CARBON BASED ENVIRONMENTAL PTY LIMITED
ABN 74 102 920 285

ROCLA QUARRY PRODUCTS
CALGA QUARRY

ENVIRONMENTAL MONITORING

DUST DEPOSITION GAUGES, SURFACE AND GROUND WATERS AND METEOROLOGICAL STATION

MARCH 2008

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Executive Summary

Carbon Based Environmental is contracted by Rocla Quarry Products to conduct environmental monitoring at the Calga Sand Quarry.

The monitoring includes;

- Dust Deposition Gauges;
- Surface Waters;
- Ground Waters; and
- Meteorological Station.

This report was prepared by Carbon Based Environmental and includes the following;

- Dust Deposition results for March 2008;
- Surface Water quality results for March 2008;
- Ground Water depth and quality results for March 2008; and
- Meteorological report for March 2008.

The March 2008 dust deposition results show a slight decrease in dust deposition rates this month. All sites, on a year to date average basis, are currently below the Air Quality Management Plan exceedence level of 3.7g/m^2.month. Results were found to be representative of dust levels as determined by the Australian Standard.

Surface water samples were collected for the normal monthly sampling event on the 1 April 2008 at sites F and the small dam below site F, as the other sites were not flowing. At the time of sample collection, there was no water discharge observed from the site. Results show generally good quality water with the two sites maintaining slightly acidic pH and low Electrical Conductivity. Total Suspended Solids were slightly elevated at site F (F Dam 7 B/C) although were low at the dam below site F. Total Oil and Grease was detected in the dam below site F.

Groundwaters were sampled for normal monthly monitoring on 1 April 2008. Groundwater depths increased at the majority of monitoring bores this month, indicating water moving away from the surface. There was a slight increase in pH at all monitoring bores this month, while EC levels remained stable.

The meteorological station continued to return high data recovery and operated well in March 2008. The predominant winds were split from the NNE-ESE and SSW-WNW, with strongest winds from the S-SE. Recorded rainfall on site for March 2008 was 103.4mm, higher than that recorded at the BOM Peats Ridge Station but below the Peats Ridge long-term average for March. Results are detailed below:

Rocla Calga Quarry	103.4mm
BOM Peats Ridge*	68.0mm
BOM Gosford*	66.0mm
BOM Peats Ridge Long term mean for March*	141.3mm

*Data sourced from Bureau of Meteorology (BOM) website (www.bom.gov.au)
Note: Differences in the daily rainfall readings between BOM and the Rocla station may occur due to BOM stations reporting rainfall at 9am and the Rocla station recording rainfall at midnight.

1.0 Sampling program

Rocla Calga Quarry conducts environmental monitoring in accordance to Development Consent, DEC (EPA) licence and Environmental Management Plans. Carbon Based Environmental are contracted to undertake dust deposition gauge, surface and groundwater and meteorological monitoring for the project. Carbon Based Environmental commenced monitoring from the April 2006 monitoring period.

Dust deposition gauges are operated to the Australian Standard AS3580.10.1 "Methods for Sampling and Analysis of Ambient Air Method 10.1 Determination of Particulates—Deposited Matter—Gravimetric Method". Sampling is undertaken every 30 +/- 2 days and each gauge is analysed for insoluble solids and ash residue. The results are reported as g/m^2.month.

Surface water sites include local streams and dams. Basic analysis including pH, Electrical Conductivity, Total Suspended Solids and Total Oil and Grease is conducted monthly when sites A to D are flowing and Site F, a dam. Additional samples are collected when daily rainfall exceeds 50mm.

Groundwater sites are monitored at least bi-monthly for water quality and at least quarterly for water level. Groundwater monitoring loggers continuously record water levels in a selection of bores.

Meteorological monitoring is conducted at the quarry and displayed on the site computer with a real time display. Wind parameters are measured according to Australian Standard AS 2923 "Ambient Air— Guide for Measurement of Horizontal Wind for Air Quality Applications".

The weather stations have the following sensor configuration;

- Air temperature
- Humidity
- Rainfall
- Atmospheric pressure
- Evaporation
- Solar radiation
- Wind speed
- Wind direction

Carbon Based Environmental continued to operate the monitoring equipment and utilise site collections at their existing locations.

2.0 MONTHLY RESULTS

2.1 DUST DEPOSITION GAUGES

Table 1 displays the results for March 2008 and the project average. Results are in g/m^2.month.

Table 1: Dust Deposition results: 29-Feb-2008 to 01-Apr-2008

Site	Monthly Insoluble Solids	Monthly Ash Residue	Monthly Combustible Matter	Monthly Ash Residue/ Insoluble Solids %	Current Project Average Insoluble Solids
CD1	0.9	0.6	0.3	67	1.4
CD2b	2.0	0.8	1.2	40	1.5
CD3	0.5	0.2	0.3	40	0.8
CD4	0.4	0.2	0.2	50	1.1
CD5	0.3	0.2	0.1	67	1.1
CD6	0.4	0.3	0.1	75	1.1

Insoluble Solids marked with an * indicate an excessively contaminated gauge. Contamination can include bird droppings, vegetation (such as plant matter, algae, pollen, seeds), and insects. Results in bold indicate insoluble solids levels above 3.7 g/m^2.month, the Development Consent annual average amenity criteria at residential locations. Project average was calculated from the 28 October 2005 (start of the Development Consent period) from results supplied by Rocla or from the installation date of the gauges.

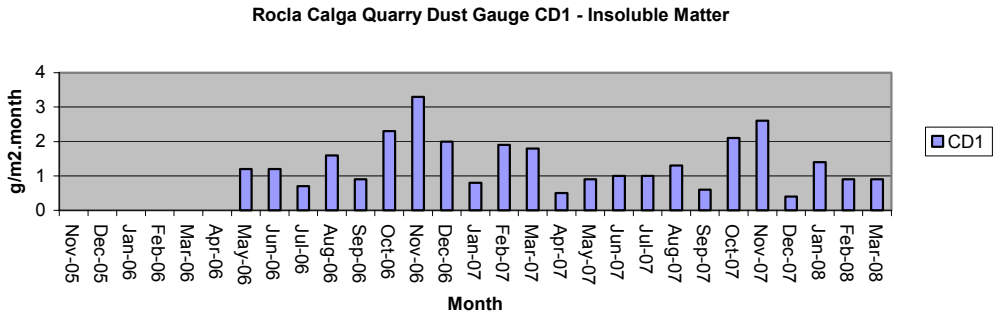
NA= Not Available.

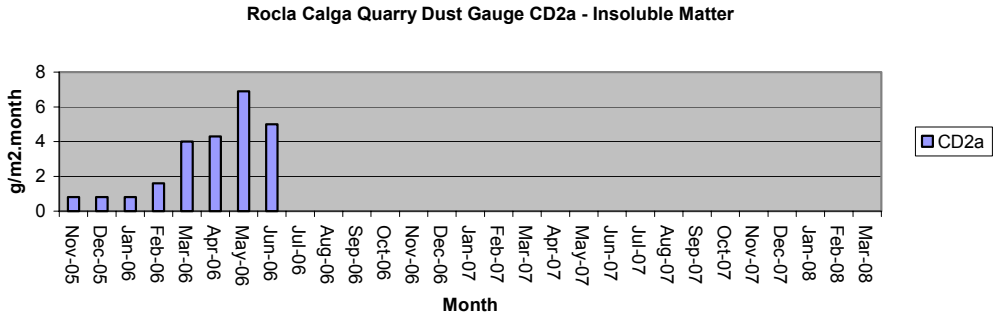
CD1 was installed on the 1 May 2006. CD2a was discontinued at the start of August 2006 due to quarry operations "mining out" the site of the gauge. The replacement gauge, Site CD2b, was located in a position adjacent to the boundary between B. Kashouli and F. & J. Gazzana in conformance with the Air Quality Management Plan. CD4 was installed on 3 October 2006, to gauge air quality impacts to the south of the site operations, as were CD5 and CD6 which were installed on the 14 December 2006.

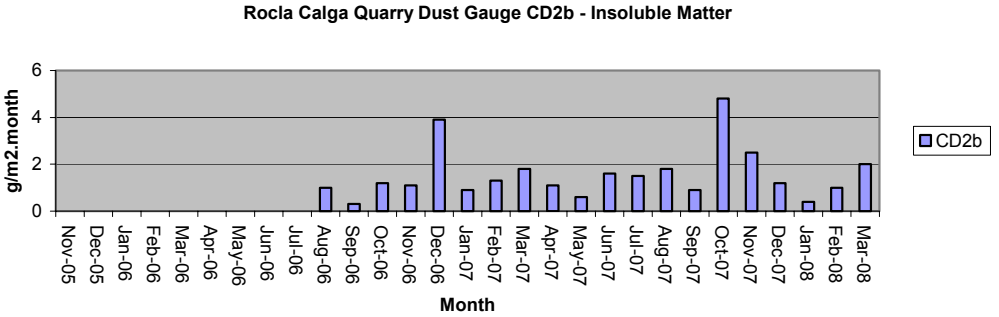
Dust deposition charts for all dust gauge sites appear in **Figure 1** below. The laboratory analysis is provided in **Appendix 1.**

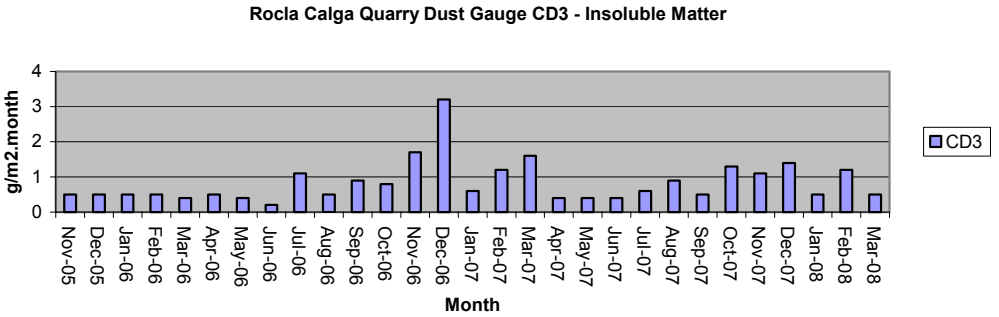
Predominant winds were split from the NNE-ESE and SSW-WNW, with strongest winds from the S-SE.

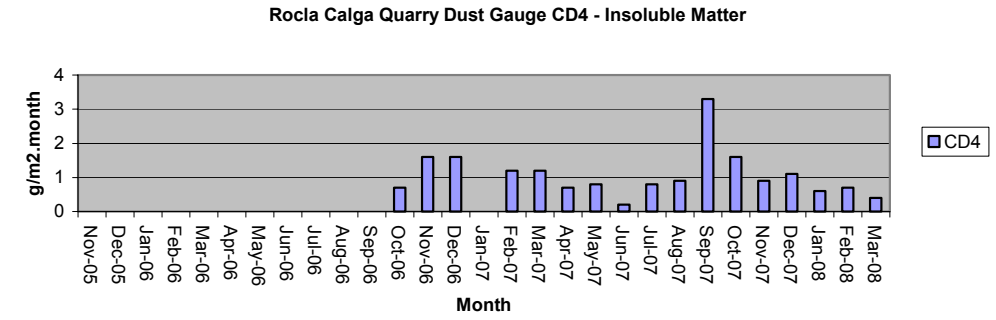
Figure 1: Dust Deposition Charts










Rocla Calga Quarry Dust Gauge CD4 - Insoluble Matter
g/m2.month
0
1
2
3
4
Nov-05
Dec-05
Jan-06
Feb-06
Mar-06
Apr-06
May-06
Jun-06
Jul-06
Aug-06
Sep-06
Oct-06
Nov-06
Dec-06
Jan-07
Feb-07
Mar-07
Apr-07
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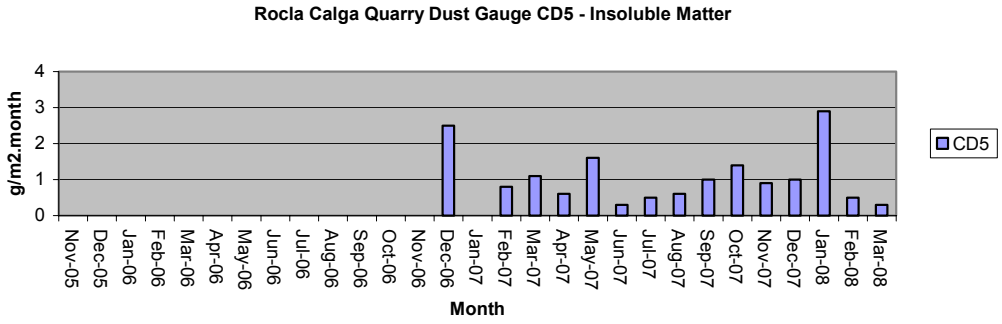
Dec-07
Jan-08
Feb-08
Mar-08
Month
CD4


Rocla Calga Quarry Dust Gauge CD5 - Insoluble Matter
g/m2.month
0
1
2
3
4
Nov-05
Dec-05
Jan-06
Feb-06
Mar-06
Apr-06
May-06
Jun-06
Jul-06
Aug-06
Sep-06
Oct-06
Nov-06
Dec-06
Jan-07
Feb-07
Mar-07
Apr-07
May-07
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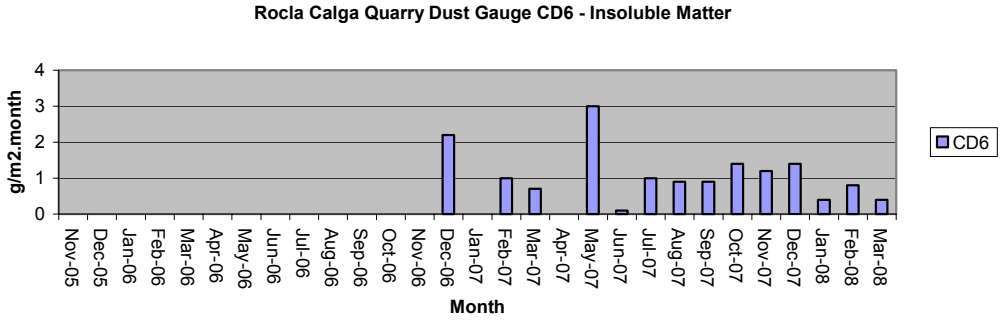
Dec-07
Jan-08
Feb-08
Mar-08
Month
CD5


Rocla Calga Quarry Dust Gauge CD6 - Insoluble Matter
g/m2.month
0
1
2
3
4
Nov-05
Dec-05
Jan-06
Feb-06
Mar-06
Apr-06
May-06
Jun-06
Jul-06
Aug-06
Sep-06
Oct-06
Nov-06
Dec-06
Jan-07
Feb-07
Mar-07
Apr-07
May-07
Jun-07
Jul-07
Aug-07
Sep-07
Oct-07
Nov-07
Dec-07
Jan-08
Feb-08
Mar-08
Month
CD6

2.2 WATER MONITORING

2.2.1 Surface Waters

Monthly surface water monitoring was conducted on the 1 April 2008 and results are listed in **Table 2**. The laboratory analysis sheets are provided in **Appendix 1.**

Table 2: Monthly surface water monitoring (March) - grab sample results

Site	Observed Flow Rate	Water Colour	Turbidity	pH	EC (uS/cm)	TSS (mg/l)	Oil and Grease (mg/l)
A	Not Flowing	--	--	--	--	--	--
B	Not Flowing	--	--	--	--	--	--
C	Not Flowing	--	--	--	--	--	--
D	Not Flowing	--	--	--	--	--	--
F	Dam	Clear	Clear	5.34	57	104	<5
Dam below F (Lower dam)*	Dam	Clear	Clear	5.27	57	8	6

At the time of sampling, there were no water discharges off site from any sampling location.
* The dam below Site F is not a requirement of the Site Water Management Plan.

There was no flow from any site at the time of sampling with two samples collected from dams; these were Site F and a small dam below site F, additional to the Site Water Management Plan requirements. The samples were collected and analysed for a monthly sampling event. Results show generally good water quality with slightly acidic pH and low Electrical Conductivity. Total Suspended Solids were slightly elevated at site F. Total Oil and Grease was detected at the dam below site F.

2.2.2 Ground Waters

Groundwaters were sampled on the 1 April 2008. Water quality tests for pH and electrical conductivity were conducted by Carbon Based Environmental Pty Limited. For water quality purposes, water was purged from the bore until constant pH (+/- 0.1 pH units) and Electrical Conductivity (+/- 5%) was obtained between samples. Data is displayed in **Table 3** and **Figures 2 to 5.**

Groundwater depths increased at the majority of monitoring bores this month, indicating water moving away from the surface. The CP series of bores generally show larger increases and decreases in depth to water due to pumping from the bores. Longer term monitoring is required to fully evaluate groundwater depth trends.

Groundwater quality results indicated a slight increase in pH across all bore this month. EC remained generally stable and low. Detailed biannual water quality monitoring was conducted in April 2008 and is next due in October 2008.

Table 3: Ground Water Quality Data

Reference	Bore	Type	Depth to water TOC (m) April 06	Depth to water TOC (m) This report	pH This report	Electrical Conductivity (uS/cm) This report
CQ1	Voutos	* Monitor	20.59	19.34	6.5	150
CQ2	Voutos	DIP Only	6.23	4.95	6.0	70
CQ3	Voutos	* Monitor	10.53	10.13	7.6	130
CQ4	Voutos	* Monitor	8.78	6.19	6.3	100
CQ5	Gazzana	DIP Only	8.69	5.45	5.8	180
CQ6	Gazzana	DIP Only	16.00	10.42	6.0	270
CQ7	Gazzana	* Monitor	6.89	6.88	6.1	105
CQ8	Gazzana	* Monitor	11.03	5.87	5.4	180
CQ9	Gazzana	DIP Only	10.10	10.43	5.6	125
CQ10	Voutos	* Monitor	NI	21.92	5.7	155
CQ11S	Gazzana	* Monitor	NI	7.85	6.1	165
CQ11D	Gazzana	* Monitor	NI	9.57	7.8	130
CQ12	Gazzana	* Monitor	NI	4.32	5.4	150
CQ13	Kashouli	* Monitor	NI	11.36	6.6	190
CP3	Gazzana	Domestic	10.40	6.02	4.8	165
CP4	Kashouli	Domestic	13.63	7.77	6.3	220
CP5	Kashouli	Domestic	16.61	13.62	5.5	240
CP6	Kashouli	Domestic	16.27	NA	5.4	235
CP7	Kashouli	Production	8.56	1.26	7.1	275
CP8	Rozmanec	Domestic	22.17	19.55	6.0	150
MW7	Rocla Bore	* Monitor	15.76	15.08	6.4	100
MW8	Rocla Bore	* Monitor	9.82	6.55	7.0	105
MW9	Rocla Bore	* Monitor	22.44	21.57	6.6	90
MW10	Rocla Bore	* Monitor	15.41	13.20	8.5	125

Notes:
TOC = Water level measured from top of bore case to water.
NM = Not Monitored – unable to sample water due to access restrictions.
NA = Parameter not available.
NR = Not Required by resident.
* = Logger Installed.
NI = These bores were not installed in April 2006 but are now operational. April 2006 was the first set of measurements taken by Carbon Based Environmental Pty Limited.

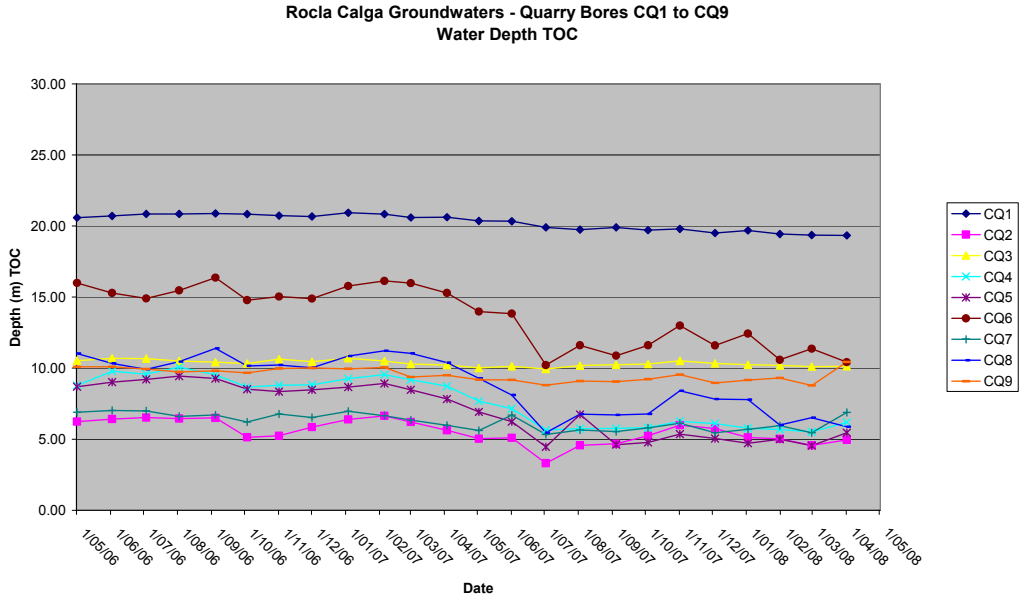
Shading is used to indicate the following trends in water depth (compared to last reading):

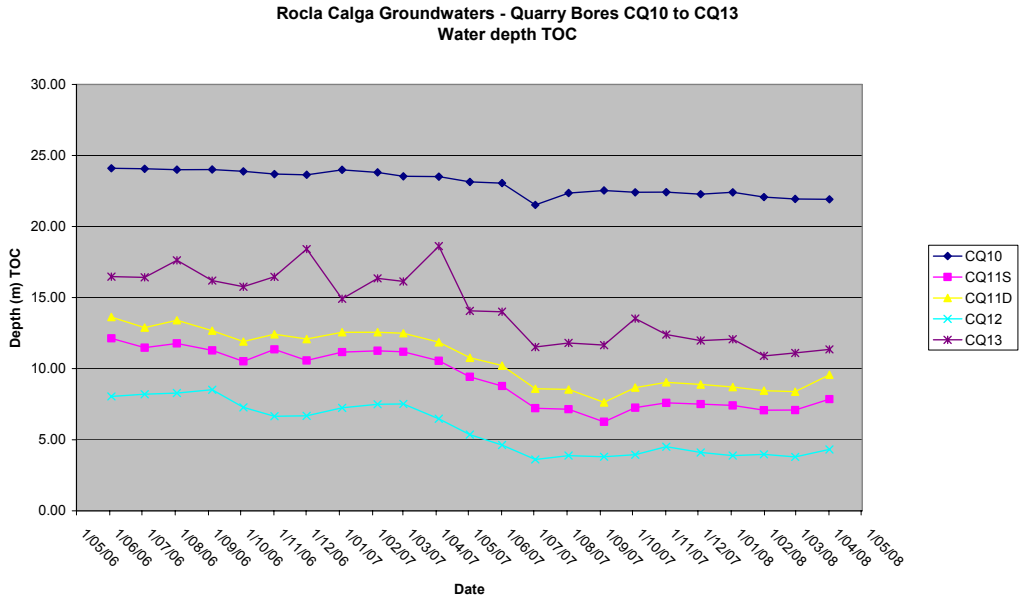
	Increase to ground water depth (water moved away from surface)
	Decrease to ground water depth (water moved towards surface)
	Stable water depth (+/- 0.01m)

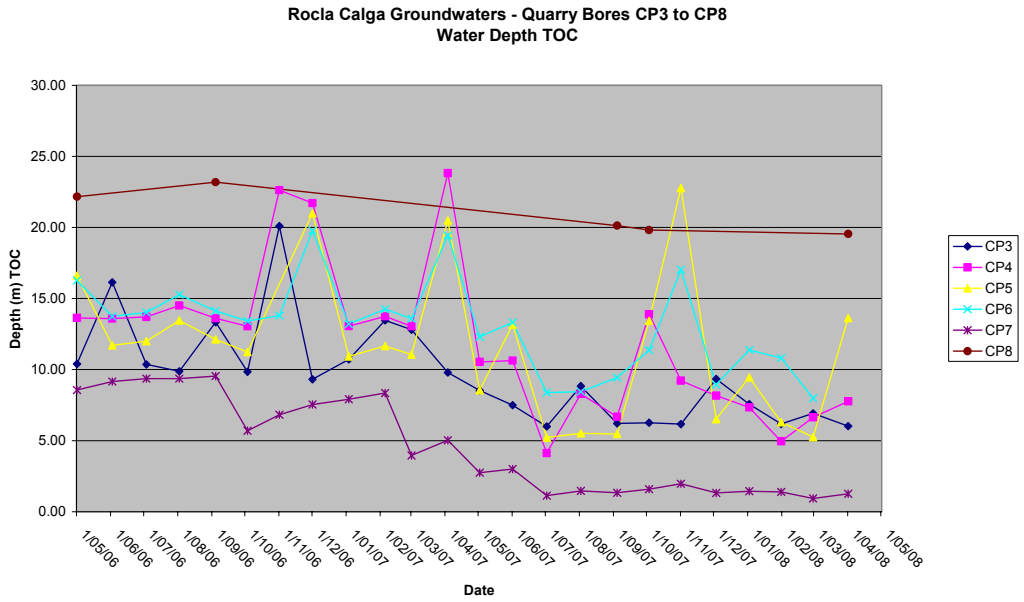
The depth at CP6 could not be measured accurately due to water running back into the bore.

Available groundwater loggers were downloaded and forwarded to the Rocla Calga Quarry groundwater consultant.

Figures 2 to 5: Groundwater Depth Charts.






Rocla Calga Groundwaters - Quarry Bores CP3 to CP8
Water Depth TOC
Depth (m) TOC
30.00
25.00
20.00
15.00
10.00
5.00
0.00
1/05/06
1/06/06
1/07/06
1/08/06
1/09/06
1/10/06
1/11/06
1/12/06
1/01/07
1/02/07
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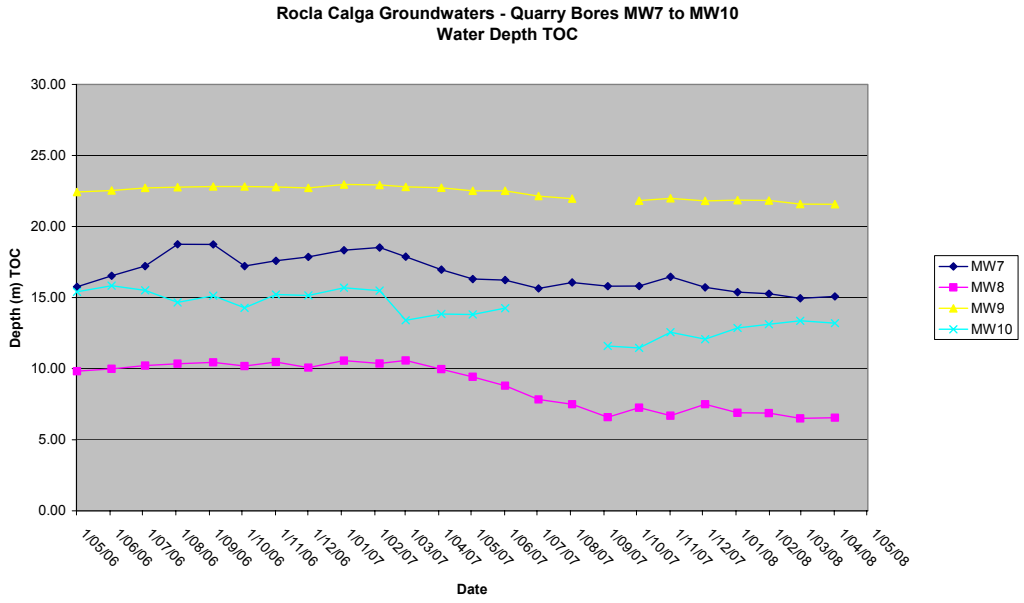
Date
CP3
CP4
CP5
CP6
CP7
CP8


Rocla Calga Groundwaters - Quarry Bores MW7 to MW10
Water Depth TOC
Depth (m) TOC
30.00
25.00
20.00
15.00
10.00
5.00
0.00
1/05/06
1/06/06
1/07/06
1/08/06
1/09/06
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1/09/07
1/10/07
1/11/07
1/12/07
1/01/08
1/02/08
1/03/08
1/04/08
1/05/08
Date
MW7
MW8
MW9
MW10

2.3 METEOROLOGICAL MONITORING

The Rocla Calga Quarry weather station was fully operational in March 2008 with approximately 100% data recovery. The weather station data follows and includes;

- Monthly data numerical summary;
- Weather charts of air temperature, humidity, heat index and wind chill, atmospheric pressure, solar radiation, evapotranspiration, rain, wind speed and data reception; and
- Wind rose (frequency distribution diagram of wind speed and direction).

Monthly weather statistics from two nearby Bureau of Meteorology (BOM) stations, Peats Ridge and Gosford are included in **Appendix 2** for comparison purposes.

Data for March 2008 shows higher rainfall at the Rocla Calga Quarry station compared to the nearby Peats Ridge BOM station and Gosford BOM station. The rainfall comparison is provided below:

Rocla Calga Quarry	103.4mm
BOM Peats Ridge*	68.0mm
BOM Gosford*	66.0mm
BOM Peats Ridge Long term mean for March*	141.3mm

*Data sourced from Bureau of Meteorology (BOM) website (www.bom.gov.au)

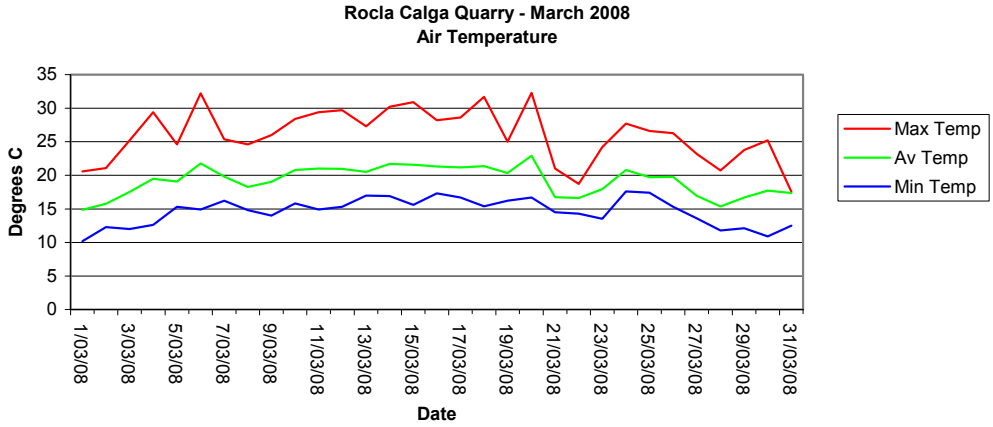
Results are displayed in the following table and figures.

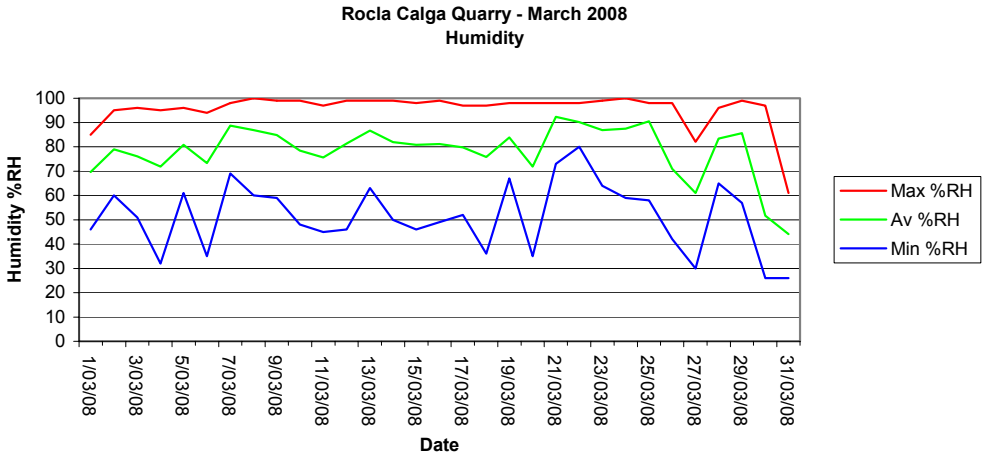
2.3.1 Monthly meteorological data summary

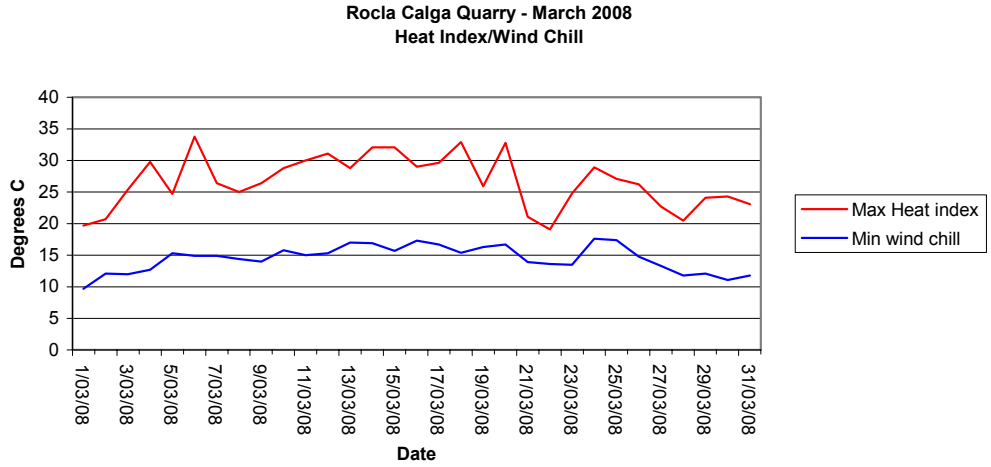
Summary **Mar-08** **Rocla - Calga**

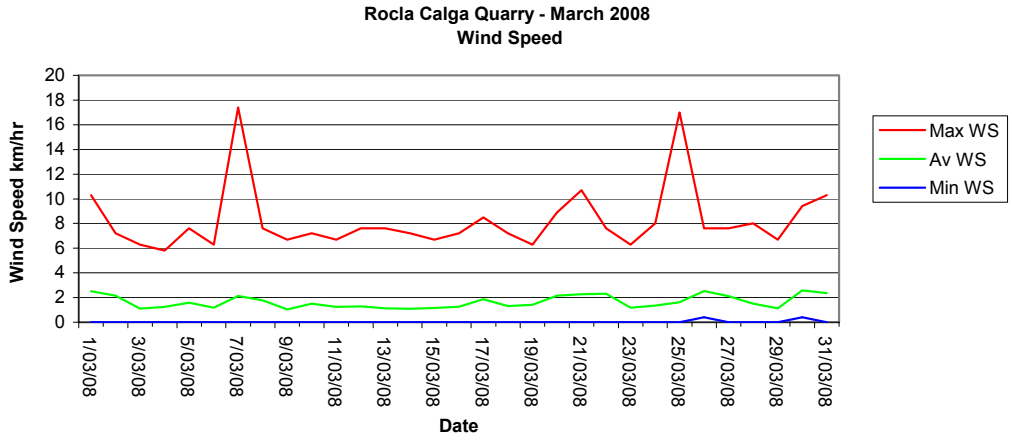
Date	Min Temp	Av Temp	Max Temp	Min %RH	Av %RH	Max %RH	RAIN mm	ET mm	Min WS	Av WS	Max WS	Min wind chill	Max Heat index	Min Atm P	Av Atm P	Max Atm P	Min Solar Rad	Av Solar Rad	Max Solar Rad	Min Data %	Av data %	Max Data %
1/03/08	10.2	14.9	20.6	46	70	85	0.0	4.5	0	2.5	10.3	9.7	19.7	1017.4	1020.6	1024.2	0	253.4	1111	96.8	99.5	100
2/03/08	12.3	15.8	21.1	60	79	95	0.4	3.2	0	2.2	7.2	12.1	20.7	1023.6	1025.2	1026.7	0	165.1	723	95	99.6	100
3/03/08	12	17.5	25.2	51	76	96	0.2	3.9	0	1.1	6.3	12	25.4	1020.7	1023.4	1025.9	0	226.0	1024	83.3	98.4	100
4/03/08	12.6	19.5	29.4	32	72	95	0.0	4.3	0	1.2	5.8	12.7	29.8	1017.5	1019.7	1022	0	234.8	951	74.6	98.8	100
5/03/08	15.3	19.1	24.6	61	81	96	0.0	3.4	0	1.6	7.6	15.3	24.7	1021.8	1023.7	1025.4	0	180.9	965	85.1	99.3	100
6/03/08	14.9	21.8	32.2	35	73	94	0.0	4.3	0	1.2	6.3	14.9	33.8	1017.9	1021.4	1024.9	0	233.5	934	95.3	99.5	100
7/03/08	16.2	19.8	25.4	69	89	98	66.0	2.5	0	2.1	17.4	14.9	26.4	1017.8	1019.8	1022	0	135.7	921	68.4	97.5	100
8/03/08	14.8	18.3	24.6	60	87	100	0.4	3.2	0	1.8	7.6	14.4	25	1021	1022.5	1024.1	0	184.5	948	91.8	98.0	100
9/03/08	14	19.0	26	59	85	99	0.4	3.4	0	1.0	6.7	14	26.4	1022.8	1024.4	1026	0	197.6	1064	93.9	98.8	100
10/03/08	15.8	20.8	28.4	48	78	99	0.2	4.0	0	1.5	7.2	15.8	28.8	1020.5	1022.8	1025.2	0	216.5	1007	88.6	99.3	100
11/03/08	14.9	21.0	29.4	45	76	97	0.0	4.0	0	1.3	6.7	15	30	1019.2	1021.0	1023	0	215.2	944	94.4	99.3	100
12/03/08	15.3	21.0	29.7	46	81	99	0.2	3.8	0	1.3	7.6	15.3	31.1	1017	1019.8	1022.9	0	213.0	913	88	99.4	100
13/03/08	17	20.5	27.3	63	87	99	0.2	3.3	0	1.1	7.6	17	28.8	1017.6	1019.0	1021.3	0	196.7	904	92.1	99.5	100
14/03/08	16.9	21.7	30.2	50	82	99	0.2	3.8	0	1.1	7.2	16.9	32.1	1018.6	1020.6	1022.6	0	210.9	915	84.8	96.8	100
15/03/08	15.6	21.6	30.9	46	81	98	0.2	3.7	0	1.2	6.7	15.7	32.1	1019.3	1020.8	1023	0	200.0	905	81.6	98.0	100
16/03/08	17.3	21.3	28.2	49	81	99	0.2	3.6	0	1.3	7.2	17.3	29	1020.7	1022.6	1024.3	0	197.3	1053	66.7	90.5	100
17/03/08	16.7	21.2	28.6	52	80	97	0.2	3.5	0	1.9	8.5	16.7	29.6	1021	1022.8	1024.4	0	173.8	917	76.6	94.3	100
18/03/08	15.4	21.4	31.7	36	76	97	0.2	3.7	0	1.3	7.2	15.4	32.9	1017.9	1020.7	1023.2	0	195.4	914	82.5	96.7	100
19/03/08	16.2	20.4	25	67	84	98	0.2	2.5	0	1.4	6.3	16.3	25.9	1016.9	1018.8	1021	0	126.7	643	75.7	95.4	100
20/03/08	16.7	22.9	32.3	35	72	98	0.2	4.0	0	2.2	8.9	16.7	32.8	1007.8	1011.9	1016.7	0	183.4	848	87.4	98.3	100
21/03/08	14.5	16.8	21	73	92	98	7.0	0.6	0	2.3	10.7	13.9	21.1	1010.1	1016.7	1021.5	0	21.2	207	65.5	89.4	99.7
22/03/08	14.3	16.6	18.7	80	90	98	8.4	0.9	0	2.3	7.6	13.6	19.1	1020.1	1021.6	1022.9	0	39.9	232	72.8	92.5	100
23/03/08	13.5	17.9	24.2	64	87	99	0.4	2.2	0	1.2	6.3	13.5	24.8	1019.5	1021.1	1022.8	0	117.0	802	74	96.0	100
24/03/08	17.6	20.8	27.7	59	87	100	0.8	2.6	0	1.4	8	17.6	28.9	1012.8	1016.1	1019.8	0	141.1	855	88	98.2	100
25/03/08	17.4	19.7	26.6	58	90	98	16.8	1.9	0	1.6	17	17.4	27.1	1005.7	1008.8	1012.8	0	104.4	907	89.8	99.0	100
26/03/08	15.3	19.8	26.3	42	71	98	0.2	3.2	0.4	2.5	7.6	14.8	26.2	1005.2	1008.2	1011.3	0	152.4	882	88.9	99.5	100
27/03/08	13.6	17.0	23.2	30	61	82	0.0	4.2	0	2.1	7.6	13.3	22.7	1010.9	1013.6	1016.2	0	203.7	907	92.1	99.4	100
28/03/08	11.8	15.4	20.7	65	83	96	0.0	2.1	0	1.5	8	11.8	20.5	1014.8	1016.0	1017.6	0	104.2	762	91.8	99.7	100
29/03/08	12.1	16.7	23.8	57	86	99	0.2	2.1	0	1.1	6.7	12.1	24.1	1010	1012.9	1015.9	0	117.9	891	90.9	99.2	100
30/03/08	10.9	17.7	25.2	26	52	97	0.2	4.6	0.4	2.6	9.4	11.1	24.3	1008.4	1011.4	1013.6	0	179.8	845	95	99.2	100
31/03/08	12.5	17.4	17.6	26	44	61	0.0	4.7	0	2.4	10.3	11.8	23.1	1011.7	1014.6	1019.2	0	194.7	849	94.2	99.0	100
Monthly	10.2	19.2	32.3	26	78	100	103.4	101.4	0	1.7	17.4	9.7	33.8	1005.2	1018.8	1026.7	0	171.5	1111	65.5	97.7	100

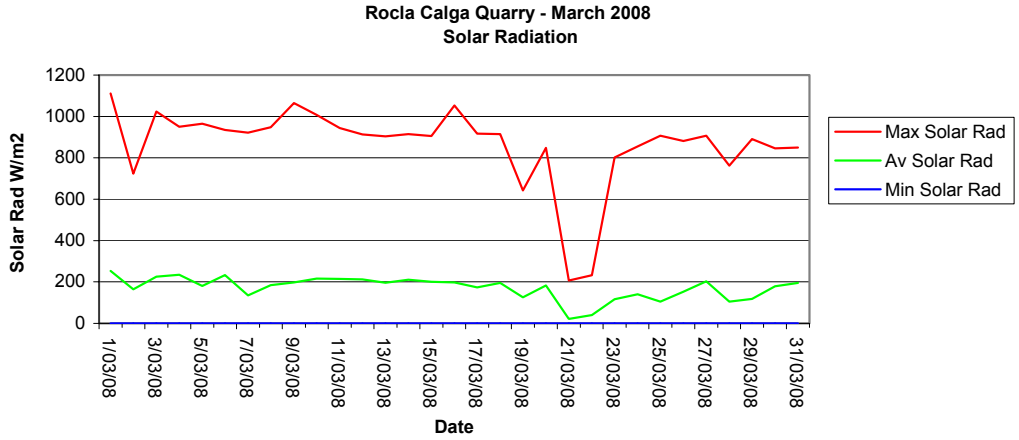
2.3.2 Monthly weather charts

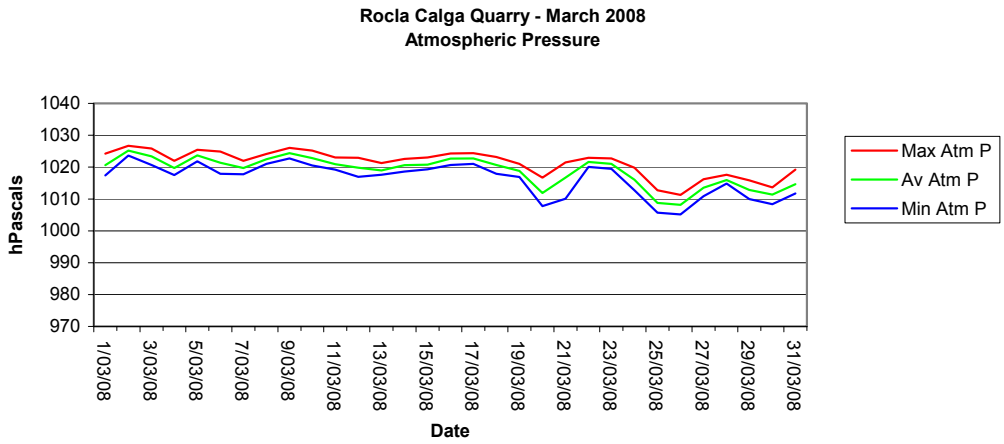


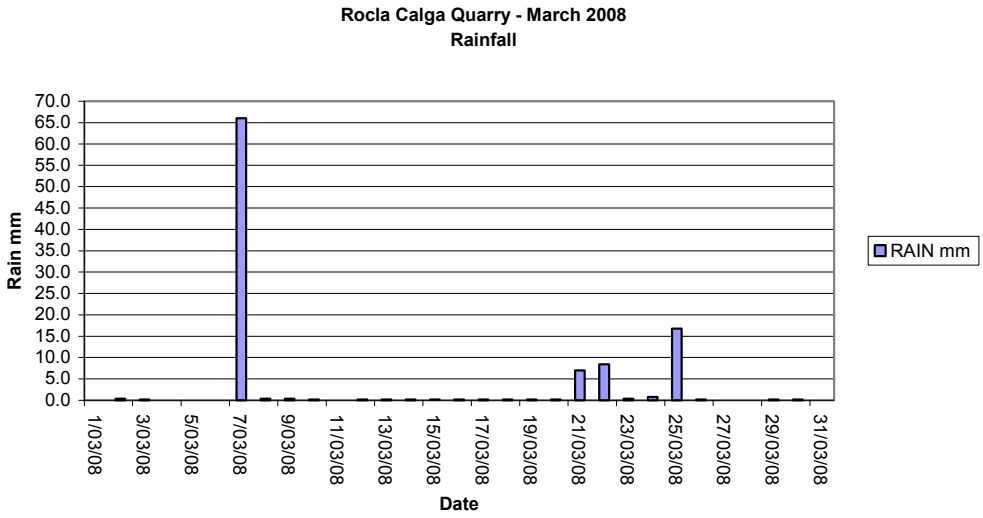


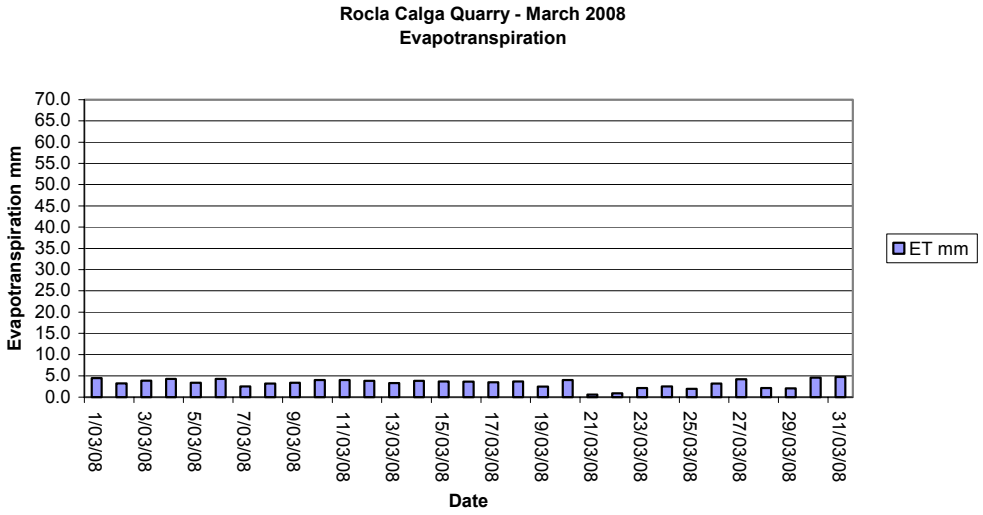


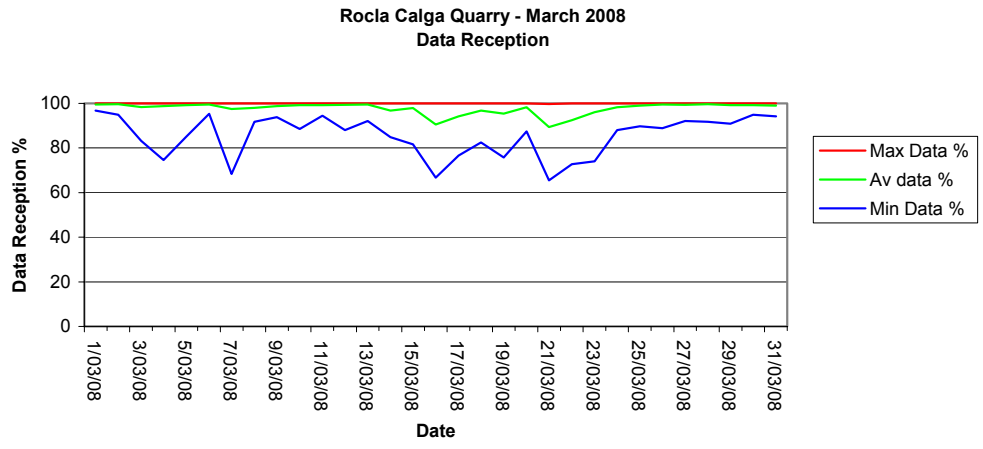

Rocla Calga Quarry - March 2008
Wind Speed
Wind Speed km/hr
20
18
16
14
12
10
8
6
4
2
0
1/03/08
3/03/08
5/03/08
7/03/08
9/03/08
11/03/08
13/03/08
15/03/08
17/03/08
19/03/08
21/03/08
23/03/08
25/03/08
27/03/08
29/03/08
31/03/08
Date
Max WS
Av WS
Min WS


Rocla Calga Quarry - March 2008
Solar Radiation
Solar Rad W/m2
1200
1000
800
600
400
200
0
1/03/08
3/03/08
5/03/08
7/03/08
9/03/08
11/03/08
13/03/08
15/03/08
17/03/08
19/03/08
21/03/08
23/03/08
25/03/08
27/03/08
29/03/08
31/03/08
Date
Max Solar Rad
Av Solar Rad
Min Solar Rad


Rocla Calga Quarry - March 2008
Atmospheric Pressure
hPascals
1040
1030
1020
1010
1000
990
980
970
1/03/08
3/03/08
5/03/08
7/03/08
9/03/08
11/03/08
13/03/08
15/03/08
17/03/08
19/03/08
21/03/08
23/03/08
25/03/08
27/03/08
29/03/08
31/03/08
Date
Max Atm P
Av Atm P
Min Atm P

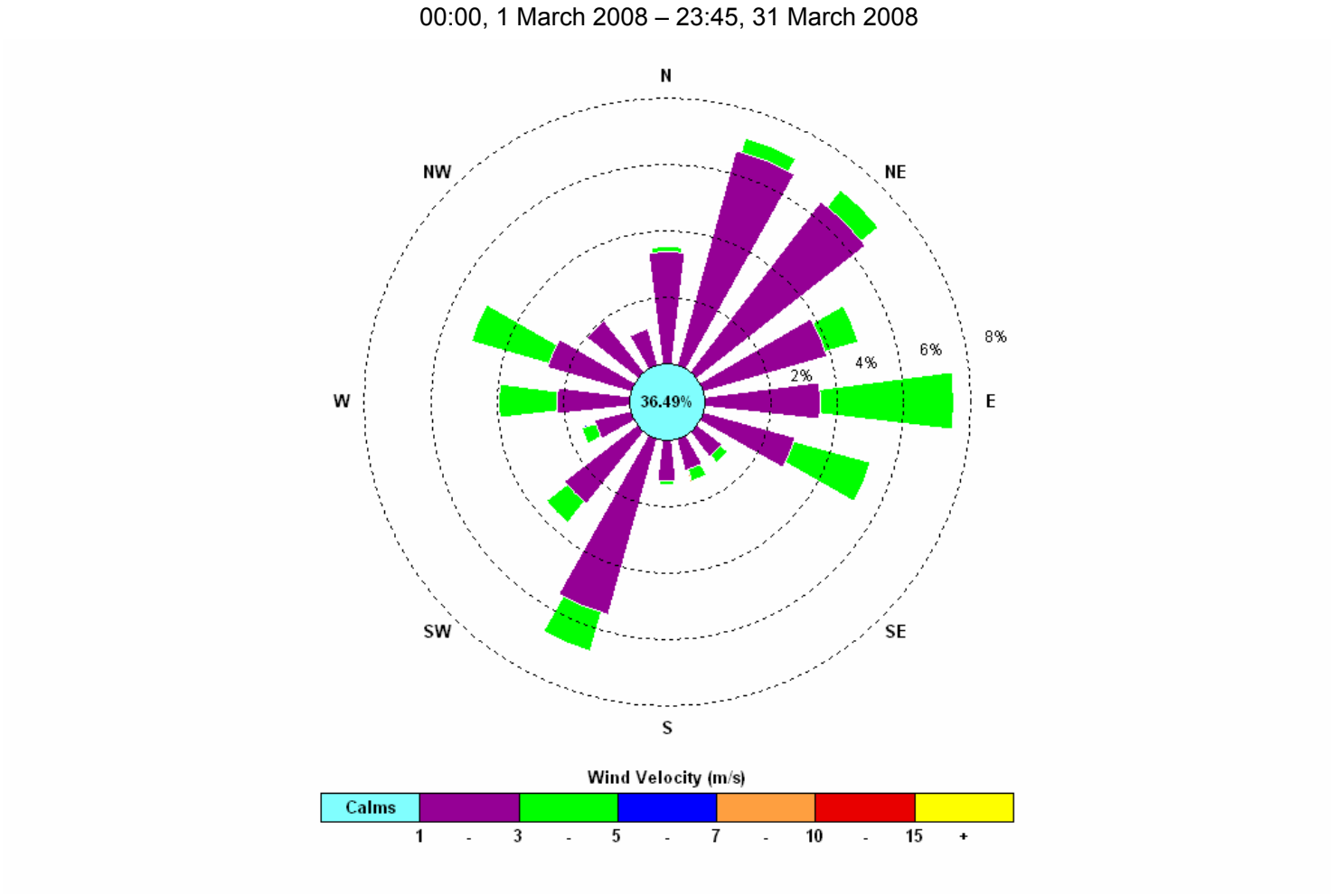

Rocla Calga Quarry - March 2008
Rainfall
Rain mm
70.0
65.0
60.0
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
1/03/08
3/03/08
5/03/08
7/03/08
9/03/08
11/03/08
13/03/08
15/03/08
17/03/08
19/03/08
21/03/08
23/03/08
25/03/08
27/03/08
29/03/08
31/03/08
Date
RAIN mm


Rocla Calga Quarry - March 2008
Evapotranspiration
Evapotranspiration mm
70.0
65.0
60.0
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
1/03/08
3/03/08
5/03/08
7/03/08
9/03/08
11/03/08
13/03/08
15/03/08
17/03/08
19/03/08
21/03/08
23/03/08
25/03/08
27/03/08
29/03/08
31/03/08
Date
ET mm


Rocla Calga Quarry - March 2008
Data Reception
Data Reception %
100
80
60
40
20
0
1/03/08
3/03/08
5/03/08
7/03/08
9/03/08
11/03/08
13/03/08
15/03/08
17/03/08
19/03/08
21/03/08
23/03/08
25/03/08
27/03/08
29/03/08
31/03/08
Date
Max Data %
Av data %
Min Data %

2.3.3 Windrose plot

Frequency plot of the average wind speed and average direction over each 15 minute sampling period. Wind is considered calm when less than a 15 minute average of 1m/s.



The windrose shows predominant winds from NNE-ESE and SSW-WNW this month. The maximum wind speed was 17.4 m/s from the SSE.

Appendix 1

Laboratory Certificates

Appendix 2

Additional Bureau of Meteorology data from Peats Ridge and Gosford Monitoring Stations

Peats Ridge, New South Wales
March 2008 Daily Weather Observations

Australian Government
Bureau of Meteorology

Date	Day	Temps		Rain	Evap	Sun	Max wind gust			9am						3pm					
		Min	Max				Dirn	Spd	Time	Temp	RH	Cld	Dirn	Spd	MSLP	Temp	RH	Cld	Dirn	Spd	MSLP
		°C	°C	mm	mm	hours		km/h	local	°C	%	eighths		km/h	hPa	°C	%	eighths		km/h	hPa
1	Sa	9.4	20.2	0	2.6					13.6	67	1	S	9		18.4	80	4	S	9	
2	Su	11.4	21.7	0.2	3.2					14.0	91	6	S	9							
3	Mo	11.1	23.3	0.2	2.4					16.6	82	1	S	4		21.2	65	2	NE	9	
4	Tu	11.7		0	3.6					17.6	77	0	NE	4		27.8	44	1	SE	4	
5	We		24.4	0						18.5	88	7	E	4		23.8	64	5	E	4	
6	Th	13.8	28.6	0	3.0					19.3	79	0	ENE	4		28.2	48	0	NNE	4	
7	Fr	15.6	26.6	0	5.2					18.8	98	8	S	9		24.7	73	6	SSE	9	
8	Sa	14.3	22.6	38.6	2.8					17.1	96	2	ESE	4		21.8	71	5	ENE	4	
9	Su	13.4	24.4	0	2.6					18.0	92	2	NE	9		22.6	72	5	NE	4	
10	Mo	15.3	25.6	0	2.6					20.3	79	1	NE	9		24.6	52	1	E	4	
11	Tu	13.2	27.4	0	5.0					18.8	88	0		Calm		26.6	52	0	E	4	
12	We	14.8		0	4.0					19.6	85	0	NE	4		26.7	58	1	NE	4	
13	Th		28.6	0.2												25.9	71	3	ESE	4	
14	Fr	16.1	26.8	0	3.6					20.2	95	7	SE	4		25.2	70	1	E	4	
15	Sa	14.6	27.6	0						21.1	86	2	NE	4		26.5	66	0		Calm	
16	Su	16.1	25.7	0.2	5.4					19.9	93	6	NE	4							
17	Mo	14.9	26.2	0.2	3.2					20.1	90	2	NE	4		25.0	61	1	E	19	
18	Tu	13.9	28.3	0.2	4.0					19.9	80	1	NE	4		27.8	44	2	NW	4	
19	We	16.7	24.4	0	5.0					18.2	96	2	NE	4							
20	Th	14.8	29.6	0.2	3.8					19.4	89	0	NE	4		29.2	47	2	NW	9	
21	Fr	16.2	16.8	1.2	4.2					16.6	98	8	S	9		16.2	94	8	S	4	
22	Sa	13.7	18.2	8.0	2.2					16.8	98	8	S	4		17.8	94	8	E	4	
23	Su	12.4	22.9	8.2	9.6					17.2	92	6	ENE	4		20.6	78	7	ESE	4	
24	Mo	16.4	24.5	1.4	1.0					18.6	96	8	SE	4		23.5	75	5	E	4	
25	Tu	17.8	26.5	2.2	3.4					19.5	95	6		Calm		25.0	65	7		Calm	
26	We	14.6	25.6	6.8	0.8					18.2	83	0	NW	4		25.5	45	2	SE	4	
27	Th	11.8	22.1	0	3.4					14.2	73	3	SW	4		21.0	39	1	SSW	4	
28	Fr	9.9	19.0	0	3.4					13.0	93	3	ESE	9							
29	Sa	10.7	22.7	0	4.4					14.4	96	3	W	4		21.3	68	4	SW	4	
30	Su	9.0	24.1	0	0.8					14.0	57	3	SE	4							
31	Mo	7.8	23.4	0.2	4.8					15.2	53	4	NW	4		21.4	72	0	NW	4	
Statistics for March 2008																					
Mean		13.5	24.4		3.6					17.6	86	3		4		23.8	64	3		5	
Lowest		7.8	16.8		0.8					13.0	53	0		Calm		16.2	39	0		Calm	
Highest		17.8	29.6	38.6	9.6					21.1	98	8	#	9		29.2	94	8	E	19	
Total				68.0	100.0																

Gosford, New South Wales
March 2008 Daily Weather Observations

Australian Government
Bureau of Meteorology

Date	Day	Temps		Rain	Evap	Sun	Max wind gust			9am						3pm					
		Min	Max				Dirn	Spd	Time	Temp	RH	Cld	Dirn	Spd	MSLP	Temp	RH	Cld	Dirn	Spd	MSLP
		°C	°C	mm	mm	hours		km/h	local	°C	%	eighths		km/h	hPa	°C	%	eighths		km/h	hPa
1	Sa	10.7	21.1	0.2			SE	33	10:46	16.4	62		WNW	7		20.8	50		SE	15	
2	Su	13.4		0.8						15.9	90		SE	6		21.6	59		SE	11	
3	Mo		23.7				SE	20	12:06	17.7	86			Calm		22.6	57		E	9	
4	Tu	10.5	27.7	0			ESE	15	12:45	17.2	84		SE	4		27.5	55		ENE	6	
5	We	13.8	25.3	0			SE	24	08:46	18.8	99			Calm		25.3	60		SSE	9	
6	Th	14.0	28.1	0			ENE	20	13:20	19.5	81					27.9	64		ENE	11	
7	Fr	14.7	26.0	0			SE	33	21:27	20.3	99		N	2		25.5	69		SSE	11	
8	Sa	16.2	23.7	33.0			SSE	22	10:19	19.8	92		NE	2		22.6	66		ESE	9	
9	Su	13.0	24.8	0.2			SE	19	13:07	18.5	96			Calm		23.0	73		ESE	9	
10	Mo	15.1	26.4	0			NNE	52	10:09	19.7	88			Calm		25.8	52		E	9	
11	Tu	13.5	27.2	0.2			ESE	22	11:48	18.5	95			Calm		27.0	55		ENE	7	
12	We	14.3	27.1	0			E	24	16:35	19.1	90		ENE	2		25.9	65		ENE	11	
13	Th	15.0	27.3	0			SE	24	13:44	19.7	95			Calm		25.6	69		SSE	13	
14	Fr	15.7	27.2	0			ENE	20	13:18	19.8	99			Calm		26.5	64		E	9	
15	Sa	14.0	28.1	0.2			NE	20	15:24	18.9	96			Calm		27.1	61		E	9	
16	Su	15.9	27.3	0			ESE	20	13:23	20.0	97			Calm		25.6	60		NE	6	
17	Mo	14.6		0						19.0	99			Calm							
18	Tu		28.4				NE	22	14:23	18.2	99			Calm		27.5	58		NE	11	
19	We	14.4	25.8	0			SE	20	10:08	19.6	95			Calm		24.0	75		SE	9	
20	Th	15.3	31.9	0			N	24	11:44	19.7	89			Calm		31.0	44		N	9	
21	Fr	18.0	18.7	0.2			SE	30	04:47	18.1	95		SSE	11		18.2	89		SSE	7	
22	Sa	15.0	20.6	6.0			SSE	20	07:02	18.5	96		S	6		20.1	77		SE	9	
23	Su	12.5	23.8	12.8			S	20	11:37	17.4	99			Calm		23.4	72		SE	9	
24	Mo	17.1	26.3	0.6			ESE	24	13:10	21.0	90		NE	2		25.6	68		NE	9	
25	Tu	17.6	28.5	0.4			N	24	12:01	19.4	97		NW	2		27.5	58		NNW	2	
26	We	14.4	27.3	10.8			N	22	09:26	19.1	79		N	7		25.4	49		NE	6	
27	Th	11.7	23.5	0			S	20	16:05	18.2	52		NW	9		23.4	33		SSW	6	
28	Fr	11.0	21.1	0			SSE	26	12:03	15.8	90		N	6		19.9	75		SE	9	
29	Sa	12.1	23.2	0.4			E	20	13:08	15.8	94			Calm		22.1	64		ESE	11	
30	Su	9.5	25.6	0.2			N	26	12:21	18.8	45		N	13		25.2	24		NW	15	
31	Mo	7.1		0						18.9	38		WNW	9		23.6	31		NNW	9	
Statistics for March 2008																					
	Mean	13.8	25.6							18.6	87			2		24.6	59			9	
	Lowest	7.1	18.7							15.8	38			Calm		18.2	24		NNW	2	
	Highest	18.0	31.9	33.0			NNE	52		21.0	99		N	13		31.0	89		#	15	