TOMINGLEY
GOLD OPERATIONS PTY LTD
(A wholly owned subsidiary of Alkane Resources Ltd)

Tomingley Gold Project

Monthly Environmental Monitoring Report – July 2015

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TABLE OF REVISIONS

Revision Number	Revision Date	Prepared By	Comments
Revision 1		Mark Williams	Submitted for Information

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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 July 2015.

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

2. WEATHER FOR JULY 2015

2.1 WEATHER STATION DATA

TGO weather data is presented below.

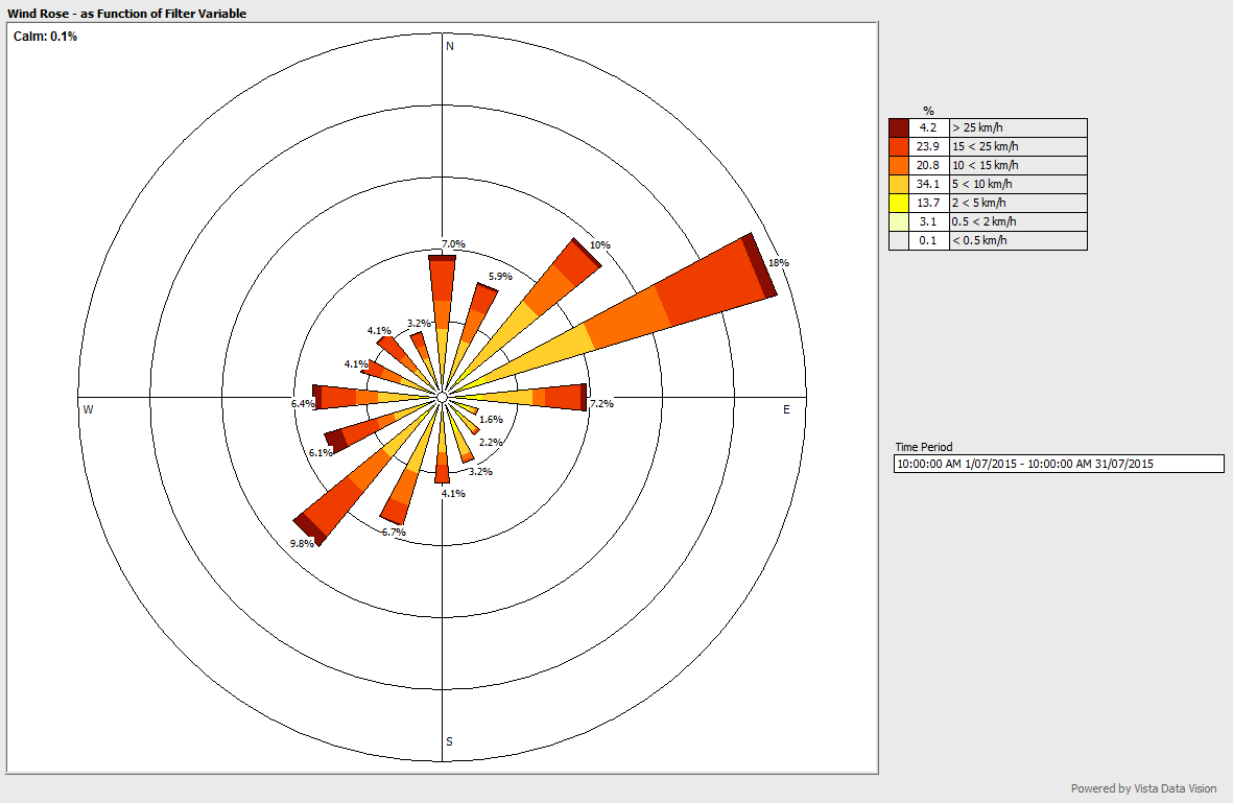


Figure 1. July 2015 wind monitoring station data

2.2 RAINFALL DATA

June	**Amount (millimetres)**
1	0.2
10	15.2
11	0.6
12	7.8
13	5.0
14	1.4
15	16.0
16	4.6
17	4.0
22	11.6
24	2.2
25	0.2
27	0.2
Total	**Approximately 69.0mm**

Table 1. July 2015 rainfall data.

3. MONITORING LOCATIONS

Figure 2 indicates the location of where monitoring is undertaken for the project. Any additional monitoring undertaken will be discussed within the body of this report.

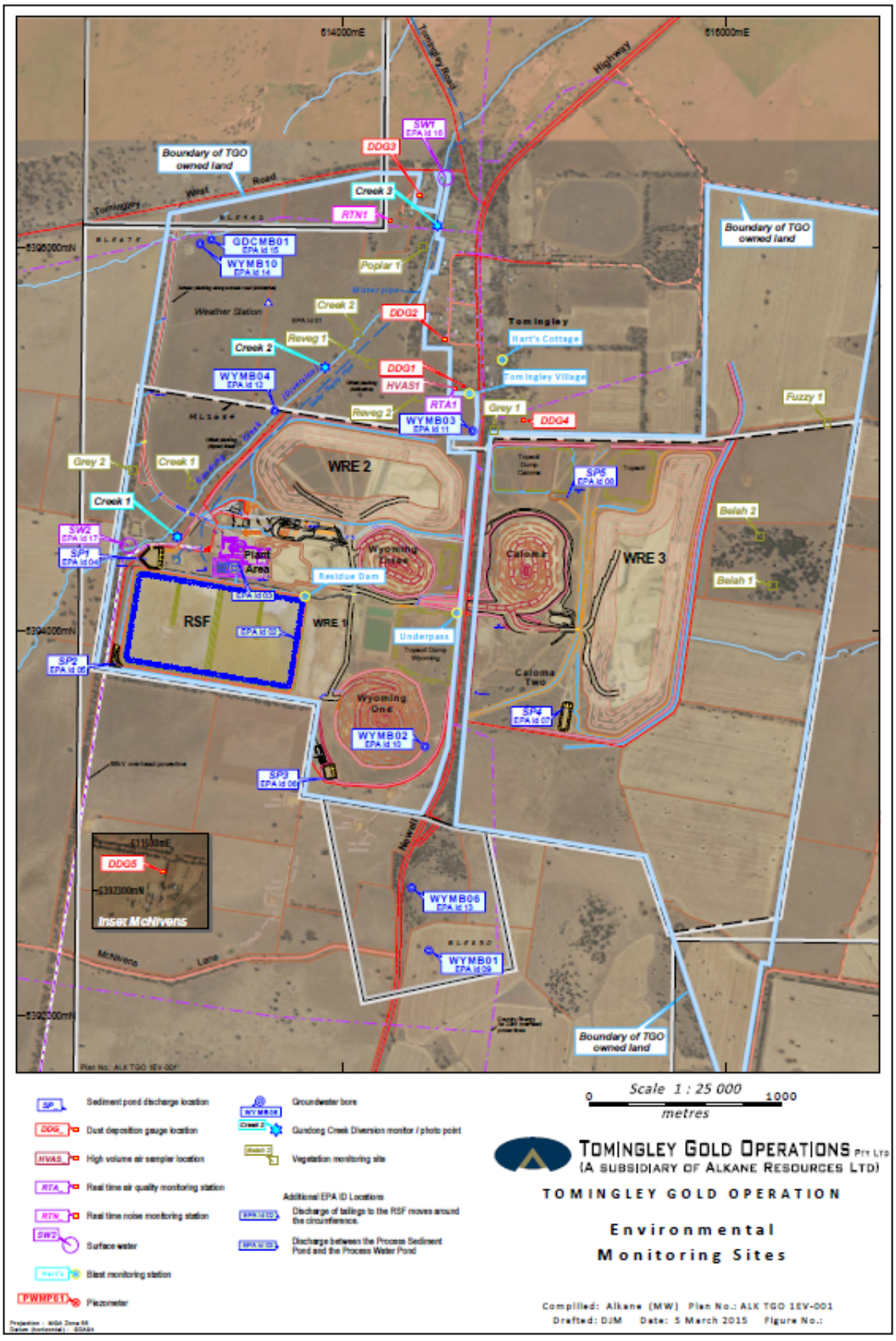


Figure 2. TGO water and vegetation monitoring points.

Figure 3 indicates the location of environmental and survey monitoring points on and around the Residue Storage Facility.

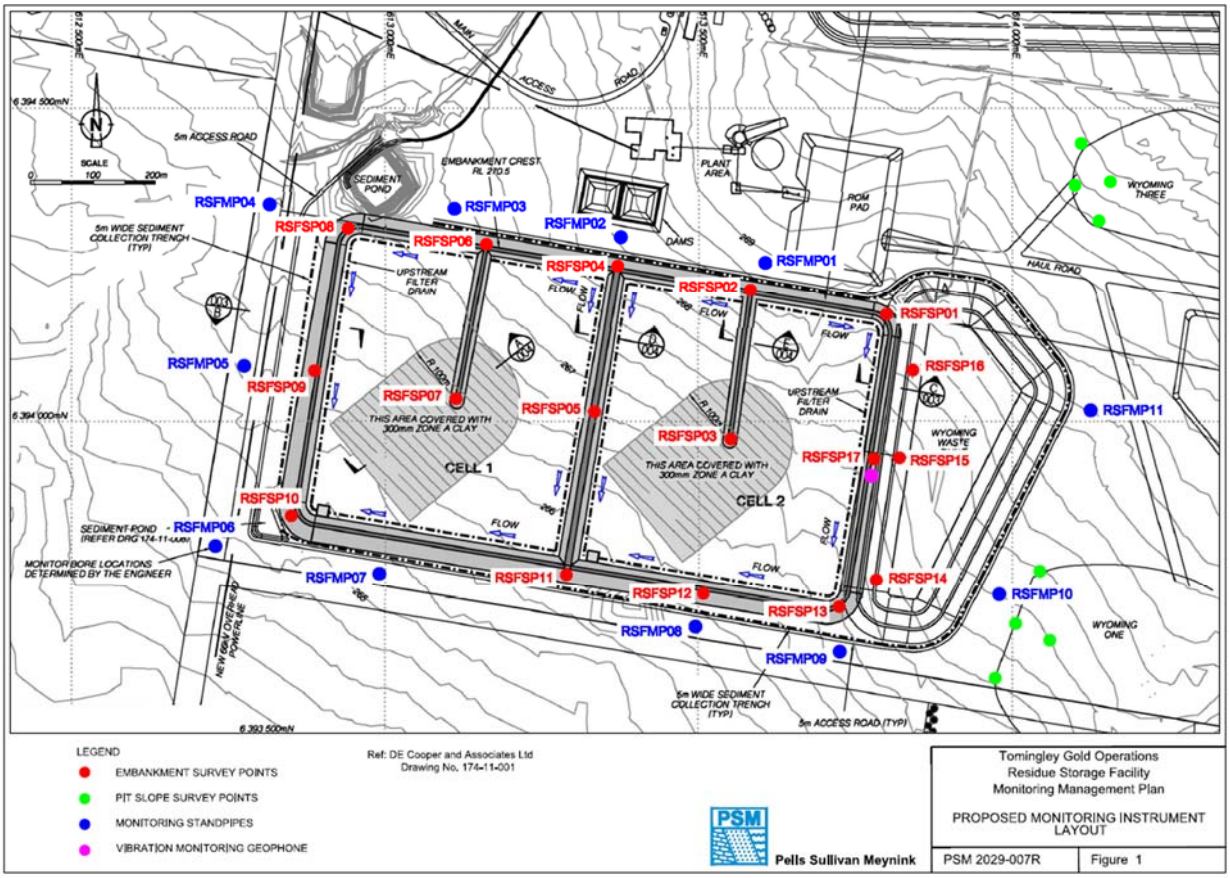


Figure 3. Residue Storage Facility monitoring points.

4. AIR QUALITY MONITORING

4.1 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 was not exceeded month.

Date	24 Hr Averages (µg/m3)	Running Average (µg/m3)	Comment
1/07/2015	11.7	21.0	
2/07/2015	26.4	21.0	
3/07/2015	26.1	21.0	21 hrs of 1 hr avg data used
4/07/2015	19.6	21.0	
5/07/2015	25.5	21.0	
6/07/2015	16.1	21.0	
7/07/2015	16.2	21.0	
8/07/2015	9.8	21.0	
9/07/2015	8.7	20.9	
10/07/2015	8.3	20.9	
11/07/2015	5.9	20.9	
12/07/2015	4.2	20.8	
13/07/2015	4.7	20.8	
14/07/2015	8.0	20.8	
15/07/2015	9.9	20.7	
16/07/2015	3.0	20.7	
17/07/2015	7.0	20.7	
18/07/2015	7.8	20.6	
19/07/2015	9.9	20.6	
20/07/2015	11.1	20.6	
21/07/2015	7.7	20.6	
22/07/2015	12.7	20.5	
23/07/2015	6.6	20.5	
24/07/2015	7.6	20.5	
25/07/2015	7.2	20.4	
26/07/2015	11.7	20.4	
27/07/2015	11.5	20.4	
28/07/2015	15.1	20.4	
29/07/2015	11.2	20.4	
30/07/2015	9.6	20.3	
31/07/2015	9.7	20.3	
Average	**11.3**		
	24 Hour criteria exceedance		

Table 2. Real time dust monitoring

4.2 DEPOSITIONAL DUST

Depositional Dust monitoring undertaken during this month returned the results indicated in Table 3 below. The performance criteria for deposited dust is averaged over 12 months.

Location	Date Monitored	Insoluble solids (g/m^2/month)	Maximum increase in deposited dust level
DDG1	02/07/2015–04/08/2015	1.2	The greatest increase in deposited dust level was recorded at DDG3; an increase of 27.7 g/m^2/month. This increase is due to the increase of inorganic matter – bird droppings. A deterrent structure has been fitted.
DDG2	02/07/2015–04/08/2015	0.8	
DDG3	02/07/2015–04/08/2015	0.8	
DDG4	02/07/2015–04/08/2015	31.6	
DDG5	02/07/2015–04/08/2015	0.3	

Table 3. Deposited Dust results for July 2015.

4.3 HIGH VOLUME AIR SAMPLER - TOTAL SUSPENDED PARTICULATES

High Volume Air Sampling (HVAS) for Total Suspended Particulates (TSP) was undertaken this month. Table 4 below provides the results.

The performance criteria for TSP is averaged over 12 months

Location	Sheet ID	Date On	Date Off	Results (TSP µg/m³)	Performance Criteria (Annual Average)
HVAS1	9153698	07/07/2015	08/07/2015	39.1	90 µg/m3.
HVAS1	9153699	13/07/2015	14/07/2015	6.2	
HVAS1	9153700	19/07/2015	20/07/2015	20.1	
HVAS1	9127545	25/07/2015	26/07/2015	17.0	
HVAS1	9127546	31/07/2015	01/08/2015	24.1	

Table 4. High Volume Air Sampler Data for July 2015.

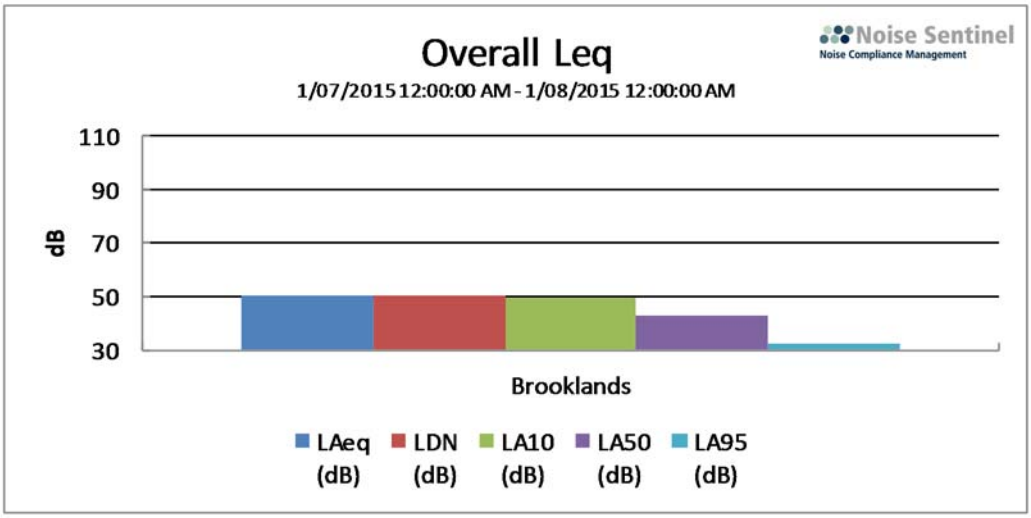
5. NOISE MONITORING

5.1 REAL-TIME NOISE MONITORING

See real-time noise monitoring data presented below.

Long Period

Tomingley Gold Site (1/07/2015 12:00 AM - 1/08/2015 12:00 AM)



Overall Data

Location	Start Time	End Time	Activity	LDN (dB)	L_{Aeq} (dB)	L_{AMin} (dB)	L_{A10} (dB)	L_{A50} (dB)	L_{A95} (dB)
Brooklands	1/07 12:00:00 AM	1/08 12:00:00 AM	100%	50.1	50.1	21.5	49.5	42.6	32.4

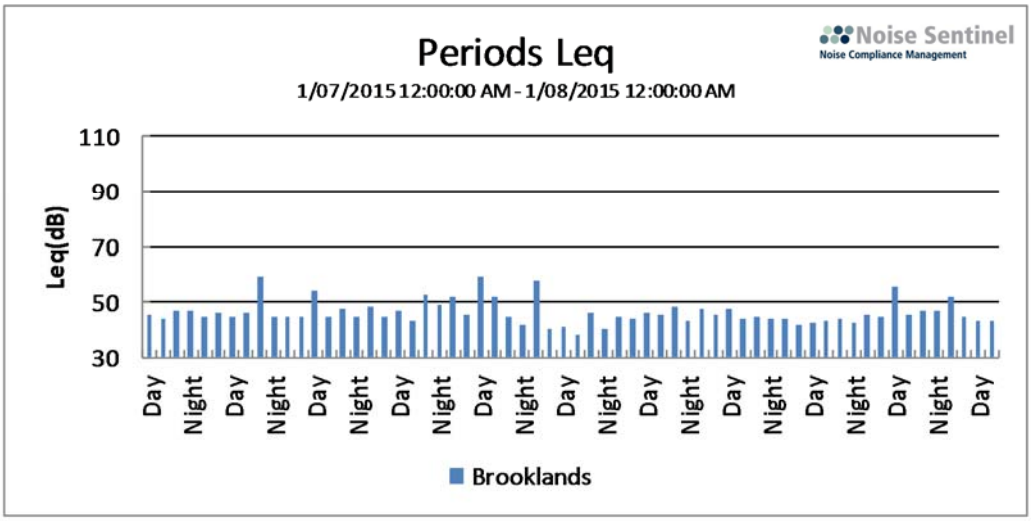


Figure 4. Fixed, real time noise monitoring data.

6. SURFACE WATER MONITORING

6.1 GUNDONG CREEK

Gundong Creek began to flow on 20 July 2015. Clarification has been sought from the Environment Protection Authority indicating that sampling natural flows is not required under the Tomingley Gold Operations Environment Protection Licence. TGO has however been sampling this water to provide data for our own information and to inform future investigations.

6.2 SEDIMENTATION PONDS

No discharge and associated water testing occurred this month.

7. GROUNDWATER MONITORING

Groundwater monitoring is carried out quarterly. As reported last month some sampling occurred in June and due to unforeseen circumstances the remainder of the June sampling had to occur in early July.

Table 1 - Ground water field results June 2015

Parameter	WYMB01	WYMB02	WYMB03	WYMB04	WYMB06	WYMB10	GDCMB01
Sampling Date	08-Jul-15	09-Jul-15	08-Jul-15	08-Jul-15	09-Jul-15	09-Jul-15	24-Jun-15
Time	1538	940	1413	1230	1223	1045	1335
Sampler	CBE	CBE	CBE	CBE	CBE	CBE	CBE
Redox (mV)	-28	106	87	60	134	122	90
Field_Oxy (ppm)	1.46	1.39	4.39	2.99	2.35	3.32	3.36
Field_pH	6.84	6.85	6.66	6.78	6.79	6.84	7.24
Field_EC_uS_cm	11420	21230	19670	25.9	13530	27200	503
Field_ temp (C)	20	20.4	21.6	21	19.6	21.2	15.2
Water level below surface (m)	-38.74	-59.17	-54.06	-62.69	-37.37	-72.15	-2.18

Table 2 - Ground water lab results June 2015

Parameter	WYMB01	WYMB02	WYMB03	WYMB04	WYMB06	WYMB10	GDCMB01
Total Suspended Solids (TSS) mg/L	<5	8	8	659	<5	5	<5
Total dissolved Solids	7060	13400	13300	17800	9630	19000	597
Ionic Balance	1.54	1.94	2.37	0.82	3.07	1.76	3.75
Lab_pH	7.37	7.37	7.34	7.45	7.42	7.37	7.09
Lab_EC_uS_cm	1230	22600	21500	27500	14700	28700	510
Ammonia	0.15	<0.01	<0.01	0.03	0.02	<0.01	0.04
Alkalinity ($CaCO_3$)	343	982	1130	966	1080	892	80
Arsenic (mg/L)	0.004	0.002	0.002	<0.001	0.023	<0.010	0.002
Bicarbonate	343	982	1130	966	1080	892	80
Cadmium (mg/L)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0010	<0.0001
Calcium (dissolved)	235	156	188	289	166	244	6
Carbonate	<1	<1	<1	<1	<1	<1	<1
Chromium	<0.001	<0.001	<0.001	0.002	<0.001	<0.010	0.003
Chloride (mg/L)	3710	6880	6300	8410	3460	8560	60
Copper (mg/L)	0.002	0.003	0.002	0.004	0.01	<0.010	0.006
Cyanide (Free)	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Cyanide (Total)	<0.004	<0.004	<0.004	<0.004	0.075	<0.004	<0.004
Cyanide (weak acid dissociable)	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Hardness (as calcium carbonate)	1670	2140	2460	3700	1990	3210	23
Iron (Total)	0.05	0.15	<0.05	1.12	>0.05	<0.50	3.51
Lead	0.002	0.006	0.002	0.007	<0.001	<0.010	0.003
Magnesium (mg/L)	263	424	484	723	382	631	2

Parameter	WYMB01	WYMB02	WYMB03	WYMB04	WYMB06	WYMB10	GDCMB01
Mercury (mg/L)	<0.0001	0.0002	<0.0001	<0.001	<0.0001	<0.0001	<0.0001
Nickel (mg/L)	0.009	0.002	0.005	0.005	0.022	<0.010	0.003
Nitrate (mg/L)	0.08	0.66	0.35	0.24	0.21	0.44	13.6
Phosphate (mg/L)	0.04	0.23	0.09	<0.01	0.36	0.79	0.05
Potassium (dissolved) (mg/L)	9	8	12	16	10	20	1
Sodium (dissolved) (mg/L)	2140	4580	4100	5510	2740	6090	90
Sulphates (mg/L)	918	1820	1850	2510	2400	2820	23
Zinc (mg/L)	0.032	0.014	0.079	0.18	0.049	<0.050	0.02

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 Harts Cottage and Tomingley Village.

EventKey	Event	Date/Time	Max R (mm/s)	Max AB (Pa)	Max AB (dBL)	Monitor location
63330	TMG06S	30/07/2015 13:00	0.33	1.92	99.6	Harts Cottage
63249	TMG06R	27/07/2015 12:58	0.42	6.71	110.5	Harts Cottage
63159	TMG06Q	23/07/2015 13:44	0.2	2.65	102.4	Harts Cottage
63132	TMG06P	22/07/2015 12:59	0.15	1.67	98.4	Harts Cottage
62961	TMG06O	16/07/2015 13:29	0.49	2.81	103	Harts Cottage
62920	TMG06N	14/07/2015 12:57	0.23	8.36	112.4	Harts Cottage
62904	TMG06M	13/07/2015 13:01	0.16	2.29	101.2	Harts Cottage
62885	TMG06L	10/07/2015 13:54	0.35	7.11	111	Harts Cottage
62815	TMG06K	6/07/2015 13:59	0.33	26.44	122.4	Harts Cottage
62798	TMG06J	4/07/2015 14:07	0.12	2.02	100.1	Harts Cottage
62797	TMG06I	4/07/2015 14:02	0.19	3.03	103.6	Harts Cottage
62792	TMG06H	3/07/2015 14:02	0.27	4.88	107.8	Harts Cottage
63330	TMG06S	30/07/2015 13:00	0.4	2.89	103.2	Tomingley Village
63249	TMG06R	27/07/2015 12:58	0.53	7.36	111.3	Tomingley Village
63159	TMG06Q	23/07/2015 13:44	0.22	3.39	104.6	Tomingley Village
63132	TMG06P	22/07/2015 12:59	0.12	1.18	95.4	Tomingley Village
62961	TMG06O	16/07/2015 13:29	0.47	3.4	104.6	Tomingley Village
62920	TMG06N	14/07/2015 12:57	0.26	8.82	112.9	Tomingley Village
62904	TMG06M	13/07/2015 13:01	0.15	6.41	110.1	Tomingley Village
62885	TMG06L	10/07/2015 13:54	0.51	10.85	114.7	Tomingley Village
62815	TMG06K	6/07/2015 13:59	0.46	23.37	121.4	Tomingley Village
62798	TMG06J	4/07/2015 14:07	0.14	2.34	101.4	Tomingley Village
62797	TMG06I	4/07/2015 14:02	0.32	2.53	102	Tomingley Village
62792	TMG06H	3/07/2015 14:02	0.26	4.61	107.2	Tomingley Village

Table 5. Blast monitoring

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 this month are:

- Monthly average: 5.001 ppm
- Daily maximum: 9.778 ppm on 20 July.
- Daily minimum: 0.920 ppm on 21 July.
- Number of exceedances: zero

10. BIODIVERSITY MONITORING

- Fauna deaths:
  - There were no fauna deaths in the RSF for the month.
- Native fauna sightings:
  - Yellow Spoonbill, *Platalea flavipes*, in a farm dam.
  - Three White-necked Heron*, Ardea pacifica*, amongst remnant vegetation along the north of site.
  - Grey-crowned Babblers, *Pomatostomus temporalis*, were seen on four occasions this month, amongst remnant vegetation to the north and south of site. On one of these occasions, nest building was observed.
- Native animal rescue:
  - A Nankeen Kestral, *Falco cenchroides* was found in mining area of site and was taken to veterinarian where unfortunatley it had to be euthanased.
- Vertebrate pests:
  - Foxes and hares are seen occasionally.