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

June 2018

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

June 2018

Document History

DATE	VERSION	REASON FOR CHANGE	AUTHOR
	Rev 1	Submitted for Information	CH

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 June 2018.

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

2. Weather for June 2018

A. Weather Station Data

TGO WEATHER DATA IS PRESENTED BELOW.

Figure 1. June 2018 wind rose

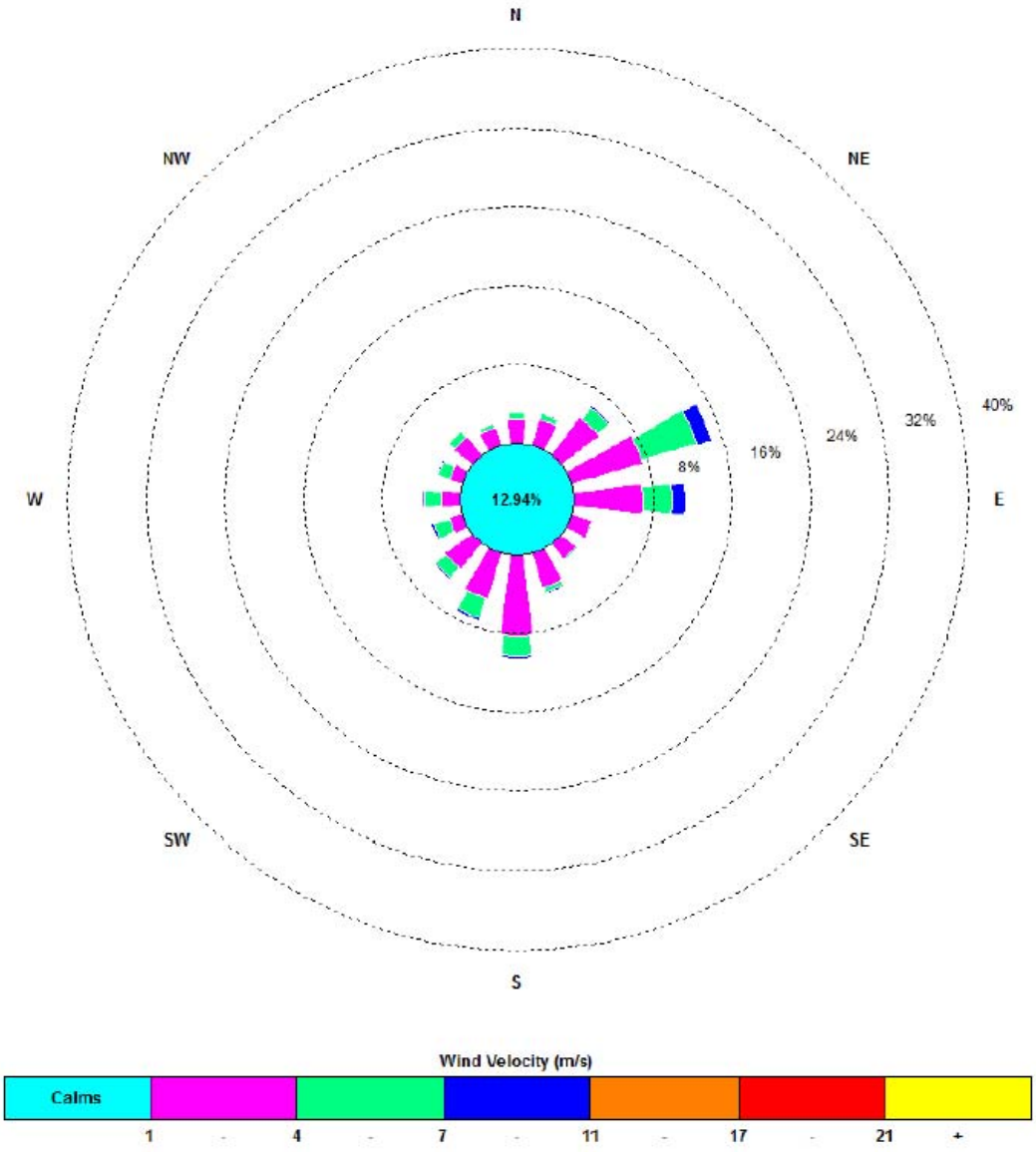


Figure 2. Rainfall June 2018

June 2018	Rainfall (mm)
June 8	2
June 9	3.8
June 12	0.6
June 16	1.8
June 17	1.4
June 27	8
June 28	4
Total Rainfall	22.6

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

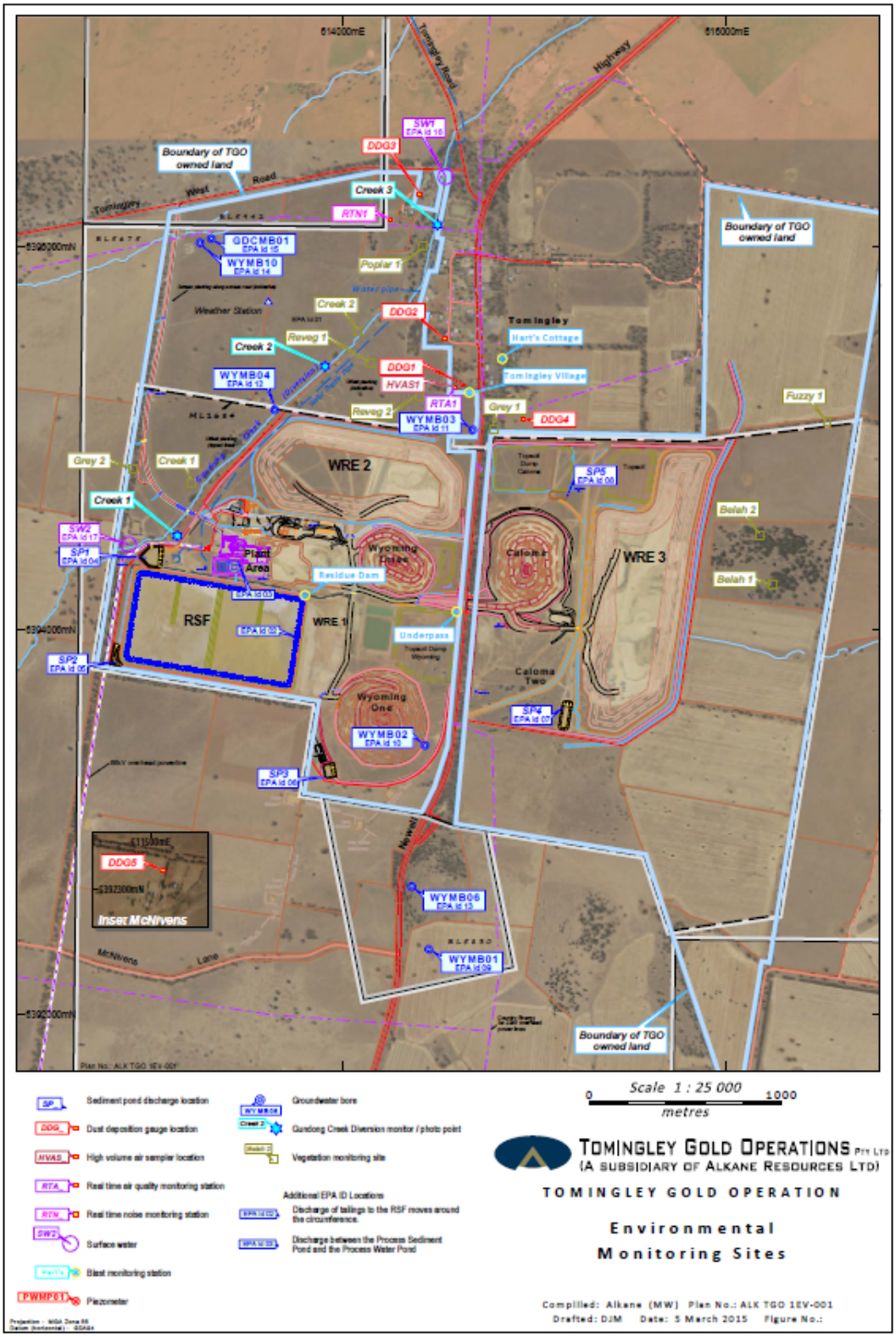
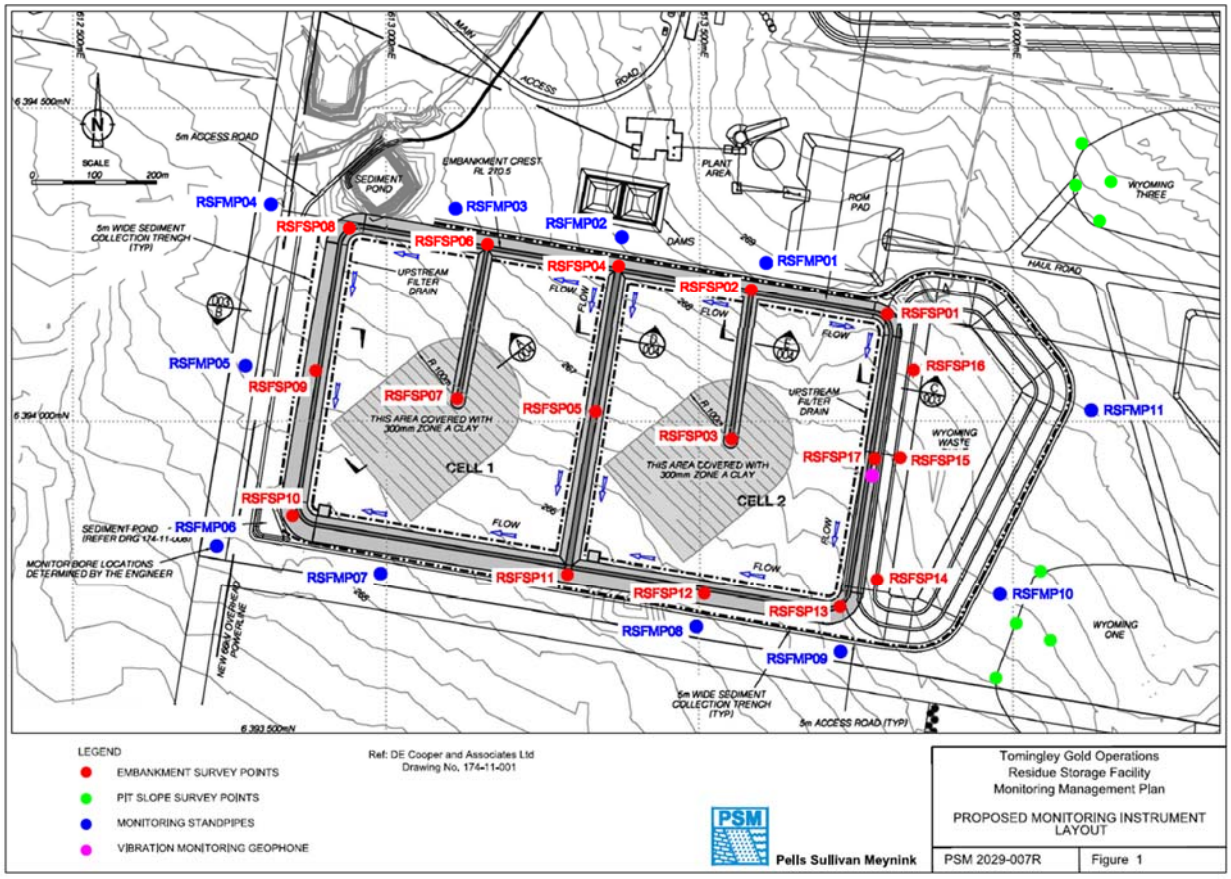


Figure 4 indicates the location of environmental and survey monitoring points on and around the Residue Storage Facility.

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 annual average at the end of June was 21.8ug/m^3, well below the license limit.

A number of high readings throughout the month were as a result of strong winds combined with regional dust from the ongoing drought. The high level recorded during May was not a result of mining activity and TGO has kept all government agencies informed of the ongoing high dust levels in the region.

Figure 5. TEOM Data June 2018

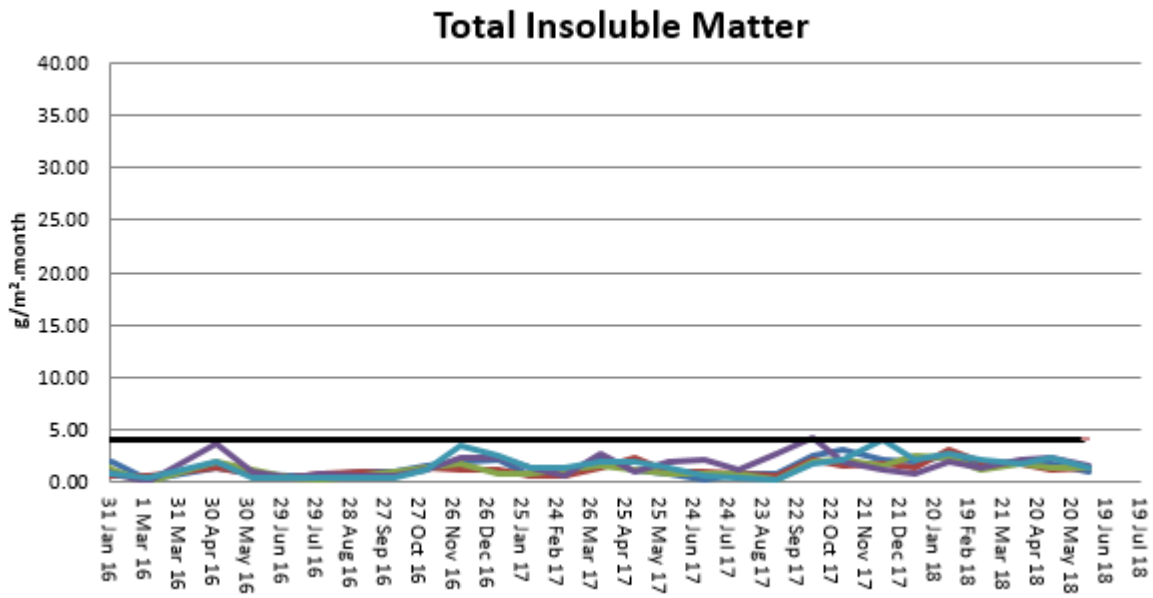
Date	24 Hr Averages	Running Average	Comment
	(µg/m3)		
1/06/2018	18.2	22.2	
2/06/2018	16.1	22.2	
3/06/2018	13.4	22.2	
4/06/2018	18.5	22.2	
5/06/2018	22.0	22.2	
6/06/2018	12.2	22.1	
7/06/2018	18.9	22.1	
8/06/2018	21.2	22.2	
9/06/2018	7.4	22.1	
10/06/2018	4.7	22.1	
11/06/2018	8.9	22.1	
12/06/2018	10.9	22.1	
13/06/2018	15.5	22.1	
14/06/2018	12.8	22.1	
15/06/2018	12.1	22.1	
16/06/2018	12.0	22.1	1 hour average data used
17/06/2018	5.6	22.1	
18/06/2018	9.5	22.0	
19/06/2018	10.8	22.0	
20/06/2018	11.6	22.0	
21/06/2018	14.2	21.9	1 hour average data used
22/06/2018	18.3	21.9	
23/06/2018	17.3	21.9	
24/06/2018	25.3	22.0	
25/06/2018	22.6	22.0	1 hour average data used
26/06/2018	18.0	22.0	
27/06/2018	16.7	22.0	
28/06/2018	2.4	21.9	
29/06/2018	9.6	21.9	
30/06/2018	11.0	21.8	1 hour average data used
Average	**13.9**		
	24 Hour Criteria Exceedance		

Note: For comparison purposes, highlighted results indicate levels above the EPA and NEPM 24-hour maximum criteria for PM_{10}.

B. Depositional Dust

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

Figure 6. Dust Deposition Results 2016 - 2018

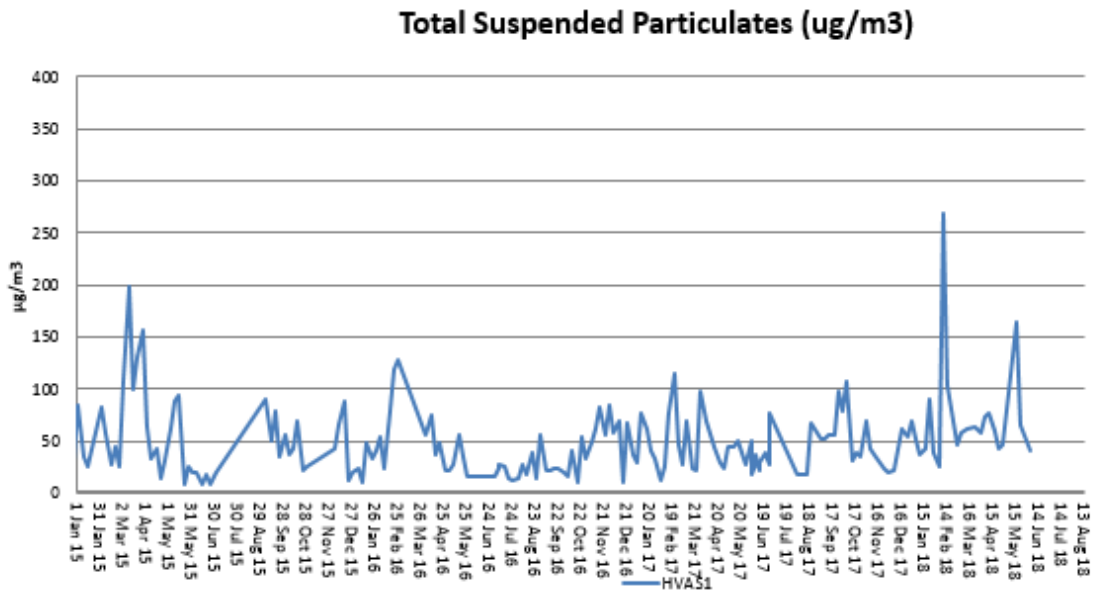


C. High Volume Air Sampler - Total Suspended Particulates

High Volume Air Sampling (HVAS) for Total Suspended Particulates (TSP) was undertaken this month. Figure 7 below provides the results.

The performance criteria for TSP is averaged over 12 months

Figure 7. Hi-Volume Air Sampler Data 2015 - 2018



5. Noise Monitoring

A. Real-Time Noise Monitoring

Real-time noise monitoring data showed no exceedances during the month of June. Full report provided separately on webpage.

6. Surface Water Monitoring

A. Gundong Creek

Gundong Creek did not flow during June and as such no samples were taken.

B. Sedimentation Ponds

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

7. Groundwater Monitoring

Groundwater was undertaken during June in line with license requirements.

Results from this round of monitoring fell within expected limits.

A further round of monitoring is scheduled in for September.

8. Blast Monitoring

Blasts are carried out in all open cut pits and vibration and decibels are monitored from several locations. Below are the vibration results recorded from the monitors at Hart's Cottage and Tomingley Village.

Figure 8. Blast Monitoring

EventKey	Date/Time	Max R (mm/s)	Location
88192	1/06/2018 16:20	0.15	Harts Cottage
88192	1/06/2018 16:20	0.14	Tomingley Village
88175	2/06/2018 13:59	0.04	Harts Cottage
88175	2/06/2018 13:59	0.05	Tomingley Village
88200	4/06/2018 13:55	0.17	Harts Cottage
88200	4/06/2018 13:55	0.17	Tomingley Village
88281	7/06/2018 14:01	0.09	Harts Cottage
88281	7/06/2018 14:01	0.1	Tomingley Village
88323	9/06/2018 14:24	0.11	Harts Cottage
88323	9/06/2018 14:24	0.11	Tomingley Village
88429	12/06/2018 13:58	0.12	Harts Cottage
88429	12/06/2018 13:58	0.1	Tomingley Village
88518	16/06/2018 12:53	0.09	Harts Cottage
88518	16/06/2018 12:53	0.08	Tomingley Village
88563	18/06/2018 16:00	0.12	Harts Cottage
88563	18/06/2018 16:00	0.21	Tomingley Village
88597	20/06/2018 13:54	0.12	Harts Cottage
88597	20/06/2018 13:54	0.13	Tomingley Village
88629	21/06/2018 13:57	0.08	Harts Cottage
88629	21/06/2018 13:57	0.09	Tomingley Village
88666	23/06/2018 14:08	0.09	Harts Cottage
88666	23/06/2018 14:08	0.11	Tomingley Village
88677	25/06/2018 13:56	0.14	Harts Cottage
88677	25/06/2018 13:56	0.12	Tomingley Village
88706	26/06/2018 14:58	0.06	Harts Cottage
88706	26/06/2018 14:58	0.07	Tomingley Village
88851	29/06/2018 15:08	0.07	Harts Cottage
88851	29/06/2018 15:08	0.09	Tomingley Village

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 well below the 100th percentile limit of 30ppm.

- Monthly average: 4.71 ppm
- Daily maximum: 11.61 ppm on 23rd June
- Daily minimum: 1.80 ppm on 18th June
- Number of exceedances: zero

10. Biodiversity Monitoring

Fauna deaths:

- No fauna deaths were recorded during June.