familiarisation will include awareness to all employees to minimise road traffic noise generated by employee commuter vehicles on public roads, including:

- awareness of local residential areas, including the Jerrys Plains and Warkworth areas;
- driving respectively through areas with residences, including limiting use of horns, no revving of engines and obeying speed limits.

United Wambo Environment and Community (E&C) personnel will be responsible for communication of the requirements of the NMP to relevant employees and contractors. Training will identify United

Wambo's site specific objectives and targets for noise management, potential noise impacts, Glencore's environmental commitments and obligations in respect of noise management.

Additional training will also be provided to relevant personnel on the site specific ***Noise Management Procedures***, the operation of noise monitoring and meteorological monitoring systems, and the implementation of the noise management system.

Specific training requirements and training schedules will be subject to individual job role, prior learning and experience. Skills and appointments relating to noise management will be maintained in a site register.

10.7 Noise Management Coordination

United Wambo will use its best endeavours to coordinate noise management with nearby mines to reasonably and feasibly minimise cumulative noise impacts.

Where high noise levels are observed during compliance monitoring or during the assessment of the ongoing performance of the United Wambo, discussions will be initiated with the relevant mining operations to inform them of the observations.

Additionally, where other operations are identified as being the source of the noise, either when investigating a complaint or in the response to noise alarms, notification of the noise impact to the mining operations will be made to advise them of the issue.

When appropriate, data will be shared between the mining operations with real time noise monitoring equipment being shared between other mining operations.

11. Noise Monitoring Program

The acoustic environment in the region surrounding United Wambo is a combination of multiple noise sources including mining operations, noise from other land uses and noise from the natural environment (e.g. birds and insects). United Wambo will undertake a program of unattended and attended noise monitoring to provide for ongoing noise performance monitoring and determination of compliance with relevant noise criteria provided in the Development Consent.

Given that Wambo mine operations (incorporating the CHPP, train loading facility and underground mine) continue to be managed separately to United Wambo operations, this noise monitoring program incorporates a methodology for the determination of the individual contribution of each operation.

11.1 Real Time Noise Monitoring

11.1.1 Real Time Noise Monitoring Network

United Wambo will establish four permanent real-time noise monitoring locations in the locations listed in and shown on ***Figure 11-1***. The real-time monitoring locations will be situated at locations representative of the nearest private residences. Mobile units that are relocatable will be available on an as needed basis.

Table 11-1: Real Time Noise Monitoring Locations

ID	Description	Easting	Northing	Representative residences
NM02-RT	South Wambo	310586	6390150	Area 1 and 2 (Res ID 3, 6, 7, 25, 379, 380, 381, 382)
NM04-RT	Maison Dieu	317946	6397696	Area 4 (Res ID 485, 487, 489, 492, 493, 495, 496)
NM05-RT	Moses Crossing	305953	6399608	Area 5 (Res ID 16, 17, 39, 40, 43, 44, 50, 133)
NM07-RT	Redmanvale Rd	304518	6398505	Area 6 (Res ID 29, 30, 33, 42, 48, 49, 75, 163, 320, 344, 345, 346, 348)

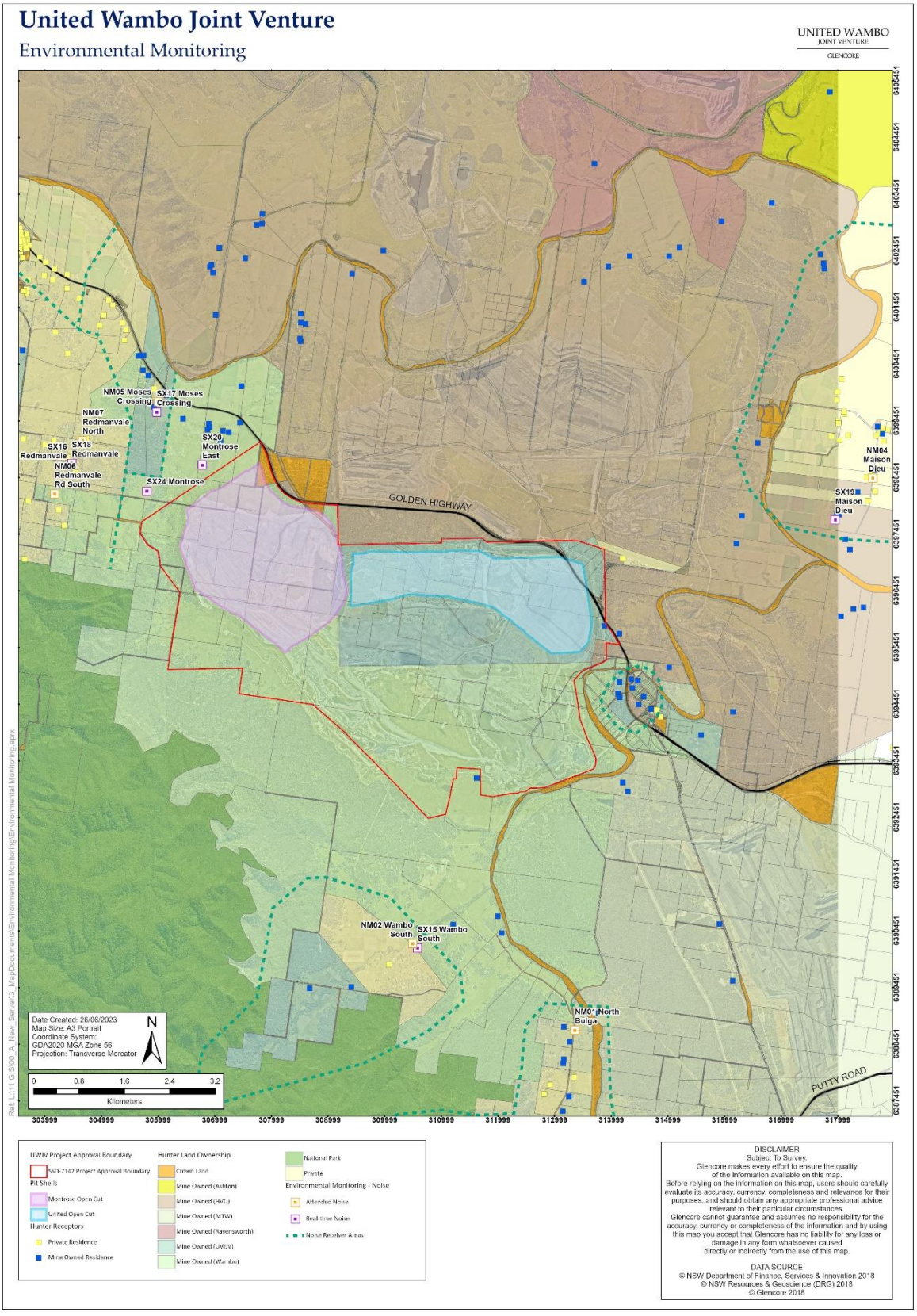

Figure 11-1: Noise Monitoring Locations

Real-time noise monitoring will be used for reactive noise management of day-to-day operations at United Wambo. The real-time monitors provide 24-hour continuous information on the ambient noise levels and meteorological data local to the monitoring site and generate quantitative data and audio recordings that can be used to determine the likely noise source.

The continuous noise monitors will record the following information:

- date and time;
- L_{Aeq} for each 15-minute interval;
- L_{Amin}, L_{A90}, L_{A10} and L_{Amax} for each 15-minute interval;
- 15-minute one-third octave L_{Aeq} noise levels corresponding to the L_{Aeq} 15-minute interval;
- L_{Aeq}, period (where period = day, evening and night) for each 24-hour interval;
- low pass to 630 Hz LA90 for each 15-minute interval;
- continuous weather data including wind direction, wind speed, temperature and rainfall as 15-minute averages; and
- directional data for each mining noise source (if applicable).

11.1.2 Trigger Action Response Plan

The real-time monitors will be programmed to send alerts to operational personnel when a noise trigger level is reached. Alarms of directional monitors will be programmed to identify noise sources only from the United Wambo Area of Influence (AOI). Alarms of non-directional monitors will be assessed to determine if noise sources are from the AOI.

United Wambo will utilise a two trigger levels system:

- Level 1 alert: when averaged noise levels from the AOI are consecutively within 2 dB of the relevant noise criterion at the nearest residence to the real-time noise monitoring unit over the alert period. First alert issued after a 30-minute period, then after every 15-minute period if noise levels are sustained; and
- Level 2 alert: when averaged noise levels from the AOI are consecutively at or above the relevant noise criterion at the nearest residence to the real-time noise monitoring unit over the alert period. First alert issued after a 30-minute period, then every 15-minute period if noise levels are sustained.

Following the receipt of a noise trigger detailed above, the ***Noise Trigger Action Response Plan (Noise TARP)*** outlined in ***Table 11-2*** will be actioned.

Table 11-2: Noise Trigger Action Response Plan

Level	Level 1 Caution	Level 2 Alarm
Trigger	**LF db(A) within 2 dB of criterion for a 30-minute period**	**LF db(A) at or above criterion for a 30-minute period**
Action	If level 1 alarm received: • Consult and review data on SiteEye to determine potential source of alarm; • Review live audio stream on Sentinex to determine if noise source/s is mining noise (such as trucks, dozer, and excavators) or non-mining noise (such as birds, insects and traffic); • Implement noise management controls as required: - Relocating equipment deeper in the pit or sheltered locations; - Reducing the drop height of material while loading to minimise impact noise; - Reversing dozers in 1st gear only; - Cease operation of dozers working in exposed locations (i.e. pre-strip and rehab); - Utilizing rubber tyred dozers in sensitive locations; - Cease operation of ancillary equipment	If level 2 alarm received: • Consult and review data on SiteEye to determine potential source of alarm; • Review live audio stream on Sentinex to determine if noise source/s is mining noise (such as trucks, dozer, and excavators) or non-mining noise (such as birds, insects and traffic); • Implement noise management controls as required: - Relocating equipment deeper in the pit or sheltered locations; - Reducing the drop height of material while loading to minimise impact noise; - Reversing dozers in 1st gear only; - Cease operation of dozers working in exposed locations (i.e. pre-strip and rehab); - Utilizing rubber tyred dozers in sensitive locations; - Cease operation of ancillary equipment - Cease operations of an excavator and fleet - Shut down all fleet if all of the above does not reduce LF noise at monitoring locations

Level	Level 1 Caution	Level 2 Alarm
Response	Mining Supervisor to log details of investigation undertaken and note noise source/s identified on SiteEye and in Mining Supervisors Shift Inspection Report. Mining Supervisor to continue to monitor noise levels.	Mining Supervisor to identify problem noise source and modify/cease operations of relevant noise source/s. Only after weather conditions improve and mining noise is below the criterion can shut down operations be restarted. If the suspected source of noise is coming from a coal stockpile dozer(s): all UWJV dozers must be parked. If coal stockpile dozer(s) (Wambo) are identified as the noise source, UWJV Mining Supervisor is to contact the CHPP Supervisor. Both supervisors will review the noise management systems (SiteEye, Sentinex) before deciding to modify the CHPP dozers operation – a field observation may be required. After identifying the noise source(s), the mining and CHPP Supervisors may start up equipment again. If weather conditions are licensable: modify/cease operations to determine impact of relevant noise source/s. If all operations have ceased for approximately 15 minutes and only non-mining noise can be heard (such as birds, insects, and traffic), operations can progressively recommence with caution, observing noise levels to identify any increase. Mining Supervisor to log details of investigation undertaken and note noise source/s identified on SiteEye and in Mining Supervisors Shift Inspection Report. Following restart, noise data on SiteEye and real-time audio should be monitored to ensure noise levels remain below criteria.

11.1.3 Validation of Real Time Monitoring Results

Real time noise monitoring results will be compared to attended monitoring results quarterly. The process will involve comparing night time 15-minute compliance noise survey data obtained at or near each of the real time monitoring. The process will provide a trigger for changes to real-time monitoring noise alarms or further attended monitoring, where required.

11.2 Attended Noise Monitoring

Attended noise monitoring will occur at the five representative locations shown on ***Figure 1-1***and listed in ***Table 11-3***.

Table 11-3: Attended Noise Monitoring Locations

NMG	NMP	Description	Easting (MGA)	Northing (MGA)	Representative residences
1	NM01	North Bulga	313354	6388694	Area 1 (Res ID 3, 6, 7, 379, 380, 381, 382)
2	NM02	South Wambo	310491	6390223	Area 2 (Res ID 25)
4	NM04	Maison Dieu	318616	6398438	Area 4 (Res ID 485, 487, 489, 492, 493, 495, 496)
5	NM05	Moses Crossing	306001	6399786	Area 5 (Res ID 16, 17, 39, 43, 44, 50, 56, 133)
6	NM06	Redmanvale South	304172	6398160	Area 6 (Res ID 29, 42, 163, 345, 346, 348
7	NM07	Redmanvale North	304666	6399100	Area 6 (Res ID 30, 33, 41, 48, 49, 75, 320, 343, 344)

Monitoring will be undertaken monthly during the night time period (noting that a night-time period will commence at 10:00 pm as defined in ***SSD 7142*** and ***EPL 3141***).

All monitoring procedures are to be in accordance with the requirements of the ***Noise Policy for Industry and AS1055 'Acoustics – Description and Measurement of Environmental Noise – General Procedures'.***and the ***United Wambo Open Cut – ROM Stockpile Modification Noise Assessment***, Umwelt, 13 July 2021.

The noise monitoring program will record, for each measurement, the following information:

- name of monitoring personnel;
- monitoring location;
- date and times that monitoring began;
- quantitative meteorological data being temperature, wind speed (including the measurement height above ground), wind direction, cloud cover (in eighths) and humidity;
- instrument type and calibration details before and after the monitoring period;
- the LAeq.15minute noise level for the 15-minute period. This is representative of the total acoustic environment to which the Project and the Wambo mine contribute;
- statistical noise level descriptors over the 15-minute interval: LAmin, LA90, LA10, LA1 and LAmax;
- notes identifying the noise sources that contribute to the maximum noise levels and the overall noise environment or for periods of time when a specific noise source is audible;

- an estimate of the noise contribution from operations at the Project, the Wambo mine or from other identifiable noise sources;
- data in one-third octave bands from 25 Hz to 12 kHz inclusive (or a broader range of bands) for the 15-minute interval to assess if any of the noise sources exhibit characteristics that may require application of modifying factors;
- data suitable for assessing the relative contribution of mine-generated noise to the overall noise being measured by using a low-pass (i.e. summation of frequencies up to and including a cut-off frequency determined to be appropriate);
- LA1,1minute Project noise levels (to allow comparison with the relevant sleep disturbance criterion); and
- an estimate of the intrusive LAeq.15minute noise level attributable to the combined United Wambo and Wambo mine, with an estimate of the intrusive LAeq.15minute noise level attributed to the United Wambo and the Wambo mine separately.

11.3 Compliance Assessment

The results of the attended noise monitoring will be analysed and compared with noise criteria defined in ***Section 9.1***, and in the relevant development consents to assess compliance.

As stated in Condition 1 of ***Appendix 4*** of ***SSD 7142***, the noise criteria in ***Table 9-1*** are to apply under all meteorological conditions except the following:

a) where 3°C/100 metres (m) lapse rates have been assessed, then:
   i wind speeds greater than 3 metres/second (m/s) measured at 10m above ground level;
   ii temperature inversion conditions between 1.5°C and 3°C/100m and wind speeds greater than 2m/s measured at 10m above ground level; or
   iii temperature inversion conditions greater than 3°C/100m.

b) where Pasquill Stability Classes have been assessed, then:
   i wind speeds greater than 3m/s at 10m above ground level;
   ii stability category F temperature inversion conditions and wind speeds greater than 2m/s at 10m above ground level;
   iii stability category G temperature inversion conditions.

As required by Condition 3 of ***Appendix 4*** of ***SSD 7142***, the attended compliance monitoring will be carried out in accordance with the methods specified in this NMP, which comply with the relevant requirements for reviewing performance set out in the ***NSW Industrial Noise Policy (EPA, 2000),*** in particular, the requirements relating to:

a) monitoring locations for the collection of representative noise data;

b) meteorological conditions during which collection of noise data is not appropriate;

c) equipment used to collect noise data, and conformity with Australian Standards relevant to such equipment; and

d) modifications to noise data collected, including for the exclusion of extraneous noise and/or penalties for modifying factors apart from adjustments for duration, with the exception of applying appropriate modifying factors for low frequency noise during compliance testing. This will be undertaken in accordance with ***Fact Sheet C of the NSW Noise Policy for Industry (EPA, 2017).***

A detailed Compliance Assessment Methodology has been developed in consultation with the DPIE and EPA in order to determine the individual noise contributions of the separate United Wambo and Wambo operations.

This compliance assessment methodology will be implemented to identify the contribution from each operation at each monitoring location and to determine compliance with the relevant consent conditions. The detailed methodology for the Phase 2 Compliance Assessment Protocol is included in ***Appendix C - Noise Compliance Assessment Methodology***.

11.4 Meteorological Monitoring

As required by Condition B37 of ***SSD 7142***, United Wambo maintains a continuous onsite meteorological monitoring station that complies with the requirements of the ***Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales (EPA, 2022).*** The station was sited in accordance with sampling method AM-1 (i.e. ***AS/NZS 3580.1.1 Ambient Air – Guide for the Siting of Sampling Units).***

Except for wind speed at microphone height, the data to be used for determining meteorological conditions shall be that recorded by the onsite meteorological station.

The meteorological station is routinely calibrated and maintained by appropriately accredited technicians. Meteorological parameters will be measured as listed in ***Table 11-4.*** Weather data from the United Wambo meteorological station will be used for the project.

Table 11-4: 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

Note

1 Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (2022)
2 For the purpose 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.

11.5 Evaluation of Impacts and Performance

United Wambo will review the outcomes of the noise monitoring results to evaluate the success of noise mitigation. The performance of the United Wambo in relation to noise management will be evaluated through the following measures:

- undertaking comparisons of monitoring results against the Development Consent noise criteria and predictions made in the EIS;
- independent environmental audits, which will be made available on the United Wambo website;
- engaging specialists to undertake independent noise investigations as required;
- noise monitoring reports, which will be made available on the United Wambo website; and
- the Annual Review which is submitted to the DPIE and relevant agencies.

11.6 Corrective Actions

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

- proximity of noise generating activities to sensitive receivers;
- location, number, elevation and exposure of noise generating equipment;
- sound power levels of equipment;
- prevailing meteorological conditions; and
- a review of operating protocols.

11.7 Change Management

United Wambo's ***Change Management Procedure (UWOC-1689771511-48)*** will be used to identify any proposed changes to existing activities that have the potential to exceed the noise criteria, including:

- significant changes to the number of equipment or type of equipment utilised on site, which may result in noise criteria for the site being exceeded;
- when the proposed mine plan configuration/orientation or hours of operation is substantially different to that which has been assessed in the relevant environmental assessment; or
- prior to purchase or rental of equipment which has the potential to result in exceedances of site noise criteria.

The proposed change to activities will be included in the United Wambo noise model to evaluate potential impact. The noise model results will be used to determine what, if any, noise mitigation measures are required or if the proposed activity can be undertaken. If the activity is undertaken then non-scheduled noise monitoring will be undertaken to confirm United Wambo's noise criteria are not being exceeded.

United Wambo will assess potential noise impacts due to mining through the annual review of the ***Environment and Community Risk Assessment***. The risk assessment will review whether the mine layout for the year will result in any additional noise management impacts which are required to be managed.

11.8 Record Keeping

All noise monitoring data are maintained in accordance with the ***EM Strategy*** and maintained on the premise for a period of four years.

12. Adaptive Management

12.1 Contingency Plan to Manage Unpredicted Impacts

Noise management controls and monitoring have been implemented to minimise noise related impacts at neighbouring properties and other sensitive locations.

In the event unpredicted impacts occur, United Wambo will implement the Noise TARP outlined in ***Table 11-2*****.** In addition, United Wambo will:

- review the current noise management measures and controls to determine if they are effective;
- develop and implement additional noise management or mitigation measures in consultation with the affected landowners; and
- undertake follow-up noise monitoring to assess the effectiveness of the additional measures.

12.2 Continuous Improvement

United Wambo 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 E11*** of ***SSD 7142.***

13. Complaint and Incident Management

13.1 Community Enquiries and Complaints

United Wambo manages community complaints as per the Complaints Procedure outlined in the United Wambo ***Environmental Management Strategy (EMS)*** and the United Wambo ***Complaints Management Procedure***.

United Wambo operate a 24-hour Community Information Line. Environment & Community personnel are responsible for acknowledging complaints and commencing a complaint investigation within 24 hours of receiving the complaint and identifying any necessary preventative or corrective actions.

Complaints are recorded in the site's complaints database and forwarded to GCAA in accordance with the complaints procedure outlined in the United Wambo ***EMS***.

Complainants are provided with a response within 24 hours, where practicable, outlining the findings of the complaint investigation and any preventative or corrective actions implemented.

A review of the effectiveness of the corrective or preventative actions will be conducted within a month of the complaint and the relevant work procedures updated if required.

In relation to the specific management of noise complaints, the following process will be implemented across the United Wambo and Wambo operations:

- United Wambo/Wambo will review the complaint in accordance with the United Wambo ***Complaints Management Procedure****;* by agreement a complaint may be reassigned based on the review process within agreed timeframes to meet regulatory response times;

- the operation responsible for the noise complaint (Wambo or United Wambo) will assume accountability, record it for compliance purposes and address it in accordance with regulatory requirements and expectations.

Details of complaints relating to noise will be provided to relevant mine planning and production personnel, to assist in the improvement of management practices.

A summary of complaints received and actions taken will be presented to the United Wambo Community Consultative Committee (CCC) as part of the operational performance review, and will be made available on the United Wambo website and reported in the Annual Review.

13.2 Incident Review and Reporting

For the purposes of this NMP, a noise incident is defined as an exceedance of the noise criteria in ***SSD 7142*** obtained as part of the monthly attended noise monitoring, within the provisions of ***SSD 7142***.

In accordance with ***Condition E10 and D6*** of ***SSD 7142***, in the event an exceedance of any noise impact assessment criteria is identified through environmental monitoring, United Wambo will notify DPIE, any affected landowners and/or existing or future tenants (including tenants of mine owned properties) and the CCC accordingly and provide regular monitoring results to each of these parties until the results show that the operation is in compliance with the relevant criteria.

14. Review and Improvement

14.1 Reporting

Environmental monitoring result summaries, compliance with Consent and Licence conditions and any required modifications to the noise monitoring will be reported in the Annual Review.

Details of continuous improvement measures will be reported in the Annual Review. Summaries will also be made available to the public via the United Wambo website (***www.unitedproject.com.au***) in accordance with the EPA requirements for publishing monitoring data.

14.2 Plan Review

The ***NMP*** has been reviewed and updated prior to the commencement of Phase 1B and Phase 2.

This ***Noise Management Plan*** and associated documents will be reviewed in accordance with ***SSD 7142*** and the United Wambo ***EMS*** that states that this must occur within three months of:

- the submission of an Annual Review under condition E11 of ***SSD 7142***;
- the submission of an environmental incident report under condition E9 of ***SSD 7142***;
- the submission of an Independent Environmental Audit under condition E12 of ***SSD 7142***; or
- any modification to the conditions of consent (unless the conditions require otherwise).

The review process is also to reflect changes in environmental legislation and guidelines and changes in technology or operational procedures. If any significant modifications to the NMP are required as an outcome of the review, relevant government agencies will be consulted regarding the changes and the revised Plan will be submitted to DPIE for approval by the Secretary within four weeks.

14.3 Audits

In accordance with Condition E12 of ***SSD 7142***, every three years United Wambo will commission an Independent Environmental Audit to the satisfaction of DPIE. The Audit will include an assessment of the adequacy of the Noise Monitoring Program. Where necessary following the audit, the Program will be updated and action taken to improve performance and management practices.

15. Document Information

Relevant legislation, standards and other reference information must be regularly reviewed and monitored for updates and should be included in the site management system. Related documents and reference information in this section provides the linkage and source to develop and maintain site compliance information.

15.1 Relevant Legislation

The following legislation is relevant to this Plan:

- Environmental Planning and Assessment Act 1979;
- Protection of the Environment Operations Act 1997;
- Protection of the Environment Operations (Noise Control) Regulation 2008;
- NSW Industrial Noise Policy (EPA, 2000);
- Noise Policy for Industry (2017);
- NSW Interim Construction Noise Guidelines (DECC, 2009);
- NSW Road Noise Policy (DECCW, 2011);
- Rail Infrastructure Noise Guideline (NSW EPA, 2013) ;
- Work Health and Safety Act 2011; and
- Explosives Act 2003.

15.2 Related Documents

Related documents, listed in ***Table 15-1*** below, are *documents* directly related to or referenced from within this document.

Table 15-1: Related documents

Number	Title
SSD7142	Development Consent
EPL3141	Environment Protection Licence
GRP-STD-HSEC-028-v1.0	Glencore Group Social Performance Standard
GCAA-625378177-9977	GCAA Social Performance Standard 10.0

Number	Title
GRP-STD-HSEC-022-v1.0	Glencore Environment Standard
GCAA-625378177-9978	GCAA Environment Standard 11.0
GRP-STD-IRM-001-v1.0	Glencore Enterprise Risk Management Standard 10.0
GCAA-625378177-10238	GCAA 11.11 Noise Management
UWOC-1689771511-378	United Wambo Noise Management Procedure
UWOC-1689771511-359	United Wambo Complaints Management Procedure
UWOC-1689771511-360	United Wambo Environmental Management Strategy
UWOC-1689771511-49	United Wambo Communication and Consultation Procedure

15.3 Reference Information

Reference information, listed in ***Table 15-2*** below, is *information* that is directly referred to for the development of this document.

Table 15-2: Reference information

Reference	Title
Umwelt 2016a	***United Wambo Open Cut Coal Mine Project – Noise Impact Assessment (Umwelt, 2016a)***
Umwelt 2016b	***United Wambo Open Cut Coal Mine Project – Environmental Impact Statement (EIS) (Umwelt 2016b)***
Umwelt 2017a	***United Wambo Open Cut Coal Mine Project – Response to Submissions (RTS) (Umwelt, 2017a)***
Umwelt 2017b	***United Wambo Open Cut Coal Mine Project – Response to Request for Further Information (RtRfFI) (Umwelt, 2017b).***
	Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (EPA, 2022)

15.4 Change Information

Full details of the document history are recorded in the document control register, by version. A summary of the current change is provided in ***Table 15-3*** below.

Table 15-3: Change information

Version	Date	Change Details
D.0	September 2019	New document
1.0	November 2019	Updated to address comments received from Department of Planning, Industry and Environment Approved 16/12/2019
2.0	April 2020	Updated Environmental Protection Licence requirements in Table 4-2 Approved 13/07/2020
2.1	July 2020	Updated to include Phase 2 of the Development
3.0	October 2020	Updated to address DPIE comments on Phase 2 submission Approved 19/11/2020 as Version 1.4
3.1	June 2021	Updated following Independent Environmental Audit and submission of Annual Review
4.0	January 2022	Updated in response to RFI from DPIE
5.0	April 2022	Review and updated in accordance with Condition E7 – Modification 1
6.0	August 2022	Minor formatting and revision of version number
7.0	May 2023	Updated following 2022 GCAA Standards Review. Main changes are: • Section 5 - included new corporate requirements • Section 6 - included Internal Stakeholder communication • Section 11.8 – added Record Keeping • Section 15.2- added references to Document Information section • Table 11 2: Noise Trigger Action Response Plan – added updates that match current TARP • Section 8.2: Existing Noise Environment

16. Accountabilities

Table 16-1: Accountabilities

Role	Accountabilities for this document
Operations Manager	• provide sufficient resources are allocated for the implementation of this NMP.
Maintenance Manager	• ensure noise controls/attenuation measures are inspected and maintained for effective noise management.
Environment & Community Manager (ECM)	• identify potential noise impacts and implement actions to mitigate the identified risks; • coordinate and conduct training to ensure all relevant personnel are aware of noise management practices and mitigation measures; • coordinate incident investigation processes including associated reporting requirements in accordance with legal requirements and incident reporting procedures; • coordinate the implementation of corrective actions and evaluate their effectiveness; and • ensure all internal and external reporting requirements are met.
Environment & Community Officer (ECO)	• coordinate, advise and assist with the implementation noise monitoring in accordance with the NMP; • maintain procedures to ensure potential noise impacts are identified; • coordinate monitoring surveys and develop proactive strategies to minimise noise and vibration impacts; • maintain monitoring equipment in accordance with the requirements of the Project Approval and this plan; • complete noise monitoring reports and make these reports available on the United Wambo website as per the requirements of the Project Approval; • investigate and document findings from noise complaints; • provide advice regarding noise management in response to alarms from the real-time noise monitoring system; • provide input regarding the effectiveness of noise mitigation measures; and • complete reporting requirements for the Annual Review associated with this plan.

Role	Accountabilities for this document
Department Managers	• ensure personnel undertake the relevant noise management training; • assist in the coordination of monitoring surveys and development of proactive strategies to minimise noise impacts; • ensure that personnel and contractors carry out work in accordance with this NMP; and • provide input regarding the effectiveness of noise mitigation measures.
All Employees and Contractors	• comply with requirements of this NMP

Appendix A - Stakeholder Consultation

DOC19/791288-2; EF13/3770

United Collieries Pty Ltd
Private Mail Bag 13
SINGLETON NSW 2330

11 September 2019

Email: Aislinn.Farnon@glencore.com.au
CC: Melanie.hollis@planning.nsw.gov.au

Attention: Aislinn Farnon

Dear Ms Farnon

UNITED WAMBO OPEN CUT COAL MINE PROJECT – ENVIRONMENTAL MANAGEMENT PLANS

Reference is made to your email dated 10 September 2019 to the Environment Protection Authority ("EPA") requesting consultation in relation to the preparation of the United Wambo Open Cut Coal Mine Project Environmental Management Plans. These include:

- Noise Management Plan;
- Air Quality and Greenhouse Gas Management Plan;
- Water Management Plan;
- Surface Water Management Plan;
- Erosion and Sediment Control Plan;
- Groundwater Management Plan; and
- Construction Environment Management Plan.

The EPA encourages the development of such plans to ensure that proponents have met their statutory obligations and designated environmental objectives. However, the EPA does not undertake consultation in regard to these documents as our role is to set environmental objectives for environmental/conservation management, not to be directly involved in the development of strategies to achieve those objectives.

The EPA has not reviewed these reports and accordingly offers no comment in relation to them.

The EPA expects that Licensees comply with their Environmental Protection Licence.

Phone 131 555
Phone 02 4908 6800
Fax 02 4908 6810
TTY 133 677
ABN 43 692 285 758
PO Box 488G
Newcastle
NSW 2300 Australia
117 Bull Street
Newcastle West
NSW 2302 Australia
info@epa.nsw.gov.au
www.epa.nsw.gov.au

`If you wish to discuss the matter further, please contact me on 02 4908 6833.

Yours sincerely

NATASHA RYAN
A/Head Regional Operations Unit
Environment Protection Authority

DOC20/628223-3

United Wambo Joint Venture
134 Jerrys Plains Road
WARKWORTH NSW 2330

Returned via the Major Projects Portal

10 August 2020

Attention: Aislinn Farnon

Dear Mr Farnon

United Wambo Open Cut Coal Mine Noise Management Plan (SSD-7142-PA-26)

Reference is made to your request on 5 August 2020 via the Department of Planning, Industry and Environment's major projects portal requesting the Environment Protection Authority (EPA) to review and comment on the United Wambo Open Cut Coal Mine Noise Management Plan.

The EPA encourages the development of such plans to ensure that licensees have determined how they will meet their statutory obligations and designated environmental objectives.

Being a regulatory authority, the EPA's role is to set environmental management objectives rather than being directly involved in the development of strategies to achieve those objectives. Accordingly, the EPA has not reviewed this management plan.

If you have any questions about this matter, please contact Jenny Rushton on 02 6883 5301 or by email to hunter.region@epa.nsw.gov.au

Yours sincerely

JENNY LANGE
A/Unit Head – Regional Operations

Phone 131 555
Phone 02 4908 6800
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PO Box 488G
Newcastle
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Appendix B - Correspondence from Global Acoustics

Global Acoustics
Noise and Vibration Analysis and Solutions

23 October 2019

Glencore Coal (NSW) Pty Limited - NSW
PMB 8
Singleton NSW 2330
Attention: Aislinn Farnon

Dear Aislinn,

Regarding: United Wambo Noise Management Plan

1 INTRODUCTION

This letter provides our confirmation that the United Wambo noise management plan (the NMP) supplied to you by us as UWJV Noise Management Plan v1.1_GAreview06.docx is:

- technically correct as per the Noise Policy for Industry; and
- meets the requirements of SSD 7142 Conditions of Consent FINAL.

The document history is broadly that it was:

- initially prepared by Glencore ;
- reviewed and revised by Global Acoustics;
- submitted to DPIE who subsequently asked for some modifications;
- revised by Glencore; and
- reviewed and revised again by Global Acoustics.

It should be noted that this document has been prepared for phase 1 only of the relevant project.

I trust this information meets your requirements. If you have any questions or need further details please contact us.

Global Acoustics Pty Ltd | PO Box 3115 | Thornton NSW 2322
Telephone +61 2 4966 4333 | Email global@globalacoustics.com.au
ABN 94 094 985 734

Prepared: Tony Welbourne
Director

QA review: Jeremy Welbourne
Consultant

Global Acoustics Pty Ltd | PO Box 3115 | Thornton NSW 2322
Telephone +61 2 4966 4333 | Email global@globalacoustics.com.au
ABN 94 094 985 734

Appendix C - Noise Compliance Assessment Methodology

Noise Management Plan - Attended Noise Monitoring

Section 1 - Monitoring Results

Date: | Time:

Name: | Location: | Period:

Microphone height: | Distances building facade:

Noise meter calibration: | /property boundary:

Meteorological data:

Temperature: | Wind Speed: at ___ m | Wind Dir.: at ___ m | Humidity:

Cloud cover: /8ths | Fog: | Temp Inv.: | Rain:

Measured Noise Levels

$L_{Aeq,15min}$: | $L_{A90,15min}$: | $L_{A10,15min}$:

$L_{Amin,15min}$: | $L_{Amax,15min}$: | $L_{A1,15min}$:

$L_{Ceq,15min}$: | Estimated Cwt - At for mine noise: | Penalty:

Estimated noise level from the Project and Wambo Mine (ink penalty): $L_{Aeq,15min}$

Section 2 - Assessment Protocol

Q1. Is the estimated noise Level from the Project and Wambo Mine:

1a. Greater than the Project criterion? $L_{Aeq,15min}$: Criterion — Yes / No

1b. Greater than the Wambo Mine criterion? $L_{Aeq,15min}$: Criterion — Yes / No

NO for both operation => Both operations are compliant with respective criterion, no further action

YES for <u>one</u> operation => Review 'Operational Status Checklist' for Operation with lower criterion

YES for <u>both</u> operations => Review 'Operational Status Checklist' for both Operations <u>and</u> go to Q2

Q2. Is the estimated noise level from Project and Wambo Mine greater than the summation of the Project and Wambo Mine criteria?

Summation of $L_{Aeq,15min}$ Criteria : — Yes / No

If YES Q2 => at least one of the operations is non-compliant with respective criteria. Actions to be implemented:

- Inform operations of potential non-compliance
- Confirm 'Operational Status Checklist' with both operations
- Relocate to an intermediate location to observe dominant noise sources
- If required, request strategic relocation of shutdown of observed dominant noise sources
- Re-monitor within 75 minutes

Section 3 - Statement of Compliance

Contribution from the Project

$L_{Aeq,15min}$: | Observed sources:

Criterion:

$L_{A1,1min}$: | Observed sources:

Criterion:

Project Compliant with:

$L_{Aeq,15min}$: Yes / No

$L_{A1,1min}$: Yes / No

Contribution from Wambo Mine (CHPP, train loading facility and underground mine)

$L_{Aeq,15min}$: | Observed sources:

Criterion:

$L_{A1,1min}$: | Observed sources:

Criterion:

Operational Status Checklist

Operational Status Wambo Mine

Equipment Description	Activity	approx 2019	approx 2023	approx 2028	Operating
CHPP	Running	1	1	1	Running Yes/No
Train Loading Facility	Train Loading	1	1	1	Running Yes/No
South Bates U/G	Ventilation	1	-	-	Running Yes/No
	Mining	1	-	-	Running Yes/No
	Coal Trucks	4	-	-	No. _____
South Wambo U/G	Ventilation	-	1	1	Running Yes/No
	Mining	1	-	-	Running Yes/No
	Coal Trucks	-	4	4	No. _____

Is Wambo Mine operating with equipment numbers specified above? Yes / No

If Yes, Wambo is likely to be operating within the Consent/EPL noise limits unless there is a failure in equipment noise control

If No, describe additional activities. Are there any failures of noise control measures evident?

Appendix D - DPIE Consultation Records

Section	Comment	Response/Change
Executive Summary	Are Mitigation Measures No. 10 and 11 not possible during Phase 1B? If so please update accordingly	Timing of Item 10 updated to reflect ongoing maintenance and inspections. Inspection and maintenance of noise attenuation systems will be completed as per OEM specifications. Frequency of maintenance and inspections will vary between different types of equipment. Timing of Item 11 updated. A period review of noise performance of the equipment fleet will be completed over any 3 year rolling period. As specified in the GCAA Noise Management Protocol.
Section 4.0	How is condition B4 and B5 being addressed? Not discussed in Section 10.	Section 10.6 Training and Awareness through United Wambo Site inductions and specific training. (I.e. inductions, crew talks, general communication meetings) discusses road noise associated with the project. To address Condition B4 (e) and (c), Section 10.3 has been updated to include operational responses from the United Wambo EIS.
Executive Summary Section 10	Does training include noise minimisation?	Updated to noise management training, training provides information regarding all aspects of Noise Management Plan.
Section 10	How will managing drop height be quantified?	Drop height may vary based on a number of factors, mainly safety. In addition, factors such as material size/type and location of excavator/ Loader in relation to haul truck.
Executive Summary Section 10	Define key and relevant employees.	References have been included to define key and relevant employees.
Section 10	Define prompt response to community enquiries and complaints	Response time has been updated to within 24 hours of the complaint or enquiry.