

1<sup>st</sup> December 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 September 2014 to 30 November 2014.

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

**December 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 September 2014 to 30 November 2014.

THREE KINGS GROUNDWATER LEVEL RECORD SHEET

Date	BH 2B	BH 5B	BH 6A	BH6B	BH 6C	BH 7	BH 10a	BH 10b
16-Sep-14	0.30	34.95	33.16	38.35	40.44	35.94	29.42	51.34
15-Oct-14	0.00	35.25	32.55	38.12	42.58	36.21	29.37	51.39
18-Nov-14	0.59	34.66	32.52	38.34	43.09	35.70	29.66	51.10

  

Date	BH 11b	BH 12a	BH 12b	BH 13a	BH13c	BH 16	BH 17	BH 18a
16-Sep-14	7.52	72.47	20.82	12.84	7.07	66.34	43.00	34.88
15-Oct-14	7.52	72.47	20.81	13.47	7.08	66.33	42.69	35.19
18-Nov-14	7.52	72.47	21.04	14.53	7.08	66.33	43.28	34.60

  

Date	BH 18B	BH 19A	BH 19B	BH 20	BH 20a	BH 21	BH 22	BH 22a
16-Sep-14	38.42	46.08	45.13	1.28	4.50	36.58	24.74	50.50
15-Oct-14	38	46.50	44.81	1.20	4.55	36.22	24.77	50.47
18-Nov-14	38.2	46.30	45.39	1.30	5.05	36.58	24.70	50.54

  

Date	BH 23	BH 23a	BH 24	BH 24a	BH 25	BH 25a	BH 26	BH 26a
16-Sep-14	5.45	51.75	6.03	2.52	22.21	10.13	0.00	59.44
15-Oct-14	5.45	51.75	5.95	2.52	22.04	10.02	0.02	59.42
18-Nov-14	5.38	51.82	5.98	2.52	21.97	10.85	0.10	59.34

  

Date	BH 27	BH28a	BH29	BH30	BH33	BH34	BH35a	BH35b
16-Sep-14	0.01	49.59	7.35	17.57	1.28	58.99	8.93	49.82
15-Oct-14	0.01	49.59	7.41	17.46	1.24	59.03	8.88	49.87
18-Nov-14	0.01	49.59	7.36	17.36	1.27	59.00	9.42	49.33

  

Date	BH36a	BH36b	BH37a	BH37b	BH38a	BH38b	BH39a	BH39b
16-Sep-14	7.20	59.33	7.18	59.35	3.89	53.87	4.74	54.72
15-Oct-14	7.23	59.30	7.21	59.32	3.95	53.91	4.73	54.76
18-Nov-14	7.31	59.22	7.28	59.25	4.07	53.84	4.81	54.68

  

Date	BH40a	BH40b
16-Sep-14	10.62	60.70
15-Oct-14	10.55	60.77
18-Nov-14	10.58	60.74

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 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.



Note:  
 Origin of Levels  
 CAS5 5049830  
 RL65.1417m  
 in same terms as  
 M205 5054417  
 RL59.305m

● SS3316 = Precise  
 Level Survey  
 Benchmarks

⊕ BH16 = Borehole  
 Location



PROJECT NO:	1.130/00451
DRAWING NO:	6451-100
SCALE:	A1: 1:5000 A3: 1:10000
REV:	B

BOREHOLE LOCATION PLAN  
 AS AT 10-3-05

WINSTONE AGGREGATES LTD  
 THREE KINGS QUARRY

HARRISON  
 GRIERSON  
 SURVEYORS  
 CONSULTING ENGINEERS SURVEYORS PLANNERS  
 Level 3 Duga House, 20 Avonway Way, Newmarket City Centre, PO Box 946, Auckland, New Zealand

ASSOCIATION OF  
 CONSULTING ENGINEERS  
 NEW ZEALAND

NO	DATE	BY	APP'D	DATE
1	10/05/05	MD	MD	10/05/05
2	10/05/05	MD	MD	10/05/05