

HERA MONTHLY ENVIRONMENTAL MONITORING SUMMARY
SEPTEMBER 2023



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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 September 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

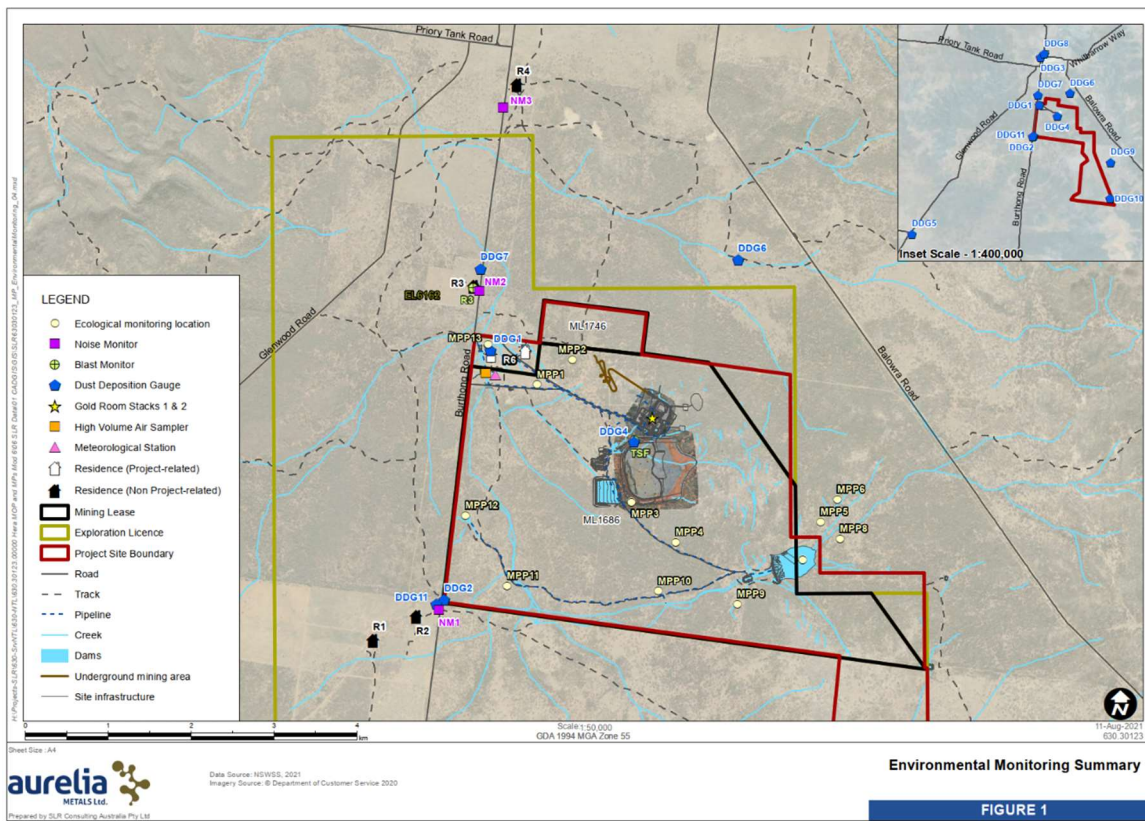


Figure 1 - Hera Environmental Monitoring Locations

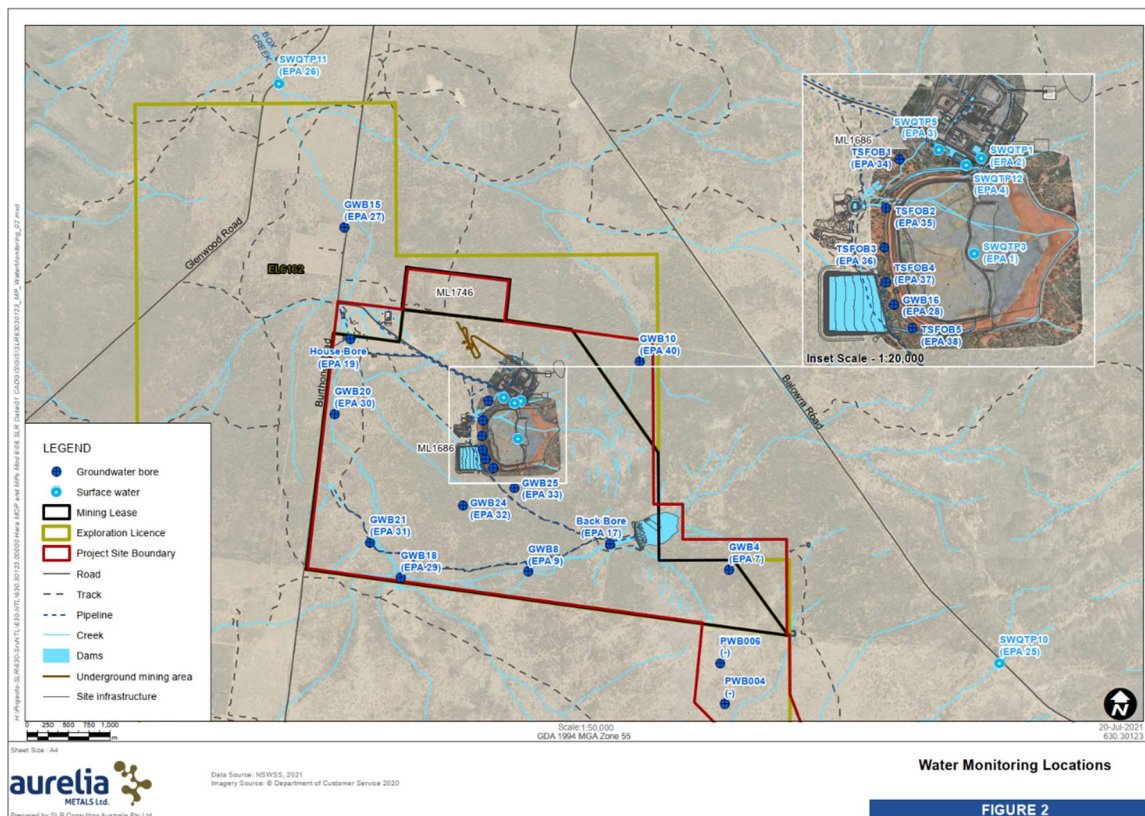


Figure 2 - Hera Water Monitoring Locations

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 September 2023.

TABLE 1: Summary of meteorological data for September 2023

Parameter	No. of measurements for the month	Minimum Value	Mean Value	Median Value	Maximum value	Total
Air Temperature (°C)	Continuous	-3.99	15.55	15.32	33.51	-
Wind Speed (m/s)	Continuous	0.00	7.09	6.06	39.36	-
Sigma Theta (°)	Continuous	1.65	23.95	19.16	102.76	-
Rainfall (mm)	Continuous	0.00	0.00	0.00	1.20	4.00
Relative Humidity (%)	Continuous	9.76	44.99	41.25	97.33	-

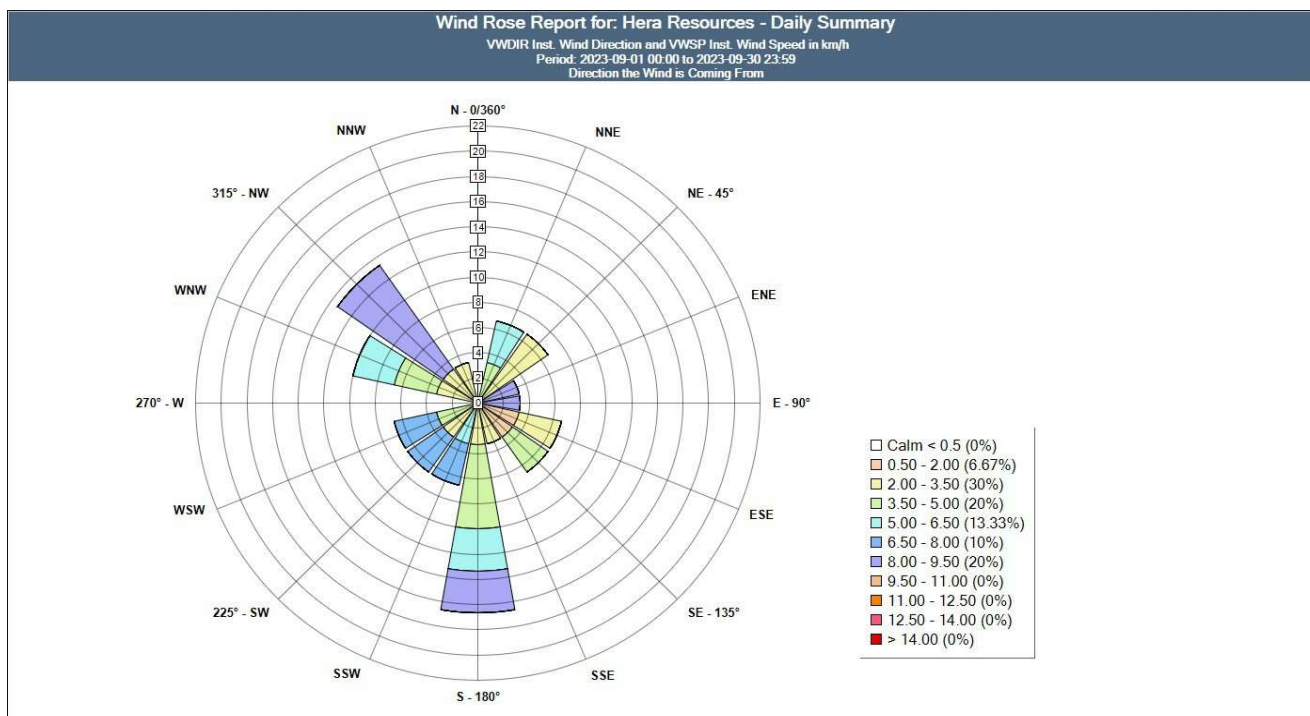


Figure 3 - Wind Rose for September 2023

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 September. As a result, there were no surface water quality results for licence points.

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 September 2023. Results are presented in **Table 2** and **3** below.

TABLE 2: Summary of groundwater monitoring results for September 2023

Licence Point	Analyte (mg/L)													
	Sb	As	HCO3-	B	Cd	Ca	CO3-2	Cl	Cr	Cu	CN-(Free)	CN-(Total)	CN-(WAD)	EC (mS/cm)
7	<0.001	<0.001	784	0.43	<0.0001	214	<1	1320	<0.001	<0.001	<0.004	<0.004	<0.004	5.38
9	<0.001	<0.001	578	0.62	<0.0001	191	<1	1100	<0.001	<0.001	<0.004	<0.004	<0.004	5.37
17	<0.001	<0.001	740	0.47	<0.0001	224	<1	1570	<0.001	<0.001	<0.004	<0.004	<0.004	6.19
19	No water for sampling													
27	0.011	0.002	518	1.14	<0.0001	82	<1	1270	<0.001	0.002	<0.004	<0.004	<0.004	5.38
28	0.002	<0.001	657	0.69	<0.0001	279	<1	1080	<0.001	<0.001	<0.004	<0.004	<0.004	5.98
29	0.009	<0.001	360	0.4	<0.0001	36	<1	260	<0.001	<0.001	<0.004	<0.004	<0.004	1.61
30	<0.001	0.003	640	1.93	<0.0001	77	<1	1520	<0.001	0.005	<0.004	<0.004	<0.004	6.84
31	<0.001	<0.001	616	0.54	<0.0001	213	<1	1780	<0.001	<0.001	<0.004	<0.004	<0.004	6.83
32	No power to bore for sampling													
33	<0.001	<0.001	489	0.52	0.0004	355	<1	1420	<0.001	<0.001	<0.004	<0.004	<0.004	6.96
34											Dry	Dry	Dry	Dry
35											Dry	Dry	Dry	Dry
36											Dry	Dry	Dry	Dry
37											Dry	Dry	Dry	Dry
38											Dry	Dry	Dry	Dry
40	<0.001	<0.001	693	0.48	<0.0001	211	<1	1280	<0.001	<0.001	<0.004	<0.004	<0.004	5.29

TABLE 3: Summary of groundwater monitoring results for September 2023

Licence Point	Analyte (mg/L)													SWL (m)
	Fe	Pb	Mg	Hg	Mo	Ni	pH	K	Ag	Na	Sn*	TDS	Zn	
7	0.07	<0.001	215	<0.0001	<0.001	0.001	6.95	20	<0.001	652	<0.001	3400	<0.005	59.73
9	<0.05	<0.001	222	<0.0001	<0.001	0.041	7.22	26	<0.001	705	<0.001	3700	0.015	Tap
17	<0.05	<0.001	240	<0.0001	0.012	0.279	7.51	16	<0.001	753	<0.001	3920	0.016	Tap
19	No water for sampling													Tap
27	<0.05	<0.001	127	<0.0001	0.001	0.002	7.16	34	<0.001	856	<0.001	3120	0.107	58.57
28	<0.05	<0.001	307	<0.0001	<0.001	0.081	6.77	31	<0.001	720	<0.001	4230	0.018	96.7
29	<0.05	<0.001	44	<0.0001	0.002	0.002	7.3	13	<0.001	262	<0.001	934	<0.005	77.56
30	<0.05	0.004	104	<0.0001	<0.001	0.004	7.65	34	<0.001	1370	<0.001	4120	0.014	67.41
31	<0.05	<0.001	292	<0.0001	<0.001	0.01	7.36	20	<0.001	826	0.001	4300	0.006	Tap
32	No power to bore for sampling													Tap
33	<0.05	<0.001	347	<0.0001	<0.001	0.057	6.93	27	<0.001	750	<0.001	4900	0.908	Tap
34														Dry
35														Dry
36														Dry
37														Dry
38														Dry
40	0.13	<0.001	206	<0.0001	<0.001	0.002	7.24	16	<0.001	649	<0.001	3270	0.006	82.26

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 Accoustic Consulting on 18 and 19 April 2023. Results are presented in the April Website Monthly Report.

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**).

Due to the site entering a Care and Maintenance phase there was no blasting undertaken during September.

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 September have been summarised in **Table 4**. No exceedances were recorded.

TABLE 4: Summary of Air Quality monitoring results for September 2023

Pollutant	Unit	Limit	Averaging Period	Result
TSP	$\mu\text{g}/\text{m}^3$	90	Annual	33.71
PM-10	$\mu\text{g}/\text{m}^3$	25	Annual	12.76
High Volume Air Samplers (PM₁₀)				
5/09/2023	$\mu\text{g}/\text{m}^3$	50	24 Hour	14.6
11/09/2023	$\mu\text{g}/\text{m}^3$	50	24 Hour	5.7
17/09/2023	$\mu\text{g}/\text{m}^3$	50	24 Hour	19.2
23/09/2023	$\mu\text{g}/\text{m}^3$	50	24 Hour	23.6
1/10/2023	$\mu\text{g}/\text{m}^3$	50	24 Hour	15.4
Dust Deposition Gauges				
Deposited Dust (DDG 1)	$\text{g}/\text{m}^2/\text{month}$	4	Annual	1.50
Deposited Dust (DDG2)	$\text{g}/\text{m}^2/\text{month}$	4	Annual	2.48

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).

Due to the site entering a Care and Maintenance phase there were no truck movements during September 2023.

5.8. Complaints

Four complaints were received this month as presented in **Table 5**.

TABLE 5: Summary of complaints received in September 2023

Date	Complaint Category
4/09/2023	Air quality - Dust complaint Burthong Road.
9/09/2023	Air quality - Dust complaint Burthong Road.
10/09/2023	Air quality - Dust complaint Burthong Road.
11/09/2023	Air quality - Dust complaint Burthong Road.