



**Three Kings Quarry**  
**Air Quality Quarterly Report**  
**September - November 2010**

**In compliance with:** Permit 21875, conditions 26 & 27  
**Compiled By:** Andrea Cave, Environmental Coordinator  
**Date:** 9<sup>th</sup> December 2010

## **Introduction**

This report details the air quality monitoring results for Winstone Aggregates Three Kings Quarry for the period September – November 2010.

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.

## September 2010

Three Kings Quarry Summary monitoring results for the period September 2010

### Three Kings Quarry Summary monitoring results for the period September 2010

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
1/09/2010	Wed	1.844	194.670	0.000		10.2	
2/09/2010	Thu	2.788	270.701	6.000	29.1	19.2	18.6
3/09/2010	Fri	4.072	255.288	3.600		16.1	
4/09/2010	Sat	5.081	227.410	1.200		22.9	
5/09/2010	Sun	2.286	277.628	0.000	28.4	17.9	
6/09/2010	Mon	4.037	292.604	3.000		28.5	
7/09/2010	Tue	2.414	213.854	15.600		9.0	
8/09/2010	Wed	1.662	170.698	0.200	-	10.2	13.4
9/09/2010	Thu	1.750	160.764	11.400		Sample < <sup>1</sup>	
10/09/2010	Fri	1.866	269.688	0.000		No Data	
11/09/2010	Sat	2.359	117.038	17.200		No Data	
12/09/2010	Sun	3.348	211.844	3.200		No Data	
13/09/2010	Mon	2.235	276.003	0.800		No Data	
14/09/2010	Tue	2.553	287.920	6.400	-	No Data	13.1
15/09/2010	Wed	2.679	232.934	3.200		No Data	
16/09/2010	Thu	2.942	187.667	14.000	25.3	Sample <	
17/09/2010	Fri	3.905	286.840	9.400		25.4	
18/09/2010	Sat	4.525	275.691	2.200		24.3	
19/09/2010	Sun	4.827	269.024	3.800	33.2	18.3	26.4
20/09/2010	Mon	3.779	266.601	1.400		20.7	
21/09/2010	Tue	4.559	258.444	5.800		Sample < <sup>2</sup>	
22/09/2010	Wed	5.899	247.913	5.800	49.9	Sample <	
23/09/2010	Thu	4.676	255.951	3.800		25.4	
24/09/2010	Fri	2.838	286.021	0.200		18.6	
25/09/2010	Sat	2.952	272.538	0.400	22.8	14.8	22.8
26/09/2010	Sun	2.112	283.073	0.000		17.6	
27/09/2010	Mon	2.009	241.719	0.000		17.3	
28/09/2010	Tue	1.870	127.306	0.000	46.3	Sample < <sup>2</sup>	
29/09/2010	Wed	3.191	92.196	0.000		Sample <	
30/09/2010	Thu	4.964	86.448	2.000		11.6	
1/10/2010	Fri						

<sup>1</sup> Instrument did run from 10th-16th because the computer motherboard failed after a power surge and would not start back up. Replaced on the 16th.

<sup>2</sup> Powercuts overnight

**October 2010**

**Three Kings Quarry Summary monitoring results for the period October 2010**

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
1/10/2010	Fri	3.691	214.243	10.600	29.1	11.3	25.2
2/10/2010	Sat	4.149	205.865	0.000		15.7	
3/10/2010	Sun	2.929	191.087	0.000		12.9	
4/10/2010	Mon	1.381	160.868	0.000		14.2	
5/10/2010	Tue	1.924	162.993	0.000	30.7	17.4	
6/10/2010	Wed	1.999	235.545	0.000		16.4	
7/10/2010	Thu	2.564	244.347	0.000		14.3	
8/10/2010	Fri	2.805	211.858	0.000		14.1	
9/10/2010	Sat	3.811	249.188	1.000	44.9	17.4	31.3
10/10/2010	Sun	3.004	253.417	0.000		18.2	
11/10/2010	Mon	4.991	210.108	5.400		15.4	
12/10/2010	Tue	4.715	179.799	0.600	39.9	16.2	
13/10/2010	Wed	3.819	173.059	1.800		5.8	
14/10/2010	Thu	2.214	175.243	0.600	12.1	Samp<	14.6
15/10/2010	Fri	3.102	242.497	0.000		NoData	
16/10/2010	Sat	2.142	267.948	0.000		NoData	
17/10/2010	Sun	3.460	190.302	2.000	24.7	NoData	
18/10/2010	Mon	3.763	267.056	3.000		NoData	
19/10/2010	Tue	2.583	281.361	0.000	30.9	NoData	25.0
20/10/2010	Wed	4.786	242.875	3.800		Samp<	
21/10/2010	Thu	5.584	243.760	1.600		21.5	
22/10/2010	Fri	4.847	222.740	0.200		28.7	
23/10/2010	Sat	3.194	204.611	0.000		31.0	
24/10/2010	Sun	1.876	140.056	0.000		16.7	
25/10/2010	Mon	2.147	210.188	0.000		17.5	
26/10/2010	Tue	1.890	177.333	0.000		19.3	
27/10/2010	Wed	2.170	108.455	0.000		16.3	
28/10/2010	Thu	2.130	103.347	0.200		12.0	
29/10/2010	Fri	2.184	105.091	0.000		9.7	
30/10/2010	Sat	2.307	106.167	0.000		10.7	
31/10/2010	Sun	2.260	126.524	0.000		7.8	

**November 2010**

**Three Kings Quarry Summary monitoring results for the period November 2010**

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
1/11/2010	Mon	1.715	169.962	0.000		16.2	
2/11/2010	Tue	1.767	113.955	0.000	17.4	10.2	11.6
3/11/2010	Wed	2.049	109.354	0.000		14.6	
4/11/2010	Thu	2.888	115.281	2.600	35.5	12.8	9.3
5/11/2010	Fri	4.603	203.417	12.800		18.2	
6/11/2010	Sat	3.481	224.885	0.000		17.3	
7/11/2010	Sun	1.875	194.726	0.000	25.9	12.1	8
8/11/2010	Mon	2.259	243.722	0.000		18.5	
9/11/2010	Tue	1.861	159.340	0.000	26.6	15.3	18.8
10/11/2010	Wed	2.892	235.358	0.000		21.7	
11/11/2010	Thu	2.935	234.837	0.000		10.1	
12/11/2010	Fri	2.924	233.052	1.000		14.5	
13/11/2010	Sat	2.762	250.122	0.000	- <sup>1</sup>	12.7	13.9
14/11/2010	Sun	3.678	250.906	0.000		18.8	
15/11/2010	Mon	2.784	234.563	1.400		12.0	
16/11/2010	Tue	1.747	197.986	0.000	34.8	14.6	14
17/11/2010	Wed	2.153	183.403	0.000		14.7	
18/11/2010	Thu	2.139	124.378	0.000	- <sup>2</sup>	16.6	12.6
19/11/2010	Fri	1.759	117.073	0.400		14.3	
20/11/2010	Sat	1.847	142.667	0.800		7.4	
21/11/2010	Sun	4.624	242.514	18.000		20.2	
22/11/2010	Mon	4.893	215.698	0.000		28.7	
23/11/2010	Tue	2.010	159.639	1.200		16.1	
24/11/2010	Wed	2.517	220.691	0.000		20.4	
25/11/2010	Thu	4.518	214.622	0.000		28.5	
26/11/2010	Fri	3.485	221.302	0.000		27.2	
27/11/2010	Sat	2.502	197.115	0.000		19.5	
28/11/2010	Sun	1.741	229.094	0.000		13.1	
29/11/2010	Mon	1.990	195.116	0.000		Samp<	
30/11/2010	Tue	2.905	198.128	0.000		NoData	

<sup>1</sup> Filter did not run

<sup>2</sup> Sample not valid power cut 3/4 way through sample period.

**Daily Log Summary for Three Kings Quarry Site for the period  
September – November 2010**

(Condition 27, Air Permit 21875)

- a. No visible dust emissions (that went over or were over the boundary) were noted in the Daily Air Log for this period.

However, it was noted that Danske Mobler had a fire on the 1<sup>st</sup> November 2010.

- b. TSP monitoring was carried as per TSP monitoring procedures documented in the site Air Quality Management Plan.
- c. The water cart used 1872m<sup>3</sup> during this period, made up of:

MONTH	LOADS	VOLUME (m <sup>3</sup> )
September	9	108
October	57	684
November	90	1080

- d. The daily log sheet is dated and signed by the person entering the information.

**Complaints:**

There have been no complaints made directly to Three Kings Quarry during this period.