VICKERY NOISE MANAGEMENT PLAN

April 2025

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Contents

1 Introduction

1.1 Overview of Approved Operations

The Vickery Coal Mine (VCM) is located in the Gunnedah Coal Basin, approximately 25 kilometres (km) north of Gunnedah in New South Wales (NSW). The VCM is operated by Vickery Coal Pty Limited (VCOPL) (a wholly owned subsidiary of Whitehaven Coal Limited [WHC]).

Development Consent (SSD-7480) was granted to VCPL on 12 August 2020 by the NSW Independent Planning Commission as a delegate of the NSW Minister for Planning under Section 75J of the NSW *Environmental Planning and Assessment Act, 1979* (EP&A Act). The Development Consent allows for the development of an open cut mine and associated infrastructure with a 25 year mine life, extracting run-of-mine (ROM) coal at up to 10 million tonnes per annum (Mtpa) and processing the coal, as well as coal from WHC's Tarrawonga Mine, at an on-site coal handling and processing plant (CHPP) for off-site transport by rail.

A full project description, including history of operations, current operating approach and mining methods are outlined within the Vickery Extension Project Environmental Impact Assessment and previous Annual Reviews for the site. These documents can be found on the Whitehaven Coal website.

1.2 Baseline Data

A background noise survey was conducted by Wilkinson Murray over a 4-week period between 21 Nov 2011 and 20 Dec 2011 in preparation of the Noise & Blasting Impact Assessment for the Vickery Coal Project EIS (Wilkinson Murray, 2013). The survey was carried out at three locations representative of the residences potentially most impacted by noise from the mine.

The noise monitoring equipment used for these measurements consisted of environmental noise loggers set to A-weighted, fast response, continuously monitoring over 15-minute sampling periods.

To describe background noise levels, the measure currently recommended in the Noise Policy for Industry (NPfI) is the Rating Background Level (RBL). This is based on the L_{A90} as defined in the NPfI.

The logger survey results are presented in Table 1. Monitoring Locations are presented in Figure 1.

Table 1– Summary of Logger Survey Results

Receiver ID	Dwelling Name	Monitoring Period	Measured $L_{A90,\ 15min}$ (dBA)		
			Day	Evening	Night
127b	Mirrabinda	2 Dec – 19 Dec 2011	26	28	33
1u	BroadWater	21 Nov – 20 Dec 2011	24	30	32
1x	Will-Gai	21 Nov – 19 Dec 2011	31	38	35

Notes:
Day: the period from 7.00 am to 6.00 pm Monday to Saturday; or 8:00 am to 6.00 pm on Sundays and public holidays.
Evening: the period from 6.00 pm to 10.00 pm.
Night: the remaining periods.

1.3 Purpose

The purpose of this Noise Management Plan (NMP) is to provide an overview of the systems, processes and documentation that have been established to:

- ensure compliance with operating conditions of all active approvals;
- minimise the impact of noise from mining activity on the environment and nearby residences;
- evaluate and report on the effectiveness of the noise management system; and maintain an effective response mechanism to deal with exceedances and complaints; and,
- ensure noise generated at the premises does not exceed the noise limits.

This Noise Management Plan will be implemented in accordance with condition B16 of SSD-7480.

1.4 Scope

The scope of the NMP applies to all activities at VCM, including mining, handling, transport and storage of coal that have the potential to increase noise levels of the immediate and surrounding receiving environment. It covers:

- Construction of the rail, coal handling Preparation Plant (CHPP), mine industrial area (MIA) and any associated infrastructure
- Topsoil recovery using scrapers, excavators, dozers and trucks;
- Drill and blast activities;
- Open cut mining using predominantly hydraulic excavators and haul trucks;
- Haul road maintenance using dozers and graders;
- Overburden shaping and dozer push;
- Coal loading;
- Coal transport along Approved Haul Route;
- Commuter vehicles using public roads;
- Land rehabilitation activities and project related earthworks and civil works;
- Ancillary activities such as pumping;
- Maintenance activities; and,
- Coal exploration drilling activities.

1.5 Management Systems

VCM; as a Whitehaven Coal operation, has established management systems that are aligned with the international management system standard ISO 14001 (ISO, 2015). These management systems provide the framework to support the planning, implementation, monitoring and review to achieve continual improvement in noise management. To minimise the noise impacts of project associated activities, a risk-based approach has been established, which includes mechanisms for predictive forecasting and noise monitoring, providing feedback on the effectiveness of controls and enabling adaptive noise management.

2 Legislative Requirements

Requirements and commitments associated with mining noise are defined within the following approvals:

- Development Consent SSD-7480
- Environment Protection Licence (EPL) 21283.

This Noise Management Plan has been developed as per the requirements of Conditions B15 and E4, of SSD-7480, as provided in Appendix 1 which contains a summary of other relevant conditions and criteria.

2.1 Noise Criteria

2.1.1 Construction Hours

Construction/development activities for the Project rail spur, CHPP and MIA, Kamilaroi Highway Rail Overpass and road realignments will generally be undertaken between 7.00 am to 6.00 pm, Monday to Sunday (inclusive) in accordance with Condition C1, Part C of SSD-7480.

In accordance with Condition C2 of SSD-7480 construction activities undertaken outside of these hours can include:

- activities that cause $L_{Aeq(15\ minute)}$ (equivalent continuous noise level over a sample period of 15 minutes) noise levels that are no greater than the operational noise impact criteria and no more than the 'Noise Affected' noise management level in accordance with the Interim Construction Noise Guideline (ICNG);
- the delivery of plant, equipment and materials of which delivery is required by NSW Police or other authorities, to be undertaken for safety reasons; and
- emergency work to avoid the loss of life, damage to property or to prevent environmental harm; and
- works approved under an Out of Hours Work Protocol in consultation with the EPA (as per Condition B6, Part B SSD-7480).

2.1.2 Development Consent

Operational Noise Criteria

Table 2: Operational Noise Criteria

Residence	Day	Evening	Night	
	$L_{Aeq(15\ min)}$	$L_{Aeq(15\ min)}$	$L_{Aeq(15\ min)}$	$L_{AF\ max}$
131a	40	37	37	52
131b, 132	40	36	36	52
All other privately-owned residences	40	35	35	52

The noise criteria in Table 2 do not apply if there is an agreement with an owner of a residence to exceed the criteria. Currently VCM has an agreement with the owner of residence 132 which has been provided to the DPHI to satisfy the notification required in SSD 7480, Condition B8.

Construction Noise Criteria

Condition C3 of SSD-7480 requires that WHC must maintain construction noise levels such that they would comply with the operational noise impact criteria in Table 1 of the SSD-7480 approval conditions (Table 2 in this plan), except where an alternative temporary limit has been approved by the Secretary for specific works or where a negotiated agreement is entered into with the owners of the relevant properties and the Secretary is advised in writing of the terms of this agreement, excluding the noise affected land referred to in Condition D1 SSD-7480.

Condition B5 of SSD-7480 also requires that WHC must ensure that the activities associated with the construction of the Project Rail Spur and road realignments does not exceed the criteria in Table 3 of the SSD-7480 approval conditions (Table 5 in this plan) at any residence on privately-owned land.

Table 3: Construction Noise Criteria

Land	Construction Noise Criteria
	$L_{Aeq(15\ min)}$
223	49
224	56
All privately-owned residences	45

Road Noise Criteria

Condition B9 requires VCM to ensure, along with Tarrawonga Coal Mine that the noise generated on public roads by the development does not exceed the criteria in Table 4.

Table 4: Road Traffic Noise Criteria

Residence	Day/Evening	Night
	$L_{Aeq\ (15\ hour)}$	$L_{Aeq\ (9\ hour)}$
All privately-owned residences	60	55

Other Criteria

Other noise criteria in SSD-7480 applicable to VCM construction and mining are summarised in Appendix 1.

2.1.3 NSW Noise Policy for Industry

Based on the NPfI, a sleep disturbance criterion of L_{AFmax} 52 dBA has been adopted as a guideline level to minimise the potential for sleep disturbance during night-time operations. The sleep disturbance criterion is only applicable to night-time operations (i.e. 10.00 pm to 7.00 am). Section 7.2.1 addresses the requirements regarding attended monitoring in accordance with the relevant procedures and exemptions of the NPfI.

2.2 Consultation and Communication

This NMP has been prepared in consultation with the Department of Planning, Housing and Infrastructure (DPHI) and the Environmental Protection Agency (EPA). In addition, VCM has extensive consultation and communication processes, including but not limited to:

- A comprehensive community engagement program which includes a Community Consultative Committee (CCC);
- Ongoing consultation with relevant government agencies including DPHI and EPA;
- A community response line (1800 942 836) which enables members of the community to contact environment and community staff to discuss concerns with noise; and,
- Publicly available project approvals, environmental and other related documentation (environmental assessments, annual reports, complaints register, CCC minutes) via the Whitehaven Coal website Whitehaven Coal.

3 Risk Management

VCM implements a comprehensive risk management system as documented in the Whitehaven Coal HSE Risk Management Standard (WHC-STD-HSE Risk Management) and the Whitehaven Coal HSE Risk Management Procedure (WHC-PRO-HSE Risk Management). Noise risks and their associated control measures are documented in the Vickery Broadbrush Risk Assessment; the control measures are summarised in section 4 of this Management Plan. Operational and project related changes that have the potential to materially alter the noise profile are managed through the Whitehaven Coal Management of Change Standard (WHC-STD-Management of Change).

4 Control Measures

WHC will implement best management practice to minimise the construction, mining and road noise of the VCM to the extent required by the Development Consent (SSD-7480) and EPL 21283.

4.1 Planning Controls

The following planning controls will be implemented at the VCM (Table 5).

Table 5: Planning Control Measures

Risk	Source	Mitigation Measures	Responsibility	Timing
Noise impacts from commuter vehicles on public roads	Section 1.4	Promoting carpooling and providing bus transport, where appropriate, from camp accommodation to reduce road traffic noise and volumes along the designated employee access routes, and safety education promoting adherence to NSW road rules and sign posted limits during relevant site induction processes.	Operations Manager	As required/Ongoing
Noise at private properties exceeds noise criteria	Section 1.4	Sound power level testing of attenuated operational mobile fleet, and, on an annual basis, a sample of mobile equipment and fixed plant operating under dynamic conditions to check on noise performance. Annual testing will be conducted such that all plant items requiring measurement will be captured on a 3-year rolling basis. Equipment brought to VCM from other Whitehaven Coal sites will have been sound tested within the previous three years and will be included in the VCM 3-year rolling program as they become due.	Environmental Superintendent	Ongoing/Annual
Noise at private properties exceeds noise criteria	Section 1.4	Developing an awareness and understanding of potential noise issues through site inductions and toolbox talks for staff, contractors and visitors. Production supervisors to get additional training in noise control/real-time response protocol	Environmental Superintendent	Ongoing/as required
Noise at private properties exceeds noise criteria	Section 1.4	Procurement of new and/or best available technology of plant and consideration of noise controls on a selection of new mobile plant where it is reasonable and feasible to do so.	Maintenance Manager	Ongoing/as required
Noise at private properties exceeds noise criteria	Section 1.4	Annually comparing the noise model predictions with attended noise monitoring data to assist with model verification over the life of the mine.	Environmental Superintendent	Annually prior to submission of Annual review
Noise at private properties exceeds noise criteria	Section 1.4	Partial enclosure/acoustic shrouding of selected ROM coal and screening infrastructure in the CHPP that will be implemented after construction is completed, as committed in the EIS.	Project Manager	Post Construction

Risk	Source	Mitigation Measures	Responsibility	Timing
Noise at private properties exceeds noise criteria	Section 1.4	Negotiating with select nearby landowners regarding possible land acquisition or entering into a written negotiated agreement, where it is mutually agreeable to do so. VCM will notify the DPHI of any negotiated agreements in accordance with Condition B4 of SSD-7480. If the applicable terms under D11 are triggered whereby within three months of receiving a written request for acquisition from a landowner with acquisition rights, the relevant conditions in D11 to D18 will be implemented as appropriate.	Environmental Superintendent	As required
Tenants not notified of predicted noise impacts at mine-owned residences	Section 1.4/ Condition D5 SSD-7480	Prior to entering into any tenancy agreement for any land owned by the Applicant that is predicted to experience exceedances of the recommended dust and/or noise criteria, the VCM will advise the prospective tenants of the rights they have under the SSD-7480.	Property Officer	As required/ongoing
Noise at private properties exceeds noise criteria	Section 1.4/ Condition B11(a)-(b) of SSD-7480	A review of the design of the rail spur will be undertaken by a suitably qualified and experienced person to determine if all reasonable and feasible noise mitigation measures have been incorporated. This review shall be provided to DPHI prior to construction of the rail spur commencing. The recommendations of this review will be implemented in accordance with B11 (b).	Project Manager	Prior to commencing construction of the rail spur
Noise at private properties exceeds noise criteria	Section 1.4/ Condition B11(c) of SSD-7480	Commissioning trials of the Project Rail Spur will be undertaken to determine the optimal train speed to minimise noise impacts.	Project Manager	Prior to commencing rail haulage on the rail spur.
Noise at private properties exceeds noise criteria	Section 1.4/ Condition B14 of SSD-7480	Confirming with ARTC that locomotives and rolling stock are approved to operate on the NSW rail network in accordance with the noise limits in ARTC's EPLs (EPL No. 3142).	Environmental Superintendent	Prior to commencing rail haulage on the rail spur
Noise at private properties exceeds noise criteria	Section 1.4/ Condition B14 of SSD-7480	Review existing and newly manufactured rolling stock for use on the rail spur and endeavour to ensure that reasonable and feasible design, construction and maintenance is undertaken by the rail service providers to minimise noise generation.	Project Manager	Prior to commencing rail haulage on the rail spur
Noise at private properties exceeds noise criteria	Section 1.4 Condition B14(c) of SSD-7480	Monitor and record all major equipment use using fleet management/planning system and make this data available at the request of the EPA.	Operations Manager	As required/Ongoing
Noise at private properties exceeds noise criteria	Section 1.4/ Condition B9 of SSD-7480	Once the VCM CHPP is commissioned coal from Tarrawonga will begin to be processed at VCM, thereby reducing the haul distance from Tarrawonga and removing coal haulage trucks from a significant portion of the public sections of the Approved Haulage Route.	General Manager Gunnedah Open Cut Operations	Following commissioning of the VCM CHPP.

4.2 Construction and Operational Controls

The following noise management controls in Table 6 will be implemented for construction and operational activities at the VCM where it is reasonable and feasible to do so (in accordance with Condition B14[a] of SSD-7480).

Additional controls or management measures may be identified during construction activities (e.g. as an outcome of attended noise monitoring and associated review mechanisms), and Strategies 1 to 7 described in the ICNG would be considered when selecting appropriate management measures or controls, including:

- Universal work practices (Strategy 1).
- Consultation and notification (Strategy 2).
- Plant and equipment (Strategy 3).
- On site (Strategy 4).
- Work Scheduling (Strategy 5).
- Transmission path (Strategy 6).
- At residences or other sensitive land uses (Strategy 7).

Table 6: Construction and Operational Controls

Risk	Source	Mitigation Measures	Responsibility	Timing
Noise at private properties exceeds noise criteria	Section 1.4	Predicted meteorological conditions and potential implications for noise levels will be made available to the shift managers at the start of each shift. Furthermore, stability class, wind speed and wind direction will enable an estimated noise risk for specific receivers.	Environmental Superintendent	Daily
Noise at private properties exceeds noise criteria	Section 1.4	Alternative dump locations in more sheltered positions will be identified in advance of each shift where possible to enable the Production Supervisor to amend operations during noise enhancing conditions or in response to the real-time noise protocol being implemented. This would enable the reduction of dumping in exposed areas of the Western Emplacement Areas at night.	Operations Manager	As required
Noise at private properties exceeds noise criteria	Section 1.4	VCM has implemented a Noise TARP (Table 8) which is utilised as part of the real-time response protocol (Section 4.5).	Operations Manager	As required
Noise at private properties exceeds noise criteria	Section 1.4	“Broadband reverse alarms” will be used in place of reverse beepers.	Operations Manager	As required
Noise at private properties exceeds noise criteria	Section 1.4	‘Silent horns’ will be implemented during periods of noise enhancing weather conditions.	Operations Manager	As required
Noise at private properties exceeds noise criteria	Section 1.4	All plant and machinery used on-site, extending to the construction of the rail spur and highway overpass, will be operated in a proper and efficient manner (e.g. at correct speed) to minimise noise generation.	Operations Manager	Ongoing
Noise at private properties exceeds noise criteria	Section 1.4	All plant and machinery used on-site will be maintained regularly to minimise noise generation. Recording of all maintenance of mining equipment will occur and data will be made readily available at the request of the Department or the EPA.	Maintenance Manager	Ongoing

Risk	Source	Mitigation Measures	Responsibility	Timing
Noise at private properties exceeds noise criteria	Section 1.4	Optimisation of shielding or temporary cessation of work within an area, or from a particularly noisy piece of equipment, will be considered when implementing the real-time noise protocol.	Operations Manager	Ongoing
Community not notified about noise generating activities	Section 1.4	Communication will be provided to local residents on the status and nature of site construction activities via communication methods that may include phone calls, written medium such as newsletters or electronic medium, or visitation to the property as appropriate. Communication will also occur via CCC meetings who represent the community as per condition A23 of SSD-7480.	Community Manager	Prior to commencing construction of the rail spur
Noise at private properties exceeds noise criteria	Section 1.4 B15 SSD-7480	Construction of the Kamilaroi Highway overpass will require scheduled work to occur in defined periods to minimise road closures where practical. This will assist in defining known noise generating sources and monitoring and measuring accordingly.	Construction Manager	During construction of the Kamilaroi Highway Overpass
Noise at private properties exceeds noise criteria	Section 1.4/ B15 SSD-7480	Lesser noise generating construction activities (e.g. welding and electrical works) will be conducted during the evening/night-time period, where practicable.	Project Manager	During construction of infrastructure
Noise at private properties exceeds noise criteria	Section 1.4	Where possible, WHC will only schedule low intensity construction activities outside standard hours (i.e. Saturday afternoon and Sunday).	Project Manager	During construction of infrastructure
Noise at private properties exceeds noise criteria	Section 1.4 B15 of SSD7480	If out of hours construction works are required an Out of Hours Work Protocol will be prepared in consultation with the EPA for residents who would be affected by the noise generated by these works, and consistent with relevant requirements within the Interim Construction Noise Guideline. This will include a summary of activities and relevant management measures. Approval of the Out of Hours Work Protocol will be sought from the Planning Secretary.	Project Manager	During construction of infrastructure
Noise concerns of the community are not heard and responded to.	Section 1.4	In the event of a complaint from a local resident, WHC will implement the complaints response process (Section 8.4).	Environmental Superintendent	As required

4.3 At-receiver Noise Controls

Proposed management procedures for private receivers where noise emissions are predicted to exceed the Project-specific criteria (in addition to the mitigation and management measures described above) for receivers in these zones will include:

- prompt response to any landowner issues of concern or complaints;
- discussions with relevant landowners to assess concerns;
- refinement of on-site noise mitigation measures and mine operating procedures;
- implementation of feasible and reasonable acoustical mitigation at receivers; and
- entering into negotiated agreements with landowners (including potential acquisition for receivers identified to be in the Noise Affectation Zone).

If a written request from the owner of any residence on the privately-owned land listed in Table 13 is received, VCM will implement additional mitigation measures at or in the vicinity of the residence in consultation with the landowner. These measures will be consistent with the measures outlined in the Voluntary Land Acquisition and Mitigation Policy for State

Significant Mining, Petroleum and Extractive Industry Developments (NSW Government, 2018). They will also be reasonable and feasible, proportionate to the level of predicted impact and directed towards reducing the relevant noise impacts of the development. VCM will also be responsible for the reasonable costs of ongoing maintenance of these additional mitigation measures until the cessation of mining operations. If there is any dispute to the additional mitigation measures proposed with the landholder then the matter may be referred to the Planning Secretary for resolution in accordance with D3 of SSD-7480.

4.4 Predictive Modelling

WHC will operate two predictive models which will be used in conjunction with the real-time response protocols as part of the comprehensive noise management system at the VCM:

- Predictive meteorological forecasting – which will predict the presence of favourable or unfavourable noise conditions based on meteorological data; and
- Predictive noise level forecasting – which will predict when construction and operational noise levels at nearby receivers may be elevated based on meteorological conditions, operating locations and equipment information.

Predictive forecasting information will be reviewed alongside the previous day's real-time noise monitoring results daily to inform the need for any specific management of operations (i.e. to maintain compliance with SSD-7480 noise criteria).

4.5 Real-time response protocols

A real-time monitoring and forecasting system will be implemented to assist with managing noise levels during upcoming periods of noise-enhancing meteorological conditions. This system will be used for all stages of the mine life to assist with the management of noise. Noise-enhancing meteorological conditions will be identified by a combination of noise and meteorological monitoring and meteorological forecasting, where noise monitoring indicates the trend in actual noise levels at a location and meteorological monitoring and forecasting indicates the likelihood that the current trend would continue or intensify over the ensuing period.

In the event that the real-time monitoring and meteorological forecasting system predicts that noise levels above TARP criteria at some receivers may occur, mine operators will adjust operations to minimise noise impacts in the event that predicted adverse weather conditions are experienced.

The real-time response trigger levels are shown in Table 7. In the event that real-time response trigger level is exceeded, SMS alarms will be directed to key staff/operational personnel. The adequacy of these alarms will be reviewed as needed with any changes reported in the Annual Review and subsequent revisions of this NMP. The response trigger levels for N-B02 will change according to its location as this monitoring unit is relocatable in response to operational requirements.

Table 7 - Real-time Response Trigger Levels

Monitor	Day	Evening	Night
N-B01	Low pass noise $L_{Aeq,15min}$ >38 dBA*	Low pass noise $L_{Aeq,15min}$ >33 dBA*	Low pass noise $L_{Aeq,15min}$ >33 dBA*
N-B02	Low pass noise $L_{Aeq,15min}$ >38 dBA*	Low pass noise $L_{Aeq,15min}$ >35 dBA*	Low pass noise $L_{Aeq,15min}$ >35 dBA*

*Levels subject to revision as appropriate following calibration with attended monitoring results at private receivers and changes to the location of the monitoring unit.

Note: Low pass noise refers to noise that has been filtered to remove higher frequencies that are generally not attributable to mining related noise sources (e.g. insect noise). This includes monitoring of LAeq(15 minute) noise levels in the 20 to 630 Hz range (LAeq,LF)

In the event that a real-time response trigger is exceeded, WHC will implement the real-time response management actions listed in Table 8 (dependent upon the assessment period of the day and the number of triggers determined). During operations, if noise from the Project exceeds specified trigger levels, mine personnel would be alerted and additional mitigation measures will be implemented until noise levels reduce below the trigger levels. VCM has implemented a Noise Trigger Action Response Plan (TARP) (Table 8) which

is utilised by the operational personnel responding to real-time triggers to guide the implementation of appropriate operational changes. Any operational changes and responses to real time triggers will be recorded in VCM's environmental response database which is integrated into production and shift reporting systems. These records will be available for download and provision to the DPHI or EPA if required.

4.5.1 Vickery Operational Noise TARP

Table 8 - Real-time Response Management Measures

Location/ Activity/Situation	No Noise alarm received (Normal – Low Risk Conditions)	Noise alarm received – NB01 >33dB (Evening/Nighttime) >38dB (daytime) NB02 >35dB (Evening/Nighttime) NB02 > 40dB (daytime)	Noise alarm received >35dB (Evening/Nighttime) Noise alarm received >40dB (Daytime) (Medium and High Risk Conditions)[1]
High RL (>280) work area close to Southern or Western Boundary **ROM pad**	No action required. Haul road speed limits and site procedures to be followed at all times.	**1.** Check weather for Category F or G inversion and/or wind >3m/s **2.** Perform Noise audio check **3.** Record details of check in CoalTrak even if no action required. Explain why no action was required (e.g. if mine noise inaudible, is the wind >3m/s and audible?) **4. <u>If mine noise can be heard</u>**- activity must be suspended or modified in high-risk areas. Change to silent horns, drop dozers to first gear, reduce truck loading noise **OR** Shut down in order of priority (A task may continue but multiple other areas may need to be shut down to allow this) 4. Record result of operational changes and the resultant noise level	**1.** **C**heck weather for wind. If wind is not contributing to noise then- **2.** Check audio recordings to see if mine noise is audible. Record finding in CoalTrak**.** **3.** STOP equipment **according to priority** (including evaporator fans if running) until noise drops below 35dB**/40dB (night/day) at NB01**. **4.** Record action taken and the result (i.e the noise level after operations amended) in CoalTrak. **5.** Even if mine noise is not audible in the noise recording VCM must still reduce noise impacts as far as reasonable and practicable. All <u>non-essential equipment</u> in high risk areas (eg high RL dumps, **western face of OEA**) should be shut down **or moved to lower risk locations** until noise reduces or noise enhancing meteorological conditions lift. Record resulting noise level in CoalTrak.
Southern or Western Haul Road – high activity			**1.** Slow trucks down below speed limits or limit amount of trucks travelling on haul road at any one time. **2.** Record action taken and the result (ie the noise level after operations amended) in CoalTrak.
High work areas or elevated dumping area close to Northern and Eastern Boundaries			**1.** Check audio recordings to see if mine noise is audible. If so- **2.** Make changes to operations in **high-risk** areas (exposed work areas, high RL dumps). **3.** Then re-check audio and if mine noise is still audible STOP equipment according to priority in this area if noise cannot be controlled. **4.** Record action taken and the result (ie the noise level after operations amended) in CoalTrak.
Soil Stripping and Vegetation Clearing (Site Wide)			**1.** CHECK Activity and noise audio and STOP if **activity is contributing to noise**. **2.** Record action taken and the result (ie the noise level after operations amended) in CoalTrak.
Excavators, trucks and Dozers (Rest of site and Rehabilitation)			**1.** CHECK Activity and noise audio and STOP equipment according to priority if **activity is contributing to noise**. **2.** Record action taken and the result (ie the noise level after operations amended) in CoalTrak.

Note: 1 Predictive meteorological/noise level forecasting as described in Section 4.4.

2 RL is 'reduced level' and is a measure of elevation relative to the Australian Height Datum (AHD)

3 NB This TARP may be updated independent to this NMP to align with operational changes and mining progression

4.6 Contingency Plan

As described in Section 2.1, Condition C3 of SSD-7480 requires that WHC must maintain construction and initial mining noise levels such that they would comply with the operational noise impact criteria.

In the event that a relevant residence is considered to be highly noise affected, WHC will implement the following Contingency Plan for the VCM:

- The Environmental Superintendent or appropriate delegate will report the event as an incident, in accordance with Section 8.
- WHC will apply adaptive management including;
    - taking all reasonable and feasible steps to ensure that the non-compliance does not recur;
    - undertake supplementary attended monitoring;
    - considering all reasonable and feasible options for remediation (where relevant) and submit a report to the Secretary describing those options and any preferred remediation measures or other courses of action; and
    - implementing remediation measures as directed by the Secretary, to the satisfaction of the Secretary.
- WHC will identify the appropriate course of action with respect to the identified impact(s), in consultation with technical specialists, the Secretary and any other relevant agencies, as necessary. For example, contingency measures, such as, but not limited to;
    - Notifying (in writing) landowners and tenants considered to be 'highly noise affected' at the earliest opportunity and provide them with options for modifying construction and initial mining activities (e.g. ceasing activities at certain times of the day).
    - investigating and implementing further noise management measures and controls, if monitoring results indicate this is required.
- WHC will, in the event there is a dispute over the proposed remedial course of action or if the actions conflict with current approvals, submit the appropriate course of action to the Secretary for approval.

WHC will implement the appropriate course of action to the satisfaction of the Secretary.

5 Noise Monitoring Program

5.1 General Requirements

As per the requirements in SSD-7480, the VCM noise monitoring program will comprise both attended and real-time noise monitoring. Noise monitoring locations are appropriate for the construction and mining phase and consideration has been made for monitoring at later phases of development at the VCM as the open cut and overburden emplacement progress. Consideration of the locations has been made in relation to prominent wind direction, vectors of nearby receivers and activities proposed. Monitoring locations will be reviewed upon the phasing out of construction activities and will be described in future revisions of the NMP.

The results of attended monitoring will be used to calibrate and validate the real-time noise monitoring system and assess compliance with the relevant criteria set in SSD-7480. Calibration and validation will be an ongoing process that is evaluated and reported annually in the Annual Review.

Meteorological monitoring will also be conducted as part of the real-time proactive noise monitoring system.

Monitoring of equipment use will be implemented in VCM's fleet monitoring/management system (FMS) and will record all major equipment use over each shift in the mining operations. This data will be available for download and provision to the DPHI or EPA if required.

5.2 Noise Monitoring Methods

5.2.1 Attended Monitoring

Attended noise monitoring will be undertaken monthly to determine compliance with the relevant noise criteria in SSD-7480. Noise measurements will be taken in accordance with the relevant requirements and exemptions (including certain meteorological conditions) of the Noise Policy for Industry (EPA, 2017).

During the construction and early mining phase, attended noise monitoring will be undertaken at the nominated locations described in Table 9 and shown on Figure 1. Locations detailed in the table are representative of the nearest receivers to the VCM construction and early mining period. Attended noise monitoring will also be undertaken at the road noise monitoring locations described in the Tarrawonga Noise Management Plan to monitor compliance with Condition B9 of SSD-7480. This monitoring is described in the Road Noise Monitoring section and the monitoring locations are displayed in Figure 2. Noise monitoring of the rail loading facilities at the Gunnedah CHPP is conducted under that development consent and described in the Environmental Management Plan for the Gunnedah CHPP (refer WHC-PLN-CHPP Environmental Management Plan).

Table 9 - Attended Monitoring Locations

Location				Frequency
Site ID	General Description	Easting	Northing	
N-AT1	Monitoring of VCM construction noise (excluding spur construction noise) at assessment location representative of receiver 125.	224467	6592946	Monthly
N-AT2	Monitoring of VCM construction noise (excluding spur construction noise) at assessment location representative of receiver 131a, 131b and 132.	227731	6588192	Monthly
N-AT3*	Monitoring of rail spur construction noise at assessment location representative of receiver 144b* (1y). Monitoring will be conducted with similar distance separating assessment location and rail spur as that separating receiver 144b and rail spur (i.e. 500 m).	226067	65877121	Once within 2 weeks of rail spur construction activities commencing. [1] and then Monthly.

Note: [1] Monitoring should coincide with time when works are closest to N-AT3 location.
* Subject to landholder agreement.

In addition to monitoring at the three nominated sites in Table 9, a representative number of attended monitoring measurements will be undertaken in proximity to landholder ID 146b during the construction period. Attended monitoring in proximity to landholder 146b will coincide with a time works are closest to the respective residence and subject to landholder agreement. An independent acoustic consultant shall advise if the monitoring location is suitable, and an appropriate alternative location if land access is not permitted.

Following commissioning of the rail spur targeted attended noise monitoring will be undertaken at appropriate locations to determine the accuracy of predicted acoustic impacts and effectiveness of any noise reduction measures, including monitoring during adverse inversion conditions.

Attended noise monitoring will be undertaken in accordance with the requirements of EPL 21283 for one day per month for a minimum of:

- 15 minutes during the day (i.e. 7.00 am to 6.00 pm);
- 15 minutes during the evening (i.e. 6.00 pm to 10.00 pm); and
- 15 minutes during the night (i.e. 10.00 pm to 7.00 am).

The intrusive noise level contribution from VCM activities will be quantified over a 15-minute measurement period ($L_{Aeq,15min}$). For every 15-minute period during nighttime measurements (N-AT1 and N-AT2), the maximum noise level (L_{Fmax}) generated by VCM activities will also be recorded.

Modifying factors (Fact Sheet C of the NPfI) will be used where applicable. Tonality and low frequency will be assessed by analysis of the measured L_{Aeq} spectrum. Analysis should be conducted on spectra representative of VCM's noise impact. The use of smaller sampling periods may be necessary to assess the applicability of modifying factors.

Noise generated by the VCM is to be measured in accordance with the relevant procedures and exemptions (including applicable meteorological conditions) of the NPfI. Monitoring results will be assessed against the NPfI with respect to modifying factors (including for low frequency noise). If monitoring results are found to contain dominant low-frequency content appropriate modifying factors will be applied to measured noise levels.

A summary of all monitoring results will be reported in the Annual Review (Section 9.1). Parameters relevant to noise criteria will be reported.

Measurements will be undertaken by a suitably experienced and capable person.

Acoustic instrumentation used in attended monitoring will comply with AS 1259.2-1990 *Acoustics - Sound Level Meters Integrating-Averaging and carry current National Association of Testing Authorities or manufacturer calibration certificates.* Instrument calibration will be conducted before and after each survey, with the variation in calibrated levels not to exceed ±0.5 dBA.

Wind direction, wind speed, air temperature and relative humidity will be recorded from the onsite weather station and changes in wind speed/direction (or other changes) will be reported as required.

Comprehensive field notes will be taken to indicate construction or operational noise sources (dozer tracks, etc.) and other sources (birds, insects, dogs, passing cars, etc.) and when they occurred during the 15-minute measurement.

Road Noise Monitoring

Attended noise monitoring is undertaken at private properties Weeroona, Brooklyn (1 and 2), Longlands and Cedarvale which are shown in Figure 2. Monitoring is undertaken on a six-monthly basis and assesses cumulative noise impacts from TCM and VCM coal haulage activities against the road noise compliance criteria.

All noise investigations will be carried out in accordance with NSW Noise Policy for Industry (NPfI, 2017), NSW Road Noise Policy and applicable Australian Standards. Noise levels will be measured in one-third octave bands using an instrument with IEC Type 1 characteristics as defined in AS 1259-1990 "Sound Level Meters". The instrument will have current calibration as per manufacturer's instructions and field calibration will be confirmed before and after measurements with a sound level calibrator.

One full one-hour measurement of road noise will be taken at each location during either the morning between 4:00 am and 6:00 am or the evening period after 6.00 pm. In keeping with the approved coal transport times, any measurements on Saturdays would be conducted during the morning period.

- If an individual truck seems particularly loud or has an observable fault resulting in elevated noise emissions, this will be recorded in the field notes. The monitoring report will include, as a minimum:
- the total number of trucks counted during the noise measurement (identified as empty or full);
- the total measured LAeq (1 hour) from coal trucks;
- the total measured LAeq (1 hour) from all sources to allow comparison of contribution from coal haul trucks comparative to other sources.
- details of any identified noisy truck(s);
- details of the calculation methodology; and
- wind speed and directional data and a discussion of potential meteorological influence on noise levels during each measurement period.

5.2.2 Real-time Noise Monitoring

A real-time monitoring system will be implemented at mine-owned residence 1z (N-B01) with an additional monitoring unit being available to be deployed as required to other locations in response to operational changes (e.g. construction) and to enable occasional review of operational noise.

Real-time noise monitoring is used as an assessment tool for ongoing performance to assist in the proactive management of noise. This will involve the use of the real-time response protocol (Table 8) for ongoing performance assessment and will assist in the implementation of pre-emptive management actions to avoid potential non-compliance with operational noise criteria.

The real-time monitoring locations are shown in Table 10 and Figure 1. Additional real time monitoring may be implemented at other neighbouring properties from time to time with the mobile monitoring unit, N-B02.

Table 10 - Real-time Monitoring Location

Location				Frequency
Site ID	General Description	Easting	Northing	
N-B01	Monitoring of VCM construction noise (excluding spur construction noise) to the south-west (1z).	227445	6589262	Continuous
N-B02	Deployed to locations as required to assist in operational noise assessment and review.	NA	NA	Continuous

The monitoring location at 1z was selected as being representative of relevant residences in the vicinity of construction and initial mining activities at the VCM. An alternative monitoring location that is representative of receiver 146 will be negotiated for the construction monitoring period dependent on land access. The alternative monitoring location that will be selected will be in consideration to changes in the mine plan and accessibility.

A summary of monitoring results will be reported in the Annual Review (Section 9.2.4). Once a baseline has been established, real-time monitoring will be compared to attended monitoring results over time. This will assist in calibrating and validating the data set including informing operational response levels and determining whether any correction or modification factors need to be incorporated.

The monitor will be set up to record noise levels 24 hours per day, seven days per week. A summary of the previous 24 hours of noise levels will be emailed to mine staff on a daily basis. The recorded audio information can be downloaded in real time to enable determination of whether the noise source is mine-related. There are numerous other potential noise sources apart from mine noise, such as wind, traffic, machinery, animals and general non-mining anthropogenic activities which may influence noise monitoring results.

The real-time noise monitor will include the following general specifications:

- recording of 15-minute statistical noise data (including L_{A1}, L_{A10}, and L_{A90});
- $L_{Aeq(15\ minute)}$ noise levels;
- $L_{Aeq(1\ minute)}$ data in 1/3 octave bands;
- $L_{Aeq(15\ minute)}$ noise levels in the 20 to 630 Hz range ($L_{Aeq,LF}$); and
- 5-minute audio files 24 hours per day, seven days per week.

Section 4 of the EIS notes that Wilkinson Murray (2018) assessed the predicted Project rail spur construction noise against the recommended noise management levels defined in the Interim Construction Noise Guideline (DECC, 2009). Activities associated with the construction of the rail spur will, by nature, progressively move along the proposed rail spur corridor and involve a number of work-fronts operating simultaneously.

Wilkinson Murray (2018) concluded no privately-owned residences are considered ‘highly noise affected’ or ‘noise affected’ by construction activities undertaken during recommended standard hours in accordance with the Interim Construction Noise Guideline (DECC, 2009).

If significant construction activities for the Project rail spur are conducted outside recommended standard hours (e.g. Saturday afternoon or Sunday during the day), receivers 132 and 144b* (refer footnote in consent applicable only to the DA approved dwelling once constructed) will be considered 'noise affected' in accordance with the Interim Construction Noise Guideline (DECC, 2009). Work on Saturdays and Sundays between 7.00 am and 6.00 pm is justified as it would allow continuity of work for the construction crew which will assist in reducing the length of the construction period and therefore the period of impact at receivers. As noted in B5 condition and section 2.1.2, noise criteria as applicable for the rail spur, Kamilaroi highway overpass, and construction of road realignments will be adhered to except where an alternative temporary limit has been approved by the Secretary for specific works or where a negotiated agreement is entered into with the owners of the relevant affected property.

5.2.3 Sound Power Level testing

It is a requirement that, once ROM production exceeds 3.5 Mt in a financial year, all mining trucks and water carts are to be commissioned as noise attenuated units. VCM will ensure that all trucks and water carts are commissioned as noise-attenuated in time for the ROM production to exceed 3.5 Mtpa. In addition to this, where it is feasible and reasonable to do so, improvements will be made to noise attenuated equipment if better technologies are available.

All mining equipment is to be tested as part of an annual testing program and monitored to ensure that any attenuation technology is maintained within specification and remains effective. Maintenance programs will restore the effectiveness of any attenuation if any defects are identified during monitoring. Annual sound power screening tests will be conducted such that all heavy machinery on site will be measured at no greater than three-year intervals. The results of any testing and/or attenuation work will be reported in the Annual Review (refer section 9.2.4).

5.3 Meteorological Monitoring

Meteorological data will continue to be collected at the on-site meteorological monitoring station (Figure 1). Meteorological monitoring will be undertaken in accordance with the applicable standards specified in EPL 21283 and the Australian Standard AS 3580: 2011 *Methods for sampling and analysis of ambient air, Part 14: Meteorological monitoring for ambient air quality monitoring applications.*

6 Responsibilities

Role	Responsibility
Environmental Superintendent, Advisor or delegate	Maintenance and update of this plan and monitoring program.
Operations Manager, Statutory Open Cut Examiner (OCE), Production Superintendent, Drill & Blast Superintendent, Maintenance Manager and Construction/Project Manager, Property Officer and General Manager GOC	Implementation of operational controls listed in Table 8.
All employees	All employees at VCM share the responsibility of maintaining compliance with all legal obligations of the VCM which includes the management of Noise and are referenced where applicable in operational control documentation.

7 Data Quality Assurance

Real-time data is accessed by a web interface that provides notifications and/or indicates when equipment is not operating as required or a noise trigger level is reached. Additional quality checks are undertaken when a noise alert is reached. Validations on the daily noise data are undertaken by an external contractor.

Monitoring equipment is maintained and calibrated in accordance with manufacturer's specifications and relevant standards.

Random audits of operating responses to real time noise monitoring systems are undertaken as required.

8 Compliance Obligations

8.1 Protocol for determining exceedances

If attended noise monitoring results exceed the levels outlined in section 2.1 the source of the elevated noise will be verified and options to address noise related impacts will be identified. Such actions will include:

- Additional testing to confirm the elevated noise is sustained in nature. Further discussion will be undertaken with EPA and DPHI regarding additional monitoring requirements to determine whether a sustained exceedance constitutes a non-compliance with EPL 21283 or SSD-7480;
- Consideration to changes to operational procedure or equipment type; and
- The installation of sound attenuation measures to plant and equipment, where necessary.

Where it is identified that the above options cannot achieve compliance with noise criteria identified through attended noise monitoring, VCM will undertake negotiations with the affected landowner with a view to entering into private agreements.

Only attended noise monitoring will be utilised to determine compliance. Real time monitoring will be used for operational management purposes only.

In accordance with Condition D6 of SSD-7480 notifications of an exceedance of noise criteria indicated in attended monitoring results will be made within 7 days of receipt of the results to the affected landholder/s and the CCC.

8.2 Non-compliance Notification

A protocol for managing and reporting non-compliances with statutory requirements has been developed as a component of the VCM's EMS and is described below.

Compliance with all approvals, plans and procedures is the responsibility of all personnel (staff and contractors) employed on or in association with WHC and the VCM.

A comprehensive obligations register for the VCM has been developed and is updated as required. A VCM representative will undertake required inspections during the construction period and of operations and initiate directions to address any actions identified, if required, and areas of actual or potential non-compliance.

8.2.1 SSD-7480

VCM will immediately notify the Department and any other relevant agencies after it becomes aware of an incident as defined in SSD-7480. The notification will identify the Development (including the development application number and name and set out the location and nature of the incident.

A written report on a non-compliance will be provided to the DPHI via the major projects website within 7 days of becoming aware of the non-compliance (or as otherwise directed by the DPHI) as per Condition E8, Part E of SSD-7480. The notification will set out the condition/s of SSD-7480 which the VCM is non-compliant with, why it is non-compliant and what actions have or will be taken to address.

A review of compliance with all conditions in SSD-7480 and all other applicable approvals and licences will be included within each Annual Review (Section 9.2.4). Additionally, in accordance with Condition E10 of SSD-7480, an IEA (Section 9.3) will be conducted by a suitably qualified, experienced and independent auditor whose appointment has been endorsed by the Secretary to assess whether WHC is complying with the requirements SSD-7480, and any other relevant approval and tenement conditions.

8.2.2 Other Statutory Requirements

A report on a non-compliance with a condition of a mining lease or any requirement of the *Mining Act 1992* or the *Mining Regulation 2016* will be reported to the Resources Regulator through the regulator portal.

A report on a non-compliance with any condition of EPL 21283 or any provisions of the *Protection of the Environment Operations Act 1997* (POEO Act) will be provided to the EPA as required and reported in the Annual Return.

8.3 Incident Notification

In accordance with Condition E7 of SSD-7480 and relevant conditions of EPL 21283 and under Part 5.7 of the POEO Act the Secretary of DPHI and representatives of all relevant regulatory agencies will be informed of any incident that;

- has caused, or threatens to cause, material harm to the environment; and
- breaches or exceeds the limits or performance measures/criteria in this approval.

A notification will be provided to the DPHI and the EPA immediately after becoming aware of an incident via the major project portal and the EPA 'hub' email address/pollution phone line. Follow up reports will be submitted to the EPA and DPHI as required.

8.4 Complaint Handling

Whilst all endeavours will be made by VCM to avoid adverse noise impacts on local landowners / residents, it is acknowledged that impacts may occur. In order to ensure an appropriate and consistent level of reporting, response and follow-up to any complaints is adopted by VCM, the following complaints management protocol will be followed:

- a publicly advertised telephone complaints line (1800 942 836) is operational to receive complaints
- initial response is provided where practical within 24 hours of receipt of a complaint
- an investigation will be initiated as per for an exceedance (Section 8)

- all details regarding the complaint including investigation outcomes and follow up actions will be documented in a Complaints Register

A copy of the Complaints Register will be made available to the CCC and the complainant (on request) and updated monthly on the VCM website. A summary of complaints received every 12 months will be included in the Annual Review.

9 Reporting and Review

9.1 Performance Indicators

The following noise related performance indicators will be used to assess the performance of the VCM:

- effective implementation of the Real-time Response Protocol for noise measured through internal audits (Section 4.5);
- results of monitoring indicate construction noise levels associated with the construction of the Project rail spur and road realignments comply with the SSD-7480 construction noise criteria within approved construction hours (Section 2.1), and with the SSD-7480 operational noise criteria outside approved construction hours (i.e. evening and night) at all privately-owned residences without noise agreements;
- results of monitoring indicate construction noise levels associated with the construction and initial mining within the VCM mining area (e.g. construction of the CHPP and rail loop, initial development of the box cut, etc.) comply with the SSD-7480 operational noise criteria;
- results of monitoring indicate construction noise levels comply with the adopted maximum noise level above the operational L_{AFmax} noise criteria (Section 2.1) at night (i.e. L_{AFmax} noise levels at or below 52 dBA) at all privately-owned residences without noise agreements; and
- noise related complaints are minimised (that is do not increase over time) and appropriate management actions are implemented following receipt of a complaint (Section 8.4).

The effectiveness of noise management and control measures at the VCM will be continually assessed, and where relevant improved, through real-time and attended noise monitoring.

9.2 Reporting

9.2.1 Regular Monitoring Reports on Webpage

In accordance with Condition E14 of SSD-7480, the following reports are updated as per requirements and available on the WHC website, including:

- Daily weather forecasts for the week;
- Real-time (daily non-validated air quality monitoring data);
- General operational responses to noise and dust levels;
- Reporting and monitoring results as per the Approval; and
- Summary reports available on a monthly basis required under s66 of the POEO Act.

9.2.2 Compliance Reporting

A protocol for managing and reporting non-compliances with statutory requirements has been developed as a component of the VCM's EMS and is described below.

Compliance with all approvals, plans and procedures is the responsibility of all personnel (staff and contractors) employed on or in association with WHC and the VCM.

A VCM representative will undertake required inspections during the construction and initial mining period and initiate directions to address any actions identified, if required, and areas of actual or potential non-compliance.

As described in Section 9.1, WHC will report incidents in accordance with Condition E7 of SSD-7480 and dependent on the incident and potential environmental harm, in accordance with the protocol for industry notification of pollution incidents under Part 5.7 of the POEO Act.

WHC will notify the Secretary and any other relevant agencies within seven days of becoming aware of a non-compliance in accordance with Condition E8 of SSD-7480. The notification will set out the condition/s of SSD-7480 which the VCM is non-compliant with, why it is non-compliant and what actions have or will be taken to address.

9.2.3 CCC Reporting

A Community Consultative Committee (CCC) has been established and will continue to be operated for the duration of operations on site. Regular briefings to the CCC will be provided, including a summary of results from the VCM air quality monitoring network.

9.2.4 Annual Review

In accordance with Condition E9 of SSD-7480, WHC will review the environmental performance of the VCM for the previous calendar year and report results within the Annual Review to the satisfaction of the Secretary.

In relation to noise management, the Annual Review will (where relevant):

- describe the development that was carried out in the relevant calendar year, and the development that is proposed to be carried out during the following calendar year including items applicable to B12 (a);
- include a comprehensive review of the monitoring results and complaints records of the development over the past year, which includes a comparison of these results against the:
    - relevant statutory requirements, limits or performance measures/criteria;
    - monitoring results of previous years; and
    - relevant predictions in the EIS.
- identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;
- identify any trends in the monitoring data over the life of the development;
- identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and
- describe what measures will be implemented over the next reporting year to improve the environmental performance of the development including reporting on the efficacy of noise attenuation (where relevant).

The Annual Review will be made publicly available on the WHC website in accordance with Condition E14, of SSD-7480.

9.3 Review

This NMP will be reviewed and evaluated to assess its adequacy and effectiveness, to the satisfaction of the Secretary (in consultation with relevant government agencies) in accordance with Condition E5, Part E of SSD 7480. This requires that this is undertaken within 3 months of:

a) The submission of an incident report;

b) The submission of the annual review;

c) The submission of an independent environmental audit; and

d) Any modifications to the conditions of the Development Consent.

If necessary, the NMP will be revised to incorporate any recommended measures to improve the environmental performance of VCM resulting from audits, community complaints and incident investigation findings. In addition, the review process will include ongoing evaluation of operational modifications, alternative methodologies and new technologies that become available for their potential to lessen noise impacts.

9.4 Independent Audit

In accordance with the relevant terms and sub-conditions within Condition E10, Part E of SSD-7480, an Independent Environmental Audit (IEA) of the VCM will be conducted by a suitably qualified, experienced and independent auditor whose appointment has been endorsed by the Secretary.

The IEA will assess the environmental performance of the VCM and review the adequacy of this NMP. If necessary, appropriate measures or actions to improve the environmental performance of the VCM in regards to management of noise will be recommended. A copy of the IEA report will be submitted to the Planning Secretary, and any other NSW agency that requests it, together with the response to any recommendations contained in the IEA report, and a timetable proposed for the implementation of the recommendations.

Within 1 year of the commencement of development (2023) WHC commissioned the first IEA. This will now be conducted every 3 years from this date. The IEA and WHC's response to recommendations in the Audit, will be made publicly available on WHC's website as per Condition E14 of SSD-7480.

10 References

Environment Protection Authority. (2017). *Noise Policy for Industry.* Sydney: Environment Protection Authority.

EPA. (2017). *NSW EPA Noise Policy for Industry.* Sydney: Corporate State of NSW and EPA. Retrieved from https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/noise/17p0524-noise-policy-for-industry.pdf

Department of Environment and Climate Change (2009) *New South Wales Interim Construction Noise Guideline.*

Department of Environment, Climate Change and Water (2011) *NSW Road Noise Policy.*

Department of Planning and Environment (2018) *Voluntary Land Acquisition and Mitigation Policy.*

NSW Environment Protection Authority (2017) *Noise Policy for Industry.*

Whitehaven Coal Limited (2013) *Vickery Coal Project Environmental Impact Statement.*

Whitehaven Coal Limited (2018) *Vickery Extension Project Environmental Impact Statement.*

Wilkinson Murray (2013) *Vickery Coal Project.*

10.1 Version Control

Revision	Description	Author	Authorised by	Date
1	Document Developed	WHC	WHC	11/3/2022
2	Updated to new template with amended monitoring locations	Spectrum Acoustics/WHC	Env Supt	11/12/24

Figure 1: VCM's Noise Monitoring Locations

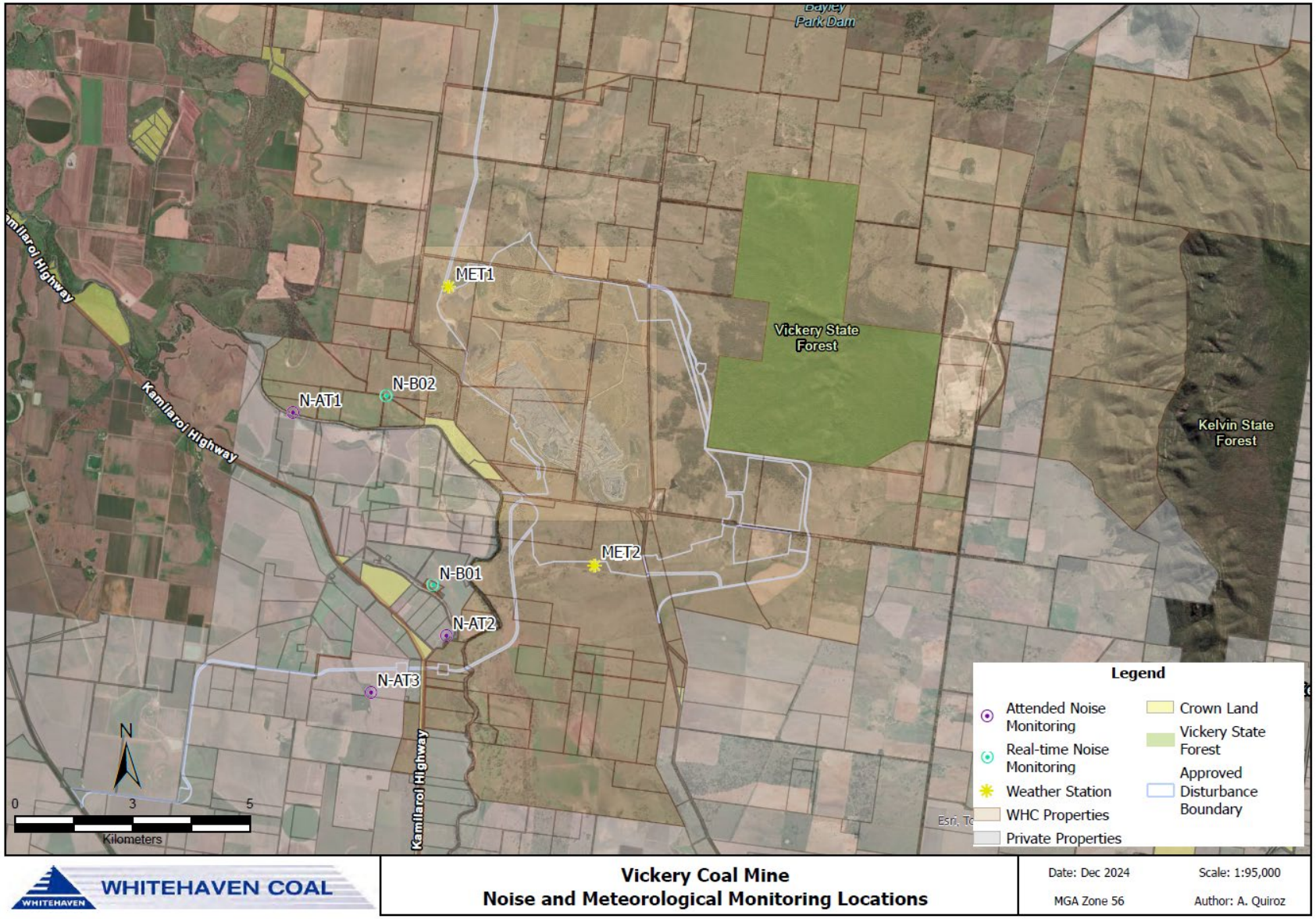

Figure 1 - Noise and Meteorological Monitoring Locations

Note- NB02 location is subject to relocation in response to operational and/or construction phases of development

Figure 2: Road Noise Monitoring Locations

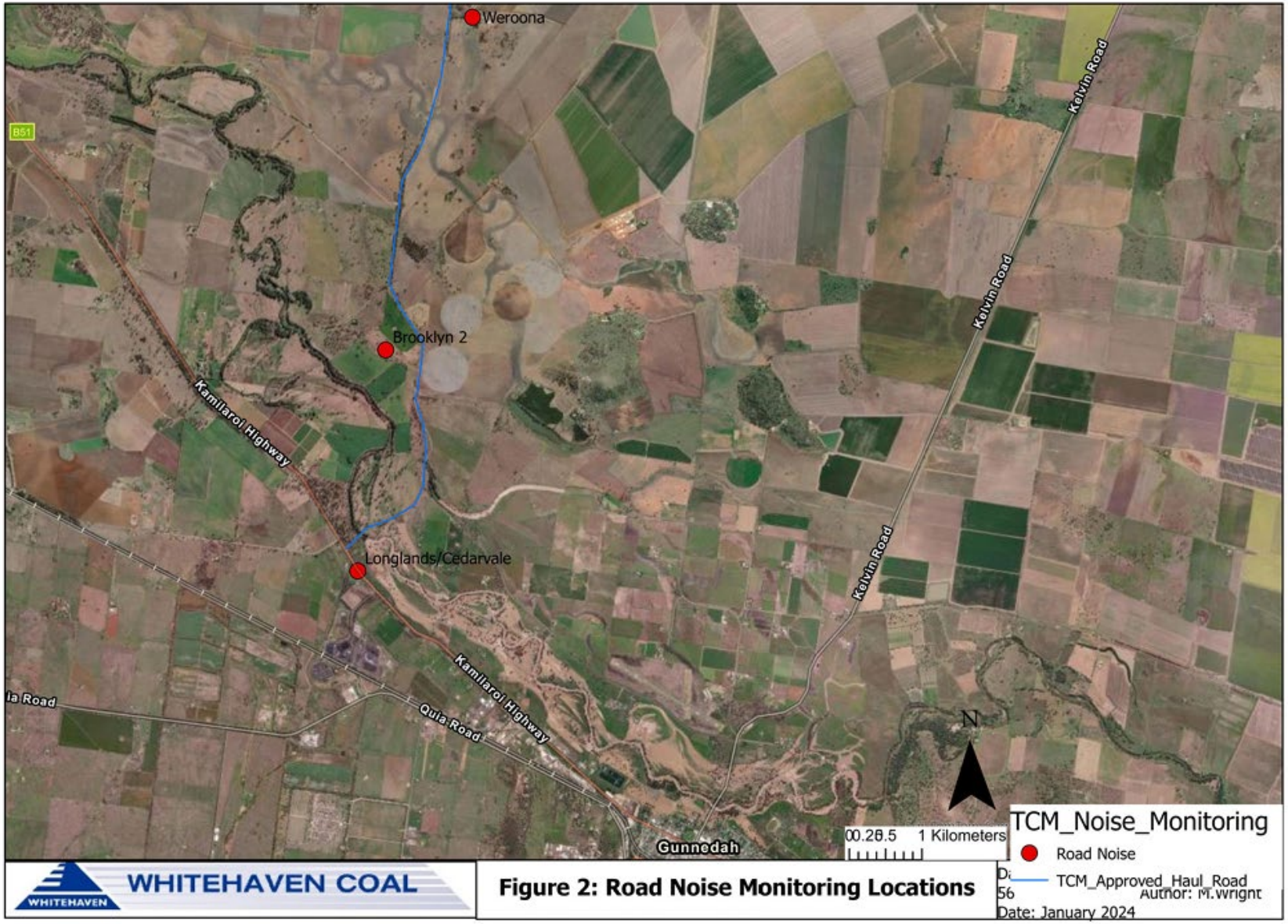

Figure 2: Road Noise Monitoring Locations

Appendix 1: Other Relevant Project Approval Conditions

<table>
<tr><th>VCM Development Consent (SSD-7480)</th><th>NMP Section</th></tr>
<tr><td>PART B SPECIFIC ENVIRONMENTAL CONDITIONS</td><td>-</td></tr>
<tr><td>NOISE</td><td>-</td></tr>
<tr><td>Operational Noise Criteria</td><td>-</td></tr>
<tr><td>B1. The Applicant must ensure that the noise generated by the development does not exceed the criteria in Table 1 at any residence[a] on privately-owned land, excluding the noise-affected land referred to in Table 13.
Table 1: Operational noise criteria dB(A)
<table>
<tr><th rowspan="2">Land</th><th>Day</th><th>Evening</th><th colspan="2">Night</th></tr>
<tr><th>$L_{Aeq\ (15\ min)}$</th><th>$L_{Aeq\ (15\ min)}$</th><th>$L_{Aeq\ (15\ min)}$</th><th>$L_{AF\ max}$</th></tr>
<tr><td>131a</td><td>40</td><td>37</td><td>37</td><td>52</td></tr>
<tr><td>131b, 132</td><td>40</td><td>36</td><td>36</td><td>52</td></tr>
<tr><td>All other privately-owned residences</td><td>40</td><td>35</td><td>35</td><td>52</td></tr>
</table>
[a] The land referred to in Table 1 is shown in Appendix 1.</td><td>Section 4, 5 and 9</td></tr>
<tr><td>B2. The Applicant must ensure that noise generated by transporting coal on the Kamilaroi Highway overpass does not exceed the criteria in Table 2 at any residence on privately-owned land.
Table 2: Kamilaroi Highway overpass noise criteria dB(A)
<table>
<tr><th>Land</th><th>Day
$L_{Aeq(15\ min)}$</th><th>Evening & Night
$L_{Aeq(15\ min)}$</th><th>Night
$L_{A1\ (1\ min)}$</th></tr>
<tr><td>223</td><td>44</td><td>44</td><td>65</td></tr>
<tr><td>224</td><td>46</td><td>46</td><td>64</td></tr>
<tr><td>284</td><td>40</td><td>36</td><td>55</td></tr>
<tr><td>292</td><td>40</td><td>36</td><td>57</td></tr>
<tr><td>Any other residence within 2.5 km of the centreline of the private haul road or Kamilaroi Highway overpass</td><td>40</td><td>35</td><td>55</td></tr>
<tr><td>All other privately-owned residences</td><td>40</td><td>35</td><td>45</td></tr>
</table>
[a] The locations referred to in Table 2 are shown in Appendix 1</td><td>Not applicable to the construction period of the VCM. Construction of Kamilaroi Highway overpass not anticipated to be required.</td></tr>
<tr><td>B3. Noise generated by the development must be measured in accordance with the relevant requirements and exemptions (including certain meteorological conditions) of the Noise Policy for Industry (EPA, 2017). The noise enhancing meteorological conditions determined by monitoring at the meteorological station required under condition B38 and as defined in Part D of the Noise Policy for Industry (EPA, 2017) apply to the noise criteria in Table 1 and Table 2.</td><td>Section 5.2</td></tr>
<tr><td>B4. The noise criteria in Table 1 do not apply if the Applicant has an agreement with the owner/s of the relevant residence or land to exceed the noise criteria, and the Applicant has advised the Department in writing of the terms of this agreement.</td><td>Section 2.1.2</td></tr>
</table>

<table>
<tr><th>VCM Development Consent (SSD-7480)</th><th>NMP Section</th></tr>
<tr><td>Construction Noise Criteria</td><td>-</td></tr>
<tr><td>B5. Between the hours of:
(a) 7 am to 6 pm Monday to Friday;
(b) 8 am to 1 pm Saturday; and
(c) At no time on Sundays or Public Holidays,
the Applicant must ensure that the noise from activities associated with the construction of the Project Rail Spur, Kamilaroi Highway Overpass and road realignments does not exceed the criteria in Table 3 at any residence on privately-owned land, unless otherwise agreed by the Planning Secretary.
Table 3: Project construction noise criteria dB(A)
<table>
<tr><th rowspan="2">Land[a]</th><th>Construction Noise Criteria</th></tr>
<tr><th>$L_{Aeq(15min)}$</th></tr>
<tr><td>223</td><td>49</td></tr>
<tr><td>224</td><td>56</td></tr>
<tr><td>All other privately-owned residences</td><td>45</td></tr>
</table>
[a] The locations referred to in Table 3 are shown in Appendix 1</td><td>Section 2, 4, 5, 6 and 9.</td></tr>
<tr><td>B6. If the Applicant proposes to undertake any construction works outside the hours specified in conditions C1 and C2, then the Applicant must prepare and implement an Out of Hours Work Protocol for these works to the satisfaction of the Planning Secretary. This protocol must be prepared in consultation with the EPA and the residents who would be affected by the noise generated by these works, and be consistent with the requirements of the Interim Construction Noise Guideline (Department of Environment and Climate Change, 2009). The Applicant shall not carry out any out of hours construction works before this protocol has been approved by the Planning Secretary.
Note: For areas where construction noise is predicted to be at or below 40 dB(A) and/ or below operational noise criteria at sensitive receptors, this is likely to provide sufficient justification to operate outside of recommended standard hours as specified in the ICNG.</td><td>Section 2 and 4.</td></tr>
<tr><td>Project Rail Spur Operational Noise Criteria</td><td>-</td></tr>
<tr><td>B7. The Applicant must ensure that noise generated by transporting coal on the Project Rail Spur does not exceed the criteria in Table 4 at any residence on privately-owned land.
Table 4: Project Rail Spur construction noise criteria dB(A)
<table>
<tr><th rowspan="2">Land[a]</th><th>Day</th><th>Evening</th><th>Night</th></tr>
<tr><th>$L_{Aeq(11\ hr)}$</th><th>$L_{Aeq(4\ hr)}$</th><th>$L_{Aeq(9\ hr)}$</th></tr>
<tr><td>144[b]</td><td>50</td><td>45</td><td>42</td></tr>
<tr><td>All other privately-owned residences</td><td>50</td><td>45</td><td>40</td></tr>
</table>
[a] The locations referred to in Table 4 are shown in Appendix 1
[b] Applicable only to the DA approved dwelling on this property once it has been constructed</td><td>Section 2, 4, 5, 6 and 9.</td></tr>
<tr><td>B8. The noise criteria in Table 4 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.</td><td>Section 5.1.</td></tr>
<tr><td>Public Road Traffic Noise Criteria</td><td>-</td></tr>
<tr><td>B9. The Applicant, together with the proponent of the Tarrawonga Coal Project, must ensure that the noise generated on public roads by the development and the Tarrawonga Coal Project does not exceed the criteria in Table 5 at any existing residence on privately-owned land.
Table 5: Road traffic noise criteria dB(A)
<table>
<tr><th>Land</th><th>Day and Evening
$L_{Aeq\ (15\ hour)}$</th><th>Night
$L_{Aeq\ (9\ hour)}$</th></tr>
<tr><td>All privately-owned residences</td><td>60</td><td>55</td></tr>
</table>
Note: Traffic noise generated by the development is to be measured in accordance with the relevant procedures in the NSW Road Noise Policy.</td><td>Section 5.2.1
Tarrawonga Coal Mine Noise MP</td></tr>
<tr><td>B10. The noise criteria in Table 5 do not apply if the Applicant has a written agreement with the relevant landowner to exceed the criteria, and the Applicant has advised the Department in writing of the terms of this agreement.</td><td>Section 2.1.2</td></tr>
<tr><td>Project Rail Spur Noise impacts</td><td>-</td></tr>
<tr><td>B11. The Applicant must:</td><td></td></tr>
<tr><td>(a) prior to commencing the construction of the Project Rail Spur:</td><td></td></tr>
</table>

VCM Development Consent (SSD-7480)	NMP Section
(i) commission suitably qualified and experienced person/s to review the design of the Project Rail Spur, and determine whether it incorporates all reasonable and feasible noise mitigation measures, including suitable measures to minimise low frequency noise; and	Section 4.1 and 5.1.
(ii) provide the Planning Secretary with a report summarising the recommended noise mitigation measures and the proposed measures to be incorporated in the design of the Project Rail Spur;	
(b) implement the recommendations of this acoustic review in condition (a);	
(c) undertake commissioning trials of the Project Rail Spur to determine the optimal train speed to minimise noise impacts; and	
(d) following commissioning of the spur line, undertake targeted noise monitoring to determine the accuracy of predicted acoustic impacts and effectiveness of any noise reduction measures, including monitoring during adverse inversion conditions, to be described in the Noise Management Plan required by condition B15,	Section 5.1
to the satisfaction of the Planning Secretary.	
Attenuation of Plant	**-**
B12. The Applicant must:	Section 5.2.3 and 9.2.4.
(a) ensure that:	
(i) when ROM coal extraction exceeds 3.5 Mt in a financial year, all mining trucks and water carts used on the site are commissioned as noise suppressed (or attenuated) units;	
(ii) where reasonable and feasible, improvements are made to existing noise suppression equipment as better technologies become available; and	
(b) monitor and report on the implementation of these requirements annually on its website.	
B13. The Applicant must:	-
(a) conduct a testing program of the attenuated plant on site, with each item of plant tested at no greater than 3 yearly intervals, to ensure that the attenuation remains effective and maintained within in-service tolerances;	Section 5.2.3
(b) restore the effectiveness of any attenuation if it is found to be defective; and	Section 5.2.3
(c) report on the results of any testing and/or attenuation work annually on its website, including a summary of any implications for meeting compliance objectives.	Section 5.2.3 and 9.2.4.
Noise Operating Conditions	**-**
B14. The Applicant must:	-
(a) take all reasonable steps to minimise all noise from construction, operational and transport activities (including by not dumping on exposed areas of the Western Emplacement Areas at night), including low frequency noise and other audible characteristics, as well as road and rail noise associated with the development, particularly during noise-enhancing meteorological conditions;	Section 4.2
(b) implement reasonable and feasible noise attenuation measures on all plant and equipment that will operate in noise sensitive areas, including but not limited to the following:	Section 4.1
(iii) partial cladding of the CHPP using acoustic lining;	
(iv) partial cladding of the ROM bin using acoustic lining; and	
(v) covers and/or cladding of conveyors;	
(c) monitor and record all major equipment use and make this data readily available at the request of the Department or the EPA;	Section 5.2.3
(d) operate a comprehensive noise management system that uses a combination of meteorological forecasts, predictive noise modelling and real-time monitoring to guide the day to day planning of mining operations and the implementation of adaptive management both proactive and reactive noise mitigation measures to ensure compliance with the relevant conditions of this consent;	Section 4
(e) record the daily adaptive management measures implemented on the site, including how operations were modified or stopped to comply with the noise criteria in Table 1, and make these records readily available at the request of the Department or the EPA;	Section 4, 4.5.
(f) ensure that the Project Rail Spur is only accessed by locomotives that are approved to operate on the NSW rail network in accordance with the noise limits in ARTC's EPL (No. 3142);	Section 4.1.
(g) use its best endeavours to ensure that the rolling stock supplied by service providers on the Project Rail Spur line is designed, constructed and maintained to minimise noise;	
(h) ensure any new rail rolling stock manufactured specifically for the development is designed, constructed and maintained to minimise noise; and	
(j) 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 5.2.1
Noise Management Plan	-

VCM Development Consent (SSD-7480)	NMP Section
B15. The Applicant must prepare a Noise Management Plan for the development to the satisfaction of the Planning Secretary. This plan must:	This NMP
(a) be prepared by a suitably qualified and experienced person/s;	Section 10.1
(b) be prepared in consultation with the EPA;	Section 2.2, Appendix 2
(c) be submitted to the Planning Secretary for approval prior to carrying out construction under this consent;	This NMP- original approval
(d) describe the measures to be implemented to ensure:	Section 4
(i) compliance with the noise criteria and operating conditions of this consent;	
(ii) best practice management is being employed; and	
(iii) noise impacts of the development are minimised during noise-enhancing meteorological conditions;	
(e) describe the measures that would be implemented to ensure the noise impacts from the construction and operation of the Kamilaroi Highway overpass and Project Rail Spur are minimised as far as practicable;	Section 4 Table 5
(f) describe the measures to minimise road traffic noise generated by employee commuter vehicles on public roads;	Section 4.1
(g) describe the noise management system in detail;	Sections 4 and 5
(h) describe the fleet attenuation and testing program; and	Section 4.1 and 5.2.3
(i) include a monitoring program that:	-
(i) uses a combination of real-time and supplementary attended monitoring to evaluate the performance of the development;	Section 4, 4.6, 8
(ii) includes a program to calibrate and validate the real-time noise monitoring results with the attended monitoring results over time;	Section 5.2 & 9.2.4
(iii) adequately supports the noise management system; and	Section 4.5 and 5
(iv) includes a procedure for undertaking attended noise compliance monitoring; and	Section 5.2.1
(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.	Sections 5.2.1, 8.1 and 9.2.2
B16. The Applicant must implement the Noise Management Plan as approved by the Planning Secretary.	Section 1.3
PART D ADDITIONAL PROCEDURES	
Acquisition Upon Request	-
D1. *Upon receiving a written request for acquisition from the owner of the privately-owned land[a] listed in Table 13, the Applicant must acquire the land in accordance with the procedures in conditions D11 to D18, inclusive.* **Table 13:** Land subject to acquisition upon request ***Acquisition Basis*** / ***Property ID*** Noise / 127 *[a] The locations of the land referred to in Table 13 is shown in Appendix 1*	Section 4.1.
Additional Mitigation Upon Request	-
D2. Upon receiving a written request from the owner of any residence on the privately-owned land[a] listed in Table 13, the Applicant 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 (NSW Government, 2018). They must also be reasonable and feasible, proportionate to the level of predicted impact and directed towards reducing the relevant noise impacts of the development. The Applicant must also be responsible for the reasonable costs of ongoing maintenance of these additional mitigation measures until the cessation of mining operations.	Section 4.3.
D3. If within three months of receiving this request from the owner, the Applicant and the owner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Planning Secretary for resolution.	
E4. Management plans required under this consent must be prepared in accordance with relevant guidelines, and include where relevant:	Entire Document
(a) summary of relevant background or baseline data;	Section 1.2
(b) details of:	-
(i) *the relevant statutory requirements (including any relevant approval, licence or lease conditions);*	Section 2
(ii) *any relevant limits or performance measures and criteria; and*	Section 2.1

VCM Development Consent (SSD-7480)	NMP Section
(iii) *the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;*	Section 9.1
(c) any relevant commitments or recommendations identified in the document/s listed in condition A2(c);	Sections 9.1 and 2.1
(d) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria;	Sections 9.1, 2.1, and 5
(e) a program to monitor and report on the:	Section 5 and 9
(i) impacts and environmental performance of the development; and	
(ii) effectiveness of the management measures set out pursuant to paragraph (d);	
(f) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;	Section 4.6
(g) a program to investigate and implement ways to improve the environmental performance of the development over time;	Section 9
(h) a protocol for managing and reporting any:	-
(i) incident, non-compliance or exceedance of any impact assessment criterion or performance measure;	Sections 8 and 9
(ii) complaint; or	Section 8.4
(iii) failure to comply with other statutory requirements;	Section 8.2.2
(i) public sources of information and data to assist stakeholders in understanding environmental impacts of the development; and	Section 2.2 and 9
(j) a protocol for periodic review of the plan.	Section 9.3

Appendix 2: Consultation Log

Date	Consultee	Comment
29/10/20	EPA	Include detail on monitoring locations and administrative items.
June-July 2021	DPIE	Include additional detail following feedback from DPIE
August 2021	DPIE	Include additional detail following feedback from DPIE
January 2024	Spectrum Acoustics	Participation in NMP preparation per Consent Condition B15(a)
December 2024	EPA	Provided for comment through the Major Projects portal. No comments provided.

Department of Planning, Housing and Infrastructure

Our ref: SSD-7480-PA-77

Tony Dwyer
Group Manager – Approvals and Biodiversity
Vickery Coal Pty Ltd
28/259 George Street
Sydney, NSW, 2000

15/05/2025

Vickery Coal 2 – Noise Management Plan

Dear Mr. Dwyer

Thank you for submitting the Noise Management Plan in accordance with Condition B15, Schedule 2 of the consent for the Vickery Coal 2 (SSD-7480-PA-77). I also acknowledge your response to the Department's review comments and request for additional information.

I note the Noise Management Plan has been prepared in consultation with the EPA; and contains the information required by the conditions of approval.

Accordingly, as nominee of the Planning Secretary, I approve the revised Noise Management Plan (Rev 2, December 2024).

You are reminded that if there are any inconsistencies between the Plan and the conditions of approval, the conditions prevail.

Please ensure you make the document publicly available on the project website at the earliest convenience.

If you wish to discuss the matter further, please contact Charissa Pillay on 02 99955944.

Yours sincerely

Stephen O'Donoghue
Director
Resource Assessments

As nominee of the Planning Secretary