TOMINGLEY
GOLD OPERATIONS PTY LTD
(A wholly owned subsidiary of Alkane Resources Ltd)
ABN 53 149 040 371

TOMINGLEY GOLD PROJECT

Monthly Environmental Monitoring Report

October 2020

TOMINGLEY
GOLD OPERATIONS PTY LTD
(A wholly owned subsidiary of Alkane Resources Ltd)
ABN 53 149 040 371

TOMINGLEY GOLD PROJECT

Monthly Environmental Monitoring Report

October 2020

Document History

DATE	VERSION	REASON FOR CHANGE	AUTHOR
	1	Submitted for Information	DP

Table of Contents

1. Introduction and Scope

This Monthly Environmental Monitoring Report has been prepared to collate environmental monitoring data undertaken for the Tomingley Gold Project during the month of October 2020.

This report also compares data collected to targets and provides commentary on environmental issues during the month.

2. Weather for October 2020

A. Weather Station Data

TGO WEATHER DATA IS PRESENTED BELOW.

Figure 1. October 2020 wind rose

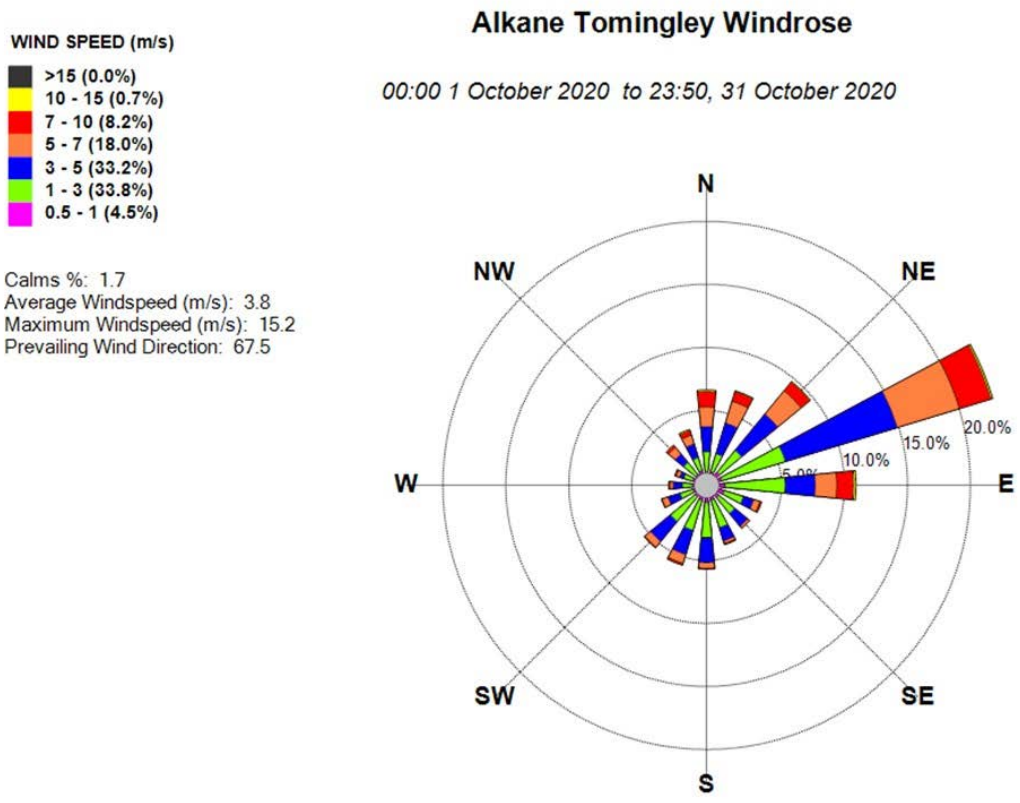


Figure 2. Rainfall October 2020

October 2020	Rainfall (mm)	Year to Date
Total Rainfall	56.4 mm	596.8 mm

3. Monitoring Locations

FIGURE 3 indicates the location of where monitoring is undertaken for the project. Any additional monitoring undertaken will be discussed within the body of this report.

Figure 3. TGO water and vegetation monitoring points

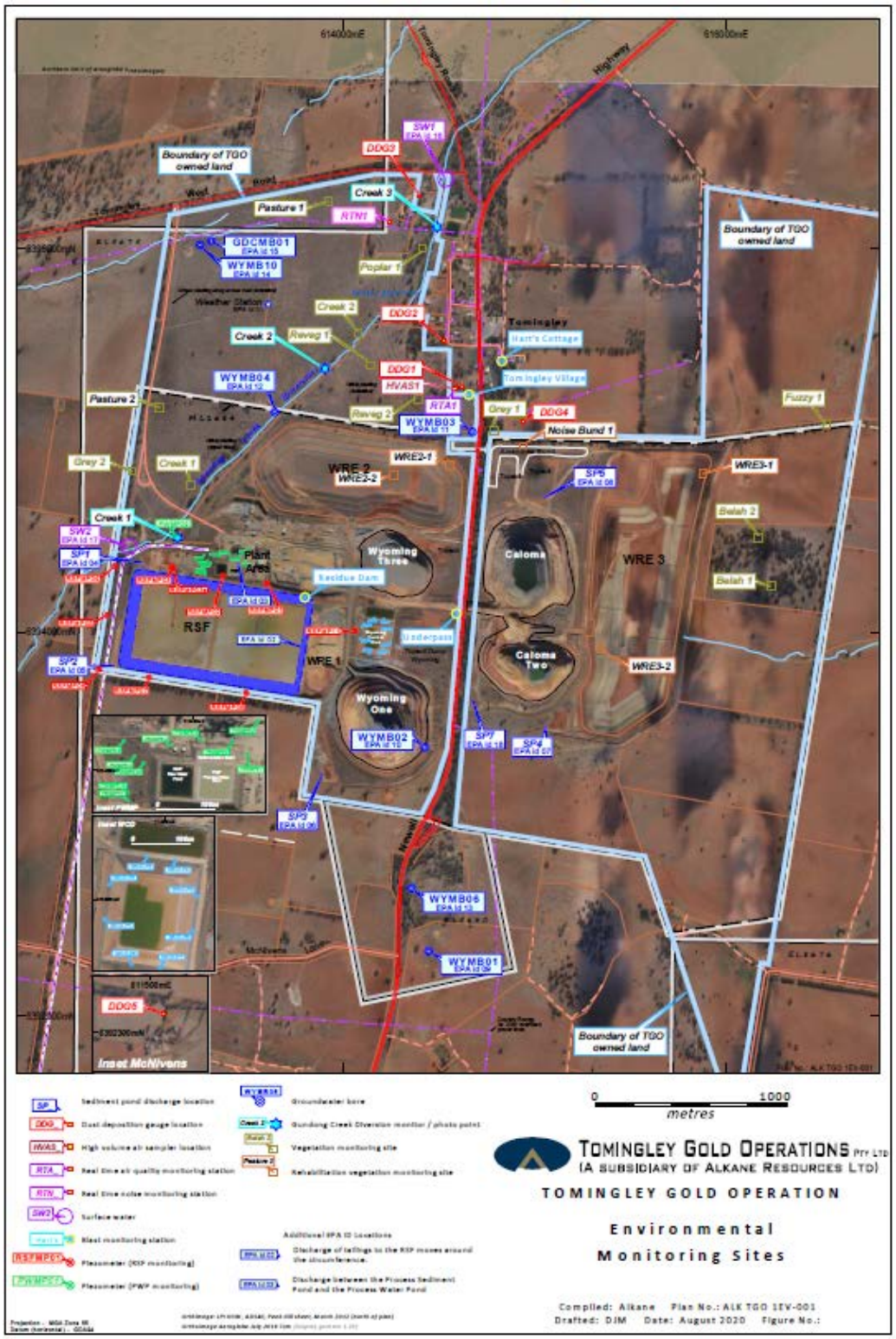
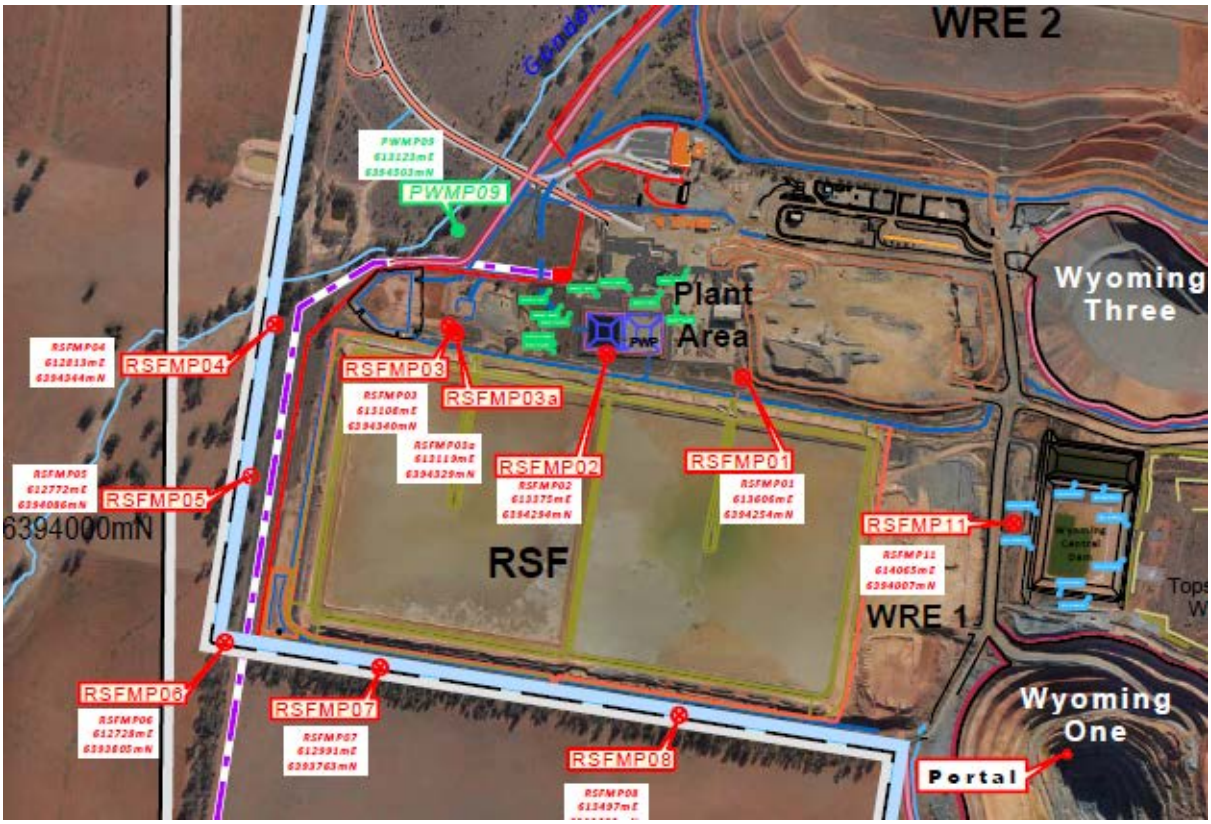


Figure 4 indicates the location of environmental and survey monitoring points on and around the Residue Storage Facility.

Figure 4. Residue Storage Facility monitoring points



4. Air Quality Monitoring

A. PM10 Monitoring

PM10 is measured via a Tapered Element Oscillating Microbalance (TEOM) located at the southern edge of the Tomingley Village. This machine transmits real-time data via the internet to a computer located on site.

The Performance Criteria for PM10 has been set at an Annual Average of 30ug/m^3 and a 24-Hour Average of 50ug/m^3.

The current annual average of all PM10 data at the end of October was 52.1 ug/m^3, which is above the Approval limit, while the average for the month was 15.2 ug/m^3. The annual average has been calculated using all recorded data for 2020 to date which includes each of the numerous dust storms and smoke from bushfires in January and February 2020.

There were nil elevated readings recorded during October.

Figure 5. TEOM Data October 2020

Date	24-hour Average	Annual Rolling Average	Comment/s
1/10/2020	12.2	55.1	
2/10/2020	13.5	55.0	
3/10/2020	14.4	55.0	
4/10/2020	24.4	55.0	
5/10/2020	23.0	54.9	
6/10/2020	19.9	54.8	
7/10/2020	22.4	54.7	
8/10/2020	9.5	54.4	
9/10/2020	11.6	54.4	
10/10/2020	11.0	54.3	
11/10/2020	9.7	54.3	
12/10/2020	13.8	54.3	
13/10/2020	19.9	54.3	
14/10/2020	21.2	54.3	
15/10/2020	23.9	54.3	
16/10/2020	19.5	54.3	
17/10/2020	27.9	54.1	
18/10/2020	10.7	54.1	
19/10/2020	15.1	53.9	
20/10/2020	14.0	53.9	
21/10/2020	16.7	53.8	
22/10/2020	12.7	53.8	
23/10/2020	16.5	53.7	
24/10/2020	9.9	53.6	
25/10/2020	12.1	52.7	
26/10/2020	6.6	52.4	
27/10/2020	8.6	52.3	
28/10/2020	14.7	52.3	
29/10/2020	9.4	52.2	
30/10/2020	15.4	52.1	
31/10/2020	11.7	52.1	
Average	**15.2**		
	Yellow shading indicates 24-hr criteria (50µg/m3) exceedance		*Units = µg/m3*

B. Depositional Dust

Depositional Dust monitoring undertaken during this month returned the results indicated in Table 1 below. The performance criteria for deposited dust is averaged over 12 months with a maximum total average of 4g/m2/month.

Table 1. Dust Deposition Results October 2020

Location	Date Monitored	Total Insoluble Matter (g/m2/month) October	Total Insoluble Matter (g/m2/month) September	Change in Total Insoluble Matter
DDG1	08/10/2020 – 03/11/2020	1	1.2	- 0.2
DDG2	08/10/2020 – 03/11/2020	1.2	1.2	0
DDG3	08/10/2020 – 03/11/2020	0.7	1	-0.3
DDG4	08/10/2020 – 03/11/2020	0.7	0.8	-0.1
DDG5	08/10/2020 – 03/11/2020	0.8	1.1	-0.3

C. High Volume Air Sampler - Total Suspended Particulates

High Volume Air Sampling (HVAS) for Total Suspended Particulates (TSP) was undertaken this month. Table 2 below provides the results.

The performance criteria for TSP are averaged over 12 months.

Table 2. Hi-Volume Air Sampler Data October 2020

Location	Sample Date	Results (TSP µg/m³)	Performance Criteria (Annual Average)
HVAS1	04/10/2020	97.4	90 µg/m3.
HVAS1	10/10/2020	<0.1	
HVAS1	16/10/2020	57.7	
HVAS1	22/10/2020	28.7	
HVAS1	28/10/2020	42.7	

5. Noise Monitoring

A. Real-Time Noise Monitoring

Real-time noise monitoring data showed no exceedances during the month of October. A full report is provided separately on the Alkane webpage.

6. Surface Water Monitoring

A. Gundong Creek

Gundong Creek continued to flow in early October and ceased flowing towards the end of the month. In accordance with the TGO Water Management Plan (WMP) weekly samples were taken while the creek flowed and analysed by ALS Laboratories. No exceedances of specified water quality parameters were recorded for the month.

B. Sedimentation Ponds

No discharge was experienced from any of the sediment ponds during the month.

7. Groundwater Monitoring

Quarterly groundwater monitoring was undertaken during September in line with licence requirements.

Results from the monitoring fell within expected limits. The next round of monitoring is due in December.

8. Blast Monitoring

Underground blasting has been continuing since January with blasts recording vibrations below the trigger level for the site monitoring equipment.

Blasts that trigger the monitoring equipment are recorded and the data is retained on site. There were no blast exceedances during October.

9. Residue Storage Facility

Residue from the processing plant is discharged into the Residue Storage Facility or RSF. The Environmental Protection Licences dictates that the Weak Acid Dissociable (WAD) Cyanide found in this residue must be less than 20 milligrams per litre for 90% of the time and less than 30 milligrams per litre for 100% of the time.

WAD cyanide discharge levels are shown below with the maximum reading below the 100th percentile limit of 30ppm.

- Monthly average: 1.97 ppm
- Daily maximum: 4.16 ppm
- Daily minimum: 0.896 ppm
- Number of exceedances: 0

10. Biodiversity Monitoring

Fauna deaths:

- No fauna deaths were recorded during October.