

# **Minutes of Rocglen Coal Mine**

## **Community Consultative Committee – Meeting #31**

**Meeting Held:** Wednesday 21<sup>st</sup> March 2018

**Venue:** Rocglen Coal Mine Training Room

**Commencement Time:** 3:00pm

### **1. Present and Apologies**

**Present:** Mr John Sturgess (JS) – Independent Chairperson  
Mrs Pam Burns (PB) – Community Representative  
Mrs Maddie Whitten (MW) – Environmental Officer  
Mr Jason Conomos (JC) – Operations Manager  
Mr Rod Barnes (RB) – Community Representative  
Mr Tim Muldoon (TM) – Group Manager Community Relations & Property  
Miss Emily Clements (EC) – Environmental Graduate (observer)

**Apologies:** Colleen Fuller (CF) – GSC Representative

### **2. Minute Taking Requirements**

MW proposes EC will take minutes throughout the meeting. Endorsed by JS and seconded by PB. MW states due to requirements for CCC meetings regarding number of representatives, EC will not be participating in meeting.

### **3. Previous Minutes**

Minutes accepted as true record of the motion by MW and seconded by PB.

### **4. Business Arising from Previous Minutes**

N/A

### **5. Mine Progress Report**

JC provided an update on production since the last meeting (covering the period from August 2017 to the end of February 2018).

- 490,801 tonnes coal
- 2,571,601 BCM overburden
- 5.24 strip ratio

1889 days since the last LTI. TM asks confirmation that 0 had occurred at Rocglen. JC confirmed, all agreeing this was a good achievement.

## **6. Review of Environmental Performance**

MW acknowledges that due to postponement of last scheduled meeting, results provided to the committee members are for the period of August 2017 to the end of February 2018.

- Two exceedances of quarterly monitoring, both recorded close to midnight. All daily results have been compliant. Noted that both occurred at 'Surrey' (of which RB was made aware), and additional monitoring was undertaken demonstrating a return to compliance. Also mentioned that attended monitoring was just undertaken again and showed compliance.
- 318 blasts undertaken to date at the time of reporting, with no exceedances of the blasting criteria since the previous CCC meeting;
- Deposited dust long term average tracking well;
- PM10 consistent with previous year's data;
- Ground water levels remain relatively stable, some variance in Surface Water Level is due to stock bores;
- Some fluctuation in surface dam Total Suspended Solids (TSS) but usually as a result of the dams being almost empty;
- A spike in Electrical Conductivity in SB19 noted in previous CCC meeting has now returned to normal;
- No complaints have been recorded since the last CCC meeting;
- 52ha of planting was undertaken on the Northern Rehabilitation area but due to dry weather has not been very successful;
- In-fill planting to be undertaken in winter;
- No further rehabilitation planned.

Note: RB arrived at 3:10pm.

## **7. General Business**

MW said that since the last meeting, night shift was stopped, however JC stated that it will return soon.

RB mentioned that dirt still up against the boundary fence between his property and the biobank site. MW noted she had spoken to Andrew about this since the last meeting. TM going to follow up with Andrew and also provided RB with Andrew's number again so that he could get in contact with him to discuss. RB concerned that the fence will rust and will eventually need replacing.

## **8. Next Meeting**

MW proposed a meeting 6 months from original meeting date, which will fall in mid-August. All agreed. Date to be determined following consultation with council representative.

## **9. Meeting End: 3:15pm**

## Rocglen Coal Mine Community Consultative Committee Meeting #31

### Environmental Monitoring Report August 2017 – February 2018

#### **Noise Monitoring**

Attended noise monitoring was undertaken between 15<sup>th</sup> and 17<sup>th</sup> August 2017, and between 13<sup>th</sup> and 16<sup>th</sup> November 2017, in accordance with the Rocglen Noise Monitoring Program and Environment Protection Licence Guidelines (90 minutes during the day, 30 minutes during the evening and 60 minutes during the night and occur for 3 consecutive operating days). Results are outlined below:

Retreat	14/08/2017	16:27	90	IA			35 dB(A) Leq (15 min) Day, Evening, Night 45dB(A) LA (1 min) Night	0.6	Y
		21:31	30		<20			0.2	Y
		22:01	60			<20		0.4	Y
		22:01	60			<20		0.4	Y
	15/08/2017	11:52	90	IA				1.8	Y
		20:28	30		IA			4.9	NA
		22:00	60			IA		5	NA
		22:00	60					5	NA
	16/08/17 - 17/08/17	13:56	90	IA				NA	Y
		20:09	30		<20			2.8	Y
		22:00	60			IA		2.1	Y
		22:00	60					2.1	Y
Surrey	14/08/2017	14:40	90	IA			1.1	Y	
		20:31	30		39		0.2	N	
		23:18	60			30	0	Y	
		23:18	60				NM	0.3	Y
	15/08/17 – 16/08/17	13:48	90	29			0.9	Y	
		19:39	30		<30		4.5	NA	
		23:18	60			35	2.5	N	
		23:18	60				45	2.5	Y
	16/08/17 - 17/08/16	12:04	90	15			4.6	NA	
		19:19	30		23		1.7	Y	
		23:15	60			23	1.2	Y	
		23:15	60				27	1.7	Y
Retreat	13/11/2017	16:27	90	NM			3	Y	
		18:00	30		NM		1.9	Y	
		22:00	60			IA	4.2	NA	
		22:00	60				IA	4.2	NA
	14/11/2017	12:39	90	NM			1.3	Y	
		20:46	30		IA		3.5	NA	
		22:00	60			IA	2.4	Y	
		22:00	60				IA	2.4	Y

	15/11/2017	12:31	90	IA				2.9	Y	
		21:08	30		IA			2.5	Y	
		22:00	60			<25		2.3	Y	
		22:00	60				<25	2.3	Y	
Surrey	13/11/2017	14:40	90	<20				35 dB(A) Leq (15 min) Day, Evening, Night	1.6	Y
		18:55	30		IA				4.1	NA
		23:23	60			<30			3	Y
		23:23	60				30		3	Y
	14/11/2017	14:27	90	NM				45dB(A) LA (1 min) Night	0.7	Y
		19:55	30		IA				3.8	NA
		23:21	60				NM		2.4	Y
		23:21	60						NM	2.4
	15/11/17- 16/11/17	14:24	90	IA					1.2	Y
		20:22	30			<25			1.2	Y
		23:25	60				<25		2.4	Y
		23:25	60						<25	2.4

The results show that, under the operating and meteorological conditions at the time of monitoring two exceedances, one of 4dB(A) and one of 5dB(A), occurred during the night time monitoring periods at the Surrey residence. All exceedances include an application of a 5dB low frequency noise modifying factor. Following some operational changes on site the November monitoring returned compliant noise levels for both sites.

In addition to operational noise, the noise from the mine must not exceed 45 dB(A) L1 (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 monitoring during the period the L1 (1 min) noise from the mine did not exceed 45 dB(A) at either monitoring location.

Rocglen's real time noise monitor is currently located at the "Penryn" property. The monitor's alarm system notifies operations when noise levels approach compliance limits and allows for the opportunity to adjust operations accordingly.

### **Blast Monitoring**

Since the first blast there have been 318 blasts (until the end of February 2018). None of the blasts since the previous CCC meeting have exceeded the 95<sup>th</sup> percentile blast criterion set for the site.

### **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:

### Deposited Dust Monitoring Data Summary 2017

Site	EPL ID no.	Property Name	Annual Mean Total Insoluble Solids (g/m <sup>2</sup> /month)	Annual Mean Ash (g/m <sup>2</sup> /month)	Long term Insoluble Solids Average (g/m <sup>2</sup> /month)
BD 3		Belah	2.0	1.4	1.3
BD4	4	Surrey	1.0	0.6	1.0
BD5		Stratford	2.3	0.6	1.2
BD6	6	Roseberry	1.1	0.5	1.2
BD7	7	Roseglass	2.4	0.4	1.1
BD8		Yarrowonga	3.6	1.2	1.4
BD2-A		Penryn	2.0	0.9	2.8

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 January 2018 remain below the annual average limit of 30µg/m<sup>3</sup>, as follows:

Costa Vale: 16.16µg/m<sup>3</sup>

Roseberry: 12.21µg/m<sup>3</sup>

The real time PM<sub>10</sub> monitor at Roseberry is currently operating to send alarms to operations in the event that PM<sub>10</sub> levels approach compliance limits.

#### Water Monitoring

##### Ground Water

Groundwater monitoring data for this CCC period is presented in the following table. Standing Water Level (SWL) graphs of bores with sufficient data sets are also provided.

Site	Date	SWL (m)	pH	Elect. Conduct µs/cm
MP2	21/Mar/17	12.06	7	5030
	18/Sep/17	12.7	6.9	5080
	7/Dec/17	12.85	6.8	5140
MP2a	21/Mar/17	12.64	7.1	3190
	18/Sep/17	12.5	7	3280
	7/Dec/17	12.7	7	3270
MP3	21/Mar/17	Dry	Insufficient water to sample	
	18/Sep/17	Dry	Insufficient water to sample	
	7/Dec/17	Dry	Insufficient water to sample	

Site	Date	SWL (m)	pH	Elect. Conduct µs/cm
<b>MP3a</b>	21/Mar/17	22.82	7.8	1315
	14/Sep/17	22.2	7.7	1340
	7/Dec/17	22.11	7.7	1330
<b>MP4</b>	21/Mar/17	Dry	Insufficient water to sample	
	14/Sep/17	Dry	Insufficient water to sample	
	7/Dec/17	Dry	Insufficient water to sample	
<b>MP4a</b>	21/Mar/17	29.97	7.5	3960
	14/Sep/17	29.9	7.7	3970
	7/Dec/17	30.01	7.6	4040
<b>MP4b</b>	21/Mar/17	26.67	7.9	3020
	14/Sep/17	26.6	7.9	3010
	7/Dec/17	26.65	7.9	3060
<b>MP5</b>	21/Mar/17	Dry	Insufficient water to sample	
	14/Sep/17	Dry	Insufficient water to sample	
	7/Dec/17	Dry	Insufficient water to sample	
<b>MP5a</b>	21/Mar/17	Dry	Insufficient water to sample	
	14/Sep/17	Dry	Insufficient water to sample	
	7/Dec/17	Dry	Insufficient water to sample	
<b>MP6</b>	21/Mar/17	8.89	7.7	1905
	14/Sep/17	8.88	7.6	1880
	7/Dec/17	8.82	7.6	1849
<b>MP7</b>	21/Mar/17	16.67	7	3090
	14/Sep/17	16.30	7.1	3100
	8/Dec/17	16.35	7	3090
<b>MP8</b>	22/Mar/17	16.90	7	4310
	14/Sep/17	16.40	7	4480
	8/Dec/17	16.58	6.9	4440
<b>WB1</b>	21/Mar/17	7.92	Windmill over bore	
	7/Dec/17	7.8	Windmill over bore	
<b>WB2</b>	22/Mar/17	15.89	7.7	3100
	18/Sep/17	15.82	7.7	2920
	7/Dec/17	15.9	7.8	2800
<b>WB3</b>	22/Mar/17	8.34	Pump over bore	
	8/Dec/17	8.56	Pump over bore	
<b>WB4</b>	21/Mar/17	Pump over bore		
	7/Dec/17	Pump over bore		
<b>WB5</b>	22/Mar/17	12.19	7.9	7130
	18/Sep/17	10.9	7.7	7390
	7/Dec/17	11.06	7.7	7360

Site	Date	SWL (m)	pH	Elect. Conduct µs/cm
<b>WB6</b>	22/Mar/17	22.17	Windmill over bore	
	7/Dec/17	22.51	Windmill over bore	
<b>WB7</b>	22/Mar/17	11.78	Windmill over bore	
	7/Dec/17	13.16	Windmill over bore	
<b>WB8</b>	22/Mar/17	28.52	Pump over bore	
	8/Dec/17	29.07	Pump over bore	
<b>WB9</b>	22/Mar/17	Windmill over bore		
	8/Dec/17	Windmill over bore		
<b>WB10</b>	21/Mar/17	13.97	7	1959
	14/Sep/17	14	6.9	2090
	8/Dec/17	14.03	6.9	2070
<b>WB11</b>	21/Mar/17	18.35	7.5	990
	14/Sep/17	18.6	7.3	997
	8/Dec/17	20.15	7.3	984
<b>WB12</b>	21/Mar/17	13.41	9.2	1373
	14/Sep/17	13.3	9.1	1520
	8/Dec/17	13.31	8.3	1823
<b>WB13</b>	22/Mar/17	38.45	7	3560
	14/Sep/17	38.8	7	3600
	8/Dec/17	31.6	7	3480
<b>WB-14</b>	22/Mar/17	13.27	7.6	1324
	14/Sep/17	14.8	7.6	1350
	8/Dec/17	15.28	7.6	1321
<b>WB-15</b>	21/Mar/17	27.56	8.1	
	14/Sep/17	32	7	1460
	8/Dec/17	29.47	7.3	1445
<b>Production Bore</b>	22/Mar/17	Pump over bore	7.3	3610
	18/Sep/17	Pump over bore	7	3640
	7/Dec/17	Pump over bore	7.1	3530
<b>Surrey No.2</b>	22/Mar/17	32.69	7.4	3280
	14/Sep/17	32	7.4	3370
	8/Dec/17	31.93	7.2	3310

Standing water level trends have remained relatively consistent since the last CCC meeting. Standing water level graphs are available at the end of the report.

### Surface Water

Overall, surface water samples taken throughout the reporting period indicate relative consistency across all monitoring parameters, with the exception of Total Suspended Solids (TSS)

which continues to show fluctuations for all sites due to fluctuating water levels. SB19, which had shown a spike in Electrical Conductivity early in 2017, returned to normal levels during the second half of the year.

### **Complaints**

There have been no complaints received since the previous CCC meeting.

### **Rehabilitation**

Rehabilitation work undertaken since the previous CCC meeting included the spreading of gypsum and native seed, re-mounding of the area, and planting of native tube stock. Unfortunately due to the hot and dry conditions of the previous 6 months the success rate of tube stock has been low. Infill planting is planned to be undertaken during winter 2018, pending rainfall.



# **Minutes of Rocglen Coal Mine**

## **Community Consultative Committee – Meeting #32**

**Meeting Held:** Wednesday 12<sup>th</sup> September 2018

**Venue:** Rocglen Coal Mine Training Room

**Commencement Time:** 3:00pm

### **1. Present and Apologies**

**Present:** Mr John Sturgess (JS) – Independent Chairperson  
Mrs Pam Burns (PB) – Community Representative  
Emily Clements (EC) – Graduate Environmental Officer  
Ivan Van Rooyen (IVR) – Operations Manager  
Mr Rod Barnes (RB) – Community Representative  
Mr Tim Muldoon (TM) – Group Manager Community Relations & Property  
Colleen Fuller (CF) – GSC Representative

**Apologies:** N/A

### **2. Minute Taking Requirements**

EC to take minutes.

### **3. Previous Minutes**

Minutes accepted as true record of motion by CF. PB seconded.

### **4. Business Arising from Previous Minutes**

- EC mentioned that Rod brought up matter of soil stacked up along his fence line from grading firebreaks. Soil was removed and action completed if Rod was happy with outcome.
- RB yes, ok.

### **5. Mine Progress Report**

- IVR – good safety performance with site being 2,102 days LTI free. Coal production a reasonable total at the end of August (575,186t) and approximately 2.4 million m<sup>3</sup> overburden moved.
- PB questioned whether they were given production numbers.
- JS commented that in the past they have always been given verbally but that they would be noted in the minutes.
- EC noted that since last CCC meeting, night shift had started back up again.

## 6. Review of Environmental Performance

- EC stated:
  - There had been two rounds of attended monitoring undertaken since the last meeting. All results were compliant at both Surrey and Retreat.
  - Deposited dust gauges are placed in the area surrounding the site, with the annual average criteria being 4g/m<sup>2</sup>/month. All sites show results below criteria.
  - The two HVAS units ('Costa Vale' to the north and 'Roseberry' to the south) both returning averages below criteria, which, given the dry weather, is good news.
  - Groundwater at all bores remains consistent.
  - Monitoring not undertaken at SD3 and SB19 for last two rounds as dams were dry. Dam B also not monitored for most recent round as a result of being dry. SD7 across the road off the mine site, showed a spike in Grease and Oil but cause is unknown and not deemed mine related as it is off site. Void EC spiked in recent monitoring round but is likely due to dry weather – will continue to monitor.
  - All blast results have returned compliant, no exceedances.
  - One complaint where complainant noted rubbish thrown on Wean Road. Complaint followed up and all operators were advised that if this was the case, it was not to happen.
  - Infill planting undertaken since last CCC following poor success of previous planting campaigns due to dry weather. Just over 2000 trees planted. Differing from last round, maintenance water continues, with milk cartons used to prevent herbivory and keep in moisture, and mulch also being trialled to help with moisture retention.
- IVR noted trees were looking good
- EC other matters to note:
  - Annual review for the site approved by DP&E and if interested, is available for anyone to look at on the website.
  - Several management plans also revised and approved, and available online.
  - DRG implemented a revision to Rocglen's Mine Lease (ML) (which was also done at other mine sites) to outline reporting in the event of an incident.
  - Whitehaven looking to continue 4Mtpa cumulative road haulage and is pursuing a modification of the project approval. There would be no change from what is currently in place.
- RB questioned what the ML variation involved and whether it was extending the project.
- IVR advised it was only a change to environmental incident reporting.
- EC confirmed – variation only changes a small section of the ML to say that a report would be provided to DRG within 7 days of an incident occurring. Variation does not affect operations/there is not extension of mine life, simply just a reporting change.

## 7. General Business

- JS asked if anyone had anything they wished to discuss.
- TM noted though this wasn't really Rocglen relevant, the Vickery EIS would be formally on display as of the following day. Has been with the department and gone

through quality assurance, but a review would be once on display. Open for public submissions, and copies are available at Whitehaven, council and online.

- Road haulage would eventually stop once rail line was established, this would be a couple of years until track complete. Opportunity for people to submit positive and negative feedback.
- CF noted the project was also in the Gunnedah Shire.
- TM stated project has already been approved, but seeking to extend a small proportion to north and south. Will go from 4Mtpa to 7Mtpa with a maximum of 10Mtpa. Big thing to get trucks off the haul road.
- JS asked if presumably this will begin once Rocglen closes up?
- TM noted this wouldn't quite be the case.
- CF asked how many employees were currently at Rocglen?
- IVR stated 20-22 operators, plus maintenance which is shared with Tarrawonga, and additional contractors. Staff to be transitioned to Vickery and other mines - opportunities opening up.
- RB had query regarding water at Werris Creek Mine. Noted he had spoken to people who advised they had purchased sprays for water onsite. Questioned why water was not being put to use on farming country.
- JS noted this wasn't a problem for Rocglen.
- RB mentioned farming missing out on water.
- CF stated this was not allowed.
- TM added that water has to stay on site, it is one of the mines regulations.
- JS asked if RB was happy with response
- RB agreed.

## **8. Next Meeting**

- JS asked if date for next meeting had been proposed.
- EC advised date hadn't been set but would arrange for the next in another 6 months.
- TM mentioned the prospective of having next meeting in town.
- IVR said he was happy to try and accommodate.
- PB agreed it would be much easier in terms of getting to and from work.

## **9. Meeting End**

3:16pm

## Rocglen Coal Mine Community Consultative Committee Meeting #32

### Environmental Monitoring Report February 2018 – August 2018

#### **Noise Monitoring**

Attended noise monitoring was undertaken from the 27<sup>th</sup> March 2018 – 1<sup>st</sup> April 2018, and the 19<sup>th</sup> June 2018 – 21<sup>st</sup> June 2018, in accordance with the Rocglen Noise Monitoring Program and Environment Protection Licence Guidelines (90 minutes during the day, 30 minutes during the evening and 60 minutes during the night and occur for 3 consecutive operating days). Results are outlined below:

Location	Date	Start Time	Period (mins)	Rocglen Measured Levels – dB(A) Leq 15min Day	Rocglen Measured Levels – dB(A) Leq 15min Evening	Rocglen Measured Levels – dB(A) Leq 15min Night	Rocglen Measured Levels – dB(A) LA 1min Night	Limits	Wind Speeds (m/s)	Compliant (Y/N)
Retreat	27/03/18	15:56	90	<25				35 dB(A)	2.5	Y
		21:22	30		I/A			Leq (15 min)	3.5	Y
		22:00	60			I/A		Day,	3.9	Y
		22:00	60				I/A	Evening,	3.9	Y
	28/03/18	11:21	90	I/A				Night	1.5	Y
		21:20	30		I/A			45dB(A)	1.5	Y
		22:00	60			I/A		LA (1 min)	1.8	Y
		22:00	60				I/A	Night	1.8	Y
	1/04/18	8:20	90	31					2.3	Y
		21:17	30		<20				1.0	Y
		22:00	60			<20			2.0	Y
		22:00	60				20		2.0	Y
Surrey	27/03/18	14:05	90	I/A				35 dB(A)	2.5	Y
		20:30	30		<25			Leq (15 min)	3.8	Y
		22:05	60			<30		Day,	4.9	Y
		22:05	60				<30	Evening,	4.9	Y
	28/03/18	9:33	90	27				Night	1.4	Y
		20:33	30		<20			45dB(A)	1.7	Y
		22:01	60			<20		LA (1 min)	1.8	Y
		22:01	60				<25	Night	1.8	Y
	1/04/18	10:10	90	I/A					2.8	Y
		20:28	30		I/A				0.8	Y
		22:00	60			I/A			2.0	Y
		22:00	60				I/A		2.0	Y
Retreat	19/06/18	8:58	90	31				35 dB(A)	1-2	Y
		20:54	30		27			Leq (15 min)	2-3	Y

	20/06/18	22:02	60			28		min)	3-4	Y	
		22:02	60				33	Day,	3-4	Y	
		8:42	90	26				Evening,	2-3	Y	
		20:28	30		28			Night	3-4	Y	
		23:33	60			24		45dB(A)	0-1	Y	
		23:33	60				27	LA (1	0-1	Y	
	21/06/18	8:58	90	I/A				min)	0-1	Y	
		20:06	30		23			Night	0	Y	
		23:30	60			24			0-1	Y	
		23:30	60				29		0-1	Y	
	Surrey	19/06/18	8:24	90	I/A				35 dB(A)	1-2	Y
			20:38	30		I/A			Leq (15	2-3	Y
22:56			60			I/A		min)	3-4	Y	
22:56			60				I/A	Day,	3-4	Y	
20/06/18		10:50	90	I/A				Evening,	4	Y	
		21:24	30	-	I/A			Night	0-1	Y	
		22:01	60	-	-	I/A		45dB(A)	0-1	Y	
		22:01	60	-	-	-	I/A	LA (1	0-1	Y	
21/06/18		11:01	90	I/A	-	-	-	min)	2-3	Y	
		21:01	30	-	23	-	-	Night	0-1	Y	
		22:01	60	-	-	25	-		0-1	Y	
		22:01	60	-	-	-	26		0-1	Y	

The results show that, under the operating and meteorological conditions at the time of monitoring, both quarters returned readings that were compliant with the relevant operational limits.

In addition to operational noise, the noise from the mine must not exceed 45 dB(A) L1 (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 monitoring during the period the L1 (1 min) noise from the mine did not exceed 45 dB(A) at either monitoring location.

Road Traffic Noise Monitoring was undertaken across the 16<sup>th</sup>-17<sup>th</sup> July 2018, results returned compliant.

### **Blast Monitoring**

Since the first blast there have been 327 blasts (until the end of August 2018). None of the blasts since the previous CCC meeting have exceeded the 95<sup>th</sup> percentile blast criterion set for the site.

### **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:

**Deposited Dust Monitoring Data Summary 2017**

	<b>BD3 (Belah)</b>	<b>BD4 (Surrey)</b>	<b>BD5 (Stratford)</b>	<b>BD6 (Roseberry)</b>	<b>BD7 (Roseglass)</b>	<b>BD8 (Yarrowonga)</b>	<b>BD2A (Penryn)</b>
<b>Month</b>	<b>Insoluble Matter (g/m<sup>2</sup>/month)</b>						
Sep 2017	1.0	1.0	0.6	1.3	0.9	25.8	1.2
Oct 2017	3.6	1.1	0.9	1.2	1.2	1.8	
Nov 2017	1.5	0.8	17.0	2.2	21.4	7.8	1.8
Dec 2017	1.9	1.7	1.1	1.6	1.4	0.5	2.6
Jan 2018	4.8	2.6	3.2	1.4	2.8	1.1	2.4
Feb 2018	11.1	2.3	1.1	1.3	0.9	0.9	2.1
Mar 2018	12.3	1.7	1.2	1.3	2.2	1.3	2.6
Apr 2018	5.6	3.1	0.8	1.1	3.4	1.0	4.8
May 2018	0.8	0.6	0.9	0.6	1.7	0.6	1.8
Jun 2018	0.8	0.8	1.1	1.0	1.0	1.9	2.2
Jul 2018	1.7	0.7	1.0	1.2	0.6	1.3	7.2
Aug 2018	1.0	2.5	1.0	1.1	1.4	1.3	3.3
<b>Annual Average</b>	<b>3.8</b>	<b>1.6</b>	<b>2.5</b>	<b>1.3</b>	<b>3.2</b>	<b>3.7</b>	<b>2.9</b>

The annual average at all sites remains 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 August 2018 remain below the annual average limit of 30µg/m<sup>3</sup>, as follows:

Costa Vale: 25 µg/m<sup>3</sup>

Roseberry: 16.06 µg/m<sup>3</sup>

The real time PM<sub>10</sub> monitor at Roseberry is currently operating to send alarms to operations in the event that PM<sub>10</sub> levels approach compliance limits.

**Water Monitoring**

**Ground Water**

Groundwater monitoring data for this CCC period is presented in the following table. Standing Water Level (SWL) graphs of bores with sufficient data sets are also provided.

<b>Site</b>	<b>Date</b>	<b>SWL (m)</b>	<b>pH</b>	<b>Elect. Conduct µs/cm</b>
<b>MP2</b>	26/03/18	12.2	6.8	5290
	20/06/18	12.6	6.8	5230
<b>MP2a</b>	26/03/18	13.10	7.1	3290
	20/06/18	13.49	7.0	3170

Site	Date	SWL (m)	pH	Elect. Conduct µs/cm
<b>MP3</b>	26/03/18	Insufficient water to sample		
	20/06/18	Insufficient water to sample		
<b>MP3a</b>	26/03/18	22.2	7.9	1320
	20/06/18	22.2	7.8	1320
<b>MP4</b>	26/03/18	Insufficient water to sample		
	20/06/18	Insufficient water to sample		
<b>MP4a</b>	26/03/18	29.05	7.7	4180
	20/06/18	29.12	7.6	4220
<b>MP4b</b>	26/03/18	25.7	8	3120
	20/06/18	25.74	7.8	3090
<b>MP5</b>	26/03/18	Insufficient water to sample		
	20/06/18	Insufficient water to sample		
<b>MP5a</b>	26/03/18	Insufficient water to sample		
	20/06/18	Insufficient water to sample		
<b>MP6</b>	26/03/18	8.29	7.8	1920
	20/06/18	8.34	7.7	1886
<b>MP7</b>	05/04/18	17.12	7	3080
	21/06/18	18.07	7	3050
<b>MP8</b>	05/04/18	16.57	6.4	4560
	21/06/18	18.28	7	4310
<b>WB1</b>	26/03/18	8.0	Windmill over bore	
	20/06/18	8.22	Windmill over bore	
<b>WB2</b>	26/03/18	15.52	7.8	3010
	20/06/18	16.2	7.8	3080
<b>WB3</b>	05/04/18	7.76	Pump over bore	
	21/06/18	7.48	Pump over bore	
<b>WB4</b>	05/04/18	Pump over bore		
	21/06/18	Pump over bore		
<b>WB5</b>	26/03/18	11.80	8.1	7780
	20/06/18	13.20	7.4	7820
<b>WB6</b>	26/03/18	21.97	Windmill over bore	
	20/06/18	22.24	Windmill over bore	
<b>WB7</b>	26/03/18	12.03	Windmill over bore	
	20/06/18	12.26	Windmill over bore	
<b>WB8</b>	05/04/18	29.02	Windmill over bore	
	21/06/18	30.75	Windmill over bore	

Site	Date	SWL (m)	pH	Elect. Conduct µs/cm
WB9	05/04/18	24.37	Pump over bore	
	21/06/18	23.82	Pump over bore	
WB10	05/04/18	14.15	6.9	2060
	21/06/18	14.30	6.9	1916
WB11	05/04/18	18.49	7.6	977
	21/06/18	18.64	7.6	943
WB12	05/04/18	13.27	8.4	1825
	21/06/18	13.40	8.4	1810
WB13	05/04/18	41.00	7.2	3350
	21/06/18	41.83	7.1	3410
WB-14	05/04/18	28.43	7.6	1254
	21/06/18	25.81	7.7	1268
WB-15	05/04/18	27.68	7.0	1463
	21/06/18	27.65	7.0	1483
Production Bore	26/03/18	Pump over bore	7.9	3620
	21/06/18	Pump over bore	7.8	3680
Surrey No.2	05/04/18	33.70	7.2	3280
	21/06/18	33.33	7.3	3160

Standing water level trends have remained relatively consistent since the last CCC meeting. Standing water level graphs can be found in the appendix of the 2017 Annual Review available on the WHC Website.

### Surface Water

Overall, surface water samples taken throughout the reporting period indicate relative consistency across all monitoring parameters, with the exception of Total Suspended Solids (TSS) which continues to show fluctuations for all sites due to fluctuating water levels.

As a result of the dry weather, SD3 and SB19 have been dry for the last two rounds of monitoring, and Dam B was dry during the most recent monitoring round. August 2018 monitoring at SD7 shows a spike in the Grease and Oil (6mg/L), the cause of which is unknown as this dam is not on the mine site. The Void Electrical Conductivity also spiked during the last monitoring round.

### Complaints

One complaint has been received since the last CCC meeting, and was in relation to littering on Wean Road. Site personnel were spoken to during pre-start talks and advise this is not to occur.

### Rehabilitation

Infill planting was undertaken at the end of June 2018, with just over 2000 trees planted. Maintenance watering continues to be undertaken. Differing from the last planting campaign,



milk cartons have been used to assist with the prevention of herbivory, as well as to maintain moisture. Mulch was also spread around the trees to support moisture retention.

### **Other**

- Rocglen's 2017 Annual Review was approved by the Department of Planning and Environment on the 2<sup>nd</sup> July 2018 and is now available on the Whitehaven Coal Website.
- The approved versions of several updated management plans are also now available on the website.
- A variation to Rocglen's Mining Lease (ML1662) was instated by the Division of Resources and Geoscience. This variation became effective as of 20<sup>th</sup> June 2018 and briefly outlines the requirements for the Environmental Incident Reporting process.
- Whitehaven pursuing the modification of the Rocglen Project Approval to permit the continuation of the Tarrawonga/Rocglen 4Mtpa cumulative road haulage for CY18.