



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

# Tomingley Gold Project

## Monthly Environmental Monitoring Report – September 2014



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

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## 1. INTRODUCTION AND SCOPE

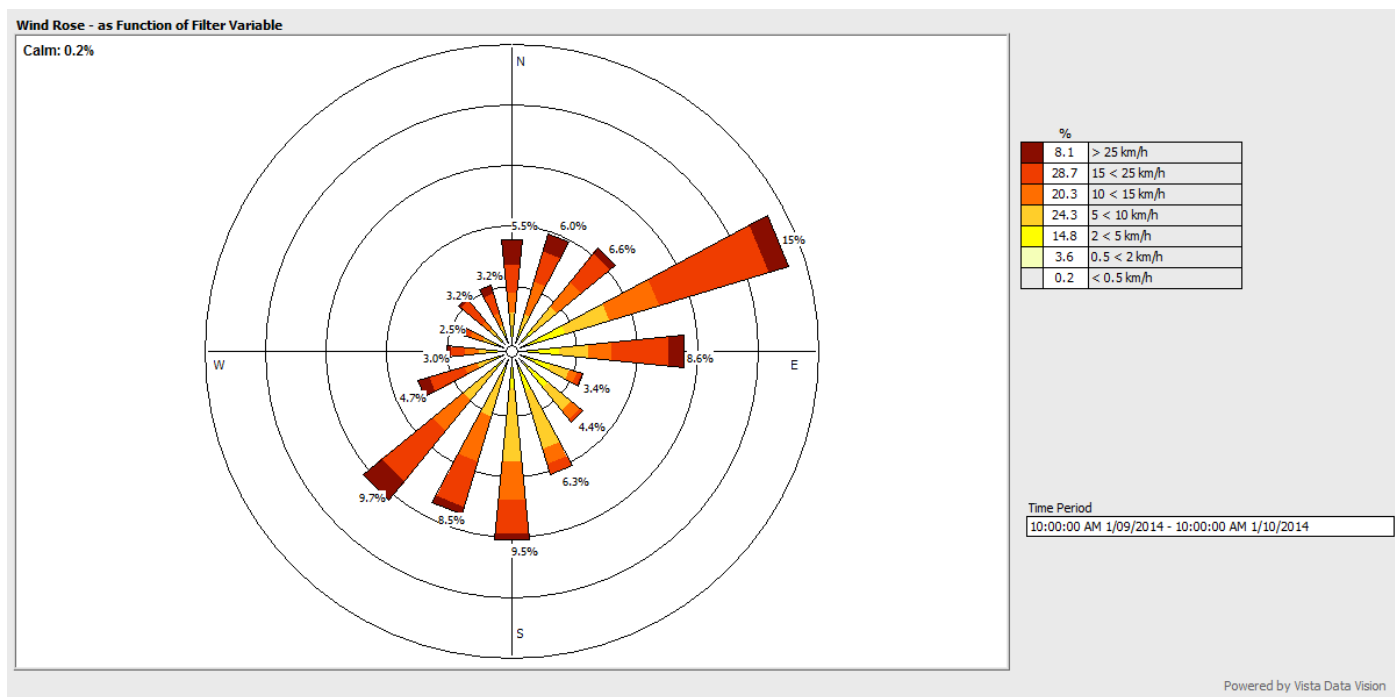
This Monthly Environmental Monitoring Report has been prepared to collate environmental monitoring data undertaken for the Tomingley Gold Project during the month of September 2014.

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

## 2. WEATHER FOR SEPTEMBER 2014

### 2.1 WEATHER STATION DATA

TGO weather data is presented below.



**Figure 1.** September 2014 wind monitoring station data

## 2.2 RAINFALL DATA

<i>August</i>	<b>Amount (millimetres)</b>
<i>2/09/2014</i>	2.0
<i>10/09/2014</i>	9.8
<i>24/09/2014</i>	6.2
<i>25/09/2014</i>	2.6
<i>26/09/2014</i>	0.4
<b>Total</b>	<b>21.0 mm</b>

**Table 1.** September 2014 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.

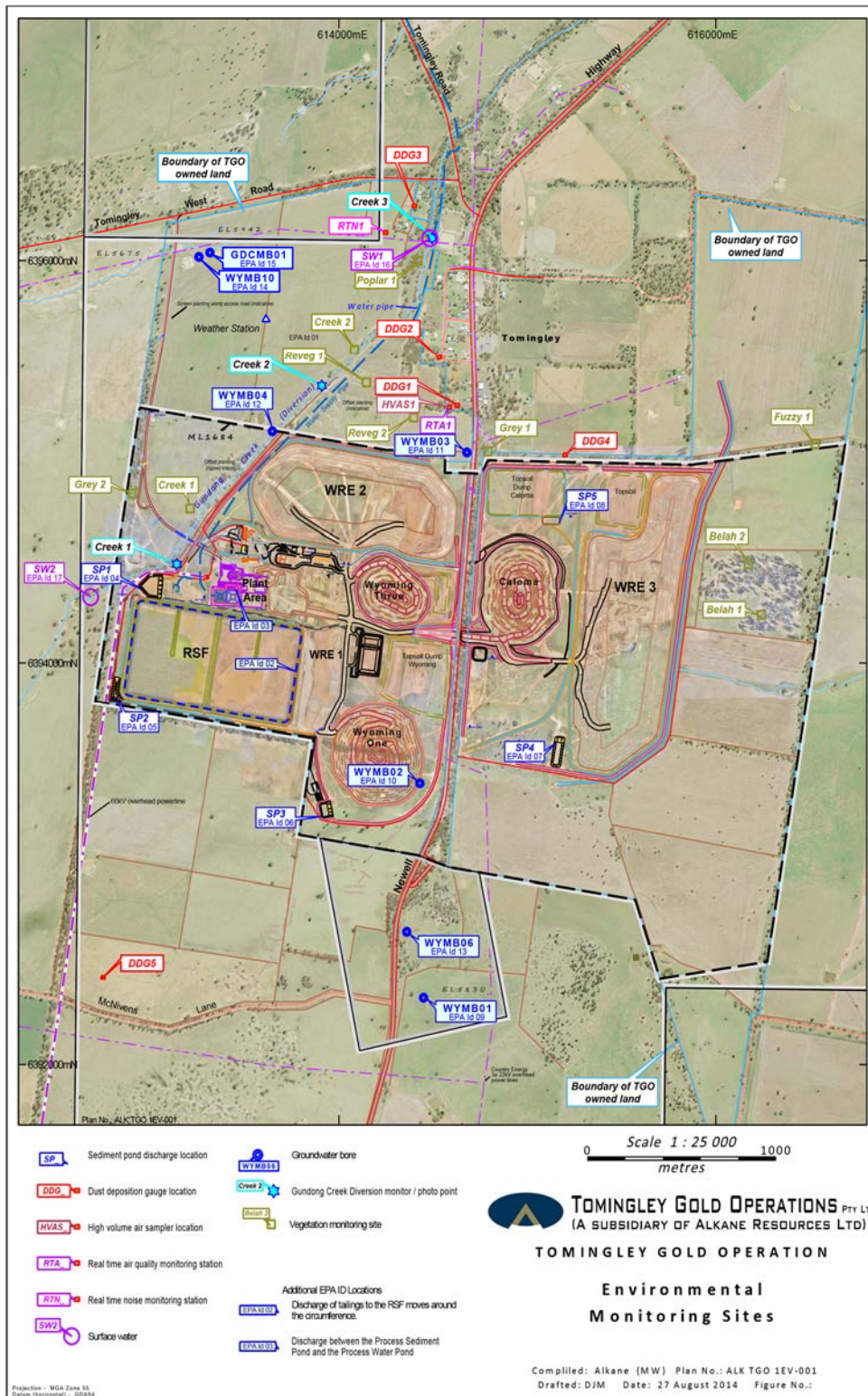


Figure 2. TGO water and vegetation monitoring points.



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

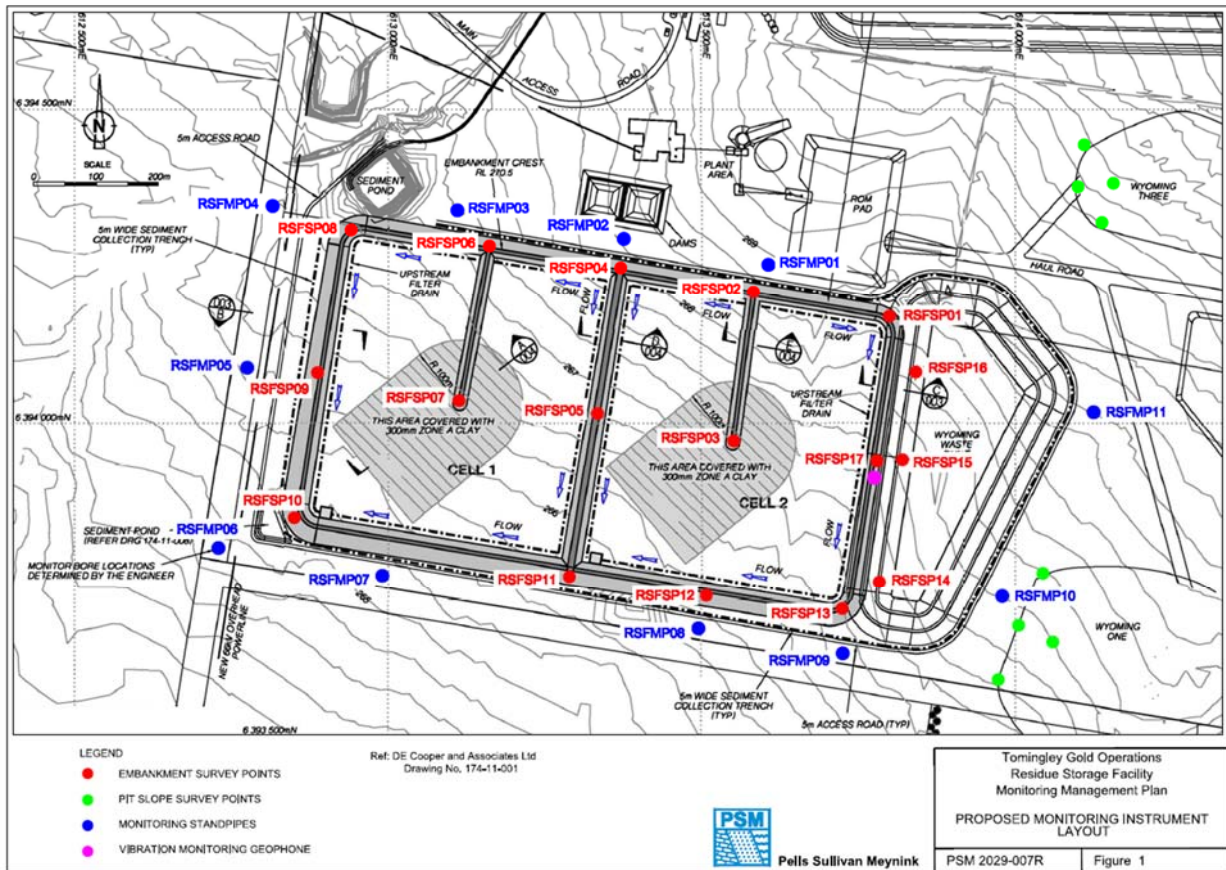


Figure 3. Residue Storage Facility monitoring points.

## 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<sup>3</sup> and a 24-Hour Average of 50ug/m<sup>3</sup>. These parameters were not exceeded this month.

Time Period: 2014-09-01 - 2014-10-01		
Summary Time Period: day		
file Name: vdv_Alkane TEOM_2014-09-01_2014-10-01_day..cs		
Data was saved using Vista Data Vision		
Saved: 2014-10-01 23:50:13		
Date	MC 24 hour (average)	MC 24 hour (max)
1/09/2014	13.265	21.46
2/09/2014	21.259	23.71
3/09/2014	15.474	18.49
4/09/2014	10.234	20.75
5/09/2014	4.299	16.85
6/09/2014	9.747	10.76
7/09/2014	9.034	10.21
8/09/2014	9.979	10.53
9/09/2014	25.055	40.08
10/09/2014	28.387	41.76
11/09/2014	15.086	18.55
12/09/2014	20.1	22.19
13/09/2014	20.794	26.96
14/09/2014	24.315	26.69
15/09/2014	15.007	16.07
16/09/2014	19.726	23.85
17/09/2014	20.603	22.79
18/09/2014	21.029	22.28
19/09/2014	22.491	23.53
20/09/2014	20.135	24.08
21/09/2014	26.982	28.52
22/09/2014	21.107	24.69
23/09/2014	18.145	18.96
24/09/2014	24.468	32.31
25/09/2014	10.165	30.21
26/09/2014	4.598	11.29
27/09/2014	11.955	12.69
28/09/2014	12.655	17.56
29/09/2014	18.253	21.01
30/09/2014	19.614	20.47

**Table 2.** Real time dust monitoring



## 4.2 DEPOSITIONAL DUST

Depositional Dust monitoring undertaken during September 2014 returned the results indicated in Table 3 below.

Location	Date Monitored	Insoluble solids (g/m <sup>2</sup> /month)	Maximum increase in deposited dust level
DDG1	01/09/2014 – 07/10/2014	1.3	DDG4 again gives the highest reading however is similar to last month.  The greatest increase in deposited dust level was recorded at DDG1 and 3; an increase of 0.8 g/m <sup>2</sup> /month
DDG2	01/09/2014 – 07/10/2014	1.3	
DDG3	01/09/2014 – 07/10/2014	1.2	
DDG4	01/09/2014 – 07/10/2014	2.6	
DDG5	01/09/2014 – 07/10/2014	1.7	

**Table 3.** Deposited Dust results for September 2014

## 4.3 HIGH VOLUME AIR SAMPLER - TOTAL SUSPENDED PARTICULATES

High Volume Air Sampling (HVAS) for Total Suspended Particulates (TSP) was undertaken during June 2014. 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/m <sup>3</sup> )	Performance Criteria (Annual Average)
HVAS1	9036591	4 September 2014	5 September 2014	66.8	90 µg/m <sup>3</sup>
HVAS1	8999205	10 September 2014	11 September 2014	28.2	
HVAS1	8999206	16 September 2014	17 September 2014	52.7	
HVAS1	8999207	22 September 2014	23 September 2014	47.9	
HVAS1	8999208	28 September 2014	29 September 2014	51.6	

**Table 4.** High Volume Air Sampler Data for September 2014



## **6. SURFACE WATER MONITORING**

### **6.1 GUNDONG CREEK**

Gundong Creek did not run the reporting period and hence water sampling did not occur.

### **6.2 SEDIMENTATION PONDS**

No discharge or water testing occurred this month.

## **7. GROUNDWATER MONITORING**

Groundwater monitoring is carried out quarterly and was undertaken in September. Results are not yet available and will be reported in the October report.

## **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
54986	TMG020	1/09/2014 12:31	0.16	1.03	94.2	Harts Cottage
55073	TMG021	4/09/2014 12:31	0.18	1.91	99.6	Harts Cottage
55122	TMG023	5/09/2014 16:45	0	0.09	73.5	Harts Cottage
55129	TMG024	6/09/2014 12:59	0.13	1.51	97.5	Harts Cottage
55158	TMG025	8/09/2014 17:27	0.01	0.21	80.6	Harts Cottage
55223	TMG026	9/09/2014 12:30	0.34	0.65	90.2	Harts Cottage
55224	TMG027	9/09/2014 12:34	0	1.96	99.8	Harts Cottage
55260	TMG028	11/09/2014 6:08	0	0.22	80.9	Harts Cottage
55286	TMG029	11/09/2014 18:07	0	0.15	77.2	Harts Cottage
55317	TMG02A	12/09/2014 12:44	0.33	0.72	91.1	Harts Cottage
55342	TMG02B	13/09/2014 10:50	0	1.16	95.3	Harts Cottage
55343	TMG02C	13/09/2014 13:40	0.16	1.29	96.2	Harts Cottage
55347	TMG02D	13/09/2014 15:48	0	0.09	72.9	Harts Cottage
55359	TMG02E	14/09/2014 16:47	0	0.09	73.5	Harts Cottage
55364	TMG02F	15/09/2014 11:36	0	0.23	81.1	Harts Cottage
55421	TMG02G	16/09/2014 12:30	0.28	1.8	99.1	Harts Cottage
55552	TMG02H	19/09/2014 13:28	0.21	2.48	101.9	Harts Cottage
55626	TMG02I	22/09/2014 12:30	0.22	1.6	98	Harts Cottage
55731	TMG02J	25/09/2014 12:27	0.13	1.79	99	Harts Cottage
55810	TMG02K	29/09/2014 12:31	0.11	1.17	95.4	Harts Cottage
54986	TMG020	1/09/2014 12:31	0.26	0.86	92.6	Tomingley Village
55073	TMG021	4/09/2014 12:31	0.16	2.4	101.6	Tomingley Village
55122	TMG023	5/09/2014 16:45	0	0.65	90.2	Tomingley Village
55129	TMG024	6/09/2014 12:59	0.13	1.73	98.8	Tomingley Village
55158	TMG025	8/09/2014 17:27	0.02	0.26	82.3	Tomingley Village
55223	TMG026	9/09/2014 12:30	0.26	2.55	102.1	Tomingley Village
55224	TMG027	9/09/2014 12:34	0	5.05	108	Tomingley Village
55260	TMG028	11/09/2014 6:08	0	0.14	76.9	Tomingley Village
55286	TMG029	11/09/2014 18:07	0.01	0.33	84.2	Tomingley Village
55317	TMG02A	12/09/2014 12:44	0.25	0.85	92.6	Tomingley Village
55342	TMG02B	13/09/2014 10:50	0	0.8	92.1	Tomingley Village
55343	TMG02C	13/09/2014 13:40	0.13	1.2	95.6	Tomingley Village
55347	TMG02D	13/09/2014 15:48	0.3	0.07	70.9	Tomingley Village
55359	TMG02E	14/09/2014 16:47	0	0.78	91.8	Tomingley Village
55364	TMG02F	15/09/2014 11:36	0.02	0.33	84.4	Tomingley Village
55421	TMG02G	16/09/2014 12:30	0.19	3.86	105.7	Tomingley Village
55552	TMG02H	19/09/2014 13:28	0.21	2.05	100.2	Tomingley Village
55626	TMG02I	22/09/2014 12:30	0.26	1.74	98.8	Tomingley Village
55731	TMG02J	25/09/2014 12:27	0.16	1.19	95.5	Tomingley Village
55810	TMG02K	29/09/2014 12:31	0.12	0.83	92.3	Tomingley Village

**Table 5.** Blast monitoring

## **9. BIODIVERSITY MONITORING**

### Native fauna sightings:

- Striate Pardalote is frequently seen around the administration area.
- Black-shouldered kite pair are nesting beside the front entrance road.
- Seven Superb Parrots were seen east of Caloma.
- Grey-crowned Babblers seen in the tree lane along Tomingley West Road and south of the RSF.
- Rufus Whistler seen near administration building.
- Eastern Rainbow Skink found beside front entrance road.
- Wood Ducks with ducklings seen around the dams beside the front entrance road.
- White-necked Heron pair still often seen in front paddock.

### Native animal rescue:

No native animals required rescue this month.

### Vertebrate pests:

- A fox observed several times across the site during the days and nights.