Annexure 2

Monitoring Data and Reports

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Available in colour on the project CD

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Table A2-1
2012 Groundwater Levels*

Bore	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CQ1				18.81	18.93	18.72	18.85	18.99	19.22	12.62	17.06	19.03
CQ3	9.97	9.85	9.91	9.91	10.06	9.91	10.07	10.22	10.31	10.74	10.39	10.32
CQ4	9.31	9.23	9.15	9.14	9.37	9.28	9.48	9.80	10.22	10.34	10.60	10.87
CQ5	5.51	5.26	5.33	5.23	5.75	5.50	5.93	6.44	6.99	7.27	7.67	8.00
CQ6	9.88	9.81	9.99	9.89	10.20	9.98	10.19	10.47	10.84	11.02	11.35	11.60
CQ7	5.67	5.66	5.91	5.81	6.11	5.86	6.08	6.41	6.64	6.84	7.01	7.12
CQ8	5.98	5.04	5.22	5.11	5.40		5.40	5.68	6.02	6.20	6.47	6.79
CQ9	8.48	8.45	8.70	8.64	8.82	8.64	8.78	9.06	9.20	9.28	9.34	9.28
CQ10	21.54	21.48	21.48	21.46	21.65	21.45	21.47	21.73	20.99	21.96	22.01	22.04
CQ11S	9.08	8.75	8.72	8.68	8.97	8.92	9.13	9.56	10.85	9.29	10.66	10.99
CQ11D	10.30	10.06	9.86	9.98	10.26	10.20	10.42	10.86	11.44	11.50	11.89	12.15
CQ12	3.46	3.40	3.49	3.47	3.88	3.56	3.85	4.17	4.47	4.65	5.03	5.24
CQ13	11.56	11.05	11.15	11.02	11.59	11.60	11.77	12.44	13.05	13.30	13.55	14.10
CP3	7.54	7.49	7.43	8.97	7.13	7.00	7.25	7.7	8.98	8.45	8.97	9.39
CP4	6.78	4.04	5.38	5.02	8.09	7.95	8.68	9.42	10.94	10.49	10.81	11.3
CP5	5.56	4.98	4.87	4.85	5.45	14.11	5.95	6.67	7.23	8.07	8.51	9.09
CP6	7.92	7.41	7.31	7.7	7.88	13.83	8.18	9.75	10.27	10.36	11.24	11.21
CP7	1.28	0.67	1.26	1.17	1.56	1.45	1.88	2.43	2.92	3.48	4.05	4.27
CP8					16.68				19.84			
MW7	14.33		14.26	14.31	14.92	14.24	14.66	15.37	15.9	16.32	16.77	17.02
MW8	6.17	5.87	5.83	5.98	6.39	6.15	6.45	6.68	7.39	7.56	7.82	8.12
MW9	21.08	21.1	21.04	21.04	24.53	20.94	21.00	21.13	21.43	21.36	21.43	21.49
MW10	11.15	11.43	11.18	11.61	11.79	11.04	11.29	10.63	12.03	12.61	13.3	13.75
MW13	7.34	7.27	7.4	7.36	7.64	7.44	7.65	7.89	8.1	8.21	8.32	8.37
MW16	7.88	7.89	8.08	8.02	8.3	8.03	8.25	8.53	8.78	8.91	9.02	9.06

* Recorded depth to water table from the top of the bore's collar — NR = Not required by resident

Source: Carbon Based Environmental

Table A2-2
2012 Groundwater Quality

Bore	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
pH												
CQ1				7.8	8.2	12.0	10.5	10.9	9.9	7.7	6.5	5.5
CQ3	6.2	6.7	6.5	6.8	7.0	7.4	6.3	6.0	6.1	5.6	5.8	5.5
CQ4	4.9	4.9	5.5	5.5	5.5	4.5	4.6	4.8	4.7	4.9	4.2	4.2
CQ5	4.8	4.7	5.1	5.1	5.2	4.2	4.4	4.5	4.1	4.4	3.6	3.8
CQ6	4.6	4.8	5.1	5.1	5.1	4.0	4.3	4.3	4.2	4.5	3.6	3.8
CQ7	5.4	5.1	5.3	5.3	5.3	4.3	4.5	4.9	4.4	4.6	3.9	4.1
CQ8	4.7	4.6	5.7	5.4	5.1		4.4	4.5	4.3	4.6	3.8	3.9
CQ9	4.8	5.0	5.2	5.2	5.2	4.2	4.3	4.4	4.3	4.7	3.6	4.0
CQ10	5.1	5.8	5.0	5.2	5.5	4.7	4.1	4.3	4.0	4.5	4.6	4.9
CQ11S	4.7	4.6	4.7	5.0	5.3	4.2	4.0	4.9	4.4	4.4	3.9	4.0
CQ11D	4.9	5.0	4.9	5.2	5.6	4.5	4.5	4.9	4.7	4.9	4.3	4.1
CQ12	4.6	4.6	4.3	4.7	5.2		4.2	4.5	4.2	4.6	3.8	3.9
CQ13	5.3	4.9	5.0	5.5	6.0	4.7	5.0	4.8	4.8	4.9	4.3	4.1
CP3	4.8	4.8	4.9	5.1	5.4	4.0	4.7	4.8	4.7	4.3	4.1	4.0
CP4	5.2	4.4	5.0	5.4	5.8	4.8	5.2	4.7	5.0	5.2	4.5	4.4
CP5	5.3	4.6	4.6	4.7	4.8	4.0	4.5	4.4	4.2	4.4	4.0	3.9
CP6	4.7	4.4	4.4	4.7	4.9	4.0	4.2	4.2	4.3	4.3	3.9	3.8
CP7	5.9	6.3	6.3	5.7	5.2	4.4	4.8	4.8	4.6	4.6	4.3	4.2
CP8					5.2				4.1			
MW7	4.8	4.7	5.0	5.1	5.2	4.6	4.1	4.5	4.4	4.1	4.2	4.1
MW8	4.9	4.7	5.0	5.0	5.0	4.5	4.1	4.6	4.6	4.6	4.3	4.1
MW9	4.9	4.8	4.9	5.1	5.4	4.2	4.2	4.4	4.5	4.5	4.3	4.0
MW10	4.6	4.5	4.4	4.7	5.0	4.1	3.9	4.4	4.2	4.3	4.1	3.8
MW13	4.7	4.6	4.7	4.8	5.0	4.2	4.1	4.4	4.7	4.3	4.2	4.0
MW16	4.8	4.5	4.6	4.9	5.2	4.3	4.0	4.5	4.4	4.6	4.4	3.9
Electrical Conductivity (µS/cm)												
CQ1				150	160	762	262	226	182	82	77.6	103
CQ3	100	150	110	120	110	120	117	125	116	108	110	113
CQ4	80	120	80	80	70	81	81	81	79	80	87	91
CQ5	130	180	130	130	130	132	134	148	184	182	185	188
CQ6	180	240	180	190	190	204	202	206	206	215	215	220
CQ7	90	200	90	90	90	75	97	97	98	98	98	101
CQ8	150	200	140	140	140		148	146	146	149	152	154
CQ9	100	140	100	100	100	111	106	109	109	107	109	111
CQ10	160	220	180	160	120	169	169	170	168	171	168	187
CQ11S	160	210	160	160	150	162	163	165	166	163	164	169
CQ11D	140	190	150	140	140	150	150	150	149	151	154	159
CQ12	130	180	140	130	130		136	134	133	135	131	127
CQ13	190	330	200	190	190	204	203	205	204	206	212	226
CP3	140	200	150	140	140	135	146	150	151	150	156	160
CP4	170	300	180	180	170	178	174	171	166	163	167	212
CP5	240	320	190	240	200	256	238	248	247	248	211	257
CP6	190	320	200	200	200	203	198	200	203	201	204	202
CP7	210	370	240	230	220	223	219	228	221	217	201	182
CP8					140				145			
MW7	110	150	110	100	110	109	109	109	110	113	113	122
MW8	80	120	90	80	80	81	81	81	82	84	82	108
MW9	80	1150	80	80	80	85	85	85	85	87	87	91
MW10	120	170	130	120	120	120	122	120	121	122	125	128
MW13	100	140	100	100	90	94	94	94	95	99	100	105
MW16	110	150	110	110	110	111	111	109	107	108	111	114

Table A2-3
2006 to 2012 Surface Water Monitoring Results*

Site	A (Dam below F)					B					C					D					E					F				
Parameter	pH	EC	TDS	TSS	Oil & Grease	pH	EC	TDS	TSS	Oil & Grease	pH	EC	TDS	TSS	Oil & Grease	pH	EC	TDS	TSS	Oil & Grease	pH	EC	TDS	TSS	Oil & Grease	pH	EC	TDS	TSS	Oil & Grease
Date sampled																														
01/05/2006	5.70	89		<1	<5																					7.66	98		2	<5
02/06/2006	5.13	98		2	<5																					6.67	93		7	<5
03/07/2006	5.00	87		2	<5																					5.55	84		1	<5
02/08/2006	5.35	97		<1	<5																					6.32	93		2	<5
04/09/2006	5.24	95		2	<5																					5.11	95		2	<5
03/10/2006	5.18	96		8	<5																					6.64	96		13	<5
01/11/2006	5.24	101		4	<5																					6.38	91		5	<5
01/12/2006	5.31	105		5	<5																					5.44	94		4	7
03/01/2007	4.99	96		3	<5																					5.58	90		9	<5
02/02/2007	5.31	98		2	<5																					5.13	101		2	<5
01/03/2007	4.89	86	55	24	<5																					5.34	85	70	9	<5
03/04/2007	5.11	93		2	<5																					5.32	92		3	<5
10/05/2007	5.38	83		6	<5																					5.78	85		8	<5
01/06/2007	5.13	91	51	5	<5																					4.95	94	52	3	<5
02/07/2007	6.12	74	49	31	<5																					6.40	74	35	51	<5
02/08/2007	4.87	60	25	15	<5																					5.15	59	30	19	<5
04/09/2007	7.23	57	38	20	<5																					7.69	56	37	26	<5
03/10/2007	6.10	57	44	5	<5																					6.60	61	48	8	<5
01/11/2007	5.58	69	48	10	5																					5.92	80	43	3	<5
03/12/2007	5.01	70	58	17	<5																					5.83	65	68	33	<5
02/01/2008	6.31	61	50	14	<5																					6.68	64	56	6	<5
31/01/2008	5.89	72	52	8	<5																					5.93	73	57	7	<5
29/02/2008	6.09	68	55	11	<5																					6.51	77	59	25	<5
01/04/2008	5.27	57	44	8	6																					5.34	57	44	104	<5
01/05/2008	5.49	57	74	46	<5																					5.70	56	89	64	<5
02/06/2008	6.79	59	47	17	<5																					7.91	59	66	17	<5
02/07/2008	5.77	58	38	19	<5																					6.52	58	42	10	<5
01/08/2008	7.25	62	38	11	<5	7.33	79	74	3	<5						5.82	98	54	1	<5						5.68	64	38	13	<5
01/09/2008	7.37	77	40	5	<5	7.06	81	65	2	<5	6.62	110	53	<1	<5	6.27	107	65	8	<5						6.43	67	47	4	<5
02/10/2008	6.47	66	46	8	<5						6.06	112	56	<1	<5											5.97	67	49	8	<5
03/11/2008	6.01	63	44	2	<5											5.68	101	61	1	<5						5.55	65	49	5	<5
02/12/2008	6.80	57	54	2	<5						6.08	98	62	1	<5											5.60	64	59	8	<5

Samples collected as wet weather samples (daily rainfall >50mm)

Results assembled by Carbon Based Environmental Pty

Table A2-3 (Cont'd)
2006 to 2012 Surface Water Monitoring Results*

Site	A (Dam below F)					B					C					D					E					F				
Parameter	pH	EC	TDS	TSS	Oil & Grease	pH	EC	TDS	TSS	Oil & Grease	pH	EC	TDS	TSS	Oil & Grease	pH	EC	TDS	TSS	Oil & Grease	pH	EC	TDS	TSS	Oil & Grease	pH	EC	TDS	TSS	Oil & Grease
Date sampled																														
06/01/2009	6.61	67	46	4	<5						5.93	94	58	1	<5											5.54	66	45	3	<5
04/02/2009	6.72	169	42	6	13						5.98	221	48	1	<5											5.68	171	42	<1	<5
05/03/2009	5.47	66	55	10	<5						5.55	92	66	5	<5											5.39	62	45	8	<5
02/04/2009	5.42	66	46	4	<5	6.51	76	68	55	<5	6.24	83	59	18	<5	6.12	55	62	60	<5						8.80	71	46	12	<5
01/05/2009	5.85	65	34	<2	<5						5.83	98	58	<1	<5	5.52	107	67	<1	<5						5.93	61	41	<2	<5
01/06/2009	5.83	65	54	9	<5	6.31	82	67	4	<5	5.57	98	68	2	<5	5.21	92	166	<1	<5						8.92	60	50	8	<5
01/07/2009	5.43	67	45	5	<5	6.41	87	65	10	<5	5.47	100	68	2	<5	5.13	96	70	2	<5						5.89	62	42	8	<5
03/08/2009	7.43	67	58	3	<5	7.06	83	71	4	<5	6.41	93	74	2	<5	5.37	102	90	2	<5						5.53	63	54	5	<5
01/09/2009	5.25	70	40	4	<5						5.23	106	51	3	<5											5.75	71	48	6	<5
01/10/2009	5.16	77	48	3	<5						5.56	99	56	12	<5											5.48	70	34	12	<5
02/11/2009	7.38	77	90	4	<5						7.06	102	91	<1	<5	5.49	137	114	4	<5						5.19	79	77	6	<5
01/12/2009	5.28	86	67	5	<5						6.29	116	75	7	<5											5.59	82	56	5	<5
29/12/2009	5.38	80	68	10	<5						5.77	101	69	2	<5	4.95	137	114	6	<5						5.89	78	61	4	<5
28/01/2010	8.02	81	62	1	<5						7.80	106	68	16	<5											7.84	83	65	<1	<5
01/03/2010	5.34	78	50	<1	<5						6.44	118	61	3	<5	4.51	194	104	25	<5						5.37	77	50	2	<5
01/04/2010	5.56	80	55	6	8						6.29	102	93	8	6	5.03	118	101	4	5						5.52	78	56	3	5
03/05/2010	5.62	89	49	3	<5						6.25	109	69	7	<5	5.44	188	123	5	<5						5.49	88	58	2	<5
02/06/2010	4.96	77	66	4	<5						6.06	98	64	12	<5	4.98	105	80	1	<5						5.40	79	52	7	<5
02/07/2010	5.22	77	44	3	<5						5.81	105	53	4	<5	5.11	128	74	1	<5						5.78	84	80	5	<5
02/08/2010	5.13	75	64	2	<5						6.04	103	68	3	<5	5.05	146	104	<1	<5						5.61	72	64	2	<5
01/09/2010	4.97	85	69	5	<5						5.43	115	87	4	<5											5.80	92	52	4	<5
01/10/2010	5.23	98	89	6	<5						6.40	105	99	16	<5											6.23	81	78	2	<5
01/11/2010	5.76	82	60	10	<5						7.53	103	82	12	<5											5.86	77	43	10	<5
01/12/2010	5.68	74	57	6	<5	5.94	73	101	17	<5						5.48	88	57	8	<5						5.69	73	38	<5	<5
30/12/2010	5.54	87	66	5	<5																					5.58	86	50	<5	<5
31/01/2011	5.73	79	57	7	<5																					4.82	85	42	<5	<5
01/03/2011	5.79	80	48	<5	<5																					4.6	86	49	<5	<5
01/04/2011					<5											4.98	156	112	6	<5						4.75	90	37	24	<5
02/05/2011	5.5	74	31	<5	<5											5.25	90	64	<5	<5						5.3	73	49	12	<5
01/06/2011	6.46	73	57	14	<5	6.58	98	90	12	<5						6.29	78	84	<5	<5						5.83	65	55	26	<5
30/06/2011	5.42	80	52	6	<5											5.16	92	61	<5	<5						5.73	70	53	7	<5
01/08/2011	5.53	72	45	8	<5											5.25	91	68	<5	<5						5.84	65	54	11	<5
31/08/2011	5.34	67	42	9	<5											5.18	91	54	<5	<5						5.32	65	38	8	<5
30/09/2011	5.15	76	46	6	<5											5.14	82	65	<5	<5						5.26	67	44	10	<5
31/10/2011	5.6	73	38	<5	<5											5.76	100	75	<5	<5						5.35	70	54	10	<5
01/12/2011	5.97	68	55	6	<5											5.74	88	72	<5	<5						5.64	74	54	10	<5
29/12/2011	6.07	65	42	<5	<5	6.81	125	65	<5	<5						5.88	92	46	<5	<5						5.79	65	52	<5	<5

Samples collected as wet weather samples (daily rainfall >50mm)

Results assembled by Carbon Based Environmental Pty Limited

Table A2-3 (Cont'd)
2006 to 2012 Surface Water Monitoring Results*

Site	A (Dam below F)					B					C					D					E					F				
Parameter	pH	EC	TDS	TSS	Oil & Grease	pH	EC	TDS	TSS	Oil & Grease	pH	EC	TDS	TSS	Oil & Grease	pH	EC	TDS	TSS	Oil & Grease	pH	EC	TDS	TSS	Oil & Grease	pH	EC	TDS	TSS	Oil & Grease
Date sampled																														
30/01/2012	5.88	59	93	14	<5											5.8	84	111	8	<5						5.65	62	54	5	<5
02/03/2012	5.66	50	58	10	<5	6.73	82	80	6	<5						6.74	49	70	40	<5						5.98	70	49	48	<5
02/04/2012	5.8	54	41	6	<5											5.89	84	63	94	<5						5.82	53	38	8	<5
02/05/2012	6.19	51	32	6	<5	6.66	70	46	<5	<5						5.96	85	59	18	<5						6.16	58	38	10	<5
31/05/2012	5.83	56	32	8	<5											5.66	105	64	5	<5						5.97	61	36	5	<5
02/07/2012	5.85	57	32	<5	<5	6.53	69	46	<5	<5						5.8	86	53	<5	<5						5.88	54	34	<5	<5
02/08/2012	5.91	59	32	11	<5	6.59	69	42	14	<5						5.74	97	48	15	<5						7.47	55	26	12	<5
03/09/2012	6.1	91	51	5	<5																					6.22	56	40	5	<5
02/10/2012	5.69	65	52	6	<5																					5.68	60	43	<5	<5
31/10/2012	6.8	71	52	14	<5																					6.83	62	38	<5	5
29/11/2012	6.75	76	62	7	<5																					6.49	65	43	<5	<5
02/01/2013	6.21	69	37	<5	<5																					6.31	62	38	5	<5

Samples collected as wet weather samples (daily rainfall >50mm)

Results assembled by Carbon Based Environmental Pty Limited

Figure A2-1
2007 to 2012 Surface Water pH

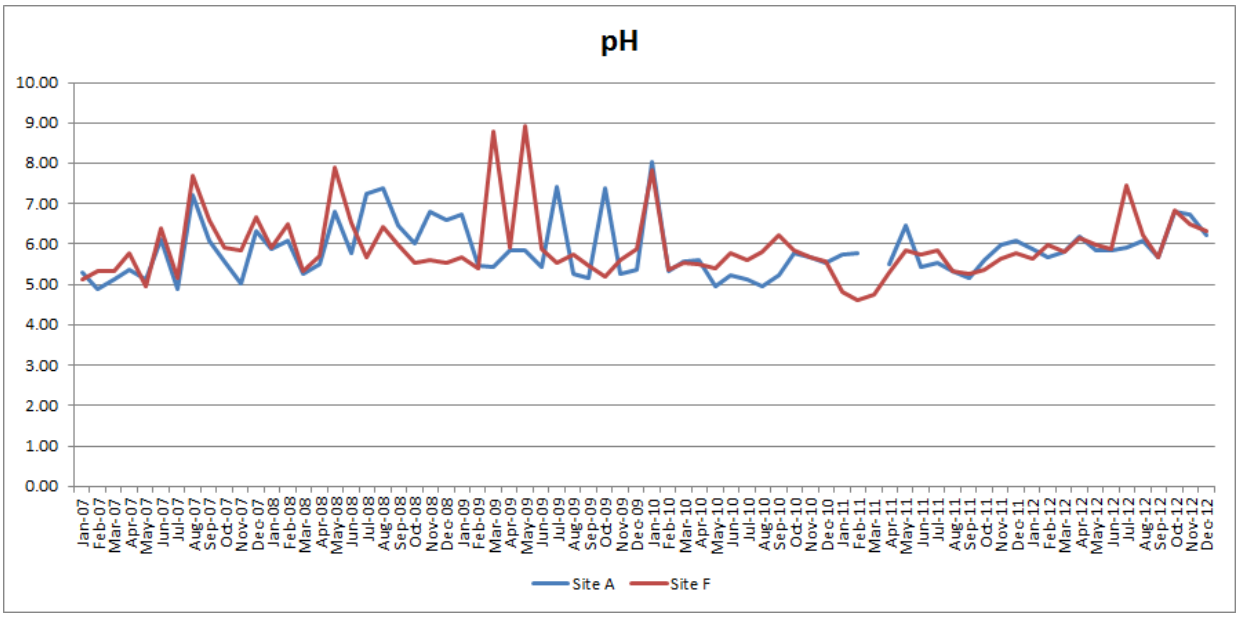


Figure A2-2
2007 to 2012 Surface Water Electrical Conductivity

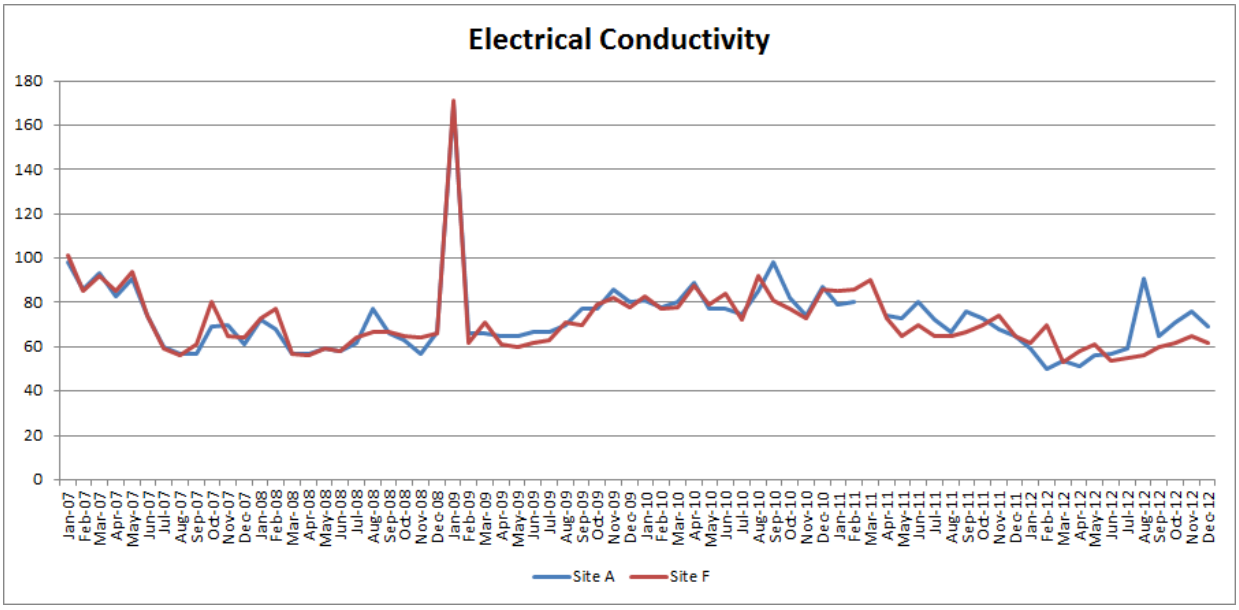


Figure A2-3
2007 to 2012 Surface Water Total Dissolved Solids

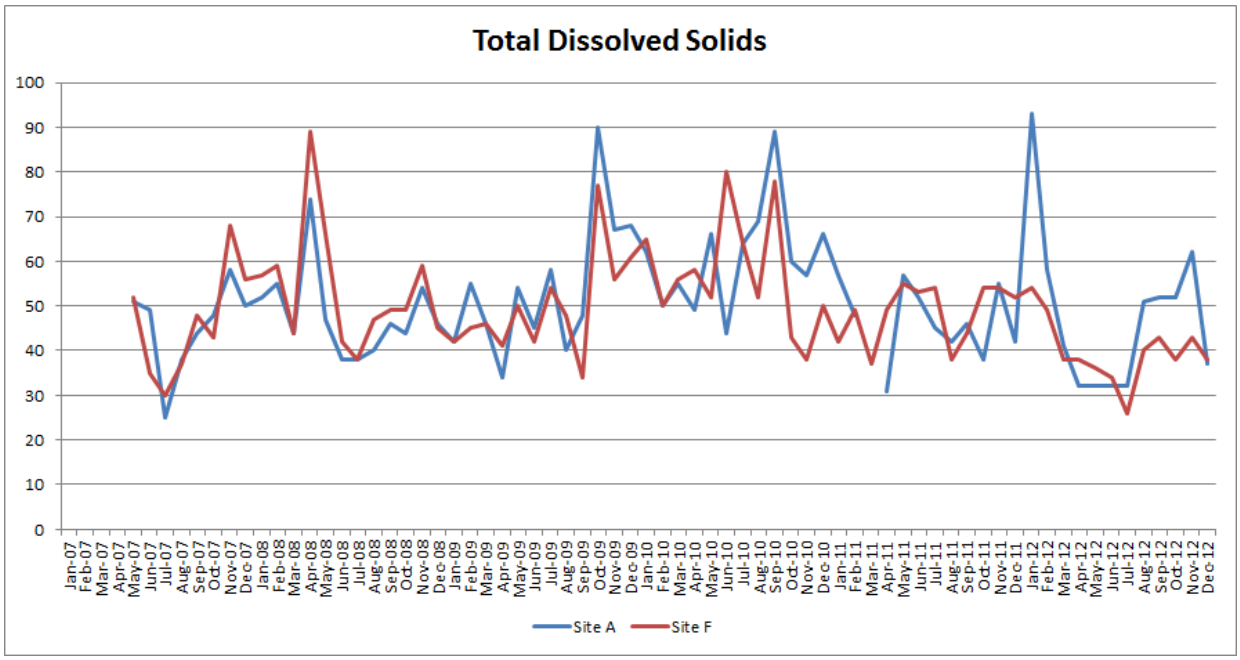
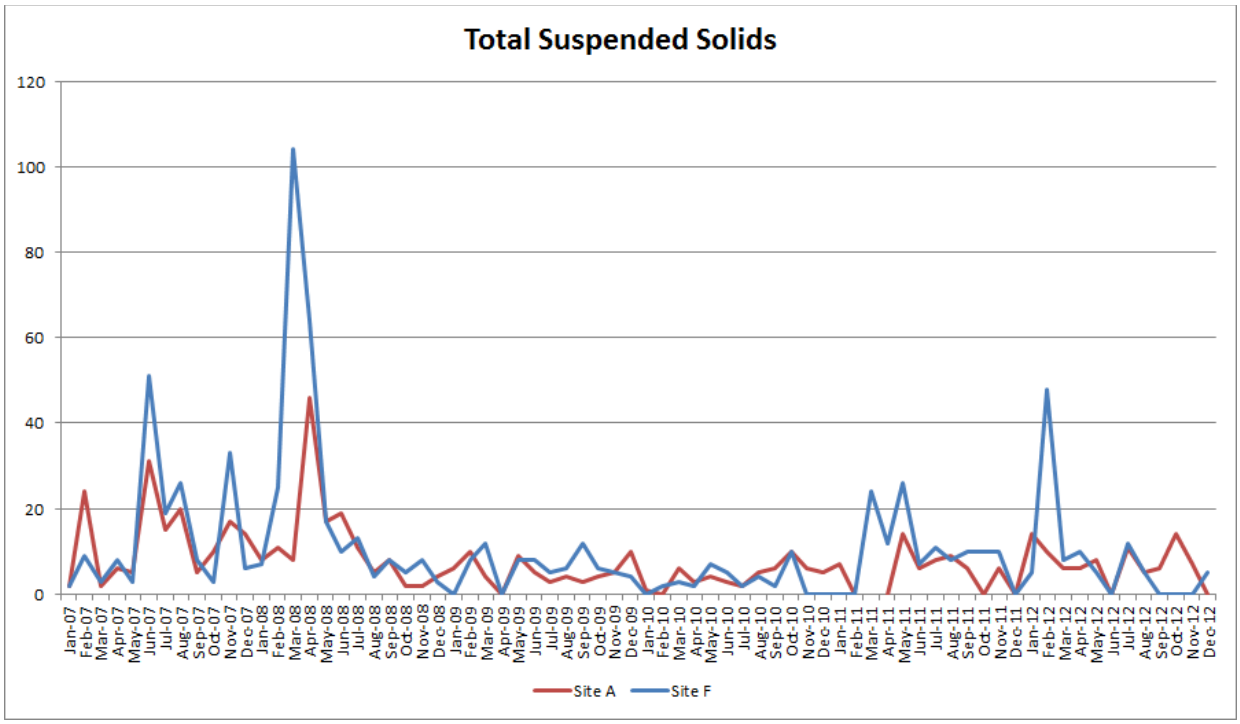


Figure A2-4
2007 to 2012 Surface Water Total Suspended Solids



TableA2-4
Noise Monitoring Results 2012

Attended Noise Measurement Results (Thursday, 16 February 2012)

Location	Time	$L_{Aeq,15min}$ due to Quarry Operations (dBA)	Daytime Criteria $L_{Aeq,15min}$ (dBA)	Comments
CN-1	2.43pm – 2.58pm	35	41	Constant engine noise from quarry audible most of the time 31-36dBA. Typical and heavy traffic on Peats Ridge Road measured with L_{Amax} 52-53dBA and L_{Amax} 61-66dBA respectively. Cicadas constantly audible 42-49dBA.
CN-3	3.02pm – 3.17pm	31	39	Engine noise from the quarry just audible for short periods of time during lulls in traffic 31dBA (estimated). Typical and heavy traffic on Peats Ridge Road measured with L_{Amax} 50-52dBA and L_{Amax} 58-61dBA respectively. Cicadas constantly audible 41-42dBA.
CN-4	3.20pm – 3.35pm	n/a*	35	Quarry operations inaudible at all times during measurement. Typical and heavy traffic on Peats Ridge Road measured with L_{Amax} 47-49dBA and L_{Amax} 53dBA respectively. Cicadas constantly audible 41-42dBA.
CN-2	3.40pm – 3.55pm	33	40	Constant engine noise from quarry audible most of the time 32-33dBA. Typical and heavy traffic on Peats Ridge Road measured with L_{Amax} 50-52dBA and L_{Amax} 57-64dBA respectively. Cicadas constantly audible 40-42dBA.

*Note: n/a = inaudible

TableA2-4 (Cont'd)
Noise Monitoring Results 2012

Attended Noise Measurement Results (July 2012)

Location	Date	Time	$L_{Aeq,15min}$ due to Quarry Operations (dBA)	Daytime Criteria $L_{Aeq,15min}$ (dBA)	Comments
CN-1	27 June	12.05pm – 12.20pm	44	41	Mobile plant engine noise combined with water pump noise audible most of the time 42-45dBA. Impact noise from mobile plant heard occasionally L_{max} 45-47dBA. Typical and heavy traffic on Peats Ridge Road measured with L_{max} 50-56dBA and 60-68dBA respectively.
CN-3	27 June	12.30pm – 12.45pm	40	39	Mobile plant engine noise combined with water pump noise audible most of the time 37-41dBA. Impact noise from dozer heard occasionally L_{max} 42-48dBA. Typical and heavy traffic on Peats Ridge Road measured with L_{max} 52-56dBA and 58-62dBA respectively.
CN-4	27 June	12.55pm – 1.10pm	30	35	Quarry operations just audible at times 30dBA (estimated). Typical and heavy traffic on Peats Ridge Road measured with L_{max} 38-44dBA and 43-47dBA respectively.
CN-2	6 July	1.35pm – 1.50pm	47	40	Mobile plant engine noise combined with water pump noise audible most of the time 44-50dBA. Typical and heavy traffic on Peats Ridge Road measured with L_{max} 56-60dBA and 63-68dBA respectively.

TableA2-4 (Cont'd)
Noise Monitoring Results 2012

Attended Noise Measurement Results (Thursday, 16 August 2012)

Location	Time	$L_{Aeq,15min}$ due to Quarry Operations (dBA)	Daytime Criteria $L_{Aeq,15min}$ (dBA)	Comments
CN-1	10.32am – 10.47am	39	41	Constant pump noise from quarry audible most of the time 37-40dBA. Impact noise from quarry audible once and measured with L_{Amax} 47dBA. Typical and heavy traffic on Peats Ridge Road measured with L_{Amax} 53-57dBA and L_{Amax} 61-67dBA respectively.
CN-2	10.51am – 11.06am	40	40	Constant pump noise from quarry audible most of the time, typically 38-40dBA and briefly up to 43dBA. Impact noise from quarry audible twice and measured with L_{Amax} 45dBA and 52dBA. Typical and heavy traffic on Peats Ridge Road measured with L_{Amax} 56-59dBA and L_{Amax} 60-66dBA respectively.
CN-3	11.15pm – 11.30pm	35	39	Pump noise from the quarry audible during lulls in traffic, typically estimated at 28-36dBA and briefly up to 40dBA. Typical and heavy traffic on Peats Ridge Road measured with L_{Amax} 53-56dBA and L_{Amax} 60-75dBA respectively. Birds nearby audible most of the time with L_{Amax} 52-54dBA.
CN-4	11.33am – 11.48am	<30	35	Noise from the quarry was audible during lulls in traffic and estimated below 30dBA. Distant dozer track noise from quarry just audible at times but not measurable. Typical and heavy traffic on Peats Ridge Road measured with L_{Amax} 38-40dBA and L_{Amax} 42-45dBA respectively. Aeroplane audible with L_{Amax} 49dBA.

TableA2-4 (Cont'd)
Noise Monitoring Results 2012

Attended Noise Measurement Results (Tuesday, 18 December 2012)

Location	Time	$L_{Aeq,15min}$ due to Quarry Operations (dBA)	Daytime Criteria $L_{Aeq,15min}$ (dBA)	Comments
CN-1	2.43pm – 2.58pm	41	41	Ongoing quarry noise audible most of the time 39-41dBA. Engine noise generated by quarry trucks audible briefly 43-47dBA. Typical and heavy traffic on Peats Ridge Road measured with L_{Amax} 55-57dBA and L_{Amax} 61-68dBA respectively.
CN-2	3.02pm – 3.17pm	36	40	Ongoing quarry noise audible most of the time 32-38dBA. Quacker alarm audible briefly L_{Amax} 38dBA. Impact noise from quarry L_{Amax} 43dBA. Typical and heavy traffic on Peats Ridge Road measured with L_{Amax} 49-54dBA and L_{Amax} 59-63dBA respectively.
CN-3	3.21pm – 3.36pm	35	39	Ongoing quarry noise audible most of the time 34-37dBA. Impact noise from quarry L_{Amax} 50dBA. Typical and heavy traffic on Peats Ridge Road measured with L_{Amax} 50-53dBA and L_{Amax} 60-61dBA respectively. Farming machinery nearby audible briefly 37-42dBA.
CN-4	3.40pm – 3.55pm	32	35	Noise from the quarry was audible during lulls in traffic and estimated to range 30-34dBA. Impact noise from quarry L_{Amax} 41dBA. Typical and heavy traffic on Peats Ridge Road measured with L_{Amax} 46-47dBA and L_{Amax} 49-51dBA respectively.

Table A2-5
2005 to 2012 Deposited Dust Monitoring Results

Month	CD-1	CD-2a	CD-2b	CD-3	CD-4	CD-5	CD-6
Nov-05		0.8		0.5			
Dec-05		0.8		0.5			
Jan-06		0.8		0.5			
Feb-06		1.6		0.5			
Mar-06		4.0		0.4			
Apr-06		4.3		0.5			
May-06	1.2	6.9		0.4			
Jun-06	1.2	5.0		0.2			
Jul-06	0.7	C		1.1			
Aug-06	1.6		1.	0.5			
Sep-06	0.9		0.3	0.9			
Oct-06	2.3		1.2	0.8	0.7		
Nov-06	3.3		1.1	1.7	1.6		
Dec-06	2.0		3.9	3.2	1.6	2.5	2.2
Jan-07	0.8		0.9	0.6	C	C	C
Feb-07	1.9		1.3	1.2	1.2	0.8	1.0
Mar-07	1.8		1.8	1.6	1.2	1.1	0.7
Apr-07	0.5		1.1	0.4	0.7	0.6	C
May-07	0.9		0.6	0.4	0.8	1.6	3.0
Jun-07	1.0		1.6	0.4	0.2	0.3	0.1
Jul-07	1.0		1.5	0.6	0.8	0.5	1.0
Aug-07	1.3		1.8	0.9	0.9	0.6	0.9
Sep-07	0.6		0.9	0.5	3.3	1.0	0.9
Oct-07	2.1		4.8	1.3	1.6	1.4	1.4
Nov-07	2.6		2.5	1.1	0.9	0.9	1.2
Dec-07	0.4		1.2	1.4	1.1	1.0	1.4
Jan-08	1.4		0.4	0.5	0.6	2.9	0.4
Feb-08	0.9		1.0	1.2	0.7	0.5	0.8
Mar-08	0.9		2.0	0.5	0.4	0.3	0.4
Apr-08	0.6		1.8	0.4	0.3	0.4	0.3
May-08	0.6		0.5	0.3	1.2	0.2	0.5
Jun-08	1.4		1.2	0.4	1.7	C	1.1
Jul-08	0.8		0.9	0.2	1.1	0.5	1.4
Aug-08	0.7		2.2	0.3	0.4	0.2	3.0
Sep-08	0.5		C	0.6	0.5	0.4	2.3
Oct-08	1.0		C	1.3	0.8	0.9	0.9
Nov-08	1.4		2.3	0.8	1.0	0.6	0.8
Dec-08	1.5		4.0	0.6	1.1	C	0.7

C = Contaminated NR = Not Recorded * Dust from local source – excluded from 2010 average

Results assembled by Carbon Based Environmental Pty Limited

Table A2-5 (Cont'd)
2005 to 2012 Deposited Dust Monitoring Results

Month	CD-1	CD-2b	CD-2c	CD-3	CD-4	CD-5	CD-6
Jan-09	2.4	3.6		1.3	1.2	1.1	1.5
Feb-09	1.8	C		1.8	1.3	1.4	0.9
Mar-09	2.0	C		1.1	0.7	1.2	1.4
Apr-09	1.4	C		0.4	0.2	0.1	0.8
May-09	1.2	C		1.8	0.7	0.7	1.6
Jun-09	0.3	1.6		0.1	0.1	0.1	0.3
Jul-09	0.4	C		2.1	0.7	0.6	0.6
Aug-09	1.3	C		1.0	1.4	0.4	0.8
Sep-09	5.3	C		3.0	3.5	3.1	6.1
Oct-09	1.9	1.8		1.1	1.1	0.9	1.9
Nov-09	2.9	3.2		1.7	1.2	1.5	4.3
Dec-09	2.8	2.6		2.4	2.5	3.2	2.3
Jan-10	1.3	3.6*		0.6	0.8	0.9	1.2
Feb-10	1.0		2.0	0.7	0.4	0.5	1.5
Mar-10	2.2		0.9	0.7	0.8	0.5	0.8
Apr-10	2.2		0.8	0.6	NR	0.5	0.6
May-10	0.7		1.5	0.7	0.7	0.3	0.8
Jun-10	0.6		3.3	0.3	0.2	0.6	0.2
Jul-10	0.7		0.5	0.3	0.3	0.4	0.4
Aug-10	0.4		0.3	0.1	0.1	0.1	0.2
Sep-10	1.2		1.0	0.4	0.8	0.2	0.2
Oct-10	0.9		0.4	0.3	0.8	0.4	0.7
Nov-10	1.1		0.5	0.4	0.2	0.4	0.3
Dec-10	3.3		1.0	0.5	0.4	0.6	1.6
Jan-11	0.6		1.2	0.3	0.2	0.6	0.3
Feb-11	6.4		1.6	0.7	1.2	0.9	1
Mar-11	1.4		1.6	1	0.2	0.1	0.2
Apr-11	4.8		0.9	0.6	0.1	0.1	0.2
May-11	1.6		0.6	0.2	0.1	0.1	0.6
Jun-11	0.8		0.4	0.3	0.1	0.2	1.1
Jul-11	0.6		0.4	1.9	0.7	0.3	0.4
Aug-11	0.4		0.5	0.2	0.2	0.2	0.5
Sep-11	2.7		0.7	2	0.3	0.2	0.5
Oct-11	3.8		0.4	0.3	0.3	0.3	0.3
Nov-11	0.9		0.4	0.3	0.7	0.4	0.5
Dec-11	0.6		0.4	0.4	0.5	0.4	0.5

C = Contaminated NR = Not Recorded * Dust from local source – excluded from 2010 average

Results assembled by Carbon Based Environmental Pty Limited

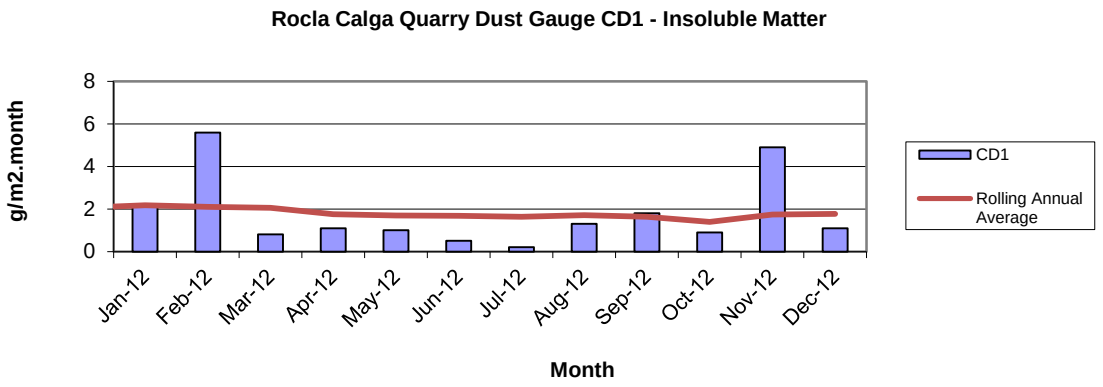
Table A2-5 (Cont'd)
2005 to 2012 Deposited Dust Monitoring Results

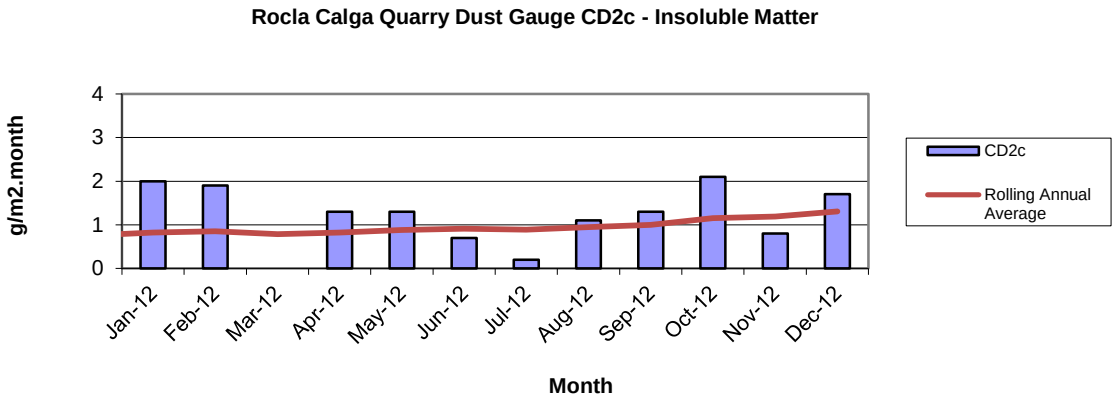
Month	CD-1	CD-2b	CD-2c	CD-3	CD-4	CD-5	CD-6
Jan-12	2.2		0.8	0.7	0.4	0.3	0.5
Feb-12	2.1		0.9	0.7	0.3	0.2	0.4
Mar-12	2.1		0.8	0.6	0.4	0.3	0.5
Apr-12	1.8		0.8	0.7	0.5	0.3	0.5
May-12	1.7		0.9	0.7	0.5	0.3	0.5
Jun-12	1.7		0.9	0.7	0.5	0.3	0.4
Jul-12	1.6		0.9	0.6	0.5	0.3	0.4
Aug-12	1.7		0.9	1.1	0.5	0.3	0.4
Sep-12	1.6		1.0	1.1	0.5	0.3	0.4
Oct-12	1.4		1.2	1.1	0.5	0.3	0.4
Nov-12	1.7		1.2	1.2	0.5	0.3	0.5
Dec-12	1.8		1.3	1.3	0.5	0.3	0.5

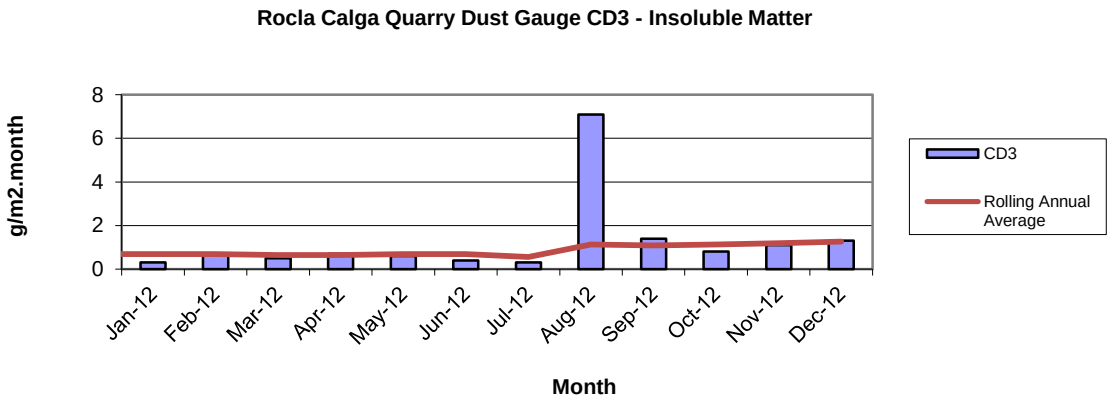
C = Contaminated NR = Not Recorded * Dust from local source – excluded from 2010 average

Results assembled by Carbon Based Environmental Pty Limited

Figures A2-5 to A2-7
2012 Deposited Dust Monitoring Graphs

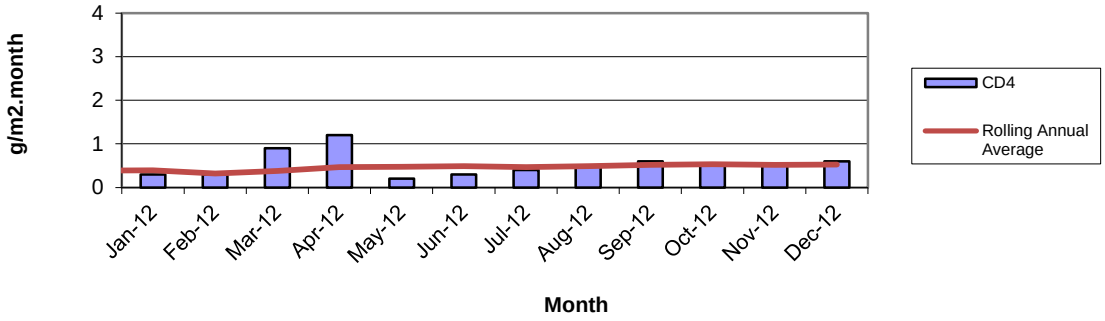




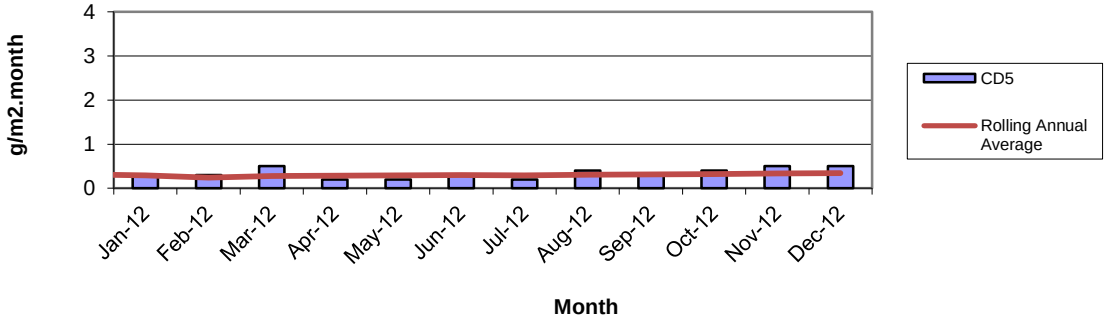


Figures A2-8 to A2-10
2012 Deposited Dust Monitoring Graphs

Rocla Calga Quarry Dust Gauge CD4 - Insoluble Matter



Rocla Calga Quarry Dust Gauge CD5 - Insoluble Matter



Rocla Calga Quarry Dust Gauge CD6 - Insoluble Matter

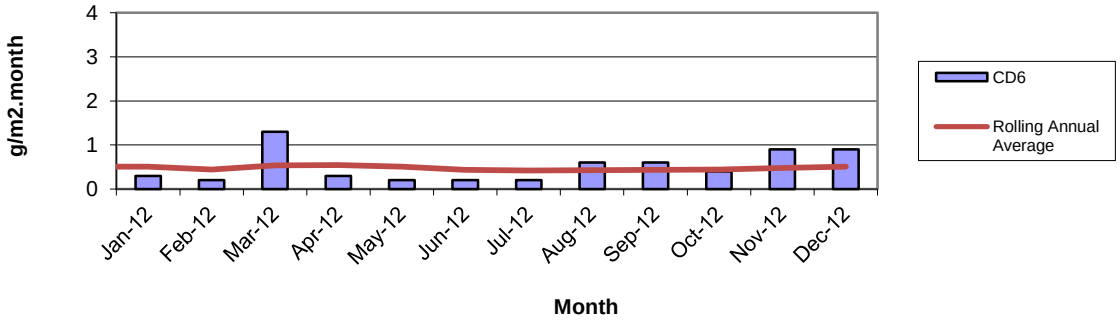


Table A2-6
2012 Rainfall Records

Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.0	36.4	12.2	0.2	0.0	2.0	0.4	0.0	0.2	0.0	0.0	1.0
2	0.0	36.8	46.2	0.2	1.6	6.8	0.0	0.0	0.0	0.4	0.0	9.6
3	0.0	24.5	7.6	0.0	0.4	17.4	0.0	0.0	0.0	0.0	0.8	2.6
4	0.0	11.4	6.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.4	0.0
5	0.0	0.2	1.2	0.0	0.0	29.2	2.6	0.0	0.0	0.0	0.0	0.0
6	7.8	0.0	0.0	0.0	0.2	3.0	1.0	0.0	0.0	0.6	0.0	0.0
7	0.8	5.4	26.2	0.0	0.0	1.4	1.0	0.0	0.0	0.0	2.6	0.0
8	0.0	0.0	30.8	2.4	0.0	0.2	0.2	0.0	0.0	0.4	11.6	0.0
9	2.8	0.8	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.2	10.0	0.4
10	0.2	2.6	0.0	0.0	0.0	4.4	1.2	0.6	0.0	0.0	0.0	15.8
11	0.0	16.2	0.0	0.8	0.0	33.2	5.2	0.4	0.0	4.4	0.0	12.6
12	0.0	12.6	0.0	2.4	0.0	18.2	0.6	0.4	0.0	4.2	0.0	0.2
13	0.0	0.4	0.0	0.2	0.0	8.0	0.0	0.0	3.4	0.0	0.0	0.0
14	7.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
15	35.2	19.4	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.2
16	9.4	0.0	0.0	0.0	0.0	6.0	0.0	0.0	0.2	0.0	19.6	0.2
17	0.4	0.0	17.5	9.6	0.0	0.2	0.0	0.4	17.8	0.0	0.0	0.2
18	1.8	0.0	2.4	130.4	0.2	0.0	0.0	0.0	3.8	0.0	0.0	0.0
19	0.2	16.4	5.8	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	16.4	2.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0
21	4.6	15.6	0.2	0.2	0.2	0.0	0.6	0.0	0.0	0.0	0.0	0.2
22	0.2	0.0	0.6	0.4	0.0	0.0	4.4	0.0	0.0	6.4	0.0	0.0
23	5.8	0.2	0.0	5.0	0.0	0.0	2.2	6.8	0.2	0.0	0.4	0.0
24	19.4	0.2	0.0	0.2	12.6	0.0	2.6	1.4	0.0	0.0	0.0	5.2
25	47.6	0.2	0.0	0.2	1.6	0.0	0.0	0.0	0.2	0.0	0.0	41.2
26		0.0	0.4	0.0	0.0	7.4	0.2	0.0	0.0	0.0	1.0	0.4
27	5.8	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	3.8	0.0
28	0.2	0.0	0.0	0.0	0.4	1.6	0.0	0.0	2.2	0.0	3.6	0.0
29	0.0	11.6	3.6	0.0	4.6	0.4	0.0	0.0	1.8	0.0	0.4	0.0
30	1.6		1.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	3.0	0.0
31	2.4		0.2		0.0		0.0	1.2		0.0		0.0
Total Monthly	**153.2**	**227.8**	**134.4**	**154.4**	**22.6**	**140.0**	**22.8**	**11.2**	**29.8**	**16.6**	**58.2**	**89.8**

Source: Carbon Based Environmental Pty Limited

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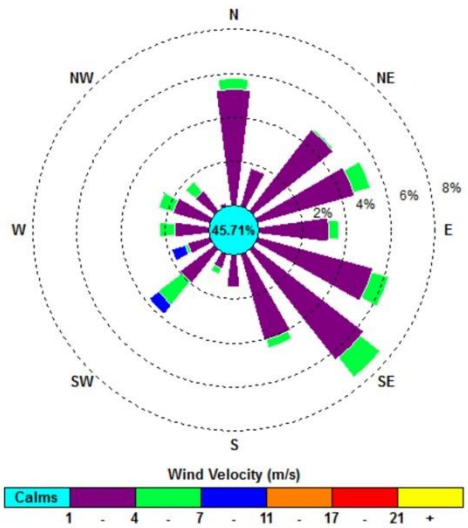

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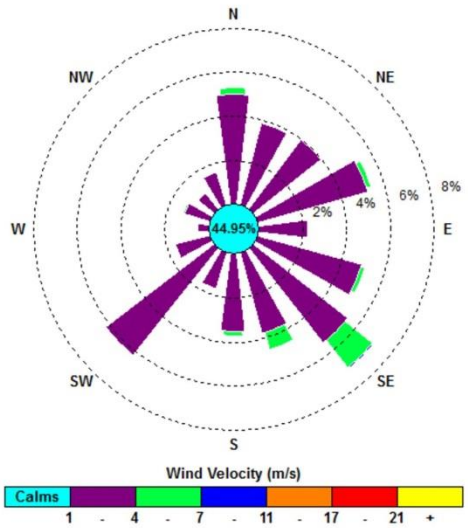
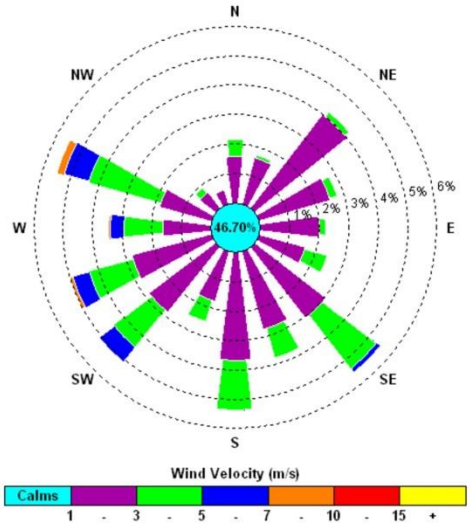


February 2012



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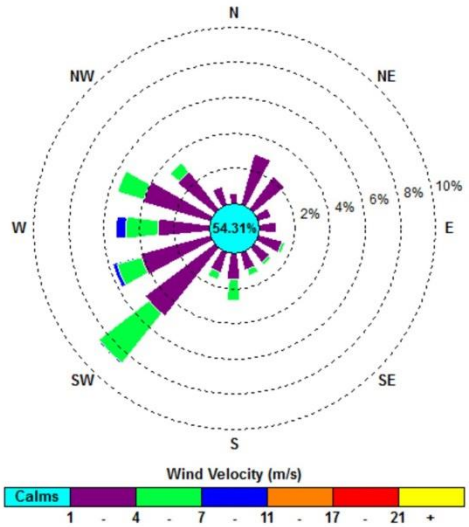

April 2012

Figure A2-11
2012 WIND RECORDS

Source: Carbon Based Environmental Pty Ltd

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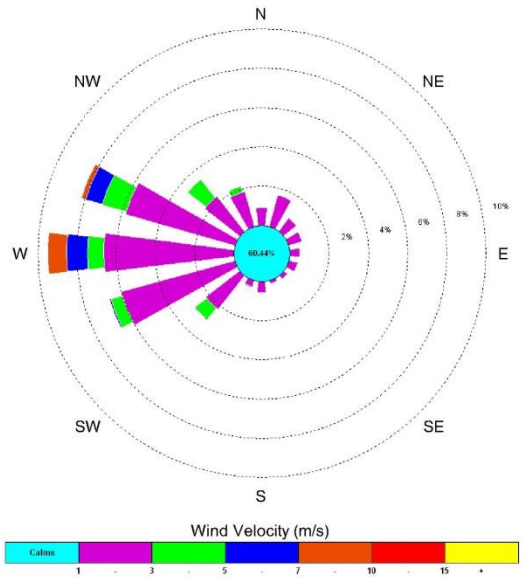
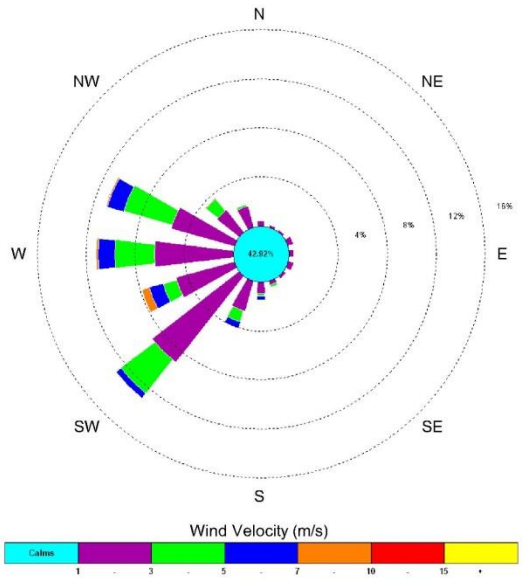
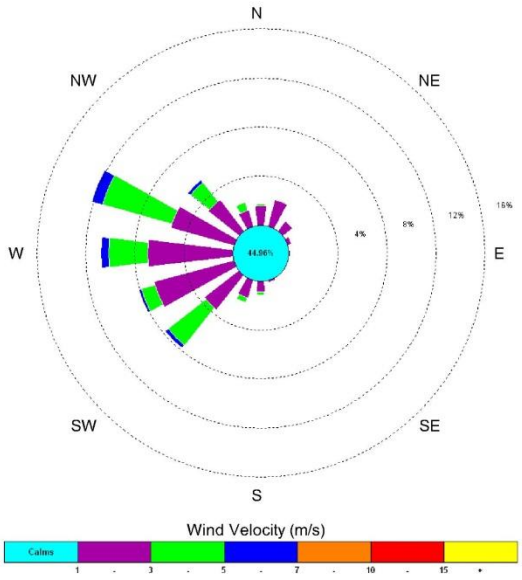


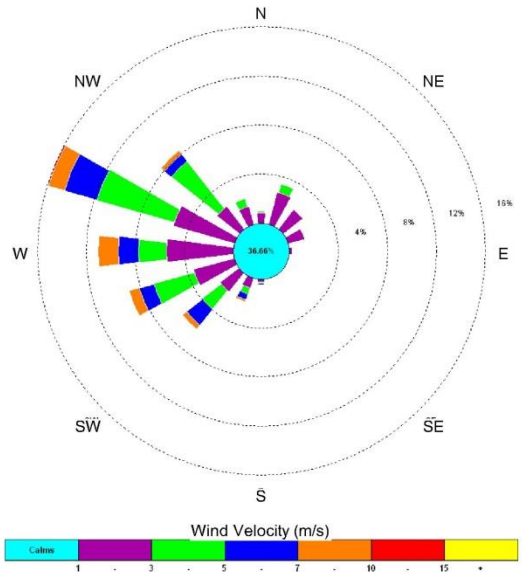
May 2012



June 2012



July 2012



August 2012

Figure A2-11 (Cont'd)
2012 WIND RECORDS

Source: Carbon Based Environmental Pty Ltd

Y:\Jobs 000 to 530\264\Reports\26441_AEMR_2012\CAD\ 264AEMR12.dwg_Windroses-17.06.2013-2:30 PM

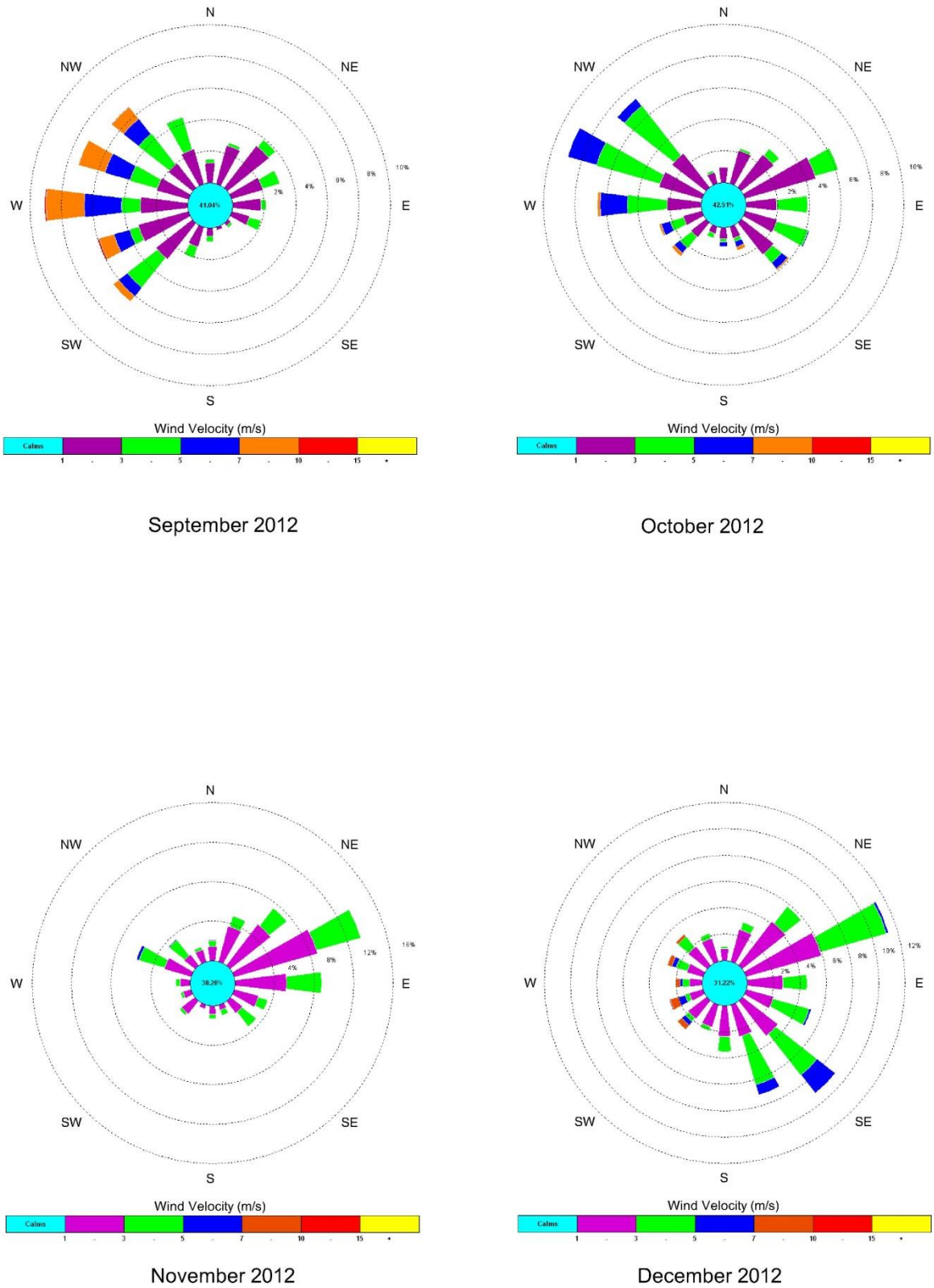


Figure A2-11 (Cont'd)
2012 WIND RECORDS

Source: Carbon Based Environmental Pty Ltd

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