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 2016

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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 2016.

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

2. Weather for March 2016

A. Weather Station Data

TGO WEATHER DATA IS PRESENTED BELOW.

Figure 1. March 2016 Wind rose

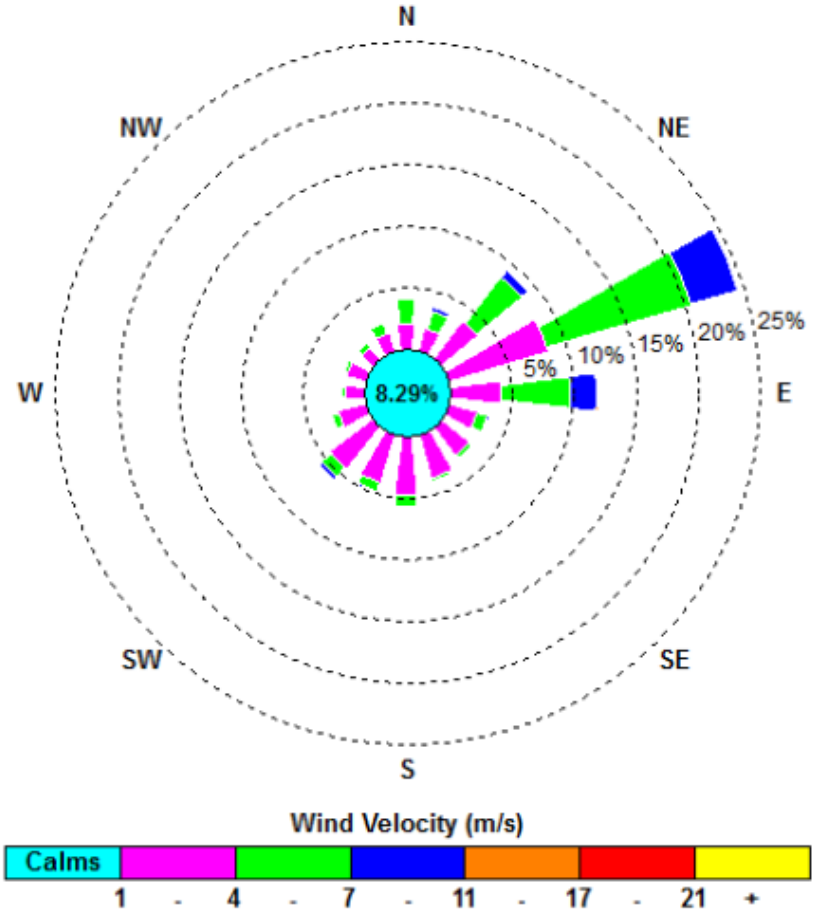


Figure 2.10: Tomingley Gold Operations Wind Rose –March 2016

Figure 2. Rainfall March 2016

February 2016	Rainfall (mm)
March 3	4
March 14	1.2
March 18	13.8
March 25	0.6
March 29	0.6
Total	20.2

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

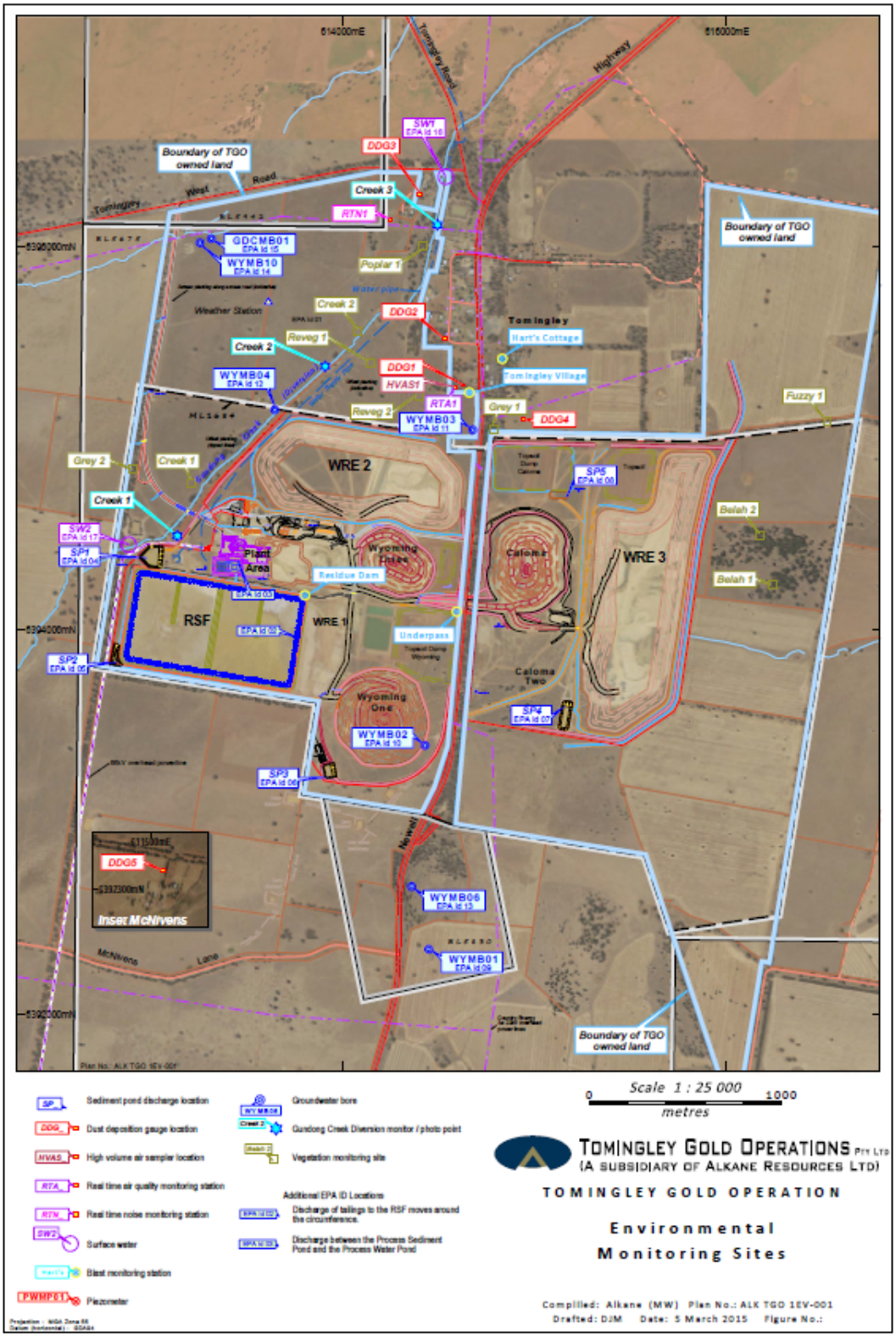
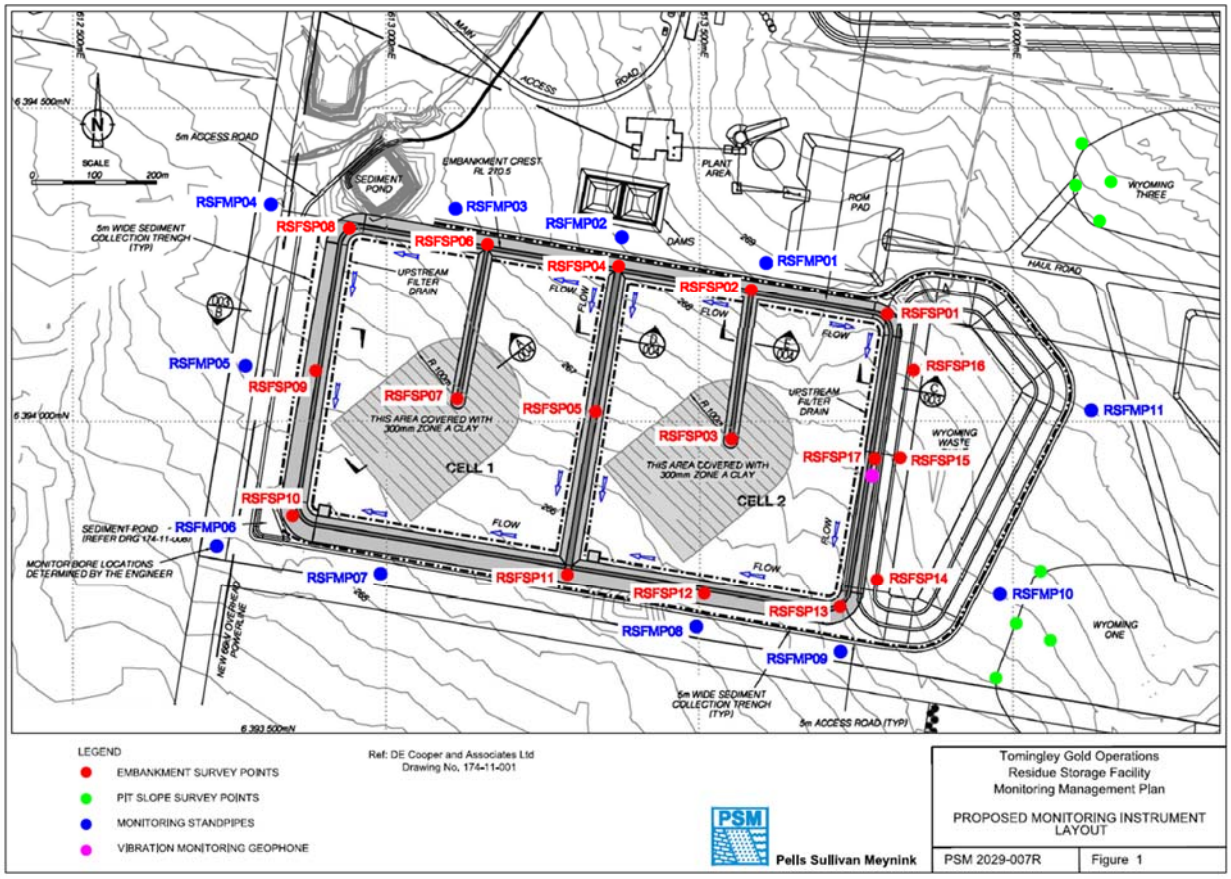


Figure 4 indicates the location of environmental and survey monitoring points on and around the Residue Storage Facility.

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 was not exceeded during the month of March.

Figure 5. TEOM Data March 2016

Date	24 Hr Averages (µg/m3)	Running Average (µg/m3)	Comment
1/03/2016	20.5	20.3	
2/03/2016	27.0	20.3	
3/03/2016	34.6	20.2	
4/03/2016	30.6	19.9	
5/03/2016	19.0	19.8	
6/03/2016	16.7	19.6	
7/03/2016	19.0	19.6	
8/03/2016	21.7	19.5	
9/03/2016	19.5	19.4	
10/03/2016	21.8	19.4	
11/03/2016	26.2	19.4	
12/03/2016	20.1	19.4	
13/03/2016	26.0	19.4	
14/03/2016	12.8	19.3	1 hr avg data used
15/03/2016	12.7	19.3	
16/03/2016	7.8	19.2	
17/03/2016	8.9	19.1	
18/03/2016	23.0	19.1	
19/03/2016	18.1	19.0	
20/03/2016	17.1	18.9	
21/03/2016	7.4	18.9	
22/03/2016	16.9	18.9	
23/03/2016	26.1	18.9	
24/03/2016	40.0	18.9	
25/03/2016	29.2	18.8	
26/03/2016	25.3	18.8	
27/03/2016	33.2	18.7	
28/03/2016	27.2	18.7	
29/03/2016	36.3	18.7	
30/03/2016	34.8	18.8	
31/03/2016	41.3	18.9	
Average	**23.2**		
	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 February 2016

Location	Date Monitored	Total Insoluble Matter (g/m2/month)	Maximum increase in deposited dust level
DDG1	1/2/2016-24/3/2016	0.2	February saw another decrease in deposited dust levels across site.
DDG2	1/2/2016-24/3/2016	0.7	
DDG3	1/2/2016-24/3/2016	0.1	
DDG4	1/2/2016-24/3/2016	0.1	
DDG5	1/2/2016-24/3/2016	0.5	

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 February 2016

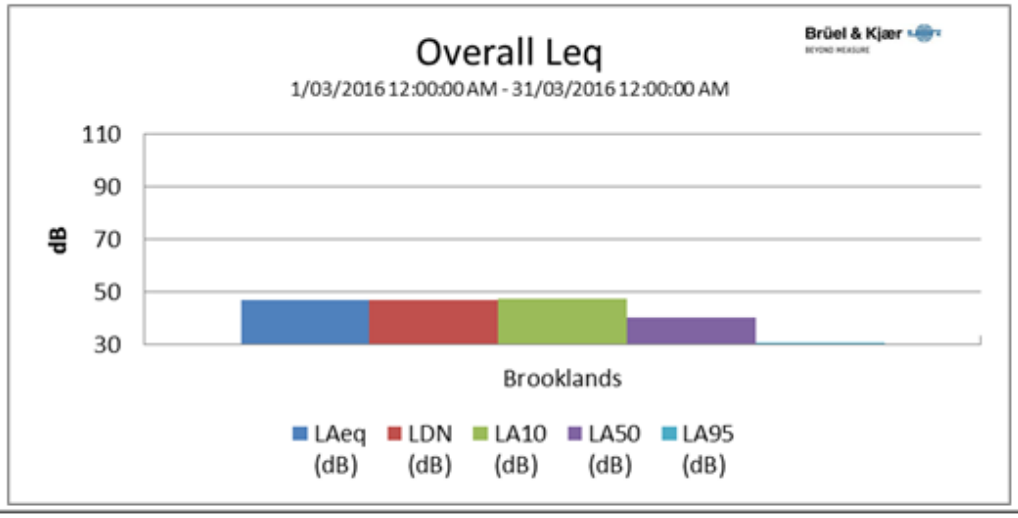
Location	Sample Date	Results (TSP µg/m³)	Performance Criteria (Annual Average)
HVAS1	02-Feb-16	54.4	90 µg/m3.
HVAS1	08-Feb-16	24.8	
HVAS1	14-Feb-16	79.3	
HVAS1	20-Feb-16	118.0	
HVAS1	26-Feb-16	129.0	

5. Noise Monitoring

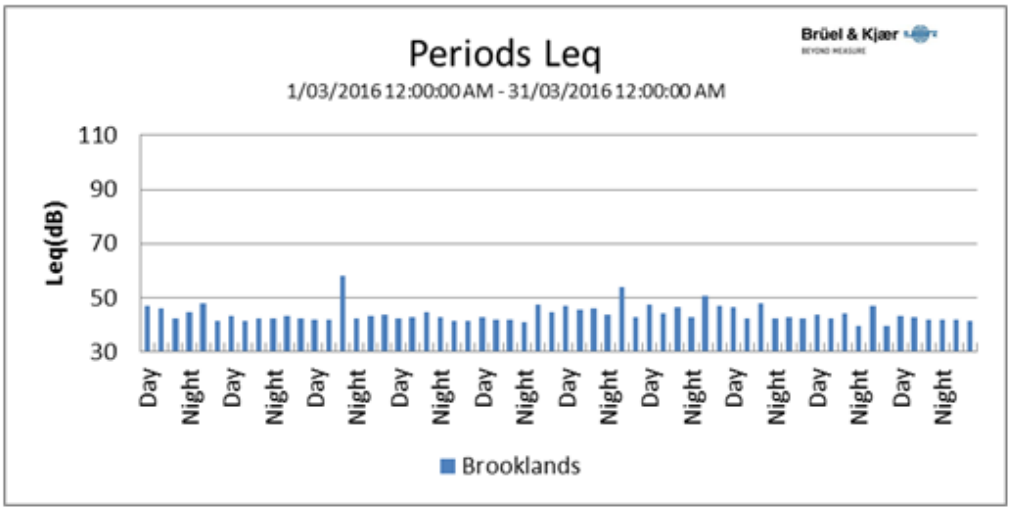
A. Real-Time Noise Monitoring

See real-time noise monitoring data presented below.

Figure 8. TGO Noise Monitoring 1/3/2016 - 31/3/2016



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%	46.8	46.8		22.0	47.2	40.0	30.5



6. Surface Water Monitoring

A. Gundong Creek

Gundong Creek did not flow over the course of January and as such no samples were taken.

B. Sedimentation Ponds

No discharge and associated water testing occurred this month.

7. Groundwater Monitoring

Groundwater monitoring was during March. Currently TGO is awaiting the sample results to be finalized.

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 Harts Cottage and Tomingley Village.

Figure 9. Blast Monitoring

EventKey	Date/Time	Max R (mm/s)	Location
68059	1/03/2016 11:03	0.18	Harts Cottage
68059	1/03/2016 11:03	0.27	Tomingley Village
68197	4/03/2016 11:00	0.4	Harts Cottage
68197	4/03/2016 11:00	0.67	Tomingley Village
68282	8/03/2016 12:59	0.35	Harts Cottage
68282	8/03/2016 12:59	0.37	Tomingley Village
68349	11/03/2016 13:00	0.36	Harts Cottage
68349	11/03/2016 13:00	0.38	Tomingley Village
68372	12/03/2016 13:01	0.35	Harts Cottage
68372	12/03/2016 13:01	0.55	Tomingley Village
68436	16/03/2016 12:57	0.23	Harts Cottage
68436	16/03/2016 12:57	0.3	Tomingley Village
68475	18/03/2016 13:39	0.41	Harts Cottage
68475	18/03/2016 13:39	0.7	Tomingley Village
68500	21/03/2016 13:57	0.61	Harts Cottage
68500	21/03/2016 13:57	0.56	Tomingley Village
68604	24/03/2016 13:22	0.46	Harts Cottage
68604	24/03/2016 13:22	0.62	Tomingley Village
68649	29/03/2016 15:29	0.59	Harts Cottage
68649	29/03/2016 15:29	0.84	Tomingley Village
68673	30/03/2016 12:59	0.16	Harts Cottage
68673	30/03/2016 12:59	0.25	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.

The WAD results for March 2016 are:

- Monthly average: 3.82 ppm
- Daily maximum: 12.7 ppm on 16th March
- Daily minimum: 3.45 ppm on 29th March
- Number of exceedances: zero

10. Biodiversity Monitoring

Fauna deaths:

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

Site Fauna

- On site fauna sightings for March included:
- 22nd March 2 Spotted Harriers, *Circus Assimilis,* in paddock adjacent to Caloma Pit.
- Juvenile Kookaburra, *Dacelo novaenguineae,* continues to reside in trees adjacent to the administration building
- Regularly throughout January a number of Grey Crowned Babblers *Pomatostomus temporalis* were seen in the tree corridor to the South of the RSF.

Vertebrate pests:

- Foxes and hares have been seen on occasion throughout the month
- A program of trapping feral cats and foxes has continued throughout March with no animals successfully captured.
- The program will continue on a monthly basis.