



Three Kings Quarry
Air Quality Quarterly Report
June - August 2008

In compliance with: Permit 21875, conditions 26 & 27

Compiled By: Sari Eru, Environmental Coordinator

Date: 10 September 08

Introduction

This report details the air quality monitoring results for Winstone Aggregates Three Kings Quarry for the period June - August 08

This report is being prepared in accordance with Conditions 26 and 27 of Permit 21875. The conditions state:

“A summary of all monitoring results, including references where applicable to wind and rainfall data, and any remedial actions taken shall be submitted to the Manager at the end of each quarter”.

“A summary of the information recorded shall be submitted to the Manager at the end of each quarter.”

Details of the monitoring undertaken as part of the air permit are described below and actual monitoring results are presented in tables within the report or in the Appendices.

Daily Log

In accordance with Condition 26 (a) – (e) of the air permit a daily log of monitoring results is maintained on site. The log includes information about equipment malfunctions; visible dust emissions, water cart use and all relevant details relating to particulate monitoring.

June 08

Three Kings Quarry Summary monitoring results for the period 1st - 30 June 08

Date	Day	daily average WD (degrees)	daily average WS m/sec	Daily Rain (mm)	Site TSP mg/m3 office	BAM FH62 mg/m-3 office	Site TSP mg/m3 North Boundary
1/06/2008	Sun	317.0	1.637	4.000		10.9	
2/06/2008	Mon	254.1	2.355	3.000		9	
3/06/2008	Tue	200.3	2.833	0.400	27.9	23.8	33.3
4/06/2008	Wed	188.3	3.506	2.000		15.7	
5/06/2008	Thur	214.0	0.958	0.000	41.1	29.3	
6/06/2008	Fri	314.6	1.675	0.200		33.6	
7/06/2008	Sat	313.8	2.286	2.600		24.7	
8/06/2008	Sun	204.6	4.141	3.200	39.7	17.4	36.3
9/06/2008	Mon	214.8	4.609	0.000		2.5	
10/06/2008	Tue	140.1	1.697	0.000		21.8	
11/06/2008	Wed	257.0	0.840	0.000	48	28.2	
12/06/2008	Thur	217.3	0.594	0.000		23.6	
13/06/2008	Fri	173.2	0.969	0.000		21.3	
14/06/2008	Sat	73.6	1.805	0.000		6.8	
15/06/2008	Sun	76.9	2.685	0.600	19.2	8.6	20.5
16/06/2008	Mon	93.0	3.723	37.000		6.3	
17/06/2008	Tue	216.1	1.925	3.400		7.7	
18/06/2008	Wed	132.4	2.536	0.000	34.1	15.1	
19/06/2008	Thur	148.5	1.884	0.000		16.1	
20/06/2008	Fri	184.9	1.455	0.000		17.7	
21/06/2008	Sat	148.4	1.611	0.800	N/R	8.8	14.8
22/06/2008	Sun	124.2	3.870	38.200		15.5	
23/06/2008	Mon	198.7	3.348	4.000		15.3	
24/06/2008	Tue	236.6	4.747	11.000		15.2	
25/06/2008	Wed	276.6	3.956	8.000	38.1	19.7	
26/06/2008	Thur	278.6	4.469	5.400		24.6	
27/06/2008	Fri	277.2	4.740	8.400		23.7	
28/06/2008	Sat	277.9	3.420	11.400	49.5	13.6	48.6
29/06/2008	Sun	242.4	2.582	5.800		13.4	
30/06/2008	Mon	207.4	2.770	0.000		15.4	

July 08

Three Kings Quarry Summary monitoring results for the period 1st - 31 July 08

Date	Day	daily average WD (degrees)	daily average WS m/sec	Daily Rain (mm)	Site TSP mg/m3 office	BAM FH62 mg/m-3 office	Site TSP mg/m3 North Boundary
1/07/2008	Tue	259.1	1.630	1.800	31	17.6	
2/07/2008	Wed	269.2	2.826	5.400		20.3	
3/07/2008	Thur	290.2	2.256	4.600		28.7	
4/07/2008	Fri	293.3	2.666	7.000	35	19.2	25.3
5/07/2008	Sat	254.3	3.934	7.400		12.8	
6/07/2008	Sun	210.5	4.276	8.000		15.1	
7/07/2008	Mon	232.7	3.032	3.800		14	
8/07/2008	Tue	166.5	2.039	0.000	24.5	13.9	
9/07/2008	Wed	154.5	1.275	0.000		18.8	
10/07/2008	Thur	90.5	1.409	0.200	17.1	10.8	24.2
11/07/2008	Fri	41.0	4.714	3.400		14.5	
12/07/2008	Sat	199.9	3.211	5.800	28.5	17	
13/07/2008	Sun	258.2	1.610	0.400		20.8	
14/07/2008	Mon	177.6	0.734	0.200		22.5	
15/07/2008	Tue	241.9	0.588	0.000		21.8	
16/07/2008	Wed	103.0	0.923	8.000	41.7	19.3	20
17/07/2008	Thur	166.3	1.436	1.000		11	
18/07/2008	Fri	68.0	2.262	1.800		9.4	
19/07/2008	Sat	95.7	3.643	8.400	33.8	10.8	
20/07/2008	Sun	45.8	2.918	13.000		13.8	
21/07/2008	Mon	45.8	3.484	0.200		26.9	
22/07/2008	Tue	89.8	3.164	19.400		20.1	20.4
23/07/2008	Wed	64.1	3.710	5.800	56.2	24.9	
24/07/2008	Thur	281.7	2.422	0.400		20.5	
25/07/2008	Fri	278.5	0.627	0.000		15.7	
26/07/2008	Sat	248.6	4.884	37.400	21.9	8.7	25.9
27/07/2008	Sun	66.9	4.986	9.000		9.5	
28/07/2008	Mon	117.5	1.689	6.200		17.8	
29/07/2008	Tue	233.9	3.018	22.800	27.9	7	
30/07/2008	Wed	156.6	4.497	40.600		14.2	
31/07/2008	Thur	263.5	0.049	1.200		22.1	

August 08

Three Kings Quarry Summary monitoring results for the period Aug 08

Date	Day	daily average WS m/sec	daily average WD (degrees)	Daily Rain (mm)	Site TSP mg/m3 office	BAM FH62 mg/m-3 office	Site TSP mg/m3 North Boundary
1/08/2008	Fri	2.6	2.611	3.000	36.2	18.2	27
2/08/2008	Sat	3.5	3.538	5.800		18.7	
3/08/2008	Sun	3.6	3.643	12.800		17.2	
4/08/2008	Mon	2.3	2.263	4.400		16.2	
5/08/2008	Tue	3.5	3.499	2.400	28.4	13.5	
6/08/2008	Wed	3.0	3.023	0.600		14.6	
7/08/2008	Thur	1.3	1.267	0.000	38.8	15.1	16.9
8/08/2008	Fri	3.1	3.076	4.000		12.9	
9/08/2008	Sat	0.9	0.900	6.800		10.6	
10/08/2008	Sun	1.5	1.516	0.000		10.1	
11/08/2008	Mon	2.3	2.339	0.000		14	
12/08/2008	Tue	3.1	3.123	11.200	26	11.1	
13/08/2008	Wed	2.4	2.425	5.600		13.9	
14/08/2008	Thur	3.1	3.117	13.000	16.5	16.1	1.6
15/08/2008	Fri	3.4	3.384	21.200		17.8	
16/08/2008	Sat	2.5	2.535	11.600		12.7	
17/08/2008	Sun	1.1	1.139	12.400		13.5	
18/08/2008	Mon	3.6	3.585	4.000		7.8	
19/08/2008	Tue	3.5	3.510	3.600		11.9	
20/08/2008	Wed	2.9	2.922	2.000		8	
21/08/2008	Thur	3.8	3.809	2.600		15.5	
22/08/2008	Fri	2.0	1.990	0.000		18	
23/08/2008	Sat	1.5	1.501	3.800		13	
24/08/2008	Sun	2.5	2.545	34.200		15.8	
25/08/2008	Mon	1.4	1.433	0.200		20.4	
26/08/2008	Tue	2.2	2.226	2.400		15.2	
27/08/2008	Wed	4.1	4.072	0.600		16.6	
28/08/2008	Thur	3.5	3.466	2.200		14	
29/08/2008	Fri	1.6	1.606	0.000		15.3	
30/08/2008	Sat	1.9	1.931	0.800		12.6	
31/08/2008	Sun	2.2	2.242	0.000		8.9	

**Daily Log Summary for Three Kings Quarry Site for the period
June - Aug 08**

(Condition 27, Air Permit 21875)

- a. No significant visible dust emissions from the quarry (outside the boundary) were recorded during the above period. Many visual dust emissions, as well as foam bubbles were recorded on various occasions from the Danske Mobler factory next door, and did enter the Three Kings Quarry site.
- b. TSP monitoring was carried as per TSP monitoring procedures documented in the site Air Quality Management Plan. No exceedances were encountered for this period.
- c. The water cart was not used at all during this period, as the constant rain kept all roads in a damp condition. As well as this water levels of the site also had risen to substantial levels, creating constant puddles in the worked area of the site.
- d. The daily log sheet is dated and signed by the person entering the information.

Complaints:

There has been no complaints received for this period.

APPENDIX 1

Hi Vol vs. BAM Graphs to show relationships



