

TOMINGLEY GOLD PROJECT

Monthly Environmental Monitoring Report

April 2016

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Document History

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

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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 April 2016.

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

2. Weather for April 2016

A. Weather Station Data

TGO WEATHER DATA IS PRESENTED BELOW.

Figure 1. April 2016 Wind rose

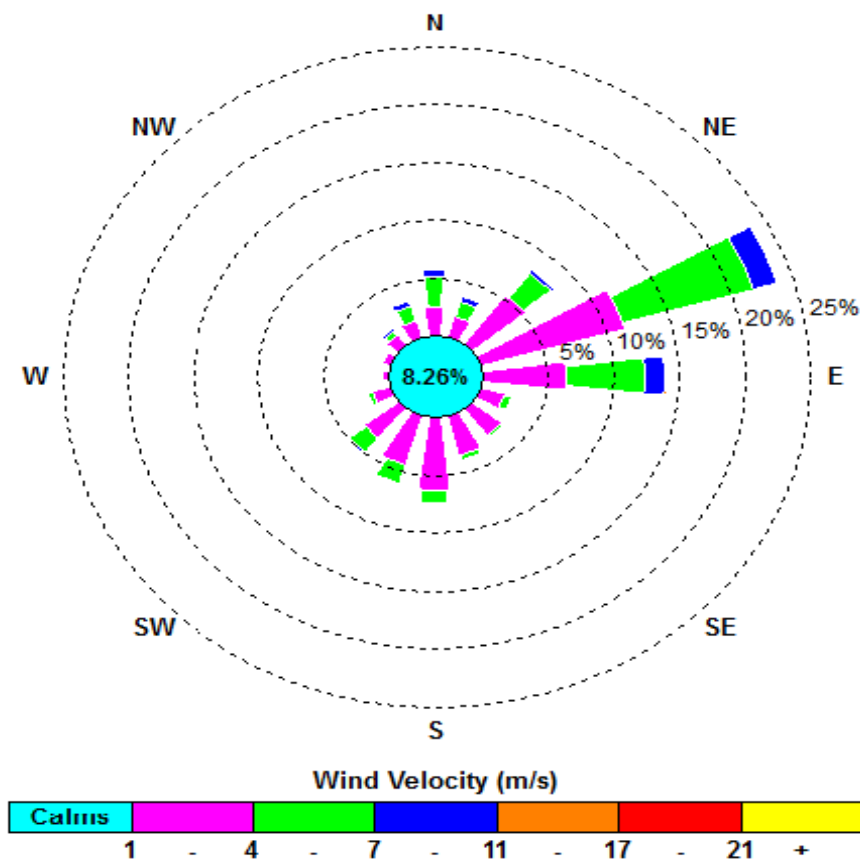


Figure 2. Rainfall April 2016

April 2016	Rainfall (mm)
April 17	1.6
April 29	13.2
April 30	27.8
Total	54.6

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

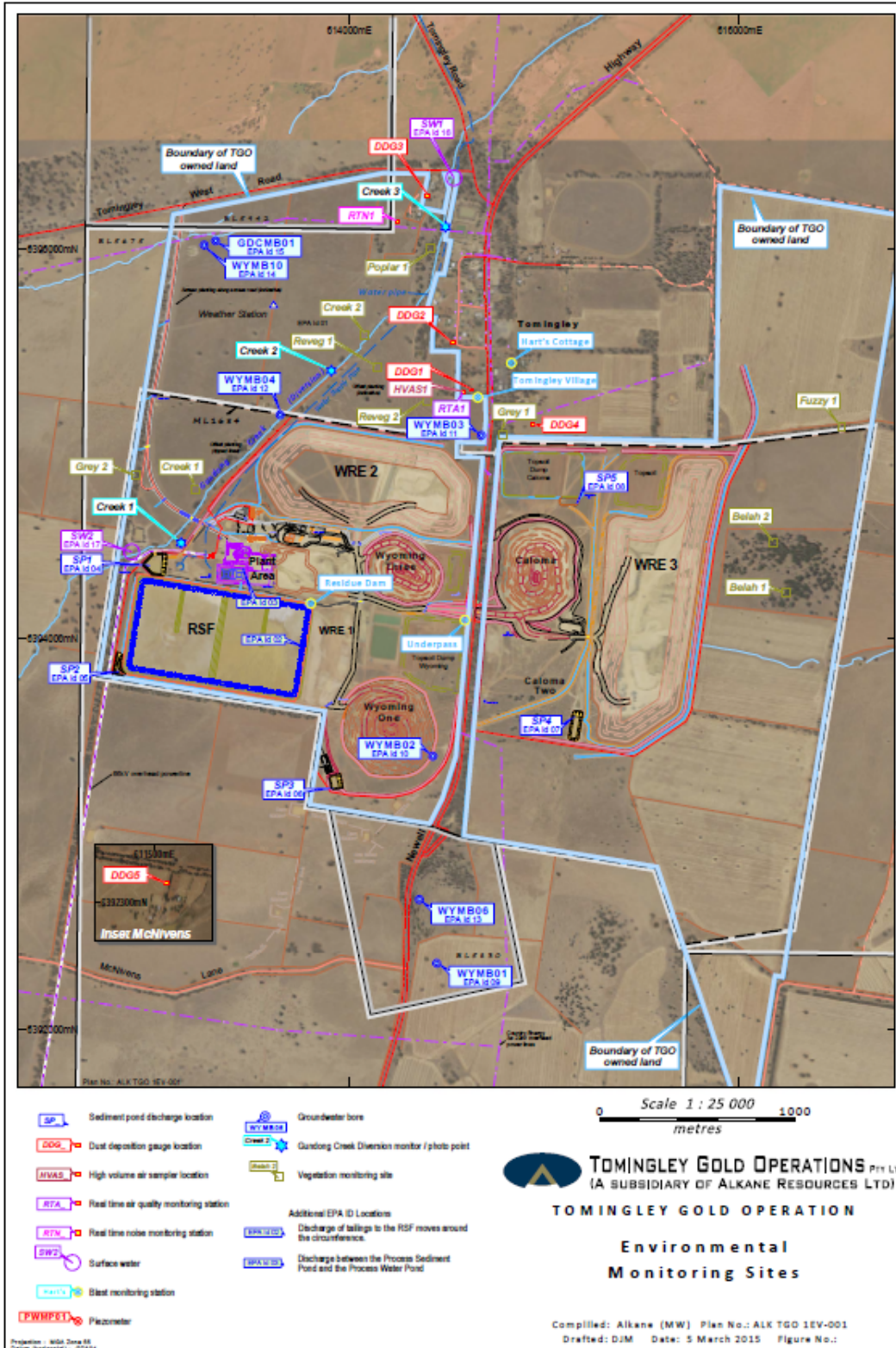
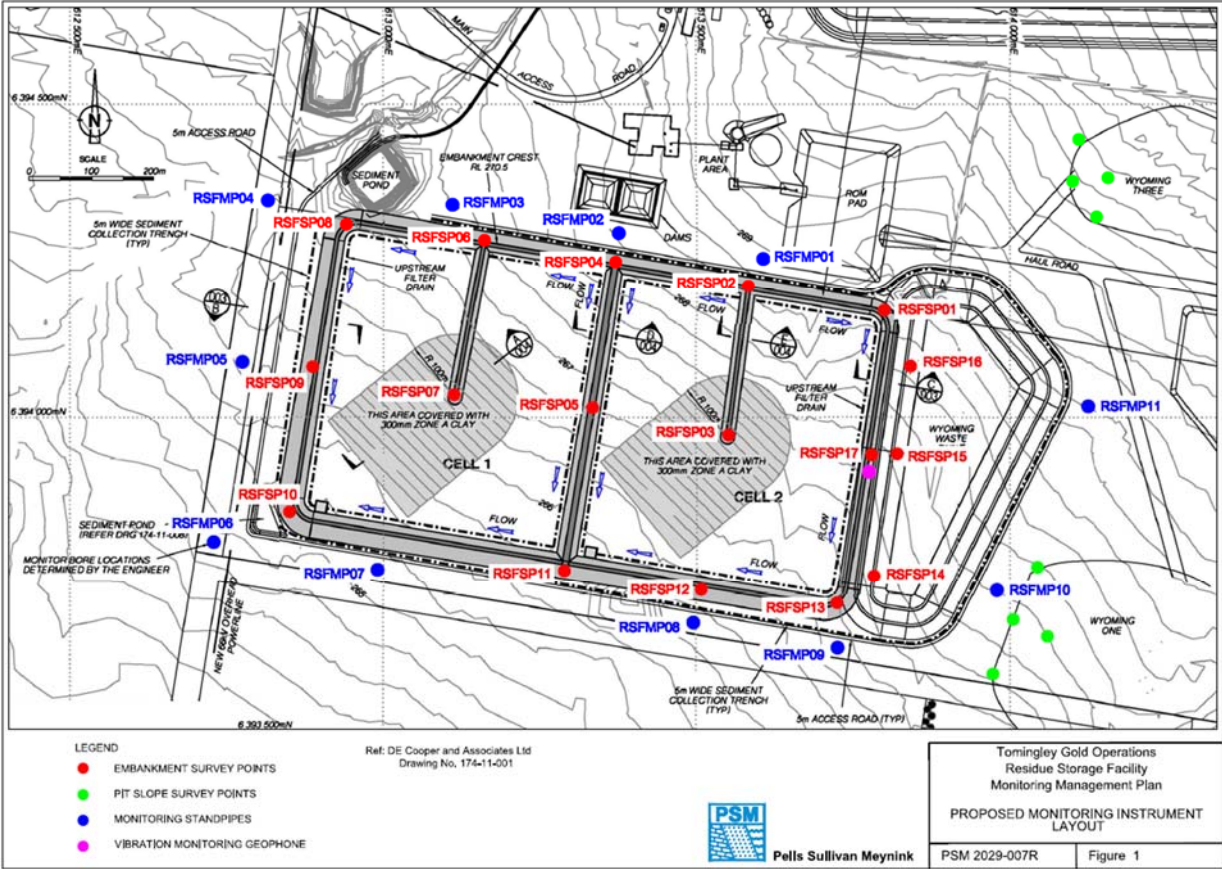


Figure 4 indicates the location of environmental and survey monitoring points on and around the Residue Storage Facility.

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/m³ and a 24-Hour Average of 50ug/m³.

The 24 hour average limit was exceeded on two occasions this month with one exceedance on April 6th being attributed partly to mine generated dust and reporting accordingly to the Authorities.

The second exceedance on April 12th was as a result off offsite dust/smoke generation and as such was not reported as an incident.

Figure 5. TEOM Data April 2016

Date	24 Hr Averages	Running Average	Comment
	(µg/m3)		
1/04/2016	28.3	18.9	
2/04/2016	26.9	18.9	1 hr avg data used
3/04/2016	33.6	18.9	
4/04/2016	41.9	19.0	
5/04/2016	41.7	19.1	
6/04/2016	53.6	19.2	
7/04/2016	37.8	19.3	
8/04/2016	35.9	19.4	
9/04/2016	31.9	19.4	
10/04/2016	33.9	19.5	
11/04/2016	36.2	19.5	
12/04/2016	54.9	19.6	
13/04/2016	28.7	19.7	1 hr avg data used
14/04/2016	18.8	19.7	
15/04/2016	20.9	19.7	
16/04/2016	27.2	19.7	
17/04/2016	34.6	19.7	
18/04/2016	13.0	19.6	
19/04/2016	13.3	19.6	
20/04/2016	21.6	19.7	
21/04/2016	25.1	19.7	
22/04/2016	31.0	19.8	
23/04/2016	22.8	19.8	
24/04/2016	15.1	19.8	
25/04/2016	18.1	19.8	
26/04/2016	16.9	19.8	
27/04/2016	15.0	19.8	
28/04/2016	35.2	19.9	
29/04/2016	43.2	19.9	
30/04/2016	6.8	19.9	
Average	28.8		
	24 Hour criteria exceedance		

Note: For comparison purposes highlighted results indicate levels above the EPA and NEPM 24-hour maximum criteria for PM₁₀

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 March 2016

Location	Date Monitored	Total Insoluble Matter (g/m²/month)	Maximum increase in deposited dust level
DDG1	24/2/2016-30/3/2016	2.0	Slight increase in deposited dust levels from the previous month however all sites remain well under license limits.
DDG2	24/2/2016-30/3/2016	2.4	
DDG3	24/2/2016-30/3/2016	1.4	
DDG4	24/2/2016-30/3/2016	1.3	
DDG5	24/2/2016-30/3/2016	2.7	

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 March 2016

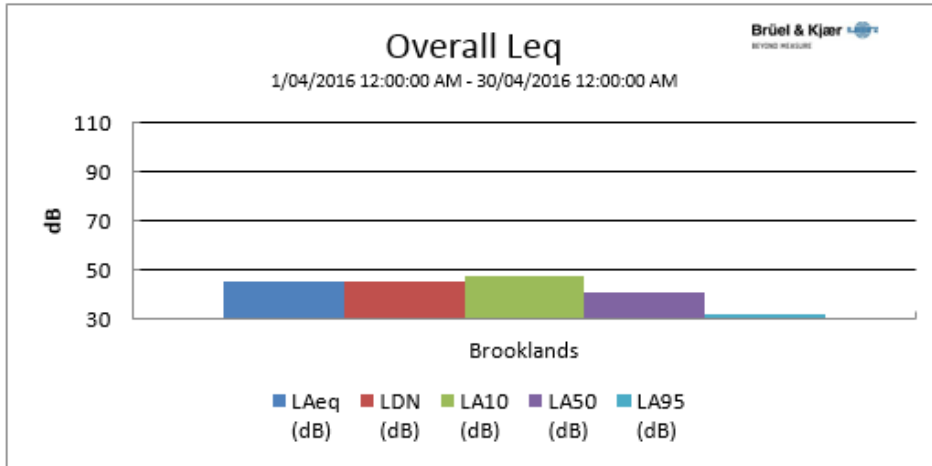
Location	Sample Date	Results (TSP µg/m³)	Performance Criteria (Annual Average)
HVAS1	03-Mar-16	76.7	90 µg/m ³ .
HVAS1	09-Mar-2016	57.6	
HVAS1	15-Mar-16	22.6	
HVAS1	21-Mar-16	23.7	
HVAS1	27-Mar-16	93.9	

5. Noise Monitoring

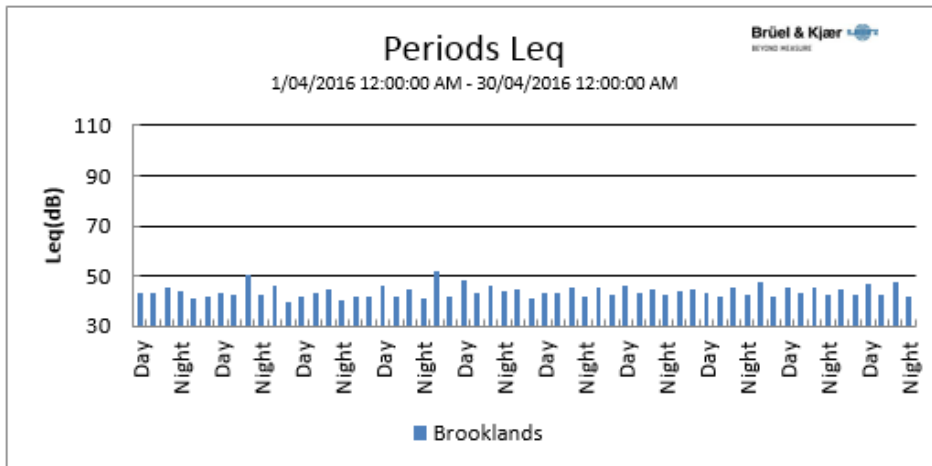
A. Real-Time Noise Monitoring

See real-time noise monitoring data presented below.

Figure 8. TGO Noise Monitoring 1/4/2016 - 30/3/2016



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	1/04 12:00:00 AM	30/04 12:00:00 AM	100%	45.2	45.2		22.2	47.2	40.6	31.7



6. Surface Water Monitoring

A. Gundong Creek

Gundong Creek did not flow over the course of April 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. Results were in line with expectations and showed no outlying results of note.

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
68710	1/04/2016 12:59	0.21	Harts Cottage
68710	1/04/2016 12:59	0.2	Tomingley Village
68714	1/04/2016 14:07	0.11	Harts Cottage
68714	1/04/2016 14:07	0.15	Tomingley Village
68784	4/04/2016 13:48	0.52	Harts Cottage
68784	4/04/2016 13:48	0.72	Tomingley Village
68873	7/04/2016 12:59	0.44	Harts Cottage
68873	7/04/2016 12:59	0.47	Tomingley Village
68914	9/04/2016 12:59	0.32	Harts Cottage
68914	9/04/2016 12:59	0.46	Tomingley Village
68927	11/04/2016 13:02	0.33	Harts Cottage
68927	11/04/2016 13:02	0.51	Tomingley Village
68980	13/04/2016 12:58	0.25	Harts Cottage
68980	13/04/2016 12:58	0.27	Tomingley Village
69030	15/04/2016 12:57	0.55	Harts Cottage
69030	15/04/2016 12:57	0.88	Tomingley Village
69046	16/04/2016 13:24	0	Harts Cottage
69046	16/04/2016 13:24	0	Tomingley Village
69098	18/04/2016 12:59	0.4	Harts Cottage
69098	18/04/2016 12:59	0.59	Tomingley Village
69172	20/04/2016 13:00	0.41	Harts Cottage
69172	20/04/2016 13:00	0.64	Tomingley Village
69179	22/04/2016 13:02	0.31	Harts Cottage
69179	22/04/2016 13:02	0.55	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 April 2016 are:

- Monthly average: 2.04 ppm
- Daily maximum: 7.24 ppm on 6th April
- Daily minimum: 0.37ppm on 8th April
- 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 April included:
- 2 Tawny Frogmouth owls, *Podargus strigoides*, have taken residence in pine tree adjacent to administration building
- Female Red Rump Parrots, *Psephotus haematonotus*, were spotted in trees around site throughout April
- Regularly throughout January a number of Grey Crowned Babblers *Pomatostomus temporalis* were seen in the tree corridor to the South of the RSF.
- Eastern Barn owl, *Tyto Javanic*, was recorded on the site access road on April during nightshift operations.

Vertebrate pests:

- Foxes and hares have been seen on occasion throughout the month
- A program of trapping feral cats and foxes has continued throughout April with a single cat captured and euthanized
- The program will continue on a monthly basis.