

# Tarrawonga Coal Mine Community Consultative Committee Meeting #74

Quarterly Environmental Monitoring Report  
July, 2023 – September, 2023



*Photo taken in October 2023 displaying topsoil spreading activities on the Southern Emplacement Area*

This report has been prepared for the Community Consultative Committee (CCC) meeting to show Environmental monitoring performance at Tarrawonga Coal Mine (TCM) for the reporting period from July 1 2023 to September 30, 2023. Maps with all the monitoring locations are available in *Appendix A*.

# Noise Monitoring

Attended Noise Monitoring was conducted during this period.

Attended noise monitoring was conducted at the “Bungalow” (TN4), “Barbers Lagoon” (TN3) and “Matong” (TN2) properties from 11<sup>th</sup> to the 15<sup>th</sup> of September 2023. Noise criteria for the mine is 35dB(A) Leq (15 min) for all operating times.

Results below show that noise emissions from the mine did not exceed operational noise criteria at the “Barbers Lagoon”, “Bungalow” or “Matong” monitoring locations for any monitoring events during the monitoring period.

*(See below summary tables extracted from Tarrawonga Coal Mine Noise Monitoring – Q3 September 2023)*

Table 1 TCM Operational Noise Monitoring Results – 11 September 2023 (Day)				
Location	Time	Total dB(A), Leq (15 min)	Wind speed / direction / PSC	Identified Noise Sources
Matong – TN2	2:50pm	41	3.4 / 186 / C	Birds (41), TCM (<20)
Barbers Lagoon – TN3	11:15am	52	2.8 / 190 / A	Birds (52), traffic (40), insects (32), TCM (<20)
Bungalow – TN4	1:15pm	43	3.1 / 152 / A	Birds (43), traffic (29), TCM (<20)

1. Pasquill Stability Class

Table 2 TCM Operational Noise Monitoring Results – 11 September 2023 (Evening)				
Location	Time	Total dB(A), Leq (15 min)	Wind speed / direction / PSC <sup>1</sup>	Identified Noise Sources
Matong – TN2	9:14pm	26	1.2 / 034 / D	Birds (26), TCM (<20)
Barbers Lagoon – TN3	7:43pm	36	1.6 / 064 / E	Dogs (35), frogs (28), TCM (<20)
Bungalow – TN4	8:24pm	33	0.9 / 177 / E	Traffic (30), TCM <sup>1</sup> (27), birds (26)

1. Coal trucks on private haul road

<b>Table 3</b>				
<b>TCM Operational Noise Monitoring Results – 11-12 September 2023 (Night)</b>				
<b>Location</b>	<b>Time</b>	<b>Total dB(A), Leq (15 min)</b>	<b>Wind speed / direction / PSC</b>	<b>Identified Noise Sources</b>
Matong – TN2	10:00pm	28	1.2 / 090 / E	Birds (28), TCM (<20)
Barbers Lagoon – TN3	12:28am	31	0.6 / 093 / E	Dogs (29), TCM (26)
Bungalow – TN4	11:20pm	36	1.0 / 271 / E	Traffic (35), dogs (30), TCM (<20)

<b>Table 4</b>				
<b>TCM Operational Noise Monitoring Results – 12 September 2023 (Day)</b>				
<b>Location</b>	<b>Time</b>	<b>Total dB(A), Leq (15 min)</b>	<b>Wind speed / direction / PSC</b>	<b>Identified Noise Sources</b>
Matong – TN2	3:18pm	34	2.3 / 188 / B	Birds (34), TCM (<20)
Barbers Lagoon – TN3	11:51am	52	2.0 / 197 / A	Traffic (52), aeroplanes (41), birds (33), insects (24), TCM (<20)
Bungalow – TN4	1:33pm	47	2.4 / 202 / B	Traffic (47), birds (34), insects (23), TCM (<20)

<b>Table 5</b>				
<b>TCM Operational Noise Monitoring Results – 12 September 2023 (Evening)</b>				
<b>Location</b>	<b>Time</b>	<b>Total dB(A), Leq (15 min)</b>	<b>Wind speed / direction / PSC</b>	<b>Identified Noise Sources</b>
Matong – TN2	9:30pm	33	1.2 / 079 / E	Birds (31), mine (28), TCM (<20)
Barbers Lagoon – TN3	7:55pm	33	1.5 / 033 / E	Birds (33), TCM (<20)
Bungalow – TN4	8:40pm	32	2.1 / 039 / F	Traffic (30), dogs (27), TCM (<20)

1. Coal trucks on private haul road

<b>Table 6</b>				
<b>TCM Operational Noise Monitoring Results – 12-13 September 2023 (Night)</b>				
<b>Location</b>	<b>Time</b>	<b>Total dB(A), Leq (15 min)</b>	<b>Wind speed / direction / PSC</b>	<b>Identified Noise Sources</b>
Matong – TN2	10:00pm	36	1.3 / 042 / E	Birds (33), mine (31), traffic (26), TCM (24)
Barbers Lagoon – TN3	12:36am	33	0.9 / 105 / E	Dogs (30), birds (30), TCM (<20)
Bungalow – TN4	11:20pm	29	2.2 / 042 / F	Birds (28), traffic (23), TCM (<20)

<b>Table 7</b>				
<b>TCM Operational Noise Monitoring Results – 13 September 2023 (Day)</b>				
<b>Location</b>	<b>Time</b>	<b>Total dB(A), Leq (15 min)</b>	<b>Wind speed / direction / PSC</b>	<b>Identified Noise Sources</b>
Matong – TN2	3:20pm	46	2.4 / 218 / B	Birds (46), TCM (<20)
Barbers Lagoon – TN3	11:45am	55	2.4 / 230 / B	Birds (55), residential (39), insects (33), TCM (<20)
Bungalow – TN4	1:30pm	41	3.2 / 216 / B	Birds (39), insects (34), traffic (33), TCM (<20)

<b>Table 8</b>				
<b>TCM Operational Noise Monitoring Results – 13 September 2023 (Evening)</b>				
<b>Location</b>	<b>Time</b>	<b>Total dB(A), Leq (15 min)</b>	<b>Wind speed / direction / PSC</b>	<b>Identified Noise Sources</b>
Matong – TN2	9:29pm	29	2.4 / 037 / E	Birds (27), traffic (24), TCM (<20)
Barbers Lagoon – TN3	7:56pm	32	0.7 / 100 / E	Frogs (29), TCM (28), dogs (23)
Bungalow – TN4	8:36pm	32	2.6 / 062 / D	Dogs (31), traffic (23), TCM (<20)

<b>Table 9</b>				
<b>TCM Operational Noise Monitoring Results – 13-14 September 2023 (Night)</b>				
<b>Location</b>	<b>Time</b>	<b>Total dB(A), Leq (15 min)</b>	<b>Wind speed / direction / PSC</b>	<b>Identified Noise Sources</b>
Matong – TN2	10:00pm	45	1.4 / 099 / E	Birds (45), mine (34), TCM (<20)
Barbers Lagoon – TN3	12:33am	33	1.1 / 091 / E	Birds (30), mine (29), TCM (<20)
Bungalow – TN4	11:19pm	29	1.4 / 074 / E	Birds (29), TCM (<20)

<b>Table 10</b>				
<b>TCM Operational Noise Monitoring Results – 14 September 2023 (Day)</b>				
<b>Location</b>	<b>Time</b>	<b>Total dB(A), Leq (15 min)</b>	<b>Wind speed / direction / PSC</b>	<b>Identified Noise Sources</b>
Matong – TN2	1:17pm	38	3.3 / 161 / B	Birds (38), TCM (<20)
Barbers Lagoon – TN3	9:55am	49	2.3 / 199 / B	Birds (48), residential (43), TCM (<20)
Bungalow – TN4	11:38am	41	2.9 / 188 / B	Birds (40), aeroplanes (33), TCM (<20)

<b>Table 11</b>				
<b>TCM Operational Noise Monitoring Results – 14 September 2023 (Evening)</b>				
<b>Location</b>	<b>Time</b>	<b>Total dB(A), Leq (15 min)</b>	<b>Wind speed / direction / PSC</b>	<b>Identified Noise Sources</b>
Matong – TN2	9:26pm	30	1.1 / 050 / E	Birds (30), TCM (<20)
Barbers Lagoon – TN3	7:51pm	33	1.4 / 103 / E	Traffic (31), birds (29), TCM (<20)
Bungalow – TN4	8:32pm	31	2.0 / 032 / E	Dogs (31), TCM (<20)

<b>Table 12</b>				
<b>TCM Operational Noise Monitoring Results – 14-15 September 2023 (Night)</b>				
<b>Location</b>	<b>Time</b>	<b>Total dB(A), Leq (15 min)</b>	<b>Wind speed / direction / PSC</b>	<b>Identified Noise Sources</b>
Matong – TN2	10:00pm	32	1.2 / 107 / F	Birds (31), insects (23), TCM (<20)
Barbers Lagoon – TN3	12:32am	29	1.7 / 103 / E	Dogs (29), TCM (<20)
Bungalow – TN4	11:21pm	27	1.4 / 082 / E	Birds (27), TCM (<20)

Noise from the mine must not exceed 45 dB(A) L1 (1 min) between 10 pm and 7 am. This criteria is to minimise the potential for sleep disturbance as a result of individual loud noises from the mine. Results of attended monitoring show that the measured L1 (1 min) noise level did not exceed sleep disturbance criteria.

Table 13 TCM Sleep Disturbance Monitoring Results – 11-12 September 2023 (Night)					
Location	Time	dB(A) L1 (1 min) <sup>1</sup>	dB(A) L1 (1 min) <sup>2</sup>	L1 Source	Wind speed / direction / PSC
Matong – TN2	10:00pm	50	<20	Birds	1.2 / 090 / E
Barbers Lagoon – TN3	12:28am	47	30	Dog	0.6 / 093 / E
Bungalow – TN4	11:20pm	54	<20	Car	1.0 / 271 / E

1. L1 (1 min) – total measured level.
2. L1 (1 min) – TCM noise only.

Table 14 TCM Sleep Disturbance Monitoring Results – 12-13 September 2023 (Night)					
Location	Time	dB(A) L1 (1 min) <sup>1</sup>	dB(A) L1 (1 min) <sup>2</sup>	L1 Source	Wind speed / direction / PSC
Matong – TN2	10:00pm	51	31	Birds	1.3 / 042 / E
Barbers Lagoon – TN3	12:36am	48	<20	Car	0.9 / 105 / E
Bungalow – TN4	11:20pm	51	<20	Dog	2.2 / 042 / F

Table 15 TCM Sleep Disturbance Monitoring Results – 13-14 September 2023 (Night)					
Location	Time	dB(A) L1 (1 min) <sup>1</sup>	dB(A) L1 (1 min) <sup>2</sup>	L1 Source	Wind speed / direction / PSC
Matong – TN2	10:00pm	73	<20	Birds	1.4 / 099 / E
Barbers Lagoon – TN3	12:33am	46	<20	Birds	1.1 / 091 / E
Bungalow – TN4	11:19pm	48	<20	Birds	1.4 / 074 / E

Table 16 TCM Sleep Disturbance Monitoring Results – 14-15 September 2023 (Night)					
Location	Time	dB(A) L1 (1 min) <sup>1</sup>	dB(A) L1 (1 min) <sup>2</sup>	L1 Source	Wind speed / direction / PSC
Matong – TN2	10:00pm	43	<20	Birds	1.2 / 107 / F
Barbers Lagoon – TN3	12:32am	47	<20	Dog	1.7 / 103 / E
Bungalow – TN4	11:21pm	50	<20	Birds	1.4 / 082 / E

The real time noise monitor located on the “Coomalgah” property remains a management tool so the noise criteria are not applicable at that site. Levels of noise recorded at that location are managed according to the noise management plan and trigger action response plan.

# Blast Monitoring

## Blasting Results

Since 2006, there have been 1231 blasts (until 30/09/2023) at TCM.

The highest result for Overpressure last quarter was 116.5 dB recorded at the ‘Coomalgah’ monitor on the 15/07/2023. TCMs blasts for the rolling year still remain below 5% of blasts with overpressure more than 115db.

The highest result for ground vibration last quarter was 2.65 mm/s recorded at the ‘Tarrawonga’ monitor on the 20/09/2023.

TCM ground vibration for the quarter was compliant and did not exceed the blasting criteria declared in the project approval and Blast Management Plan (BMP).

*Table 1 - Max Peak Overpressure and Ground Pressure for the Quarter*

Monitor Location	Date	Max. Peak Overpressure (dB)	Criterion (dB)	Date	Max. Peak Ground Pressure (mm/s)	Criterion (mm/s)
Tarrawonga*	07/08/2022	110.1	N/A	20/09/2023	2.65	N/A
Coomalgah	15/07/2022	116.5	120	09/09/2023	0.92	10

*\*Limit Not applicable according to EPL and PA11\_0047 because it is a project related property.*

# Air Quality Monitoring

## Dust Deposition Results

Standard Australia AS/NZS 3580.10.1:2016, "Methods for sampling and analysis of ambient air – Determination of particulate matter – Deposited matter – Gravimetric Method," classifies deposited dust as insoluble solids. Therefore, TCM tests air quality monthly at mine-owned sites for indicative purposes, to infer compliance, against the limit of 4 g/m<sup>2</sup>/month.

**Table 3** shows deposited dust gauge results over 12 months. All the dust monitors are located on project related or WHC owned land; as such compliance criteria (4g/m<sup>2</sup>/month) do not apply. While deposited dust trends remain steady during the reporting period (refer graph in *Appendix B*), some monitors are displaying non-mine related particulate matter deposition more regularly than others. Non-mine related particulate matter could be attributed to organic matter (such as leaves, mice, frogs, insects or bird faeces that fall in to the bottles), or they may be in farming locations, so during some months dust levels may be higher due to harvesting. To mitigate contamination from bird faeces, spikes have been added to the top of each dust gauge unit to deter birds from perching.



Table 2 - Deposited Dust Gauge Results [g/m<sup>2</sup>/month]<sup>121</sup>

MONTH	TEMPLEMORE (EB-4)	BOLLOL CREEK STN (EB-5)	AMBARDIO (EB-6)	TARRAWONGA (EB-7)	PINE GROVE (EB-9)	TARRAWONGA MINE (EB-10)	TARRAWONGA MINE (EB-11)	TARRAWONGA MINE (EB-14)	TARRAWONGA MINE (EB-15)	JERALONG NORTH (EB-16)
Oct-22	28.7#	8.9#	1.1	0.9	2.2	92.8#	6.6#	0.8	2.3	3.9
Nov-22	45.2#	4.7#	0.7	1.1	3.2	16.3#	0.9	0.5	1.1	3.8
Dec-22	22.3#	1.9	1.2	1.2	4.1#	11.8#	4.5#	2	0.9	4.2#
Jan-23	1.8	6.1#	2	1.3	2.1	3.5	4.2#	2.5	2.5	4.7#
Feb-23	1	1.9	2.5	0.7	2.2	0.6	2	3.6#	1	1.6
Mar-23	4.8#	1	0.4	1.2	0.5	0.7	1.9	0.7	0.7	2.2
Apr-23	0.8	1.8	1.1	0.4	1.3	1.5	2.8	3.3	0.6	0.6
May-23	0.5	7.3	0.7	0.4	1.1	0.7	3.6	3.9	1	5.5#
Jun-23	1.3	1.9	0.6	0.5	0.7	1.3	2.3	5.8	1.4	6.5
Jul-23	0.6	1.1	0.8	0.3	0.3	0.8	3	3.8	1.1	2.1
Aug-23	4.1#	0.9	1.9	0.3	0.1	0.5	1.3	9.6#	1	0.4
Sep-23	1.1	2.2	0.7	0.6	0.5	1.1	5.1	6.2#	2.5	0.6
<b>12 MONTH ROLLING AVERAGE</b>	1.0	2.2	1.1	0.7	1.3	1.2	2.9	3.7	1.6	1.2

# Analysis done/ field comments on these bottles concluded that they are contaminated, often with low ash/insoluble matter. Often noted on field sheets are bird droppings, insects and plant matter. These are now excluded from the average calculation.

+ bottles missing due to replacement after contamination or temporary civil/mining activities in the area.

<sup>1</sup>DDG bottle on the fenceline between TCM and BCM ROM.

### High Volume Air sampler (PM10) Results

The High Volume Air Sampler (HVAS) installed at Coomalgah property monitors levels of Particle Matter under 10 micron (PM<sub>10</sub>). It operates for 24hr every 6 days. **Table 3** shows that all 24hr average values recorded for this quarter are below 50µg/m<sup>3</sup>.

*Table 3: HVAS PM10 24hr Quarterly Average levels*

Date	24hr averaged PM10 (µg/m <sup>3</sup> )	Criterion 24hr average (µg/m <sup>3</sup> )	Comments
4/07/2023	1	<b>50</b>	Nil
10/07/2023	1.9		
16/07/2023	3.9		
22/07/2023	1.7		
28/07/2023	7.6		
3/08/2023	12.1		
9/08/2023	8.5		
15/08/2023	3.4		
21/08/2023	6.1		
27/08/2023	12.9		
2/09/2023	4.5		
8/09/2023	7.6		
14/09/2023	8		
20/09/2023	19.1		
26/09/2023	11.2		



### Real-time Air monitoring (PM<sub>10</sub>)

A real time air quality unit (TEOM) is located at the “Flixton” property to monitor PM<sub>10</sub> levels in ambient air, as per the current Air Quality and Greenhouse gas Management Plan. It is an operational management tool and dust levels nearing or reaching the nominated criteria will trigger actions onsite to assess the source of dust and modify operations if it is determined to be related to Tarrawonga operations.



*Figure 1: TEOM installed at Flixton property*

Three portable dust (PM<sub>10</sub>) monitors have been utilised since Nov 2018 to improve the real-time dust monitoring network and assist the operation to mitigate any potential dust generated by the operation.



*Figure 2: Portable and real-time dust monitor installed at TCM in November 2018*

# Water Monitoring

## Groundwater

Routine groundwater monitoring results undertaken between September 2022 and September 2023 are shown in **Table 4** (refer to graphs in *Appendix C*).

*Table 4: Groundwater results summary*

Site	Date	SWL (mbgl)	pH (units)	Elect. Conductivity (µS/cm)
<b>MW1</b>	September 22	6.46	7.58	3,490
	December 22	6.12	7.75	3,420
	March 23	5.74	7.37	3,600
	June 23	5.73	7.73	3,830
	September 23	5.61	6.98	3,390
<b>MW2</b>	September 22	2.66	6.69	806
	December 22	3	6.91	906
	March 23	3.1	6.41	946
	June 23	3.53	6.87	979
	September 23	3.58	6.31	778
<b>MW4</b>	September 22	8.9	7.39	3,010
	December 22	9.08	7.51	3,050
	March 23	8.5	7.04	2,900
	June 23	9.05	7.43	3,380
	September 23	8.31	6.62	2,990
<b>MW5</b>	September 22	1.36	7.66	1,874
	December 22	1.67	7.88	2,022
	March 23	1.8	7.13	1,412
	June 23	2.12	7.45	757
	September 23	2.29	6.97	1,862
<b>MW8</b>	September 22	12.61	Casing blocked	Casing blocked
	December 22	Sampling error		
	March 23	Sampling error		
	June 23	12.3		
	September 23	12.54		

The Vibrating Wire Piezometer, located in the North-East of Tarrawonga’s Mining Lease, is monitored as per our Project Approval. The graph below (Figure 3) displays the water level at differing depths within the VWP.

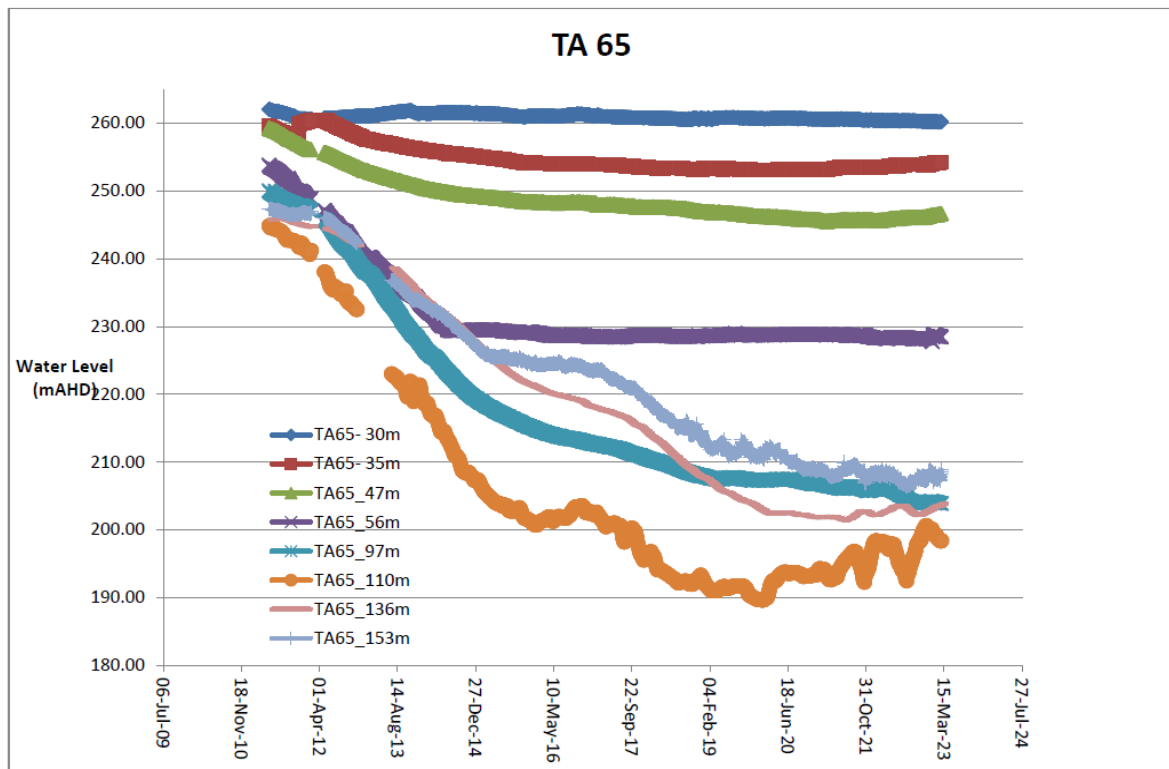


Figure 3: Groundwater Levels at TA65 (VWP)

### Surface Water

Water storage onsite is expected to be sufficient for at least the next 7 months. TCM has not undertaken any discharging of treated water during the reporting period.

TCM has recorded 297.2mm of rain for 2023, so far. The nearby Boggabri weather station has recorded 322.8mm this year.

Table 5: Annual rainfall

2022	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Monthly Rain (mm)	106.6	74.4	100	60.8	59	14.4	32.4	116.6	166.2	170.2	129.8	34.4	1064.8
Cumulative (mm)	106.6	181	281	341.8	400.8	415.2	447.6	564.2	730.4	900.6	1030.4	1064.8	
2023	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Monthly Rain (mm)	21.2	11	169.8	37.2	0.8	35.8	8	11.4	2	0			297.2
Cumulative (mm)	21.2	32.2	202	239.2	240	275.8	283.8	295.2	297.2	297.2			

## Evaporator Fans

During the reporting period, Tarrawonga did not use the Evaporator fans to evaporate mine water. As we are now moving into a conservatory water stage, the fans are unlikely to be used during the summer.

# Rehabilitation and Clearing

## Rehabilitation

TCM submitted the report on rehabilitation achieved in 2022 to the Resources Regulator, as well as the Forward Program for 2023, where TCM commits to approximately **37Ha** of Ecosystem Establishment for the year (tubestock planting and seeding) and approximately **25Ha** of land ready for rehabilitation use (Landform establishment/ Growth medium development).

By the close of September 2023, TCM prepared approximately 15.8Ha of landform prepared, and 8.6Ha of topsoil spread. By the time of this report, topsoil has been spread over more than 24Ha on the SOEA (Southern Emplacement Area). Seeding on the SOEA is happening now and will continue along the rehabilitation face as the topsoil spreading is finalised. Tubestock planting is scheduled to occur when ground moisture is more suitable, but infill planting in the Northern emplacement area will occur prior to the end of the year.

Trees on the both the North and South rehab areas continue to successfully establish and grow on our rehabilitation area. Ecologists were here last week to assess the success rate of rehab and that monitoring report will be included in our Annual Review.





**Total area of ecosystem establishment: 160ha**  
**Total area of Landform establishment: 42.6ha**  
**Topsoil spreading: 18ha**

Figure 4: Rehab Status as at end of September 2023

### **Clearing**

20Ha of topsoil from 2021 and 2022 clearing has been stripped, with soil awaiting transfer to a prepared area of the NOEA for storage. Once in place it will be shaped to shed rainwater and seeded to encourage native species growth and discourage weeds.

Clearing at Tarrawonga ceased for the year in April 2023. Mulching concluded in August. Topsoil and Subsoil will be stripped once storage areas become available. Until then, the soil will remain in place as this retains the soil's viability.

## **Complaints**

One complaint received during the reporting period. This pertained to a rock kicked up by a haul truck and cracking the windscreen of a member of the public. The windscreen was fixed by WHC.

## **Environmental Management Plans**

### **TAR Management Plans**

The Water Management Plan was updated and approved by the DPE.

The Blast Management Plan is currently under review and will be submitted to the DPE in the coming weeks.

All the approved Management Plans are available on the WHC website.

### **BTM Water Strategy**

The BTM mines submitted an updated BTM Groundwater Model. This has now been approved and displayed on our website.

The BTM Noise Management Strategy has also been reviewed and will be submitted by MCCM once finalised.

## **Annual and Compliance Reporting**

### **Annual Review and Annual Return Reports**

The Annual Return and Annual Review were submitted in March 2023.

### **Annual Compliance EPBC statement**

The Annual Compliance EPBC statement was submitted to DAWE in June 2023.

### **Annual National Pollutant Inventory (NPI) and Greenhouse Gas Emission (NGERs) Reports 2023**

TCM has submitted information for the NPI and NGERs reports and these were approved and reports published at the close of September 2023.



## Audits - Compliance

Tarrawonga recently underwent their Independent Environmental Audit and Independent Biodiversity Audit. These audits are required by the Project Approval PA11\_0047, and EPBC Act respectively.

The audits were carried out smoothly with no immediate concerns. One minor administrative non-compliance was identified that a report had been submitted to the Regulator but then not uploaded to the website. The audit reports have been submitted to the department with action plans. These will be available on our website upon approval.

## Approvals and Licencing

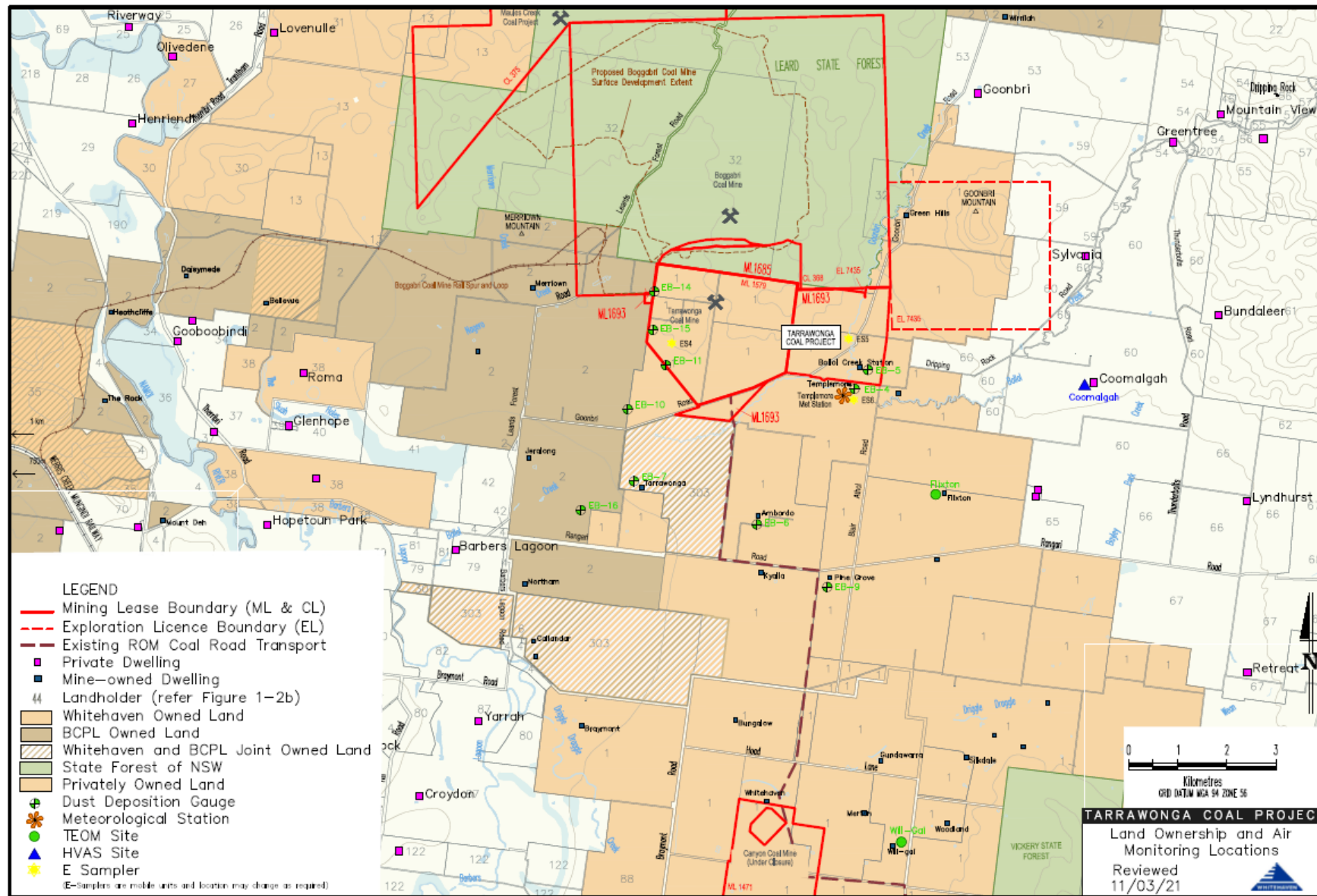
Tarrawongas MP11\_0047 Modification 10 was approved on the 19<sup>th</sup> October 2023. This modification is in relation to Haul truck hours. Tarrawonga will update relevant management plans (Noise and Traffic) to align with this modification.

The updated EPL variation was issued by the EPA in June 2023. This variation outlines recommended improvements to some of Tarrawongas sediment dam inlets, outlets and drains, and some require the use of Earthlok (a rock lining mat). Some of these projects have already been completed as can be seen in the photo below.

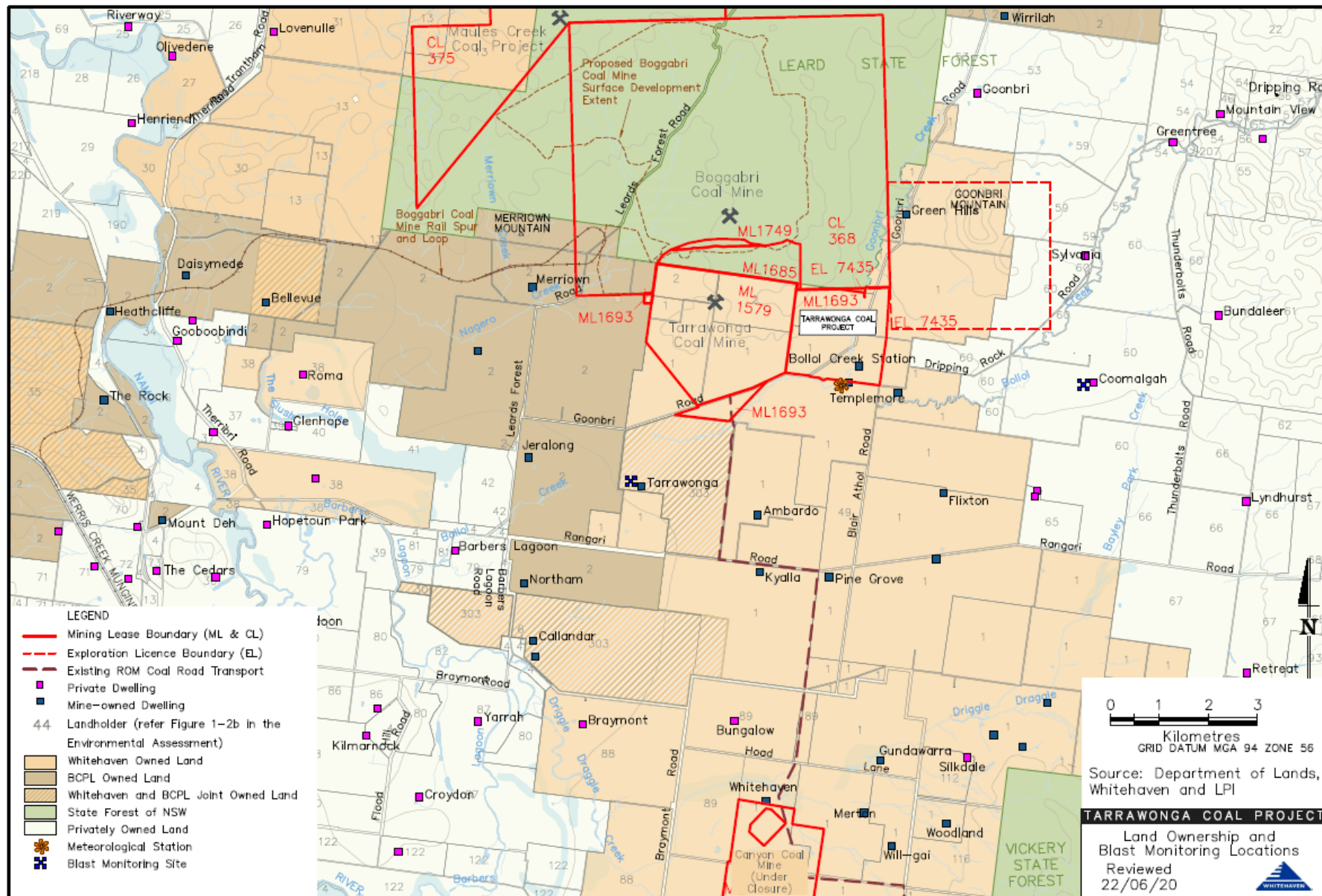


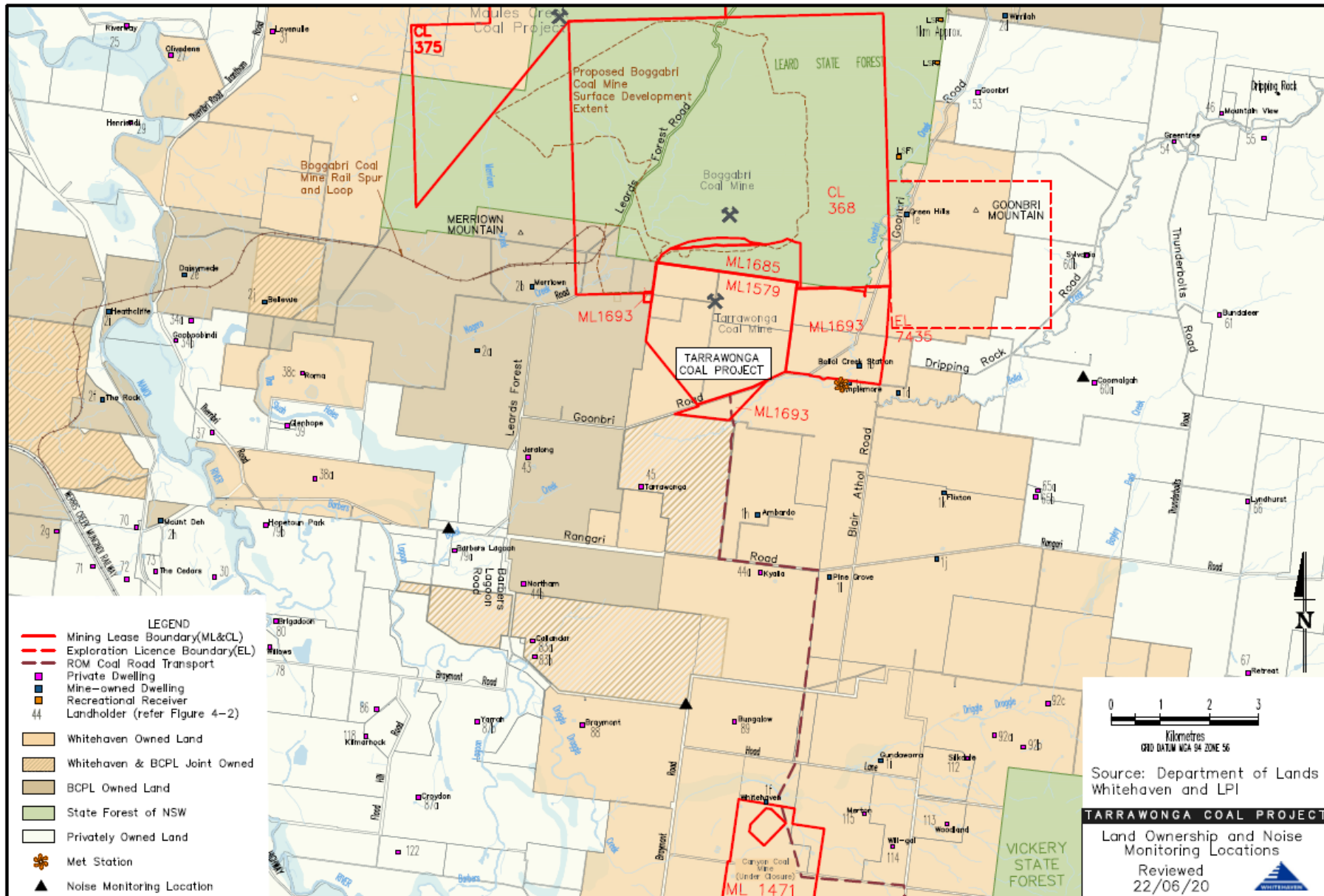
*Figure 5: Earthlok installation on the drain from the ROM pad to SB16A*

# Appendix A

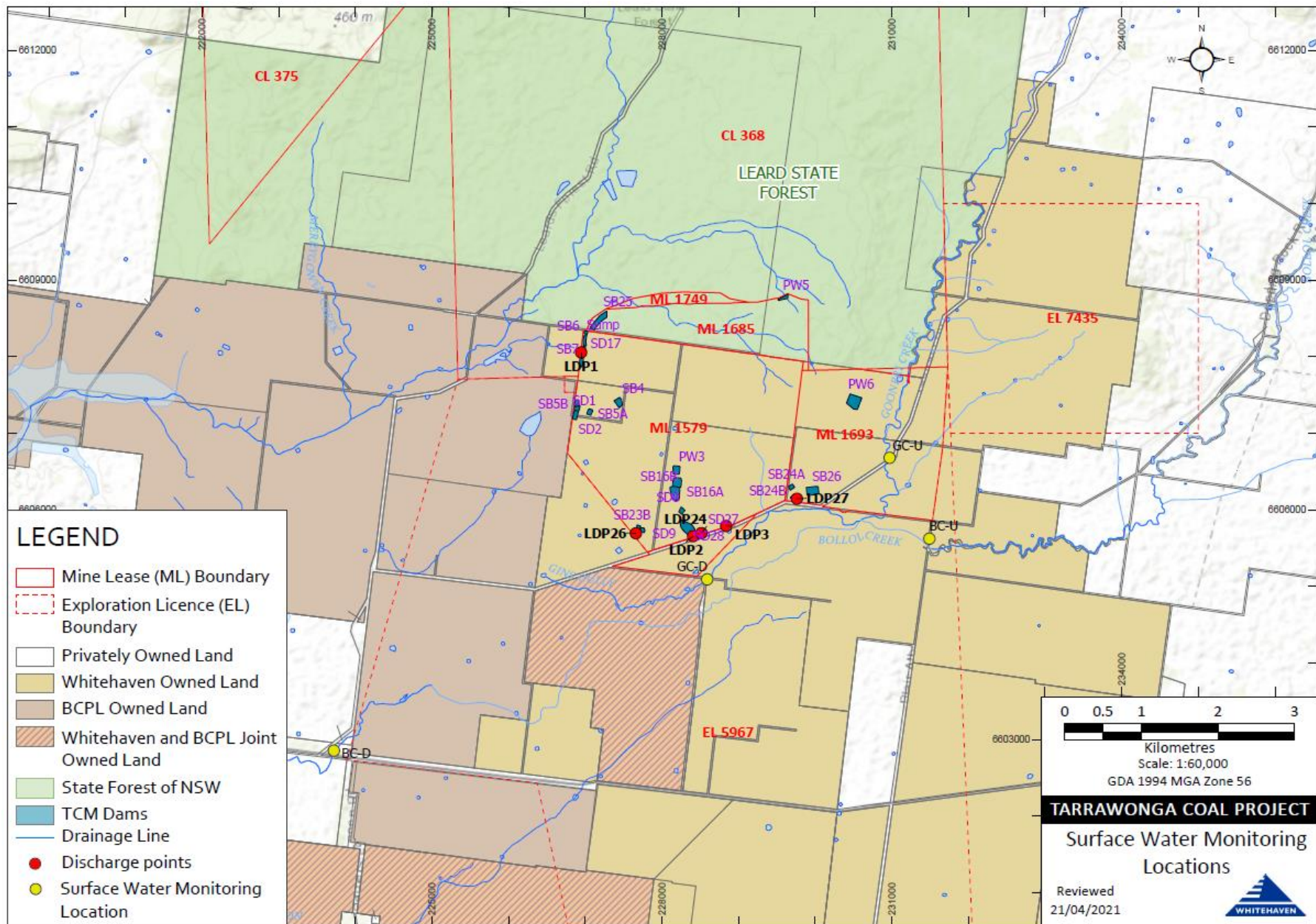




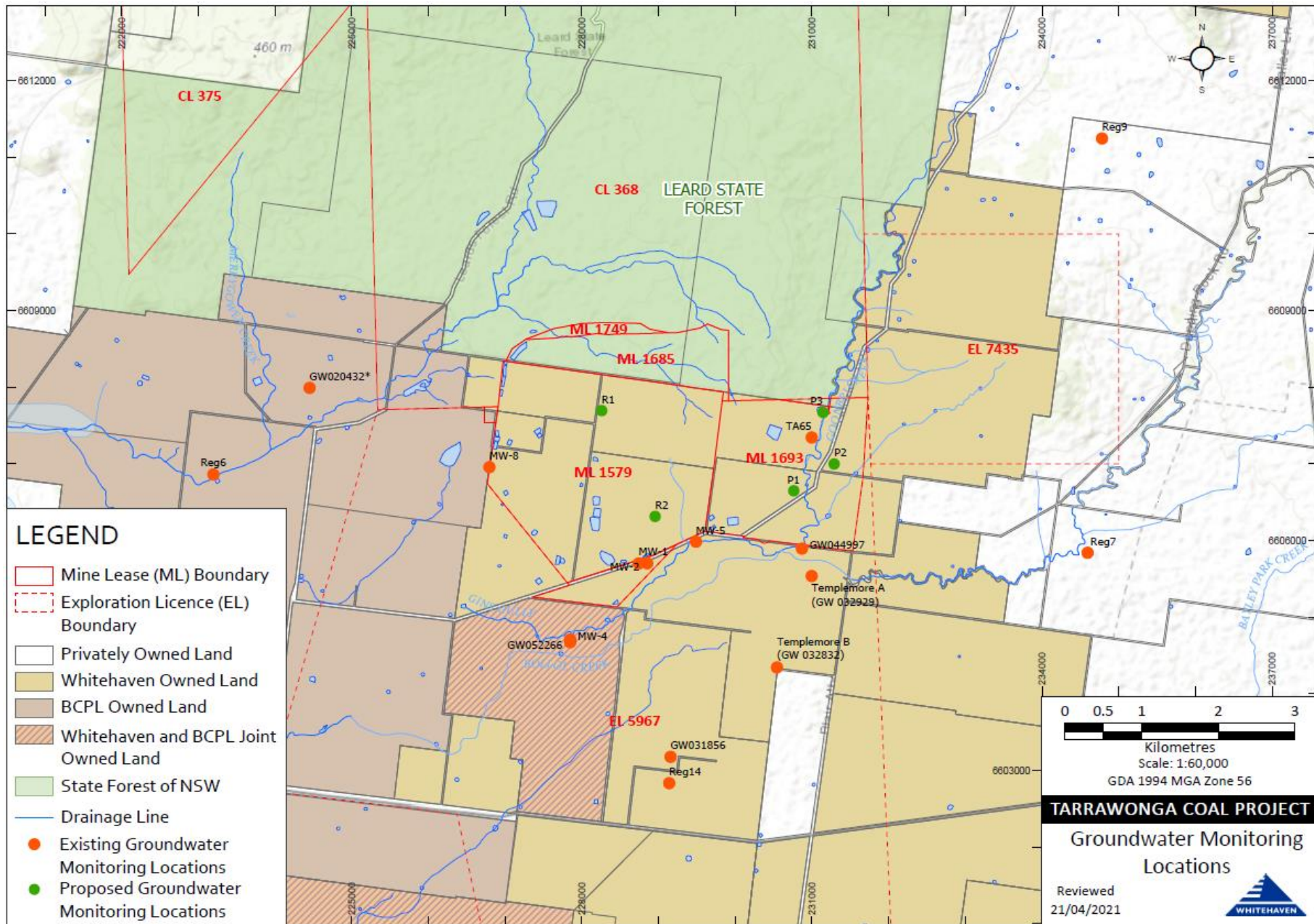






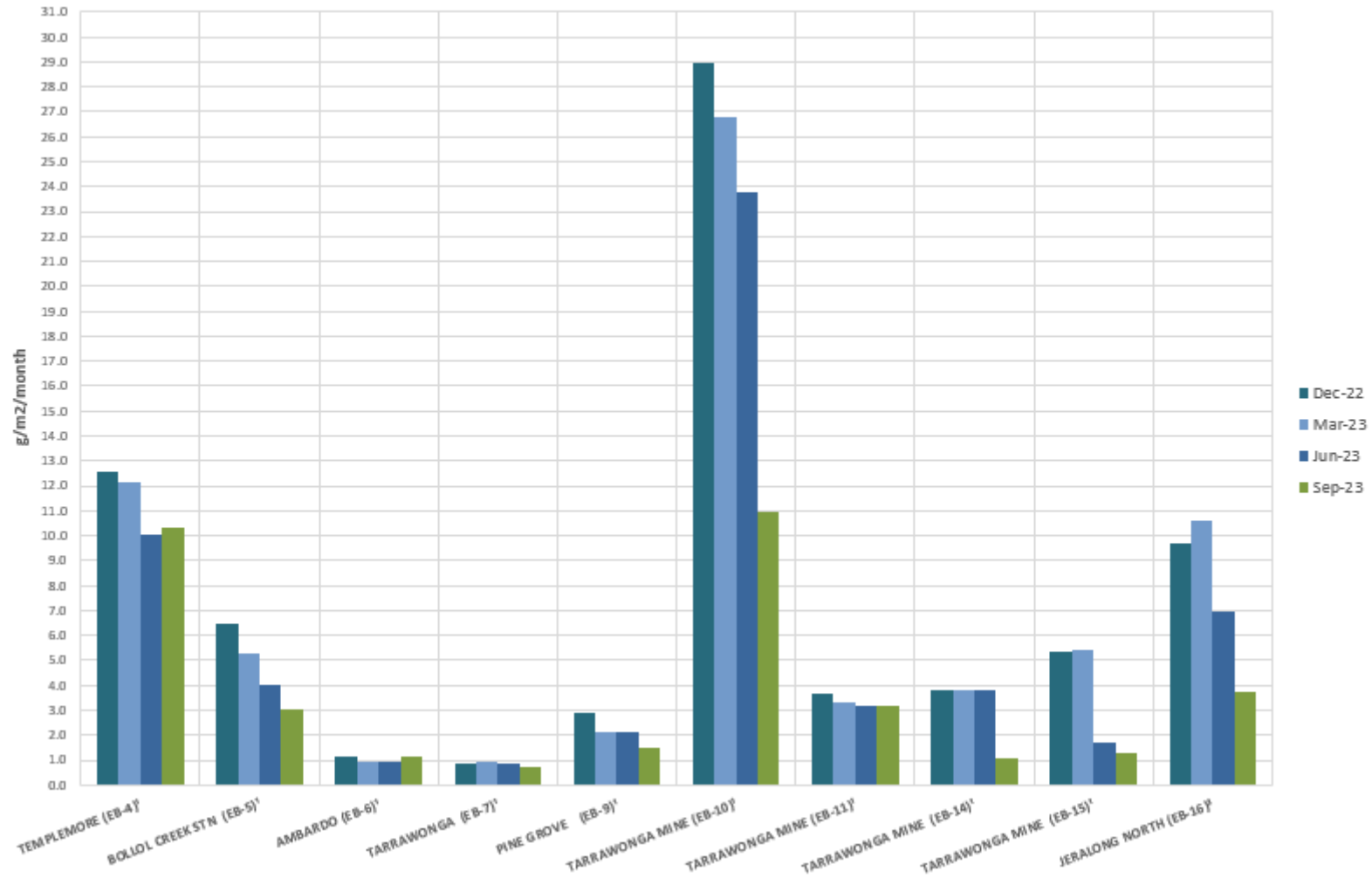




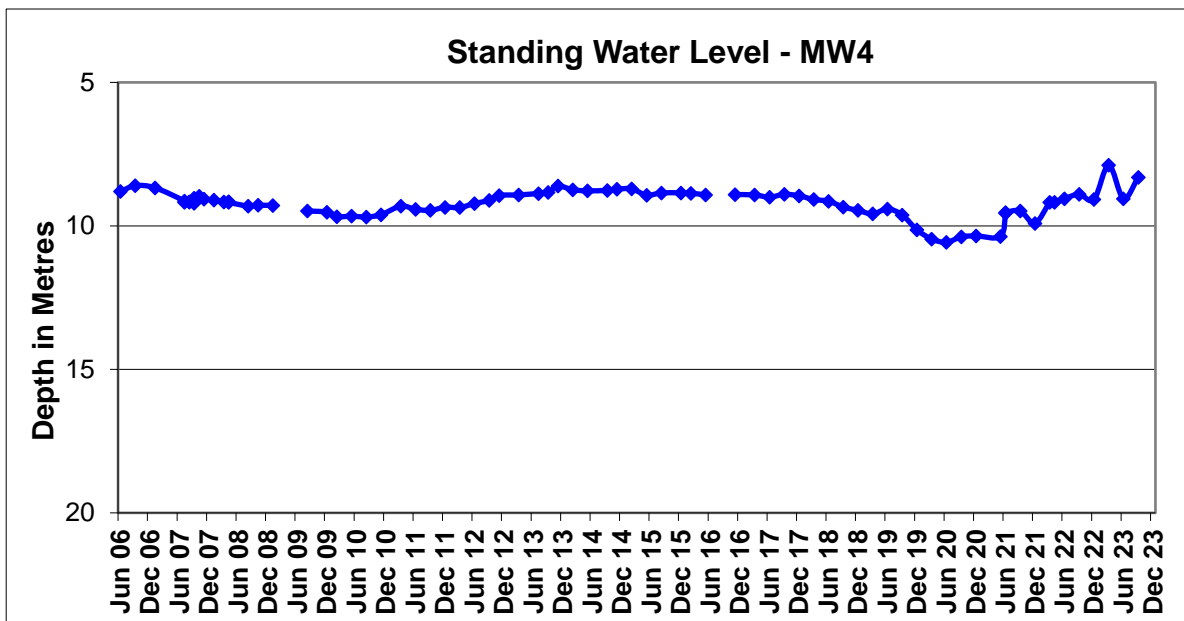
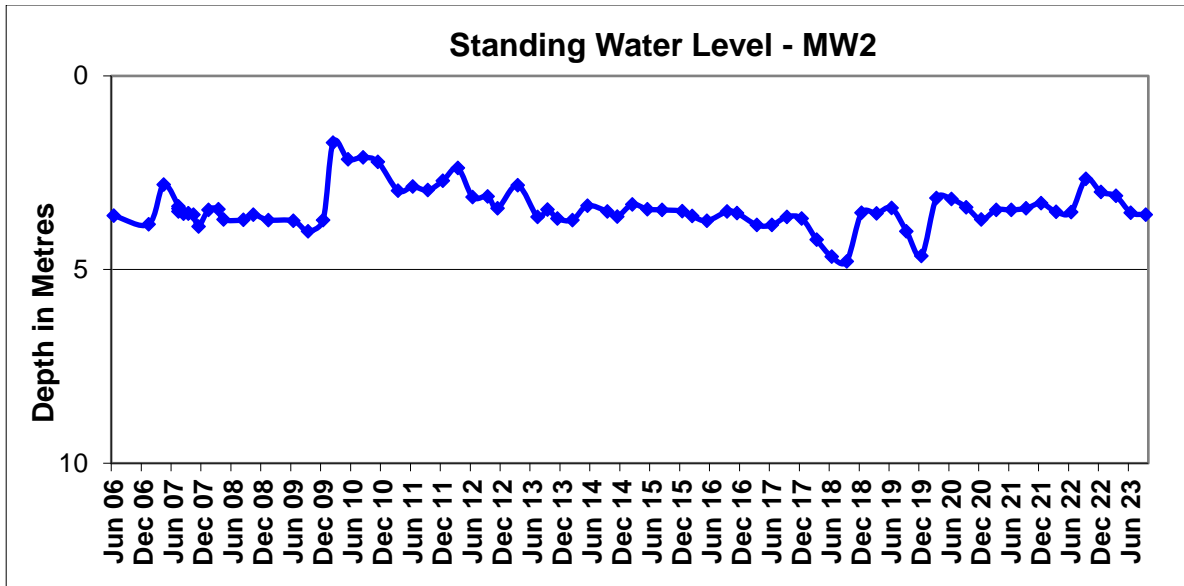
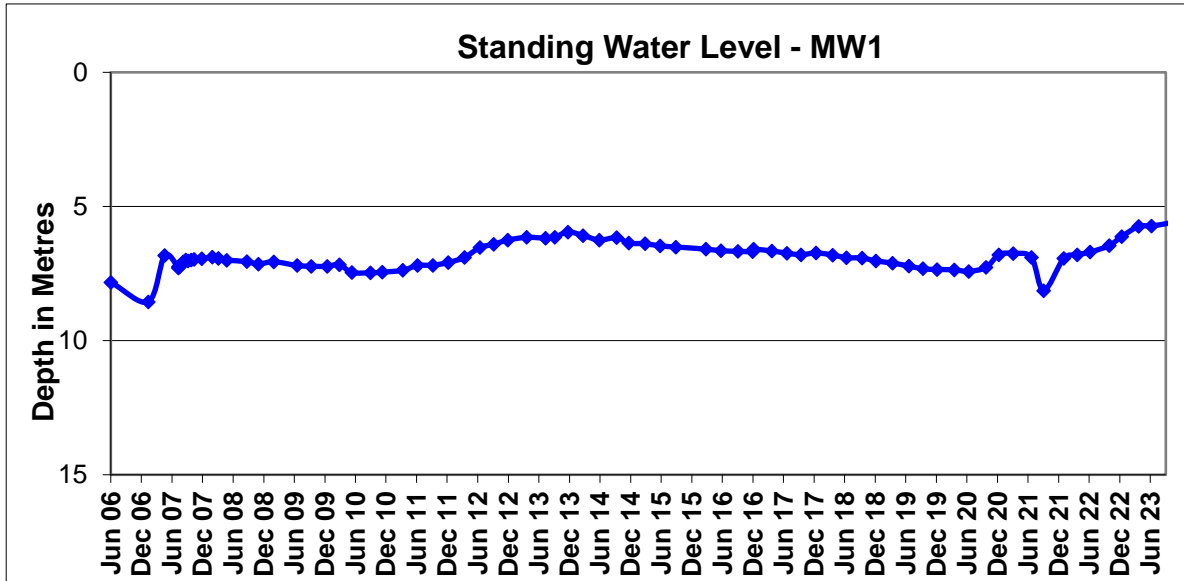


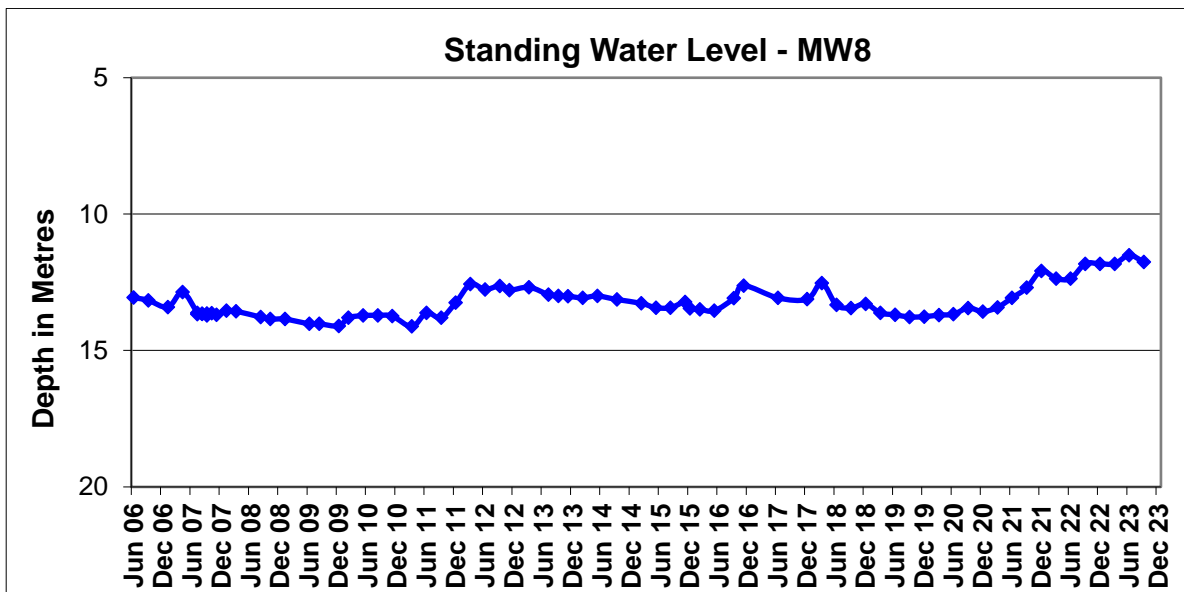
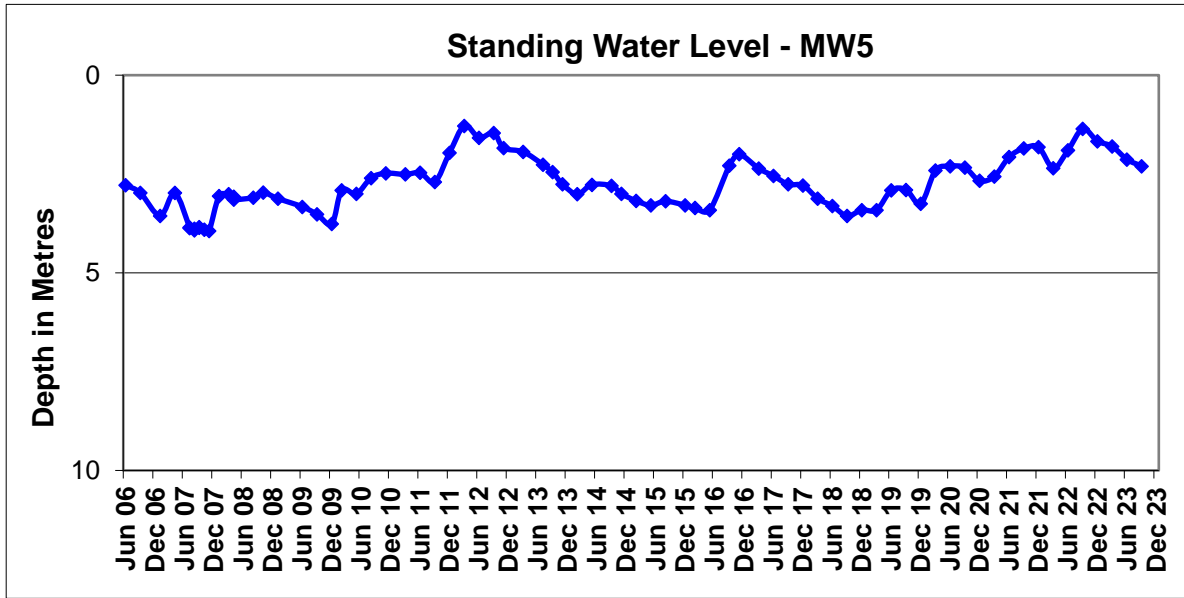
# Appendix B

Deposited Dust Gauge Results- Quarterly rolling average [g/m<sup>2</sup>/month]



# Appendix C





**Notes:** Notes of the 73<sup>rd</sup> Meeting of the Tarrawonga Coal Community Consultative Committee  
**2023**

**Wednesday 30 August**

Held at the Tarrawonga Coal Mine Training Room, 9 am.

**Members Present:** Aaron Cross (AC) – Narrabri Shire Council, Alison Quiroz (AQ) – TCM, Elizabeth O’Hara (EOH) – Community Representative, Jackie Scott (JS) – WHC, Landon Brady (LB) – Narrabri Shire Council, Larissa Golby (LG) – Tarrawonga Coal Mine, Maddi Wright (MW) – Tarrawonga Coal Mine, Prashanth Van Houten (PvH) – Gunnedah Shire Council (alternate), Wade Hudson (WH) – Gunnedah Shire Council.

**Apologies:** Colleen Fuller (CF) – Community Representative, Cr Darrell Tiemens – Narrabri Shire Council (DT), Cr Rob Hooke – Gunnedah Shire Council (RH), Lloyd Finlay (LF) – Community Representative, Mark Hathway (MHa) – Community Representative, Megan Martin (MM) – TCM, Michelle Henry (MH) – Narrabri Shire Council, Omar Romeril (OR) – TCM

**Independent Chair:** David Ross (DR)

**Independent Secretary:** Debbie Corlet (DC)

Agenda Items	Who to Present
1. Welcome and Apologies	DR
2. Declaration of pecuniary or other interests	DR
3. Minutes from Previous Meeting	DR
4. Actions from Previous Meeting	DR
5. Mine Progress Report	MW
6. Environmental Monitoring Report	MW & AQ
7. General Business	ALL
8. Next Meeting – <b>Wednesday 25 October 2023</b>	ALL



Agenda Item	Discussion	Action/By Whom
1.	<b>Welcome and Apologies</b> – DR welcomed everyone to the CCC meeting. Advised that he is still looking for new members but to date the response has been underwhelming. Explained that this will be a short meeting as we'll be doing a site tour.	
2.	<b>Declaration of pecuniary or other interests</b> – EOH has a small package of WHC shares. DR is paid a fee as chair as is DC for typing the minutes.	
3.	<b>Minutes from Previous Meeting</b> – Members accepted the minutes appropriately reflected what was discussed.	
4.	<b>Actions from Previous Meeting</b> – DR – Most actions from previous meeting have been completed. An action on RH to remain open due to his absence.	
5.	<b>Mine Progress Report – Overview</b>  MW commenced the report by providing members with an update on the mine's safety statistics before discussing how mining production has progressed.  <b>Community</b> – Donations across April to June 2023 of over \$385,378.63 were spent in the local community.	

6.

### Environmental Monitoring Report

**Q3 CY23 Summary** – MW noted that topsoil stripping is nearly completed. Sediment dams have been dewatered and inlets are being reworked and desilted. Rehabilitation of SOEA has progressed well, with topsoil spreading; more than half done and seeding to occur in the coming weeks. Water Management Plan submitted and waiting for review by the DPE. Annual Rehab Report submitted under the new legislation. Independent Environmental Audit undertaken; report will be published when finalised – one minor administrative non-compliance identified.

WH – Re the Water Management Plan, is that in part due to the Modification Plan.

MW – It's a general review requirement triggered to take place every three years.

**Noise** – No exceedances in Q3 Attended Noise Monitoring.

**Blasting** – All blasts this quarter were within blasting criteria. 1216 blasts up until 30 June at TCM since operations began.

**Air** – All air quality monitoring for the quarter is within TCM's approval criteria.

**Tyre Disposal Update** – 319 Tonnes of tyres disposed at Tarrawonga on 22 Nov 2. No more have been disposed of this year (EPL 12365). WHC has compiled the report on the tyre approval granted in the EPL and has been submitted.

EOH – The general feeling in the community is that it is just easier to bury the tyres because there is no cost. So, you aren’t actively encouraged to find alternatives.  
 MW – We do a lot of research in this space. There is no technology for this type of rubber to be recycled. There is nowhere for it to go.

EOH – Can you provide a slide next CCC of where you have researched (a slide for all future meetings).

DR – I think because of PvH’s previous suggestions for organisations to be considered to help with tyre researching, each of the mines considered those. I think they all reached out to the organisation. Unfortunately, only tyres of a much smaller size could be handled.

MW – No one wants to fund it.  
 LB – Needs to be a lot more work done. In Europe, recycled tyre material is used for roads. Here they say it is not up to standard for roads.  
 MW – The report submitted goes more into where the tyres are buried rather than about the storage. Definitely something we are aware of and try not to store for a long time. We don’t monitor day to day.

PvH – 319 tonnes were disposed of in November. Post that date what happens with the tyres.  
 MW – They are stored - can’t be higher than 3 metres below the surface. Can’t be near anything combustible. The licence will dictate what we can dispose.

LB – Does the EPL state re leaching issues.  
 MW – No it doesn’t.  
 EOH – Tyre Stewardship was a prime ministerial program. Might be something that WHC can put forward to being a recycler.

DR – This issue of tyres has been discussed for the last 2 years. But, I don’t think that we have discussed how the mine manages the issues of leaching etc once buried. Could that be a discussion / presentation at the next meeting?  
 MW – This is something we are very passionate about as well. Yes, we can do at the next meeting.

EOH – There was also talk about chemicals being buried inside the tyres.  
 MW – No never to my knowledge.

ACTION 1 – MW to provide a slide on where they have researched for the tyre recycling.

ACTION 2 – A presentation on how mine minimises impacts of tyre burial at next meeting

ACTION 3 – MW to report back and confirm no chemicals being buried.

	<p>LB – Re the chemical storage - the EPA do routine inspections where they will look into issues like that. There was a requirement for bunding.</p> <p>EOH – This sort of thing is very important for the community.</p> <p>Noise - No exceedances in Q3 Attended Noise Monitoring.</p>	<p>ACTION 4 – MW to provide the link for the tyre management report.</p>
<p>7.</p>	<p><b>General Business</b></p> <p>EOH – How much have the evaporators been used in the months since the last CCC meeting.</p> <p>MW – Have been used rarely; last time used was the 2<sup>nd</sup> August. The evaporation is not very high due to winter. Maybe more in summer.</p> <p>DR – At our next meeting, we need to talk about the revised CCC Guidelines. This discussion will require some time. Members across all of the State’s CCC, including proponents, can be subjected in the future to sterner warnings if required.</p> <p>MW – With respect to what we are undertaking over the next few months, rehabilitation is our priority and needs to be completed by 31 December. Other than the modification 10 discussed at the previous meeting, there are no other modifications expected in the next few months.</p> <p>AQ –We have to improve our sediment dams as part of our EPL licence variation- date is by 31 December.</p> <p>EOH - Stock planting. Is there a move to more seed spreading.</p> <p>MW – We are doing both. First seeding and then tube stock. There is more talk of what is more effective. At this time, we are doing both. We do trials every year as well to see what works. Missed out on planting tubestock in flood period; 36 ha in total by the end of this year. Due to the site being inaccessible, mining was halted and dirt was not transported as required. The land-forming of the rehabilitation was the main cause behind rehab being delayed for 2022. We are more than making up for it in our rehabilitation efforts for this year.</p>	
<p>8.</p>	<p><b>Next meeting date</b> – Wednesday 25 October 2023 at 10:00 am.</p> <p>Members then spent the rest of the meeting on a site tour looking predominantly at rehabilitation sites.</p>	

**Meeting (including site tour) closed at 12:00 pm.**

<b>Page No</b>	<b>Action No</b>	<b>Description</b>	<b>Date Raised</b>
		RH to report back next month on meeting with UNSW	24 May 2023
3	1	MW to provide a slide on where they have researched for the tyre recycling.	30 August 2023
3	2	A presentation on how mine minimises impacts of tyre burial at next meeting	30 August 2023
3	3	MW to report back and confirm no chemicals being buried.	30 August 2023
3	4	MW to provide the link for the tyre management report.	30 August 2023