



WINSTONE
AGGREGATES

Three Kings Quarry – Permit No 12977

Groundwater Take To Dewater Three Kings Quarry

Quarterly Report

December 2008

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 the 1st September to 30th November 2008.

THREE KINGS GROUNDWATER LEVEL RECORD SHEET

Date	BH 1B	BH 2B	BH 5B	BH 6A	BH 6B	BH 6C	BH 7	BH 10a
17-Sep-08	9.83	36.39	42.53	31.69	37.63	41.16	36.83	29.13
15-Oct-08	10.57	35.65	43.28	32.24	38.13	40.66	36.11	28.48
19-Nov-08	11.27	34.95	43.98	32.78	38.60	40.19	35.45	28.63
								29.82
								29.53
								29.82
								50.94
Date	BH 10b	BH 11b	BH 12a	BH 12b	BH 13a	BH 13c	BH 16	BH 17
17-Sep-08	8.08	72.68	72.45	72.45	5.01	62.35	48.03	42.16
15-Oct-08	8.08	72.68	72.45	72.45	5.02	59.08	48.38	42.92
19-Nov-08	8.08	72.68	72.44	72.44	5.19	56.55	48.69	43.62
								34.26
Date	BH 18A	BH 18B	BH 19A	BH 19B	BH 20	BH 20a	BH 21	BH 22
17-Sep-08	47.27	37.23	44.26	47.03	38.51	4.30	52.44	38.07
15-Oct-08	47.71	36.79	45.00	46.81	38.60	4.93	51.81	37.48
19-Nov-08	48.41	36.09	45.70	46.53	38.60	5.45	51.29	36.94
								33.96
								33.96
								41.28
Date	BH 22a	BH 23	BH 23a	BH 24	BH 24a	BH 25	BH 25a	BH 25b1
17-Sep-08	9.53	65.61	6.28	51.71	6.33	56.47	1.21	61.55
15-Oct-08	10.01	65.13	6.24	51.74	6.37	56.43	1.24	61.52
19-Nov-08	10.28	64.86	6.21	51.72	6.49	56.31	1.28	61.48
								22.03
								37.42
								11.59
								47.85
								10.08
								48.97
Date	BH 25b2	BH 26	BH 26a	BH 27	BH 28a	BH 28b	BH 29	BH 30
17-Sep-08	8.26	51.65	0.35	59.09	5.06	54.35	0.01	49.59
15-Oct-08	7.41	50.80	0.33	59.11	5.13	54.28	0.01	49.59
19-Nov-08	8.40	51.79	0.33	59.11	5.17	54.24	0.01	49.59
								6.39
								51.04
								8.43
								58.17
								16.99
								55.22
Date	BH 31a	BH 31b	BH 32	BH 33	BH 34	BH 35a	BH 35b	BH 36a
17-Sep-08	15.09	48.68	12.4	49.69	12.4	49.69	1.31	55.69
15-Oct-08	15.36	48.95	12.87	50.16	12.87	50.16	1.23	55.24
19-Nov-08	15.09	48.68	12.72	50.01	12.72	50.01	1.18	54.84
								3.82
								49.40
								17.05
								49.21
								55.43
								7.57
								58.96
Date	BH 36b	BH 37a	BH 37b	BH 38a	BH 38b	BH 39a	BH 39b	BH 40a
17-Sep-08	7.24	59.29	3.46	54.08	3.46	54.08	3.63	53.97
15-Oct-08	7.42	59.11	3.52	54.02	3.64	53.96	4.11	54.37
19-Nov-08	7.51	59.02	3.56	53.98	3.75	53.85	4.16	54.32
								4.87
								4.81
								53.66
								6.92
								55.07
								4.79
								57.34
								10.68
								60.64
								10.72
								60.60
Date	BH 40b							
17-Sep-08	8.51	62.85						
15-Oct-08	8.46	62.90						
19-Nov-08	8.55	62.81						

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).

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



Note:
 Origin of Levels
 RL53.5049930
 RL63.1412m
 In M205 5054417 as
 RL59.3050m

● SS3316 = Precise
 Leveling Survey
 Benchmarks
 ● BH16 = Borehole
 Location



PROJECT NO.	6451-100
DATE	10/3/05
SCALE	AS SHOWN
BY	...
CHECKED	...
APPROVED	...

BOREHOLE LOCATION PLAN
 AS AT 10-3-05

WINSTONE AGGREGATES LTD
 THREE KINGS QUARRY

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ASSOCIATION OF
 CONSULTING ENGINEERS
 NEW ZEALAND
 REGISTERED
 ENGINEERS

NO.	DATE	DESCRIPTION
1	10/3/05	ISSUED FOR TENDERS
2	10/3/05	ISSUED FOR TENDERS
3	10/3/05	ISSUED FOR TENDERS
4	10/3/05	ISSUED FOR TENDERS
5	10/3/05	ISSUED FOR TENDERS
6	10/3/05	ISSUED FOR TENDERS
7	10/3/05	ISSUED FOR TENDERS
8	10/3/05	ISSUED FOR TENDERS
9	10/3/05	ISSUED FOR TENDERS
10	10/3/05	ISSUED FOR TENDERS