Noise Management Plan

A comprehensive Noise Management Plan (NMP) is in development with Wood Noise consultants. The NMP will be provided to DWER and the Shire of Murray once received. Potential noise impacts and management measures are consistent with the attached NMP document below using the Noise impact assessment (IA) and mitigation measures presented in the IA.

Affected residents within 2km are subject to an amenity agreement.

Lot 20 is Doral owned.

Noise Management Plan

Background

Doral plan to begin mining in Lots 31-34 of the Keysbrook mine sometime between Q4 2025 – Q1 2026 pending state and local government approvals. Several houses are within 2 km of Lots 31-34 which trigger regulatory requirement to prepare a noise management plan (NMP). As a result, Doral engaged Wood Noise Engineers to understand the noise emission levels at nearby noise-sensitive receptors (NSRs) from mining activity in the southern region (blocks 216, 217, 218 & 226) of Lots 31-34. Closest residence to mining are under an amenity agreement.

Wood undertook sound power level measurements of the new Mining Feed Unit (MFU) and 3D acoustic modelling to predict noise levels at the nearest NSRs and assess the results against the regulatory requirements to determine compliance.

Acoustic Modelling

The measured sound power levels have been used to inform the 3D acoustic modelling.

Assumptions:

- Wind is assumed to be downwind to all receptors to form the basis of worst-case scenario.
- Electric in-pit MFU is located approximately 100 m from the nearest lot boundary (Lot 20).
- Additional mobile equipment (ME) is located approximately 100 m to 150 m from the Lot 20 boundary.
- An 8 m high L-shaped noise bunds oriented to attenuate sound propagation towards the nearest affected receptors and spaced no more than 15m from the screening plant is included, as per previous assessments.

Assigned noise levels

The Assigned Levels (refer to Table 1) are based on the requirements of MS1809 and the *Environmental Protection (Noise) Regulation 1997 (*the Regulations). Condition 14-4(1) of MS1089 requires that tonal characteristics must be assumed to be present at all times when modelling noise impacts as part of a noise management and monitoring plan. Therefore, as per the Regulations, +5 dB adjustment for tonality is applicable to the noise received at a NSR (Refer to *AU01496-1-100-Rev0-9 February 2023)*.

Table 1: Assigned noise levels

Location	**Assigned levels, dB(A)**		
	Weekday (0700-1900)	Evening (1900-2200) and Sunday/Public Holiday (0900-1900)	Night (2200-0700/0900)
NSR (Adjusted for Tonality)	40	35	30

Operations

Mining fleet will be operational during daytime only hours 7am – 7pm Monday – Saturday and 9am – 7pm Sunday and Public Holidays. Nightime equipment in operation will be limited to one loader feeding the Secondary feeder/JDM Feeder and the Wet Concentrator. Please see Table 2 below for day and nighttime equipment in operation.

Table 2: Proposed equipment for mining Lots 31-34

Daytime	Night - time
1 x JDM Feeder	1 x JDM Feeder
1 x Secondary Feeder	1 x Secondary Feeder
1 x CAT 988 Front-end Loader	1 x WA500 Loader
1 x Wet Concentrator Plant	1 x Wet Concentrator Plant
1 x CAT 390F Excavator	-
1 x CAT 750 haul trucks	-
1 x CAT 740 watercart	-
1 x CAT D7R dozers	-

Predicted Noise

Noise emissions for Night-time operations are compliant with noise regulations for those residents including REC203(8) and south of Readheads Rd without amenity agreement. See Table 3 and Figure 1 for detail.

Table 3: Night-time predicted noise

NIGHT-TIME				
Receiver	**Adjusted Assigned Level, L_{A10} (dB)**	**Predicted Level, L_{A10} (dB)**	**Difference (dB)**	**Compliance Comment**
REC 215 (17)	30	32	+2	Under agreement
REC 220 (14)	30	33	+3	Under agreement
REC 203 (8)	30	26	-4	Compliant
REC 181 (25)	30	24	-6	Compliant
REC 15	30	25	-5	Compliant
REC 187 (31)	30	25	-5	Compliant
REC 28	30	22	-8	Compliant
REC 19	30	22	-8	Compliant
REC 175 (32)	30	25	-5	Compliant

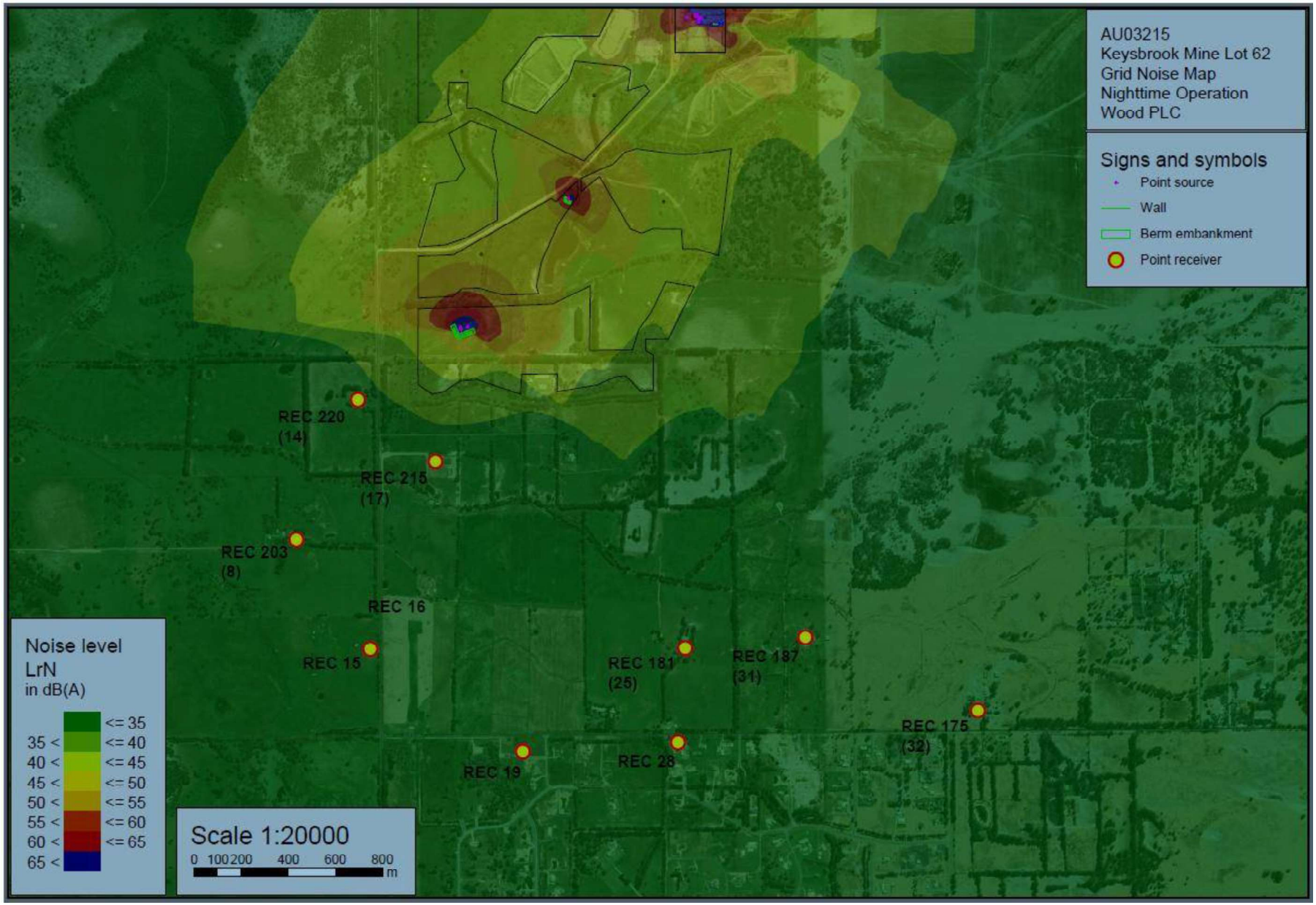

Figure 1 – Night-Time predicted noise when mining Lots 31-34

Daytime noise emissions are compliant with noise regulations for those residents including REC 203(8) and south Readheads Rd without amenity agreement. See table 3 and Figure 2 for detail.

Table 3: Daytime predicted noise

DAYTIME				
Receiver	**Adjusted Assigned Level, L_{A10} (dB)**	**Predicted Level, L_{A10} (dB)**	**Difference (dB)**	**Compliance Comment**
REC 215 (17)	40	48	+8	Under agreement
REC 220 (14)	40	45	+5	Under agreement
REC 203 (8)	40	41	+1	Under agreement
REC 181 (25)	40	39	-1	Compliant
REC 15	40	40	0	At limit
REC 187 (31)	40	38	-2	Compliant
REC 28	40	37	-3	Compliant
REC 19	40	37	-3	Compliant
REC 175 (32)	40	34	-6	Compliant

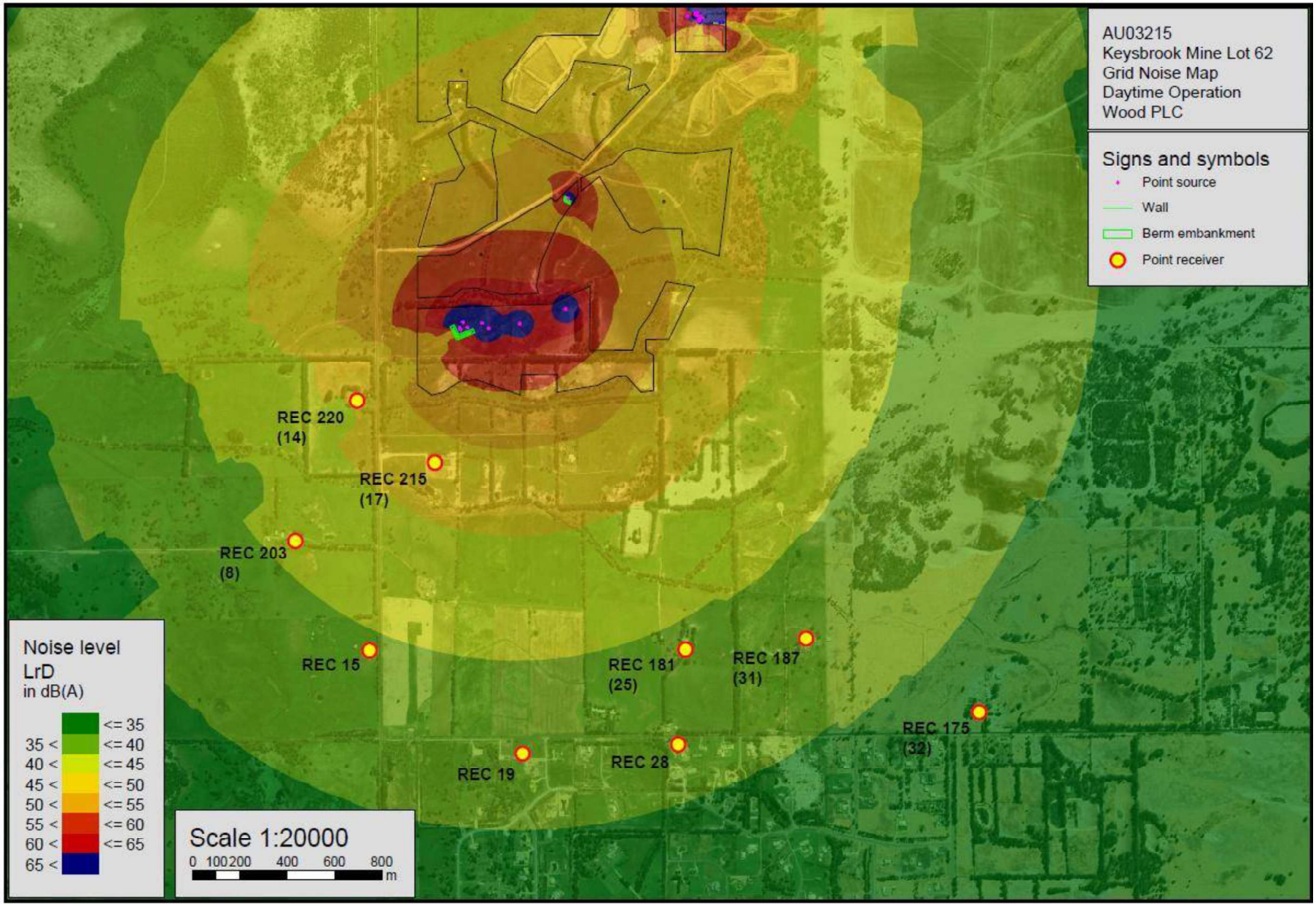

Figure 2 – Daytime predicted noise when mining Lots 31-34

Noise Management Measures

To aid in maintaining compliance, Doral propose the following noise mitigation measures as per noise modelling scenarios. See Table 4 below.

Table 4: Noise mitigation measures

Equipment	Mitigation included in noise modelling
Mobile Screening plants	8m high L-shaped noise bunds oriented to attenuate sound propagation towards the nearest affected receptors and spaced no more than 15m from the screening plant. Only 1 screening plant to be used for operations within 700m of receptors 220(14) and 220(17).
Field Pumps	2.8m noise barriers spaced 6m from pumps and oriented to attenuate sound propagation towards the nearest affected receptors[1].
Mobile equipment	Utilise equipment as per Table 1 for day and night operations. Omission of all reversing squawkers/beepers

[1] Barrier heights and locations can be optimised to achieve compliance. For example, lower height barriers could be specified if they are installed closer to the pumps.