

HERA MONTHLY ENVIRONMENTAL MONITORING SUMMARY
APRIL 2023



Table of Contents

1. INTENT	3
2. SCOPE	3
3. DEFINITIONS.....	3
4. MAPS.....	4
5. MONITORING RESULTS	5
5.1. Weather.....	5
5.2. Water	6
Surface Water	6
Groundwater	6
5.3. Noise.....	6
5.4. Blast Monitoring.....	7
5.5. Air Quality	7
5.6. Gold Room Stack Monitoring	7
5.7. Concentrate Transport	7
5.8. Complaints	8

Author	Mark Williams
Version	1.0
Date Created	May 2023
Review Date	31 May 2023

1. Intent

This monthly environmental monitoring report is a requirement under section 66(6) of the NSW Protection of the Environment Operations Act 1997 (POEO Act), in which holders of an environment protection licence make their pollution monitoring data publicly available. This report is intended to keep the community, stakeholders, and regulators informed of the Hera mine's environmental performance and to maintain a transparent and accountable reporting system.

2. Scope

This report covers all of Hera's environmental monitoring conditions for January 2023. These conditions, where applicable, are measured against Hera's Environmental Protection Licence (EPL), development consent conditions and Australian Standards to determine Hera's compliance.

These conditions include;

- Weather Conditions
- Surface Water Monitoring results
- Ground Water Monitoring results
- Noise Monitoring results
- Blasting monitoring results
- Air Quality Monitoring results
- Gold Room Stack Monitoring
- Concentrate Transport
- Complaints

3. Definitions

Term	Definition
mm/s	The peak of the vibration in millimeters per second
Insoluble Solids	The insoluble portion of the dust deposited in dust deposition gauge
Total Lead	Including dissolved lead in the liquid portion and the lead particulates in the filter paper following laboratory analysis
g/m ² /month	Grams per square meter per month
dB (L)	Decibel (linear maximum)
dB LA _{eq} (15 minute)	Decibel (linear weighted average over 15 minutes)
CN Free	Free Cyanide (Hydrogen Cyanide and Cyanide ions in solution)
CN WAD	Weak Acid Dissociable Cyanide (includes Cyanide species liberated at moderate pH of 4.5)
TSS	Total Suspended Solids

4. Maps

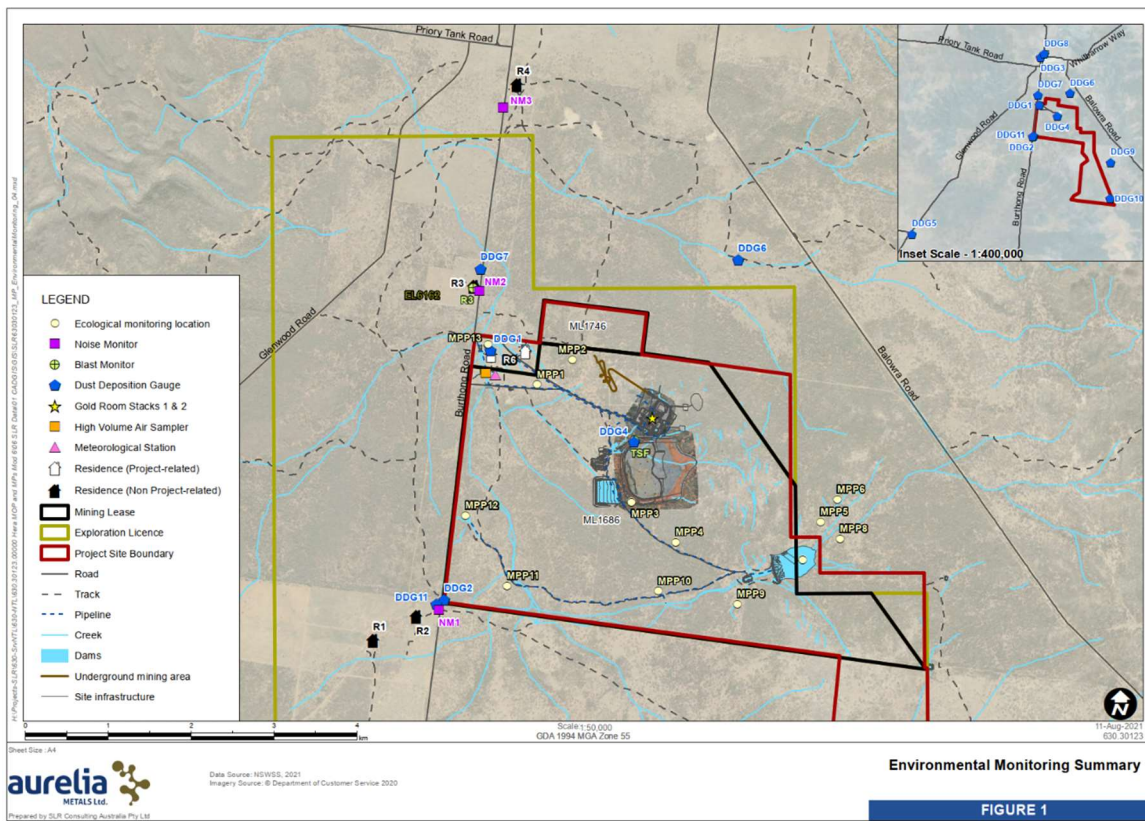


Figure 1 - Hera Environmental Monitoring Locations

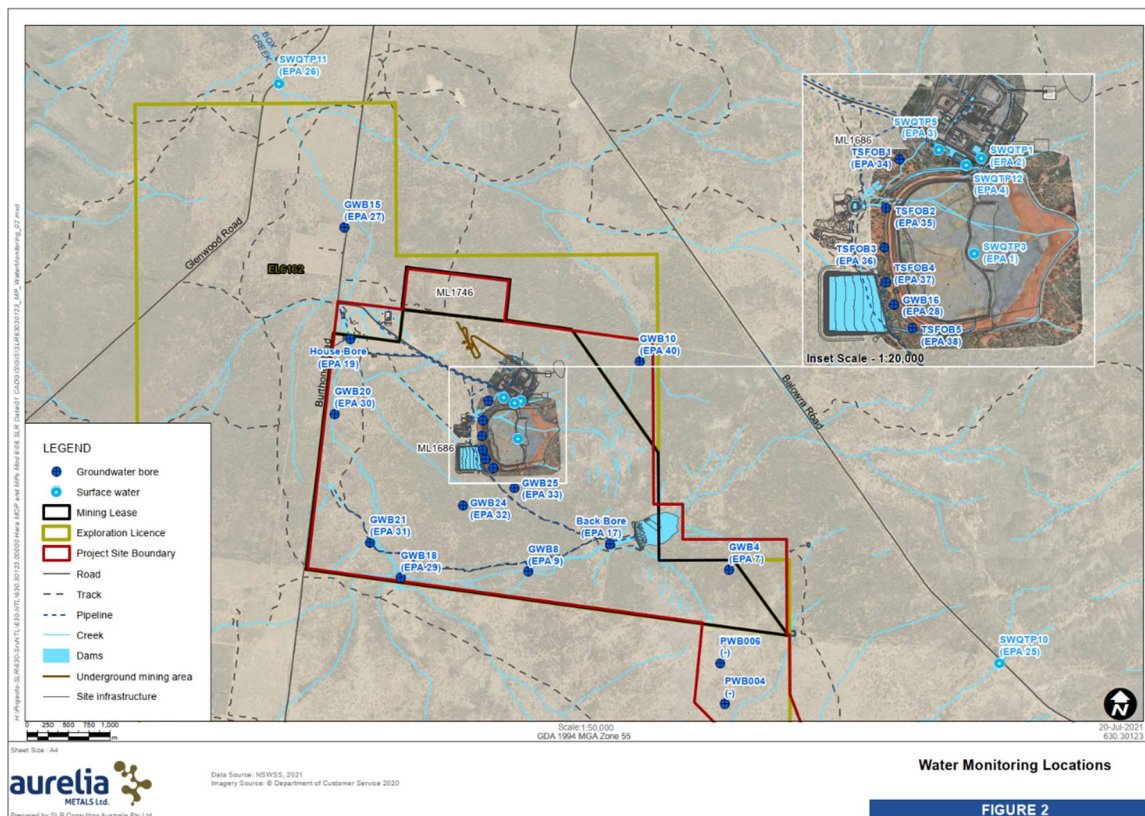


Figure 2 - Hera Water Monitoring Locations

5. Monitoring Results

5.1. Weather

The meteorology monitoring data is acquired through Hera’s weather station located on the Hera Mine site, approximately 4km south of the town of Nymagee, NSW, Refer **Figure 1**.

Meteorological monitoring is conducted on a continuous basis. **Table 1** shows a summary of the data collected by the weather station this month. **Figure 3** is the wind rose for the month of April 2023.

TABLE 1: Summary of meteorological data for April 2023

Parameter	No. of measurements for the month	Minimum Value	Mean Value	Median Value	Maximum value	Total
Air Temperature (°C)	Continuous	-0.33	15.91	15.92	28.08	-
Wind Speed (m/s)	Continuous	0.00	7.16	6.43	31.85	-
Sigma Theta (°)	Continuous	2.10	21.42	17.52	99.61	-
Rainfall (mm)	Continuous	0.00	0.00	0.00	1.40	1.00
Relative Humidity (%)	Continuous	24.31	61.77	61.55	99.89	-

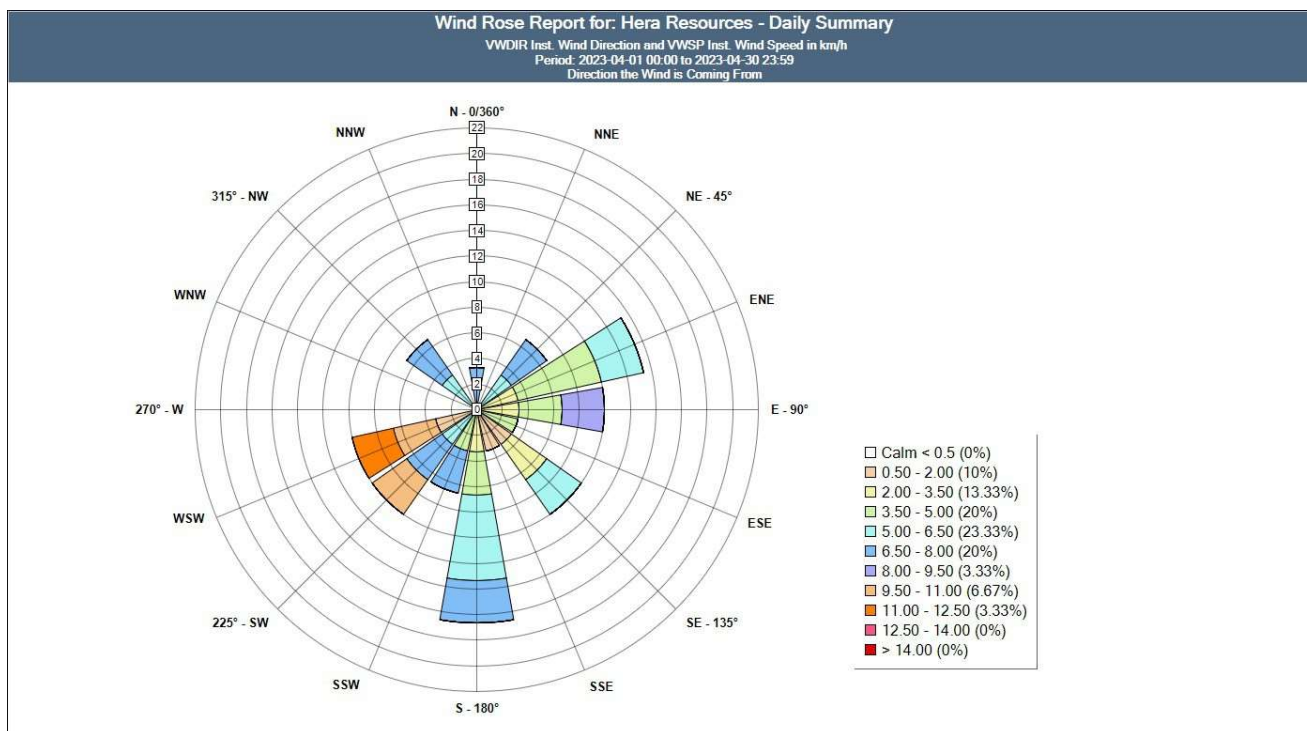


Figure 3 - Wind Rose for April 2023

5.2. Water

Water monitoring involves collecting water samples from several locations around site. The water samples are submitted to a NATA accredited laboratory for physical and chemical analysis. Analysis of pH and electrical conductivity are obtained in the field using a handheld monitor.

Surface Water

Hera has 6 licence points associated with surface water. Four of these points are located within the mining lease and two are located off the mining lease, with one upstream and another downstream of the lease, refer **Figure 2**.

Due to the site entering a Care and Maintenance phase no processing was completed during April. As a result, there were no surface water quality results for licence points 1

Groundwater

Hera has 17 licence points associated with groundwater. These points are located around the Project Area, (refer **Figure 2**) and are a combination of observation bores, production bores and piezometers. Monitoring is conducted quarterly and was completed in March 2023. Results are presented in the March 2023 website monthly report.

5.3. Noise

The Company has four licenced monitoring points (R1, R2, R3 and R4) located along the Burthong Road (**Figure 1**). The locations are strategically placed near the Hera Mine's nearest neighbours. R1 and R2 are measured from the same point as both neighbours are in very close proximity to each other.

The annual noise assessment was carried out by Muller Acoustic Consulting on 18 and 19 April 2023. Results are presented in **Table 2**. No exceedance was recorded.

- *The assessment has identified that noise emissions generated by HGM were audible at all receiver locations, however the noise emissions from HGM remained below relevant noise limits. (Appendix 1 MAC 2023)*

TABLE 2: Noise Monitoring Results – April 2022

Noise Monitoring						
Receiver	Date	Time	LA _{eq} Limit (dB)	LA _{1(1 min)} Limit (dB)	LA _{eq} Site Contribution (dB)	LA _{1(1 min)} Site Contribution (dB)
R1-R2	19/04/2023	9:20	35	n/a	<30	n/a
R3	19/04/2023	10:02	35	n/a	<25	n/a
R4	19/04/2023	09:42	35	n/a	<25	n/a
R1-R2	18/4/2023	18:36	35	n/a	<30	n/a
R3	18//04/2023	19:31	35	n/a	28	n/a
R4	18/04/2023	19:01	35	n/a	<25	n/a
R1-R2	19/04/2023	04:59	35	45	26	<40
R3	19/04/2023	05:45	35	45	27	<40
R4	19:04/2023	05:23	35	45	<25	<40

Hera holds a Noise and Blast agreement with the Landholder of R3. The agreement has been provided to the EPA and the Department of Planning and Environment (DPIE).

5.4. Blast Monitoring

The blast monitor is located adjacent to the dwelling on the nearest neighbour's property (**Figure 1**).

During November 2021 a new blast monitoring system was implemented which does not trigger monitoring for every blast. Due to the site entering a Care and Maintenance phase there was no blasting undertaken during April.

Hera holds a Noise and Blast agreement with the Landholder of R3. The agreement has been provided to the EPA and DPE.

5.5. Air Quality

The Company has two High Volume Air Samplers (HVAS), designed to sample Particulate matter less than 10 μm (PM10) or Total Suspended Particulate (TSP) matter and two Dust Deposition Gauges (DDG). Refer to **Figure 1** for location of the sampling points.

Results for air quality monitoring conducted in January have been summarised in **Table 3**. No exceedances were recorded.

TABLE 3: Summary of Air Quality monitoring results for April 2023

Pollutant	Unit	Limit	Averaging Period	Result
TSP	$\mu\text{g}/\text{m}^3$	90	Annual	32.96
PM-10	$\mu\text{g}/\text{m}^3$	25	Annual	10.93
High Volume Air Samplers (PM₁₀)				
5/04/2023	$\mu\text{g}/\text{m}^3$	50	24 Hour	25.9
11/04/2023	$\mu\text{g}/\text{m}^3$	50	24 Hour	33.2
17/04/2023	$\mu\text{g}/\text{m}^3$	50	24 Hour	5.4
23/04/2023	$\mu\text{g}/\text{m}^3$	50	24 Hour	25.8
29/04/2023	$\mu\text{g}/\text{m}^3$	50	24 Hour	7.4
Dust Deposition Gauges				
Deposited Dust (DDG 1)	$\text{g}/\text{m}^2/\text{month}$	4	Annual	1.33
Deposited Dust (DDG2)	$\text{g}/\text{m}^2/\text{month}$	4	Annual	2.23

5.6. Gold Room Stack Monitoring

Hera has two licenced gold room stack monitoring points (Refer to Figure 1).

Gold Room stack monitoring is conducted on an annual basis. Annual monitoring was conducted and reported on in January 2022.

Due to the site entering a Care and Maintenance phase the annual gold room stack monitoring was not completed.

5.7. Concentrate Transport

The Company is licenced to transport 60,000 tonnes of lead/zinc concentrate from the Hera site to Hermidale rail siding during daylight hours only. Hera is limited to eight truck movements per day

averaged over a calendar month (two truck movements to Hermidale rail is defined as entering and leaving the site). A summary of concentrate haulage operations is presented in **Table 4**.

TABLE 4: Summary of concentrate truck movements for April 2023

Date	Load Time	Truck Dry Tonnes
18/4/2023		48.97
19/4/2023		50.54
	Total Tonnes	2877.36
	Average truck movements per day	4.21

5.8. Complaints

Nil complaints were received in April.