

2nd September 2014

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 2014 to 31 August 2014.

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

September 2014

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 2014 to 31 August 2014.

THREE KINGS GROUNDWATER LEVEL RECORD SHEET

Date	BH 2B	BH 5B	BH 6A	BH 6B	BH 6C	BH 7	BH 10a	BH 10b
18-Jun-14	1.03	34.22	34.21	34.12	39.88	28.56	29.86	50.90
15-Jul-14	1.03	34.22	34.19	33.73	39.97	28.22	29.8	50.96
19-Aug-14	1.10	34.15	34.21	33.57	39.95	28.64	29.87	50.89
19-Aug-14	1.10	34.15	34.21	33.57	39.95	28.64	29.87	50.89

Date	BH 11b	BH 12a	BH 12b	BH 13a	BH 13c	BH 16	BH 17	BH 18A
18-Jun-14	7.52	72.47	21.82	50.41	54.96	49.49	50.65	34.18
15-Jul-14	7.46	72.53	21.29	50.94	57.52	49.1	51.04	34.18
19-Aug-14	7.52	72.47	21.23	51.00	57.88	48.84	51.30	34.11
19-Aug-14	7.52	72.47	21.23	51.00	57.88	48.84	51.30	34.11

Date	BH 18B	BH 19A	BH 19B	BH 20	BH 20a	BH 21	BH 22	BH 22a
18-Jun-14	38.92	45.58	45.8	34.25	41.00	39.05	39.05	50.60
15-Jul-14	39.16	45.34	45.82	34.23	41.10	38.95	37.11	24.64
19-Aug-14	39.16	45.34	45.86	34.19	41.05	39.00	37.08	24.67
19-Aug-14	39.16	45.34	45.86	34.19	41.05	39.00	37.18	24.71

Date	BH 23	BH 23a	BH 24	BH 24a	BH 25	BH 25a	BH 26	BH 26a
18-Jun-14	5.53	51.67	6.4	50.94	6.90	55.90	22.46	36.99
15-Jul-14	5.52	51.68	6.29	51.05	6.77	56.03	22.36	37.09
19-Aug-14	5.55	51.65	6.25	51.09	6.62	56.18	22.60	36.85
19-Aug-14	5.55	51.65	6.25	51.09	6.62	56.18	22.60	36.85

Date	BH 27	BH 28a	BH 29	BH 30	BH 33	BH 34	BH 35a	BH 35b
18-Jun-14	0.05	49.55	6.98	51.63	7.95	58.65	16.62	16.91
15-Jul-14	0.05	49.55	7.12	51.77	7.85	58.75	16.91	17.02
19-Aug-14	0.01	49.59	7.18	51.83	7.80	58.80	17.02	17.02
19-Aug-14	0.01	49.59	7.18	51.83	7.80	58.80	17.02	17.02

Date	BH 36a	BH 36b	BH 37a	BH 37b	BH 38a	BH 38b	BH 39a	BH 39b
18-Jun-14	7.50	59.03	7.48	59.05	3.71	53.83	3.86	53.74
15-Jul-14	7.36	59.17	7.33	59.20	3.66	53.88	3.78	53.82
19-Aug-14	7.34	59.19	7.31	59.22	3.60	53.94	3.80	53.80
19-Aug-14	7.34	59.19	7.31	59.22	3.60	53.94	3.80	53.80

Date	BH 40a	BH 40b
18-Jun-14	10.77	60.55
15-Jul-14	10.70	60.62
19-Aug-14	10.69	60.63
19-Aug-14	10.69	60.63

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 piezometer in BH28b stopped producing reliable results and monitoring ceased in July 2012. Waterlevels have continued to be monitored by the piezometer installed in BH28a.

The pneumatic piezometers BH25b1 and BH25b2 stopped producing reliable results and monitoring of these ceased in April 2013 and November 2013, respectively. Waterlevels have continued to be monitored by the standpipe piezometer BH25.

The pneumatic piezometers 31a and 31b stopped producing reliable result and monitoring of these ceased in January 2014 and July 2012, respectively. Waterlevels have continued to be monitored by the standpipe piezometer BH33.

