

Minutes of the 47th Meeting of the Tarrawonga Coal Mine Community Consultative Committee

Meeting Held: 15th February 2017 (10.20am)

Venue: Tarrawonga Coal Mine, Training Room

1.0 Present and Apologies

Present: **Mr David Ross (DR), Independent Chairman**
Mr Andrew Johns (AJ), Gunnedah Shire Council Representative
Mrs Colleen Fuller (CF), Gunnedah Shire Council Representative
(Councillor)
Mrs Annie McMahon (AM), Narrabri Shire Council Representative
(Councillor)
Mrs Julie Heiler (JH), Community Representative
Mrs Rebecca Ryan (RR), Community Representative
Mrs Cath Collyer (CC), Community Representative
Mr Anthony Margetts (AM), Tarrawonga Operation Manager
Mr Lachlan Johnson (LJ), Tarrawonga Environmental Officer
Mr Tim Muldoon (TM), Group Manager - Community Relations &
Property

Apologies: Ms Lexie Frankham (LF), Group Environment Superintendent –
Operations

2.0 Declaration of Pecuniary or Non-Pecuniary Interests

DR declared that he is paid a fee for his participation as Independent Chairman.

3.0 Previous Minutes

Minutes of the previous site meeting were adopted as a true record. Moved JH Second AJ. It was noted that an incorrect date be amended to finalise minutes.

4.0 Business Arising

DR advised that Peter Bryant whilst expressing interest in joining the TCM CCC was not able to fulfil without a conflict of interest as he is a contractor to WHC.

LJ confirmed that LF had sent a letter of thankyou to John Turner thanking him for his time in the role of Chairman of the CCC.

DR advised that he had liaised with Vickery Chairperson to ensure that there are no clashes of meetings going forward.

LJ advised that he had consulted with BCM and MCCM regarding the frequency of and format of the BTM Cumulative CCC; he advised that the consensus is that the BTM CCC make those recommendations and determinations at the next BTM CCC meeting.

DR has spoken with Steve Cox of OEH in relation to community consultation of the Biodiversity Strategy and other matters as they arise. SC advised that at present there is no one filling the role of community consultation. DR will continue to liaise with OEH on this matter.

DR raised the September attended noise monitoring result at Barbers Lagoon noting that TCM was to notify DP&E. LJ advised that DP&E were notified for information only as it was not deemed a non-compliance following review of the Industrial Noise Policy and Project Approval.

5.0 New Community Consultative Committee Guidelines

DR provided an overview of the new CCC guidelines and distributed a copy of the Code of Conduct for signing and submission to DR. All members in attendance signed the Code of Conducts Forms and returned to DR during the meeting.

6.0 Sound Power Level Modification

LJ provided an overview of the modification and advised that after the meeting a copy of the link to the DP&E website would be provided to all members for further review and make a submission if required.

DR asked the timeframe; LJ believed it to be a 28 day exhibition period but would provide confirmation in the subsequent email.

AM (NSC) asked whether it would be advertised in the local papers? LJ advised that he was not aware and would follow up on this question following the meeting.

CC asked how it links to the Vickery Extension Project and the expected timing of the EIS submission. AM (TCM) and TM advised that the timing was not yet confirmed and that the modification was only in relation to onsite equipment rather than road haulage trucks.

JH asked what the ultimate impact for local residents would be with regard to the modification. AM advised that the existing offsite criteria as specified in the Project Approval remains and that the SPL modification allows the site to take a whole of operation approach rather than individual plant.

7.0 General Business

7.1 TCM Coal Haulage

JH asked whether Daracon and Mackellar trucks were now operating out of TCM for haulage of Coal to the Gunnedah CHPP. AM advised that they had be

engaged to haul coal from Rocglen only at this stage. JH advised that BIS had been good since their commencement with a significant reduction in issues and complaints, would be a shame to see a return of the issues of the past.

TM advised that they have been engaged on short-term contracts and would liaise with the Short Term Planning & Logistics Manager in relation to expectations to operate to the same standard as BIS.

7.2 Black Pine Control

JH asked about the black pine on site and what avenues are available to the mine to remove as it is a 'woody weed' and is taking over. TM noted that in the Offset Strategies there were commitments to manage pine regrowth; LJ confirmed this. LJ advised that there is significant restrictions placed on TCM in relation to clearing and there is no requirement to control as it not listed as a declared noxious weed. LJ will take the matter off line and discuss internally with WHC personnel and take any action required and report back to the committee.

7.3 Offsets

CC raised a question whether there had been any further discussion regarding the State Government looking at other options for offsetting (converting to National Parks) for state significant development.

TM advised that this matter is still being discussed. The approach of buying large quantities of land for offsetting is not good for the company as it gets criticised for converting agricultural land to conservation and that this approach only appeases a small percentage of the population. There are issues for adjacent landholders including pests, productivity and fire.

CC highlighted there are major social impacts of this approach in particular for communities like Boggabri; considered to a bigger impact than the mine itself.

JH asked whether the Government was going to re-consult with the community? CC quoted that 27 families had moved away from the Boggabri community as a result of land purchases for mining.

7.4 Social Impacts Guidelines –State Significant Development

CC provided a summary of the Social Impacts Meeting convened in Gunnedah by DP&E. CC advised that the facilitation by DP&E was poor and was a backwards progression from the meeting in Boggabri.

AJ advised that he would send consultation details to LJ for distribution to the committee members.

There was poor advertisement of the meeting and the meeting had no direction and the agenda was not followed. DP&E need to explain the process of consultation and DR to follow up with DP&E for updates and further

information. How will the consultation affect the development of guidelines/processes.

7.5 TCM Newsletter

JH advised that the latest issues of the WHC newsletter are no longer considered useful as they focus on MCCM and not Tarrawonga. Community want to hear about TCM and don't have faith in the content about the MCCM. TM to follow up and report back.

7.6 Community Representation

DR asked whether Jim Picton had been formally thanked by the committee? LJ advised that this should come from the Chairman. DR to complete.

DR asked whether current representation on the committee was sufficient. Committee agreed that no formal advertisement be undertaken; however, should any local residents be interested then the committee and chairperson can follow up.

8.0 Environmental Trust

DR gave overview of the status of the trust and application process for distribution of funds for environmental projects in the Leard Forest Precinct. TCM, BCM and MCCM all contribute to the funds as part of approval conditions.

Applications and advertising is currently on the NSC and GSC websites and at the Boggabri Library. Applications are open until end of April.

CC and RR to consider whether they would join the Environmental Trust as community representatives of the TCM CCC.

TM asked who were successful in the previous round. CC advised that the Boggabri Public School and Boggabri Showground Trust were successful.

9.0 Mine Progress Report

AM (TCM) presented the Mine Progress Report:

- Increased production from 6th February, which now includes Saturday and Sunday dayshifts. Equates to an increase in 20% work hours per week. The increased production will run through till end of financial year with coal targets increased from 2.3MT to 2.6MT to compensate for delays at other WHC operations.
- Approval of the Road Haulage Modification which allows for an increase from 3.5MT to 4MT cumulative from Tarrawonga and Rocglen during calendar 2017.
- No change in operational fleet.
- Increase workforce by 12 fulltime equivalents
- Road Haulage at this stage to remain only BIS trucks.

- Occasional Saturday blast is possible; however, intention is to limit to Saturday loading.
- Currently aiming to break site record for longest period without an injury onsite and achieve a total recordable injury frequency rate (TRIFR) of 0. Never achieved at TCM since commencement of operations.

CC asked about operations at Rocglen. AM (TCM) advised that it is likely that there is no increase in production at Rocglen this FY and is likely to scale down over next 2 years approximately? TM advised that there had been efficiencies on site that had enabled continuation and that at the end of operations the workforce would transition into other sites.

10.0 Environmental Monitoring Report

LJ presented to Environmental Monitoring report.

The committee members requested that the property names be included on the noise tables rather the site ID's for ease of reading. LJ to adjust in subsequent reports.

No complaints since last meeting.

LJ provided an update on the clearing schedule at TCM and likely increase in protestor activity. LJ noted that only a small area was to be cleared during this campaign.

TM advised that WHC had increased security presence within the area to combat protestor activity.

11.0 New Business

Nil

12.0 Complaints

Complaints were discussed in the Environmental Monitoring Report.

13.0 Next Meeting

17 May 2017 10am Tarrawonga Coal Mine
 16 August 2017 10am Tarrawonga Coal Mine
 15 November 2017 10am Tarrawonga Coal Mine

BTM CCC Meeting 18 May 2017 Time: TBA Location: TBA

Meeting closed at 11.40am

David Ross - Chair

Tarrawonga Coal Mine Community Consultative Committee Meeting #47

Environmental Monitoring Report November 2016 – January 2017

Noise Monitoring

Attended noise monitoring was undertaken at the “Bungalow” (TN4), “Barbers Lagoon” (TN3) and “Matong” (TN2) properties from 5th-7th and 28th-29th December 2016, with results outlined below. The noise criterion for the mine is 35dB(A) Leq (15 min) for all operating times.

The results in Tables 1 to 3 show that noise emissions from the mine did not exceed the operational noise criterion at the “Barbers Lagoon”, “Bungalow” or “Matong” monitoring locations during the monitoring event.

In addition to the 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. The results of the sleep disturbance monitoring (table 13-16) show that the measured L1 (1 min) noise level did not exceed the sleep disturbance criterion.

The real time noise monitor is located on the “Coomalgah” property. Open Cut Examiners action alarms by investigating the noise source and modifying operations if it is identified that operations from Tarrawonga are contributing to the elevated noise levels. The unit will remain a management tool used to facilitate operations maintaining compliance.

Equipment sound power level testing was undertaken in November 2016; results were received from the consultant in January and subsequently reported to DP&E. DP&E were notified of results where the individual plant items exceeded the indicative levels identified in the Environmental Assessment. TCM is undertaking an investigation into the results and potential mitigation options.

EPL ID	Date	Start Time	Measurement period	Measured Levels – dB(A) L _{eq} 15min Day	Measured Levels – dB(A) L _{eq} 15min Evening	Measured Levels – dB(A) L _{eq} 15min Night	Measured Levels – dB(A) L _{A1} (1 min) Night	Limit	Wind Speed (m/s)	Stability Category	Compliant (Yes/No)
TN2	5/12/16	20.39	30		IA			35	2.5	E	Yes
	5/12/16	22.48	60			<20		35	0	G	N/A
	5/12/16	22.15	60				30	45	0.8	F	Yes
	6/12/16	13.42	90	36				35	4.8	A	N/A
	6/12/16	17.35	30		32			35	0.5	D	Yes
	6/12/16	22.38	60			<25		35	0.9	F	Yes
	6/12/16	22.00	60				30	45	0.6	F	Yes
	7/12/16	13.01	90	28				35	1.6	A	Yes
	7/12/16	20.16	30		IA			35	2.3	E	Yes
	7/12/16	22.00	60			IA		35	1.3	E	Yes
	7/12/16	22.16	60				IA	45	1.0	F	Yes
	8/12/16	10.33	90	33				35	0.5	A	Yes
	28/12/16	18.44	30		IA			35	1.8	F	Yes
	28/12/16	23.30	60			NM		35	1.5	E	Yes
	29/12/16	0.01	60				NM	45	1.3	E	Yes
	29/12/16	14.17	90	IA				35	2.1	A	Yes

EPL ID	Date	Start Time	Measurement period	Measured Levels – dB(A) Leq 15min Day	Measured Levels – dB(A) Leq 15min Evening	Measured Levels – dB(A) Leq 15min Night	Measured Levels – dB(A) LA1 (1 min) Night	Limit	Wind Speed (m/s)	Stability Category	Compliant (Yes/No)
TN3	5/12/16	18.35	30		IA			35	4.4	D	N/A
	6/12/16	1.33	60			26		35	1.7	E	Yes
	6/12/16	1.33	60				33	45	1.7	E	Yes
	6/12/16	17.04	90	IA				35	2.5	D	Yes
	6/12/16	18.21	30		IA			35	1.9	D	Yes
	7/12/16	1.41	60			IA		35	0.7	F	Yes
	7/12/16	1.25	60				IA	45	0.7	F	Yes
	7/12/16	14.40	90	IA				35	1.9	A	Yes
	7/12/16	18.42	30		IA			35	1.9	D	Yes
	8/12/16	1.09	60			IA		35	1.4	E	Yes
	8/12/16	1.25	60				IA	45	1.2	E	Yes
	8/12/16	14.26	90	IA				35	2.7	A	Yes
	28/12/16	18.00	30		IA			35	1.1	A	Yes
	28/12/16	22.15	60			IA		35	0.8	F	Yes
	28/12/16	22.45	60				IA	45	1.8	D	Yes
	29/12/16	12.27	90	IA				35	2.5	A	Yes

EPL ID	Date	Start Time	Measurement period	Measured Levels – dB(A) Leq 15min Day	Measured Levels – dB(A) Leq 15min Evening	Measured Levels – dB(A) Leq 15min Night	Measured Levels – dB(A) LA1 (1 min) Night	Limit	Wind Speed (m/s)	Stability Category	Compliant (Yes/No)
TN4	5/12/16	19.21	30		IA			35	2.5	D	Yes
	5/12/16	23.49	60			IA		35	1.6	E	Yes
	5/12/16	23.49	60				IA	45	1.6	E	Yes
	6/12/16	15.06	90	IA				35	1.5	A	Yes
	6/12/16	19.04	30		IA			35	1.3	E	Yes
	6/12/16	23.40	60			IA		35	2.4	D	Yes
	6/12/16	23.40	60				IA	45	2.4	D	Yes
	7/12/16	10.11	90	IA				35	1.0	A	Yes
	7/12/16	19.23	30		IA			35	2.1	D	Yes
	7/12/16	23.55	60				IA	45	0.9	F	Yes
	8/12/16	00.14	60			IA		35	3	E	Yes
	8/12/16	08.08	90	IA				35	0.4	A	Yes
	28/12/16	19.31	30		IA			35	1.5	F	Yes
	29/12/16	1.05	60			IA		35	0.4	F	Yes
	29/12/16	1.20	60				IA	45	0.8	F	Yes
	29/12/16	16.19	90	IA				35	1.6	A	Yes

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Blast Monitoring

Blasting Results

Since the first blast, there have been 704 blasts (until the 2/2/2017).

Since the last meeting there has been no blasts exceed the blast criterion.

At present one blast monitor remains located on project related land; an EPL variation is being prepared. The revised Blast Management Plan has been submitted to the DP&E for approval.

All blasts were within the 100 percentile limit for ground vibration.

Air Quality

Air Quality (Dust Deposition) Results

Five monitoring locations exceeded the limit of 4g/m²/month (average). These monitors are located on mine-owned land; as such compliance criteria do not apply. A review of the location of the deposited dust gauges is being undertaken as part of a revision of the Air Quality Greenhouse Gas Management Plan.

MONTH	TEMPLEMORE (EB-4) ¹	BOLLOL CREEK STN (EB-5) ¹	AMBARD (EB-6) ¹	TARRAWONGA (EB-7) ¹	(EB-8) ¹ THUIN	PINE GROVE (EB-9) ¹	TARRAWONGA MINE (EB-10) ¹	TARRAWONGA MINE (EB-11) ¹	TARRAWONGA MINE (EB-14) ¹	TARRAWONGA MINE (EB-15) ¹	JERALONG NORTH (EB-16) ²
Feb-16	11.1	2.9	38.6	1.5	0.8	2.6	11.6	3.4	6.2	4.1	5.3
Mar-16	15.7	4	2.2	0.7	0.3	3.1	2.5	5.7	4.1	2.7	0.8
Apr-16	NS	4.4	1.3	0.8	2.1	1.0	1.2	2.3	3.2	3.1	0.9
May-16	10.6	2.2	0.9	0.7	5.3	1.0	4.0	5.7	1.9	4.9	1.0
Jun-16	2.8	1.3	0.9	0.4	4.4	0.4	3.7	10.9	1.7	11.8	0.5
Jul-16	5.4	1.1	1.0	0.3	10.6	0.1	4.2	3.3	1.0	4.9	0.2
Aug-16	13.9	6.9	0.1	0.3	15.3	0.3	2.6	10.1	1.2	3.7	0.3
Sep-16	4.6	8.1	0.3	0.4	22.8	0.4	23.4	7.3	1.5	5.5	0.4
Oct-16	2.7	4.0	0.3	0.6	10.4	1.6	9.1	3.7	0.5	2.8	0.2
Nov-16	7.1	4.3	1.2	1.3	1.9	3.7	5.9	3.0	1.7	2.3	2.1
Dec-16	18.6	2.0	0.7	0.5	5.7	2.3	1.8	2.6	2.4	4.2	2.1
Jan-17	23.8	3.4	0.9	0.8	4.7	2.3	4.4	2.3	2.2	2.3	2.0
REPORTING PERIOD AVERAGE	10.6	3.7	4.0	0.7	7.0	1.6	6.2	5.0	2.3	4.4	1.3
LONG TERM AVERAGE	3.8	3.1	1.5	1.2	3.1	1.1	4.6	2.5	2.8	5.3	2.1

PM₁₀ Results

The annual average for PM₁₀ readings at “Coomalgah” was 12.78µg/m³ (until end of January) and remains below the annual average limit of 30µg/m³.

There has been no exceedance of the daily PM₁₀ limit since the last CCC meeting.

The fixed real time air quality monitor (TEOM) is currently providing daily reports as well as real time air quality results from the “Flixton” property.

The Predictive Forecast Modelling System prescribed in the draft Air Quality Management Strategy is now being implemented providing daily dust risk forecasts and modelling capabilities.

Water Monitoring

Groundwater

Routine groundwater monitoring was undertaken in November 2016.

Table 4- Groundwater results Summary

Site	Date	SWL (m)	pH	Elect. Conduct
MW1	December 2015	6.59	7.7	3270
	February 2016	6.59	8.09	3400
	May 2016	6.65	7.7	3340
	September 2016	6.67	8.0	3350
	November 2016	6.68	7.6	3170
MW2	December 2015	3.49	7.1	528
	February 2016	3.62	7.38	575
	May 2016	3.74	6.9	597
	September 2016	3.50	7.04	557
	November 2016	3.54	7.0	524
MW4	December 2015	8.85	7.3	4410
	February 2016	8.86	7.85	4650
	May 2016	8.92	7.4	4480
	September 2016	9.05	7.5	4300
	November 2016	8.91	7.3	4330
MW5	December 2015	3.28	7.7	3070
	February 2016	3.35	7.76	2230
	May 2016	3.40	7.7	1632
	September 2016	2.28	7.98	1750
	November 2016	2.0	7.6	3010
MW6	December 2015	5.4	7.8	946
	February 2016	5.38	7.85	1080
	May 2016	5.36	7.6	1090
	September 2016	5.15	No sample	No sample
	November 2016	4.74	7.5	1416
MW7	December 2015	104.09	No sample	No sample

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Site	Date	SWL (m)	pH	Elect. Conduct
	February 2016	104.51	No sample	No sample
	May 2016	104.87	No sample	No sample
	September 2016	104.19	No sample	No sample
	November 2016	104.41	No sample	No sample
MW8	December 2015	13.5	Casing blocked	Casing blocked
	February 2016	13.53	Casing blocked	Casing blocked
	May 2016	13.58	Casing blocked	Casing blocked
	September 2016	13.08	Casing blocked	Casing blocked
	November 2016	12.62	Casing blocked	Casing blocked

Surface Water

No further wet weather monitoring has been undertaken since the last CCC meeting.

Currently site water is sufficient to maintain operations throughout the summer period.

Rehabilitation

Since the last meeting there has been 9.9ha of landform establishment (bulk shaping) undertaken on the northern and southern emplacement areas. During the next 5 five months top soiling, water management, soil amelioration and vegetation establishment will be undertaken on these areas. Further information on the progression of these areas will be provided in future CCC meetings.

Complaints

Since the last meeting, there have been no complaints.

Minutes of the 48th Meeting of the Tarrawonga Coal Mine Community Consultative Committee

Meeting Held: 17th May 2017 (10.07am)

Venue: Tarrawonga Coal Mine, Training Room

1.0 Present and Apologies

Present: **Mr David Ross (DR), Independent Chairman**
Mrs Colleen Fuller (CF), Gunnedah Shire Council Representative (Councillor)
Mrs Julie Heiler (JH), Community Representative
Mrs Cath Collyer (CC), Community Representative
Mr Lachlan Johnson (LJ), Tarrawonga Environmental Officer
Mr Tim Muldoon (TM), Group Manager - Community Relations & Property
Mr Daryl Campbell (DC), Community Liaison Officer
Mr Craig Sullivan (CS), Tarrawonga Mining Superintendent

Apologies: Mr Blair Meyers (BM), Tarrawonga Operations Manager
Mrs Rebecca Ryan (RR), Community Representative
Mrs Annie McMahon (AM), Narrabri Shire Council Representative (Councillor)
Mr Andrew Johns (AJ), Gunnedah Shire Council Representative

2.0 Declaration of Pecuniary or Non-Pecuniary Interests

DR declared that he is paid a fee for his participation as Independent Chairman.

3.0 Previous Minutes

Minutes of the previous site meeting were adopted as a true record. Moved JH Second CF.

4.0 Business Arising

LJ informed the committee that Anthony Margetts had resigned from WHC and Blair Meyers had replaced him as the Tarrawonga Operations Manager.

TM spoke to Short Term Planning & Logistics Manager regarding expectations of any sub-contractor engaged to haul coal from either Tarrawonga Coal Mine or Rocglen Coal Mine to the WHC CHPP. It was advised that the same expectation placed on BIS Industries would be placed on any subcontractor, however it was noted due to the short term contracts in place it would be unlikely to result in the installation of GPS tracking equipment.

DR informed the CCC of OEH discussions regarding the biodiversity reforms noting the key points included: regulations and tools on exhibition, maps won't be released at this point in time. JH stated the maps need to be made public with the regulation. DR further advised that there will be consultation with key stakeholders. CCC members are advised to look at www.landmanagement.nsw.gov.au for further information.

LJ advised that the SPL modification had been approved.

LJ advised that there had been no further action undertaken in relation to the removal of black pine. JH noted that TCM should remove pine on site first before considering offset works.

TM updated the CCC regarding the status of the community newsletters; current consideration is to return to individual mine newsletters.

DR advised that CC has joined the Environmental Trust.

LJ advised that the Environmental Report had been updated.

5.0 General Business

Nil

6.0 Mine Progress Report

LJ presented the Mine Progress Report:

- LJ reiterated the last CCC updated specifically in relation to increased production which included Saturday and Sunday dayshifts. The increased production will run through till end of financial year with coal targets increased from 2.3MT to 2.7MT.
- The SPL modification had been approved by DP&E.
- Increased workforce to cater with increased production.

CC asked whether it was still intended to return to reduced production in FY2018. CS advised that this remains the intention and that it is intended that Sunnyside Coal Mine will recommence operations and make up in the shortfall in the open cut operations.

JH asked whether WHC will operate Sunnyside Coal Mine. CS said the final decision had not yet been made however it is intended to operate for a period of approximately 2-3 years to enable finalisation of rehabilitation activities.

CC asked what the blasting days for Rocglen Coal Mine were; LJ advised that they were approved to undertake blasting Monday – Saturday the same as TCM.

JH asked whether Sunnyside would have a CCC; LJ advised that it had one in place.

7.0 Environmental Monitoring Report

LJ presented to Environmental Monitoring report.

JH asked how she would be able to differentiate noise sources at her property. LJ provided generalised methodology as to how she would be able to differentiate mining related noise sources from individual mine sites.

JH asked whether there would be more aerial seeding off the southern emplacement. LJ advised that it had been a reasonable success and that there was intention to undertake further seeding dependent upon what the weather conditions. JH advised that it had made a positive difference.

No complaints since last meeting.

CC noted that LJ had advised there were EMP's under review and requested status and nature of any updates.

Noise Management Plan – Administrative review and revised noise monitoring location.
Blast Management Plan – Administrative review and revised noise monitoring location.
Air Quality Greenhouse Gas Management Plan – Administrative review and revise air quality monitoring network.

Water Management Plan – Addressing DP&E and DPI comments for resubmission to DP&E. WMP will be presented at the next CCC to provide overview of plan.

Biodiversity Management Plan – With DP&E pending approval.

It was noted that BTM Strategies would be discussed at the BTM CCC.

CC noted that the Regional Biodiversity Strategies need to consider the social impacts of the environmental offsetting. DR requested to follow up on this matter with the respective departments. DR noted that he had spoken to Stephen O'Donoghue from DP&E; Stephen had indicated that the Regional Biodiversity Strategy was expected to be finalised as soon as possible (possibly even the week of the CCC meeting).

8.0 New Business

8.1 Feral Animals – JH raised the issue of feral animals and in particular feral pigs. What is WHC doing and stated that the issue needs to be addressed. CC also noted the increasing issue of illegal pig hunters. LJ advised given the nature of the discussion that this be raised at the BTM CCC as it affected all three mining operations. LJ also advised that feral pigs hadn't been observed to be as big an issue for the TCM properties as they leased with obligations on lessees.

9.0 Complaints

Complaints were discussed in the Environmental Monitoring Report.

10.0 Next Meeting

16 August 2017 10am Tarrawonga Coal Mine

Meeting closed at 11.17am

David Ross - Chair

Tarrawonga Coal Mine Community Consultative Committee Meeting #35

Environmental Monitoring Report August – November 2014

Noise Monitoring

Noise monitoring was undertaken at the “Tarrawonga” property from the 9th to 12th September 2014, with results outlined below. The noise criterion for the mine is 35dB(A) Leq (15 min) for all operating times.

Table 1 - TCM Noise Monitoring Results, 10 th – 12 th June 2014					
Date	Time	dB(A),Leq (15 min)	Wind speed/direction	Temp. Inversion °C/100m	Identified Noise Sources as dB(A) Leq (15 min)
9 September 2014	3:42	37	3.8/NW	-	TCM (36), cattle (30), birds and insects (25)
9 September 2014	9:29pm	35	1.5/N	+7.0	TCM (32), frogs & insects (32)
9 September 2014	10:05pm	38	1.5/N	+10.2	TCM (37), frogs (32),
10 September 2014	8:49am	41	3.9/W	-	TCM (30), Wind (41)
10 September 2014	7:01 pm	26	1.0/SW	+2.6	TCM (26)
10 September 2014	10:04pm	24	Calm	+8.6	TCM Inaudible, Domestic Noise (24)
11 September 2014	8:05am	40	1.1/SSE	-	Birds (40), TCM (25)
11 September 2014	7:05pm	29	0.7/NNW	+11.4	TCM (28), birds (22)
11 September 2014	10:00pm	25	0.8/NNW	+11.8	TCM (22), cattle (22)
12 September 2014	8:47am	42	2.1/SSE		TCM (37), birds (40)
12 September 2014	7:14pm	30	0.8/NNW	+13.0	TCM (30), frogs (30)
12 September 2014	10:06pm	37	0.4/WSW	+8.0	TCM (37), frogs (24)

The results in Table 1 show that noise emissions from the mine did exceed the operational noise criterion at the “Tarrawonga” monitoring location during the monitoring event. The property is project owned and therefore a noise criterion does not apply.

In addition to the 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. The results of the sleep disturbance monitoring show that the measured L1 (1 min) noise level did not exceed the sleep disturbance criterion.

TCM Sleep Disturbance Monitoring Results				
Location	Time	dB(A),L1 (1 min)	Wind speed/ direction	Temperature Inversion °C/100m
Tarrawonga (9/9/14)	10:05 pm	43	1.5/N	+10.2
Tarrawonga (10/9/14)	10:04 pm	n/a	Calm	+8.6
Tarrawonga (11/9/14)	10:00 pm	25	0.8/NNW	+11.8
Tarrawonga (12/9/14)	10:06 pm	44	0.4/WSW	+8.0

The real time noise monitor was relocated to the “Matong” property in November 2013 and has indicated mine noise at that location to be generally within compliance limits. As the weather has started to warm up and less severe inversion categories, the number of alarms received from the monitor has decreased. The site OCE’s action each alarm by investigating the noise source and modifying operations if it is identified that operations from Tarrawonga are contributing to the elevated noise levels.

Blast Monitoring

Blasting Results

Since the first shot there have been 530 blasts (until the 14/11 2014). All blasts have been within 100 percentile limit for ground vibration and air blast overpressure since the last meeting.

On 23rd September a result of 119.1dB was recorded at the Tarrawonga monitor; this remains within the 5% threshold for exceedances over 115dB. As the property is also project owned blast criterion do not apply.

Air Quality

Air Quality (Dust Deposition) Results

MONTH	TEMPLEMORE (EB-4)	BOLLOL CREEK STN (EB-5)	AMBARDO (EB-6)	TARRAWONGA (EB-7)	THUIN (EB-8)	PINE GROVE (EB-9)	TARRAWONGA MINE (EB-10)	TARRAWONGA MINE (EB-11)	PINE GROVE (EB-12)	BOLLOL CREEK (EB-13)	TARRAWONGA MINE (EB-14)	TARRAWONGA MINE (EB-15)	JERALONG NORTH (EB-16)
November 2013	2.4	0.3	0.8	1.1	2.0	1.1	1.2	1.1	0.4	2.9	0.6	6.5	5.2
December 2013	4.5	2.5	1.4	1.2	2.3	1.2	9.8	3.6	2.1	0.6	0.2	4.6	5.2
January 2014	0.7	6.0	0.3	0.6	1.0		0.5	3.8	2.9	0.5	2.0	2.4	13.3
February 2014	2.7	0.4	1.1	0.5	0.6	1.4	0.6	2.1	0.4	3.6	1.3	2.0	2.6
March 2014	10.7	3.0	1.2	1.1	1.4	1.1	0.1	3.2	1.7	8.7	2.7	17.1	2.7
April 2014	3.7	2.1	1.6	0.7	1.9	0.9	1.7	2.5	2.1	2.9	7.7	2.8	0.6
May 2014	1.0	1.3	0.2	0.4	4.8	1.1	0.7	2.8	2.7	2.8	5.4	8.1	1.3
June 2014	2.1	2.6	0.2	0.4	2.2	0.5	1.9	5.6	0.9	0.8	2.6	10.8	0.5
July 2014	0.8	2.8	0.3	0.3	0.7	0.3	3.4	2.7	0.5	0.2	1.4	7.6	0.5
August 2014	1.2	3.6	0.7	0.3	2.8	0.8	1.9	8.7	1.4	1.2	5.1	26	0.9

September 2014	2.2	2.4	0.6	0.5	1.1	0.6	1.9	1	0.5	0.7	3.7	6.8	0.6
October 2014	5	2.6	1.7	1	2.3	1.1	1.9	6.2	1	7.6	2.6	9.7	1.2
ANNUAL AVERAGE	3.08	2.47	0.84	0.68	1.9	0.9	2.1	3.6	1.38	2.71	3.0	8.7	2.90

All monitoring locations remain below the limit of $4\text{g/m}^2/\text{month}$ (average) with the exception of EB-15. As this monitor is located on mine-owned land, compliance criteria do not apply.

PM₁₀ Results

The annual average for PM₁₀ readings at “Templemore” is currently at $25.45\mu\text{g/m}^3$ (until end of October 2014) and remains below the annual average limit of $30\mu\text{g/m}^3$. PM₁₀ levels have remained compliant since the last CCC meeting.

The fixed real time air quality monitor (TEOM) is currently providing daily reports as well as real time air quality results from the “Flixton” property.

Water Monitoring

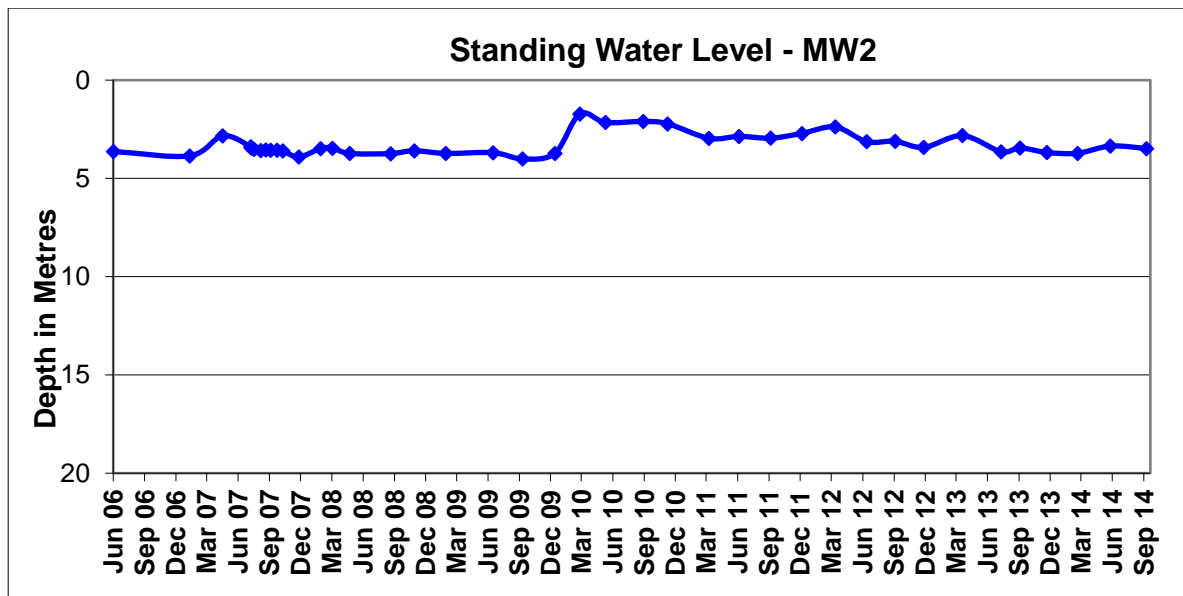
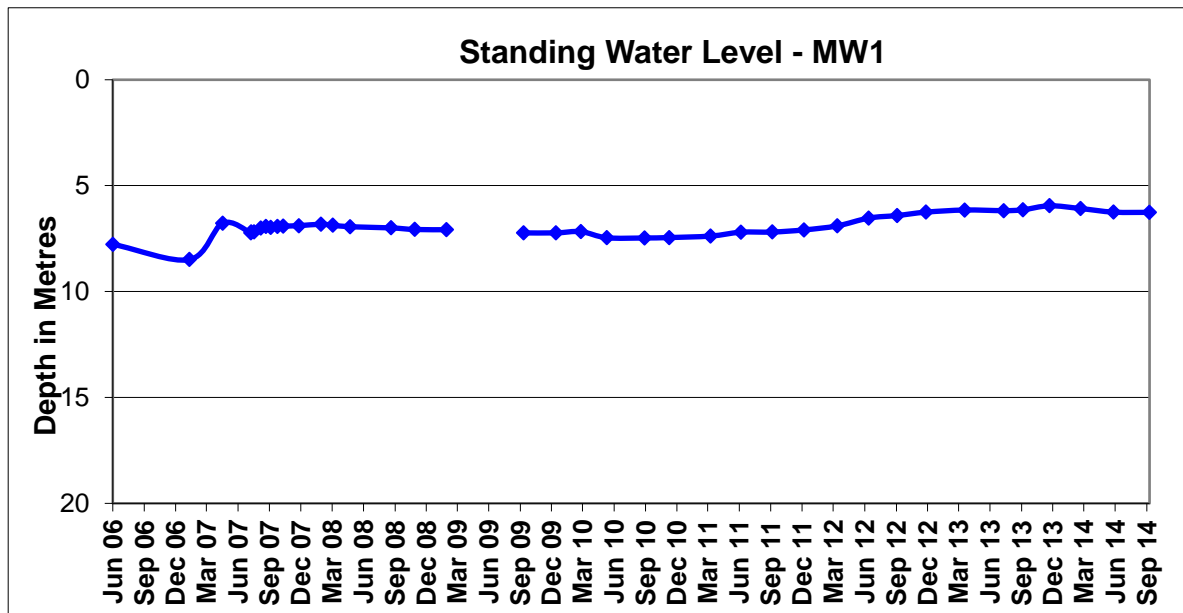
Ground Water

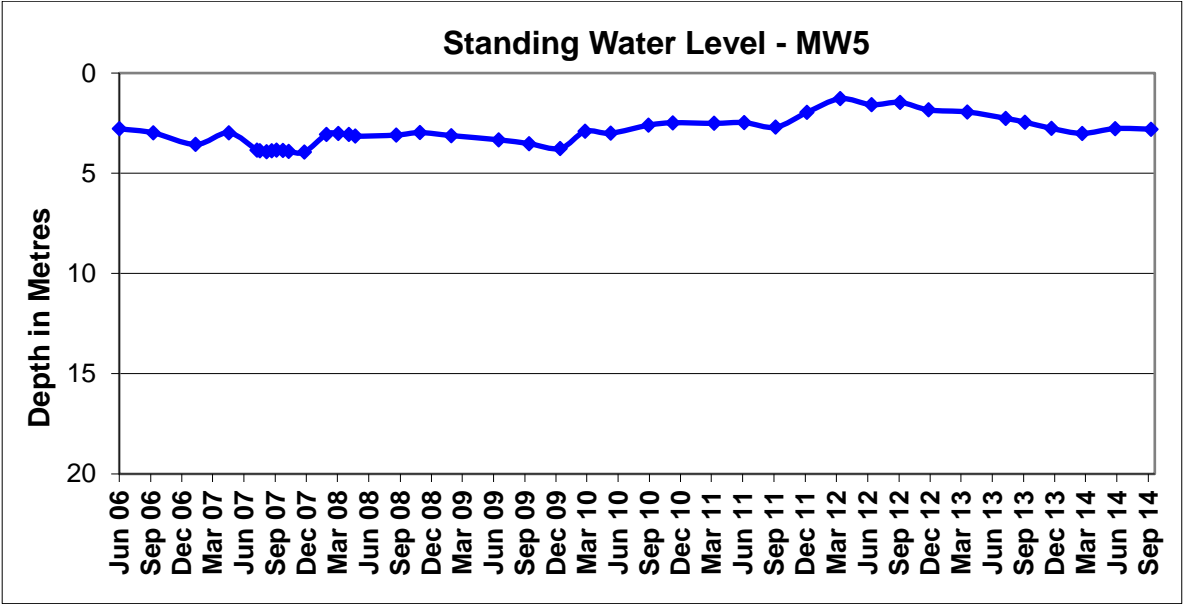
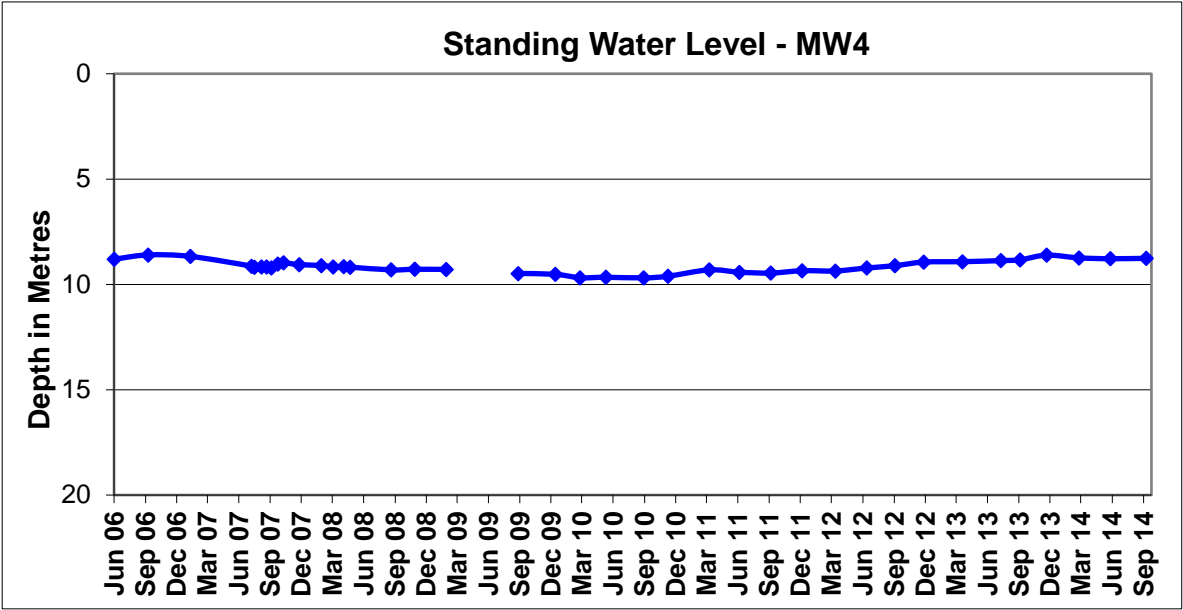
Groundwater monitoring data obtained to date, including the last round of SWL monitoring in September 2014, is provided in the table and graphs below. All monitoring locations have remained relatively consistent over the past three months.

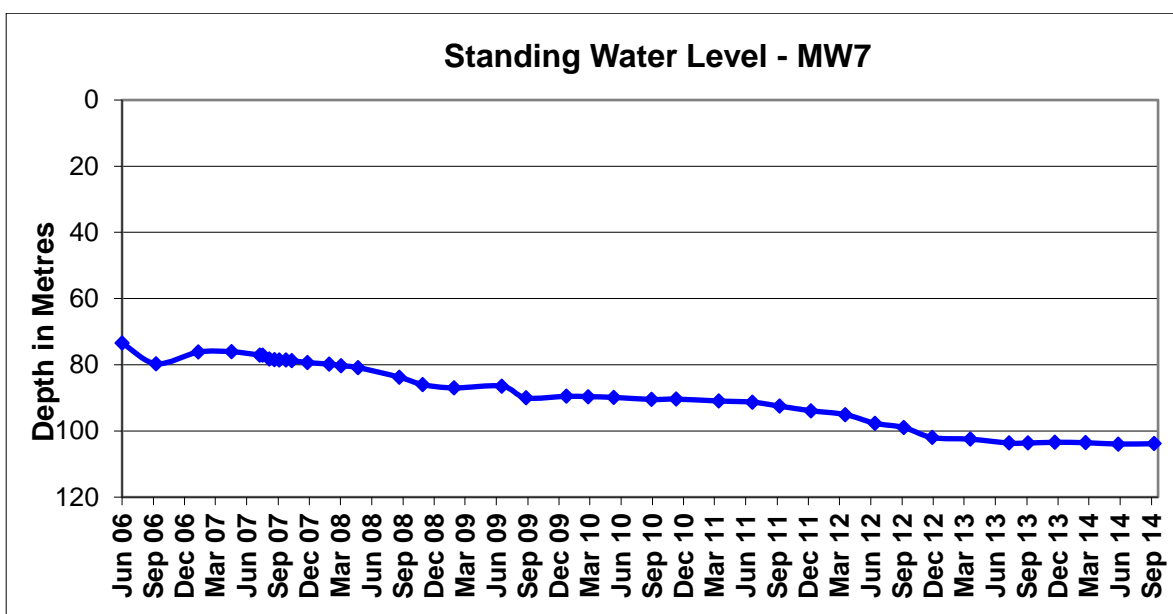
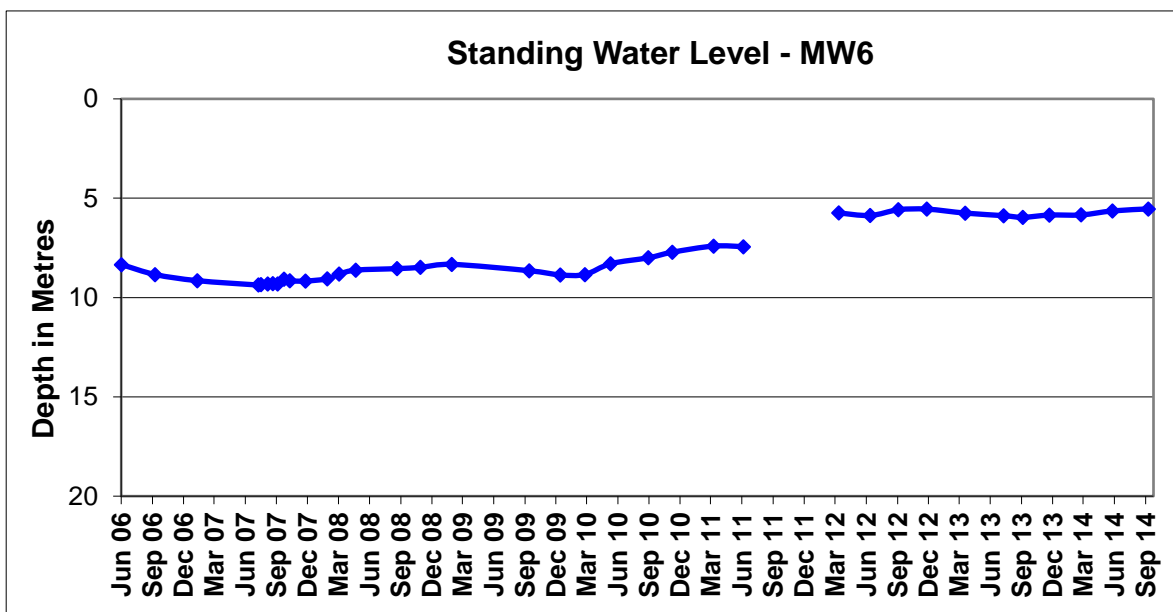
Table 4- Groundwater results Summary

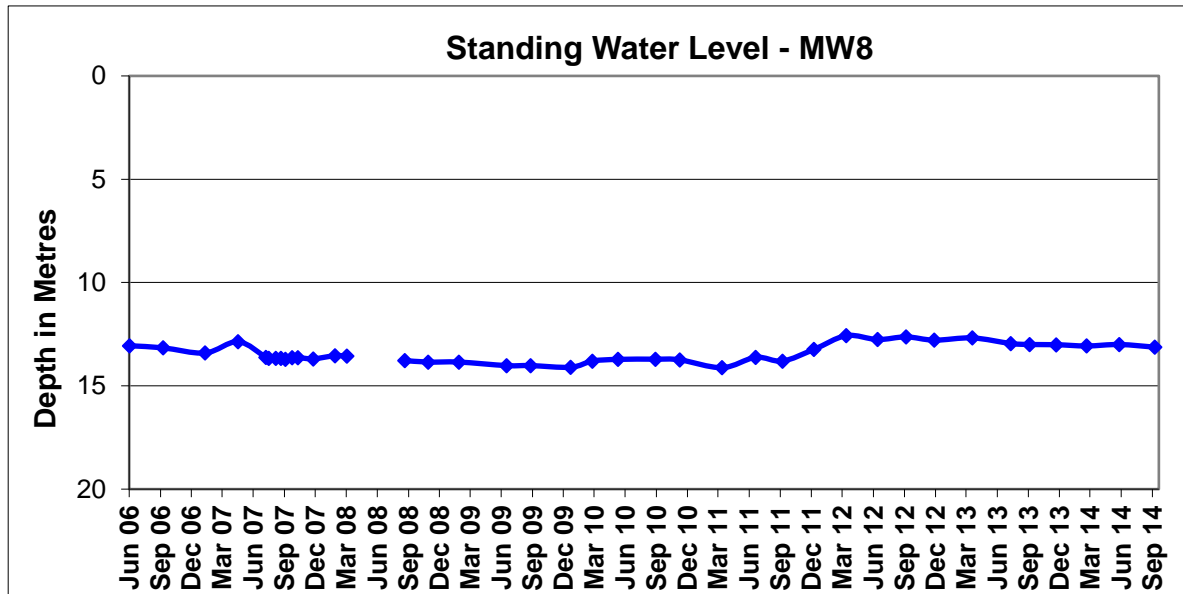
Site	Date	SWL (m)	pH	Elect. Conduct
MW1	September 2013	6.14	7.19	3330
	November 2013	5.95	7.6	3140
	February 2014	6.08	7.65	3440
	May 2014	6.25	7.6	3140
	September 2014	6.26	7.97	3320
MW2	September 2013	3.45	7.46	674
	November 2013	3.68	6.9	694
	February 2014	3.72	7.01	694
	May 2014	3.35	7.4	618
	September 2014	3.5	7.27	615
MW4	September 2013	8.83	7.99	3950
	November 2013	8.61	7.6	3720
	February 2014	8.74	7.98	3890
	May 2014	8.78	7.6	3840
	September 2014	8.76	7.83	4170
MW5	September 2013	2.45	8.07	1810
	November 2013	2.76	7.7	2430
	February 2014	3.01	7.77	1850
	May 2014	2.77	7.7	925
	September 2014	2.8	7.99	2200
MW6	September 2013	5.96	7.8	496
	November 2013	5.85	7.2	486
	March 2014	5.84	7.51	212
	May 2014	5.64	7.5	360
	September 2014	5.54	7.61	854
MW7	September 2013	103.65	No Sample	No Sample

	November 2013	103.43	No Sample	No Sample
	February 2014	103.55	No Sample	No Sample
	May 2014	103.96	No Sample	No Sample
	September 2014	103.84	No sample	No sample
MW8	September 2013	13.00	Casing blocked	Casing blocked
	November 2013	13.01	Casing blocked	Casing blocked
	February 2014	13.07	Casing blocked	Casing blocked
	May 2014	13.00	Casing blocked	Casing blocked
	September 2014	13.13	Casing blocked	Casing blocked









Surface Water

Routine surface water monitoring was conducted during May 2014.

No wet weather discharges have occurred since the last CCC meeting. Sampling was undertaken 27th August 2014 at Nagero downstream monitoring location following 37.6mm rain over a two day period.

Rehabilitation

During August 720 trees and understory species were planted on the southern rehabilitation area.

During the next 3 months an area of approximately 4 hectares in the northern extension will be shaped and top soiled ready for rehabilitation during early to mid-autumn 2015.

Soil stripping activities in the northern extension have been completed for the first year of operations in the northern extension; two stockpiles one to the west of the northern emplacement and one of top of the northern emplacement have been designated.

Complaints

Since the last meeting, there have been 8 complaints, as outlined on the following table.

Tarrawonga Coal Pty Ltd – Tarrawonga Coal Mine **2014 Complaints Register**

#	Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken / Follow-up
1	Phone call to Environmental Manager	6/01/2014 8:45pm	Complaint in relation to a mine vehicle travelling west along the Manilla-Boggabri Road near the Wean Race Course at excessive speed. The complainant's wife was heading east along the road when the mine vehicle passed, showering her in rocks and dust, and cracking her windscreen. The complaint is not in relation to the windscreen, but the general safety of other road users when these people travel at excessive speed along poor quality roads. The complainant is concerned someone will be seriously injured or killed as a result of mine personnel causing a road accident.	The complainant was asked if he had any identifying features of the vehicle involved such as a rego number or make of vehicle, however, the only identifier was that it was a utility with a beacon and high vis markings on the side. On this basis, the complainant was advised that we had no way of identifying the driver, or even if the vehicle was associated with the Tarrawonga Mine. Despite this, the complainant's concerns were noted and he was advised that the matter would be raised with the site Operations Manager to include in any toolbox sessions with operators, that it is expected that all personnel abide by relevant road rules, drive in a responsible manner and drive to road conditions. This was communicated with the Operations Manager the following morning 7 th January 2014.	No further advice required.
2	Email to Environmental Manager	9/04/2014 7:48am	The complaint related to increased dust and noise levels over the two weeks; a noticeable increase in mine related dust with a particular occurrence on Saturday 5/4. Second email noted that mine related noise was distinct morning of 11/4.	Monitored dust and noise levels in particular at the complainant's property boundary have been reviewed. These levels are within the specified levels. The matter will be continued to be monitored. Environmental Manager responded via email advising Environmental Officer would review noise and dust data for last two weeks. Environmental Officer to liaise with complainant and arrange a face to face meeting at a mutually convenient time.	
3	Email to Environmental Manager	22/04/2014 6:10pm	Complaint about the dense dust in the valley and all around the mountains to the east of the Tarrawonga mine that morning. The complainant said the dust was very heavy and thick and there was a black layer above the mine site which all seemed to be floating in an easterly direction towards the complainant's homes and working environment. The complainant also noted mine noise that she is	Environmental Superintendent responded via email (8/5/2014) advising that the site Environmental Officer would contact the complainant to arrange a meeting to discuss the issues.	

#	Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken / Follow-up
			hearing during the night at her two properties. She said it is quite loud.		
4	Email to Environmental Manager	28/04/2014 4:15pm	Complaint regarding noise over the last week being louder than normal and that this is a continuation from the complainant's last email. The complainant said it concerns her as she hears this noise at night and it has been loud during the days as well.	Environmental Superintendent responded via email (8/5/2014) advising that the site Environmental Officer would contact the complainant to arrange a meeting to discuss the issues.	
5	Email to Environmental Superintendent	21/05/2014 8:19am	Complaint regarding the heavy dust within the valley and around the complainant's homes through Tuesday 20/5 and morning of Wednesday 21/5. The complainant stated it is unacceptable to live with such conditions.	The Site Environmental Officer has undertaken preliminary investigation into the source, weather conditions, monitoring data and external factors which resulted in elevated atmospheric dust conditions on the day.	Environmental Superintendent replied via email to complainant advising that the site Environmental Officer would further investigate the matter and discuss with the complainant at the planned meeting.
6	After hours call to EPA	26/5/2014 3.35pm	Complaint to EPA on the 20/5/2014 at 6:00am with the caller reporting extreme levels of dust in the valley that morning coming from the two main coal mines. The caller also said above both the mines there is a black haze, a mixture of diesel and coal dust the caller believes. The weather was not windy on the day, with only a slight breeze. The complainant also noted that there was a lot of machine noise as well that morning.	Environmental Officer replied by email to the EPA 28/5/2014 advising that the site was aware of the poor weather conditions on the day of the complaint, made every effort to minimise dust generation and initiated an investigation following an email from the complainant to the Environmental Superintendent. The EPA was advised that the Tarrawonga Environmental Officer has been attempting to make a time to meet with the complainant since their last complaints with no advice to date from the complainant as to when they would like to meet.	Continued attempts will be made to contact complainant to organise a meeting to discuss their concerns.
7	After hours call to EPA	26/5/2014 3.35pm	Complaint to EPA on 21/5/2014 regarding large amount of thick dust being generated by general mine activity plus a black inversion layer across the Tarrawonga and Boggabri Coal Mines and Leards Forest Rd at 6:30am. The complainant noted that the dust was still very heavy at the time of the call at 8:26am.	Environmental Officer replied by email to the EPA 28/5/2014 advising that the site was aware of the poor weather conditions on the day of the complaint, made every effort to minimise dust generation and initiated an investigation following an email from the complainant to the Environmental Superintendent. The EPA was advised that the Tarrawonga Environmental Officer has been attempting to make a time to meet with the complainant since their last complaints with no advice to date from the complainant as to when they would like to meet.	Continued attempts will be made to contact complainant to organise a meeting to discuss their concerns.
8	Phone call to Environmental Officer	27/6/2014 1.20pm	Complaint made to the Environmental Officer regarding Blast No. 492 in the Tarrawonga Open Cut Pit. The complainant believed that	The Environmental Officer spoke to the complainant and advised that the blast was within compliance limits as specified in the project approval and the EPL. The concerns of the complainant were noted.	The Environmental Officer will raise the matter with the Group Environmental Manager prior to

#	Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken / Follow-up
			the blast caused the house to shake in an unacceptable manner and that this was the second occasion within the last 3 weeks (Boggabri Blast) that had adversely impacted the property.		providing any further details to the complainant.
9	Phone call to the Environmental Officer	9/7/2014	Complaint made relating to blast no. 494 and also blasting in general over the last few months. The house shook considerably during the blast. Complainant happy to work with Tarrawonga to reach an outcome.	The Environmental Officer discussed the matter at length with the complainant including blast timing, product etc. It was advised that the blast was within compliance limits specified in both the EPL and PA.	Further investigation into blasting impacts to be undertaken and further details to be conveyed to complainant once investigation completed including any actions that will implemented.
10	Phone call to the Tarrawonga Complaint Hotline	31/7/14	Complaint made relating to dust levels emanating from Tarrawonga on day of the complaint and also the previous afternoon.	An investigation was subsequently carried out by the Environmental Officer which identified increased dust levels blowing off an exposed drill pattern.	A water cart was utilised to water down drill pattern and cuttings to reduce dust emissions.
11	Phone call to the EPA	23/7/14 (Received 1/8/14)	Complaint made regarding dust coming from Tarrawonga.	Weather data and dust inspection records were reviewed indicating that a strong inversion was present on the morning of the complaint. Dust inspection carried out later in the day identified that dust was being minimised.	Response sent to the EPA via email.
12	Phone call to the EPA	30/7/14 (Received 1/8/14)	Complaint made regarding dust plume coming from Tarrawonga.	Weather conditions and dust inspection records were reviewed. Elevated dust conditions had been noted; in particular moderate winds resulted in dust blowing off an exposed drill pad (noted during dust inspection).	A water cart was utilised to suppress dust emanating from an exposed drill pad and drill cuttings. This drill pad had been part of the circuit but had dried since the last pass.
13	Phone call to the Tarrawonga Complaint Hotline	11/9/14 11.09 (follow-up call 1700)	Complaint made regarding the dust over the mine/s at 0700 and again 0900 on the morning of the complaint.	A review of weather conditions and real time dust monitor was undertaken following the discussion with the complainant. Only light winds were occurring on the morning of the complaint and would have impacted upon dust dispersal. The real time monitor showed no sign of increased PM10 levels.	Continue to monitor dust levels and ensure dust is being minimised
14	Phone call to the EPA	11/9/14 (received 12/9/14)	Complaint made reporting thick and heavy dust in the Valley from mining operations.	A review of meteorological conditions was undertaken post receiving the complaint; conditions were stable with a moderate inversion and low winds speeds. These conditions would have impacted upon dust dispersal. A review of real time dust monitor results showed no sign of increase in PM10 levels. Operations only commenced at 6.45am following the morning pre start meeting with two water carts in operation from the commencement of the shift. Given the time of the complaint	Response provided to the EPA via email.

#	Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken / Follow-up
				there may have been other factors contributing to dust (such as local unsealed roads).	
15	Phone call to the EPA	16/9/14 (received 17/9/14)	Complaint made regarding ongoing dust pollution from mining operations.	<p>A review of meteorological conditions, real time dust levels, operational notes and daily dust inspection records have been undertaken to outline the conditions on the day of complaint and actions implemented at site to minimise dust levels. At the commencement shift meteorological were stable with low winds and a moderate inversion in effect; three water carts were in operation from the beginning of shift. Conditions deteriorated as expected (predictive weather forecast) during the morning at which point operations planned and implemented a number of dust minimisation strategies and measures to reduce dust levels; including, restricting dump truck speeds, restricting Bis haul truck speeds on the ROM circuit, and increased water use on exposed areas such as drill patterns and unused haul roads. Consideration was also given to shutting down a digger and coal crushing plants in high risk conditions.</p> <p>An adverse weather condition alarm was issued at 1000 enacting investigation level as per the PRP – Identification of Adverse Weather Conditions for Overburden Handling.</p> <p>At approximately 1030, the RH170 excavator and associated haul trucks were shutdown to enable water carts to continue to minimise dust.</p> <p>All three water carts were hot seated during the crib break (1130 – 1230) further allowing water trucks to target hotspots and reduce dust levels.</p> <p>Following the crib break the RH170 and trucks returned to operation.</p> <p>There were no subsequent adverse weather condition triggers; however wind speeds remained relatively moderate until mid-afternoon when wind speeds declined.</p> <p>The real time dust monitor did show some signs of elevated PM10 levels in particular during the morning; however, post crib break PM10 levels began to reside with only small spikes in an otherwise downward trend. 24hr PM10 levels for the day of the complaint were 23.8 which was also the peak.</p> <p>The OCE, Environmental Officer and Operations Manager monitored operations throughout to most efficiently managed and minimise dust levels; operators were also proactively managing dust through proper of equipment and requesting water cart</p>	Response provided to the EPA via email.

#	Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken / Follow-up
				when required.	
16	Phone call to DP&E	16/9/2014	Complaint related to blasting in high wind conditions.	At the time of the blast the wind speed was 6.7m/s at 312°. Wind speeds were monitored throughout the morning and it is noted that moderate wind conditions were observed. Due to these conditions, the decision to fire the shot was postponed until wind conditions were assessed and considered to be within limits (per Draft Blast MP, which has had two rounds of comments from DPE and will be re-submitted for approval in the next week or two). Wind speeds observed for the 45 minute period leading up to the shot remained below the 7m/s threshold, 20 minutes prior the shot these conditions were confirmed with the Operations Manager and at the two minute countdown confirmation was provided to the shot firer & Operations Manager that wind speeds remained within limits.	Response sent via email to DP&E.
17	Phone call to the EPA	24/9/14 (received 3/10/14)	Complaint related to dust generated by blast at Tarrawonga Mine and dust conditions on the following day.	A review of blast records and meteorological data was undertaken following receipt of the complaint. Meteorological conditions were suitable for blasting at the time with clear skies, a wind speed of 1.9m/s and direction of 185°; these weather conditions were consistent throughout the morning of the blast with the wind emanating from the south and south – east. Dust inspection records for the 24th September identify no dust issues and meteorological conditions did not identify any adverse weather conditions; with a maximum speed of 2.7m/s and with prevailing winds from the north. Two water trucks were in operation throughout the day.	Response sent via email to the EPA on 9/10/14
18	Phone call to the EPA	7/10/14 (received 10/10/14)	Complaint related to high levels of dust being generated by Tarrawonga Coal; speeds high with significant gusts.	A review of meteorological conditions and operations was undertaken on receipt of the complaint. It was observed on arrival at Tarrawonga (0645) that there was increased dust surrounding the mining operations and adjacent unsealed roads and properties; it should be noted at the time of observation Tarrawonga had not commenced operations and had not been operational since the end of day shift on Saturday (4/10/14). It was also observed that there was significant dust being generated by increased traffic volumes on Goonbri Road (non-project related), dust was also being generated along other unsealed local roads. A review of meteorological conditions was undertaken upon arrival at site it was recorded that Category F Stability Class; this remained until approximately 0745. Operations were modified throughout the day to minimise dust generation; at the commencement of shift two water trucks were in operation and shortly after commencement a third water truck was utilised.	Response sent via email to the EPA on 16/10/14

#	Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken / Follow-up
19	Phone call to the EPA	10/10/14 (received 10/10/14)	Complaint related to dust covering the valley surrounding Tarrawonga Coal and Boggabri Coal.	A review of meteorological conditions and operations was undertaken upon receipt of the complaint. The Environmental Officer observed dust being generated by surrounding local unsealed roads in particular Goonbri Rd with non-project related traffic the major contributor. At that time a review of meteorological was also undertaken and Category F Stability Class was observed at 0705. Conditions and operations were monitored and conditions improved throughout the morning. Dust being generated from Goonbri Rd was consistent throughout the morning.	Response sent via email to the EPA on 16/10/14
20	Email to Group Environment Manager	31/10/14	Complaint related to visible dust within the Wean Valley which is impacting upon breathing.	A review of operations and dust sources was undertaken by the Environmental Officer at the time of the complaint. The review found that there was an increase in both mine and non-mine related traffic utilising local unsealed roads; in particular, Manilla and Goonbri Road. On the morning of the complaint all light vehicles travelling to Tarrawonga and Maules Creek mines were diverted via Blue Vale Road (dirt section) and Braymont Road due to protestor activity on the dedicated private haul road.	Email sent to complainant at 10:08am 31/10/14.

Minutes of the 49th Meeting of the Tarrawonga Coal Mine Community Consultative Committee

Meeting Held: 30th August 2017 (10.10am)

Venue: Tarrawonga Coal Mine, Training Room

1.0 Present and Apologies

Present: **Mr David Ross (DR), Independent Chairman**
Mrs Colleen Fuller (CF), Gunnedah Shire Council Representative (Councillor)
Mrs Julie Heiler (JH), Community Representative
Mrs Cath Collyer (CC), Community Representative
Mr Lachlan Johnson (LJ), Tarrawonga Environmental Officer
Mr Blair Meyers (BM), Tarrawonga Operations Manager
Mrs Rebecca Ryan (RR), Community Representative
Mrs Annie McMahon (AM), Narrabri Shire Council Representative

Apologies: Mr Andrew Johns (AJ), Gunnedah Shire Council Representative
Mr Tim Muldoon (TM), Group Manager - Community Relations & Property

2.0 Declaration of Pecuniary or Non-Pecuniary Interests

DR declared that he is paid a fee for his participation as Independent Chairman.

3.0 Previous Minutes

Minutes of the previous site meeting were adopted as a true record. Moved CF Second CC.

4.0 Business Arising

LJ advised that an update of the WMP would be provided as part of the environmental monitoring report.

5.0 Mine Progress Report

BM presented the Mine Progress Report:

- TCM achieved a 0 TRIFR rate for FY17. JH commended the result.
- TCM achieved full year production of 2.7MT and WHC operated assets produced 23MT for the FY17.
- Scaled back operations from 7 days per week to 5; maintenance continuing to operate 7 days per week.
- FY18 forecast is 2.1MT. No foreseeable increase given limitations on haulage from TCM and RCM to Gunnedah CHPP. CC asked where the limitation came from; LJ advised that the limit is part of the project approval and there is a cumulative limit with RCM.

- BM advised that RCM was scheduling 1MT for FY18 and 700KT for FY19.
- Recent removal of the remainder of the National Plant fleet which have been demobilised offsite.
- Terex Trucks have been sold and are currently being relocated offsite.
- Project Approval Modification allowing TCM to mine further to the north up to the boundary to Boggabri Coal Mine. Mine lease extension is still pending final signoff.
- A further increase in the workforce of 6-8 employees. CC asked where these employees would be sourced given the already stretched employee pool, BM advised that 5 had already been filled and they were employing unskilled operators and upskilling the existing workforce.

6.0 Environmental Monitoring Report

LJ presented to Environmental Monitoring report.

AM asked for the background on the deposition dust gauges and what the results meant and why there was a plan to remove a large number of the monitoring locations. LJ advised that the current locations were on mine owned land including the mine site itself. Results on mine owned land were not considered to be exceedances of project approval conditions. LJ advised that the revised Air Quality Greenhouse Gas Management Plan proposed the removal of deposited gauges from mine owned land except where required by the project approval.

BM advised that a dust control trial would be undertaken at site; this trial is the use of an elevated sprinkler to increase moisture content at the dig face. If successful it will be utilised at other locations in the operation. JH asked where the water would be sourced, in particular from the river. LJ advised that it would be sourced from existing onsite water supplies; in particular the mining void which due to surface water runoff had a significant quantity of water in reserve. No river water is to be used on site for the trial. CC asked whether if successful the trial would be used at other sites. BM noted that it was for TCM initially.

LJ advised that no dust additives are scheduled for use on site in response to JH query.

AM asked what factors are considered during an air quality level investigations. LJ advised that it includes prevailing weather conditions, mining operations and other external factors such as unsealed roads and agricultural practices.

CC noted that there had been an announcement in relation to the North West Air Monitoring Network.

LJ provided update to the revised WMP which had been submitted to DP&E for approval noting that broadly speaking the details around the Goonbri Creek realignment and associated works had not been included as the realignment works are still under consideration and have not been scheduled. AM asked for background to the proposed works, this was provided by LJ. LJ noted that with the exception of the omission of Goonbri Creek related details the WMP does not outline any unforeseen (as per EA) matters/issues.

CC asked how the site storage dam's levels were with particular focus on potential discharge offsite. It was advised dam levels were below required capacity to manage rainfall events.

DR asked where the Water Management Strategy was up to. LJ advised was sitting with BTM mines and was working through prior to resubmission to DP&E.

7.0 Annual Review

LJ presented the AR.

CC asked whether TC employees travel via sealed roads to work and whether there was an approved Traffic Management Plan. LJ advised that employees from Boggabri and Gunnedah travel to site via sealed roads and in accordance with the Traffic Management Plan.

8.0 MOP

The CCC was advised that a MOP amendment is to be submitted to DRG in late November/early December to stabilise and rehabilitation the course rejects emplacement and address a number of administrative changes. Further mining sequence review will be considered as part of the amendment.

9.0 General Business

9.1 JH requested that the state of Blue Vale Road be noted and that necessary maintenance works be undertaken. CF advised that this would be taken to council and any follow up liaison would be initially sent to LJ.

9.2 JH thanked TCM for its participation in the Feral Pig Forum held in Boggabri and noted the initial success of cooperative efforts.

9.3 CF presented the 140 Years of Mining in Gunnedah to the CCC inviting people of the community to attend and support the event.

9.4 CC requested that the employee numbers for TCM who reside in the Boggabri region be provide as part of a campaign to bring a child care service to Boggabri. LJ to provide indicative numbers.

9.5 BTM CCC broad agenda was discussed in particular noting that there would be no site presentations and would focus on BTM issues only.

10.0 Complaints

Complaints were discussed in the Environmental Monitoring Report.

11.0 Next Meeting

1st November 2017 10am Tarrawonga Coal Mine

Meeting closed at 11.55am

David Ross - Chair

Tarrawonga Coal Mine Community Consultative Committee Meeting #49

Environmental Monitoring Report May 2017 – August 2017

Noise Monitoring

Attended noise monitoring was undertaken at the “Bungalow” (TN4), “Barbers Lagoon” (TN3) and “Matong” (TN2) properties from 29th May to 1st June 2017, with results outlined below. The noise criterion for the mine is 35dB(A) Leq (15 min) for all operating times.

The results in Tables 1 to 3 show that noise emissions from the mine did not exceed the operational noise criterion at the “Barbers Lagoon”, “Bungalow” or “Matong” monitoring locations during the monitoring event.

In addition to the 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. The results of the sleep disturbance monitoring (table 13-16) show that the measured L1 (1 min) noise level did not exceed the sleep disturbance criterion.

The real time noise monitor is located on the “Coomalgah” property. Open Cut Examiners investigate any noise alarms and identify the noise source and implement action to modify operations if it is identified that operations from Tarrawonga are contributing to the elevated noise levels. The unit will remain a management tool used to facilitate operations maintaining compliance.

Revised Noise Management Plan remains with DP&E for approval. The BTM Noise Management Strategy has been approved by DP&E.

EPL ID	Date	Start Time	Measurement period	Measured Levels – dB(A) Leq 15min Day	Measured Levels – dB(A) Leq 15min Evening	Measured Levels – dB(A) Leq 15min Night	Measured Levels – dB(A) LA1 (1 min) Night	Limit	Wind Speed (m/s)	Stability Category	Compliant (Yes/No)
Matong	29/5/17	14:37	90	21				35	0.7	241	Yes
	29/5/17	21:40	30		30			35	1.7	17	Yes
	29/5/17	22:00	60			29		35	1.1	5	Yes
	29/5/17	22:30	60				40	45	1.2	24	Yes
	30/5/17	11:40	90	21				35	1.6	224	Yes
	30/5/17	21:25	30		IA			35	1.7	49	Yes
	30/5/17	22:45	60			28		35	1.9	40	Yes
	30/5/17	22:45	60				42	45	1.9	40	Yes
	31/5/17	17:15	90	32				35	0.9	203	Yes
	31/5/17	21:50	30		<20			35	1.0	2	Yes
	31/5/17	22:05	60			<20		35	1.0	2	Yes
	31/5/17	22:05	60				<20	45	1.0	2	Yes
	1/6/17	11:48	90	<20				35	2.9	170	Yes
	1/6/17	21:45	30		<20			35	0.7	50	Yes
	1/6/17	22:15	60			<20		35	NA	NA	Yes
	1/6/17	22:15	60				<20	45	NA	NA	Yes

IA – Inaudible

Table 1 – Attended Noise Monitoring Matong

EPL ID	Date	Start Time	Measurement period	Measured Levels – dB(A) Leq 15min Day	Measured Levels – dB(A) Leq 15min Evening	Measured Levels – dB(A) Leq 15min Night	Measured Levels – dB(A) LA1 (1 min) Night	Limit	Wind Speed (m/s)	Stability Category	Compliant (Yes/No)
Barbers Lagoon	29/5/17	16:26	90	IA				35	1.0	111	Yes
	29/5/17	20:48	30		IA			35	1.2	26	Yes
	29/5/17	23:17	60			IA		35	0.7	30	Yes
	29/5/17	23:17	60				IA	45	0.7	30	Yes
	30/5/17	13:15	90	IA				35	2.1	217	Yes
	30/5/17	21:25	30		IA			35	1.7	49	Yes
	30/5/17	22:00	60			IA		35	1.9	34	Yes
	30/5/17	22:45	60				30	45	NA	NA	Yes
	31/5/17	12:54	90	IA				35	2.1	228	Yes
	31/5/17	18:00	30		IA			35	1.8	199	Yes
	31/5/17	23:15	60			25		35	NA	NA	Yes
	31/5/17	23:15	60				37	45	NA	NA	Yes
	1/6/17	12:30	90	IA				35	2.6	154	Yes
	1/6/17	21:00	30		<20			35	1.5	53	Yes
	1/6/17	23:13	60			27		35	NA	NA	Yes
	1/6/19	23:59	60				35	45	NA	NA	Yes

IA – Inaudible

Table 2 – Attended Noise Monitoring Barbers Lagoon

EPL ID	Date	Start Time	Measurement period	Measured Levels – dB(A) Leq 15min Day	Measured Levels – dB(A) Leq 15min Evening	Measured Levels – dB(A) Leq 15min Night	Measured Levels – dB(A) LA1 (1 min) Night	Limit	Wind Speed (m/s)	Stability Category	Compliant (Yes/No)
Bungalow	29/5/17	13:14	90	IA				35	2.5	211	Yes
	29/5/17	20:04	30		IA			35	1.4	250	Yes
	30/5/17	1:03	60			IA		35	1.0	25	Yes
	30/5/17	1:03	60				IA	45	1.0	25	Yes
	30/5/17	12:00	90	<20				35	1.6	235	Yes
	30/5/17	20:42	30		23			35	0		Yes
	31/5/17	23:45	60			IA		35	NA	NA	Yes
	31/5/17	23:45	60				IA	45	NA	NA	Yes
	31/5/17	15:24	90	IA				35	3.0	205	Yes
	31/5/17	18:45	30		IA			35	1.0	36	Yes
	1/6/17	00:15	60			IA		35	NA	NA	Yes
	1/6/17	00:15	60				IA	45	NA	NA	Yes
	1/6/17	14:15	90	IA				35	3.4	159	Yes
	1/6/17	21:27	30		IA			35	0.7	50	Yes
	1/6/17	22:01	60			IA		35	NA	NA	Yes
	1/6/17	22:01	60				IA	45	NA	NA	Yes

IA – Inaudible

Table 3 – Attended Noise Monitoring Bungalow

Blast Monitoring

Blasting Results

Since the first blast, there have been 756 blasts (until the 28/8/2017).

There has been no exceedance of criteria since the last meeting for ground vibration or overpressure.

At present one blast monitor (Tarrawonga monitor) remains located on project related land; an EPL variation is being prepared for relocation of the Tarrawonga monitor. The revised Blast Management Plan remains with DP&E for approval.

Air Quality

Air Quality (Dust Deposition) Results

Five monitoring locations exceeded the limit of 4g/m²/month (average). These monitors are located on mine-owned land; as such compliance criteria do not apply. A review of the location of the deposited dust gauges has been undertaken as part of a revision of the Air Quality Greenhouse Gas Management Plan which will be submitted to DP&E for approval.

MONTH	TEMPLEMORE (EB-4) ¹	BOLLOL CREEK STN (EB-5) ¹	AMBARDI (EB-6) ¹	TARRAWONGA (EB-7) ¹	THUIN (EB-8)	PINE GROVE (EB-9) ¹	TARRAWONGA MINE (EB-10) ¹	TARRAWONGA MINE (EB-11) ¹	TARRAWONGA MINE (EB-14) ¹	TARRAWONGA MINE (EB-15) ¹	JERALONG NORTH (EB-16) ²
Aug-16	13.9	6.9	0.1	0.3	15.3	0.3	2.6	10.1	1.2	3.7	0.3
Sep-16	4.6	8.1	0.3	0.4	22.8	0.4	23.4	7.3	1.5	5.5	0.4
Oct-16	2.7	4.0	0.3	0.6	10.4	1.6	9.1	3.7	0.5	2.8	0.2
Nov-16	7.1	4.3	1.2	1.3	1.9	3.7	5.9	3.0	1.7	2.3	2.1
Dec-16	18.6	2.0	0.7	0.5	5.7	2.3	1.8	2.6	2.4	4.2	2.1
Jan-17	23.8	3.4	0.9	0.8	4.7	2.3	4.4	2.3	2.2	2.3	2.0
Feb-17	59.5	17.9	0.4	1.1	2.3	1.0	0.0	2.8	2.2	4.3	4.3
Mar-17	3.5	4.0	4.7	1.1	1.5	1.4	22.0	3.7	6.0	7.8	1.8
Apr-17	6.0	3.9	5.9	0.8	4.6	0.5	8.7	2.4	2.8	2.5	2.8
May-17	3.0	3.0	0.0	0.7	2.0	0.4	4.1	2.7	2.0	4.3	1.0
Jun-17	53.6 ¹	4.2	1.5	0.9	3.0	2.4	6.9	4.5	2.0	2.4	1.0
Jul-17	2.0	2.4	0.9	0.7	2.0	1.0	1.6	3.7	1.2	4.1	0.5
REPORTING PERIOD AVERAGE	16.5	5.3	1.4	0.8	6.4	1.4	7.5	4.1	2.1	3.9	1.5

¹Investigation undertaken – not deemed to be mining related.

Table 4 – Deposited Dust Gauge Results

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PM₁₀ Results

The annual average for PM₁₀ readings at “Coomalgah” was 11.19µg/m³ (until end of July) and remains below the annual average limit of 30µg/m³.

There has been one result above the daily limit specified in the Project Approval. This occurred 18th May 2017 recorded a result of 96µg/m³ against a criteria of 50µg/m³. An investigation was undertaken into this result upon receipt. It was determined that the result was a result of farming activities adjacent to the HVAS. Farming activities observed were primarily broad acre cultivation. This result will be excluded from the annual average.

The fixed real time air quality monitor (TEOM) is currently providing daily reports as well as real time air quality results from the “Flixton” property.

The Predictive Forecast Modelling System prescribed in the draft Air Quality Management Strategy is now being implemented providing daily dust risk forecasts and modelling capabilities.

Water Monitoring

Groundwater

Routine groundwater monitoring was undertaken in February 2017.

Table 4- Groundwater results Summary

Site	Date	SWL (m)	pH	Elect. Conduct
MW1	May 2016	6.65	7.7	3340
	September 2016	6.67	8.0	3350
	November 2016	6.68	7.6	3170
	February 2017	6.66	8.36	3380
	June 2017	6.74	7.8	3290
MW2	May 2016	3.74	6.9	597
	September 2016	3.50	7.04	557
	November 2016	3.54	7.0	524
	February 2017	3.85	7.7	639
	June 2017	3.86	7.0	591
MW4	May 2016	8.92	7.4	4480
	September 2016	9.05	7.5	4300
	November 2016	8.91	7.3	4330
	February 2017	8.92	8.13	4610
	June 2017	9.00	7.4	4370
MW5	May 2016	3.40	7.7	1632
	September 2016	2.28	7.98	1750
	November 2016	2.0	7.6	3010
	February 2017	2.35	8.24	1750
	June 2017	2.54	7.9	1288
MW6	May 2016	5.36	7.6	1090
	September 2016	5.15	No sample	No sample
	November 2016	4.74	7.5	1416
	February 2017	4.68	8.25	1630
	June 2017	4.77	7.5	1660

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Site	Date	SWL (m)	pH	Elect. Conduct
MW7	May 2016	104.87	No sample	No sample
	September 2016	104.19	No sample	No sample
	November 2016	104.41	No sample	No sample
	February 2017	104.74	No sample	No sample
	June 2017	104.92	No sample	No sample
MW8	May 2016	13.58	Casing blocked	Casing blocked
	September 2016	13.08	Casing blocked	Casing blocked
	November 2016	12.62	Casing blocked	Casing blocked
	February 2017	12.90	Casing blocked	Casing blocked
	June 2017	13.11	Casing blocked	Casing blocked

Surface Water

No further wet weather monitoring has been undertaken since the last CCC meeting.

Currently site water is sufficient to maintain operations throughout the summer period.

Rehabilitation

Soil amelioration and top soiling has been completed and water management is being finalised on this year's rehabilitation areas. Vegetation establishment will be undertaken on these areas during the upcoming weeks. Further information on the progression of these areas will be provided in future CCC meetings.

Complaints

Since the last meeting, there have been one complaint in relation to air quality. An investigation has been undertaken and determined that the issue was not related to the Tarrawonga operations.

Environmental Management Plans

Noise Management Plan

Resubmitted following approval of the BTM Noise Management Strategy. Changes incorporated in previous resubmission awaiting approval include attending monitoring locations changes, administrative changes and removal of prescriptive procedural based text.

Blast Management Plan

Changes incorporated into resubmission awaiting approval include blast monitoring location changes, administrative changes and removal of prescriptive procedural based text.

Air Quality Greenhouse Gas Management Plan

Submitted to DP&E for approval; changes include updated air quality monitoring network including removal of deposited dust gauges from mine owned land except where required by approval. Other changes include removal of prescriptive procedural based text and further administrative changes to reflect current operations.

Water Management Plan

Submitted for approval. Water management plan includes but not limited surface water monitoring, groundwater monitoring, and site water balance.

Meeting #49

Environmental Management Strategy

Submitted for approval; the EMS outlines the sites environmental management systems.

BTM Air Quality Management Strategy

Recently approved by DP&E and will be amended to the AQGGMP.

Minutes of the 50th Meeting of the Tarrawonga Coal Mine Community Consultative Committee

Meeting Held: 1st November 2017 (10.10am)

Venue: Tarrawonga Coal Mine, Training Room

1.0 Present and Apologies

Present: **Mr David Ross (DR), Independent Chairman**
Mr Andrew Johns (AJ), Gunnedah Shire Council Representative
Ms Ann Luke (AL), Gunnedah Shire Council
Mr Gaelan McCann (GM), Environmental Officer - Tarrawonga
Mr John Hamson (JHa), Production Superintendent - Tarrawonga
Mrs Julie Heiler (JH), Community Representative
Miss Lexie Frankham (LF), Group Superintendent - Environment
Mrs Cath Collyer (CC), Community Representative

Apologies: Mr Blair Meyers (BM), Tarrawonga Operations Manager, Mrs Annie McMahon (AM), Narrabri Shire Council Representative, Rebecca Ryan (community representative)

2.0 Declaration of Pecuniary or Non-Pecuniary Interests

DR declared that he is paid a fee for his participation as Independent Chairman.

3.0 Previous Minutes

Minutes of the previous site meeting were adopted as a true record. Moved CC Seconded DR.

4.0 Business Arising

JHa provided an update on the use of an elevated sprinkler for dust control. The sprinkler was trialled for approximately 3 weeks with good results for dust suppression. The sprinkler will be used as needed at different locations around site.

CC provided an update on the campaign to bring a child care service to Boggabri. LJ had provided indicative numbers of TCM employees residing in the Boggabri. A review by a consultant had concluded that a child care service is viable in Boggabri.

5.0 Mine Progress Report

JHa presented the Mine Progress Report:

- TCM is on track to meet its production target of 2.1MT for FY18 while working on productivity improvements and increased efficiency.
- TCM has had 0 LTI since the last meeting with a focus on safety and professionalism.
- TCM continues to recruit more staff with a comment on staff shortages in the mining industry. CC enquired about staff shortages. JHa advised that shortages are across the board including new hires with no prior mining experience. AJ advised that skills

shortages are being felt in non-mining industries as well and provided anecdotes of labour shortages in Gunnedah.

- DR asked if there was any planned variation in operations between now and February. JHa confirmed that there are no plans to alter current operations.

6.0 Environmental Monitoring Report

JHa presented the Environmental Monitoring Report.

- CC asked to know what species of grass were being used in rehabilitation and whether there was any information regarding which species were more successful. JHa's understanding was that grasses were native but information regarding which species were used and relative success were not available to hand but could be provided at the next meeting. CC advised that she was happy to receive the information at the next meeting.
- CC questioned what time blasting was performed on site. JHa advised that blasting was generally scheduled between 11:00am-12:00pm and was coordinated with neighbouring mines.
- AJ advised the upcoming installation of an air quality monitoring station in Gunnedah to be provided by the EPA. CC asked if that was one of the two monitoring stations recently announced by the EPA. LF added that the second station was planned for installation at Narrabri. CC commented that the monitoring station should be installed in Boggabri as that is where impacts on air quality are most likely to be felt.
- CC asked what the storage capacity of the dams were on site. JHa advised that he did not know the exact number but that current capacity was sufficient for mine operations during the summer period. CC requested that the capacity of the dams and percentage currently stored be provided subsequent to the meeting. JH commented that the RFS currently has trouble accessing water and asked whether the RFS could access the dam at the front gate to fill their tankers to fight fires. LF stated that this should be raised with BM once he had returned from annual leave.
- JH asked if property names could be included next to groundwater monitoring results in future reports to make the locations easier to determine which was accepted by LF
- CC queried what processes were in place to check relevance to BTM strategies when sites changed their management plans. JH asked how individual mines are being held accountable under the BTM strategies. DR put forward that it would be best to ask this at the BTM CCC meeting.

7.0 General Business

- 7.1** CC asked if there would be any change to operations next year as Rocglen Mine starts to wind down. JHa advised that planning for next year was still underway.
- 7.2** CC wished to thank Lachlan Johnson for calling to notify her of his resignation and to thank her for her participation in the CCC.
- 7.3** LF discussed a timeframe for hiring a permanent replacement for LJ. Interviews underway but a replacement may still be some months away.
- 7.4** DR spoke of the difficulty in finding community representatives to participate in CCC meetings. He proposed a new CCC participant (Carolyn Nancarrow) who is

currently a member of the MCC CCC. DR will discuss the appointment of Carolyn to the TCM CCC with BM. All community and council members in attendance approved the proposal.

7.5 JH wanted to thank Clr Colleen Fuller for her work regarding improving road quality. CC mentioned the poor quality of roads between TCM and Manilla and the potential safety implications.

8.0 Complaints

Complaints were discussed in the Environmental Monitoring Report. No complaints were received since the last meeting.

9.0 Next Meeting

14th February 2018 10am Tarrawonga Coal Mine

Meeting closed at 11:22am

David Ross - Chair

Tarrawonga Coal Mine Community Consultative Committee Meeting #50

Environmental Monitoring Report 30 August 2017 – 31 October 2017

Noise Monitoring

Attended noise monitoring was undertaken at the “Bungalow” (TN4), “Barbers Lagoon” (TN3) and “Matong” (TN2) properties from 4th to 7th September 2017, with results outlined below. The noise criterion for the mine is 35dB(A) Leq (15 min) for all operating times.

The results in Tables 1 to 3 show that noise emissions from the mine did not exceed the operational noise criterion at the “Barbers Lagoon”, “Bungalow” or “Matong” monitoring locations during the monitoring event.

In addition to the 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. The results of the sleep disturbance monitoring (table 13-16) show that the measured L1 (1 min) noise level did not exceed the sleep disturbance criterion.

The real time noise monitor is located on the “Coomalgah” property. Open Cut Examiners investigate any noise alarms and identify the noise source and implement action to modify operations if it is identified that operations from Tarrawonga are contributing to the elevated noise levels. The unit will remain a management tool used to facilitate operations maintaining compliance.

Revised Noise Management Plan remains with DP&E for approval. The BTM Noise Management Strategy has been approved by DP&E.

EPL ID	Date	Start Time	Measurement period	Measured Levels – dB(A) Leq 15min Day	Measured Levels – dB(A) Leq 15min Evening	Measured Levels – dB(A) Leq 15min Night	Measured Levels – dB(A) LA1 (1 min) Night	Limit	Wind Speed (m/s)	Stability Category	Compliant (Yes/No)
TN2 Matong	4/9/2017	16:07	90	<35				35	5	B	Yes
	4/9/2017	21:37	30		33			35	2.8	D	Yes
	4/9/2017	22:46	60			34		35	2.3	E	Yes
	4/9/2017	22:46	60				44	45	2.3	E	Yes
	5/9/2017	11:32	90	32				35	4.4	C	Yes
	5/9/2017	18:37	30		38*			35	2.3	D	Yes
	5/9/2017	22:22	60			35		35	1.4	E	Yes
	5/9/2017	23:11	60				46*	45	1.5	D	Yes
	6/9/2017	10:38	90	<30				35	5.3	C	Yes
	6/9/2017	18:08	30		36*			35	2.7	D	Yes
	6/9/2017	22:00	60			37*		35	1.4	E	Yes
	6/9/2017	22:00	60				45	45	1.4	E	Yes
	7/9/2017	16:07	90	28				35	3.2	A	Yes
	7/9/2017	18:39	30		39			35	1.6	D	Yes
	7/9/2017	22:00	60			36*		35	0.5	F	Yes
	7/9/2017	22:45	60				44	45	1.6	E	Yes

IA – Inaudible

* - Monitoring undertaken on project related land

Table 1 – Attended Noise Monitoring Matong

EPL ID	Date	Start Time	Measurement period	Measured Levels – dB(A) Leq 15min Day	Measured Levels – dB(A) Leq 15min Evening	Measured Levels – dB(A) Leq 15min Night	Measured Levels – dB(A) LA1 (1 min) Night	Limit	Wind Speed (m/s)	Stability Category	Compliant (Yes/No)
TN3 Barbers Lagoon	4/9/2017	17:30	90	IA				35	3.4	D	Yes
	4/9/2017	21:15	30		IA			35	3.0	D	Yes
	4/9/2017	22:31	60			<20		35	2.4	D	Yes
	4/9/2017	22:31	60				<20	45	2.4	D	Yes
	5/9/2017	11:35	90	IA				35	4.4	C	Yes
	5/9/2017	18:42	30		IA			35	2.3	D	Yes
	5/9/2017	23:28	60			IA		35	1.4	F	Yes
	5/9/2017	23:28	60				IA	45	1.4	F	Yes
	6/9/2017	11:34	90	IA				35	4.3	B	Yes
	6/9/2017	18:15	30		IA			35	2.3	E	Yes
	6/9/2017	23:33	60			IA		35	1.5	D	Yes
	6/9/2017	23:33	60				IA	45	1.5	D	Yes
	7/9/2017	11:56	90	<30				35	3.3	A	Yes
	7/9/2017	19:00	30		IA			35	1.3	E	Yes
	7/9/2017	22:31	60			IA		35	1.6	E	Yes
	7/9/2017	22:31	60				IA	45	1.6	E	Yes

IA – Inaudible

Table 2 – Attended Noise Monitoring Barbers Lagoon

EPL ID	Date	Start Time	Measurement period	Measured Levels – dB(A) Leq 15min Day	Measured Levels – dB(A) Leq 15min Evening	Measured Levels – dB(A) Leq 15min Night	Measured Levels – dB(A) LA1 (1 min) Night	Limit	Wind Speed (m/s)	Stability Category	Compliant (Yes/No)
TN4 Bungalow	4/9/2017	14:27	90	IA				35	5.1	B	Yes
	4/9/2017	20:33	30		<20			35	1.8	F	Yes
	4/9/2017	23:13	60			<20		35	3.8	D	Yes
	5/9/2017	00:02	60				25	45	3.3	D	Yes
	5/9/2017	09:46	90	IA				35	2.4	A	Yes
	5/9/2017	18:00	30		IA			35	2.6	D	Yes
	5/9/2017	22:15	60			IA		35	1.4	E	Yes
	5/9/2017	22:15	60				IA	45	1.4	E	Yes
	6/9/2017	10:38	90	IA				35	5.3	C	Yes
	6/9/2017	18:57	30		IA			35	1.8	E	Yes
	6/9/2017	23:57	60			IA		35	1.0	D	Yes
	6/9/2017	23:57	60				IA	45	1.0	D	Yes
	7/9/2017	09:33	90	IA				35	2.4	A	Yes
	7/9/2017	18:04	30		IA			35	2.7	E	Yes
	8/9/2017	00:08	60			IA		35	1.3	D	Yes
	7/9/2017	00:08	60				IA	45	1.3	D	Yes

IA – Inaudible

Table 3 – Attended Noise Monitoring Bungalow

Blast Monitoring

Blasting Results

Since the first blast, there have been 770 blasts (until 31/10/2017).

There has been no exceedance of criteria since the last meeting for ground vibration or overpressure.

The highest result obtained for blasting overpressure was 113.7 dB at the Coolmalgah monitoring station on 17/10/2017. The highest result for ground vibration was 1.03 mm/s at the Coolmalgah monitoring station on 7/09/2017.

At present one blast monitor (Tarrawonga monitor) remains located on project related land; an EPL variation is being prepared for relocation of the Tarrawonga monitor. The revised Blast Management Plan remains with DP&E for approval.

Air Quality

Air Quality (Dust Deposition) Results

Four monitoring locations exceeded the limit of 4g/m²/month (annual average). These monitors are located on mine-owned land; as such compliance criteria do not apply. A review of the location of the deposited dust gauges has been undertaken as part of a revision of the Air Quality Greenhouse Gas Management Plan which will be submitted to DP&E for approval.

MONTH	TEMPLEMORE (EB-4) ¹	BOLLOL CREEK STN (EB-5) ¹	AMBARDI (EB-6) ¹	TARRAWONGA (EB-7) ¹	THUIN (EB-8)	PINE GROVE (EB-9) ¹	TARRAWONGA MINE (EB-10) ¹	TARRAWONGA MINE (EB-11) ¹	TARRAWONGA MINE (EB-14) ¹	TARRAWONGA MINE (EB-15) ¹	JERALONG NORTH (EB-16) ²
Nov-16	7.1	4.3	1.2	1.3	1.9	3.7	5.9	3.0	1.7	2.3	2.1
Dec-16	18.6	2.0	0.7	0.5	5.7	2.3	1.8	2.6	2.4	4.2	2.1
Jan-17	23.8	3.4	0.9	0.8	4.7	2.3	4.4	2.3	2.2	2.3	2.0
Feb-17	59.5	17.9	0.4	1.1	2.3	1.0	0.0	2.8	2.2	4.3	4.3
Mar-17	3.5	4.0	4.7	1.1	1.5	1.4	22.0	3.7	6.0	7.8	1.8
Apr-17	6.0	3.9	5.9	0.8	4.6	0.5	8.7	2.4	2.8	2.5	2.8
May-17	3.0	3.0	0.0	0.7	2.0	0.4	4.1	2.7	2.0	4.3	1.0
Jun-17	53.6 ¹	4.2	1.5	0.9	3.0	2.4	6.9	4.5	2.0	2.4	1.0
Jul-17	2.0	2.4	0.9	0.7	2.0	1.0	1.6	3.7	1.2	4.1	0.5
Aug-17	2.9	3.1	0.9	0.9	2.4	1.5	4.2	2.2	1.8	4.9	0.4
Sep-17	12.7	3.5	1.8	0.6	2.0	1.4	3.2	2.0	1.9	-	0.7
Oct-17	6.6	4.2	2.0	1.1	1.1	3.0	2.5	3.3	4.7	8.6	1.8
12 MONTH ROLLING AVERAGE	13.2	4.7	1.7	0.9	2.8	1.7	5.4	2.9	2.6	4.3	1.7

¹Investigation undertaken – not deemed to be mining related.

Table 4 – Deposited Dust Gauge Results

PM₁₀ Results

The annual average for PM₁₀ readings at “Coomalgah” was 17.34µg/m³ (until end of September) and remains below the annual average limit of 30µg/m³.

There has been no exceedance of the daily PM₁₀ limit since the last CCC meeting.

The fixed real time air quality monitor (TEOM) is currently providing daily reports as well as real time air quality results from the “Flixton” property.

The Predictive Forecast Modelling System prescribed in the draft Air Quality Management Strategy is now being implemented providing daily dust risk forecasts and modelling capabilities.

Water Monitoring

Groundwater

Routine groundwater monitoring was undertaken in September 2017.

Table 4- Groundwater results Summary

Site	Date	SWL (m)	pH	Elect. Conduct
MW1	September 2016	6.67	8.0	3350
Thuin	November 2016	6.68	7.6	3170
	February 2017	6.66	8.36	3380
	June 2017	6.74	7.8	3290
	September 2017	7.47	8.31	3370
MW2	September 2016	3.50	7.04	557
Thuin	November 2016	3.54	7.0	524
	February 2017	3.85	7.7	639
	June 2017	3.86	7.0	591
	September 2017	4.43	7.54	533
MW4	September 2016	9.05	7.5	4300
Tarrawonga	November 2016	8.91	7.3	4330
	February 2017	8.92	8.13	4610
	June 2017	9.00	7.4	4370
	September 2017	9.52	7.82	4570
MW5	September 2016	2.28	7.98	1750
Templemore	November 2016	2.0	7.6	3010
	February 2017	2.35	8.24	1750
	June 2017	2.54	7.9	1288
	September 2017	3.55	8.19	2640
MW6	September 2016	5.15	No sample	No sample
Nagero	November 2016	4.74	7.5	1416
	February 2017	4.68	8.25	1630
	June 2017	4.77	7.5	1660
	September 2017	5.35	8.15	1710
MW7	September 2016	104.19	No sample	No sample

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Site	Date	SWL (m)	pH	Elect. Conduct
Tarrawonga Mine	November 2016	104.41	No sample	No sample
	February 2017	104.74	No sample	No sample
	June 2017	104.92	No sample	No sample
	September 2017	105.52	No sample	No sample
MW8	September 2016	13.08	Casing blocked	Casing blocked
Tarrawonga Mine	November 2016	12.62	Casing blocked	Casing blocked
	February 2017	12.90	Casing blocked	Casing blocked
	June 2017	13.11	Casing blocked	Casing blocked
	September 2017	13.79	Casing blocked	Casing blocked

Surface Water

No further wet weather monitoring has been undertaken since the last CCC meeting.

Currently site water is sufficient to maintain operations throughout the summer period.

Rehabilitation

Soil amelioration and top soiling has been completed and water management is being finalised on this year's rehabilitation areas. Vegetation establishment will be undertaken on these areas during the upcoming weeks. Further information on the progression of these areas will be provided in future CCC meetings.

Complaints

Since the last meeting, there have been no complaints.

Environmental Management Plans

Noise Management Plan

Resubmitted following approval of the BTM Noise Management Strategy. Changes incorporated in previous resubmission awaiting approval include attending monitoring locations changes, administrative changes and removal of prescriptive procedural based text.

Blast Management Plan

Changes incorporated into resubmission awaiting approval include blast monitoring location changes, administrative changes and removal of prescriptive procedural based text.

Air Quality Greenhouse Gas Management Plan

Submitted to DP&E for approval; changes include updated air quality monitoring network including removal of deposited dust gauges from mine owned land except where required by approval. Other changes include removal of prescriptive procedural based text and further administrative changes to reflect current operations.

Water Management Plan

Submitted for approval. Water management plan includes but not limited surface water monitoring, groundwater monitoring, and site water balance.

Environmental Management Strategy

Submitted for approval; the EMS outlines the sites environmental management systems.

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BTM Air Quality Management Strategy

Recently approved by DP&E and will be amended to the AQGGMP.