

TOMINGLEY GOLD PROJECT

Monthly Environmental Monitoring Report

August 2017

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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 August 2017.

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

2. Weather for August 2017

A. Weather Station Data

TGO WEATHER DATA IS PRESENTED BELOW.

Figure 1. August 2017 wind rose

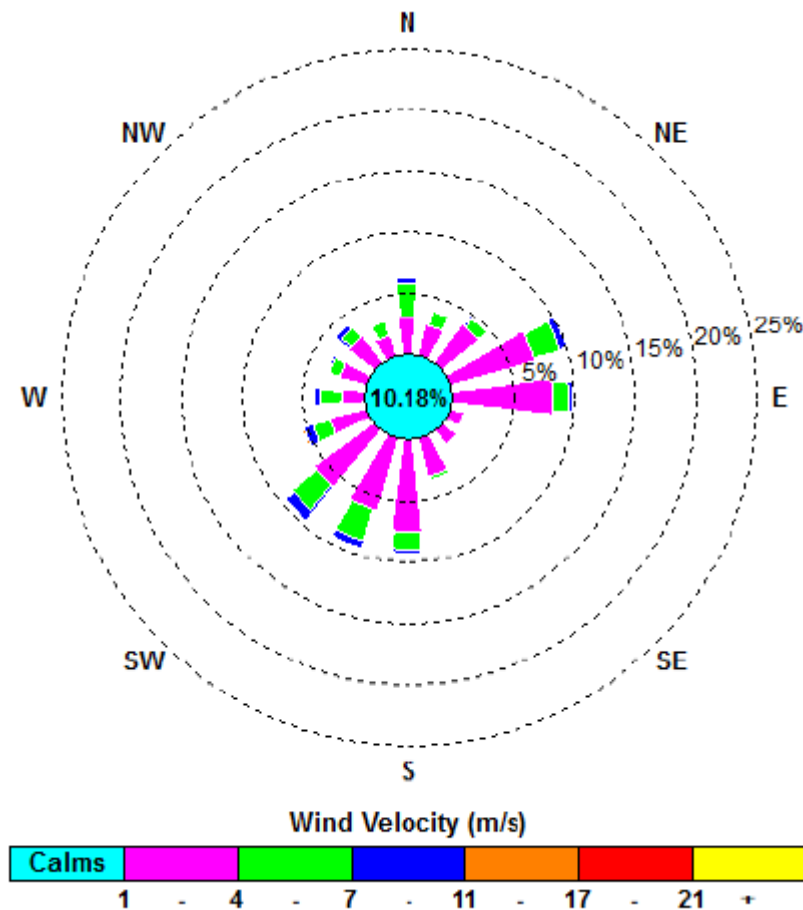


Figure 2. Rainfall August 2017

August 2017	Rainfall (mm)
August 1	0.2
August 3	20.6
Total Rainfall	20.8

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

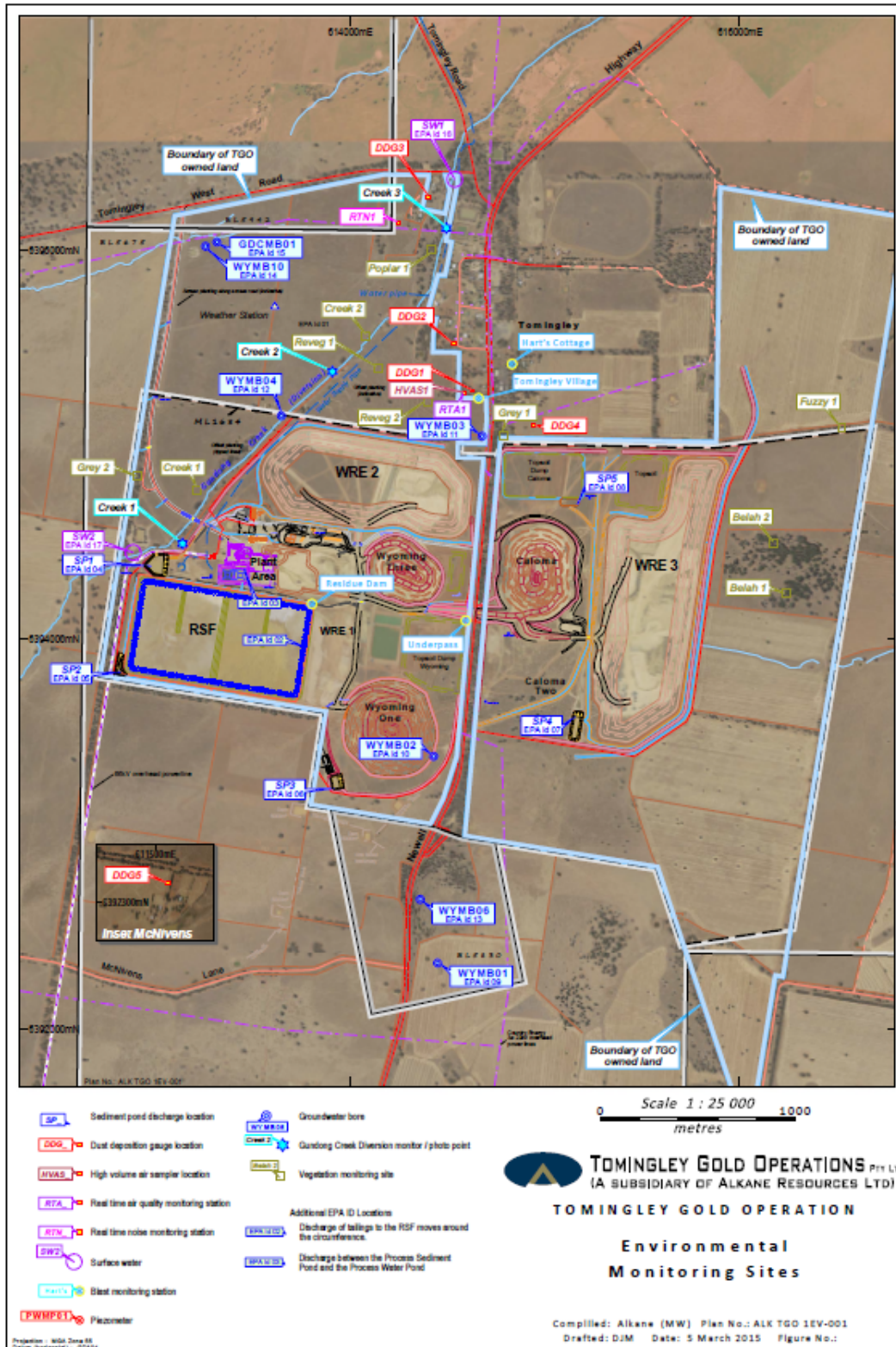
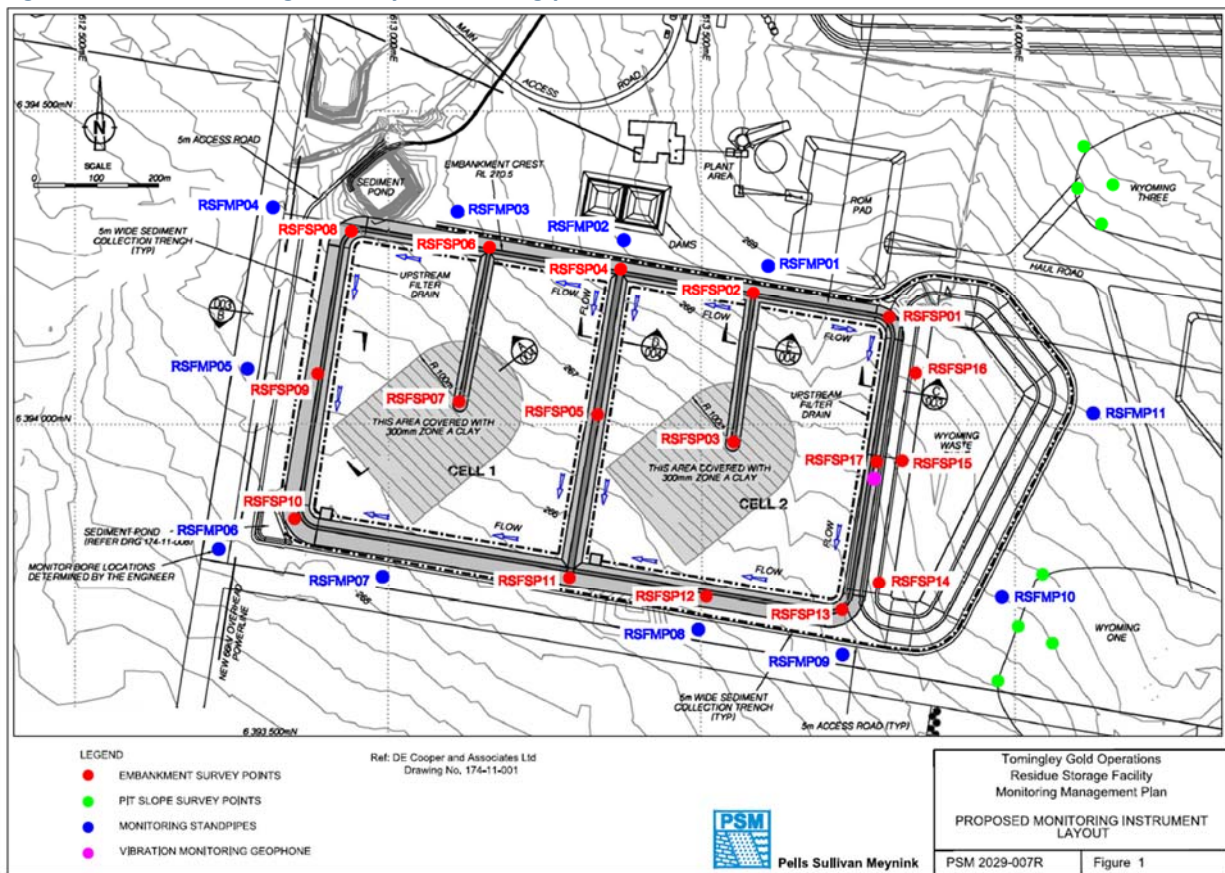


Figure 4 indicates the location of environmental and survey monitoring points on and around the Residue Storage Facility.

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/m³ and a 24-Hour Average of 50ug/m³.

The 24 hour average limit was not exceeded during August.

The annual average at the end of May was 18.7ug/m³, well below the license limit.

Figure 5. TEOM Data August 2017

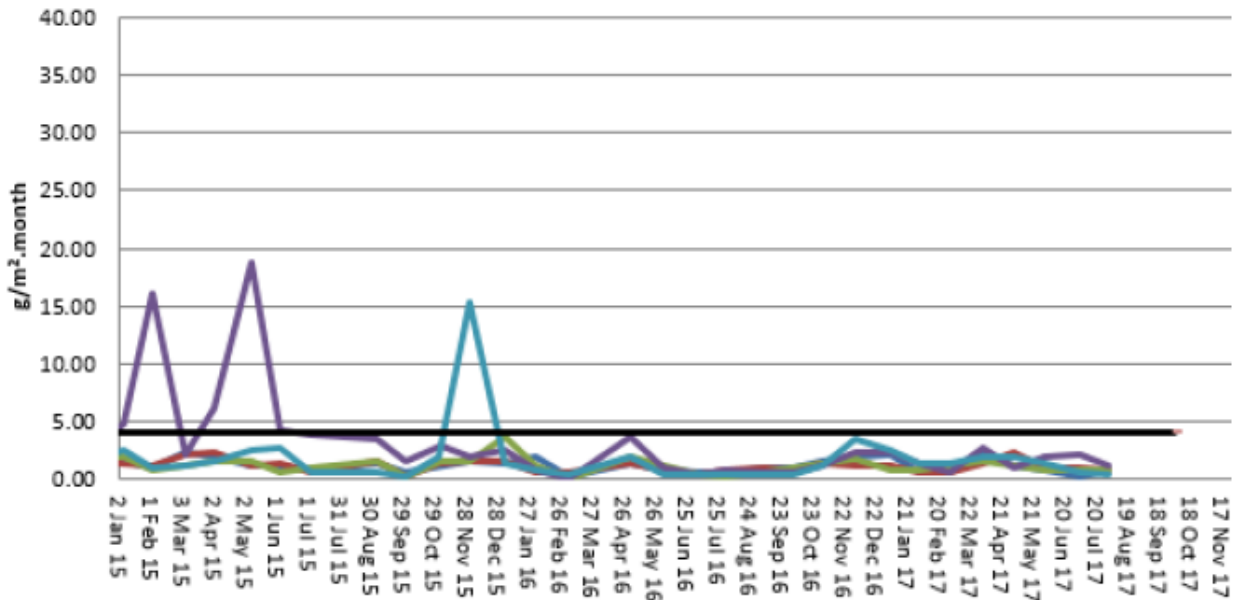
Date	24 Hr Averages	Running Average	Comment
	(µg/m ³)		
1/08/2017	9.9	18.2	
2/08/2017	11.1	18.2	1 hour average data used
3/08/2017	8.9	18.2	
4/08/2017	4.5	18.2	
5/08/2017	6.8	18.2	
6/08/2017	9.2	18.2	
7/08/2017	8.6	18.2	
8/08/2017	12.3	18.2	
9/08/2017	9.0	18.2	
10/08/2017	14.2	18.2	
11/08/2017	22.2	18.2	
12/08/2017	15.6	18.2	
13/08/2017	12.8	18.2	
14/08/2017	13.0	18.2	
15/08/2017	22.2	18.2	
16/08/2017	21.9	18.2	
17/08/2017	14.5	18.2	
18/08/2017	28.5	18.2	
19/08/2017	27.8	18.2	
20/08/2017	20.2	18.2	
21/08/2017	15.9	18.3	
22/08/2017	23.4	18.3	
23/08/2017	27.1	18.4	
24/08/2017	27.2	18.4	
25/08/2017	23.0	18.4	
26/08/2017	28.6	18.5	
27/08/2017	29.9	18.5	
28/08/2017	27.1	18.6	
29/08/2017	24.2	18.6	
30/08/2017	37.8	18.6	
31/08/2017	22.3	18.7	
Average	18.7		
	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 2015 - 2017

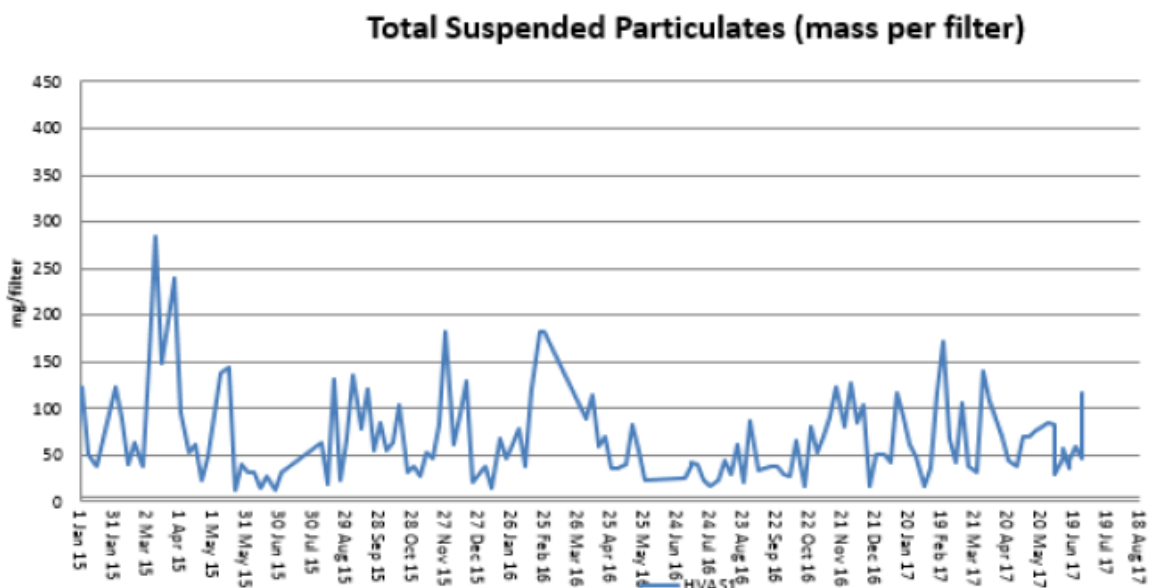


C. High Volume Air Sampler - Total Suspended Particulates

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

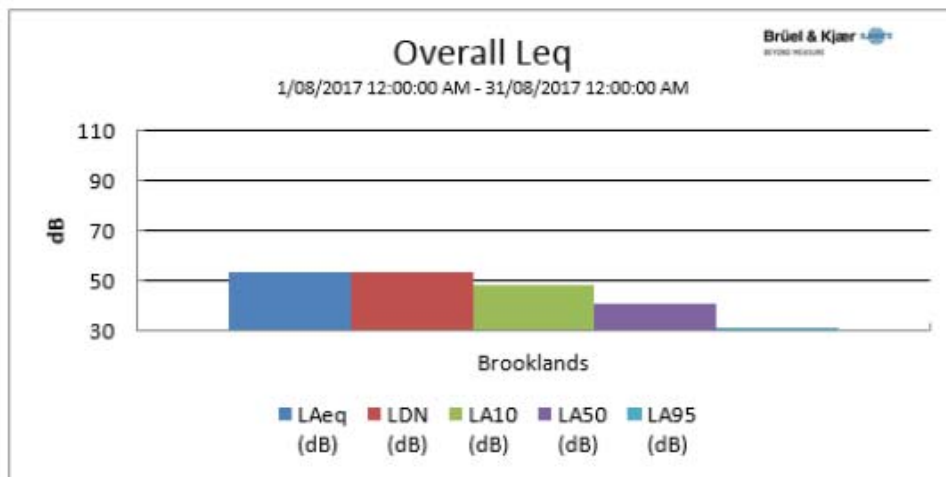


5. Noise Monitoring

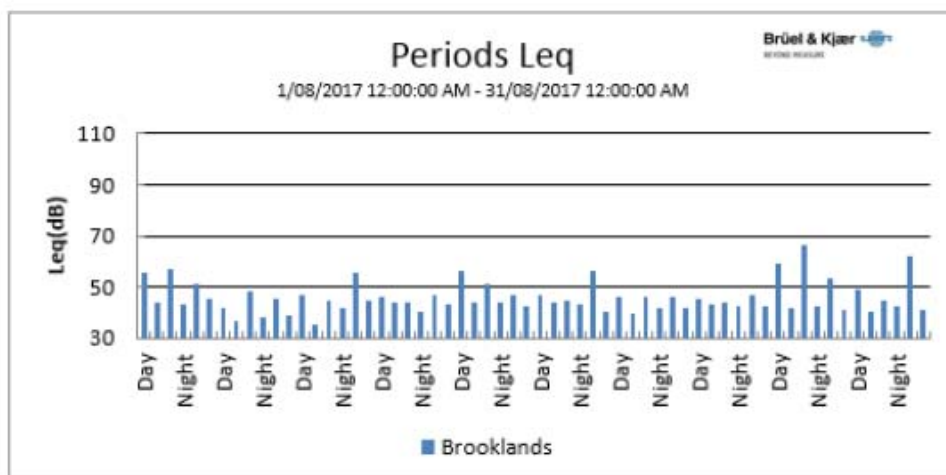
A. Real-Time Noise Monitoring

See real-time noise monitoring data presented below.

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



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	1/08 12:00:00 AM	31/08 12:00:00 AM	100%	53.6	53.6		20.7	48.2	40.9	30.1



6. Surface Water Monitoring

A. Gundong Creek

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

B. Sedimentation Ponds

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

7. Groundwater Monitoring

Groundwater was undertaken during June in line with license requirements.

Results from this round of monitoring fell within expected limits.

A further round of monitoring is scheduled in for September.

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
79720	1/08/2017 11:03	0.05	Harts Cottage
79720	1/08/2017 11:03	0.05	Tomingley Village
79750	2/08/2017 13:56	0.05	Harts Cottage
79750	2/08/2017 13:56	0.06	Tomingley Village
79752	2/08/2017 14:12	0.05	Harts Cottage
79752	2/08/2017 14:12	0.05	Tomingley Village
79802	5/08/2017 13:56	0.09	Harts Cottage
79802	5/08/2017 13:56	0.07	Tomingley Village
79822	7/08/2017 12:18	0.07	Harts Cottage
79822	7/08/2017 12:18	0.12	Tomingley Village
79926	11/08/2017 13:11	0.09	Harts Cottage
79926	11/08/2017 13:11	0.17	Tomingley Village
79996	15/08/2017 13:00	0.09	Harts Cottage
79996	15/08/2017 13:00	0.07	Tomingley Village
80056	17/08/2017 13:00	0.06	Harts Cottage
80056	17/08/2017 13:00	0.06	Tomingley Village
80144	21/08/2017 13:03	0.14	Harts Cottage
80144	21/08/2017 13:03	0.22	Tomingley Village
80187	23/08/2017 14:01	0.07	Harts Cottage
80187	23/08/2017 14:01	0.07	Tomingley Village
80238	25/08/2017 13:03	0.06	Harts Cottage
80238	25/08/2017 13:03	0.1	Tomingley Village
80285	26/08/2017 13:01	0.03	Harts Cottage
80285	26/08/2017 13:01	0.03	Tomingley Village
80286	28/08/2017 13:00	0.04	Harts Cottage
80286	28/08/2017 13:00	0.04	Tomingley Village
80308	29/08/2017 13:19	0.1	Harts Cottage
80308	29/08/2017 13:19	0.08	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: 2.69 ppm
- Daily maximum: 4.91 ppm on 26th August
- Daily minimum: 0.49 ppm on 30th August
- 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 feral cats being captured during August.