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

January 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 January 2017.

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

2. Weather for January 2017

A. Weather Station Data

TGO WEATHER DATA IS PRESENTED BELOW.

Figure 1. January 2017 wind rose

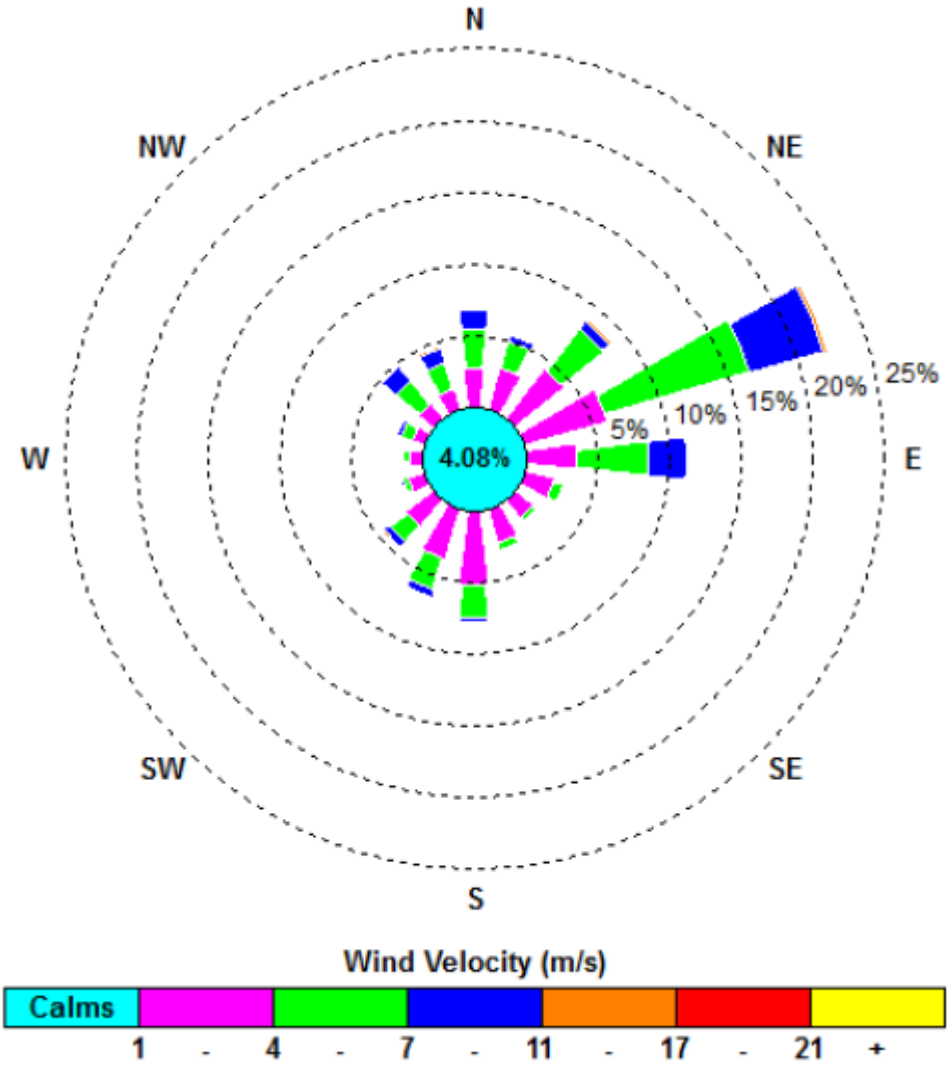


Figure 2. Rainfall January 2017

January 2017	Rainfall (mm)
January 12	1.2
January 14	0.2
January 20	8
January 23	0.4
January 24	0.6
January 26	0.4
Total Rainfall	10.8

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

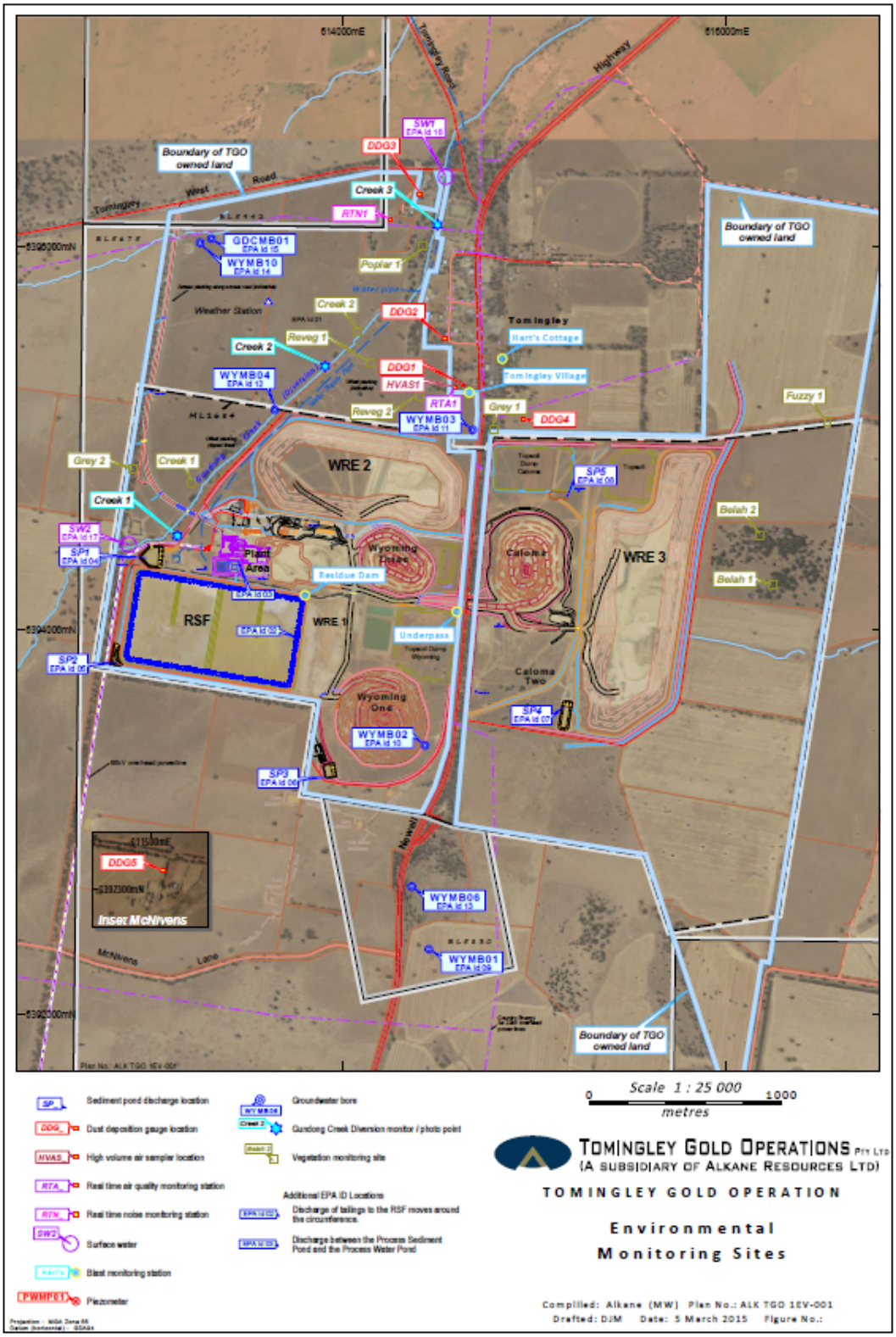
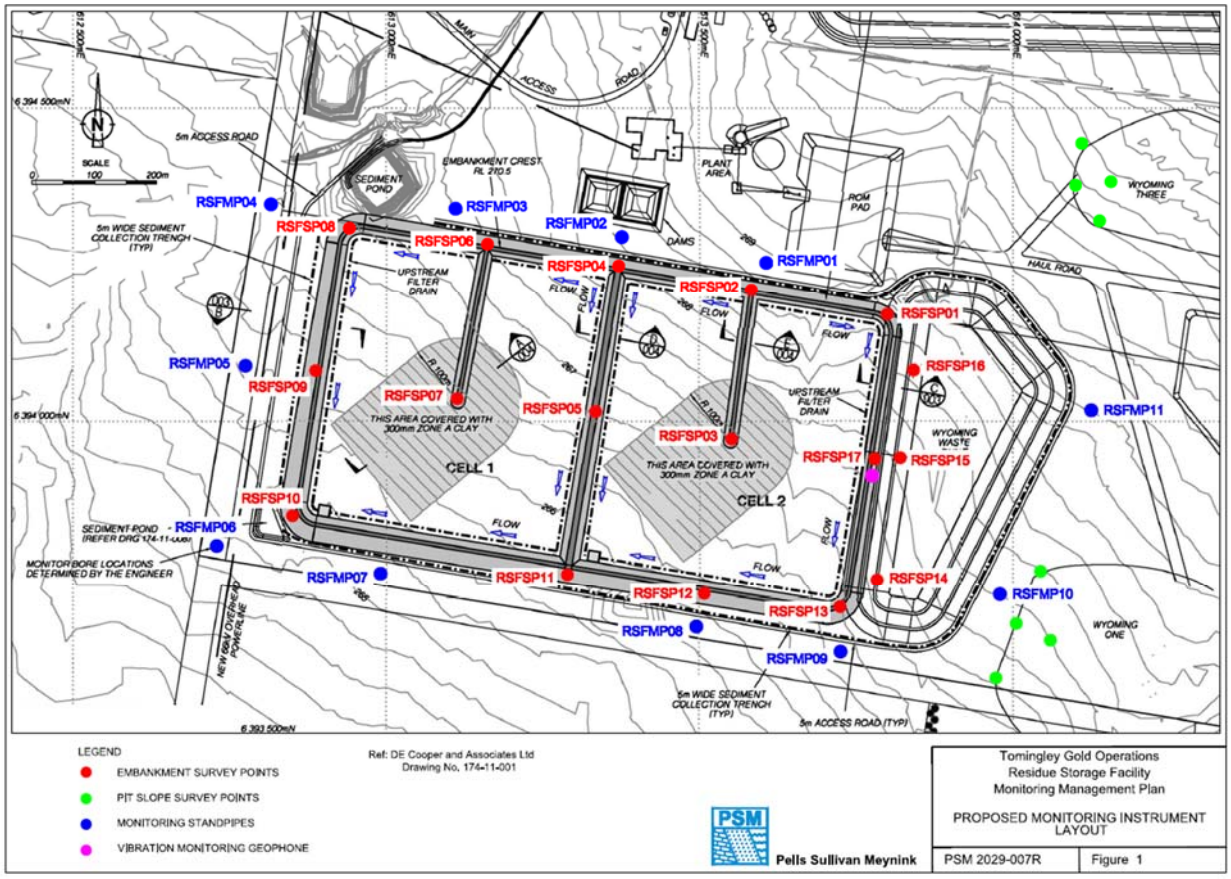


Figure 4 indicates the location of environmental and survey monitoring points on and around the Residue Storage Facility.

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/m^3 and a 24-Hour Average of 50ug/m^3.

The 24 hour average limit exceeded on one occasion during December. The annual average at the end of December was 18.5ug/m^3, well below the license limit.

Figure 5. TEOM Data January 2017

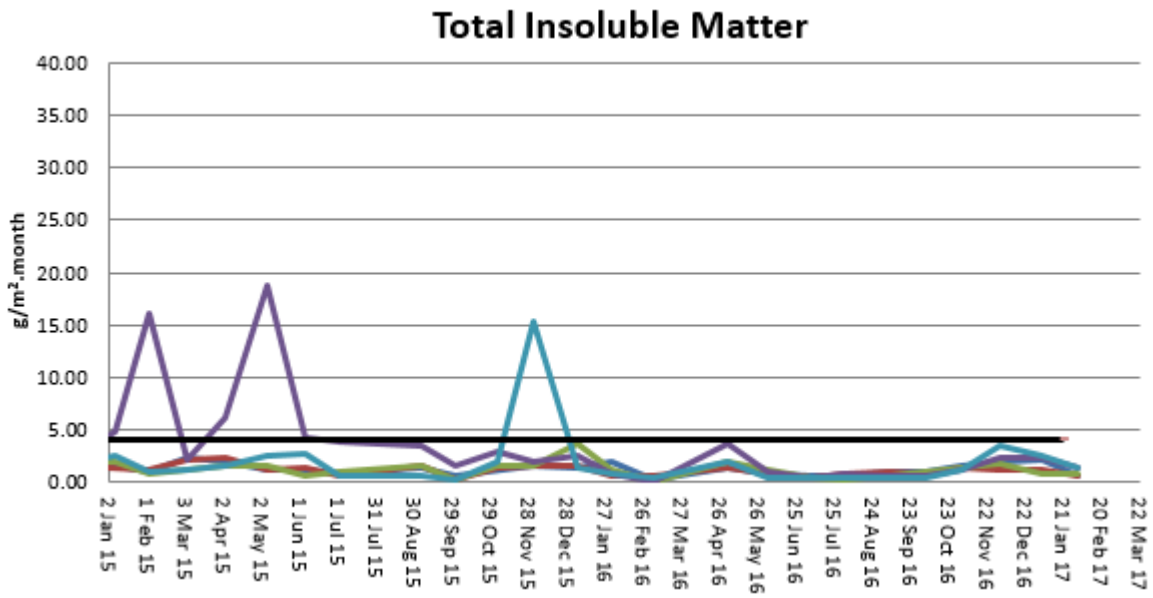
Date	24 Hr Averages (µg/m3)	Running Average (µg/m3)	Comment
1/01/2017	19.2	18.2	
2/01/2017	12.1	18.2	
3/01/2017	13.0	18.2	
4/01/2017	11.0	18.2	
5/01/2017	10.0	18.2	
6/01/2017	13.9	18.2	
7/01/2017	11.3	18.2	
8/01/2017	15.3	18.2	
9/01/2017	26.8	18.3	
10/01/2017	21.6	18.3	
11/01/2017	19.8	18.3	
12/01/2017	39.1	18.3	
13/01/2017	37.4	18.3	
14/01/2017	19.7	18.2	
15/01/2017	28.4	18.3	
16/01/2017	16.0	18.3	
17/01/2017	22.5	18.3	
18/01/2017	29.3	18.4	
19/01/2017	17.1	18.4	
20/01/2017	12.6	18.4	
21/01/2017	12.0	18.4	
22/01/2017	19.4	18.4	
23/01/2017	22.9	18.4	
24/01/2017	16.3	18.4	
25/01/2017	12.5	18.4	
26/01/2017	13.4	18.4	
27/01/2017	14.4	18.4	
28/01/2017	17.0	18.4	
29/01/2017	14.5	18.4	
30/01/2017	16.7	18.4	
31/01/2017	29.6	18.5	
Average	**18.5**		
	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

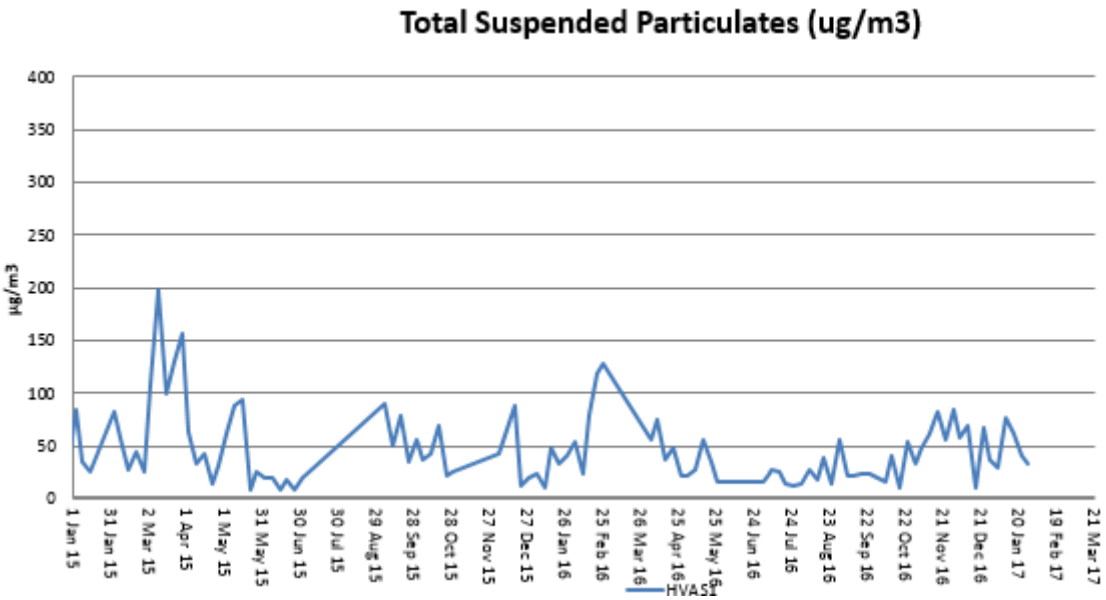


C. High Volume Air Sampler - Total Suspended Particulates

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

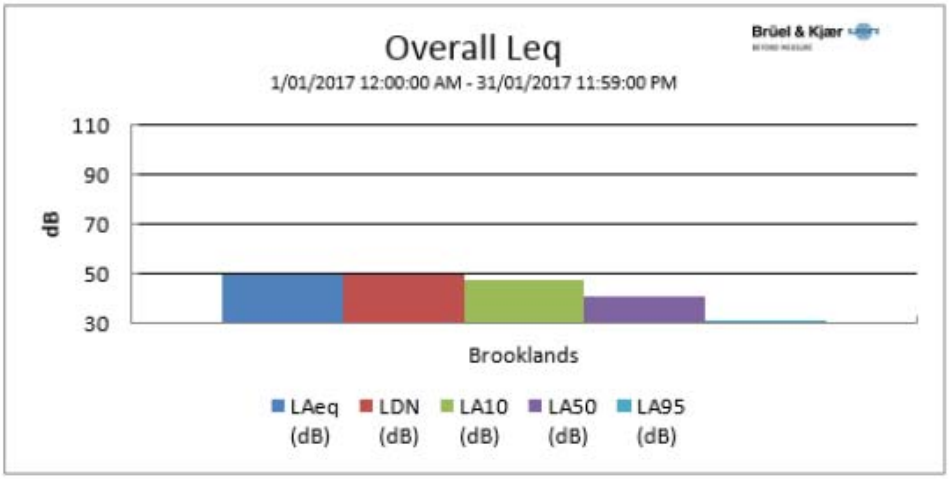


5. Noise Monitoring

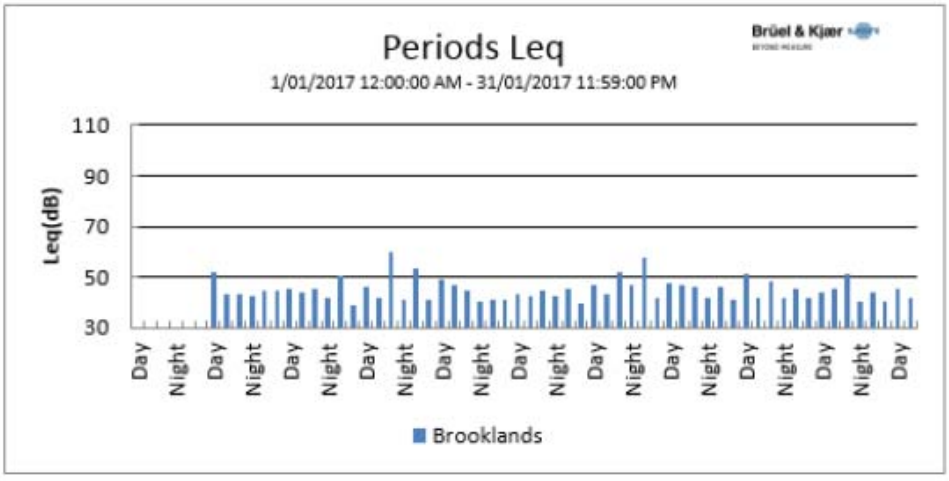
A. Real-Time Noise Monitoring

See real-time noise monitoring data presented below.

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



Location	Start Time	End Time	Activity	LDN (dB)	L_{Aeq} (dB)	L_A (dB)	L_{AMin} (dB)	L_{A10} (dB)	L_{A50} (dB)	L_{A95} (dB)
Brooklands	1/01 12:00:00 AM	1/02 12:00:00 AM	88%	49.3	49.3		23.7	47.3	40.6	31.3



6. Surface Water Monitoring

A. Gundong Creek

Gundong Creek flowed strongly over the course of the month.

Results of this sampling fell within the expected range.

Weekly sampling will be undertaken while the creek continues to flow.

B. Sedimentation Ponds

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

7. Groundwater Monitoring

Groundwater monitoring was in December and due again in March, in line with license requirements.

Results from Decembers monitoring fell within expected limits.

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
74889	5/01/2017 13:32	0.34	Harts Cottage
74889	5/01/2017 13:32	0.65	Tomingley Village
74937	7/01/2017 13:31	0.31	Harts Cottage
74937	7/01/2017 13:31	0.9	Tomingley Village
74938	7/01/2017 13:46	0.07	Harts Cottage
74938	7/01/2017 13:46	0.31	Tomingley Village
74968	9/01/2017 13:25	0.12	Harts Cottage
74968	9/01/2017 13:25	0.24	Tomingley Village
75124	11/01/2017 13:31	0.3	Harts Cottage
75124	11/01/2017 13:31	0.61	Tomingley Village
75189	13/01/2017 12:57	0.32	Harts Cottage
75189	13/01/2017 12:57	0.92	Tomingley Village
75244	16/01/2017 13:01	0.32	Harts Cottage
75244	16/01/2017 13:01	0.62	Tomingley Village
75353	17/01/2017 14:55	0.38	Harts Cottage
75353	17/01/2017 14:55	0.6	Tomingley Village
75426	19/01/2017 13:09	0.28	Harts Cottage
75426	19/01/2017 13:09	0.5	Tomingley Village
75507	23/01/2017 13:02	0.2	Harts Cottage
75507	23/01/2017 13:02	0.33	Tomingley Village
75537	24/01/2017 13:31	0.24	Harts Cottage
75537	24/01/2017 13:31	0.64	Tomingley Village
75599	27/01/2017 13:00	0.26	Harts Cottage
75599	27/01/2017 13:00	0.51	Tomingley Village
75624	28/01/2017 13:02	0.17	Harts Cottage
75624	28/01/2017 13:02	0.2	Tomingley Village
75660	30/01/2017 13:57	0.39	Harts Cottage
75660	30/01/2017 13:57	0.54	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: 2.44 ppm
- Daily maximum: 6.06 ppm on 8th January
- Daily minimum: 0.98 ppm on 10th January
- 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 animals being captured throughout January