

12th September 2018

Auckland Council
Private Bag 92300
Auckland 1142

Attention: Richard Preece

Re: Quarterly Report for Three Kings Quarry, Air Permit 40041

With regard to the above consent, please find attached the quarterly report for the period of 1st June 2018 to 31st August 2018.

Should you have any queries please do not hesitate to contact me on 027 504 3624 or at angela.klein@winstoneaggregates.co.nz.

Yours faithfully



Angela Klein
Environmental Fill Specialist



Three Kings Quarry

Air Quality Quarterly Report

June 2018 – August 2018

In compliance with: Permit 40041, Conditions 27 & 28

Introduction

This report details the air quality monitoring results for Winstone Aggregates Three Kings Quarry for the period June 2018 – August 2018.

On 11th February 2015 a new discharge to air consent (40041) was granted. The primary changes are the removal of HiVol monitoring and a decrease in the trigger level for the BAMs to 60µg/m³ as a 24hour average. The HiVol monitors continued to be run as per the previous consent (21875) requirements until the 20th September 2015 when they were discontinued with the approval of Council.

The Air Quality Management Plan has been revised in consultation with the Three Kings Site Liaison Group and Council to reflect the conditions of the new consent.

This report has been prepared in accordance with Conditions 27 and 28 of Permit 40041.

Condition 27 states:

TSP monitoring showing exceedance of the trigger value given in Condition 21, shall be reported to the Team Leader – Air Quality as soon as practicable. 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 Team Leader – Air Quality at the end of each quarter.

Condition 28 states:

A daily log of all such information that is required to enable compliance with the conditions of this consent shall be kept and maintained. The log shall record, on a daily basis, information including, but not limited to:

- (a) any dust control equipment malfunctions and any remedial action taken;*
- (b) any visible emissions of dust and the source;*
- (c) all relevant details relating to the TSP monitoring or other monitoring required by the TSP Monitoring Plan, to enable compliance with Conditions 19 to 24;*
- (d) when a water cart was used and, if so, the frequency of use and the volume of water used; and*
- (e) the date and time of the entry and the signature of the person entering the information.*

The log shall be made available on request, during operating hours, to an enforcement officer and shall be kept for the term of the consent. A summary of the information recorded shall be submitted to the Team Leader – Air Quality 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 attached to the report.

Summary of Monitoring Results

Summary tables of the monitoring results for each month of the reporting period are attached to this report. An overview of the quarter is provided below.

The Southern Boundary BAM unit has not been operational since April 2018 when it was severely damaged in a storm. Discussions are currently being held with Auckland Council to decommission the southern BAM as the unit is sited on land next to proposed remediation in the southern reserve. Dust control measures such as sprinklers and watercart are proposed to be utilised to control dust as has been successfully undertaken in the past at the site. The BAM unit located at the site office which is positioned to record dust emissions from the prevailing wind will remain in place during the rehabilitation works.

June 2018

All results for June 2018 were within the consented limits.

July 2018

All results for July 2018 were within the consented limits.

August 2018

All results for August 2018 were within the consented limits.

Daily Log

In accordance with Condition 28 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. A summary of the daily log is provided below.

- a. Over the last quarter all dust control equipment has functioned as required with maintenance being undertaken on both the sprinkler system and water cart as necessary.
- b. Visible dust emissions (that went over or were over the boundary) that were noted in the daily log for this period include:
 - Visible dust and odourous fumes from Danske Mobler extractor vents, recorded on multiple days in August 2018.
- c. TSP monitoring was carried out as per TSP monitoring procedures documented in the site Air Quality Management Plan. A summary of the results is provided above and the tabled results for this reporting period are attached to this report.
- d. The water cart used 312 m³ during this period. The use over this quarter was made up of:

MONTH	LOADS	VOLUME (m ³)
June 2018	7	84
July 2018	10	120
August 2018	9	108

- e. 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 regarding dust during the period of June 2018 to August 2018.

Next Reporting Period

The next quarterly report will be submitted in early December 2018. This report will cover the monitoring period of September 2018 to November 2018.

Monitoring Results for the Period June 2018

Date	Day	daily average WS m/sec	daily average WD (degrees)	Daily Rain (mm)	BAM Office (µg/m ³)	BAM South Boundary (µg/m ³)
1/06/2018	Fri	1.292	108.257	0.0	13.5	NO DATA
2/06/2018	Sat	3.469	93.118	0.0	8.9	NO DATA
3/06/2018	Sun	2.465	112.052	27.4	9.1	NO DATA
4/06/2018	Mon	3.210	89.823	29.0	7.1	NO DATA
5/06/2018	Tue	3.479	209.170	6.4	14.8	NO DATA
6/06/2018	Wed	2.395	246.111	3.0	18.6	NO DATA
7/06/2018	Thu	3.067	180.934	0.6	9.8	NO DATA
8/06/2018	Fri	1.784	164.347	0.0	15.9	NO DATA
9/06/2018	Sat	0.986	116.611	0.0	13.7	NO DATA
10/06/2018	Sun	1.092	122.497	0.0	13.7	NO DATA
11/06/2018	Mon	2.226	175.576	14.0	9.8	NO DATA
12/06/2018	Tue	4.483	247.583	15.6	13.6	NO DATA
13/06/2018	Wed	2.167	275.410	1.2	10.2	NO DATA
14/06/2018	Thu	2.040	261.958	0.0	14.9	NO DATA
15/06/2018	Fri	1.940	297.753	1.6	18.8	NO DATA
16/06/2018	Sat	1.976	281.552	4.8	10.8	NO DATA
17/06/2018	Sun	1.732	248.222	0.0	21.9	NO DATA
18/06/2018	Mon	2.839	182.524	0.8	18.9	NO DATA
19/06/2018	Tue	1.607	185.611	0.8	21.6	NO DATA
20/06/2018	Wed	1.973	135.785	5.6	13.0	NO DATA
21/06/2018	Thu	2.808	145.681	0.8	9.7	NO DATA
22/06/2018	Fri	1.389	179.747	0.0	8.5	NO DATA
23/06/2018	Sat	1.751	257.344	0.8	17.4	NO DATA
24/06/2018	Sun	2.286	237.740	4.4	7.4	NO DATA
25/06/2018	Mon	2.771	259.372	28.6	10.5	NO DATA
26/06/2018	Tue	3.199	240.885	12.6	13.6	NO DATA
27/06/2018	Wed	0.790	191.986	0.0	29.5	NO DATA
28/06/2018	Thu	1.079	234.406	0.8	19.8	NO DATA
29/06/2018	Fri	1.124	176.808	0.2	12.6	NO DATA
30/06/2018	Sat	0.835	178.507	0.2	19.7	NO DATA

159.200

Monitoring Results for the Period July 2018

Date	Day	daily average WS m/sec	daily average WD (degrees)	Daily Rain (mm)	BAM Office ($\mu\text{g}/\text{m}^3$)	BAM South Boundary ($\mu\text{g}/\text{m}^3$)
1/07/2018	Sun	2.240	230.795	5.6	9.5	NO DATA
2/07/2018	Mon	2.710	260.229	0.4	18.9	NO DATA
3/07/2018	Tue	1.790	197.219	0.0	13.4	NO DATA
4/07/2018	Wed	1.571	180.219	0.0	13.3	NO DATA
5/07/2018	Thu	1.263	143.038	0.0	15.7	NO DATA
6/07/2018	Fri	1.051	124.392	0.0	19.5	NO DATA
7/07/2018	Sat	2.074	272.611	0.0	14.5	NO DATA
8/07/2018	Sun	3.839	170.017	2.0	6.8	NO DATA
9/07/2018	Mon	4.391	282.653	4.2	18.2	NO DATA
10/07/2018	Tue	3.351	263.583	4.6	15.6	NO DATA
11/07/2018	Wed	1.902	276.774	0.2	20.8	NO DATA
12/07/2018	Thu	1.396	240.049	0.6	18.6	NO DATA
13/07/2018	Fri	1.219	130.420	0.0	15.7	NO DATA
14/07/2018	Sat	2.767	96.503	2.6	11.1	NO DATA
15/07/2018	Sun	2.744	139.653	44.2	12.6	NO DATA
16/07/2018	Mon	1.910	256.354	0.4	16.8	NO DATA
17/07/2018	Tue	1.785	259.688	0.0	18.9	NO DATA
18/07/2018	Wed	1.161	245.413	0.4	15.2	NO DATA
19/07/2018	Thu	1.749	285.760	0.2	16.2	NO DATA
20/07/2018	Fri	1.307	245.410	0.6	16.4	NO DATA
21/07/2018	Sat	1.742	163.302	0.0	13.2	NO DATA
22/07/2018	Sun	2.534	253.694	4.8	9.6	NO DATA
23/07/2018	Mon	1.543	268.510	3.8	20.5	NO DATA
24/07/2018	Tue	1.064	217.365	0.0	19.3	NO DATA
25/07/2018	Wed	2.112	264.899	1.4	12.9	NO DATA
26/07/2018	Thu	3.759	251.219	0.0	23.7	NO DATA
27/07/2018	Fri	1.997	291.552	1.2	21.0	NO DATA
28/07/2018	Sat	2.993	265.563	1.6	17.8	NO DATA
29/07/2018	Sun	2.957	268.841	2.0	11.8	NO DATA
30/07/2018	Mon	2.099	186.264	0.0	15.1	NO DATA
31/07/2018	Tue	1.387	119.403	0.0	9.1	NO DATA

80.8

Monitoring Results for the Period August 2018

Date	Day	daily average WS m/sec	daily average WD (degrees)	Daily Rain (mm)	BAM Office (µg/m ³)	BAM South Boundary (µg/m ³)
1/08/2018	Wed	1.085	156.715	0.6	16.0	NO DATA
2/08/2018	Thu	1.665	181.708	0.0	15.5	NO DATA
3/08/2018	Fri	1.026	242.753	3.0	14.0	NO DATA
4/08/2018	Sat	1.242	203.934	0.0	14.5	NO DATA
5/08/2018	Sun	1.986	216.993	1.6	6.4	NO DATA
6/08/2018	Mon	1.213	138.181	0.0	7.0	NO DATA
7/08/2018	Tue	1.249	148.170	0.0	11.5	NO DATA
8/08/2018	Wed	2.437	133.639	6.4	10.8	NO DATA
9/08/2018	Thu	2.746	250.785	0.2	16.3	NO DATA
10/08/2018	Fri	1.510	225.163	0.0	17.6	NO DATA
11/08/2018	Sat	1.518	116.316	0.0	13.4	NO DATA
12/08/2018	Sun	1.019	126.816	0.0	11.4	NO DATA
13/08/2018	Mon	1.783	103.771	5.8	8.3	NO DATA
14/08/2018	Tue	4.385	237.622	12.4	16.3	NO DATA
15/08/2018	Wed	4.795	243.101	2.4	19.7	NO DATA
16/08/2018	Thu	2.980	264.517	0.0	19.5	NO DATA
17/08/2018	Fri	2.407	270.240	9.8	23.7	NO DATA
18/08/2018	Sat	2.301	254.747	3.0	8.8	NO DATA
19/08/2018	Sun	1.458	235.406	0.0	14.5	NO DATA
20/08/2018	Mon	3.122	149.410	2.0	10.8	NO DATA
21/08/2018	Tue	2.720	260.826	4.8	12.7	NO DATA
22/08/2018	Wed	2.745	236.816	8.8	19.5	NO DATA
23/08/2018	Thu	2.234	245.042	2.2	13.0	NO DATA
24/08/2018	Fri	2.497	240.802	3.2	9.5	NO DATA
25/08/2018	Sat	3.804	239.823	1.2	15.6	NO DATA
26/08/2018	Sun	1.958	210.833	0.6	19.6	NO DATA
27/08/2018	Mon	0.860	154.500	0.0	17.1	NO DATA
28/08/2018	Tue	1.931	99.170	0.0	11.5	NO DATA
29/08/2018	Wed	2.058	204.196	28.8	17.2	NO DATA
30/08/2018	Thu	1.786	201.309	0.0	10.8	NO DATA
31/08/2018	Fri	1.657	230.507	1.6	14.6	NO DATA

98.400