LIDDELL

GLENCORE

Noise Monitoring Program

Plan

Number: LIDOC-90533967-1114
Owner: Environment & Community Officer
Status: Approved
Version: 10.0
Effective: 15/02/2021
Review: 15/02/2024

Table of Contents

1. Purpose

The Noise Monitoring Program outlines the noise monitoring undertaken by Liddell Coal Operations Pty Ltd (LCO) to ensure compliance with statutory requirements:

- DA 305-11-01, the determination of the Development Application
- Environmental Protection Licence (EPL) 2094

This program specifically satisfies Schedule 3, Condition 3 of DA 305-11-01 which states:

The Applicant must update and subsequently implement the Noise Monitoring Program for the development to the satisfaction of the Secretary. This program must be submitted to the Secretary by the end of May 2015, and must include regular attended monitoring in accordance with Appendix 6 (of DA305-11-01), and a noise monitoring protocol for evaluating compliance with the noise impact assessment criteria in this consent.

2. Scope

The noise monitoring in this program comprises all noise monitoring activities at LCO including attended, unattended and meteorological assessment.

The plan has been updated to comply with DA 305-11-01 Modification 7 and EPL 2094.

3. Noise Assessment Criteria

The noise assessment criteria for LCO set out by DA 305-11-01 Schedule 3 and EPL 2094 are shown in ***Table 3-1***.

The criteria consider the most recent detailed noise assessment for the remediation works within the Mountain Block Offset Area, completed by Global Acoustics.

Compliance will be determined by attended monitoring surveys. DPIE require monitoring to determine if any impacts are systemic/sustained. LCO is considered compliant if at the time of monitoring, the measured noise levels from the mine do not exceed the noise assessment criteria in ***Table 3-1*** for $LA_{eq,\ 15\ minute}$ and $LA_{1,1minute}$, taking into account:

- Whether criteria are applicable during weather conditions prevailing at the time of measurement;
- Whether modifying factors apply at the time of measurement;

Table 3-1 - LCO Noise Assessment Criteria

<table>
<tr><th colspan="2">Development Consent (305-11-01)</th><th colspan="2">Environmental Protection Licence (2094)</th><th>Document Section Reference</th></tr>
<tr><td>Condition</td><td>Requirement</td><td>Condition</td><td>Requirement</td><td></td></tr>
<tr><td>Schedule 3:1</td><td>Project Specific Noise Impact Assessment Criteria

The Applicant must ensure that the noise generated by the development does not exceed the noise impact assessment criteria in Table 1 at any residence.

Table 1: Noise impact assessment criteria dB(A)
<table>
<tr><th>Assigned residential location number</th><th>Day (L_{Aeq} ((15 min))</th><th>Evening (L_{Aeq} ((15 min))</th><th>Night (L_{Aeq} ((15 min))</th><th>Night (L_A (1 min))</th></tr>
<tr><td>1,5,6,7,8,9,10,11,12,14</td><td>35</td><td>35</td><td>35</td><td>45</td></tr>
<tr><td>2</td><td>35</td><td>35</td><td>36</td><td>45</td></tr>
<tr><td>3</td><td>36</td><td>35</td><td>37</td><td>45</td></tr>
<tr><td>4</td><td>36</td><td>35</td><td>36</td><td>45</td></tr>
<tr><td>All other privately-owned land</td><td>35</td><td>35</td><td>35</td><td>45</td></tr>
</table>
Note: To determine the locations referred to in Table 1, see Appendix 5 of DA 305-11-01

Noise generated at the development is to be measured in accordance with the relevant requirements of the NSW Industrial Noise Policy.</td><td>L5.1</td><td>Same as DA-305-11-01</td><td>Table 3-1</td></tr>
</table>

Development Consent (305-11-01)		Environmental Protection Licence (2094)		Document Section Reference
	Appendix 6 *(of DA 305-11-01)* sets out the meteorological conditions under which these criteria apply and the requirements for evaluating compliance with these criteria. However, these criteria do not apply if the applicant has an agreement with the owner(s) of the relevant residence or land to generate higher noise levels, and the Applicant has advised the Department in writing of the terms of this agreement.			
Schedule 3:2	**Operating Conditions** The Applicant must: (a) Implement all reasonable and feasible measures to minimise the construction, operational, road and rail noise of the development; (b) Operate a noise management system on site that uses attended noise monitoring data to ensure compliance with relevant conditions of consent; (c) Evaluate the effectiveness of the noise management system (d) Minimise the noise impacts of the development during the meteorological conditions when the noise criteria in this consent does not apply (see Appendix 6 (of DA 305-11-01)); and (e) Monitor and report on compliance with the relevant noise conditions of DA 305-11-01, to the satisfaction of the Secretary	N/A	N/A	***4.2*** ***5***
Schedule 3:3	**Monitoring** The Applicant must update and subsequently implement the Noise Monitoring Program for the development to the satisfaction of the Secretary. This program must be submitted to the Secretary by the end	N/A	N/A	This Document

Development Consent (305-11-01)		Environmental Protection Licence (2094)		Document Section Reference
	of May 2015, and must include regular attended monitoring in accordance with Appendix 6 (*of DA 305-11-01)* and a noise monitoring protocol for evaluating compliance with the noise impact assessment criteria in this consent *(DA 305-11-01)*			
Appendix 6	**Noise Compliance Assessment** ***Applicable Meteorological Conditions*** 1. The noise criteria in Table 1 of Schedule 3 (of DA 305-11-01) are to apply under all meteorological conditions except the following: (a) During periods of rain or hail; (b) Average wind speed at microphone height exceeds 5m/s; (c) Wind speeds greater than 3 m/s measured at 10 m above ground level; or (d) Temperature inversion conditions greater than 3˚C/100 m, or alternatively stability class F and G.	L5.4	The noise limits set out in condition L5.1 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.	***4.2.4***
Appendix 6	***Determination of Meteorological Conditions*** 2. Except for wind speed at microphone height, the data to be used for determining meteorological conditions shall be that recorded by the meteorological station or in the vicinity of the site	L5.5	For the purposes of condition L5.3: (d) Data recorded by the closest and most representative meteorological station installed on the premises at EPA Identification Point 13 must be used to determine meteorological conditions; and (e) 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).	***4.2.4***

Development Consent (305-11-01)		Environmental Protection Licence (2094)		Document Section Reference
Appendix 6	***Compliance Monitoring*** 3. Attended monitoring is to be used to determine compliance with the relevant conditions of this consent. 4. This monitoring must be carried out at least once a month (but at least two weeks apart), unless the Secretary directs otherwise. *Note: The Secretary may direct that the frequency of attended monitoring increase or decrease at any time during the life of the development.* 5. Unless otherwise agreed with the Secretary, this monitoring is to be carried out in accordance with the relevant requirements for reviewing performance set out in the NSW Industrial Noise Policy (as amended from time to time), in particular the requirements relating to: (e) Monitoring locations for the collection of representative noise data (f) Meteorological conditions during which collection of noise data is not appropriate: (g) Equipment used to collect noise data, and conformity with Australian Standards relevant to such equipment; and 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 should be undertaken in accordance with Fact Sheet C of the NSW Noise Policy for Industry (EPA, 2017).	M10.1 M10.2 M10.3 M10.4	Same as DA-305-11-01	4.2.1

Development Consent (305-11-01)		Environmental Protection Licence (2094)		Document Section Reference
N/A	N/A	M10.4	Where required in writing by the EPA, the Licensee must carry out attended monitoring at sensitive receivers in addition the monitoring required by Condition M10.2.	-

4. Measurement & Evaluation

4.1 Monitoring locations

Noise Monitoring is undertaken at the locations shown in ***Table 4-1*** and ***Figure 4-1***. These locations have been selected to be representative of the local LCO community and likely properties that may be impacted by LCO operational noise. The locations are representative of currently occupied properties identified for monitoring in the Development Approval, and 2013 Environmental Impact Statement (EIS).

Table 4-1 - Noise Monitoring Locations at LCO

Monitoring Location	2013 EIS Receptor Location	EPL Reference
1317 Hebden Rd	12 R4 (also representative of R5 and R6)	Monitoring Point 14
1246 Hebden Rd	14 R1 (also representative of R2 and R3)	Monitoring Point 15

Note: Residence 1246 Hebden Rd (14) is the closest occupied non-mined owned residence to Liddell Coal.

A review of noise monitoring locations conducted by Global Acoustics in March 2013 (refer Appendix A) determined that the number of sites could be reduced to two (1246 (R1, R3) and 1307 (R4, R5, R6) Hebden Road) on the basis of:

- The Environment Protection Authority (EPA) has advised LCO, as part of the Pollution Reduction Program, that: 'Noise sensitive receiver locations do not include any locations owned by the licensee or another coal mine or where a negotiated agreement (as outlined in the Industrial Noise Policy) is in place between the landowner and any licence holder'. While this statement refers to 'another coal mine' it is considered reasonable to substitute 'another noise generating industry' such as AGL Macquarie Liddell and Bayswater Power Stations into this statement. AGL Macquarie (R15) owns the Liddell Recreational Area (LRA) (R13) and monitoring has indicated it is significantly affected by Power Station generated noise.
- Noise monitoring has been undertaken at 1412 (R7) and 1525 (R9) Hebden Road on nominally three occasions per quarter, since quarter 4, 2010. The total sample count at both locations is 25 with a maximum mining LAeq at these locations of 32 dB, measured at 1412 (R7) Hebden Road; and
- Prior to and up until the review in March 2013, mining noise has been insignificant and inaudible, less than LAeq 20 dB, or, not measurable due to low level mine noise impact for 88 and 80 percent of the samples at 1412 (R7) and 1525 (R9) Hebden Road respectively. Therefore, it these locations have a history of receiving low to zero mining noise levels from LCO.

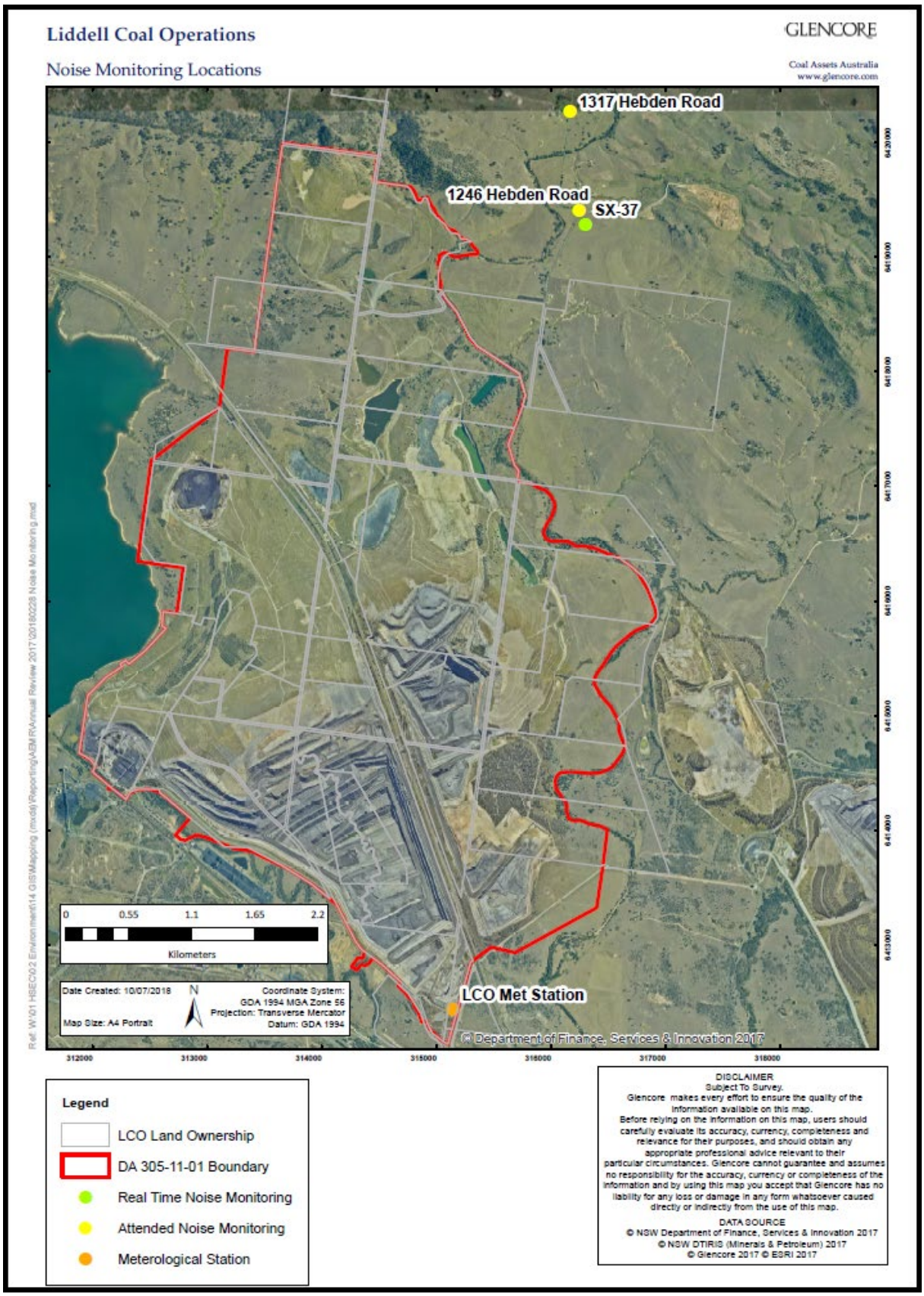

Figure 4-1 - Noise monitoring locations at LCOMonitoring Protocol

4.1.1 Attended Noise Monitoring

4.1.1.1 Description

The attended noise monitoring survey is used to quantify and describe the acoustic environment at each monitoring location. The results are compared with the noise criteria in ***Section 3*** to assess compliance. Attended noise monitoring is the preferred method for determining compliance with prescribed limits because it allows for an accurate determination of the contribution made by industrial noise sources, if any, to measured ambient noise levels. The attended noise monitoring program is used to:

- identify individual sources contributing to the ambient noise environment;
- quantify mine noise levels;
- determine whether a modifying factor should be applied to the contributing mine noise levels (in accordance with ***Fact Sheet C of the NSW Noise Policy for Industry***);
- gain an understanding of the effects of meteorological conditions on the propagation of the noise from LCO to the monitoring location; and
- allow, by comparison, evaluation of real-time monitoring data for accuracy of noise management

All noise measurements will be accompanied by both qualitative description (including cloud cover) and quantitative measurements of prevailing weather conditions throughout the monitoring period. Quantitative data will be sourced from the meteorological monitoring station utilised by LCO.

During the attended noise measurements, the noise consultant will also note any significant mining generated noise sources (i.e. haul trucks, dozers, etc).

4.1.1.2 Sampling

Attended noise monitoring will be undertaken once per calendar month at the representative locations nominated in ***section 4.1*****,** in accordance with the Environment Protection Authority (EPA) ***Industrial Noise Policy (INP) guidelines*** and ***Australian Standard AS 1055 'Acoustics, Description and Measurement of Environmental Noise'.*** Each monthly attended noise survey comprises up to two 15-minute measurements at each location.

Historical monitoring and industry accepted experience shows that mining noise is generally inaudible during the day. Additionally, it is accepted that night-time measurements are conservatively representative of evening results. Therefore, attended noise monitoring will only be undertaken during the night period (10:00 pm to 7:00 am) unless otherwise requested by DPIE.

For each 15 minute monitoring period, the following information will be recorded:

- operator's name;
- monitoring location;
- date and time that monitoring began at each location;
- quantitative meteorological data such as temperature, wind speed, wind direction and humidity;
- qualitative meteorological information such as cloud cover, fog, and rainfall;
- instrument calibration details before and after the monitoring period;
- the value or estimate of the LCO LAeq,15minute;

- the highest mining LA1,1minute noise level (to allow comparison with the relevant sleep arousal criterion);
- the overall LAeq,15minute and LCeq,15minute;
- statistical noise level descriptors: LA90, LA50, LA10, LA1 and LAmax;
- notes that identify the noise source that generated the highest LA1,1minute (LAmax);
- measurements in one-third octave bands from 25 Hz to 10 kHz inclusive (or a broader range of bands) to assess if the mining noise has characteristics that may require modifying factors to be applied; and
- data suitable for assessing the relative contribution of mine-generated noise to the overall noise being measured by using a suitable low-pass filter.

To avoid disturbance to residents, monitoring locations at slight distances from actual residences are used to measure compliance. In most cases, suitable monitoring locations where noise levels are likely to be the highest are chosen.

To determine compliance with the $LAeq_{15\ minute}$ and $LA_{1,1\ minute}$ noise limits, attended noise measurements are taken at representative locations. To demonstrate that the current noise monitoring locations used for LCO are representative of the nearest sensitive receptor, approximate difference in noise levels is determined between the actual monitoring locations and the residence (house) being represented.

Approximate distances between actual monitoring locations, residence (house) locations and the nearest point of site were determined. Calculations were then made to establish the approximate difference in mining noise levels that is likely between the monitoring locations and the residence (house) locations if there were operations at the nearest point.

The nearest point of site was used as a worst case scenario; activity on site but further away should result in smaller differences between received noise levels at the monitoring and residence (house) locations.

Approximate changes in received noise levels between actual monitoring location and residence (house) locations are in Table 4.2.

Table 4-2 - LCO Monitoring Locations and Change in Received Noise Levels

Monitoring Location	Residence represented (Modification 5 of DA-305-11-01 reference)	Change in dB between the monitoring location and the residence
1246 Hebden Rd	R1	-0.1
1246 Hebden Rd	R3	-0.4
1317 Hebden Rd	R4	0.0
1317 Hebden Rd	R5	-0.1
1317 Hebden Rd	R6	-0.5

Table 4.2 shows there are insignificant changes in noise levels between monitoring and residence (house) locations. In all cases, noise levels at residences are expected to be equal to or less than would

be measured at the monitoring locations based on distance calculations. The approximate change in received noise levels between actual monitoring locations and the residences they represent is within 0.5 of a decibel, which is within the error range of a Type 1 sound level meter used for environmental monitoring. Additionally, 0.5 dB is well below the change in noise levels perceptible to the human ear in a steady state environment. On this basis, all monitoring locations can be considered to be representative of the receptors they were chosen to represent.

4.1.1.3 Compliance Assessment & Response

The flowchart in Figure 4-2 outlines the process for attended noise monitoring and the required response based on noise results.

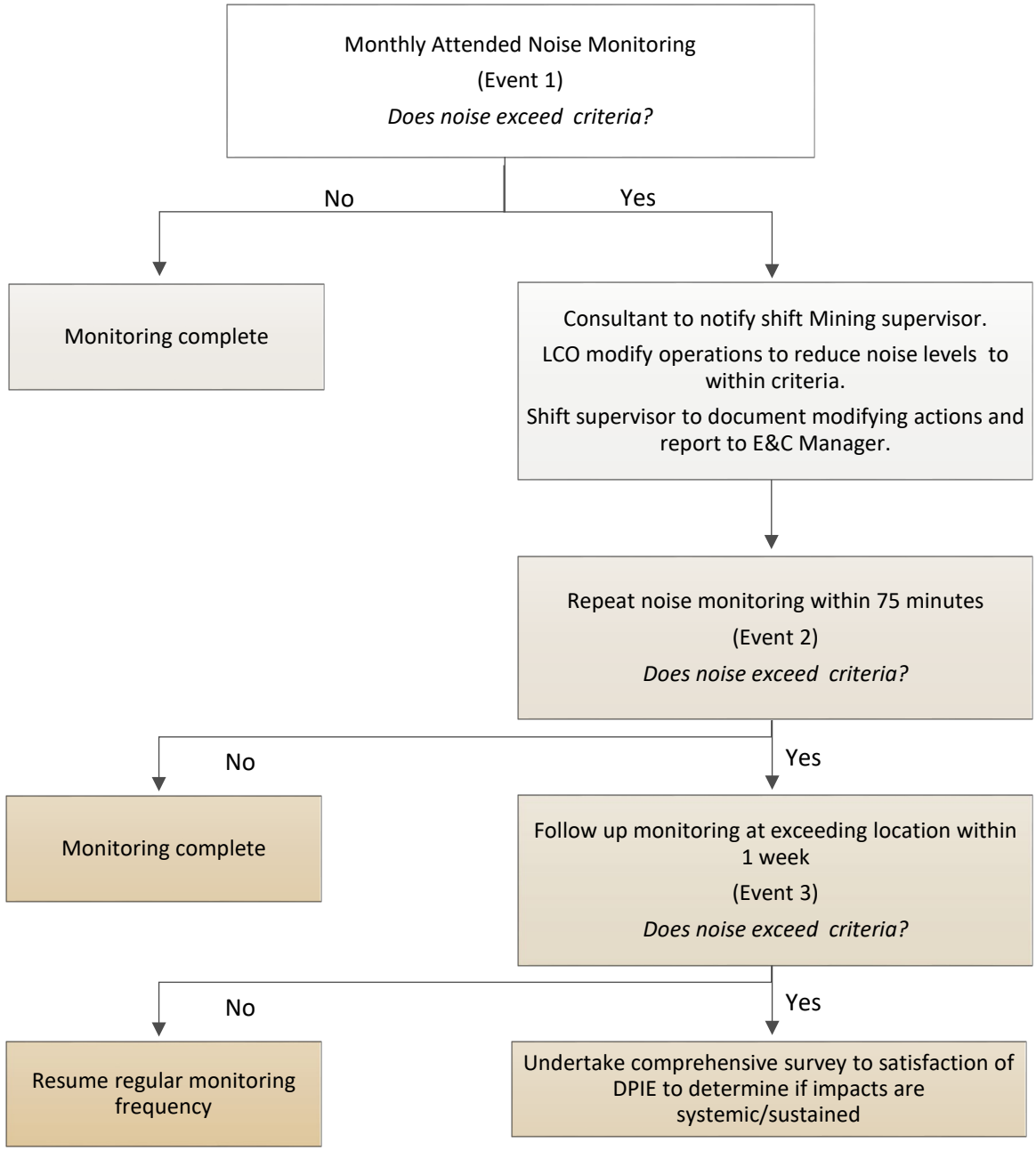

Figure 4-2 – Attended Noise Monitoring Process and Required Response

4.1.2 Unattended Real-Time Noise Monitoring

4.1.2.1 Description

Real-time noise monitoring is a proactive way to manage noise impacts at LCO. Real-time noise monitoring allows noise levels and local meteorological data to be analysed and compared to compliance modelling. Results indicating that operational activities are exceeding noise level criteria are used to proactively manage those activities.

The unattended continuous noise monitor provides information on the ambient noise environment local to the monitoring site. The unattended continuous noise monitoring data includes quantitative data that can be used to determine the likely source of the noise. LCO has a real time, directional noise monitoring unit (refer to ***Figure 4-1***) that is programmed to send an SMS alarm to key operational personnel when a trigger noise level is reached.

The unattended real-time continuous noise monitor also provides the following functionality:

- a complete representation of all noises at the monitoring location throughout the period, with results showing diurnal variations and, if the period is long enough, seasonal variations;
- noise data suitable for the compilation of cumulative frequency distribution curves for comparison with prior noise modelling predictions or relevant noise criteria;
- correlation with attended monitoring data to improve accuracy of management responses to triggers and prompt further investigation where an increasing noise level trend is observed;
- supplemental data for noise investigations initiated in response to community complaints or noise exceedances;
- data that can be used to determine correlations between mining operations, meteorological conditions and environmental noise levels; and
- data for use in assessment of cumulative noise levels.

The unattended continuous noise monitors record the following information:

- the date and time;
- the LAeq for each 15 minute interval;
- the LAmin, LA90, LA10 and LAmax for each 15 minute interval;
- the 15 minute one-third octave LAeq noise levels corresponding to the LAeq 15 minute interval;
- between 10 seconds and one minute (depending on the settings) one-third octave noise levels over the entire monitoring period;
- the LAeq, period (where period = day, evening and night) for each 24 hour interval;
- the maximum LA1,1minute noise level recorded over a predefined 15 minute night time measurement period;
- continuous weather data monitoring for wind direction, speed, temperature and rainfall as 15 minute averages; and
- continuous audio file recording for subsequent playback.

4.1.2.2 Sampling

Low frequency noise levels (25Hz to 630Hz) are consistent with continuous open cut mining noise. Measured and calculated alarm conditions target the low frequency noise levels, and exclude extraneous noise sources. The unattended noise monitor measures that frequency 24/7 at 1246 Hebden Road.

4.1.2.3 Compliance Assessment & Response

The real-time monitoring equipment is used as a management tool for day-to-day operations rather than a tool to monitor compliance.

Alarm trigger levels are set below and at relevant criterion at the nearby sensitive receivers, as identified in the DA 305-11-01. They are not set for the life of mine and reviews of trigger levels are regularly undertaken to ensure they adequately represent mine noise where a response is required. There are two alarm level types sent by SMS notification, shown in

Table 4-3. The adopted trigger levels are reviewed and revised as necessary, in consultation with a suitably qualified acoustic consultant.

Table 4-3 - LCO SMS Noise Alarms

Alert Type	Criteria	Purpose	Required response
AMBER	Noise levels **> 33dB(A)** for a period of **30 mins**	• Warn that noise levels are approaching noise limits • Trigger for further surveillance and monitoring of noise levels via noise monitor required	• Review operations and current meteorological conditions is undertaken in order to minimise the risk of noise level exceedances
RED	Noise levels **≥ 35dB(A)** for a period of **30 mins**	• Warn that noise levels are exceeding noise limits • Trigger for decisive action to reduce noise levels within a practical timeframe (target 75mins or less) required	• Undertake mitigation measures • Consider modification of operations such as relocation of work areas, utilise alternate machine for the task (i.e. rubber tyre dozer) or cessation of operations in a particular area.

4.1.3 Sound Power Testing

The monitoring program is also used to assess the performance of all mining machinery. Equipment selection will be governed by the noise performance of the mine, not necessarily individual items of equipment. A continued program of regular sound power screening testing is undertaken at LCO and assists in managing sound power levels, as well as identifying plant items requiring maintenance to noise attenuation packages.

4.1.4 Meteorological Conditions

The local meteorological data collected during the attended monitoring program, and by the unattended noise monitoring units, will be supplemented by more detailed records from the LCO weather station (refer to ***Figure 4-1***). The meteorological data recorded by the weather stations include:

- wind speed, wind direction and sigma-theta;
- temperature;
- humidity; and
- rainfall.

The meteorological data is recorded at 15-minute intervals and is linked directly to the LCO real time monitoring system allowing for access to real time weather conditions.

Noise limits will apply under all meteorological conditions except for those specified in ***Table 3-1***. Noise exceedances identified to have occurred during the excluded meteorological conditions are considered to be 'extraneous noise' as detailed in the INP.

5. Reporting & Review

All internal and external reporting is undertaken in accordance with the requirements of the ***Glencore HSEC Assurance Standard*** and this monitoring program.

5.1 Internal Reporting

If attended noise monitoring indicates an exceedance of the relevant noise criteria in ***Table 3-1***, incident / non-compliance reporting is undertaken in accordance with the GCAA ***Incident Reporting and Investigation Procedure***.

5.2 External Reporting

All noise monitoring results will be made publicly available on the LCO website in accordance with Schedule 5, Condition 9 of the ***DA 305-11-01***. LCO will update these results in accordance with current legislative requirements.

The Annual Review (AR) prepared each year for LCO will include all noise monitoring results for the corresponding year. The AR will also include an assessment of the noise monitoring results against the noise impact assessment criteria, and any trends in monitored noise levels over the period. Any complaints relating to noise emissions from LCO, and the response actions taken, will be reported in the AR. Reporting will also be conducted in accordance with the EPL 2094 compliance reporting to be submitted to EPA.

The EPA Annual Return requires an annual noise compliance assessment report prepared by an appropriately qualified acoustic consultant. The report must include an assessment of any exceedance of noise limits and justification that the noise monitoring points identified in Condition P1.4 are still representative of the noise limits at the sensitive receivers identified in Condition L5.1.

A summary of noise monitoring results will be presented to the LCO Community Consultative Committee (CCC) meetings which are held every six months.

5.3 Noise Exceedance Notifications

5.3.1 DPIE Noise-affected Night

If the attended monitoring program identifies a "noise-affected night" as per ***Figure 4-2***, and LCO is likely to be responsible for any exceedance of noise criterion, the Environment and Community Manager (or delegate) will:

1. Notify the Director General accordance with Schedule 4, Condition 2 of DA 305-11-01. This will entail notification to the DPIE via DPIE Major Projects Planning Portal the following day (or as soon as practical), and supply a written report of the exceedance within 7 days.
2. Review mitigation measures which would prevent the exceedance from re-occurring;
3. Notify affected landowners and/or tenants of noise exceedance at residence, in accordance with DA 305-11-01 Schedule 4 Condition 2. Notification to be delivered via letter/email, phone call or face-to-face meeting (stakeholder preferred method) and include details of exceedance and further monitoring results as requested.
4. Report the exceedance to the LCO Community Consultative Committee (CCC) (Schedule 5 Condition 7) and in the AR (Schedule 5 Condition 3).

The above excludes where a negotiated agreement has been entered into in relation to that impact or where the properties are owned by LCO or another coal mine or noise generating industry.

The written report to the DPIE (and any other government department/agency as required) will include the following details:

- The date, time and nature of the exceedance/incident;
- Identify the likely cause of the exceedance/incident;
- Description of the response action that has been undertaken to date; and
- Description of the proposed measures to address the exceedance/incident.

Outcomes of the attended noise monitoring surveys and any actions taken will be provided to DPIE and EPA as requested.

5.3.2 DPIE Non Noise-affected Night

If an attended monitoring result exceeds the criterion but is not deemed to be a noise affected night due to mitigation actions, the exceedance is required to be reported to the DPIE the following day (or as soon as practical) verbally and/or via email, along with information on any actions taken to reduce the noise.

The licensee must report any exceedance of licence noise limits to the EPA Hunter at hunter.region@epa.nsw.gov.au as soon as practicable after the exceedance becomes known to the licensee or to one of the licensee's employees or agents

5.3.3 Environmental Protection Licence

The licensee must report any exceedance of licence noise limits to the EPA Hunter at hunter.region@epa.nsw.gov.au as soon as practicable after the exceedance becomes known to LCO.

Incidents resulting in or having the potential to result in material harm to the environment (as defined by Section 147 of the POEO Act) shall be reported in accordance with the Liddell Coal Operations Pollution Incident Response Management Plan.

In accordance with EPL conditions and as per LCO document control procedures, monitoring records will be maintained on site for at least four years.

5.4 Complaint Response

All community complaints will be handled in accordance with the site ***Complaints Management Procedure.***

In accordance with Schedule 4, Condition 4 of DA 305-11-01, if a landowner considers the development to be exceeding any noise criterion, except where this is predicted in the 2013 Environmental Assessment (SLR, 2013) then he/she may request the Director General in writing for an independent review of the impacts of LCO on his/her land. Should this occur, LCO will undertake the process provided in Schedule 4, Conditions 4 to 6 of DA 305-11-01.

6. Corrective Action

If a systemic/sustained exceedance of noise impact assessment criterion is identified attended noise monitoring activities, the following process will be undertaken:

- Comparison of the attended noise monitoring results with the predicted noise levels from a compliance noise model of the mine under like meteorological conditions. The compliance noise model of the mine will be prepared using the latest mine plan, equipment schedule, equipment locations and production statistics;
- Refine the noise compliance model taking into account the findings of the attended noise monitoring survey;
- Using the compliance noise model to predict the noise level in the surrounding region using the meteorological conditions used to determine the noise impact assessment criteria;
- Comparison of the predicted noise levels with the relevant noise impact assessment criteria to assess compliance of the mine with criteria; and
- Should the noise exceedance be attributable to a specific piece of plant, a review will be conducted by the maintenance department to confirm any irregularity causing enhanced noise from the equipment. Where deemed necessary, sound power testing (SPT) on this particular piece of plant will be undertaken to determine whether levels are consistent with the LCO noise model. This SPT will be additional to LCO's SPT regime.

7. Review

The Noise Monitoring Program is to be reviewed in consultation with the Director-General of the DPIE at least every three years, as required by recommendations arising from the Independent Environment Audit, or after any significant changes to the operation. The review will reflect changes in environmental expectations, technology and operational procedures.

8. Accountabilities

Role	Accountabilities
Operations Manager	Provide adequate resources to assist the implementation of the Noise Monitoring Program.
Environment & Community Manager	Ensure the Noise Monitoring Program is implemented. Review the Noise Monitoring Program and ensure records are stored and distributed appropriately. Engage a suitably qualified consultant to undertake the requirements of the Noise Monitoring program.
Maintenance Manager	Provide adequate resources to assist the implementation of the Sound Power Testing regime.
Mechanical Engineer	Ensure the SPT regime is implemented. Engage a suitably qualified consultant to undertake the requirements of the Noise Monitoring Program in relation to SPT.

9. Document Information

9.1 Related Documents

Related documents, listed in ***Table 9-1***, are documents directly related to or referenced from within this document.

Table 9-1 - Related Documents

Number	Title
-	SLR (2013) Liddell Coal Operations Environmental Assessment for Modification to DA 305-11-01
-	Umwelt (Australia) Pty Limited (2006) Environmental Assessment for Liddell Colliery Modification to Development Consent
-	Hansen Bailey, Environmental Assessment, Modification 7 to DA 301-11-01, August 2018, Prepared on behalf of Liddell Coal Operations
LIDOC-90533967-798	Community Complaint & Enquiry Management Procedure
LIDOC-90533967-797	Environmental Management Strategy
LIDOC-90533967-5247	Attended Noise Monitoring Response Form
LIDOC-90533967-4033	Environmental Reporting Procedure

Number	Title
LIDOC-90533967-746	Noise Management Procedure

9.2 Reference Information

Reference information, listed in ***Table 9-2***, is information that is directly referred to for the development of this document.

Table 9-2 - Reference Information

Reference	Title
Legislation	Department of Environment and Conservation (2000) NSW Industrial Noise Policy
	Protection of the Environment Operations Act 1997 (POEO Act)
Australian Standards	Australian Standards (1997) 1055-1997: Acoustics – Description and Measurement of Environmental Noise
GCAA-625378177-10238	11.11 Noise Management

9.3 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 9-3.

Table 9-3 - Change Information

Version	Date	Review Team	Change Details
0	04/02/2009	M Howes	Original DG Approved Document (external document)
0	30/09/2009	M Howes	Modification to the plan following the 2009 independent audit (external document)
1.0	01/02/2011	M Hawthorne	Update to new document template and changes to the monitoring locations to be more representative of the LCO noise impact on the community.
2.0	28/06/2012	M Bower & B de Somer	Addition of requirement for making attended noise monitoring data publicly available.
	4/7/2012	H Simms	Document owner changed to Environment & Community Superintendent. Accountabilities updated to reflect Environment & Community Superintendent. Updated revisions table to reflect version history.
3.0	15/11/2012	B de Somer	3 Yearly Review for submission to DP&I as per 2012 Independent Environmental Audit.

Version	Date	Review Team	Change Details
	8/8/2013	B de Somer, Global Acoustics P/L, D Foster	Further review and update to all sections of the document to address DP&I requirements.
4.0	24/02/2014	B de Somer, Global Acoustics P/L, D Foster	Address further revision comments from DP&I.
	06/03/2014	B de Somer, Ann Hagerthy (DP&I)	Address final comments from DP&I regarding unattended monitoring program and reporting requirements. Final issue for formal approval.
5.0	21/3/2014	B de Somer, H Simms	Updated Figure 1 – Noise Monitoring Locations. Minor text amendments
6.0	30/03/2015	L Barben, B de Somer	Updated in accordance with Modification 5 DA 305-11-01 and GCAA HSEC Standards. Update to Glencore document template.
	13/07/2015	L Barben	Updated in accordance with DP&E comments
	13/08/2015	L Barben	Append DPE approval letter
7.0	October 2016		Document migration to new SharePoint.
8.0	10/07/2018	B de Somer, M Henderson	Update Fig1. Minor text updates in Section 3 and Section 4. Add DPE Approval to Appendix B. H Simms, B De Somer - Transferred to current template, doc owner to E&C Officer.
9.0	26/06/2019	M Henderson, B de Somer	Full review. Added Section 2.2 Modification 7 – Mountain Block Remediation Updated Section 2.1 in accordance with Modification 7.
10.0	06/07/2020	L Depczynski, B de Somer	Full review. New document template and structural changes. Addition of new requirements of EPL 2094. Monitoring results response flowchart added (Figure 4-2).
11.0			

Appendix A - Receiver Location Plan