

TOMINGLEY GOLD PROJECT

Monthly Environmental Monitoring Report

May 2016

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Document History

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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 May 2016.

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

2. Weather for May 2016

A. Weather Station Data

TGO WEATHER DATA IS PRESENTED BELOW.

Figure 1. May 2016 wind rose

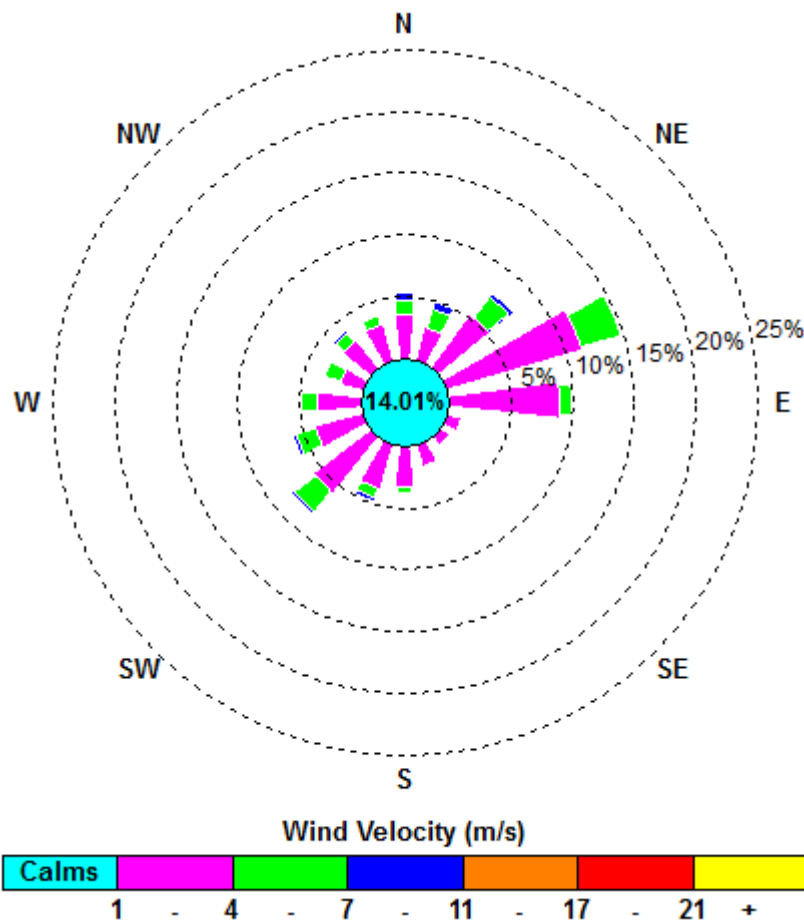


Figure 2. Rainfall May 2016

May 2016	Rainfall (mm)
May 1	12
May 8	6.6
May 9	23.6
May 10	1.6
May 11	0.2
May 14	0.2
May 26	14.6
May 27	0.4
May 28	9 9
Total	68.2

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

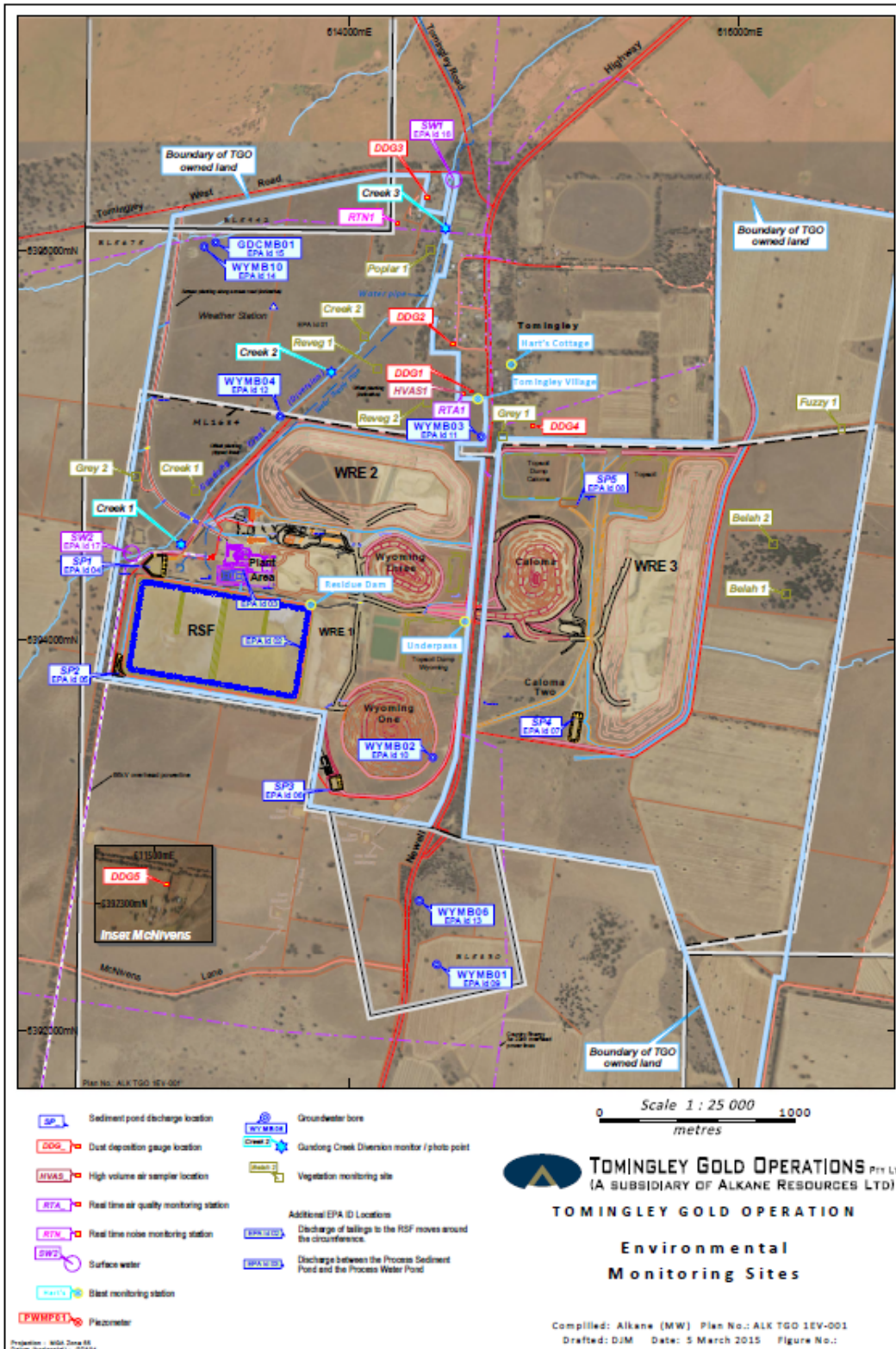
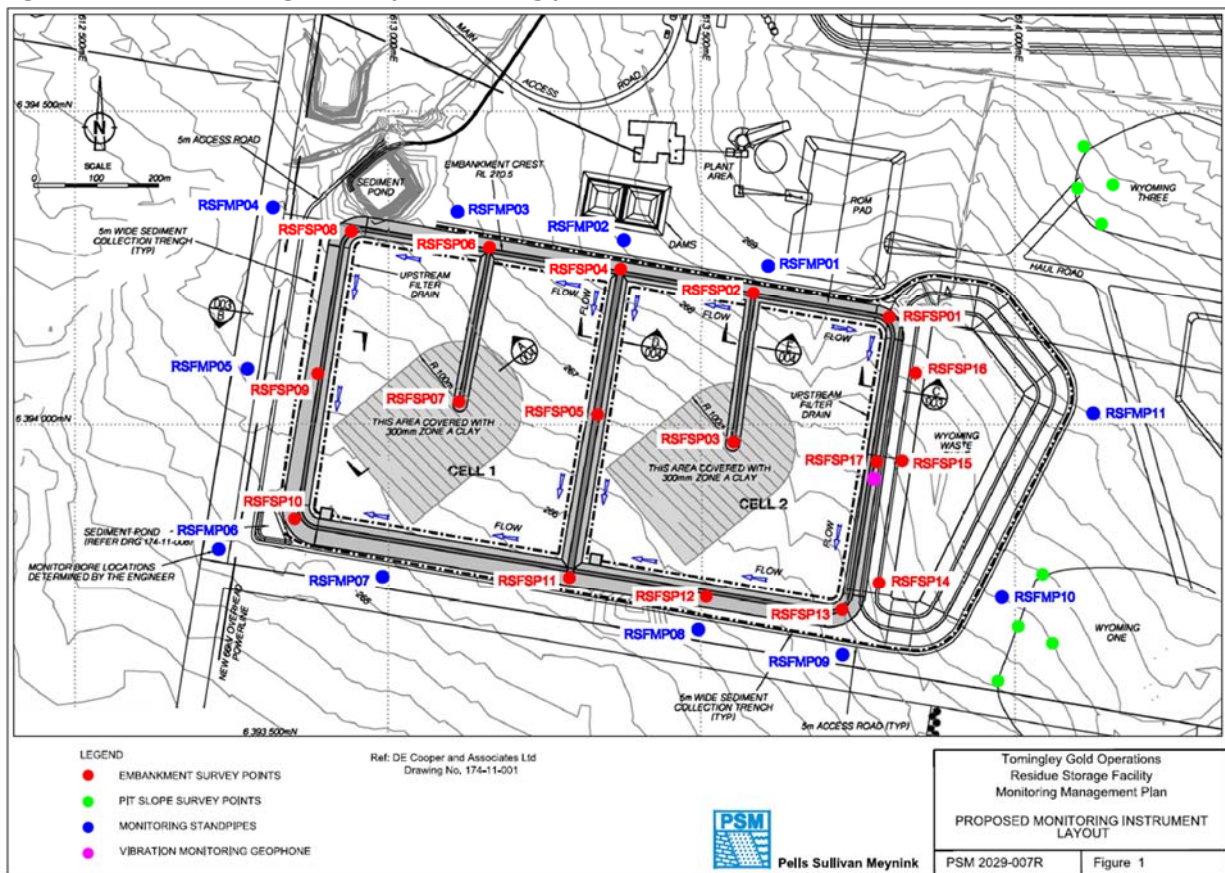


Figure 4 indicates the location of environmental and survey monitoring points on and around the Residue Storage Facility.

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/m³ and a 24-Hour Average of 50ug/m³.

The 24 hour average limit not exceeded on any occasions during May.

Figure 5. TEOM Data May 2016

Date	24 Hr Averages	Running Average	Comment
	(µg/m3)		
1/05/2016	7.4	19.9	
2/05/2016	10.2	19.9	
3/05/2016	12.1	19.9	
4/05/2016	16.7	19.9	
5/05/2016	16.9	19.8	
6/05/2016	15.7	19.5	
7/05/2016	18.3	19.4	
8/05/2016	17.1	19.4	
9/05/2016	6.4	19.3	
10/05/2016	6.8	19.3	
11/05/2016	17.9	19.3	
12/05/2016	10.1	19.2	
13/05/2016	10.9	19.1	
14/05/2016	30.2	19.1	
15/05/2016	17.2	19.0	
16/05/2016	12.4	19.0	
17/05/2016	19.9	19.1	
18/05/2016	27.9	19.1	
19/05/2016	23.2	19.1	
20/05/2016	20.2	19.1	
21/05/2016	24.4	19.1	
22/05/2016	31.1	19.2	
23/05/2016	29.4	19.2	
24/05/2016	25.6	19.2	
25/05/2016	28.4	19.2	
26/05/2016	9.8	19.2	
27/05/2016	5.9	19.2	
28/05/2016	5.9	19.1	
29/05/2016	6.4	19.1	
30/05/2016	9.6	19.1	
31/05/2016	16.1	19.1	
Average	16.4		
	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 April 2016

Location	Date Monitored	Total Insoluble Matter (g/m²/month)	Maximum increase in deposited dust level
DDG1	30/3/2016-2/5/16	1.4	General downward trend in deposited dust levels over the month. Slight increase in DDG4 as a result of non-mine related activity.
DDG2	30/3/2016-2/5/16	1.5	
DDG3	30/3/2016-2/5/16	1.9	
DDG4	30/3/2016-2/5/16	3.8	
DDG5	30/3/2016-2/5/16	1.9	

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 April 2016

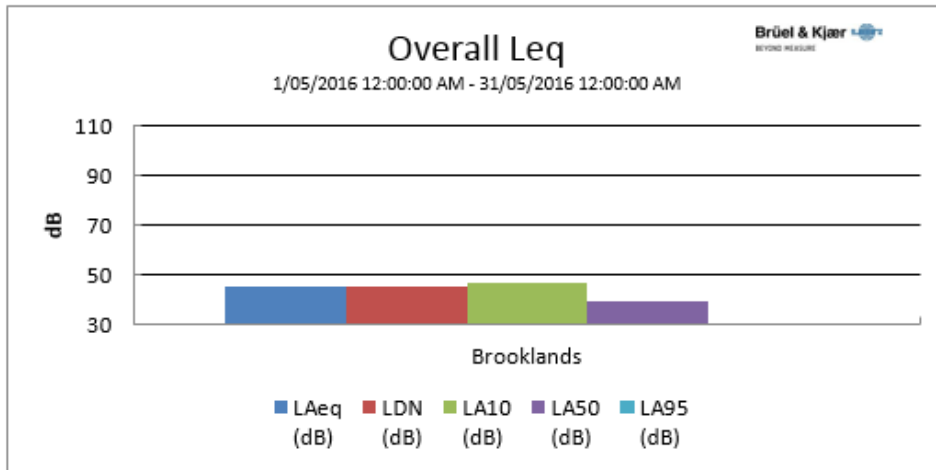
Location	Sample Date	Results (TSP µg/m³)	Performance Criteria (Annual Average)
HVAS1	02-April-16	56.6	90 µg/m ³ .
HVAS1	08-April-2016	75.4	
HVAS1	14-April-16	36.9	
HVAS1	20-April-16	48.2	
HVAS1	26-April-16	22.6	

5. Noise Monitoring

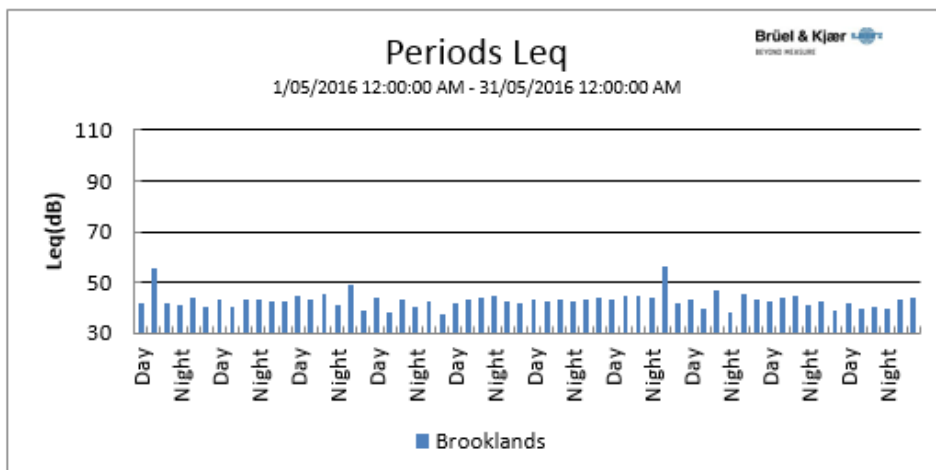
A. Real-Time Noise Monitoring

See real-time noise monitoring data presented below.

Figure 8. TGO Noise Monitoring 1/5/2016 - 31/5/2016



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	1/05 12:00:00 AM	31/05 12:00:00 AM	100%	45.4	45.4		21.0	46.8	39.5	29.4



6. Surface Water Monitoring

A. Gundong Creek

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

B. Sedimentation Ponds

No discharge and associated water testing occurred this month.

7. Groundwater Monitoring

Groundwater Monitoring will be conducted in June, in line with license conditions.

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
69335	2/05/2016 12:58	0.35	Harts Cottage
69335	2/05/2016 12:58	0.54	Tomingley Village
69361	3/05/2016 12:59	0.3	Harts Cottage
69361	3/05/2016 12:59	0.48	Tomingley Village
69388	4/05/2016 12:59	0.2	Harts Cottage
69388	4/05/2016 12:59	0.29	Tomingley Village
69405	5/05/2016 13:00	0.18	Harts Cottage
69405	5/05/2016 13:00	0.23	Tomingley Village
69465	7/05/2016 14:30	0.27	Harts Cottage
69465	7/05/2016 14:30	0.38	Tomingley Village
69567	14/05/2016 10:58	0.34	Harts Cottage
69567	14/05/2016 10:58	0.54	Tomingley Village
69597	16/05/2016 12:58	0.46	Harts Cottage
69597	16/05/2016 12:58	0.53	Tomingley Village
69636	18/05/2016 13:00	0.43	Harts Cottage
69636	18/05/2016 13:00	0.51	Tomingley Village
70016	20/05/2016 13:00	0.25	Harts Cottage
70016	20/05/2016 13:00	0.28	Tomingley Village
70030	21/05/2016 13:01	0.37	Harts Cottage
70030	21/05/2016 13:01	0.49	Tomingley Village
70066	24/05/2016 12:59	0.42	Harts Cottage
70066	24/05/2016 12:59	0.76	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: 1.63 ppm
- Daily maximum: 4.4 ppm on 25th May
- Daily minimum: 0.11ppm on 22nd May
- 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 May included:
- 1 Tawny Frogmouth owl, *Podargus strigoides*, in pine tree adjacent to administration building
- Male Red Rump Parrots, *Psephotus haematonotus*, were spotted in trees around site throughout May
- Regularly throughout May a number of Grey Crowned Babblers *Pomatostomus temporalis* were seen in the tree corridor to the South of the RSF.
- No fauna deaths recorded on site

Vertebrate pests:

- A program of trapping feral cats and foxes has continued throughout May with a number of cats, *Felis Catus*, captured and euthanized
- The program will continue on a monthly basis.