

HERA MONTHLY ENVIRONMENTAL MONITORING SUMMARY  
JUNE 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 June 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 <sup>2</sup> /month	Grams per square meter per month
dB (L)	Decibel (linear maximum)
dB LA <sub>eq</sub> (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

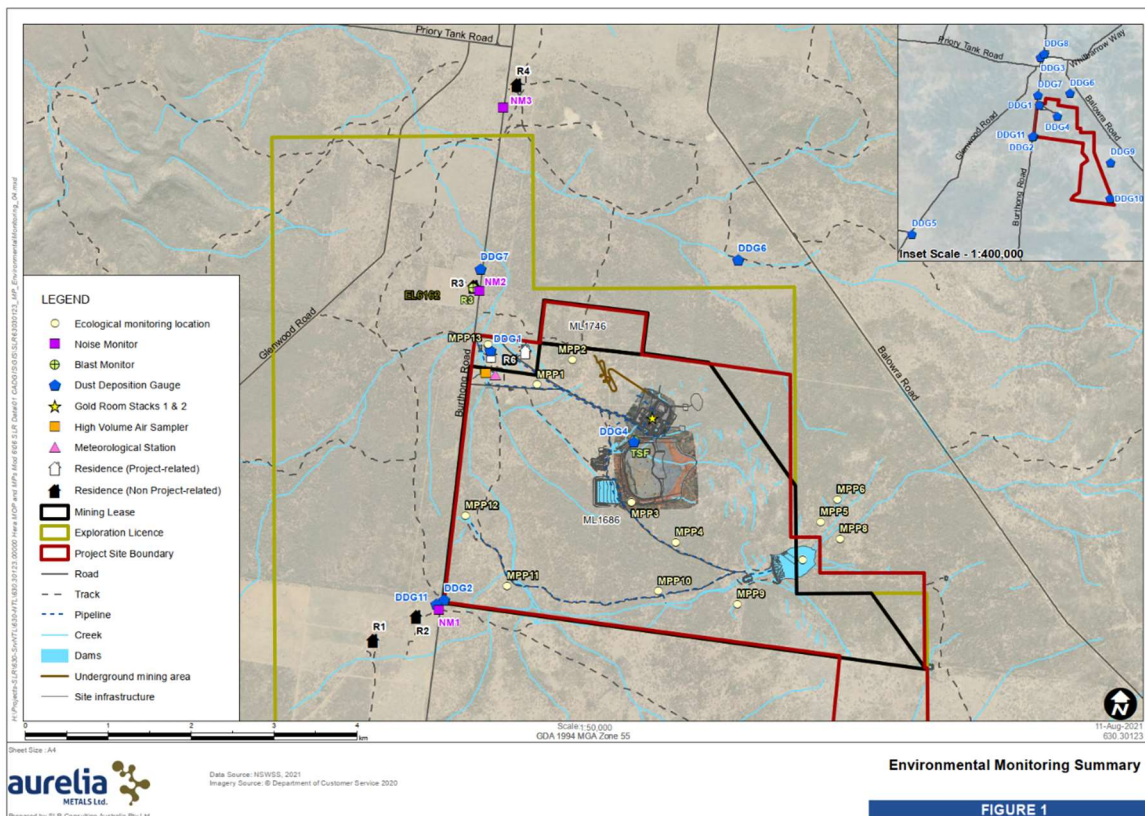


Figure 1 - Hera Environmental Monitoring Locations

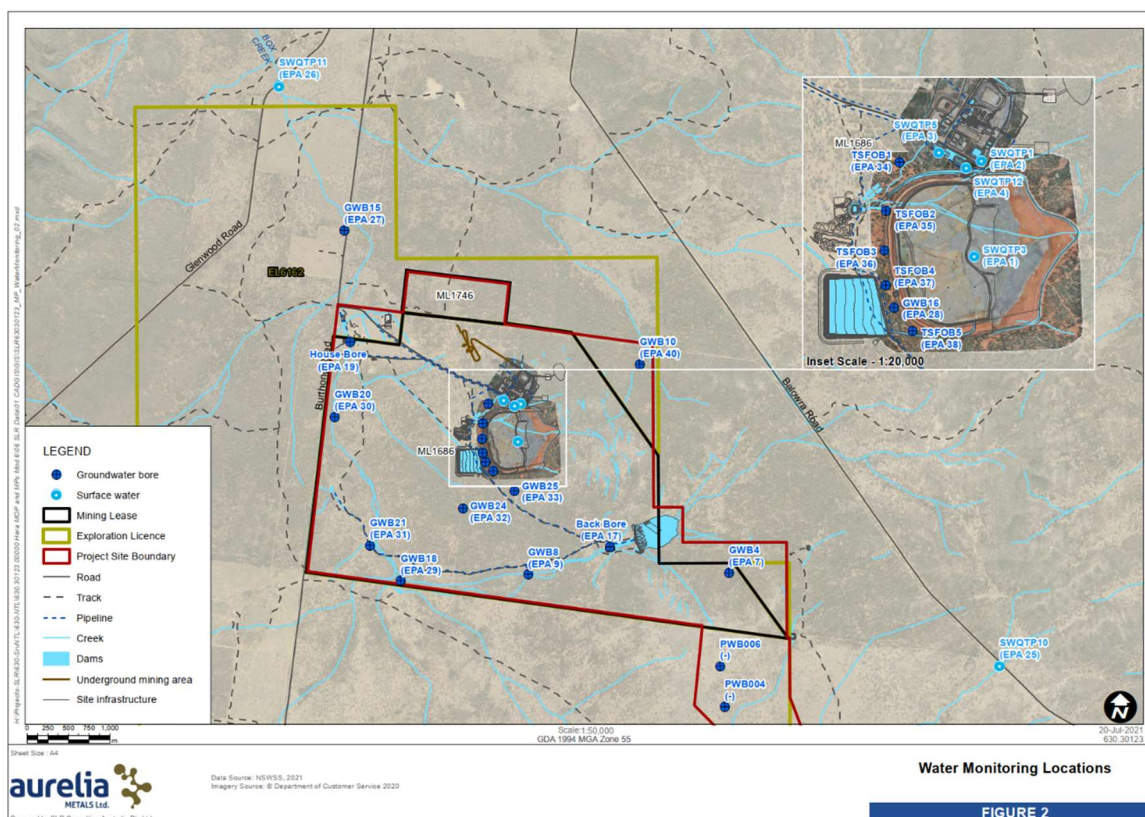


Figure 2 - Hera Water Monitoring Locations



## 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 June 2023.

TABLE 1: Summary of meteorological data for May 2023

Parameter	No. of measurements for the month	Minimum Value	Mean Value	Median Value	Maximum value	Total
Air Temperature (°C)	Continuous	-6.30	9.12	9.16	24.78	-
Wind Speed (m/s)	Continuous	0.00	5.81	3.97	25.81	-
Sigma Theta (°)	Continuous	0.62	22.31	18.09	98.04	-
Rainfall (mm)	Continuous	0.00	0.01	0.00	2.20	43.00
Relative Humidity (%)	Continuous	26.05	76.75	84.74	99.89	-

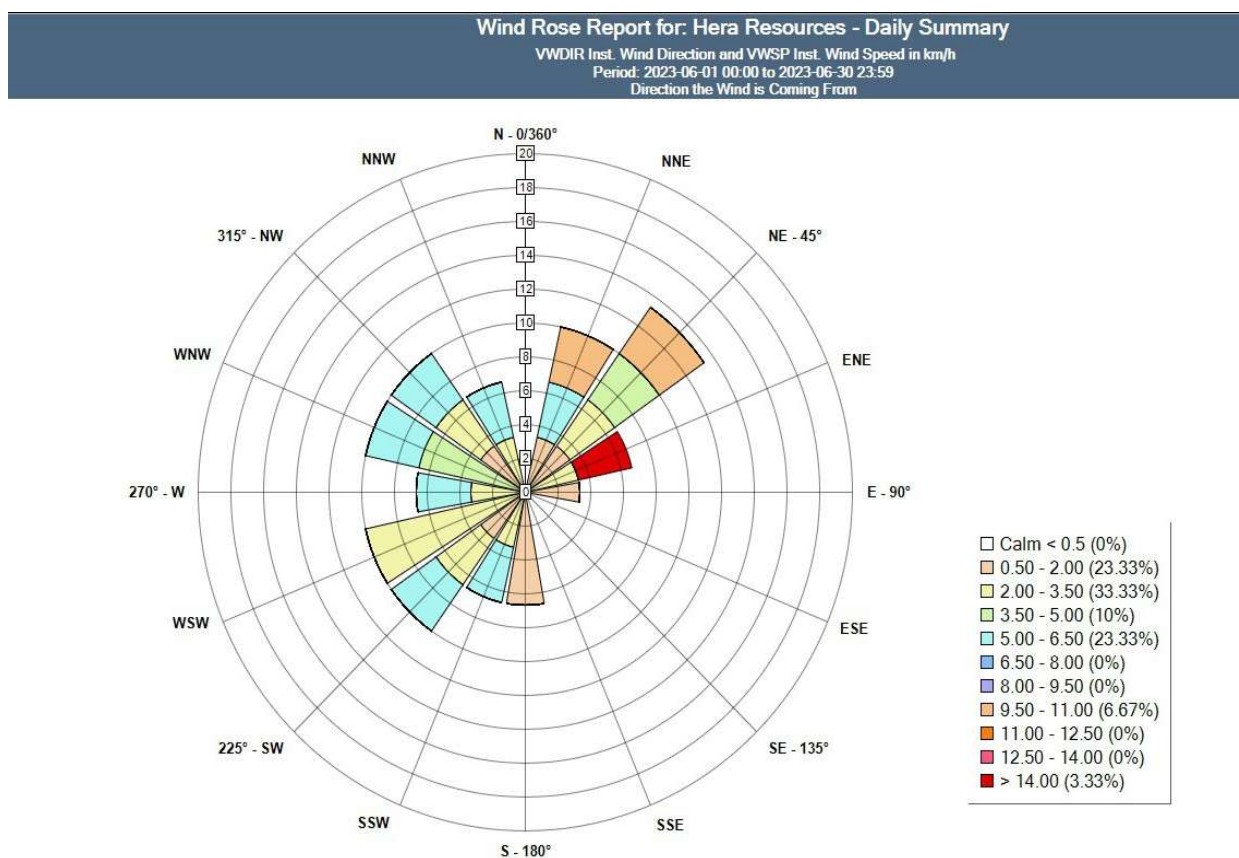


Figure 3 - Wind Rose for June 2023

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

TABLE 2: Summary of groundwater monitoring results for June 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	703	0.47	<0.0001	201	<1	1240	<0.001	<0.001	<0.004	<0.004	<0.004	5360
9	<0.001	<0.001	568	0.6	<0.0001	206	<1	1170	<0.001	<0.001	<0.004	<0.004	<0.004	5980
17	<0.001	<0.001	524	0.37	<0.0001	177	<1	1220	<0.001	<0.001	<0.004	<0.004	<0.004	5040
19	No power to bore for sampling													
27	<0.001	<0.001	453	1.3	<0.0001	67	<1	1290	<0.001	<0.001	<0.004	<0.004	<0.004	5620
28	<0.001	0.002	642	0.71	<0.0001	214	<1	1030	<0.001	<0.001	<0.004	<0.004	<0.004	5420
29	0.004	0.004	325	0.41	<0.0001	41	<1	286	<0.001	<0.001	<0.004	<0.004	<0.004	1770
30	<0.001	0.004	563	1.84	<0.0001	71	<1	1470	<0.001	<0.001	<0.004	<0.004	<0.004	6820
31	<0.001	<0.001	458	0.42	<0.0001	111	<1	774	<0.001	<0.001	<0.004	<0.004	<0.004	3310
32	<0.001	<0.001	625	0.95	<0.0001	237	<1	1110	<0.001	0.001	<0.004	<0.004	<0.004	6540
33	<0.001	<0.001	418	0.48	<0.0001	345	<1	1370	<0.001	<0.001	<0.004	<0.004	<0.004	6720
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	622	0.47	<0.0001	194	<1	1230	<0.001	<0.001	<0.004	<0.004	<0.004	5290

TABLE 3: Summary of groundwater monitoring results for June 2023

Licence Point	Analyte (mg/L)													SWL (m)
	Fe	Pb	Mg	Hg	Mo	Ni	pH	K	Ag	Na	Sn*	TDS	Zn	
7	<0.05	<0.001	199	<0.0001	<0.001	<0.001	7.04	19	<0.001	597	<0.001	3440	<0.005	59.84
9	<0.05	<0.001	253	<0.0001	<0.001	0.046	7.19	28	<0.001	775	<0.001	4000	0.012	Tap
17	<0.05	<0.001	186	<0.0001	0.002	0.018	7.27	12	<0.001	590	<0.001	3430	0.011	Tap
19	No power to bore for sampling													Tap
27	0.39	<0.001	140	<0.0001	<0.001	<0.001	7.29	36	<0.001	935	<0.001	3320	0.026	58.51
28	1.1	<0.001	233	<0.0001	<0.001	0.02	7.03	27	<0.001	657	<0.001	3750	0.011	97.1
29	1.17	<0.001	51	<0.0001	0.002	0.002	7.34	13	<0.001	274	<0.001	1060	<0.005	77.41
30	<0.05	0.006	101	<0.0001	0.001	0.004	7.23	33	<0.001	1350	<0.001	4180	0.006	67.63
31	<0.05	<0.001	136	<0.0001	<0.001	0.007	7.09	13	<0.001	397	0.001	2180	0.005	Tap
32	<0.05	<0.001	253	<0.0001	<0.001	0.096	7.01	32	<0.001	951	<0.001	4730	0.19	Tap
33	17.5	<0.001	343	<0.0001	<0.001	0.024	6.66	27	<0.001	735	<0.001	5140	0.678	Tap
34														Dry
35														Dry
36														Dry
37														Dry
38														Dry
40	<0.05	<0.001	192	<0.0001	<0.001	0.001	7.27	15	<0.001	610	<0.001	3440	<0.005	64.98



### 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 May.

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

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

Pollutant	Unit	Limit	Averaging Period	Result
TSP	µg/m <sup>3</sup>	90	Annual	34.70
PM-10	µg/m <sup>3</sup>	25	Annual	11.58
<b>High Volume Air Samplers (PM<sub>10</sub>)</b>				
4/06/2023	µg/m <sup>3</sup>	50	24 Hour	9.8
10/06/2023	µg/m <sup>3</sup>	50	24 Hour	19.1
16/06/2023	µg/m <sup>3</sup>	50	24 Hour	27.1
22/06/2023	µg/m <sup>3</sup>	50	24 Hour	12.7
28/06/2023	µg/m <sup>3</sup>	50	24 Hour	9.3
<b>Dust Deposition Gauges</b>				
Deposited Dust (DDG 1)	g/m <sup>2</sup> /month	4	Annual	1.55
Deposited Dust (DDG2)	g/m <sup>2</sup> /month	4	Annual	2.33

### 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 June 2023.

## 5.8. Complaints

One complaint was received this month as presented in **Table 5**.

TABLE 5: Summary of complaints received in June 2023

Date	Complaint Category
4/06/2023	Air quality - Dust from Tailings Storage Facility