

# Rocglen Coal Mine Community Consultative Committee Meeting #10

## Environmental Monitoring Report October – December 2010

### Noise Monitoring

#### Attended Noise Monitoring

Attended noise monitoring was undertaken on the 14<sup>th</sup> December 2010, as required for operational noise monitoring under the Noise Monitoring Program, with results outlined below:

RCM Noise Monitoring Results – 14 December 2010 (Day)				
Location	Time	dB(A),Leq	Wind speed/ direction	Identified Noise Sources
Surrey	11:20 am	38	1.5 m/s - ESE	Birds & insects (38), RCM (<20)
Costa Vale	11:56 am	39	1.5 m/s - ESE	Birds & insects (39), RCM (30)

RCM Noise Monitoring Results – 14 December 2010 (Evening)				
Location	Time	dB(A),Leq	Wind speed/ direction	Identified Noise Sources
Surrey	9:35 pm	50	3 m/s, E	Wind in trees (48), insects (47), RCM inaudible
Costa Vale	9:10 pm	51	3 m/s, E	Birds & insects (51), RCM inaudible

RCM Noise Monitoring Results – 14 December 2010 (Night)				
Location	Time	dB(A),Leq	Wind speed/ direction	Identified Noise Sources
Surrey	10:31 pm	47	3 m/s - NE	Wind (46), insects (40), RCM inaudible
Costa Vale	10:05 am	46	3.5m/s - NE	Insects & frogs (46), RCM inaudible

The results indicate that, under the operational and atmospheric conditions at the time, noise emissions from the mine did not exceed the criterion of 35 dB(A) at either monitoring location.

In addition to the operational noise, the noise from the mine must not exceed 45 dB(A) L<sub>1</sub> (1 min) between the hours of 10 pm and 7 am. This is to minimise the potential for sleep disturbance as a result of individual loud noises from the mine.

During the night time measurement circuit the L<sub>1</sub> (1 min) noise from the mine did not exceed 45 dB(A) at either monitoring location.

Following recent complaints pertaining to noise levels at the “Surrey” property, a real time noise monitor has been placed at the property for an extended period. A full review of results from that monitoring will be undertaken in the near future and outcomes advised at the next CCC meeting.

### **Road Noise Monitoring**

No monitoring has occurred since the last CCC meeting. Results from the upcoming round of monitoring will be provided at the next CCC meeting.

### **Unattended Noise Monitoring**

Unattended noise monitoring was carried out in September 2010 at both the “Costa Vale” and “Surrey” properties with results provided in the following tables. Unattended monitoring provides noise levels from all sources and does not distinguish mine related noise from other noise sources.

#### **Costa Vale**

Date	Leq(day)	Leq(eve)	Leq(night)	L90(day)	L90(eve)	L90(night)
10-Dec-10	52.8	61.0	57.0	35.2	41.7	38.0
11-Dec-10	50.1	57.0	50.1	33.0	34.7	33.5
12-Dec-10	48.3	49.4	43.1	34.0	35.2	32.3
<b>LAeq</b>	<b>51</b>	<b>58</b>	<b>53</b>			
<b>L90</b>				<b>34</b>	<b>35</b>	<b>34</b>

#### **Surrey**

Date	Leq(day)	Leq(eve)	Leq(night)	L90(day)	L90(eve)	L90(night)
10-Dec-10	57.6	46.8	43.3	32.5	31.2	32.3
11-Dec-10	44.5	43.8	46.6	31.0	31.0	31.3
12-Dec-10	46.4	42.1	49.0	31.5	27.2	32.5
<b>LAeq</b>	<b>53</b>	<b>45</b>	<b>47</b>			
<b>L90</b>				<b>32</b>	<b>31</b>	<b>32</b>

### **Blast Monitoring**

#### **Blasting Results**

Since the first shot there have been 65 blasts (until the end of the reporting period). All blasts during this report period have been compliant within the limits of 115dB<sub>L</sub> and 5mm/s.

To date, the highest overpressure recorded is 119.9 dB<sub>L</sub> recorded at “Costa Vale” on the 24<sup>th</sup> August 2009. The highest ground vibration recorded is 1.50 mm/s recorded at “Roseberry” on the 12<sup>th</sup> December 2008.

## Air Quality

### Deposited Dust Results

The deposited dust results (g/m<sup>2</sup>/month) obtained for the site over the last 12 months are as follows:

**Air Quality (Dust Deposition) Results**

Month	BD2 - Glenroc	BD3 - Belah	BD4 - Surrey	BD5 - Stratford	BD6 - Roseberry	BD7 - Roseglass	BD8 - Yarrowonga
January 2010	1.7	2.8	1.4	2.2	2.5	1.5	1.3
February 2010	2.3	1.2	0.8	0.7	1.4	3.1	1.7
March 2010	4.3	3.7	0.9	1.1	1.2	0.7	0.8
April 2010	1.8	0.7	0.9	0.5	0.4	4.0	1.0
May 2010	0.5	0.9	0.4	0.4	0.3	0.5	0.2
June 2010	1.6	0.8	0.9	0.7	0.7	0.8	1.4
July 2010	0.8	0.6	0.4	0.4	0.4	0.4	0.4
August 2010	1.0	0.4	0.4	2.6	0.6	0.4	0.4
September 2010	0.5	0.7	1.1	0.6	1.8	1.5	0.8
October 2010	1.2	1.1	0.8	0.4	0.6	0.6	0.6
November 2010	1.6	1.0	1.4	1.1	2.0	2.2	1.3
December 2010	0.5	0.6	0.5	1.3	1.6	0.7	1.7
<b>Annual Average</b>	<b>1.5</b>	<b>1.2</b>	<b>0.8</b>	<b>1.0</b>	<b>1.1</b>	<b>1.4</b>	<b>1.0</b>

Deposited dust levels have continued to remain at low levels since the last CCC meeting and have been relatively consistent over the last 12 months. The annual average at all sites remains well below the concentration threshold of 4g/m<sup>2</sup>/month.

### PM<sub>10</sub> Results

The annual averages for PM<sub>10</sub> levels up until the end of December 2010 remain below the annual average limit of 30µg/m<sup>3</sup>, as follows:

Glenroc: 11.98µg/m<sup>3</sup>  
Surrey/Roseberry: 8.9µg/m<sup>3</sup>

The 24hr criterion of 50µg/m<sup>3</sup> was not breached at either Glenroc or Roseberry during the period.

The highest PM<sub>10</sub> readings at each site are as follows:

Glenroc: 113 µg/m<sup>3</sup> (14<sup>th</sup> December 2009)  
Roseberry: 101 µg/m<sup>3</sup> (8<sup>th</sup> December 2009)

## Water Monitoring

### Ground Water

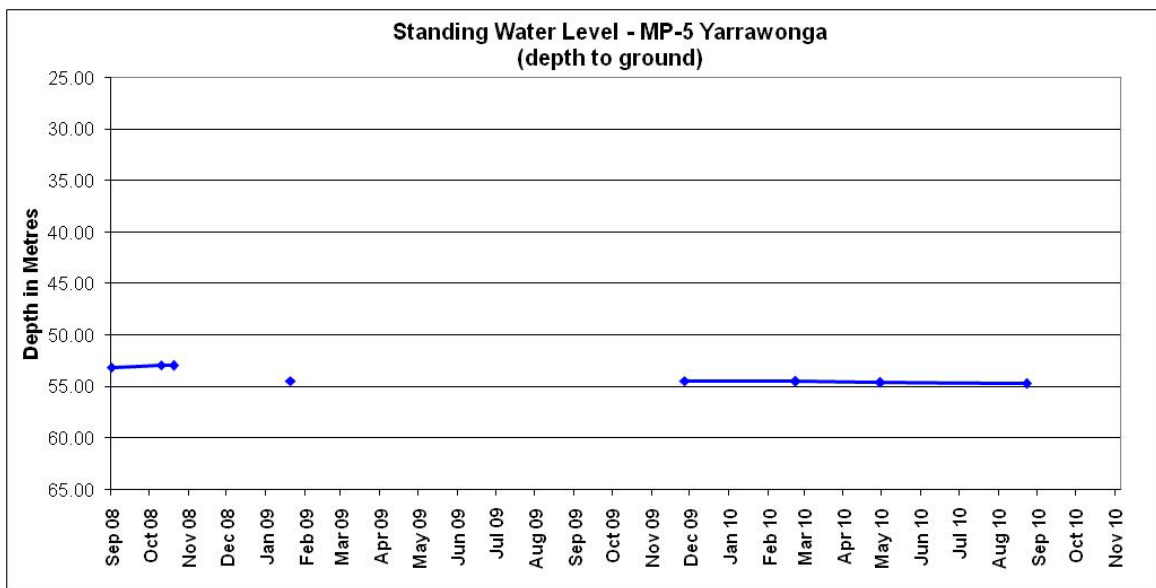
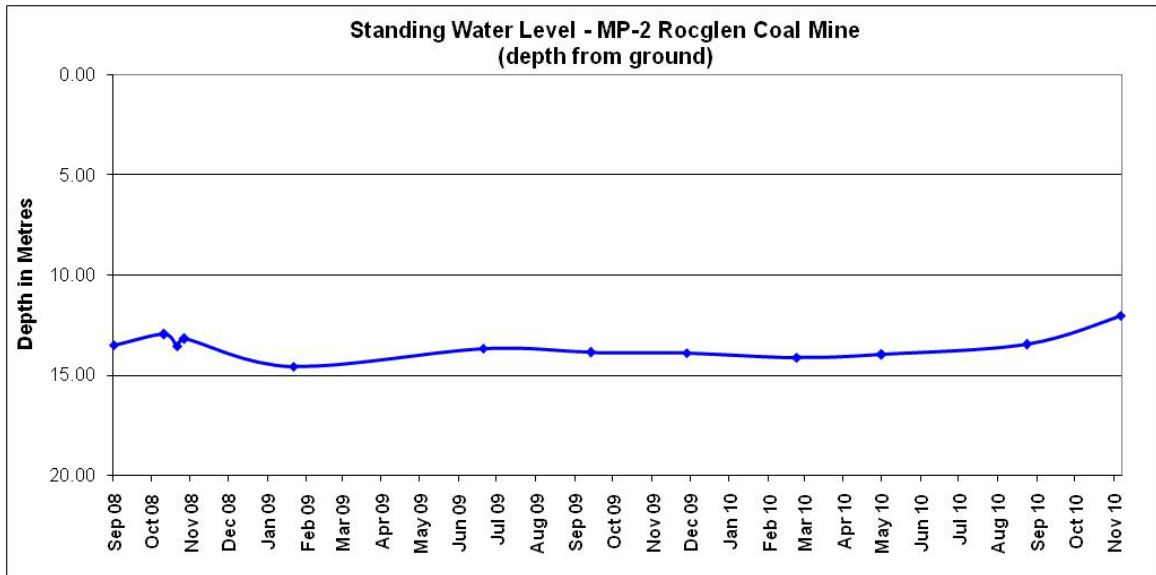
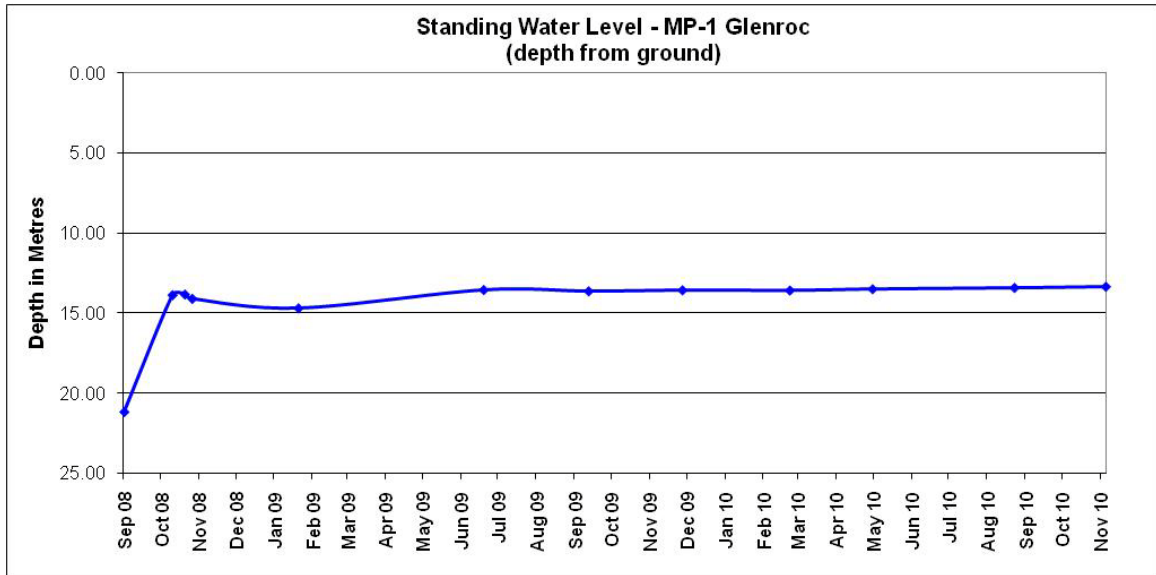
Groundwater monitoring data obtained to date is presented in the following table. Standing Water Level (SWL) graphs are also provided.

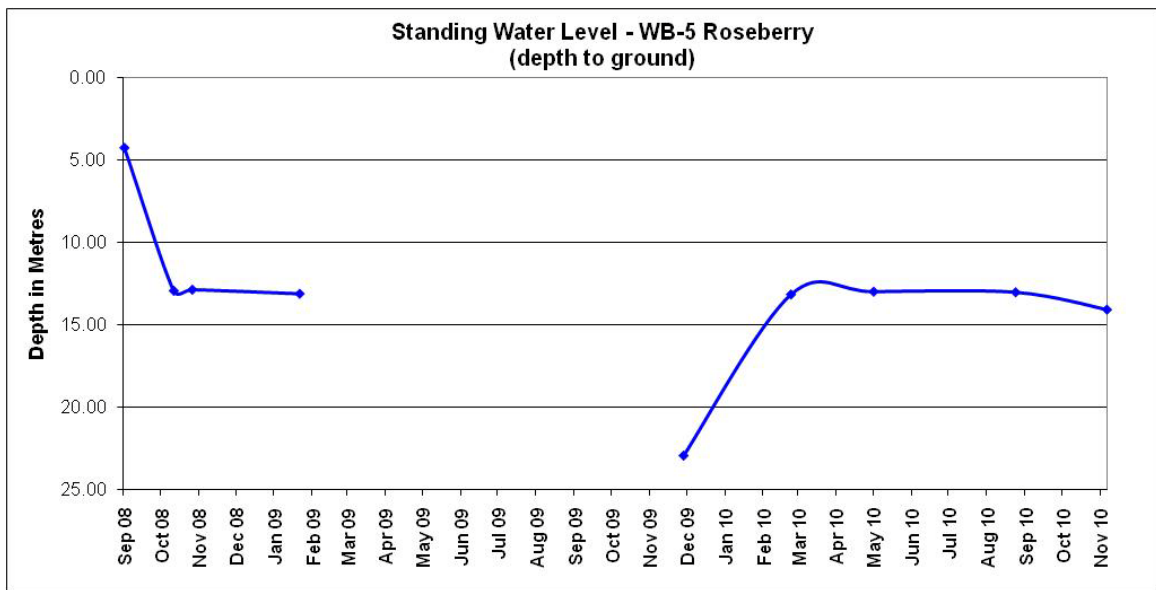
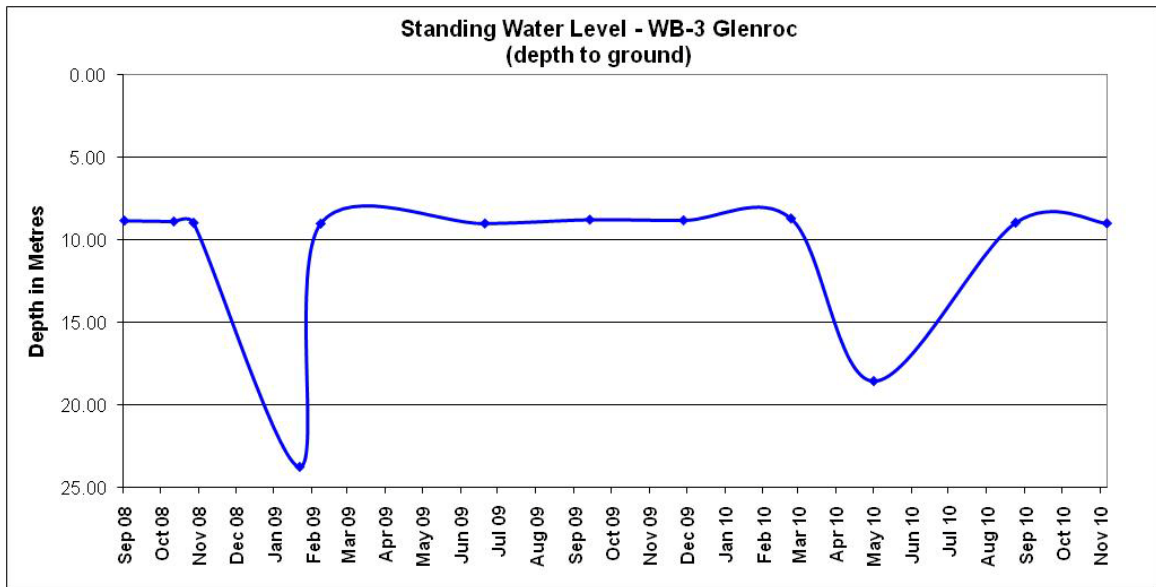
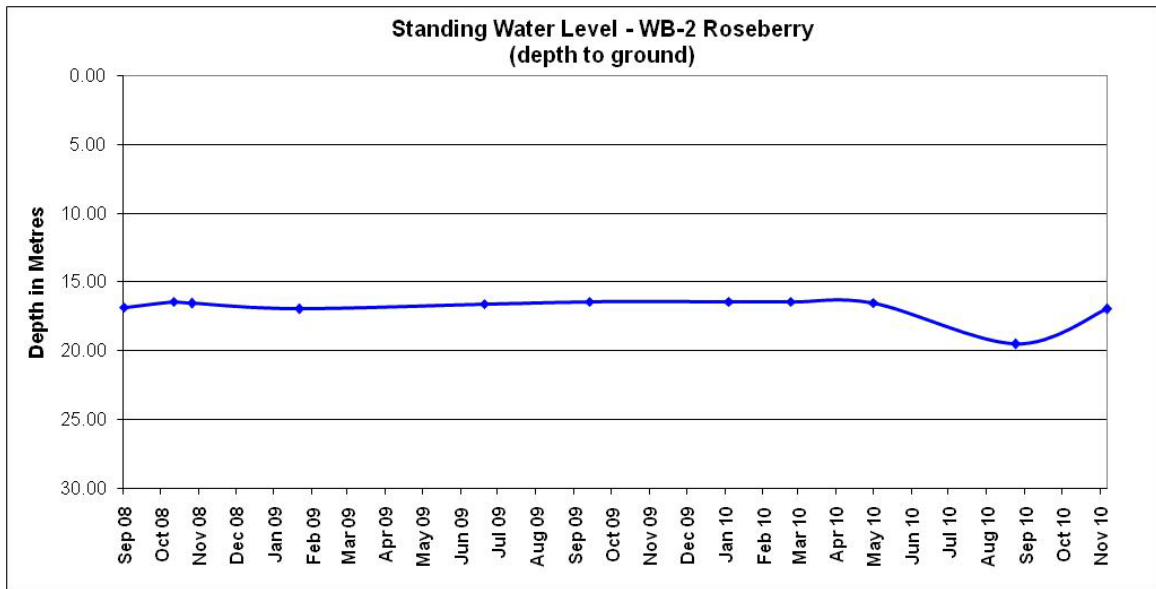
Site	Date	SWL (m)	pH	Elect. Conduct µs/cm
<b>MP1</b>	September 08	21.14		
	13 October 08	13.87		
	23 October 08	13.83		
	29 October 08	14.10	7.6	2360
	23 January 09	14.69		
	22 June 09	13.55	7.8	2250
	15 September 09	13.63		
	30 November 09	13.57	7.85	2250
	25 February 10	13.58		
	3 May 10	13.5	8.06	2100
	26 Aug 10	13.42	8	1650
	8 November 10	13.35	7.36	2080
	<b>MP2</b>	September 08	13.53	
13 October 08		12.98		
23 October 08		13.56		
29 October 08		13.20	7.3	4180
23 January 09		14.60		
22 June 09		13.70	7	5210
15 September 09		13.88		
30 November 09		13.90	6.99	4560
25 February 10		14.14		
3 May 10		14	7.37	4760
26 August 10		13.48	7.07	5060
8 November 10		12.04	6.72	3720
<b>MP3</b>		September 08	11.81	
	13 October 08	9.06		
	23 October 08	17.36		
	29 October 08	N/S Bore Dry		
	23 January 09	18.3 (mud)		
	22 June 09	N/S Bore Dry		
	15 September 09	Dry		
	30 November 09	Dry		
	25 February 10	Dry		
	3 May 10	Dry		
	26 August 10	Dry		
	8 November 2010	Dry		
	<b>MP4</b>	September 08	22.62	
13 October 08		23.02		
22 October 08		23.17		
29 October 08		N/S Bore Dry		
23 January 09		24.16 (mud)		
22 June 09		N/S Bore Dry		
15 September 09		Dry		
30 November 09		Dry		
25 February 10		Dry		
3 May 10		Dry		

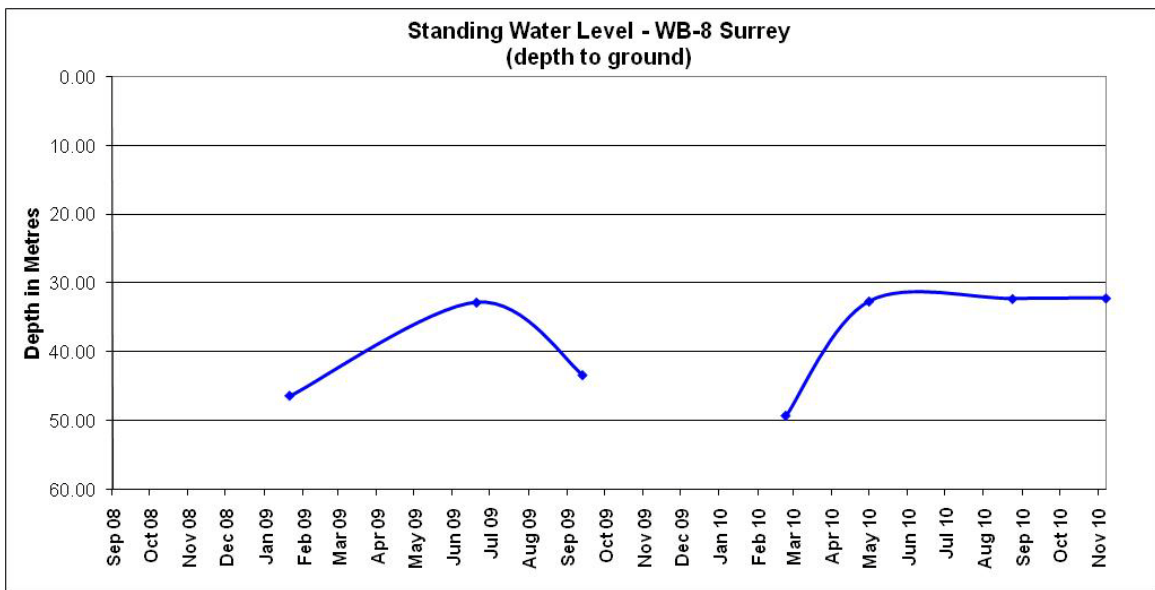
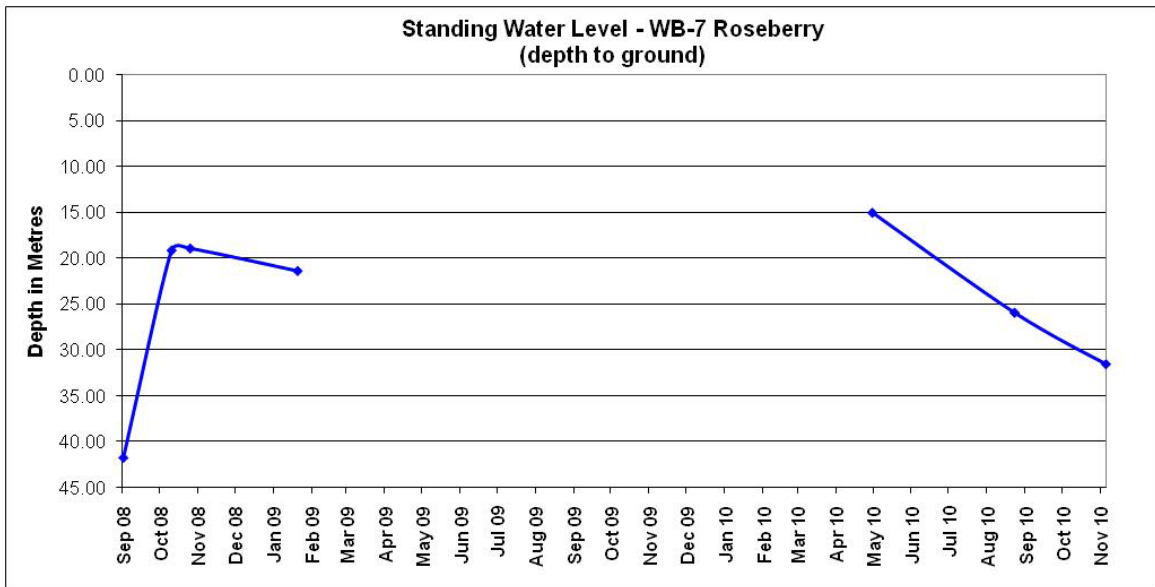
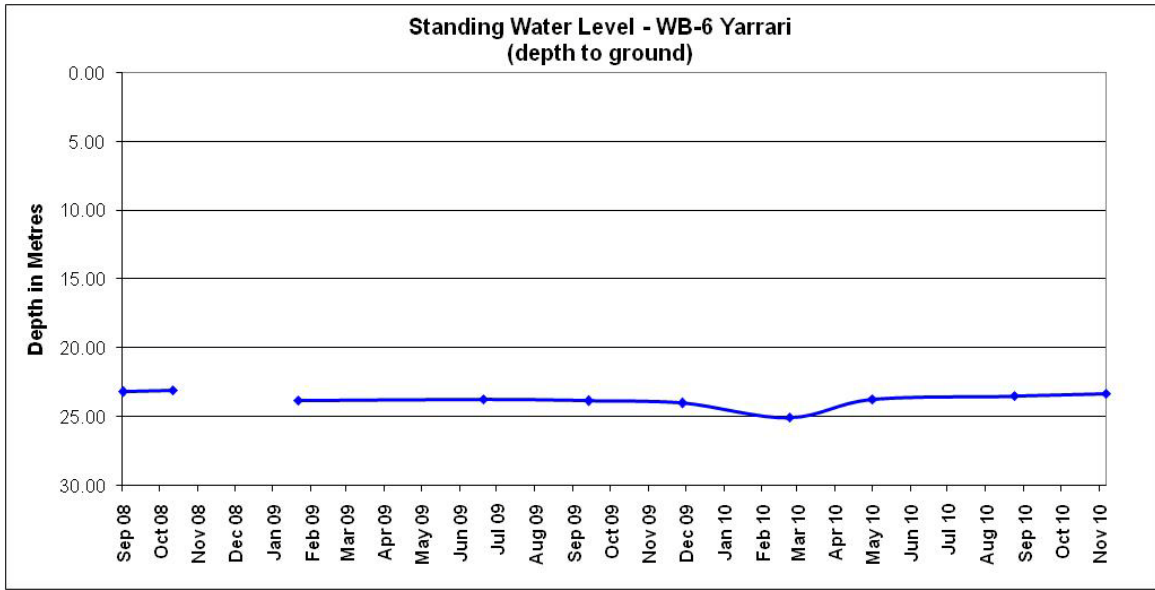
	26 August 10	Dry		
	8 November 10	Dry		
<b>MP5</b>	September 08	53.13		
	13 October 08	52.9		
	23 October 08	52.96		
	29 October 08	N/S Bore Dry		
	23 January 09	54.44 (mud)		
	22 June 09	N/S Bore Dry		
	15 September 09	Dry		
	30 November 09	54.4	Insufficient water to sample	
	25 February 10	54.48		
	3 May 10	54.6		
	26 August 10	54.69		
	8 November 10	Insufficient water to sample		
<b>WB1</b>	13 October 08	8.95		
	28 October 08	8.85	7.9	1996
	NO ACCESS			
<b>WB2</b>	September 08	16.87		
	13 October 08	16.49		
	28 October 08	16.60	7.7	3430
	23 January 09	17.00		
	22 June 09	16.65	7.2	3160
	15 September 09	16.45		
	6 January 09	16.45	7.51	2010
	25 February 10	16.48		
	3 May 10	16.56	7.84	2190
	26 August 10	19.54	7.4	3000
	8 November 10	17.00	7.3	2410
<b>WB3</b>	September 08	8.82		
	13 October 08	8.87		
	29 October 08	8.95	7.2	4480
	23 January 09	23.72		
	10 February 09	9.0		
	22 June 09	8.99	7.5	4380
	15 September 09	8.76		
	30 November 09	8.8	7.74	3890
	25 February 10	8.69		
	3 May 10	18.53	7.88	4000
	26 August 2010	8.94	8.28	3260
	8 November 2010	8.98	8.02	2360
<b>WB4</b>	Casing Sealed	No Access		
	26 August 2010	Unable to dip	7.83	3650
<b>WB5</b>	September 08	4.23		
	13 October 08	12.92		
	28 October 08	12.85	7.2	8400
	23 January 09	13.1		
	22 June 09	No Access	6.6	7930
	15 September 09	No Access		
	30 November 09	22.93	7.06	4880
	25 February 10	13.14		
	3 May 10	12.97	7.43	6720
	26 August 10	13.01	7.47	7480
	8 November 10	14.06	7.86	5810

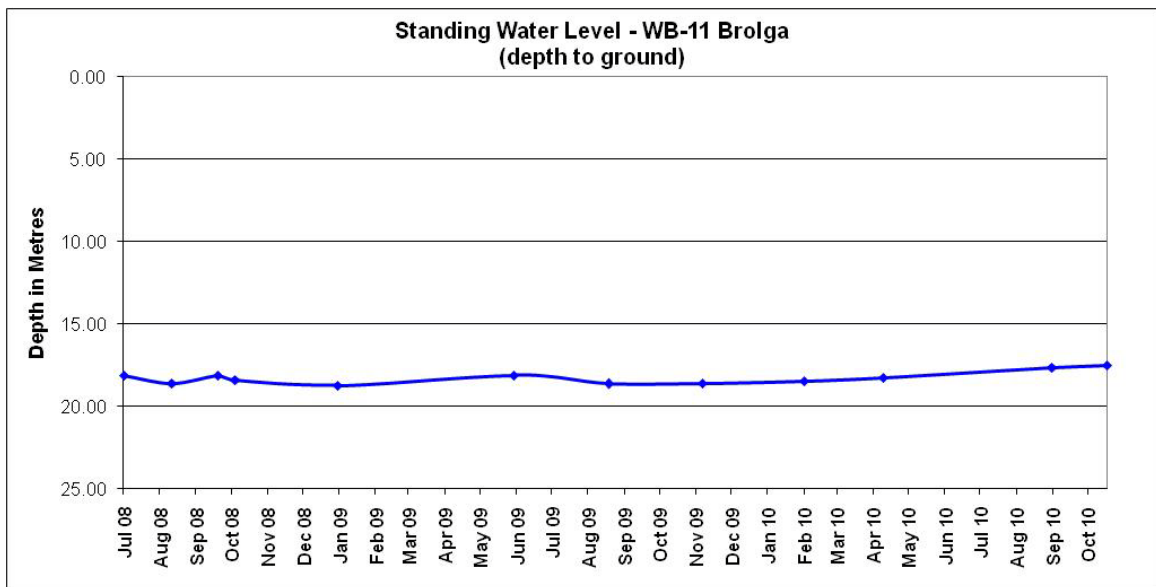
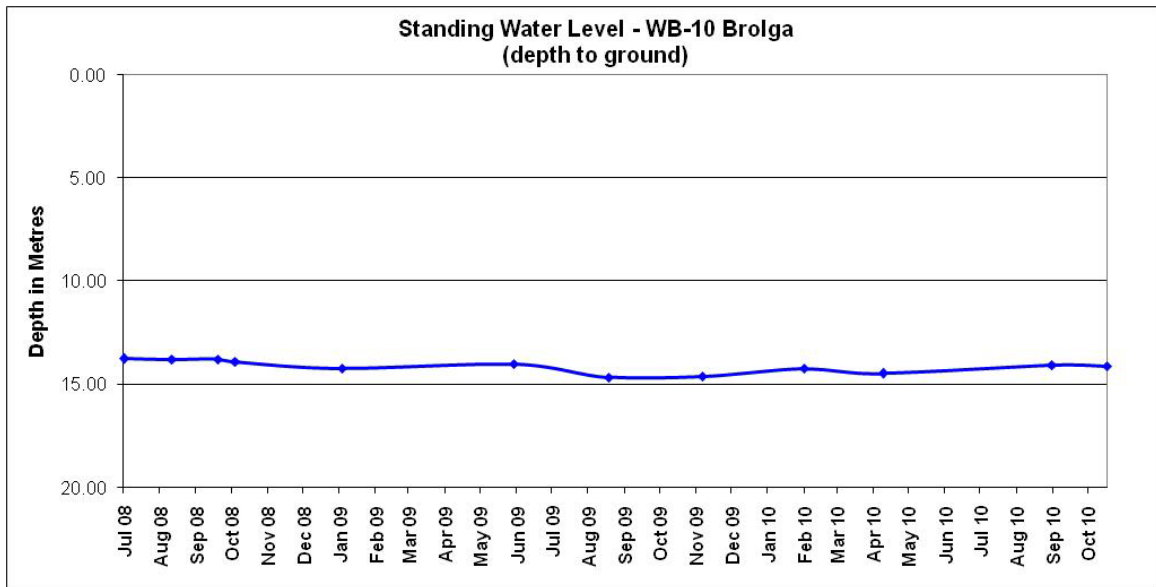
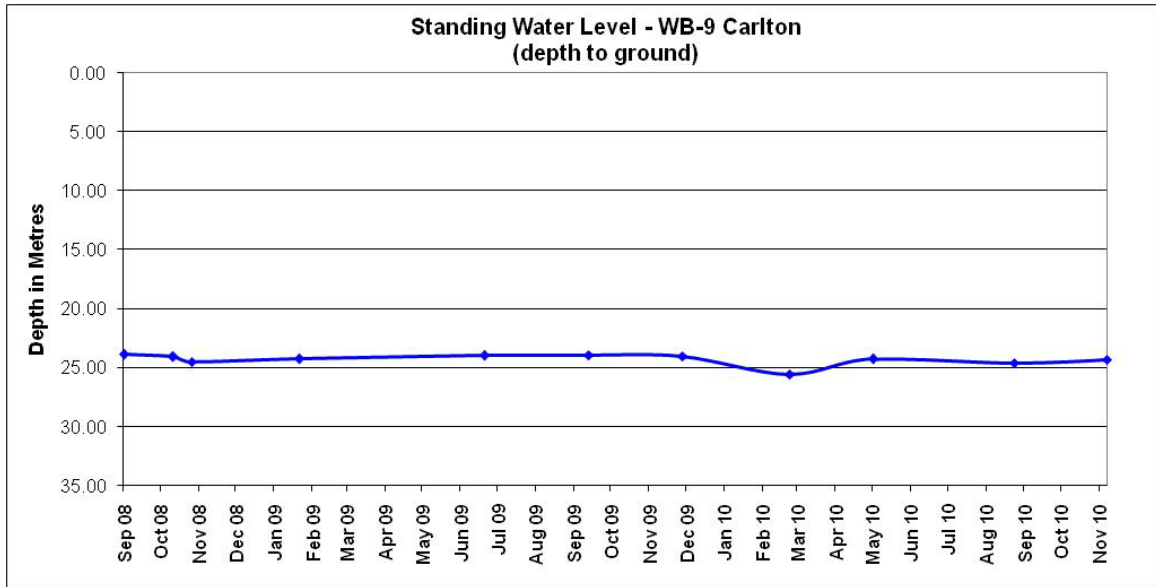
<b>WB6</b>	September 08	23.18		
	13 October 08	23.05		
	29 October 08	No Access		
	23 January 09	23.81		
	22 June 09	23.74	Unable to sample	
	15 September 09	23.83		
	30 November 09	24.02	No sample – bore equipped	
	25 February 10	25.05		
	3 May 10	23.71		
	26 August 10	23.47	Bore equipped	
	8 November 10	23.31	Bore equipped	
<b>WB7</b>	September 08	41.75		
	13 October 08	19.11		
	28 October 08	18.90	7.2	2730
	23 January 09	21.35		
	22 June 09		7.4	2690
	15 September 09	Bore equipped		
	30 November 09	Unable to dip	7.3	2260
	25 February 10	Unable to dip		
	3 May 10	15	7.45	2470
	26 August 10	25.91	Unable to sample – bore equipped	
	8 November 10	31.53	7.24	2240
<b>WB8</b>	September 08	No Access		
	13 October 08	No Access		
	29 October 08	No Access		
	23 January 09	46.4		
	22 June 09	32.75	8.2	2240
	15 September 09	43.38		
	30 November 09	Dry		
	25 February 10	49.32		
	3 May 10	32.59	Unable to Sample	
	26 August 10	32.23	Unable to Sample	
	9 November 10	32.14	Bore Equipped	
<b>WB9</b>	September 08	23.88		
	13 October 08	24.09		
	28 October 08	24.50	7.5	931
	23 January 09	24.27		
	22 June 09	23.99	7.9	1080
	15 September 09	23.94		
	30 November 09	24.05	7.14	1020
	25 February 10	25.58		
	3 May 10	24.26	Unable to Sample	
	26 August 10	24.59	7.72	1057
	9 November 10	24.34	Windmill over bore	
<b>WB10</b>	July 08	13.75		
	September 08	13.80		
	13 October 08	13.77		
	28 October 08	13.9	7.4	2235
	27 January 09	14.23		
	22 June 09	14.01	7	2220
	11 September 09	14.65		
	30 November 09	14.62	6.89	1690
	25 February 10	14.23		
	3 May 10	14.47	7.93	2010

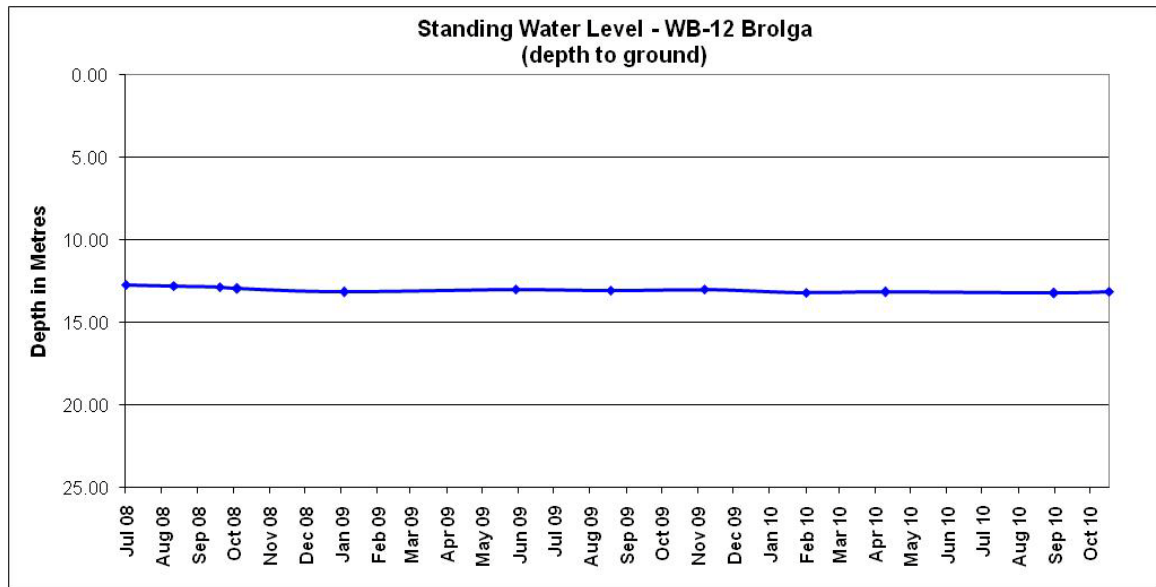
	24 September 10	14.05	6.7	1833
	10 November 10	14.1	6.72	1905
<b>WB11</b>	July 08	18.11		
	September 08	18.61		
	13 October 08	18.13		
	28 October 08	18.4	7.5	1086
	27 January 09	18.73		
	22 June 09	18.1	8	880
	11 September 09	18.63		
	30 November 09	18.6	6.65	929
	25 February 10	18.47		
	3 May 10	18.24	8.37	921
	24 September 10	17.65	7.59	865
	10 November 10	17.49	7.49	867
<b>WB12</b>	July 08	12.73		
	September 08	12.80		
	13 October 08	12.83		
	28 October 08	12.95	8.1	2152
	27 January 09	13.16		
	22 June 09	12.99	8	2070
	11 September 09	13.05		
	30 November 09	12.99	8.34	1640
	25 February 10	13.19		
	3 May 10	13.15	8.27	1390
	24 September 10	13.22	8.71	873
	10 November 10	13.13	7.07	891
<b>Production Bore</b>	September 08	55.24		
	13 October 08	50.18		
	28 October 08	49.90	7.3	4030
	27 January 09	49.90		
	22 June 09	>50	7.1	3580
	27 August 09		7.3	3330
	30 November 09		7.2	3160
	25 February 10	Bore equipped		
	3 May 10		7.52	3310
	26 August 10	Unable to dip	7.42	3340
	8 November 10	Bore Equipped		











Standing water levels have remained relatively consistent since the last CCC meeting with the exception of WB7, which has continued to drop since May 2010, dropping approximately 5.62m over the last 3 months. Routine monitoring at this bore has indicated fluctuating water levels that are most likely associated with the connected windmill actively drawing water during monitoring events. The next round of monitoring in February 2011 will continue to observe any ongoing trends.

### Surface Water

Since the last CCC meeting there has been three wet weather discharges from site and one controlled discharge. The details are as follows:

- Wet Weather Discharge SB18, 25<sup>th</sup> October 2010: Discharge occurred after 12.8mm of rain on the 24<sup>th</sup> of October and 37.6mm of rain in October leading up to the event. Even though the effort of flocculation took place two days earlier (22<sup>nd</sup> October), inflows to SB18 resulted in discharge of water with high TSS. SB18 recorded 488mg/L of TSS while DDCK (downstream of SB18), recorded a TSS level of 234mg/L.
- Wet Weather Discharge SD3, 1<sup>st</sup> December 2010: Discharge occurred following 20.8mm of rain, in addition to the 111.2mm received over the previous month of November. The discharge was compliant with all EPL parameters including TSS, where flocculation efforts reduced TSS from 53mg/L (pre flocculation sample) down to 23mg/L at the time of discharge.
- Wet Weather Discharge SB18, 6<sup>th</sup> December 2010: Discharge occurred following 38.4mm of rainfall over the preceding 5 days. The discharge was compliant with all EPL parameters except for TSS. Elevated TSS levels included 996mg/L at SB18 and 462mg/L at DDCK. UNDC (unnamed drainage channel) recorded 25mg/L, being well below criteria.

The high recordings of TSS at both SB18 and DDCK in the above discharges are due to the failure of the flocculation process to bring levels down to below criteria. Flocculation of SB18 with Magnafloc LT425 failed due to the sheer high concentration (above 1000mg/L) of TSS within the dam. An exposed subsoil stockpile forms a major portion of the catchment area for SB18 and DDCK. LT245 can bring high concentrations of sediment down with high dose rates, but dosage rates must observe manufacturer's instructions in order to ensure no toxicity to aquatic organisms. Therefore, it was used to its maximum safe level only and consequently did not prove effective over a short time frame. LT245 has successfully treated water with lower TSS levels, as found with SD3.

Whitehaven is currently planning construction of additional sediment basins downstream of both SB18 and SD3, to give the site greater storage capacity of water, to control discharge and to provide more opportunity to manage the problematic TSS levels in the water.

Routine surface water sampling was undertaken at selected sites on the 8<sup>th</sup> November 2010 to obtain background water quality data. There was nothing in these results that were indicative of any change in water quality since mine commencement. The next round of surface water monitoring will be conducted in February 2011.

## **Complaints**

Two complaints have been received since the last CCC meeting (up until the end of December):

### **27<sup>th</sup> October 2010**

The complainant contacted the Environmental Manager at 1:30pm due to excessive noise and dust from the mine.

Recent noise monitoring was discussed. The complainant noted that there was no noise during the monitoring event and the Environmental Manager noted that Whitehaven will soon have the capacity to place a real time noise monitor at the property for successive days to avoid this issue if noise remains a concern. In terms of dust, it was acknowledged that the mine creates dust, but is not the only dust source, particularly with Wean Road (unsealed) within close proximity to the residence.

Conversations have been held with the complainant as well as a meeting at the residence by the Community Liaison Officer. Further discussions will take place with the complainant relating to ongoing noise/dust issues.

### **9<sup>th</sup> December 2010**

The complainant contacted the Environmental Manager at 8:30am due to excessive noise from the mine during the night.

The Environmental Officer rang the complainant at 9:40am on 9<sup>th</sup> December 2010 to discuss his concerns. He said that the noise went all afternoon and into the night causing them to have to go inside rather than eating outside. He said he could hear the trucks roaring through the gears. The complainant was given the Project Manager's mobile phone number again and was advised that it was best to call him or the OCE in the future to enable the issue to be dealt with immediately.

Since this complaint a real time noise monitor has been set up at the complainant's residence to continuously record noise and weather data. After several weeks of monitoring, reports and audio can be analysed to identify noise sources and levels, in relation to weather conditions at the time. The results will be discussed with the complainant.

### **Rehabilitation**

Shaping of the western side of the southern overburden dump has continued to enable soil replacement and cover crop establishment. It is intended that April/May 2011 will provide best conditions to commence tubestock planting. A compost trial has also been conducted on the rehabilitation with evaluation of results to take place in near future.