

7th June 2013

Auckland Council
Private Bag 92300
Auckland 1142

Attention: Naveen Kumar, Water Resources Section

Re: Quarterly Report for Three Kings Quarry, Permit 12977

Dear Naveen

As required by Condition 7 of the above resource consent, please find enclosed records of groundwater level measurements for the period of 01 March 2013 to 31 May 2013.

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

Yours faithfully



Elyse LaFace
Environmental Coordinator



Three Kings Quarry – Permit No 12977

Groundwater Take To Dewater Three Kings Quarry

Quarterly Report

June 2013

QUARTERLY REPORT

Three Kings Quarry – Permit No 12977

The following report is made with regard to Condition 7 of Permit No 12977.

This report contains the groundwater levels within boreholes surrounding the take point.

A plan showing the location of boreholes in which groundwater levels were measured is attached.

This report contains records for the period of 1 March 2013 to 31 May 2013.

THREE KINGS GROUNDWATER LEVEL RECORD SHEET

Date	BH 1B	BH 2B	BH 5B	BH 6A	BH6B	BH 6C	BH 7	BH 10a						
20-Mar-13		0.89	34.36	34.30	34.11	44.68	38.92	39.87	43.45	35.34	29.09	39.52	28.85	50.91
16-Apr-13		1.02	34.23	34.19	34.36	44.43	39.06	39.73	43.62	35.17	29.01	39.60	29.86	50.90
15-May-13		0.45	34.80	34.80	34.53	44.26	38.74	40.05	42.97	35.82	28.03	40.58	29.87	50.89

Date	BH 10b	BH 11b	BH 12a	BH 12b	BH 13a	BH13c	BH 16	BH 17								
20-Mar-13	8.1	72.66	72.35	21.93	50.30	66.98	5.15	66.98	16.89	55.28	7.1	66.31	49.39	50.75	43.57	34.31
16-Apr-13	8.1	72.66	72.41	22.04	50.19	66.98	5.15	66.98	17.09	55.08	7.1	66.31	49.53	50.61	43.72	34.16
15-May-13	8.1	72.66	72.46	21.75	50.48	67.17	4.96	67.17	17.27	54.90	7.09	66.32	49.48	50.66	43.11	34.77

Date	BH 18A	BH 18B	BH 19A		BH 19B		BH 20		BH 20a		BH 21		BH 22			
20-Mar-13	48.78	35.72	38.77	45.73	45.69	34.36	41.02	39.03	2.46	54.20	6.85	49.89	36.95	35.36	34.07	41.17
16-Apr-13	48.8	35.70	38.68	45.82	45.87	34.18	41.20	38.85	2.47	54.19	7.00	49.74	37.09	35.22	34.07	41.17
15-May-13	48.56	35.94	38.64	45.86	45.22	34.83	41.20	38.85	2.09	54.57	6.12	50.62	36.64	35.67	34.03	41.21

Date	BH 22a	BH 23	BH 23a		BH 24		BH 24a		BH 25		BH 25a		BH25b1			
20-Mar-13	11.33	63.81	5.63	51.57	6.53	50.81	6.91	55.89	2.45	60.31	22.37	37.08	13.95	45.49	8.27	47.16
16-Apr-13	11.47	63.67	5.67	51.53	6.61	50.73	6.98	55.82	2.47	60.29	22.35	37.10	12.53	46.91		
15-May-13	11.02	64.12	5.63	51.57	6.52	50.82	6.97	55.83	2.49	60.27	22.23	37.22	11.46	47.98		

Date	BH25b2	BH 26	BH 26a		BH 27		BH28a		BH28b	BH29	BH30				
20-Mar-13	10.93	54.32	0.10	59.34	5.30	54.11	0.13	49.47	6.83	51.48	8.17 58.43	16.67	54.90		
16-Apr-13	12.47	55.86	0.09	59.35	5.27	54.14	0.25	49.35	6.85	51.50		8.20	58.40	16.67	54.90
15-May-13	16.42	59.81	0.04	59.40	5.08	54.33	0.23	49.37	6.94	51.59		8.06	58.54	16.73	54.96

Date	BH31a		BH31b		BH32		BH33		BH34		BH35a		BH35b		BH36a	
20-Mar-13	15.11	48.70					2.05	58.22	11.38	47.37	17.94	48.32	11.24	55.02	7.79	58.74
16-Apr-13	14.97	48.56					2.11	58.16	10.94	47.81	17.95	48.31	11.25	55.01	7.73	58.80
15-May-13	16.37	49.96					1.93	58.34	9.96	48.79	17.91	48.35	11.24	55.02	7.55	58.98

Date	BH36b	BH37a	BH37b		BH38a		BH38b		BH39a		BH39b		BH40a			
20-Mar-13	7.70	58.83	3.68	53.86	3.90	53.70	4.25	54.23	5.01	53.46	7.33	54.66	5.10	57.03	10.76	60.56
16-Apr-13	7.69	58.84	3.73	53.81	3.94	53.66	4.35	54.13	5.05	53.42	7.40	54.59	5.08	57.05	10.87	60.45
15-May-13	7.51	59.02	3.64	53.90	3.82	53.78	4.22	54.26	4.90	53.57	7.30	54.69	5.00	57.13	10.82	60.50

Date	BH40b	
20-Mar-13	8.80	62.56
16-Apr-13	8.88	62.48
15-May-13	8.78	62.58

Locations of boreholes are marked on the attached plan.

Waterlevels within standpipe piezometers are expressed as depth below surface levels (first column) and as elevations above sealevel (second column). All values expressed in meters.

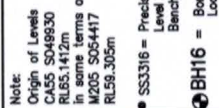
Waterlevels within pneumatic piezometers are expressed as head of water above piezometer tip (first column) and as elevations above sealevel (second column).

BH32 destroyed by Roading Contractors in June 2011.

The pneumatic piezometers in BH28b and BH31b ceased working in July 2012. Waterlevels will continue to be monitored by piezometers installed in these bores (refer to BH28a and BH31a).

The pneumatic piezometer in 25b1 ceased working in April 2013. Groundwater levels will continue to be monitored in BH25a (a standpipe piezometer).

As a result of fill activities the last monitoring round for BH1b was December 2012 with the decommission of this borehole undertaken in early January 2013. At this stage of operations, waterlevels within the quarry will continue to be monitored by BH2b and BH5b.



WHOLE LOCATION PLAN
AS AT 10-3-05

WINSTONE AGGREGATES LTD
THREE KINGS QUARRY

HARRISON
HARRISON



ASSOCIATION OF
CONSULTING ENGINEERS
NEW ZEALAND

ISO 9001
QUALITY
ASSURED

DATE	DESCRIPTION	AMOUNT	CHECK NO.	BANK	DATE	DESCRIPTION	AMOUNT	CHECK NO.	BANK
01/01/2017	BORIS HOL				01/01/2017	BORIS HOL			
01/01/2017	BORIS HOL				01/01/2017	BORIS HOL			