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

May 2017

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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 May 2017.

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

2. Weather for May 2017

A. Weather Station Data

TGO WEATHER DATA IS PRESENTED BELOW.

Figure 1. May 2017 wind rose

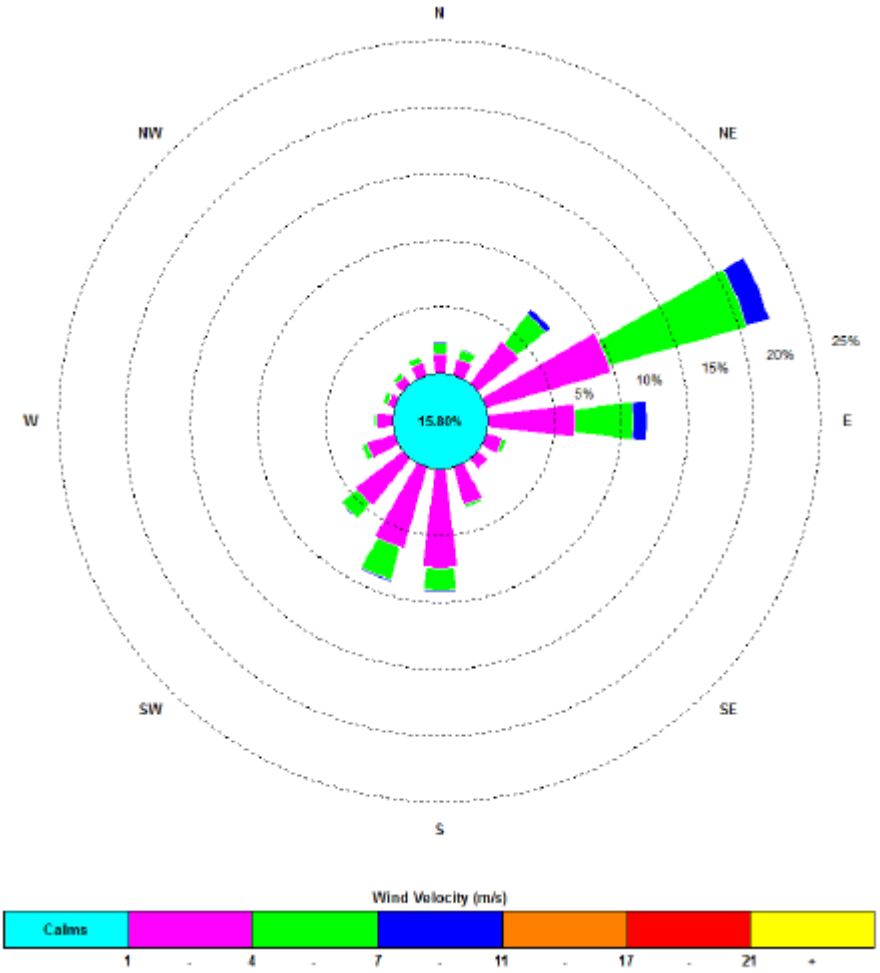


Figure 2. Rainfall May 2017

May 2017	Rainfall (mm)
May 14	1.2
May 15	0.2
May 19	17.6
May 20	8
May 21	0.2
May 23	0.2
May 31	0.2
Total Rainfall	27.6

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

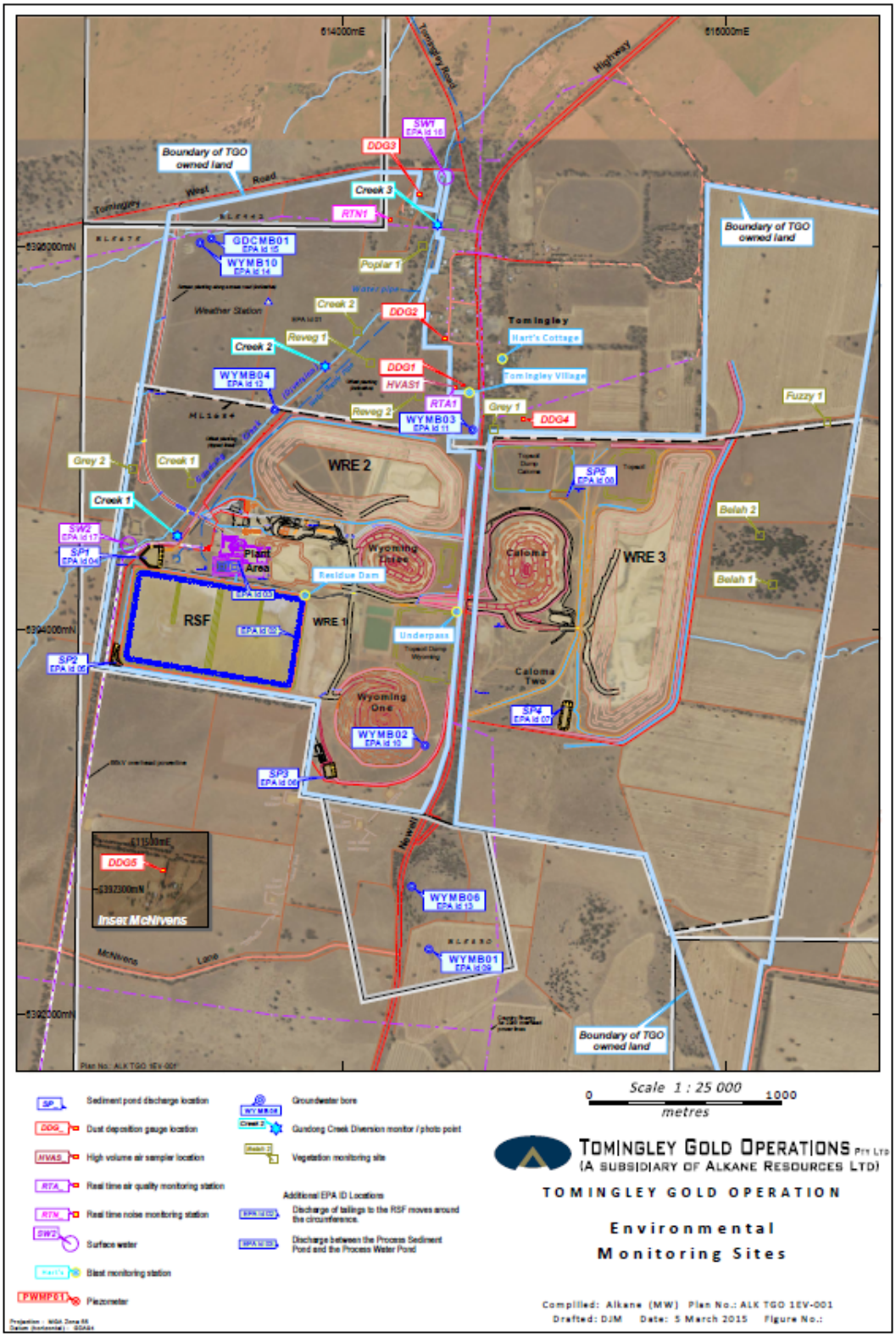
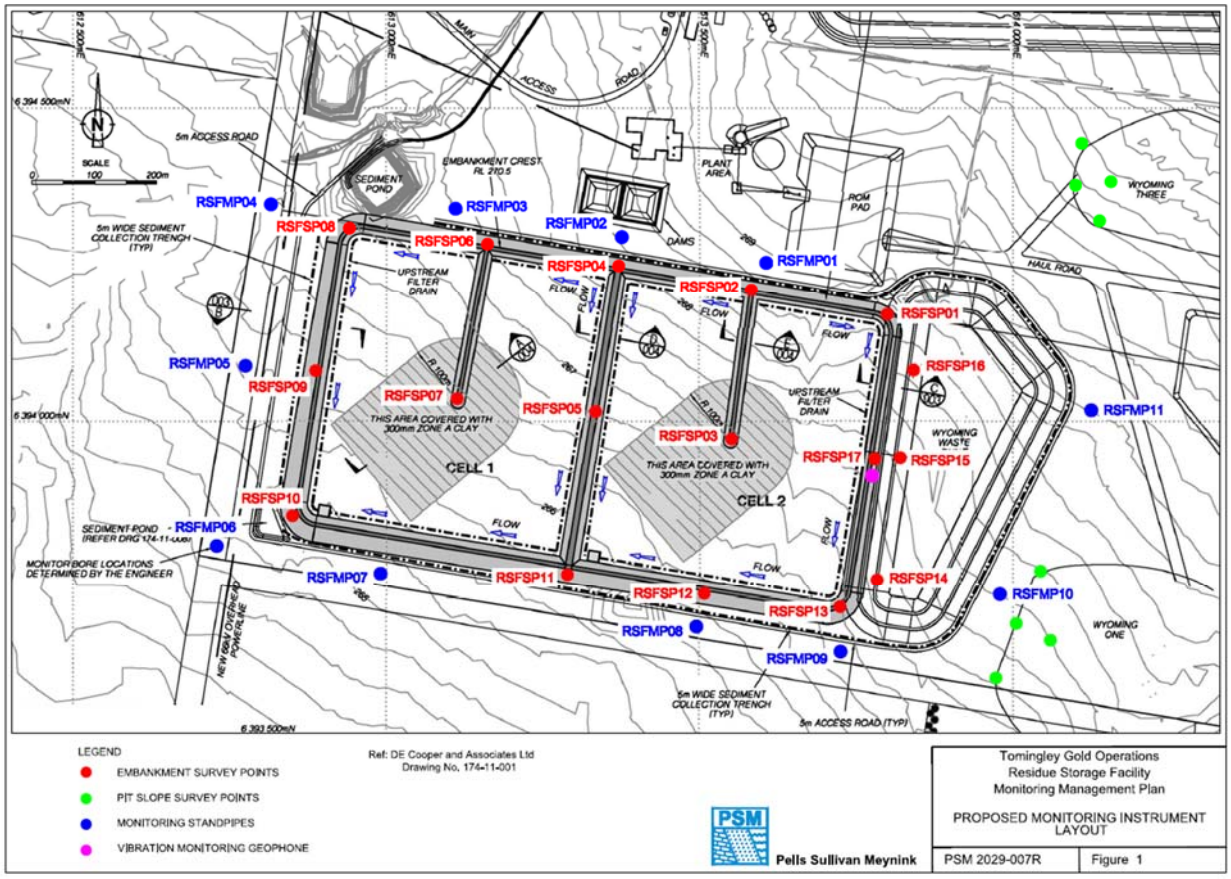


Figure 4 indicates the location of environmental and survey monitoring points on and around the Residue Storage Facility.

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 24 hour average limit was not exceeded during May.

The annual average at the end of May was 17.1ug/m^3, well below the license limit.

Figure 5. TEOM Data May 2017

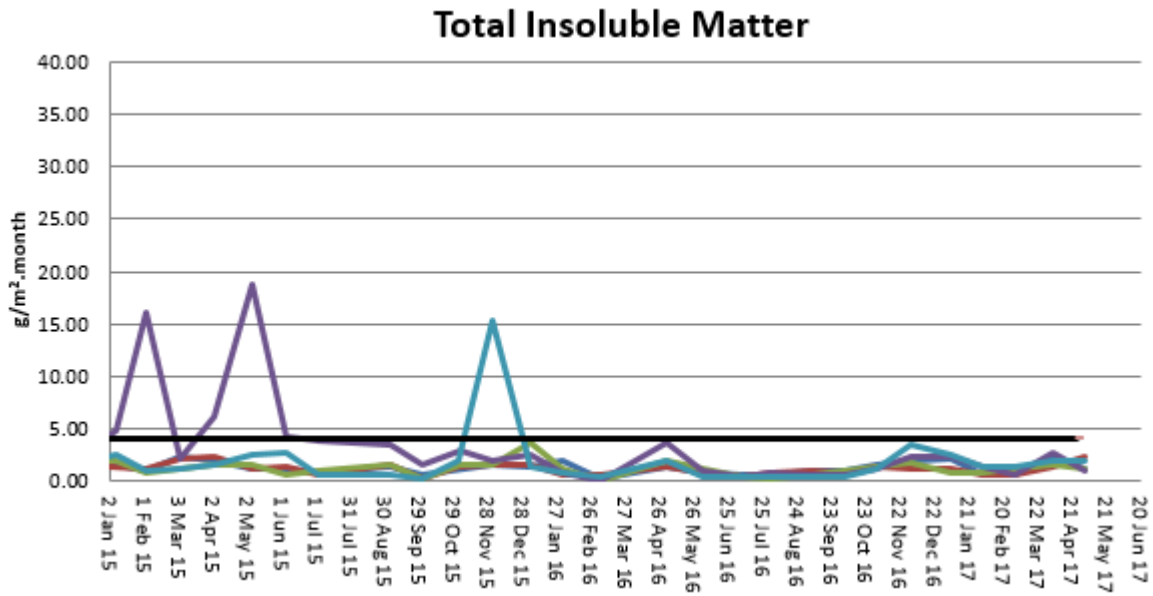
Date	24 Hr Averages (µg/m3)	Running Average (µg/m3)	Comment
1/05/2017	17.9	16.9	
2/05/2017	23.9	17.0	
3/05/2017	24.1	17.0	
4/05/2017	13.7	17.0	
5/05/2017	11.4	17.0	
6/05/2017	16.1	17.0	
7/05/2017	20.7	17.0	
8/05/2017	30.8	17.0	
9/05/2017	24.5	17.1	
10/05/2017	24.5	17.1	
11/05/2017	34.6	17.2	
12/05/2017	27.5	17.2	
13/05/2017	16.5	17.2	
14/05/2017	12.3	17.2	
15/05/2017	18.4	17.2	
16/05/2017	25.1	17.2	
17/05/2017	36.6	17.3	
18/05/2017	24.6	17.3	
19/05/2017	11.6	17.3	
20/05/2017	6.8	17.2	
21/05/2017	11.6	17.2	
22/05/2017	12.5	17.2	
23/05/2017	13.6	17.1	
24/05/2017	13.9	17.1	
25/05/2017	15.3	17.0	1-hour average data used
26/05/2017	15.2	17.0	
27/05/2017	15.8	17.0	
28/05/2017	13.9	17.0	
29/05/2017	13.7	17.1	
30/05/2017	16.6	17.1	
31/05/2017	8.3	17.1	
Average	**18.4**		
	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

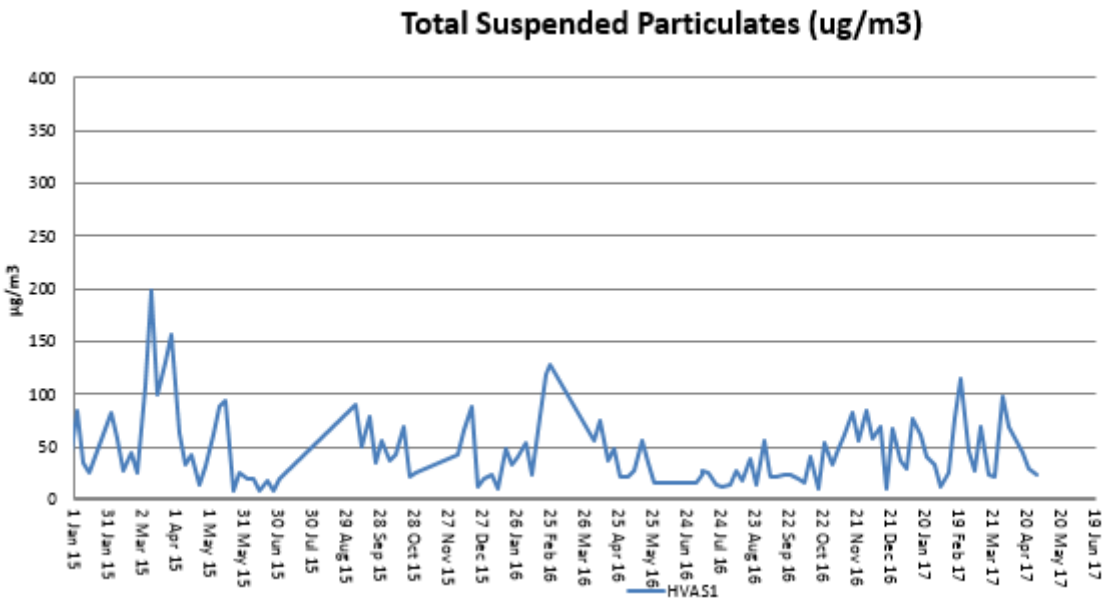


C. High Volume Air Sampler - Total Suspended Particulates

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

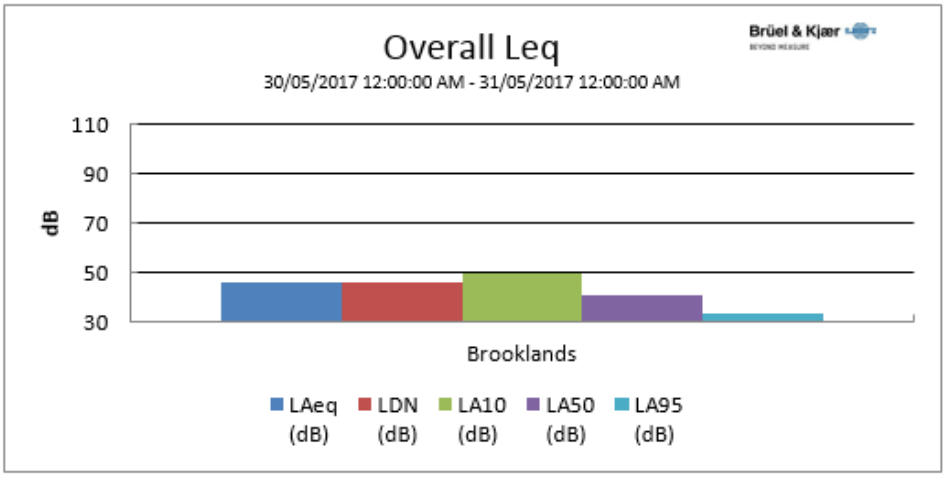


5. Noise Monitoring

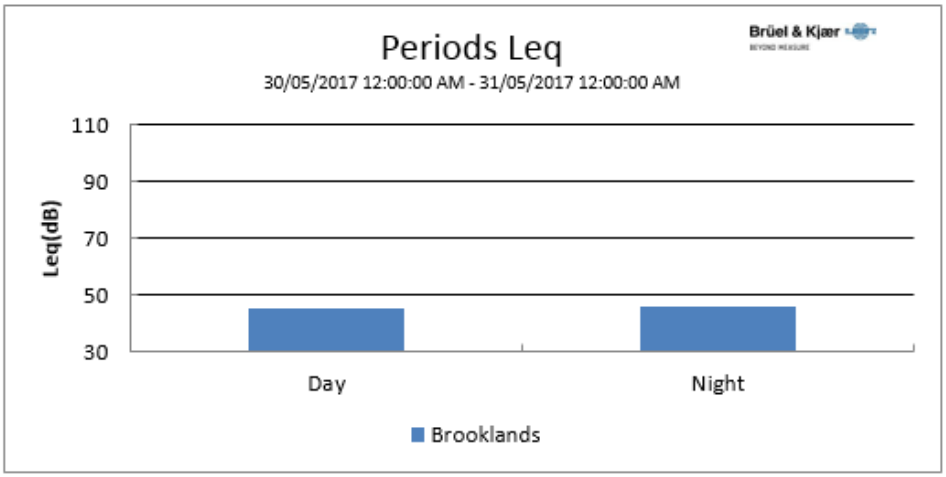
A. Real-Time Noise Monitoring

See real-time noise monitoring data presented below.

Figure 8. TGO Noise Monitoring 1/5/2017 - 31/5/2017



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	30/05 12:00:00 AM	31/05 12:00:00 AM	100%	45.6	45.6		28.0	49.8	40.8	33.1



6. Surface Water Monitoring

A. Gundong Creek

Gundong Creek did not flow during May and as such, no water sampling was undertaken.

B. Sedimentation Ponds

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

7. Groundwater Monitoring

Groundwater was undertaken during March in line with license requirements.

Results from this round of monitoring fell within expected limits.

A further round of monitoring is scheduled in for June.

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
77682	2/05/2017 13:00	0.13	Harts Cottage
77682	2/05/2017 13:00	0.29	Tomingley Village
77738	3/05/2017 13:10	0.06	Harts Cottage
77738	3/05/2017 13:10	0.09	Tomingley Village
77781	5/05/2017 12:59	0.24	Harts Cottage
77781	5/05/2017 12:59	0.44	Tomingley Village
77798	6/05/2017 14:01	0.17	Harts Cottage
77798	6/05/2017 14:01	0.24	Tomingley Village
77824	8/05/2017 12:59	0.46	Harts Cottage
77824	8/05/2017 12:59	0.87	Tomingley Village
77849	9/05/2017 13:59	0.11	Harts Cottage
77849	9/05/2017 13:59	0.13	Tomingley Village
77943	11/05/2017 14:18	0.01	Harts Cottage
77943	11/05/2017 14:18	0.03	Tomingley Village
77927	11/05/2017 14:33	0.06	Harts Cottage
77927	11/05/2017 14:33	0.11	Tomingley Village
77962	12/05/2017 12:56	0.2	Harts Cottage
77962	12/05/2017 12:56	0.41	Tomingley Village
77984	13/05/2017 13:00	0.07	Harts Cottage
77984	13/05/2017 13:00	0.08	Tomingley Village
78009	15/05/2017 13:07	0.33	Harts Cottage
78009	15/05/2017 13:07	0.54	Tomingley Village
78138	18/05/2017 15:00	0.08	Harts Cottage
78138	18/05/2017 15:00	0.12	Tomingley Village
78158	19/05/2017 14:59	0.21	Harts Cottage
78158	19/05/2017 14:59	0.37	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: 4.46 ppm
- Daily maximum: 8.61 ppm on 19th May
- Daily minimum: 0.85 ppm on 22nd May
- 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 a single feral cat being captured during May.