

Minutes of the 42nd Meeting of the Tarrawonga Coal Mine Community Consultative Committee

Meeting Held: 2nd March 2016 (10.20am)

Venue: Tarrawonga Coal Mine, Training Room

1.0 Present and Apologies

Present: Mr John Turner (JT), Independent Chairman
Mr Lachlan Johnson (LJ), Tarrawonga Environmental Officer
Mrs Cath Collyer (CC), Narrabri Shire Council (NSC) delegate
Mr Ekin Eraydin (AM), Tarrawonga Engineer
Mrs Rebecca Ryan (RR), Gunnedah Shire Council (GSC) delegate
Mrs Julie Heiler (JH), Community Rep (arrived 10.30)
Mr Jim Picton (JP), Community Rep
Mr Tim Muldoon (TM), Group Manager Community Relations and Property
Mr Daryl Campbell (DC), Community Relations Officer

Apologies: Mrs Jill Johnson (JJ), Group Manager – Environment
Ms Lexie Frankham (LF), Environmental Superintendent – Operations

2.0 Declaration of Pecuniary or Non-Pecuniary Interests

JT 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.

4.0 Business Arising

4.1 In relation to the Environment Trust, JT advised that he had undertaken media interviews to publicise the opening of the application period for environmental projects and the Environmental Trust.

JT advised that the process to have the Environmental Trust Incorporated had commenced to cover off on liability; a selection of incorporated names was presented to the respective members for consideration.

Environmental Trust will meet prior the BTM CCC in May to determine projects.

CC advised that she had met with Boggabri Lions to present the program and intends to meet with Boggabri Rotary.

4.2 LJ provided overview of discharge monitoring requirements per the EPL and Water Management Plan. There is no requirement for automated flow gauges on the discharge dams. Two automated flow gauges will be installed on Goonbri Creek above and below the proposed realignment (per EA and final design) of Goonbri Creek, the committee was advised that these had not yet been installed and were to be installed in the future.

5.0 General Business

5.1 Mine Progress Report

EE provided an update:

- Northern Extension pit proceeding ahead of schedule through the maximisation of dozer push.
- Central pit progresses as per schedule.
- Maximising water cart usage

LJ added to the report providing an overview of clearing to date.

CC asked about the total area, timing and whether there had been any outsider impacts. LJ advised that the area been cleared was approximately 12ha initially, and was approved to clear until 30 April in accordance with Biodiversity Management Plan. It was advised that there had been three instances of protestor activity; it was advised that activity is expected to continue until end of March.

5.2 Environmental Monitoring Report

LJ presented the environmental monitoring results which are attached in the Environmental Monitoring Report.

CC noted that there had been an increase in the number of deposited dust gauges that exceeded the 4g/m²/month (average); then asked why there had been an increase of the three month period. LJ advised that some of the gauges are between Boggabri Coal and Tarrawonga Coal, others on the mine site and as a result of the mines easterly progression. LJ did also advise that there were some results where a determination of the causal factors had to be finalised. CC asked how the sampling process worked and why the samples were destroyed; LJ advised that it was undertaken by contractors as per Australian Standards. LJ did reiterate that all gauges are located on project related land.

LJ provided overview of mine site water storage and use; sufficient water to maintain operations into the short term but noted that levels had been significantly depleted over the dry summer period. No river pumping has been undertaken and the pipeline is now utilised on site. TM provided clarification of licensing and use of the past few years.

6.0 New Business

6.1 JT advised the committee that Libby Guest had resigned from the CCC and Environmental Trust.

JT noted that Tarrawonga would need to advertise for a replacement and that under the new draft guidelines he would have authority to select new member¹.

Discussion between LJ, JT, TM and JH regarding the requirement to have an environmental representative under new guidelines, further review of the guidelines required and an update will be provided. The Tarrawonga Project Approval does not require an Environmental Representative on the CCC.

6.2 JH put the motion to the committee proposing that the CCC only meet six (6) monthly based on her belief that there have been only a few minor issues

¹ Draft guidelines are not applicable until they have been finalised and accepted.

surrounding Tarrawonga over last 18 months. JT advised that it is the decision of the committee to determine how often the committee meets but noted the guidelines recommended at least twice annually.

JP advised the committee that he would like the meetings to continue on a quarterly basis.

CC and RR advised that they would support the decision of the committee. JT advised it would be beneficial if the motion was considered following the inclusion of the additional community representative/s on the CCC and that it could be revisited in 12 months' time.

The members of the committee agreed to the approach and that meetings would currently remain at a frequency of quarterly.

6.3 JH asked JT what provisions were in the guidelines for re-election or length of tenures. JT noted that guidelines did not specify length of tenures or process of requiring re-election. The committee suggested as part of the advertising process for new community members that the remaining local landholders should be approached; including but not limited to Keith Blanch and Richard Gilham. TM advised that expressions of interest would be sought for a replacement community member.

6.4 The committee discussed the Environmental Trust with JT noting that with the resignation of Libby Guest the trust would be short a representative of Tarrawonga. CC asked JP if he was interested and JT facilitated in providing an overview of what the trust undertakes. JP advised that he would further consider the offer but noted that during May when project selection was underway he was likely to be busy.

6.5 JH asked JT and the trust members about a project that a landholder wanted to undertake (Green cestrum control) noting that NSC had advised that they couldn't apply for funds as they were administering the projects. CC advised that she would be speaking with the General Manager to ensure that NSC would co-ordinate the control action with land owners neighbouring Maules Creek and would proceed forward with seeking funds for a co-ordinated project to control green cestrum. NSC was only the holder of funds. JH advised that she would provide this information to the potential applicant.

7.0 Complaints

Complaints were discussed in the Environmental Monitoring Report.

8.0 Next Meeting

Meeting dates for 2016:

- 18 May
- BTM CCC meeting – 17 November
- 10 August
- 16 November

Meeting closed at 11:03am

John Turner - Chair

Tarrawonga Coal Mine Community Consultative Committee Meeting #42

Environmental Monitoring Report December 2015 – February 2016

Noise Monitoring

Attended noise monitoring was undertaken at the “Bungalow”, “Barbers Lagoon” and “Matong” properties from 7th to 10th December 2015, with results outlined below. The noise criterion for the mine is 35dB(A) Leq (15 min) for all operating times.

Table 1 TCM Operational Noise Monitoring Results – 7 December 2015 (day)				
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Identified Noise Sources
Matong	11:57 am	35	1.7/253	Birds (35), mine noise (22) TCM est. (<20)
Barbers Lagoon	1:43 pm	32	2.2/224	Birds (30), traffic (25), wind (24), TCM (<20)
Bungalow	3:29 pm	32	1.3/269	Birds& insects (32), TCM (<20)

Table 2 TCM Operational Noise Monitoring Results – 7 December 2015 (evening)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Temperature Inversion °C/100m	Identified Noise Sources
Matong	7:28 pm	41	1.0/238	+0.4	Birds & insects (41), mine noise (27) TCM est. (<20)
Barbers Lagoon	9:12 pm	43	1.2/315	+8.6	Insects (43), TCM (<20)
Bungalow	8:28 pm	41	2.4/293	+5.6	Insects (41), TCM (<20)

Table 3 TCM Operational Noise Monitoring Results – 7/8 December 2015 (night)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Temperature Inversion °C/100m	Identified Noise Sources
Matong	10:02 pm	37	1.0/30	+3.8	Mine noise (36) TCM est. (20), insects (29)
Barbers Lagoon	12:31 am	42	1.3/16	+1.2	Insects (42), mine noise (24) TCM est. (21)
Bungalow	11:18 pm	38	1.2/55	+4.8	Insects (38), mine noise (23) TCM est. (20)

Table 4 TCM Operational Noise Monitoring Results – 8 December 2015 (day)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Identified Noise Sources	
Matong	2:13 pm	45	4.4/298	Birds (45), wind (30), mine noise (27) TCM est. (<20)	
Barbers Lagoon	2:39 pm	42	4.2/304	Wind (42), birds (29), traffic (25), TCM (<20)	
Bungalow	12:56 pm	40	3.3/303	Wind (40), birds (27), TCM (<20)	

Table 5 TCM Operational Noise Monitoring Results – 8 December 2015 (evening)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Temperature Inversion °C/100m	Identified Noise Sources
Matong	7:50 pm	35	0.7/28	+3.8	Birds & insects (34), mine noise (27) TCM est. (<20)
Barbers Lagoon	8:35 pm	42	1.4/15	+3.8	Insects (42), traffic (25), mine noise (22) TCM est. (20)
Bungalow	9:16 pm	47	1.8/6	+1.4	Insects (47), TCM (<20)

Table 6 TCM Operational Noise Monitoring Results – 8/9 December 2015 (night)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Temperature Inversion °C/100m	Identified Noise Sources
Matong	10:03 pm	41	2.2/13	+0.8	Insects (40), wind (31), mine noise (30) TCM est. (<20)
Barbers Lagoon	11:17 pm	48	3.0/279	+0.2	Insects (48), traffic (23), TCM (<20)
Bungalow	12:29 am	36	2.2/245	+1.6	Insects (34), mine noise (30) TCM est. (27)

Table 7 TCM Operational Noise Monitoring Results – 9 December 2015 (day)				
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Identified Noise Sources
Matong	10:35 am	39	2.9/298	Birds (38), mine noise (32) TCM est. (<20)
Barbers Lagoon	7:05 am	41	2.7/300	Birds (39), traffic (35), mine noise (28) TCM est. (25)
Bungalow	8:48 am	44	1.6/19	Birds (43), wind (27), mine noise (27), TCM est. (24)

Table 8 TCM Operational Noise Monitoring Results – 9 December 2015 (evening)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Temperature Inversion °C/100m	Identified Noise Sources
Matong	7:53 pm	40	2.3/46	+1.2	Birds & insects (38), mine noise (34) TCM est. (<20)
Barbers Lagoon	8:37 pm	35	2.3/51	+1.2	Birds & insects (34), mine noise (28) TCM est. (25)
Bungalow	9:18 pm	35	2.4/53	+1.4	Insects (35), mine noise (24) TCM est. (21)

Table 9 TCM Operational Noise Monitoring Results – 9/10 December 2015 (night)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Temperature Inversion °C/100m	Identified Noise Sources
Matong	10:04 pm	40	2.7/18	+1.2	Mine noise (40) TCM est. (25), insects (29)
Barbers Lagoon	11:19 pm	37	1.9/79	+1.0	Insects (37), mine noise (23) TCM est. (20)
Bungalow	12:33 am	37	1.4/244	+1.6	Insects (37), mine noise (25), TCM est. (22)

Table 10 TCM Operational Noise Monitoring Results – 10 December 2015 (day)				
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Identified Noise Sources
Matong	2:15 pm	33	2.1/22	Birds & insects (33), mine noise (21), TCM est. (<20)
Barbers Lagoon	3:58 pm	42	1.5/50	Birds & insects (42), traffic (25), TCM (<20)
Bungalow	9:07 pm	43	4.6/132	Birds (42), wind (35), TCM (<20)

Table 11 TCM Operational Noise Monitoring Results – 10 December 2015 (evening)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Temperature Inversion °C/100m	Identified Noise Sources
Matong	9:24 pm	35	1.7/20	+1.6	Insects (34), wind (25), mine noise (23) TCM est. (<20)
Barbers Lagoon	8:10 pm	46	1.4/72	+1.0	Birds & insects (46), traffic (28), mine noise (24) TCM est. (21)
Bungalow	8:53 pm	38	1.2/28	+1.6	Insects (38), TCM (<20)

Table 12 TCM Operational Noise Monitoring Results – 10 December 2015 (night)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Temperature Inversion °C/100m	Identified Noise Sources
Matong	10:00 pm	36	3.1/11	+1.4	Insects (35), wind (28), mine noise (24) TCM est. (<20)
Barbers Lagoon	10:00 pm	43	3.1/11	+1.4	Insects (43), wind (26), TCM (<20)
Bungalow	11:14 pm	35	2.7/10	+2.4	Insects (34), wind (28), TCM (<20)

The results in Table 1- Table 12 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.

Table 13 TCM Sleep Disturbance Monitoring Results – 7/8 December 2015 (night)				
Location	Time	dB(A),L1 (1 min)	Wind speed/ direction	Temperature Inversion °C/100m
Matong	10:02 pm	25	1.0/30	+3.8
Barbers Lagoon	12:31 am	27	1.3/16	+1.2
Bungalow	11:18 pm	25	1.2/55	+4.8

Table 14 TCM Sleep Disturbance Monitoring Results – 8/9 December 2015 (night)				
Location	Time	dB(A),L1 (1 min)	Wind speed/ direction	Temperature Inversion °C/100m
Matong	10:03 pm	<20	2.2/13	+0.8
Barbers Lagoon	11:17 pm	<20	3.0/279	+0.2
Bungalow	12:29 am	33	2.2/245	+1.6

Table 15 TCM Sleep Disturbance Monitoring Results – 9/10 December 2015 (night)				
Location	Time	dB(A),L1 (1 min)	Wind speed/ direction	Temperature Inversion °C/100m
Matong	10:04 pm	30	2.7/18	+1.2
Barbers Lagoon	11:19 pm	24	1.9/79	+1.0
Bungalow	12:33 am	26	1.4/244	+1.6

Table 16 TCM Sleep Disturbance Monitoring Results – 10 December 2015 (night)				
Location	Time	dB(A),L1 (1 min)	Wind speed/ direction	Temperature Inversion °C/100m
Matong	10:00 pm	<20	3.1/11	+1.4
Barbers Lagoon	10:00 pm	<20	3.1/11	+1.4
Bungalow	11:14 pm	<20	2.7/10	+2.4

The real time noise monitor is located on the “Coomalgah” property. OCE’s 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.

Blast Monitoring

Blasting Results

Since the first shot there have been 633 blasts (until the 29/2/2016).

All blasts have been within 100 percentile limit for ground vibration and air blast overpressure since the last meeting.

Air Quality

Air Quality (Dust Deposition) Results

MONTH	TEMPLEMORE (EB-4)	BOLLOL CREEK STN (EB-5)	AMBARDI (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)
March 2015	2.9	2.7	2.7	1.1	1.0	0.9	6.2	2.1	2.5	2.0	5.5	4.9	0.3
April 2015	0.4	2.3	1.7	1.4	3.1	-	6.5	3.6	6.0	1.5	2.5	7.7	14.6
May 2015	1.4	2.7	1.9	23.7	1.5	0.4	8.6	2.7	0.7	2.5	3.5	9.2	<0.1
June 2015	21.4	1.8	0.7	1.1	2.9	0.8	-	9.5	0.7	1.1	1.7	5.0	0.4
July 2015	144.0	2.2	0.6	4.3	4.2	0.4	21.1	6.8	<0.1	1.0	1.2	4.5	0.5
August 2015	49.4	12.1	1.7	1.3	10.7	0.6	7.3	2.4	0.4	0.9	1.2	3.6	0.5
September 2015	10.2	5.3	1.6	1.0	6.9	2.1	1.6	5.1	1.7	2.4	3.9	15.4	1.2
October 2015	2.6	4.2	0.7	0.6	0.7	6.0	3.9	2.4	1.2	0.2	4.5	3.7	0.9
November 2015	NS*	3.4	1.5	1.1	8.6	1.7	17.0	6.0	1.2	13.9	5.8	8.9	10.7
December 2015	22.9	4.8	0.9	1.2	5.7	1.7	7.9	7.0	0.7	9.1	2.8	2.9	2.1
January 2016	14.0	26.0	1.0	1.2	4.8	5.6	6.0	NS**	1.0	2.1	1.3	2.4	1.3
February 2016	11.1	2.9	38.6	1.5	0.8	2.6	11.6	3.4	1.4	2.3	6.2	4.1	5.3
ANNUAL AVERAGE	23.4	5.9	4.6	3.3	4.24	1.9	8.1	4.25	1.6	3.3	3.3	6.0	3.4

*Contaminated (beetles)

** Broken bottle

Seven monitoring locations exceeded the limit of 4g/m²/month (average); Templemore EB-4, Bollol Creek Station (EB-5), Ambardo (EB-6), Thuin (EB-8), Tarrawonga Mine EB-10, Tarrawonga Mine (EB-11), and Tarrawonga Mine EB-15. As these monitors are located on mine-owned land, compliance criteria do not apply.

PM₁₀ Results

The annual average for PM₁₀ readings at “Templemore” is currently at 23.23µg/m³ (until end of January 2016) and remains below the annual average limit of 30µg/m³.

There has been one exceedance of the daily PM₁₀ limit since the last CCC meeting. The exceedance occurred on 12th January 2016.

An investigation into the elevated result was undertaken subsequent to receiving the result. As a result of the predicted weather conditions on the 11th and 12th January operations were modified to mitigate against potential air quality impacts. Operations were further modified following air quality observations; this included restricting ancillary equipment activities such as grading. Meteorological conditions on the 12th of January were hot (39.1°) with a prevailing wind direction of North West.

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 December 2015, is provided in the table and graphs below. Results at all monitoring locations remained relatively consistent between August 2015 and December 2015.

Table 4- Groundwater results Summary

Site	Date	SWL (m)	pH	Elect. Conduct
MW1	November 2014	6.36	7.7	3190
	February 2015	6.39	8.0	3420
	May 2015	6.47	7.5	3210
	August 2015	6.51	8.03	3440
	December 2015	6.59	7.7	3270
MW2	November 2014	3.63	7.4	615
	February 2015	3.32	7.59	567
	May 2015	3.44	7.2	522
	August 2015	3.46	7.32	538
	December 2015	3.49	7.1	528
MW4	November 2014	8.72	7.3	3970
	February 2015	8.71	7.7	4430
	May 2015	8.71	7.3	4120
	August 2015	8.85	7.72	4680
	December 2015	8.85	7.3	4410
MW5	November 2014	3.0	7.8	3020
	February 2015	3.17	8.15	2060
	May 2015	3.29	7.8	2120
	August 2015	3.18	8.08	2210
	December 2015	3.28	7.7	3070
MW6	November 2014	5.55	7.5	712
	February 2015	5.64	7.67	617
	May 2015	5.65	7.5	692
	August 2015	No sample	No sample	No sample
	December 2015	5.4	7.8	946
MW7	November 2014	104.01	No sample	No sample
	February 2015	104.09	No sample	No sample
	May 2015	104.67	No sample	No sample
	August 2015	104.0	No sample	No sample
	December 2015	104.09	No sample	No sample
MW8	November 2014	13.22	Casing blocked	Casing blocked
	February 2015	13.27	Casing blocked	Casing blocked

	May 2015	13.43	Casing blocked	Casing blocked
	August 2015	13.47	Casing blocked	Casing blocked
	December 2015	13.5	Casing blocked	Casing blocked

Surface Water

Routine surface water monitoring was conducted during November 2015.

No wet weather discharges have occurred since the last CCC meeting.

Rehabilitation

Rehabilitation of the northern extension emplacement nears completion with the bulk shaping, top spreading, contouring and mounding of 5.5ha completed. Tree planting is scheduled for early autumn with improved seasonal conditions predicted during late autumn and early winter.

Further trials will be undertaken to stabilise the southern emplacement with aerial seeding anticipated for mid-autumn and will target improved rainfall conditions. Work to date has included dumping a tertiary material with a higher content of loam in areas to be seeded to improve likely success rates of seed germination. This sheeting also improves the aesthetic appearance by improving the uniformity of the emplacement.

Complaints

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

Complaints Register

Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken/Follow-up
Phone call to the Operations Manager	27/11/2015 11.30	Objection to the closing of Goonbri Road for the purposes of blasting.	Operations Manager spoke to the complainant and provided advice as to the necessity of closing the road and notification process.	The Operations Manager visited the complainant on the afternoon of the complaint to discuss the matter further. Environmental Officer met with the complainant 4/12/2015 to discuss the matter further. Advice was provided as to the likely frequency of the closure.
Phone call to the Environmental Officer and Senior OCE Complaint to the EPA complaints hotline.	11/12/2015 10.13am	Complaint was in relation to dust generation associated with blast no. 615. Complainant advised that dust had travelled to a house on their property.	An investigation was undertaken into the complaint including review of meteorological conditions, blast footage, photographs and review of operational conditions.	Environmental Superintendent – Operations provided a response to the EPA on 18/12/2015 as required. This response addressed EPA's request for information.

Minutes of the 42nd Meeting of the Tarrawonga Coal Mine Community Consultative Committee

Meeting Held: 18th May 2016 (10.20am)

Venue: Tarrawonga Coal Mine, Training Room

1.0 Present and Apologies

Present: Mr John Turner (JT), Independent Chairman
Mrs Rebecca Ryan (RR), Gunnedah Shire Council (GSC) delegate
Mrs Cath Collyer (CC), Narrabri Shire Council (NSC) delegate
Mr Anthony Margetts (AM), Tarrawonga Operation Manager
Mr Lachlan Johnson (LJ), Tarrawonga Environmental Officer
Mr Tim Muldoon (TM), Group Manager Community Relations and Property
Ms Lexie Frankham (LF), Environmental Superintendent – Operations

Apologies: Mr Jim Picton (JP), Community Representative
Mrs Julie Heiler (JH), Community Representative

2.0 Declaration of Pecuniary or Non-Pecuniary Interests

JT 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.

4.0 Business Arising

4.1 LJ advised the committee that the advertisement for new CCC members had not yet been undertaken. LJ advised that it was anticipated that the advertisement would be finalised by early June.

CC advised that she had spoken to some local landholders; however, was advised that they were not interested in being on the Tarrawonga CCC.

5.0 General Business

5.1 Mine Progress Report

AM provided an update:

- Advised that TCM is on track for a record year
- Production is below forecast costs
- Mining is progressing as expected and according to plan.

5.2 Environmental Monitoring Report

LJ presented the environmental monitoring results which are attached in the Environmental Monitoring Report.

CC asked for more information on what the attended noise monitoring results mean and what are the key numbers reported including actual result and limits.

AM provided commentary regarding the overpressure event noted in the Environmental Management Report. CC asked what new controls were put in place following the investigation, AM advised that the controls are now in place as part of design and quality control.

CC asked LJ what actions were undertaken on date of PM10 HVAS exceedance; LJ advised that this included shutting down an excavator and truck fleet and modified/restricted ancillary activities.

6.0 New Business

6.1 JT advised that he would like to reinstate the date of 10th August as the next CCC meeting. All members agreed.

6.2 JT advised that there would be changes to the alternative members under the new draft guidelines. The Secretary would appoint a pool of alternatives rather than individual members having an alternative. JT notes that this is still in draft format and will be worked through as it is currently unworkable.

7.0 Complaints

Complaints were discussed in the Environmental Monitoring Report.

8.0 Next Meeting

Meeting dates for 2016:

- 10 August
- 16 November

Meeting closed at 10.44am

John Turner - Chair

Tarrawonga Coal Mine Community Consultative Committee Meeting #43

Environmental Monitoring Report March 2016 – May 2016

Noise Monitoring

Attended noise monitoring was undertaken at the “Bungalow”, “Barbers Lagoon” and “Matong” properties from 1st to 4th March 2016, with results outlined below. The noise criterion for the mine is 35dB(A) Leq (15 min) for all operating times.

Table 1 TCM Operational Noise Monitoring Results – 1 March 2016 (day)				
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Identified Noise Sources
Matong	11:25 am	30	1.3/154	Birds (28), mine noise (25) TCM est. (20)
Barbers Lagoon	1:10 pm	37	1.6/156	Birds & insects (36), traffic (28), wind (24), TCM (<20)
Bungalow	2:54 pm	33	2.0/216	Birds & insects (32), wind (26), TCM (<20)

Table 2 TCM Operational Noise Monitoring Results – 1 March 2016 (evening)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Stability class	Identified Noise Sources
Matong	8:02 pm	34	3.5/107	D	Insects (34), TCM (<20)
Barbers Lagoon	8:30 pm	45	3.9/111	E	Insects (45), wind (28), TCM (<20)
Bungalow	9:09 pm	44	5.3/118	E	Insects (43), wind (36), TCM (24) ¹

1. Tarrawonga haul trucks

Table 3 TCM Operational Noise Monitoring Results – 1 March 2016 (night)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Stability class	Identified Noise Sources
Matong	10:21 pm	36	4.9/89	F	Insects (36), TCM (<20)
Barbers Lagoon	10:00 pm	44	4.5/99	F	Insects (44), wind (30), mine noise (26) TCM est. (24)
Bungalow	11:10 pm	39	4.7/61	D	Insects (39), wind (26), TCM (<20)

Table 4 TCM Operational Noise Monitoring Results – 2 March 2014 (day)				
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Identified Noise Sources
Matong	10:59 am	35	1.6/185	Birds (35), mine noise (24) TCM est. (<20)
Barbers Lagoon	10:31 am	38	1.7/192	Birds (38), TCM (<20)
Bungalow	12:12 pm	30	1.5/164	Birds (30), TCM (<20)

Table 5 TCM Operational Noise Monitoring Results – 2 March 2016 (evening)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Stability class	Identified Noise Sources
Matong	7:43 pm	30	4.1/113	D	Birds & insects (28), wind (25), TCM (<20)
Barbers Lagoon	8:30 pm	41	3.9/115	F	Insects (41), wind (26), TCM (<20)
Bungalow	9:15 pm	42	4.6/103	E	Insects (42), wind (28), TCM (<20)

Table 6 TCM Operational Noise Monitoring Results – 2/3 March 2016 (night)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Stability class	Identified Noise Sources
Matong	12:45 am	36	2.5/38	F	Insects (35), wind (27), mine noise (21) TCM est. (<20)
Barbers Lagoon	10:00 pm	42	5.4/68	D	Insects (42), wind (29), mine noise (28) TCM est. (25)
Bungalow	11:09 pm	46	4.8/43	E	Wind (44), insects (42), TCM (<20)

Table 7 TCM Operational Noise Monitoring Results – 3 March 2016 (day)				
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Identified Noise Sources
Matong	11:10 am	30	1.3/238	Wind (29), mine noise (23) TCM est. (<20)
Barbers Lagoon	8:25 am	39	1.3/171	Birds & insects (39), TCM (<20)
Bungalow	10:07 am	33	1.6/201	Birds & insects (33) TCM (<20)

Table 8 TCM Operational Noise Monitoring Results – 3 March 2016 (evening)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Stability class	Identified Noise Sources
Matong	7:34 pm	29	2.0/128	A	Birds & insects (29), TCM (<20)
Barbers Lagoon	8:03 pm	36	2.8/128	F	Birds (36), TCM (<20)
Bungalow	8:43 pm	40	5.6/63	E	Insects (39), wind (31), TCM (24) ¹

1. Tarrawonga haul trucks

Table 9 TCM Operational Noise Monitoring Results – 3/4 March 2016 (night)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Stability class	Identified Noise Sources
Matong	12:41 am	41	2.6/60	D	Insects (41), mine noise (22) TCM est. (<20)
Barbers Lagoon	10:00 pm	40	3.9/76	E	Insects (39), mine noise (29) TCM est. (26), wind (27)
Bungalow	11:15 pm	38	3.7/50	F	Insects (37), wind (28), mine noise (26), TCM est. (23)

Table 10 TCM Operational Noise Monitoring Results – 4 March 2016 (day)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Identified Noise Sources	
Matong	9:35 am	32	1.0/149	Birds (32), mine noise (21), TCM est. (<20)	
Barbers Lagoon	11:17 am	31	2.0/234	Birds & insects (31), TCM (<20)	
Bungalow	10:04 am	32	1.2/180	Birds (29), tractor (27), wind (26), TCM (<20)	

Table 11 TCM Operational Noise Monitoring Results – 4 March 2016 (evening)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Stability class	Identified Noise Sources
Matong	7:50 pm	44	2.3/97	C	Insects (44), TCM (<20)
Barbers Lagoon	9:21 pm	39	5.1/116	E	Insects (38), wind (31), TCM (<20)
Bungalow	8:36 pm	44	5.0/112	F	Wind (42), insects (39), TCM (<20)

Table 12 TCM Operational Noise Monitoring Results – 4/5 March 2016 (night)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/direction	Stability class	Identified Noise Sources
Matong	10:05 pm	39	4.2/117	E	Insects (39), TCM (<20)
Barbers Lagoon	11:18 pm	40	2.9/47	F	Insects (39), mine noise (33) TCM est. (30)
Bungalow	12:28 pm	35	2.6/62	E	Insects (34), mine noise (28) TCM est. (24)

The results in Table 1- Table 12 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.

Table 13 TCM Sleep Disturbance Monitoring Results – 1 March 2016 (night)				
Location	Time	dB(A),L1 (1 min)	Wind speed/direction	Stability class
Matong	10:21 pm	<20	4.9/89	F
Barbers Lagoon	10:00 pm	27	4.5/99	F
Bungalow	11:10 pm	<20	4.7/61	D

Table 14 TCM Sleep Disturbance Monitoring Results – 2/3 March 2016 (night)				
Location	Time	dB(A),L1 (1 min)	Wind speed/direction	Stability class
Matong	12:45 am	<20	2.5/38	F
Barbers Lagoon	10:00 pm	29	5.4/68	D
Bungalow	11:09 pm	<20	4.8/43	E

Table 15 TCM Sleep Disturbance Monitoring Results – 3/4 March 2016 (night)				
Location	Time	dB(A),L1 (1 min)	Wind speed/direction	Stability class
Matong	12:41 am	<20	2.6/60	D
Barbers Lagoon	10:00 pm	30	3.9/76	E
Bungalow	11:15 pm	26	3.7/50	F

Location	Time	dB(A),L1 (1 min)	Wind speed/ direction	Stability class
Matong	10:05 pm	<20	4.2/117	E
Barbers Lagoon	11:18 pm	34	2.9/47	F
Bungalow	12:28 pm	26	2.6/62	E

The real time noise monitor is located on the “Coomalghah” 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.

Blast Monitoring

Blasting Results

Since the first shot there have been 647 blasts (until the 13/5/2016).

All blasts since the last meeting have been within the 100 percentile limit for ground vibration and air blast overpressure.

The blast on 10th March 2016 recorded a result >115dB. This remains within the 5% annual limit for EPL and Project Approval. An internal investigation was completed for this result and the outcomes of this investigation are incorporated in blast design to reduce risk of reoccurrence.

Air Quality

Air Quality (Dust Deposition) Results

MONTH	TEMPLEMORE (EB-4)	BOLLO CREEK STN (EB-5)	AMBARDIO (EB-6)	TARRAWONGA (EB-7)	THUIN (EB-8)	PINE GROVE (EB-9)	TARRAWONGA MINE (EB-10)	TARRAWONGA MINE (EB-11)	PINE GROVE (EB-12)	BOLLO CREEK (EB-13)	TARRAWONGA MINE (EB-14)	TARRAWONGA MINE (EB-15)	JERALONG NORTH (EB-16)
May 2015	1.4	2.7	1.9	23.7	1.5	0.4	8.6	2.7	0.7	2.5	3.5	9.2	<0.1
June 2015	21.4	1.8	0.7	1.1	2.9	0.8	-	9.5	0.7	1.1	1.7	5.0	0.4
July 2015	144.0	2.2	0.6	4.3	4.2	0.4	21.1	6.8	<0.1	1.0	1.2	4.5	0.5
August 2015	49.4	12.1	1.7	1.3	10.7	0.6	7.3	2.4	0.4	0.9	1.2	3.6	0.5
September 2015	10.2	5.3	1.6	1.0	6.9	2.1	1.6	5.1	1.7	2.4	3.9	15.4	1.2
October 2015	2.6	4.2	0.7	0.6	0.7	6.0	3.9	2.4	1.2	0.2	4.5	3.7	0.9
November 2015	NS*	3.4	1.5	1.1	8.6	1.7	17.0	6.0	1.2	13.9	5.8	8.9	10.7
December 2015	22.9	4.8	0.9	1.2	5.7	1.7	7.9	7.0	0.7	9.1	2.8	2.9	2.1
January 2016	14.0	26.0	1.0	1.2	4.8	5.6	6.0	NS**	1.0	2.1	1.3	2.4	1.3
February 2016	11.1	2.9	38.6	1.5	0.8	2.6	11.6	3.4	1.4	2.3	6.2	4.1	5.3
March 2016	15.70	4.00	2.20	0.70	0.30	3.10	2.50	5.70	1.20	3.90	4.10	2.70	0.80
April 2016	NS	4.40	1.30	0.80	2.10	1.00	1.20	2.30	0.80	2.30	3.20	3.10	0.90
ANNUAL AVERAGE	26.61	6.15	4.39	3.21	4.10	2.17	7.39	4.85	1.00	3.48	3.28	5.46	2.24

*Contaminated (beetles)

** Broken bottle

Seven monitoring locations exceeded the limit of 4g/m²/month (average); Templemore EB-4, Bollol Creek Station (EB-5), Ambardo (EB-6), Thuin (EB-8), Tarrawonga Mine EB-10, Tarrawonga Mine (EB-11), and Tarrawonga Mine EB-15. As these monitors are located on mine-owned land, compliance criteria do not apply.

PM₁₀ Results

The annual average for PM₁₀ readings at “Templemore” was 19.42µg/m³ (until end of March 2016) and remains below the annual average limit of 30µg/m³. The High Volume Air Sampler was relocated to the Coomalpah property at the start of April; the annual average is currently 29.88µg/m³ (April 2016 only). The annual average has restarted with the relocation.

There has been one exceedance of the daily PM₁₀ limit since the last CCC meeting. The exceedance occurred on 17th February 2016. An investigation into the elevated result was undertaken subsequent to receiving the result. The investigation included a review of the TEOM data, for the 16th and 17th of February, meteorological data and daily dust check observations (Environmental Officer). Air quality was poor on the 16th and 17th February and operations modified activities to minimise offsite impacts. The Tarrawonga EO liaised with the Boggabri Coal and Maules Creek Coal Operations throughout the period.

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 February 2016, is provided in the table and graphs below. Results at all monitoring locations remained relatively consistent between December 2015 and February 2016.

Table 4- Groundwater results Summary

Site	Date	SWL (m)	pH	Elect. Conduct
MW1	February 2015	6.39	8.0	3420
	May 2015	6.47	7.5	3210
	August 2015	6.51	8.03	3440
	December 2015	6.59	7.7	3270
	February 2016	6.59	8.09	3400
MW2	February 2015	3.32	7.59	567
	May 2015	3.44	7.2	522
	August 2015	3.46	7.32	538
	December 2015	3.49	7.1	528
	February 2016	3.62	7.38	575
MW4	February 2015	8.71	7.7	4430
	May 2015	8.71	7.3	4120
	August 2015	8.85	7.72	4680
	December 2015	8.85	7.3	4410
	February 2016	8.86	7.85	4650
MW5	February 2015	3.17	8.15	2060
	May 2015	3.29	7.8	2120
	August 2015	3.18	8.08	2210
	December 2015	3.28	7.7	3070

Site	Date	SWL (m)	pH	Elect. Conduct
	February 2016	3.35	7.76	2230
MW6	February 2015	5.64	7.67	617
	May 2015	5.65	7.5	692
	August 2015	No sample	No sample	No sample
	December 2015	5.4	7.8	946
	February 2016	5.38	7.85	1080
MW7	February 2015	104.09	No sample	No sample
	May 2015	104.67	No sample	No sample
	August 2015	104.0	No sample	No sample
	December 2015	104.09	No sample	No sample
	February 2016	104.51	No sample	No sample
MW8	February 2015	13.27	Casing blocked	Casing blocked
	May 2015	13.43	Casing blocked	Casing blocked
	August 2015	13.47	Casing blocked	Casing blocked
	December 2015	13.5	Casing blocked	Casing blocked
	February 2016	13.53	Casing blocked	Casing blocked

Surface Water

Routine surface water monitoring was conducted during February 2016.

No wet weather discharges have occurred since the last CCC meeting.

Rehabilitation

Rehabilitation of the northern extension has been completed with tree planting undertaken at the start of May. A further 2.5ha of tree planting was undertaken on the southern emplacement. Aerial seeding was undertaken during May on the southern face of the southern emplacement as part of stabilisation trials. This seeding follows the sheeting of the area with tertiary/loam like overburden. This area will be monitored to evaluate success.

Complaints

Since the last meeting, there has been one complaint, as outlined on the following table.

Complaints Register

Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken/Follow-up
Phone call to Operations Manager Text Message to the Environmental Officer	22/4/2016 9.15am & 9.34am	Complainant advised that dust from the mines was terribly thick and visible; this was observed at 7am.	The Environmental Officer undertook a visual inspection, review of meteorological and air quality conditions and liaised with Boggabri Coal.	Operations were modified with follow up communication to the complainant undertaken on the day of the complaint providing action details.

Minutes of the 45th Meeting of the Tarrawonga Coal Mine Community Consultative Committee

Meeting Held: 15th September 2016 (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
Mr Jim Picton (JP), Community Representative
Mrs Julie Heiler (JH), Community Representative (arrived 10.15)
Mr Steve O'Donoghue (SD), Department of Planning & Environment (DP&E)
Ms Heidi Watters (HW), Department of Planning & Environment (Observer)
Mr Anthony Margetts (AM), Tarrawonga Operation Manager
Mr Lachlan Johnson (LJ), Tarrawonga Environmental Officer
Ms Lexie Frankham (LF), Environmental Superintendent – Operations

Apologies: Mr Tony Meppem, Narrabri 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 LF Second AM.

4.0 Business Arising

Nil

5.0 Leard Forest Regional Biodiversity Strategy – DP&E Presentation

SD presented the Leard Forest Regional Biodiversity Strategy to the committee. SD advised that Tarrawonga has been required to put funds towards the development of the strategy. SD advised that the committee may provide feedback to the Department by 17th October. The intention of the strategy is to incorporate its strategies into the Biodiversity Management Plans of the individual mine sites. A new matrix is to be developed as part of the proposed new state biodiversity legislation. The strategy is proposed to be finalised following CCC feedback and then gain Office of Environment and Heritage (OEH) endorsement.

JH told the committee that there were no landholders or farmers on the steering group noting that the outcomes would affect the farming community in the short medium and long term and asked SD why no farmers were on the steering group.

SD advised that the steering group was made up of representatives as per the recommendations.

JH submitted a series of statements and questions to SD regarding the draft Biodiversity Strategy and its development:

Planting of box trees won't be any good for forestry in future and this approach will be attempting to replace something that it is not.

The government needs to look forward and work towards an outcome that will find and sustain the community of Boggabri; currently the focus is entirely on the animals and the trees. Farmers and landholders need to be prioritised.

The ripping of offset lands for planting of native vegetation has changed the water management in the district.

Revegetation should be allowed to regenerate naturally with consideration given towards fire management; at present revegetation has no allowance for fire control measures and any outbreak will directly impact upon adjacent farming operations.

There has been a lot of attention paid to indigenous Australians to date; what about the rights of the pioneering landholders who developed the region and recognised the productive potential of the land. This land has previously been acknowledged as highly productive land.

Feral animals congregating on agricultural lands as they are pushed out by revegetation and mining activities.

A perception that the threatened species are more important than people; why can funds be allocated for research projects for threatened species but can't get the funding for the regional air quality monitoring network. What about the health of people?

Leard State Forest and Willeroi do not represent what is perceived by the government and public.

If there is to be planting of trees why not plant trees of Aboriginal significance such as medicines; bush tucker and bush craft and provide research into this program. This would be an investment into the future and heritage of aboriginal people of the region. This could potentially be adopted as an indigenous tourism venture.

DR asked JH to summarise key concerns.

JH outlined the following:

Loss of productive agricultural land noting that the government has placed no value on productive agricultural land.

Fire control and hazards resulting from forestry style planting to adjacent land holders

Australia must continue to provide food to the nation's growing population

Planting trees in rows is unnatural and land should be allowed to naturally regenerate.

SD agreed that where possible regeneration should occur naturally.

JH asked why the need to rip up farm land?

SD advised that the approval had already been determined by the PAC and this includes the location of offsets. The decision has been made and that cannot be changed. The requirements of the project approval therefore require that the mines undertake such activities. The draft strategy does refer to natural regeneration and no linear plantings.

JH advised that leases had been terminated to enable revegetation of productive agricultural land. JH proceeded to note that the government makes the decisions then steps back and lets the mines 'cop the flack' for the decisions and outcomes. The government has a duty to follow the process through. The communities are frustrated with the government's decisions to convert agricultural land and that there is a loss of

community resulting from these decision with landholders and businesses leaving the region.

SD again reiterated that the decisions about the where and how much land to be offset by the mining operations have been made. OEH identified these and approved these as part of linkages between the Nandewar Range and the Pilliga.

JH noted that CCC members can't give answers to the community regarding the content and intent of the draft strategy. DP&E should come to Boggabri and present to the community in the same way that the mines do during the public consultation process of the mine development. The government must take responsibility and explain the outcomes to the community.

JH then proceeded to ask why the approvals can't be changed.

SD said it's not just a matter for the state but there have been federal approvals.

JH advised SD that the governments perceptions is that the forest was full of animals; this is wrong. The objectives of the strategy are that the government is trying to make it something it never was.

JH asked SD if the government would come to Boggabri and present.

AJ asked if the draft strategy was on public exhibition.

SD said it was not on public exhibition and there was no intention from the government to present to the community.

DR asked SD if it was the government's intention that the strategy be worked through the CCC members.

SD Yes

JP asked what happens with the buffer zones around the mining operations; land bought for the mines, will they form part of the offsets?

In the case of Tarrawonga land bought as part of mine buffers is not part of the offset package and once mining is finished it is up to the mines but intention is to continue as agricultural land.

JP advised that the people that he represents are four of his neighbours.

JH advised that the local RFS is not happy about the land being locked up for offsets. There has been a loss of the volunteer base with the reduction of the farming community and the RFS now has additional impacts to deal with.

The Government allowed the mines to operate and the government needs to present and consult with the community so that it feels as they though own it. As a consequence of the Maules Creek Operation there is a feeling in the Boggabri community that WHC do not have the social licence to operate and as such that reflects badly on Tarrawonga.

DR suggested a number of actions:
SD to absorb this current feedback

DR to discuss further with SD within 2 weeks. SD to discuss the matter further within DP&E prior to the discussion with DR.

CCC members to provide a submission

Following discussion between SD and DR decide whether there is any benefit in bring along ecological experts to present to CCC. Invite OEH to present

SD advised that the draft strategy is not about making recommendations to offsets.

JH asked about species selection?

SD advised the draft strategy does not carry that level of detail.

JH advised that the conservations are for the environment and not the community.

SD advised that the draft strategy includes provision for identifying future areas for conservation value.

JP told SD that DP&E need to have a day in Boggabri to consult with the whole community.

SD advised that DPE are coordinating the strategy but it is the responsibility of the individual mines approvals and management plans.

JH tabled initial comments to SD during the meeting.

6.0 Advertisement for new members

LJ advised the committee that advertising for new members had taken place; however, no interest was received.

SD advised that prior to the next CCC meeting it is anticipated that the new CCC Guideline will be released.

JH advised that Tarrawonga was doing well at the present with community concerns; predominately because they had bought out all adjacent properties and had addressed the majority of issues previously raised and continue to work with landholders to address matters as they arise.

People are time poor and the timing of meetings makes attendance difficult.

AJ advised that he was surprised that no council technical staff were on the committee. DR asked if AJ would take responsibility as to whether GSC would offer councillors and /or technical staff as future representatives on the CCC.

DR asked the committee whether everyone was comfortable with him approaching Lloyd Findlay. Committee advised yes.

Committee discussed further potential candidates including Cath Collyer (pending council re-election), Rebecca Ryan and Pete Brian.

JP and JH to approach community members to ascertain interest.

7.0 General Business

JH asked if the CCC could write a letter to John Turner thanking him for his service. LF advised that she would check with Jill Johnson whether this had already been done.

JH asked whether the mines affect the Dark Sky Guidelines (Coonabarabran). SD advised that they are not retrospective but would capture new developments.

8.0 Mine Progress Report

AM presented the Mine Progress Report:

- TCM was aiming for a similar yearly production target as last financial year; this may be reviewed pending a coal haulage modification.
- No significant change planned for onsite equipment for FY17 at this stage
- Operations have moved past southern emplacement meaning that TCM is more visible from the southern side.
- Significant increase in onsite water following wet winter and significant reduction in onsite use during cool wet weather. However water is being managed well within the site storage capacity
- No discharges offsite to date
- Aerial seeding of the southern emplacement showing relative success; sown for air quality impacts and visual amenity. To be sown with summer crop over coming months to maintain coverage.

SD asked what the plan was moving forward with the southern emplacement.

AM advised that plans are under review and that aerial seeding is a temporary measure.

AM advised that there had been a significant increase in the scrutiny from the three major regulators (DP&E, DRE and EPA) within the region. Increased amount of time addressing enquires from these departments.

JH asked whether there will be discharge gauges on dams.

LJ advised that flow gauges to be emplaced on Goonbri Creek but not on licenced discharge points.

JH asked where all the water has been coming from that is flowing around and past Tarrawonga. LJ advised that Goonbri Creek has had a significant flow for a prolonged period.

AM advised that TCM evacuated site on 14th September due to wet weather

9.0 Environmental Monitoring Report

LJ presented to Environmental Monitoring report noting the following:

- Some monitoring results not available at the time of report preparation;
- Attended noise monitoring done in June

- Matong monitoring location experienced four results >35dB. It was then noted that the location is on project related land and therefore is not considered to be an exceedance of the criteria.
- There is a proposed revision of the Noise Management Plan with a change to monitoring locations with Matong location to be changed to Coomalgah (private property). This will remove last project related noise monitoring location.
- JH asked if the results are contrary to the noise modelling; LJ advised the results seem reflective of the modelling.
- LJ advised the sleep disturbance criterion was not exceeded.
- LJ provided an overview of blasting operations:
 - Since last meeting 5 blasts >115dB including 2 >120dB.
 - Monitors are on project related land.
 - Agreements in place subject to approval of revised Blast Management Plan and variation to the EPL. Monitors to be related to Coomalgah and Barbers Lagoon.
 - LJ to report back with findings of investigations into overpressure events at next CCC meeting if finalised.
- Deposited dust gauge annual averages have dropped significantly for 4 locations.
- The Air Quality Predictive Forecast System now being implemented for dust and fume predictive tracking and retrospective review of blasting.

SD asked how long it had been in place. LJ advised that it had only been in use for approximately a month. LJ further advised that there were some technical issues that were being dealt with as part of the implementation of the program.

- LJ advised that the groundwater locations had shown signs of consistency since last monitoring round. SD enquired about the drop in MW5; LJ clarified that the measurement was depth to water and was in fact increase in the water level.
- LJ advised that 5 significant rainfall events had been experienced since June with no discharge of waters from site. LJ reiterated to JH that no water from the disturbed areas of TCM including waste emplacements had left site.
- LJ advised that limited rehabilitation had been undertaken since last meeting and was limited to bulk earth works on the northern emplacement.
- LJ advised five complaints had been received and provided an overview of each complaint and actions undertaken.

10.0 New Business

Nil

11.0 Complaints

Complaints were discussed in the Environmental Monitoring Report.

12.0 Next Meeting

16 November

Meeting closed at 12.06pm

David Ross - Chair

Tarrawonga Coal Mine Community Consultative Committee Meeting #45

Environmental Monitoring Report June 2016 – August 2016

Noise Monitoring

Attended noise monitoring was undertaken at the “Bungalow”, “Barbers Lagoon” and “Matong” properties from 6th to 9th June 2016, with results outlined below. The noise criterion for the mine is 35dB(A) Leq (15 min) for all operating times.

Table 1 TCM Operational Noise Monitoring Results – 6 June 2016 (day)				
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Identified Noise Sources
Matong	12:28 pm	39	4.3/287	Wind (38), mine noise (29) TCM (29) , birds (26)
Barbers Lagoon	3:55 pm	42	2.3/256	Birds (42), traffic (26), TCM (<20)
Bungalow	2:13 pm	39	2.8/305	Wind (39), birds (25), TCM (<20)

Table 2 TCM Operational Noise Monitoring Results – 6 June 2016 (evening)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Stability class	Identified Noise Sources
Matong	7:58 pm	38	2.3/301	D	Mine noise (38) TCM est. (38)
Barbers Lagoon	8:40 pm	26	2.7/307	D	Traffic (26), TCM (<20)
Bungalow	9:20 pm	29	2.9/309	D	Wind (29), TCM (<20)

Table 3 TCM Operational Noise Monitoring Results – 6/7 June 2016 (night)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Stability class	Identified Noise Sources
Matong	10:06 pm	40	4.1/299	D	Mine noise (40) TCM est. (39)
Barbers Lagoon	11:18 pm	30	3.7/292	D	Wind (28), sheep (26) TCM (<20)
Bungalow	12:29 am	28	3.5/297	D	Wind (28), TCM (<20)

Table 4 TCM Operational Noise Monitoring Results – 7 June 2016 (day)				
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Identified Noise Sources
Matong	11:22 am	39	5.4/302	Wind (39), mine noise (29) TCM est. (25)
Barbers Lagoon	9:35 am	43	4.8/305	Wind (40), birds (40), traffic (25), TCM (<20)
Bungalow	1:09 pm	40	5.6/303	Wind (40), TCM (<20)

Table 5 TCM Operational Noise Monitoring Results – 7 June 2016 (evening)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Stability class	Identified Noise Sources
Matong	7:50 pm	37	3.1/302	D	Mine noise (37), TCM est. (37)
Barbers Lagoon	8:31 pm	25	2.5/311	D	Traffic (25), TCM (<20)
Bungalow	9:11 pm	33	3.4/302	D	Wind (33), TCM (<20)

Table 6 TCM Operational Noise Monitoring Results – 7/8 June 2016 (night)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Stability class	Identified Noise Sources
Matong	10:01 pm	39	3.0/287	D	Mine noise (39) TCM (39)
Barbers Lagoon	11:13 pm	24	2.0/309	D	Traffic (24), TCM (<20)
Bungalow	12:22 am	21	1.1/17	D	Wind (21), TCM (<20)

Table 7 TCM Operational Noise Monitoring Results – 8 June 2016 (day)				
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Identified Noise Sources
Matong	10:10 am	29	2.7/296	Mine noise (27) TCM (27) , birds (24)
Barbers Lagoon	11:51 am	39	3.0/287	Birds (38), traffic (31), TCM (<20)
Bungalow	8:24 am	41	1.9/312	Birds (41), traffic (27), TCM (25) ¹

1. Tarrowonga haul trucks

Table 8 TCM Operational Noise Monitoring Results – 8 June 2016 (evening)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Stability class	Identified Noise Sources
Matong	7:55 pm	41	1.3/26	F	Mine noise (41), TCM est. (38)
Barbers Lagoon	8:37 pm	29	1.3/35	E	Traffic (27), sheep (24), TCM (<20)
Bungalow	9:16 pm	30	1.5/38	D	Mine noise (30), TCM est. (27)

Table 9 TCM Operational Noise Monitoring Results – 8/9 June 2016 (night)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Stability class	Identified Noise Sources
Matong	10:04 pm	30	1.4/32	D	Mine noise (30) TCM est. (<20)
Barbers Lagoon	11:13 pm	35	1.6/35	D	Sheep (33), mine noise (29) TCM est. (26) , traffic (27)
Bungalow	12:23 am	31	0.7/61	D	Mine noise (31), TCM est. (28)

Table 10				
TCM Operational Noise Monitoring Results – 9 June 2016 (day)				
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Identified Noise Sources
Matong	12:20 pm	38	2.7/292	Birds (36), mine noise (32) TCM (32) , wind (29)
Barbers Lagoon	12:50 pm	35	2.1/302	Birds (35), traffic (23), TCM (<20)
Bungalow	11:10 am	41	4.1/297	Wind (41), TCM (<20)

Table 11					
TCM Operational Noise Monitoring Results – 9 June 2016 (evening)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Stability class	Identified Noise Sources
Matong	9:24 pm	40	4.6/315	D	Wind (40), mine noise (29) TCM (29)
Barbers Lagoon	8:40 pm	30	4.2/313	D	Traffic (27), wind (27), TCM (<20)
Bungalow	9:21 pm	43	4.7/314	D	Wind (43), TCM (<20)

Table 12					
TCM Operational Noise Monitoring Results – 9/10 June 2016 (night)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Stability class	Identified Noise Sources
Matong	10:02 pm	34	2.5/319	F	Mine noise (34) TCM (34)
Barbers Lagoon	10:03 pm	33	2.5/319	F	Wind (32), traffic (27), TCM (<20)
Bungalow	11:14 pm	23	1.8/325	F	Traffic (23), TCM (<20)

The results in Table 1- Table 12 show that noise emissions from the mine did not exceed the operational noise criterion at the “Barbers Lagoon” or “Bungalow”. Monitoring at “Matong” did exceed the limit on four occasions. The Matong property is project related land. Subsequent to receiving the June results agreement was reached with a private landholder in the eastern quadrant to replace the Matong monitoring location. A revised Noise Management Plan will need to be approved by DP&E and a variation to the EPL will need to be lodged and approved by the EPA prior to this occurring.

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.

Table 13				
TCM Sleep Disturbance Monitoring Results – 6/7 June 2016 (night)				
Location	Time	dB(A),L1 (1 min)	Wind speed/ direction	Stability class
Matong	10:06 pm	45	4.1/299	D
Barbers Lagoon	11:18 pm	<20	3.7/292	D
Bungalow	12:29 am	<20	3.5/297	D

Table 14				
TCM Sleep Disturbance Monitoring Results – 7/8 June 2016 (night)				
Location	Time	dB(A),L1 (1 min)	Wind speed/ direction	Stability class
Matong	10:01 pm	43	3.0/287	D
Barbers Lagoon	11:13 pm	<20	2.0/309	D
Bungalow	12:22 am	<20	1.1/17	D

Table 15				
TCM Sleep Disturbance Monitoring Results – 8/9 June 2016 (night)				
Location	Time	dB(A),L1 (1 min)	Wind speed/ direction	Stability class
Matong	10:04 pm	35	1.4/32	D
Barbers Lagoon	11:13 pm	33	1.6/35	D
Bungalow	12:23 am	34	0.7/61	D

Table 16				
TCM Sleep Disturbance Monitoring Results – 9/10 June 2016 (night)				
Location	Time	dB(A),L1 (1 min)	Wind speed/ direction	Stability class
Matong	10:02 pm	40	2.5/319	F
Barbers Lagoon	10:03 pm	<20	2.5/319	F
Bungalow	11:14 pm	<20	1.8/325	F

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.

Blast Monitoring

Blasting Results

Since the first blast there have been 676 blasts (until the 13/9/2016).

Since the last meeting there has been two blasts greater than the 100%ile limit (120dB) and three blasts in excess of the 115dB limit; as such TCM is now in exceedance of the 5% tolerance for air blast overpressure (>115dB).

Blast No. 655 23rd June recorded result of 115.3dB

Blast No. 659 14th July recorded result of 115.3dB

Blast No. 669 19th August recorded result of 121.2dB

Blast No. 672 1st September recorded result of 115.3dB

Blast No. 674 9th September recorded result of 124.3dB

The latter two blast results are subject to further independent specialist review to determine cause of overpressure and further implement findings into blast design.

At present blast monitors are located on project related land and such EPL and Project Approval limits have not been exceed as they specifically refer to results recorded on privately owned land.

Where required by the individual Mine Lease conditions appropriate notification has been made to DRE. Results are also reported through the Annual Return and Annual Review.

Agreement has been reached with two private landowners to relocate the blast monitors. A revised Blast Management Plan will be submitted to DP&E for approval and a variation to the EPL will be submitted to the EPA for approval subsequent to the approval of the management plan.

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

Air Quality

Air Quality (Dust Deposition) Results

MONTH	TEMPLEMORE (EB-4)	BOLLOL CREEK STN (EB-5)	AMBARDI (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)
September 2015	10.2	5.3	1.6	1.0	6.9	2.1	1.6	5.1	1.7	2.4	3.9	15.4	1.2
October 2015	2.6	4.2	0.7	0.6	0.7	6.0	3.9	2.4	1.2	0.2	4.5	3.7	0.9
November 2015	NS*	3.4	1.5	1.1	8.6	1.7	17.0	6.0	1.2	13.9	5.8	8.9	10.7
December 2015	22.9	4.8	0.9	1.2	5.7	1.7	7.9	7.0	0.7	9.1	2.8	2.9	2.1
January 2016	14.0	26.0	1.0	1.2	4.8	5.6	6.0	NS**	1.0	2.1	1.3	2.4	1.3
February 2016	11.1	2.9	38.6	1.5	0.8	2.6	11.6	3.4	1.4	2.3	6.2	4.1	5.3
March 2016	15.70	4.00	2.20	0.70	0.30	3.10	2.50	5.70	1.20	3.90	4.10	2.70	0.80
April 2016	NS	4.40	1.30	0.80	2.10	1.00	1.20	2.30	0.80	2.30	3.20	3.10	0.90
May 2016	10.6	2.2	0.9	0.7	5.3	1.0	4.0	5.7	0.7	1.0	1.9	4.9	1.0
June 2016	2.8	1.3	0.9	0.4	4.4	0.4	3.7	10.9	0.5	2.1	1.7	11.8	0.5
July 2016	5.4	1.1	1.0	0.3	10.6	0.1	4.2	3.3	0.1	1.4	1.0	4.9	0.2
August 2016	13.9	6.9	0.1	0.3	15.3	0.3	2.6	10.1	0.5	2.4	1.2	3.7	0.3
ANNUAL AVERAGE	10.9	5.5	4.2	0.8	5.5	2.1	5.5	5.6	0.9	3.6	3.1	5.7	2.1

*Contaminated (beetles)

** Broken bottle

Seven monitoring locations exceeded the limit of 4g/m²/month (average): Templemore EB-4, Bollol Creek Station (EB-5), Ambardo (EB-6), Thuin (EB-8), Tarrawonga Mine EB-10, Tarrawonga Mine (EB-11), and Tarrawonga Mine EB-15. As these monitors are located on mine-owned land, compliance criteria do not apply. Four of the seven monitoring locations in excess of the 4g/m²/month (average) have dropped significantly whilst the remaining relatively consistent or experiencing a slight increase.

PM₁₀ Results

The annual average for PM₁₀ readings at “Coomalgah” was 8.26µg/m³ (until end of July 2016) 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

Groundwater monitoring data obtained to date, including the last round of SWL monitoring in February 2016, is provided in the table and graphs below. Results at all monitoring locations remained relatively consistent between December 2015 and February 2016.

Table 4- Groundwater results Summary

Site	Date	SWL (m)	pH	Elect. Conduct
MW1	August 2015	6.51	8.03	3440
	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
MW2	August 2015	3.46	7.32	538
	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
MW4	August 2015	8.85	7.72	4680
	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
MW5	August 2015	3.18	8.08	2210
	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
MW6	August 2015	No sample	No sample	No sample
	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		
MW7	August 2015	104.0	No sample	No sample
	December 2015	104.09	No sample	No sample
	February 2016	104.51	No sample	No sample
	May 2016	104.87	No sample	No sample
	September 2016	N/A*		
MW8	August 2015	13.47	Casing blocked	Casing blocked
	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	N/A*		

*Not available at time of preparation

Surface Water

Routine surface water monitoring was conducted during September and August 2016.

During July, August and September there have big 5 rainfall events that have resulted in monitoring of Goonbri Creek, Bollol Creek and Nagero Creeks at both upstream and downstream monitoring locations.

Despite the wet weather TCM hasn't discharged waters from site. Currently site water is sufficient to maintain operations throughout the summer period.

Rehabilitation

Rehabilitation has been restricted to landform establishment on the northern and southern emplacement areas. Further information on the progression of these areas will be provided in future CCC meetings.

Complaints

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

Complaints Register

Method	Date/Time of Complaint	Nature of Complaint	Investigation	Action Taken / Follow-up
Phone call and text message to the Environmental Officer	20/5/2016 12.02pm	Complainant advised that the air quality was poor and noise levels were loud throughout the week of the complaint	A review of operations, meteorological conditions was undertaken by the Tarrawonga Environmental Officer. The Environmental Officer liaised with adjacent mining operations as part of the assessment of cumulative impacts.	Operations had been modified throughout the week in response to air quality triggers and visual observations. Real time noise monitor indicated operations generally in compliance with approval limits. The Environmental Officer will arrange a suitable time to meet with the complainant under similar meteorological conditions.
Phone call to the Drill & Blast Manager	15/7/2016	Complainant advised that their house shook following a blast at Tarrawonga.	Investigation of meteorological data and monitoring results was undertaken.	Operations Manager discussed the matter with complainant advising that the blast was within compliance criteria.
Phone call to the Senior Production Engineer	22/7/2016 3.50pm	Complainant advised that their boundary fence had been damaged (second occurrence) by light vehicle or similar.	As the complaint was generic and no Tarrawonga employees had reported any incident no further investigation was undertaken.	A toolbox talk on driving to site is to be provided to all personnel on site including contractors
Phone call to the Environmental Officer	4/8/2016	Complainant advised that due to recent rainfall there property had been inadvertently flooded as a result of the Tarrawonga operation.	A review of creek flows, overland flows and meteorological data was undertaken by the Tarrawonga Environmental Officer subsequent to the initial contact with the complainant.	During the initial conversation the Environmental Officer advised that Tarrawonga had not discharged any waters from site as a result of the rainfall received, provided an overview of regional rainfall amounts and what measures are in place to manage water onsite. The findings from the subsequent inspection of the local flows were provided to the complainant.

Phone call the Tarrawonga Office	9/9/2016 3.25pm	Complainant advised that the blast at the Tarrawonga operation shook the house badly.	A review of the meteorological conditions and blast results was undertaken.	Drill and Blast Manager called the complainant to discuss the matter and provide information regarding the blast event.
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Minutes of the 46th Meeting of the Tarrawonga Coal Mine Community Consultative Committee

Meeting Held: 16th November 2016 (10.00am)

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
Mr David Moses (DM), Gunnedah Shire Council Representative (Alternative)
Mr Cameron Steines (CS), Narrabri Shire Council Representative (Alternative)
Mrs Julie Heiler (JH), Community Representative
Mrs Rebecca Ryan (RR), Community Representative
Mr Steve O'Donoghue (SD), Department of Planning & Environment (DP&E)
Mr Steve Cox (SC), Office of Environment and Heritage
Mr Anthony Margetts (AM), Tarrawonga Operation Manager
Mr Lachlan Johnson (LJ), Tarrawonga Environmental Officer
Ms Lexie Frankham (LF), Environmental Superintendent – Operations

Apologies: Mrs Colleen Fuller, Gunnedah Shire Council Representative
Mrs Cath Collier, Community Representative
Mr Tim Muldoon, WHC

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 AJ Second JH.

4.0 Business Arising

- LJ advised that the investigation report in relation to blasting incidents had not yet been finalised.
- DR requested that OEH and DP&E attend next meeting; both agencies represented at meeting.
- AJ advised that GSC had endorsed technical officer attend TCM CCC.
- Lloyd Finlay not able to join TCM CCC as had been elected to Council and would represent of other BTM CCC's.
- JH had advised initial discussion with Peter Bryant; further discussion required.
- LF still to determine if letter sent by Whitehaven to John Turner thanking him for his time as chair

5.0 General Business

5.1 JH advised that her property experienced 3 blasts 2 hours apart on 28th October; the first of the blasts was heard and felt in Boggabri. JH advised that a letter had been sent to both BCM and MCCM in relation to the issue. JH noted that the weather conditions on the day were adverse with low wind speeds and overcast conditions. JH was highly disappointed with the three mines for not working proactively together to minimise blasting related impacts. Drill and Blast teams have extensive meteorological forecasting information available to make informed decisions and in her opinion this is just not occurring to an acceptable standard across all three BTM operations.

AM advised that a review of blast results and conditions would be undertaken.

JH further advised that she did not need to see the technical reports in response to this matter.

AM advised that records had been reviewed (during the CCC meeting) and that TCM did not fire a blast on the 28th October.

5.2 JH advised that dust had been an issue over past fortnight noting that there are health concerns associated with this highlighting that her son had recently had pneumonia and that it was believed to be caused by air quality. JH is following up further with Hunter New England Health. JH noted that she had called EPA and noted cumulative dust impacts.

5.3 AJ noted the clash between the Vickery and Tarrawonga CCC. DR to liaise with LJ and Vickery to prevent clash in future.

5.4 DR requested input regarding the timing of the next BTM CCC and where the committee members saw opportunities for improvement. JH noted that BTM CCC in past had a better representation of coal companies hierarchy and that this lack of attendance has influenced attendance of community representatives.

Environmental groups have pushed an agenda at the meetings that is not in the interest of the community; their skill set would be better suited to providing constructive input.

LJ and LF to discuss meeting format with BCM and MCCM and report back to DR.

General consensus was that BTM meetings should be held six monthly in lieu of individual mine CCC's. LJ to discuss this with BCM and MCCM at next BTM monthly Environmental meeting.

6.0 Draft Biodiversity Conservation Act Legislation Q&A

SC opened the discussion with a brief overview of the draft legislation process; focus for the topic was how it would impact residents in the BTM area.

SC asked whether any community members had attended any community consultation workshops. No members advised they had attended.

JH advised that she had not attended a community workshop nor had she put in a submission. JH said that she was advised that a map had been withheld that was displayed in 2015 at a Regional Biodiversity Strategy (RBS) working group on Narrabri. It was requested at this working group that the map not be circulated as it indicated potential acquisition zones. This information was provided to JH by another CCC member.

SD advised that this was incorrect. Biodiversity mapping is being completed for the draft legislation with the intention to show conservation values and not about acquisition.

JH said that the community were only ever given small pieces of the jigsaw and they were never given the bigger picture. Community had not been consulted and the workshops did not involve farmer groups. Conservation land either side of private properties results in unprecedented impacts on farmers from feral and native animal population issues.

SC noted that there are two sets of maps; the Leard Forest Precinct Maps and the draft state wide map. State maps are preliminary and identify potential areas for conservation; they have not been ground-truthed. Draft legislation expected to come into effect end of July 2017. State maps will undergo consultation and will be provided over the internet as will detailed consultation strategy.

JH advised that the Government is relying on people to have access to the internet and the knowhow to access and use internet.

JH advised that she and the community were tired of seeing productive land being devalued by planting of trees and converting to offset lands. The community and country needs agriculture to be sustained as they will continue to operate when the mines have gone. Trees are planted too close together, in straight lines; this approach is ridiculous and unnatural. RFS can't get their equipment into these areas. The tree selection is not suitable for other uses such as forestry and medicinal purposes. JH noted that there should be consideration of indigenous tourism as source of potential future income and education.

DR confirmed that he will discuss further with SC and SD who the appropriate person/s is within the relevant departments for future contact should be to answer these pressing issues (re future community consultation).

SD noted that specific planting strategies need to be addressed within individual mine Biodiversity Management Plans.

JH asked whether the Government can guarantee that it can fund this commitment.

SC advised that \$240 million has been allocated plus \$70 million annually. SC advised that the government was not targeting farmland as it is too risky based on price to return to conservation.

JH asked how the government expects the mines to return productive farmland to conservation areas when the government considers it too risky.

SC advised that the funds enable landholders to undertake conservation works but would not be forced to do any work.

7.0 Mine Progress Report

AM presented the Mine Progress Report:

- A project modification is pending with regard to increased road haulage into town; this will enable a slight increase in production.
- At this stage no additional shifts planned but if coal prices remain positive or increase further may operate Saturdays but no plans as yet.
- TCM has received a Project Approval modification to receive fine coal rejects. Already had approval to receive coarse rejects. MOP amendment required and this is expected within 4-6 weeks.

8.0 TCM Annual Review

LJ presented the Tarrawonga Annual Review to the Committee. Hard copies were provided and DR and JH requested website link; LJ to provide in subsequent email to the committee.

9.0 Environmental Monitoring Report

LJ presented to Environmental Monitoring report noting the following:

- Quarterly noise monitoring undertaken during September:
 - Barbers Lagoon result >35dB limit during one night monitoring period (see table 6).
 - Result was considered unexpected
 - INP does not consider single excursion of up to 2dB to be a non-compliance.
 - Will retest in December
 - Consultant provided context that the climatic conditions and saturated grounds would have had an impact on the noise result.
 - SD noted that the result would still need to be report to the Department.
 - LF & SD to catch up as this advice is relevant to other WHC sites.
 - SD noted that this advice had previously been provided to WHC.
 - Matong monitoring location under review as part of revised noise management plan.

- RR asked difference between mine noise and TCM noise. LJ noted that it was the cumulative noise result for all mines combined.
- LJ advised that blasting had been compliant since last CCC meeting.
- One blast monitor relocated to the Coomalgah property, other monitor subject to EPL variation and revised NMP.
- LJ advised that the deposited dust gauges were located on project related land and that they were therefore not considered non-compliant.
- A review of the dust deposition gauges is underway as part of review of Air Quality Greenhouse Gas Management Plan.
- LJ advised that the predictive air quality forecasting system was being implemented but had ongoing teething issues.
- JH asked whether any remodelling of the noise and dust models had been undertaken.
 - LJ advised that annual noise model validation reports are completed and that they are consistent with modelling.
- LJ advised that aerial seeding was to take place again with summer cover crop on the southern emplacement. JH asked what species were being planted as didn't need unwanted species establishing. LJ advised that they are oats, millet and rye corn.
- LJ noted no complaints since last meeting.

10.0 New Business

10.1 JH noted that the mine site access road and the coal haul road were incredibly rough. AM advised that further patching work will be undertaken.

10.2 LJ introduced the new CCC guidelines. DR advised that they were to be discussed at the next meeting. DR invited SD to comment.

SD noted that major changes included appointing new members, minutes and a code of conduct.

DR advised code of conduct to be reviewed along with new guidelines prior to next CCC meeting. CS to provide NSC with copies of guidelines.

New Guidelines were distributed to all members in attendance.

10.3 DR invited members of CCC to provide comments about his performance to date. JH advised that she appreciated his approach as a problem solver and his intent to make the CCC's productive. DR advised he takes his independence seriously and that this question would be raised periodically.

10.4 JH requested that potential new CCC community representatives come to a meeting to see it in operation.

11.0 Complaints

Complaints were discussed in the Environmental Monitoring Report.

12.0 Next Meeting

15 February 2017

Meeting closed at 11.38am

David Ross - Chair

Tarrawonga Coal Mine Community Consultative Committee Meeting #46

Environmental Monitoring Report September 2016 – November 2016

Noise Monitoring

Attended noise monitoring was undertaken at the “Bungalow”, “Barbers Lagoon” and “Matong” properties from 5th to 9th September 2016, with results outlined below. The noise criterion for the mine is 35dB(A) Leq (15 min) for all operating times.

Table 1 TCM Operational Noise Monitoring Results – 5 September 2016 (day)				
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Identified Noise Sources
Matong	11:27 am	31	1.5/204	Birds (31), TCM (20)
Barbers Lagoon	3:13 pm	37	2.3/185	Birds (37), traffic (25), TCM (<20)
Bungalow	1:15 pm	39	1.7/144	Birds (35), TCM (<20)

Table 2 TCM Operational Noise Monitoring Results – 5 September 2016 (evening)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Stability class	Identified Noise Sources
Matong	8:05 pm	27	0.8/356	E	TCM (27)
Barbers Lagoon	8:50 pm	32	1.4/21	D	Frogs (31), Mine noise (23) TCM est. (22)
Bungalow	9:29 pm	34	1.6/32	E	Frogs (33), TCM (27) ¹

1. Tarrawonga haul trucks

Table 3 TCM Operational Noise Monitoring Results – 5/6 September 2016 (night)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Stability class	Identified Noise Sources
Matong	10:17 pm	35	2.2/36	E	TCM (35) , frogs (22)
Barbers Lagoon	12:46 am	39	1.2/41	F	Mine noise (38) TCM est. (35) , frogs (31)
Bungalow	11:37 pm	30	0.9/41	E	Frogs (27), Mine noise (27) TCM est. (26)

Meeting #46

Table 4 TCM Operational Noise Monitoring Results – 6 September 2016 (day)				
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Identified Noise Sources
Matong	10:11 am	41	1.3/217	Birds (41), Mine noise (30) TCM est. (28)
Barbers Lagoon	8:22 am	40	1.0/206	Mine noise (37) TCM est. (34) , birds (36), traffic (30)
Bungalow	11:58 am	31	1.9/215	Birds (31), TCM (<20)

Table 5 TCM Operational Noise Monitoring Results – 6 September 2016 (evening)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Stability class	Identified Noise Sources
Matong	8:26 pm	23	1.2/13	F	Frogs (23), TCM (<20)
Barbers Lagoon	7:03 pm	37	1.7/25	E	Frogs (37), TCM (<20)
Bungalow	9:12 pm	34	1.6/32	E	Frogs (33), TCM (27)¹

1. Tarrawonga haul trucks

Table 6 TCM Operational Noise Monitoring Results – 6/7 September 2016 (night)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Stability class	Identified Noise Sources
Matong	11:11 pm	28	0.9/32	E	TCM (28)
Barbers Lagoon	12:59 am	40	0.9/98	D	Mine noise (40) TCM est. (37) , frogs (29)
Bungalow	12:31 am	33	1.0/195	E	Mine noise (32) TCM est. (29) , frogs (24)

Table 7 TCM Operational Noise Monitoring Results – 7 September 2016 (day)				
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Identified Noise Sources
Matong	9:58 am	36	1.9/179	Birds (36), Mine noise (24) TCM est. (23)
Barbers Lagoon	8:14 am	40	1.2/205	Birds (37), mine noise (36) TCM est. (30) , traffic (28)
Bungalow	1:27 pm	33	2.4/150	Birds (30), wind (30), TCM (<20)

Table 8 TCM Operational Noise Monitoring Results – 7 September 2016 (evening)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Stability class	Identified Noise Sources
Matong	7:58 pm	25	0.4/57	F	Frogs (23), TCM (20)
Barbers Lagoon	7:16 pm	40	1.2/47	D	Frogs (39), mine noise (30) TCM (25) , traffic (24)
Bungalow	9:18 pm	31	1.2/28	D	Mine noise (30) TCM est. (28) , frogs (22)

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Table 9					
TCM Operational Noise Monitoring Results – 7/8 September 2016 (night)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Stability class	Identified Noise Sources
Matong	12:06 am	33	3.2/31	D	Wind (33), TCM (<20)
Barbers Lagoon	10:00 pm	38	1.5/30	D	Frogs (36), mine noise (34) TCM est. (32)
Bungalow	1:30 am	36	2.1/20	F	Mine noise (33) TCM est. (32) , wind (31), frogs (28)

Table 10				
TCM Operational Noise Monitoring Results – 8 September 2016 (day)				
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Identified Noise Sources
Matong	9:59 am	34	2.9/28	Birds (32), TCM (27) , wind (26)
Barbers Lagoon	8:44 am	40	4.0/35	Wind (37), birds (37), TCM (<20)
Bungalow	10:12 am	35	2.7/80	Wind (34), birds (28), TCM (<20)

Table 11					
TCM Operational Noise Monitoring Results – 8 September 2016 (evening)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Stability class	Identified Noise Sources
Matong	8:40 pm	40	1.6/15	E	TCM (40) , frogs (22)
Barbers Lagoon	7:18 pm	42	1.1/27	E	Frogs (41), mine noise (35) TCM est. (34)
Bungalow	7:56 pm	35	1.5/12	D	Mine noise (33) TCM est. (32) , frogs (25)

Table 12					
TCM Operational Noise Monitoring Results – 8/9 September 2016 (night)					
Location	Time	Total dB(A), Leq (15 min)	Wind speed/ direction	Stability class	Identified Noise Sources
Matong	11:19 pm	40	2.6/17	F	Wind (40), TCM (<20)
Barbers Lagoon	10:03 pm	38	2.4/13	F	Frogs (36), mine noise (34) TCM (33)
Bungalow	1:42 am	35	4.0/29	D	Mine noise (34) TCM est. (32) , frogs (28)

The results in Tables 1 to 12 indicate that, under the operational and atmospheric conditions at the time, the measured noise levels from TCM was higher than the relevant noise criterion of 35 dB(A) Leq at the Barbers Lagoon location on one occasion during the night time period of the 6th/7th of September.

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Noise levels from TCM at the Matong monitoring location were higher than the general noise criterion but did not exceed the worst case predicted levels outlined in the EA. The Matong monitoring location is located on project related land.

TCM noise emissions were measured below the relevant criterion at the Bungalow monitoring location.

At Barbers Lagoon the noise was 2 dB(A) above the noise criterion during the night time survey on 6/7 September. It is noted that an exceedance of less than 2 dB (A) above a statutory noise limit specified in a licence condition is not considered to be a non-compliance as per the discussion in Section 11.1.3 of the NSW Industrial Noise Policy.

At the time of the measured elevated noise level there was a light wind drift from the east. Such atmospheric conditions would be noise enhancing in relation to mine noise at the Barbers Lagoon receiver.

In the weeks leading up to the attended noise survey the area had been subjected to persistent rains. As a result of the rains the ground between the mine site and the receiver was saturated and in some locations there was surface water in paddocks (the area being Bollol Creek and Goonbri Creek located between the monitoring location and TCM).

The receiver at Barbers Lagoon is over 6kms from the closest parts of TCM. At such distances ground effects are a significant contributor to the overall noise attenuation. The attenuation due to ground effects would be considerably reduced by the saturated ground (and surface water). The resultant received noise could be up to several decibels higher than would otherwise be encountered under the typical ground conditions in the area.

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.

Table 13				
TCM Sleep Disturbance Monitoring Results – 5/6 September 2016 (night)				
Location	Time	dB(A),L1 (1 min)	Wind speed/ direction	Stability class
Matong	10:17 pm	40	2.2/36	E
Barbers Lagoon	12:46 am	38	1.2/41	F
Bungalow	11:37 pm	29	0.9/41	E

Table 14				
TCM Sleep Disturbance Monitoring Results – 6/7 September 2016 (night)				
Location	Time	dB(A),L1 (1 min)	Wind speed/ direction	Stability class
Matong	11:11 pm	33	0.9/32	E
Barbers Lagoon	12:59 am	43	0.9/98	D
Bungalow	12:31 am	35	1.0/195	E

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Table 15 TCM Sleep Disturbance Monitoring Results – 7/8 September 2016 (night)				
Location	Time	dB(A),L1 (1 min)	Wind speed/ direction	Stability class
Matong	12:06 am	<20	3.2/31	D
Barbers Lagoon	10:00 pm	38	1.5/30	D
Bungalow	1:30 am	35	2.1/20	F

Table 16 TCM Sleep Disturbance Monitoring Results – 8/9 September 2016 (night)				
Location	Time	dB(A),L1 (1 min)	Wind speed/ direction	Stability class
Matong	11:19 pm	<20	2.6/17	F
Barbers Lagoon	10:03 pm	37	2.4/13	F
Bungalow	1:42 am	36	4.0/29	D

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.

Blast Monitoring

Blasting Results

Since the first blast there have been 690 blasts (until the 14/11/2016).

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

At present one blast monitors remains located on project related land; an EPL variation is being prepared to be submitted concurrently with a revised blast management plan.

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

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Air Quality

Air Quality (Dust Deposition) Results

MONTH	TEMPLEMORE (EB-4)	BOLLOL CREEK STN (EB-5)	AMBARDI (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 2015	NS*	3.4	1.5	1.1	8.6	1.7	17.0	6.0	1.2	13.9	5.8	8.9	10.7
December 2015	22.9	4.8	0.9	1.2	5.7	1.7	7.9	7.0	0.7	9.1	2.8	2.9	2.1
January 2016	14.0	26.0	1.0	1.2	4.8	5.6	6.0	NS**	1.0	2.1	1.3	2.4	1.3
February 2016	11.1	2.9	38.6	1.5	0.8	2.6	11.6	3.4	1.4	2.3	6.2	4.1	5.3
March 2016	15.70	4.00	2.20	0.70	0.30	3.10	2.50	5.70	1.20	3.90	4.10	2.70	0.80
April 2016	NS	4.40	1.30	0.80	2.10	1.00	1.20	2.30	0.80	2.30	3.20	3.10	0.90
May 2016	10.6	2.2	0.9	0.7	5.3	1.0	4.0	5.7	0.7	1.0	1.9	4.9	1.0
June 2016	2.8	1.3	0.9	0.4	4.4	0.4	3.7	10.9	0.5	2.1	1.7	11.8	0.5
July 2016	5.4	1.1	1.0	0.3	10.6	0.1	4.2	3.3	0.1	1.4	1.0	4.9	0.2
August 2016	13.9	6.9	0.1	0.3	15.3	0.3	2.6	10.1	0.5	2.4	1.2	3.7	0.3
September 2016	4.6	8.1	0.3	0.4	22.8	0.4	23.4	7.3	0.5	21.3	1.5	5.5	0.4
October 2016	2.7	4.0	0.3	1.4	10.4	1.6	9.1	3.7	0.4	2.8	0.5	2.8	0.2
ANNUAL AVERAGE	10.4	5.8	4.1	0.8	7.6	1.6	7.8	5.9	0.75	5.4	2.6	4.8	2.0

*Contaminated (beetles)

** Broken bottle

Eight 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.

PM₁₀ Results

The annual average for PM₁₀ readings at “Coomalgah” was 7.14µg/m³ (until end of September 2016) 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.

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Water Monitoring

Groundwater

No further groundwater monitoring has been undertaken since the last CCC meeting in September.

Table 4- Groundwater results Summary

Site	Date	SWL (m)	pH	Elect. Conduct
MW1	August 2015	6.51	8.03	3440
	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
MW2	August 2015	3.46	7.32	538
	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
MW4	August 2015	8.85	7.72	4680
	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
MW5	August 2015	3.18	8.08	2210
	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
MW6	August 2015	No sample	No sample	No sample
	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		
MW7	August 2015	104.0	No sample	No sample
	December 2015	104.09	No sample	No sample
	February 2016	104.51	No sample	No sample
	May 2016	104.87	No sample	No sample
	September 2016	N/A*		
MW8	August 2015	13.47	Casing blocked	Casing blocked
	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	N/A*		

*Not available at time of preparation

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.

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Rehabilitation

Rehabilitation has been restricted to landform establishment on the northern and southern emplacement areas. Further information on the progression of these areas will be provided in future CCC meetings.

Further aerial seeding of the southern emplacement is planned so sow a summer crop; the success of this program will be monitored with results to be provided during future CCC meetings.

Complaints

Since the last meeting, there have been no complaints.