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

March 2017

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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 March 2017.

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

2. Weather for March 2017

A. Weather Station Data

TGO WEATHER DATA IS PRESENTED BELOW.

Figure 1. March 2017 wind rose

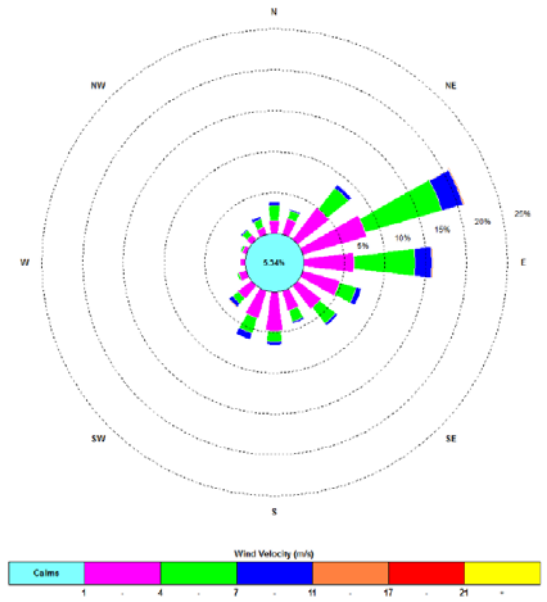


Figure 2. Rainfall March 2017

March 2017	Rainfall (mm)
March 13	93
March 14	1.2
March 20	19.2
March 21	6
March 22	7.8
March 23	21.8
March 24	13.6
March 30	0.2
Total Rainfall	162.8

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

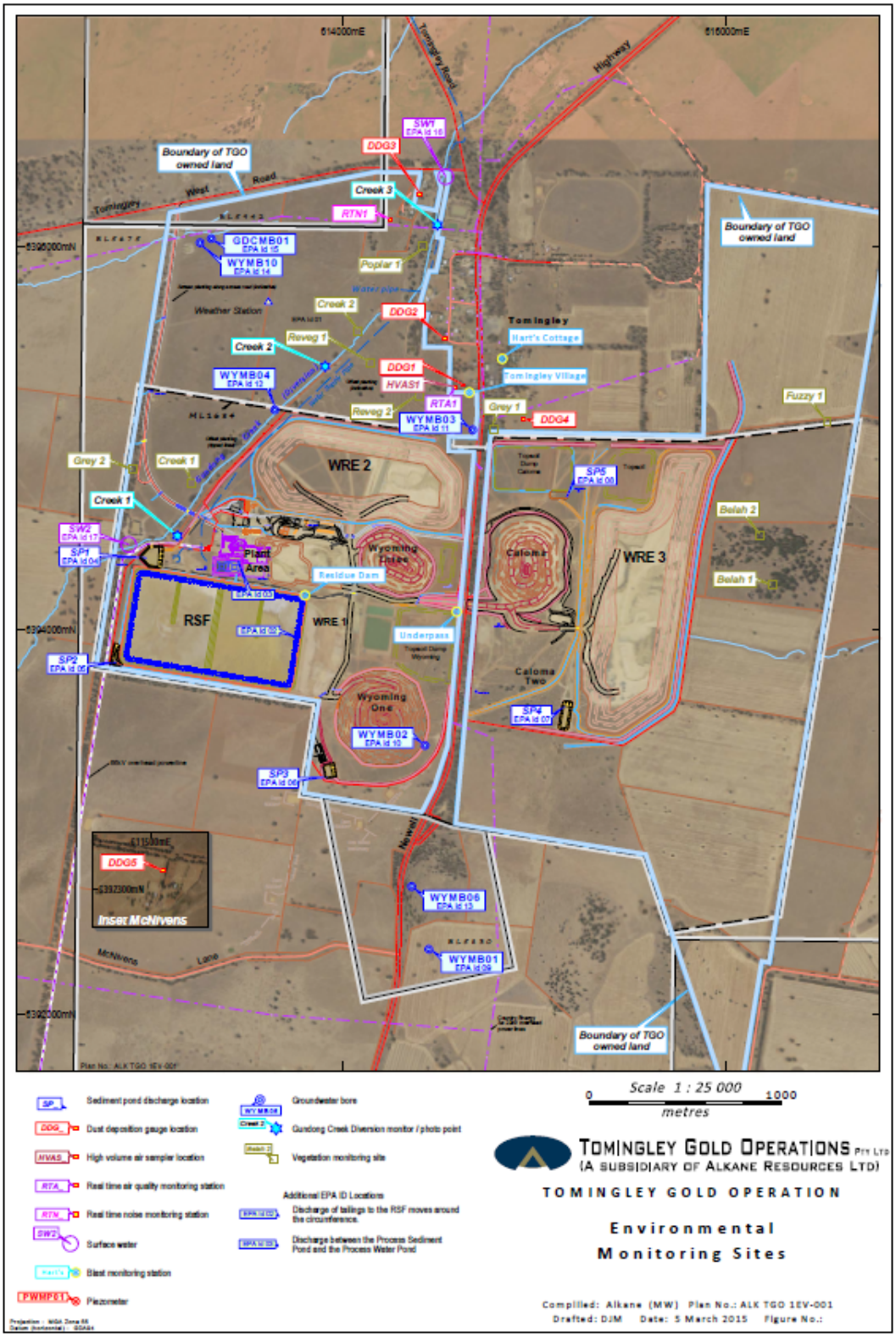
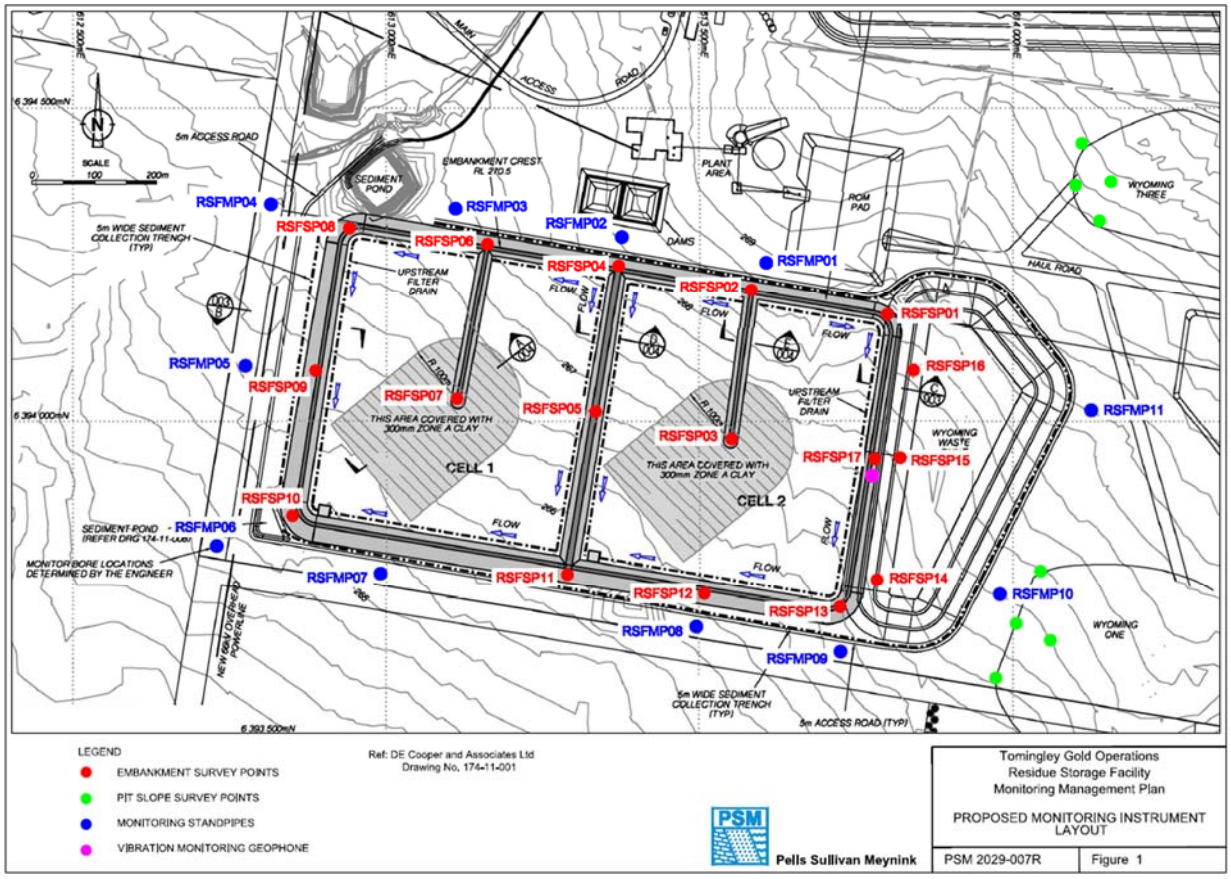


Figure 4 indicates the location of environmental and survey monitoring points on and around the Residue Storage Facility.

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 24 hour average limit was not exceeded during March.

The annual average at the end of March was 17.9ug/m^3, well below the license limit.

Figure 5. TEOM Data March 2017

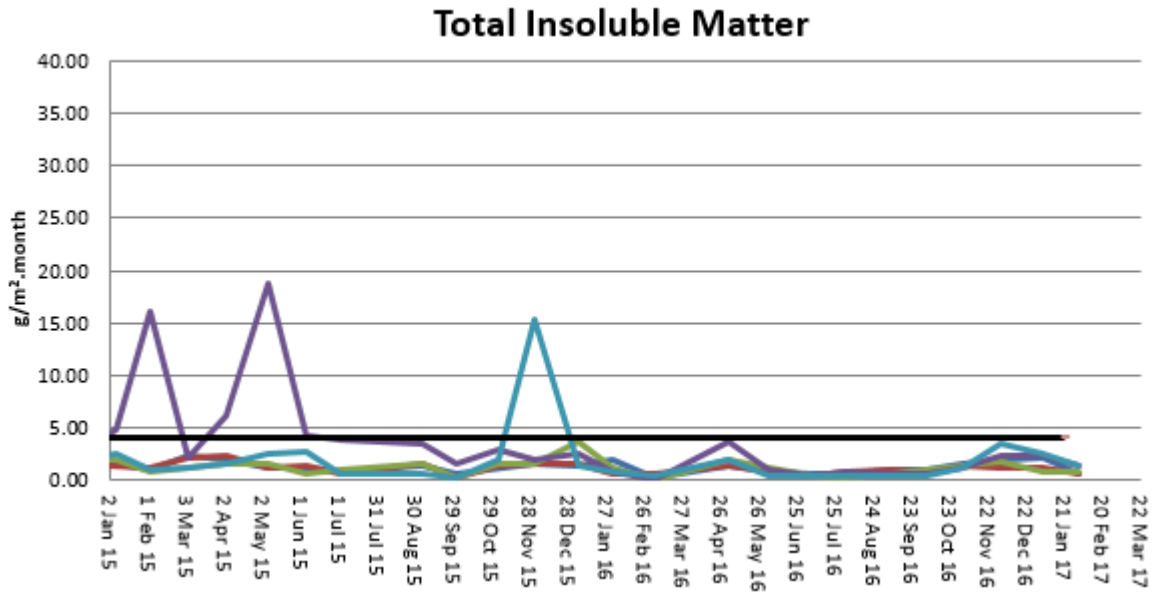
Date	24 Hr Averages	Running Average	Comment
	(µg/m3)		
1/03/2017	17.9	18.5	
2/03/2017	13.3	18.4	
3/03/2017	15.1	18.4	
4/03/2017	7.7	18.3	
5/03/2017	15.5	18.3	
6/03/2017	17.3	18.3	
7/03/2017	14.2	18.3	
8/03/2017	10.6	18.3	
9/03/2017	14.7	18.2	
10/03/2017	25.1	18.2	
11/03/2017	21.5	18.2	
12/03/2017	NA	18.2	Insuffucient data
13/03/2017	22.1	18.2	1-hour average data used
14/03/2017	9.0	18.2	
15/03/2017	6.9	18.2	
16/03/2017	9.9	18.2	
17/03/2017	14.9	18.2	
18/03/2017	10.4	18.2	
19/03/2017	8.8	18.1	
20/03/2017	8.6	18.1	
21/03/2017	9.6	18.1	
22/03/2017	6.1	18.1	1-hour average data used
23/03/2017	9.1	18.1	
24/03/2017	5.3	18.0	1-hour average data used
25/03/2017	10.7	17.9	
26/03/2017	12.0	17.9	
27/03/2017	18.0	17.9	
28/03/2017	41.3	17.9	
29/03/2017	24.5	17.9	
30/03/2017	45.6	17.9	
31/03/2017	19.5	17.9	
Average	**15.5**		
	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.

Figure 6. Dust Deposition Results 2015 - 2017

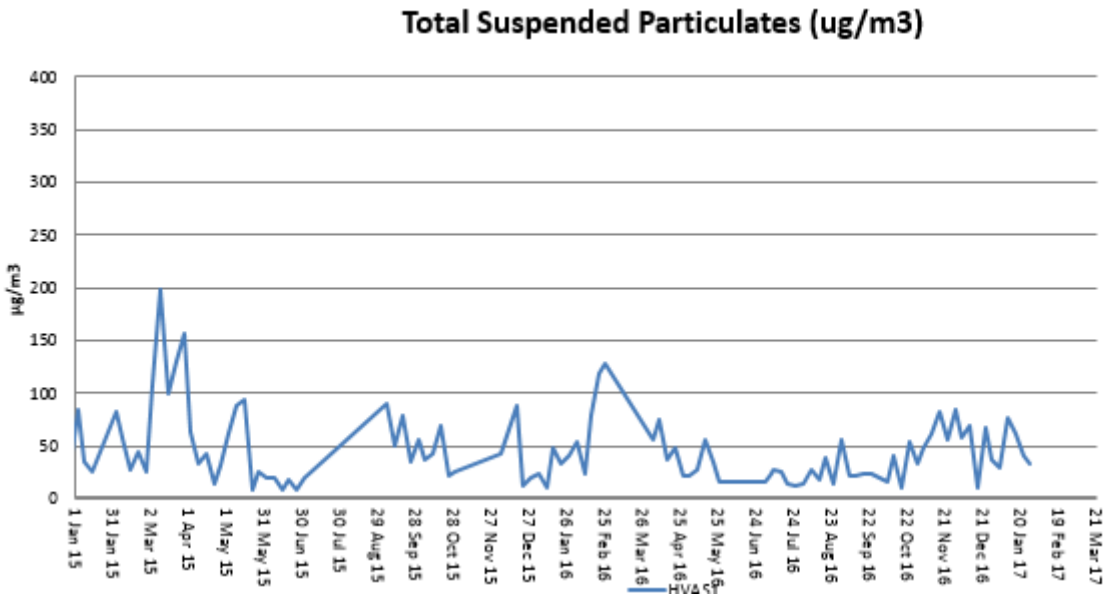


C. High Volume Air Sampler - Total Suspended Particulates

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 - 2017

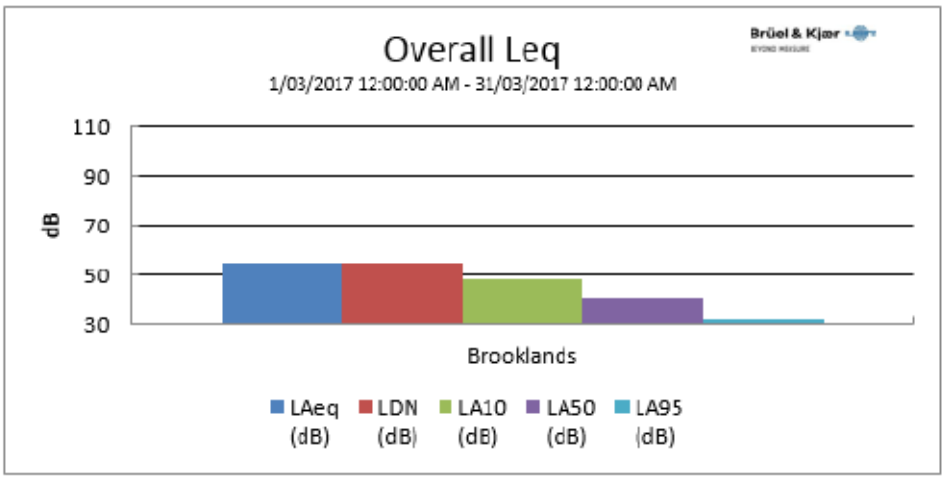


5. Noise Monitoring

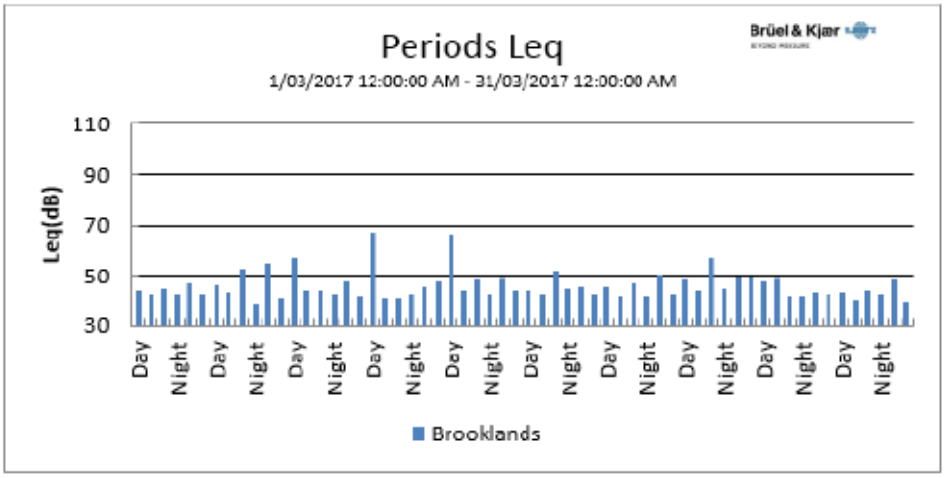
A. Real-Time Noise Monitoring

See real-time noise monitoring data presented below.

Figure 8. TGO Noise Monitoring 1/3/2017 - 31/3/2017



Location	Start Time	End Time	Activity	LDN (dB)	L_{Aeq} (dB)	L_{AF} (dB)	L_{AMin} (dB)	L_{A10} (dB)	L_{A50} (dB)	L_{A95} (dB)
Brooklands	1/03 12:00:00 AM	31/03 12:00:00 AM	100%	54.6	54.6		21.4	48.3	40.9	31.9



6. Surface Water Monitoring

A. Gundong Creek

Gundong Creek flowed during March as a result of heavy rainfall and a single sample was taken at two locations. Results were consistent with previously obtained analysis.

B. Sedimentation Ponds

Sediment basins did not experience any discharges during the month of March.

7. Groundwater Monitoring

Groundwater was undertaken during March in line with license requirements.

Results from this round of monitoring fell within expected limits.

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 9. Blast Monitoring

EventKey	Date/Time	Max R (mm/s)	Location
76514	1/03/2017 12:55	0.29	Harts Cottage
76514	1/03/2017 12:55	0.38	Tomingley Village
76549	3/03/2017 12:58	0.26	Harts Cottage
76549	3/03/2017 12:58	0.64	Tomingley Village
76565	4/03/2017 14:35	0.1	Harts Cottage
76565	4/03/2017 14:35	0.12	Tomingley Village
76589	6/03/2017 13:09	0.28	Harts Cottage
76589	6/03/2017 13:09	0.35	Tomingley Village
76635	8/03/2017 13:00	0.22	Harts Cottage
76635	8/03/2017 13:00	0.37	Tomingley Village
76692	10/03/2017 13:03	0.18	Harts Cottage
76692	10/03/2017 13:03	0.32	Tomingley Village
76705	11/03/2017 13:01	0.14	Harts Cottage
76705	11/03/2017 13:01	0.19	Tomingley Village
76864	18/03/2017 13:58	0.1	Harts Cottage
76864	18/03/2017 13:58	0.11	Tomingley Village
76899	21/03/2017 14:02	0.12	Harts Cottage
76899	21/03/2017 14:02	0.1	Tomingley Village
76923	22/03/2017 12:59	0.26	Harts Cottage
76923	22/03/2017 12:59	0.38	Tomingley Village
76974	25/03/2017 13:00	0.08	Harts Cottage
76974	25/03/2017 13:00	0.1	Tomingley Village
76994	27/03/2017 15:11	0.1	Harts Cottage
76994	27/03/2017 15:11	0.12	Tomingley Village
77062	30/03/2017 13:01	0.11	Harts Cottage
77062	30/03/2017 13:01	0.07	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: 2.34 ppm
- Daily maximum: 6.05 ppm on 31st March
- Daily minimum: 0.26 ppm on 22nd March
- Number of exceedances: zero

10. Biodiversity Monitoring

Fauna deaths:

- There were no fauna deaths in the RSF for the month.

Vertebrate pests

- A program of trapping feral cats and foxes has continued with no animals being captured throughout March