

6th September 2013

Auckland Council
Private Bag 92300
Auckland 1142

Attention: Naveen Kumar, Water Resources Section

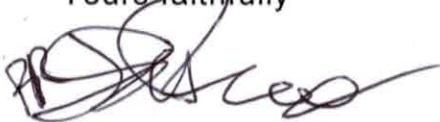
Re: Quarterly Report for Three Kings Quarry, Permit 12977

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 June 2013 to 31 August 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



WINSTONE
AGGREGATES

Three Kings Quarry – Permit No 12977

Groundwater Take To Dewater Three Kings Quarry

Quarterly Report

September 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 June 2013 to 31 August 2013.

THREE KINGS GROUNDWATER LEVEL RECORD SHEET

Date	BH 1B	BH 2B	BH 5B	BH 6A	BH 6B	BH 6C	BH 7	BH 10a					
18-Jun-13		0.26	34.99	33.82	44.97	38.51	40.28	42.90	35.89	27.54	41.07	29.75	51.01
17-Jul-13		0.00	35.25	33.08	45.71	38.20	40.59	42.53	36.26	28.23	40.38	29.4	51.36
20-Aug-13		0.90	34.35	32.68	45.99	38.54	40.25	43.33	35.46	28.56	40.05	29.86	50.90

Date	BH 10b	BH 11b	BH 12a	BH 12b	BH 13a	BH 13c	BH 16	BH 17								
18-Jun-13	8.1	72.66	7.11	72.88	21.06	51.17	4.81	67.32	13.04	59.13	7.05	66.36	48.72	51.42	42.99	34.89
17-Jul-13	8.1	72.66	7.54	72.45	20.78	51.45	5.01	67.12	12.99	59.18	7.08	66.33	48.27	51.87	42.63	35.25
20-Aug-13	8.1	72.66	7.55	72.44	21.18	51.05	5	67.13	14.49	57.68	7.07	66.34	48.59	51.55	43.51	34.37

Date	BH 18A	BH 18B	BH 19A	BH 19B	BH 20	BH 20a	BH 21	BH 22								
18-Jun-13	48.39	36.11	38.11	46.39	45.18	34.87	41.08	38.97	1.61	55.05	4.84	51.90	36.50	35.81	33.96	41.28
17-Jul-13	48.07	36.43	37.95	46.55	44.82	35.23	41.00	39.05	1.40	55.26	4.49	52.25	36.20	36.11	33.92	41.32
20-Aug-13	48.37	36.13	38.03	46.47	45.67	34.38	41.00	39.05	1.32	55.34	5.10	51.64	36.78	35.53	33.91	41.33

Date	BH 22a	BH 23	BH 23a	BH 24	BH 24a	BH 25	BH 25a	BH 25b1								
18-Jun-13	9.92	65.22	5.51	51.69	6.24	51.10	6.66	56.14	2.51	60.25	22.03	37.42	10.42	49.02		
17-Jul-13	9.74	65.40	5.54	51.66	6.05	51.29	6.48	56.32	2.50	60.26	21.94	37.51	10.07	49.37		
20-Aug-13	10.21	64.93	5.46	51.74	6.05	51.29	6.41	56.39	2.50	60.26	21.99	37.46	10.60	48.84		

Date	BH 25b2	BH 26	BH 26a	BH 27	BH 28a	BH 28b	BH 29	BH 30							
18-Jun-13	16.84	60.23	0.01	59.43	4.93	54.48	0.03	49.57	7.22	51.87		7.82	58.78	17.18	55.41
17-Jul-13	11.21	54.60	0.01	59.43	5.05	54.36	0.01	49.59	7.27	51.92		7.80	58.80	17.47	55.70
20-Aug-13	9.04	52.43	0.01	59.43	5.30	54.11	0.01	49.59	7.25	51.90		7.76	58.84	17.26	55.49

Date	BH 31a	BH 31b	BH 32	BH 33	BH 34	BH 35a	BH 35b	BH 36a					
18-Jun-13	17.15	50.74											
17-Jul-13	15.34	48.93		1.72	58.55	9.13	49.62	17.86	48.40	10.91	55.35	7.25	59.28
20-Aug-13	15.44	49.03		1.68	58.59	8.84	49.91	17.66	48.60	10.77	55.49	7.23	59.30
				1.83	58.44	9.39	49.36	17.79	48.47	10.73	55.53	7.34	59.19

Date	BH 36b	BH 37a	BH 37b	BH 38a	BH 38b	BH 39a	BH 39b	BH 40a								
18-Jun-13	7.22	59.31	3.63	53.91	3.77	53.83	4.22	54.26	4.73	53.74	7.32	54.67	4.87	57.26	10.76	60.56
17-Jul-13	7.20	59.33	3.46	54.08	3.60	54.00	4.01	54.47	4.72	53.75	7.17	54.82	4.80	57.33	10.56	60.76
20-Aug-13	7.32	59.21	3.54	54.00	3.70	53.90	4.06	54.42	4.82	53.65	7.28	54.71	4.84	57.29	10.58	60.74

Date	BH 40b
18-Jun-13	8.74
17-Jul-13	8.49
20-Aug-13	8.58

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 seallevel (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 seallevel (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. Waterlevels will continue to be monitored by piezometers installed in these bores (refer to 25b2).

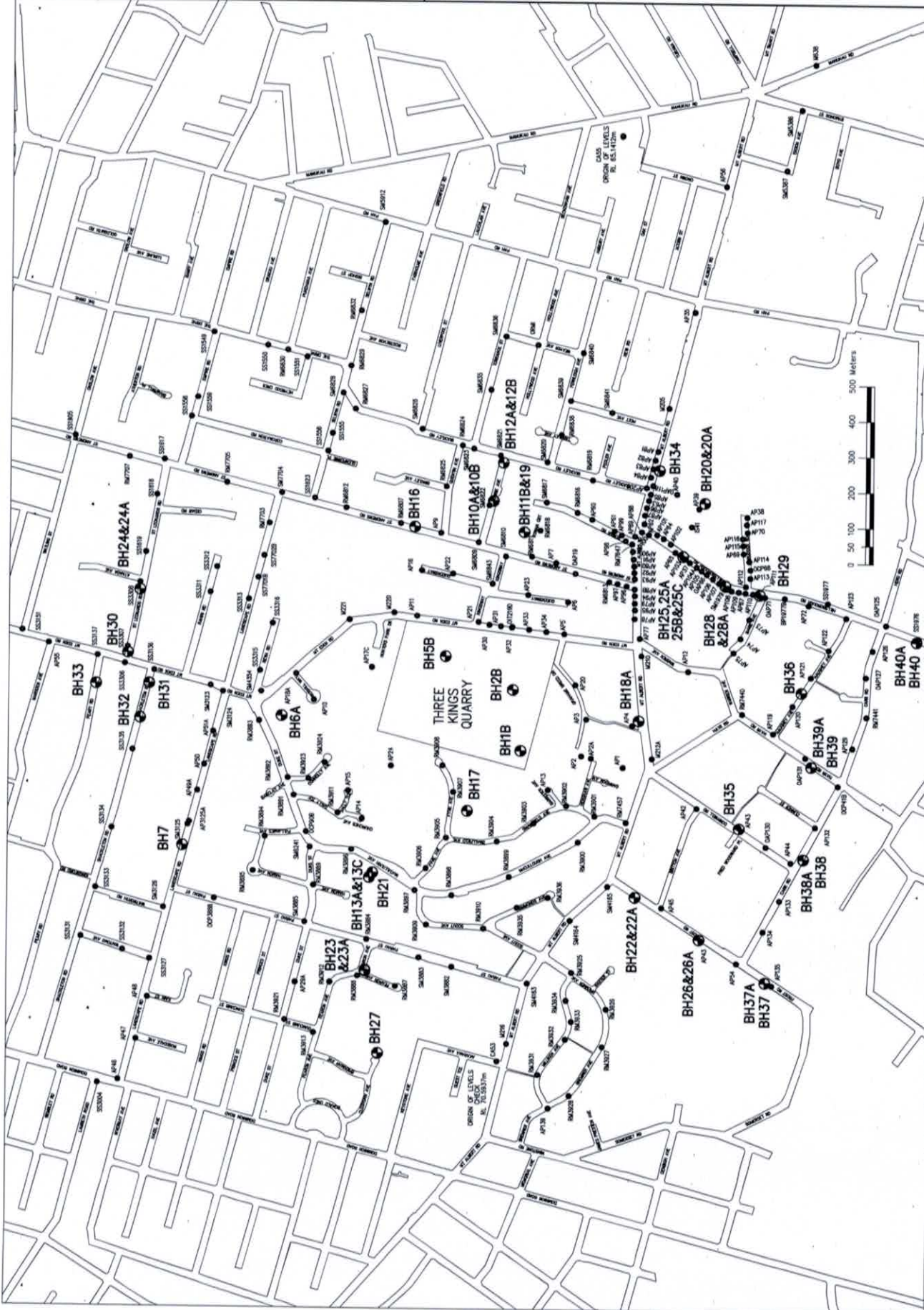
As a result of fill activities the last monitoring round for BH1b was December 2012 with the decommission of this borehole undertaken in early January 2013. At this stage of operations, waterlevels within the quarry will continue to be monitored by BH2b and BH5b.



Note:
 Origin of Levels
 CAS5 5046930
 RL65,1412m
 in same terms as
 M205 5054417
 RL59,305m

SS3316 = Precise
 Level Survey
 Benchmarks

BH16 = Borehole
 Location



DATE PLOTTED	11/03/2004
SCALE	AS SHOWN
PROJECT NO.	6451-100
DRAWING NO.	6451-100

TITLE: **BOREHOLE LOCATION PLAN**
 AS AT 10-3-05

PROJECT: **WINSTONE AGGREGATES LTD**
THREE KINGS QUARRY

CONSULTANT: **HARRISON GRIFFIN**
 CONSULTING ENGINEERS SURVEYORS PLANNERS
 Level 1, Capital House, 28 Auckland Way, Morningside, Auckland City, New Zealand. Tel: 09 308 3299

ASSOCIATION OF CONSULTING ENGINEERS NEW ZEALAND
 THE ENGINEERING COUNCIL OF NEW ZEALAND
 THE INSTITUTION OF PROFESSIONAL SURVEYORS
 THE INSTITUTION OF PROFESSIONAL PLANNERS

NO.	DATE	BY	DESCRIPTION
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