



The Manager

Raumix Aggregates Kimberley

N12

Kimberley

3rd October 2024

Sir

ENVIRONMENTAL NOISE: SEPTEMBER/OCTOBER 2024

Herewith the environmental noise report for your concern.

Should you require more information regarding this report please do not hesitate to contact our Centurion office.

Yours faithfully

P. H Meyer

IMEC (MVS), P.Grad. OH (USQ), MSHE (USQ), Nat. Dip. IT (TUT)

SURVEY: ENVIRONMENTAL NOISE
REPORT NO: KL/02/10/24.

1 Introduction.

1.1 Surveyor.

Survey and report conducted by R Behr

Report verified by PH Meyer

1.2 Purpose.

The purpose of this survey was to determine the environmental noise impact of plant operations from Raumix Kimberley on the surrounding community. Sound pressure levels were measured at 9 test sites selected and demarcated to ensure that repeated readings were taken at the same positions around the plant and mine. These measurements were necessary to assess the sound pressure levels and to comply with the MH&S Act Sect (5).

1.3 Objectives of the survey.

Management requested HOHL to conduct a noise survey to determine environmental noise impact of Raumix Kimberley operations on the surrounding community.

1.4 Description of work process.

This plant is in operation 24 hours a day.

Deliveries and collections take place by means of road transport.



2 Environmental Noise

2.1 Method employed.

For the purpose of this survey the ambient noise rating level was analysed against SABS Code SABS 10103 6th Edition for Environmental Noise in Table 2, and SANS 10083.

Table 2.1: Typical rating levels for ambient noise in districts as per SANS 10103:2008

Type of district	Outdoors		In-doors, with open windows.	
	Day	Evenings /weekends	Day	Evenings /weekends
Rural	45	40	35	30
Suburban with little road traffic	50	45	40	35
Urban	55	50	45	40
Urban with some workshops, business premises and main roads	60	50	50	45
Central business	65	60	55	50
Industrial	70	65	60	55

Table 2.2: Estimated community/group response. $\Delta L_r^{(1)}$ dB as per SANS 10103:2008

1	2	3
Excess $\Delta L_r^{(1)}$ dB	Category	Description
$0 \leq 5$	None	No observed action
$> 5 \leq 10$	Little	Sporadic complaints
$> 10 \leq 15$	Medium	Widespread complaints
$> 15 \leq 20$	Strong	Threats of community/group action
> 20	Very strong	Vigorous community/group action.



2.2 Equipment used.

Svantek fully integrating sound level meter 34952 complies with the accuracy requirements specified for a Type 1 instrument in IEC 651 and IEC 804. Use was made of a windscreen of a type specified and supplied by the manufacturer for the microphone used which do not detectably influence the accuracy of the meter under ambient conditions of the survey. Microphone frequency response: 31.5 Hz – 16 kHz.

The sound level meter was checked prior to and immediately after the survey for calibration and was within the 1 dB limit prescribed for this type of survey. The microphone was positioned 1.4 m above ground level as required in the Code. In all instances the microphone was more than 3.5 m away from any walls or other flat surfaces, which could have had an influence on the readings obtained.



Figure 1: Sampling Areas



Sampling point	Sampling area
1	Main gate entrance
2	Truck waiting area
3	Road to main entrance
4	Tomri boerdery entrance
5	Western boundary (Yard)
6	Northwestern boundary (Offices)
7	Namakwa boerdery (Boundary)
8	Tomri boerdery property
9	Namakwa boerdery entrance

3 Results of Environmental Noise

Table 3.1: Daytime measurements - Monday (30/09/2024) (Western wind)

Remarks	Peak dB (A)	Max dB (A)	Min dB (A)	Ave SPL dB (A)	Urban limit
Sampling conducted between 10h00 and 12h00 – Plant operational					
Test Station 1	97.8	85.0	46.6	60.7	60
Test Station 2	89.9	74.6	39.2	58.7	60
Test Station 3	96.0	79.9	39.3	60.3	60
Test Station 4	95.1	81.8	39.9	61.2	60
Test Station 5	83.6	61.5	39.3	49.1	60
Test Station 6	78.4	62.0	39.3	50.5	60

Table 3.2: Night-time measurements - Monday (30/09/2024)

Remarks	Peak dB (A)	Max dB (A)	Min dB (A)	Ave SPL dB (A)	Urban limit
Sampling conducted between 20h00 and 22h00 – Plant operational					
Test Station 1	60.8	72.8	43.7	54.6	50
Test Station 2	79.8	66.9	41.9	55.8	50
Test Station 3	90.1	77.4	39.8	57.2	50
Test Station 4	87.5	75.7	39.1	60.3	50
Test Station 5	67.5	50.2	30.7	47.5	50
Test Station 6	68.4	56.8	41.5	46.9	50
Test Station 7	80.3	68.3	39.2	56.7	50

Table 3.3: Daytime measurements - Tuesday (01/10/2024) (South Eastern wind)

Remarks	Peak dB (A)	Max dB (A)	Min dB (A)	Ave SPL dB (A)	Industrial limit
Sampling conducted between 10h00 and 12h00 – Plant not in operation					
Test Station 1	96.7	78.7	39.4	56.7	65
Test Station 2	82.0	71.5	42.4	55.9	65
Test Station 3	83.5	66.1	39.4	51.1	65
Test Station 4	94.7	81.4	39.4	60.7	65
Test Station 5	77.3	61.1	34.8	46.5	65
Test Station 6	83.7	55.6	39.5	41.0	65



Table 3.4: Night-time measurements - Tuesday (01/10/2024)

Remarks	Peak dB (A)	Max dB (A)	Min dB (A)	Ave SPL dB (A)	Industrial limit
Sampling conducted between 20h00 and 22h00 – Plant not in operation					
Test Station 1	86.4	61.3	39.2	47.0	50
Test Station 2	82.8	67.1	39.0	49.7	50
Test Station 3	89.3	74.7	39.2	55.9	50
Test Station 4	87.8	75.3	39.2	60.8	50
Test Station 5	74.8	59.7	34.3	46.2	50
Test Station 6	75.1	54.5	39.2	41.2	50

Table 3.5: Night-time measurements - Wednesday (02/10/2024) (South Eastern wind)

Remarks	Peak dB (A)	Max dB (A)	Min dB (A)	Ave SPL dB (A)	Industrial limit
Sampling conducted between 02h00 and 04h00 – Plant operational					
Test Station 1	89.2	75.2	39.1	48.2	50
Test Station 2	89.3	65.1	41.8	51.6	50
Test Station 3	75.4	57.8	39.1	49.7	50
Test Station 4	86.8	70.0	39.1	53.8	50
Test Station 5	75.2	61.3	34.6	48.8	50
Test Station 6	69.3	55.1	39.1	46.4	50
Test Station 8	92.1	63.4	39.1	46.4	50
Test Station 9	86.7	72.6	39.1	54.8	50



Conclusion

Sound pressure levels of mining activities was audible at the different noise testing stations, however it is our considerate opinion that Sound Pressure levels from activities from Raumix Kimberley Mine operations does not exceed the prescribed SPL's for Urban areas at the boundaries. The wind direction for the Monday (30/09/2024) was a Western wind while the wind direction on Tuesday (01/10/2024) and Wednesday (02/10/2024) was a South-Eastern wind. The SPL difference on the different testing stations when the plant is in operation compared to when the plant is not in operation was not significant.

Peaks recorded during this survey were from transport vehicles (trucks, etc.) entering the site and traffic from the public road (N12) next to the site perimeter. Other intermittent noise activities were emitted from the train passing the site entrance and the adjacent company (Ready Mix plant) which operated during the daytime.

Test station 8 at the residential area did not exceed the limit during any time of the survey. Plant noise at the residence was audible but had no effect on sound pressure levels. Peaks at this station was from traffic on the main road.

Recommendations.

Regular maintenance must continue to be conducted at the Raumix – Kimberley site in order to lower the levels of unwanted sound to the community. This survey must be repeated every two years or when there is a change in process.

General

Results reflected in this report are correct for the day and times this survey was conducted, should conditions change results will alter accordingly.



Glossary.

SPL: Sound pressure level will be displayed, with the selected weighting and response characteristics. The value displayed is the maximum SPL during the previous second.

L_{AEQ}: The average integrated sound level accumulated while in the run mode is shown in numeric display. L_{AEQ} indicates that a 3dB exchange rate was used for measurements.

dB (A): Decibel on the A-scale rating.

A handwritten signature in black ink, appearing to be 'J. J. J.', located at the bottom right of the page.



CERTIFICATE OF ACCREDITATION

In terms of section 22(2)(b) of the Accreditation for Conformity Assessment, Calibration and Good Laboratory Practice Act, 2006 (Act 19 of 2006), read with sections 23(1), (2) and (3) of the said Act, I hereby certify that:-

HEALTH & OCCUPATIONAL HYGIENE LABORATORY CC

Co. Reg. No.: 2000/019208/23
CENTURION

Accreditation Number: OH0091

is a South African National Accreditation System accredited Inspection Body to undertake
TYPE A inspection provided that all SANAS conditions and requirements are complied with

This certificate is valid as per the scope as stated in the accompanying scope of accreditation,
Annexure "A", bearing the above accreditation number for

OCCUPATIONAL HYGIENE INSPECTION AT WORKPLACES

The facility is accredited in accordance with the recognised International Standard

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The accreditation demonstrates technical competency for a defined scope and the operation of a
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While this certificate remains valid, the Accredited Facility named above is authorised to use the
relevant SANAS accreditation symbol to issue facility reports and/or certificates

Mr T Baleni

Acting Chief Executive Officer

Effective Date: 12 September 2022

Certificate Expires: 25 September 2026

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Occupational Hygiene Regulations. Approval to inspect within the regulatory domain is granted by the
Department of Employment and Labour.



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Certificate No L94164 As Found/As Left Rev 0

Manufacturer Svantek; ACO Pacific

Description Sound Level Meter; Microphone

Model No SVAN 971; 7052E

Serial No 34952; 71184

Plant No None

Calibrated for Health & Occupational Hygiene Laboratory cc

Address PO Box 51630, Wierdapark, 0149

Temperature $21.7^{\circ}\text{C} \pm 2^{\circ}\text{C}$

Relative humidity $41\% \text{ rh} \pm 5\% \text{ rh}$

Barometric Pressure $863 \text{ mbar} \pm 5 \text{ mbar}$

Date of calibration 03 September 2024

Expiry date 03 September 2026

Issue Date

04 September 2024

Calibrated by *E Terblanche* Digitally signed by Enrico Terblanche
Date: 2024.09.04 12:05:53 +02'00'

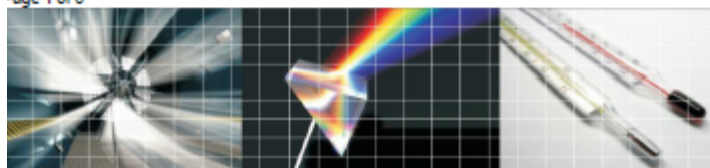
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Technical Signatory *E Terblanche* Digitally signed by Enrico Terblanche
Date: 2024.09.04 12:06:18 +02'00'

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