

Tarrawonga Coal Mine Community Consultative Committee Meeting #76

Quarterly Environmental Monitoring Report
January 2024 – March 2024



Photo taken in February 2024 showing fresh tree mounding on the TC Rehabilitation

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 January 1 2024 to March 31 2024. 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 11th to the 15th of March 2024. 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 – Q1 March 2024)

| Table 1 TCM Operational Noise Monitoring Results – 11 March 2024 (Evening) | | | | |
|---|--------|------------------------------|--|---|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC ¹ | Identified Noise Sources |
| Matong – TN2 | 6:05pm | 34 | 3.9 / 131 / D | Birds (33), insects (26), TCM (<20) |
| Barbers Lagoon – TN3 | 7:37pm | 52 | 2.7 / 109 / E | Traffic (52), insects (30), birds (29), TCM (25)¹ |
| Bungalow – TN4 | 6:55pm | 44 | 3.8 / 117 / E | Insects (41), birds (39), traffic (36), TCM (<20) |

1. Coal trucks on private haul road

| Table 2 TCM Operational Noise Monitoring Results – 11-12 March 2024 (Night) | | | | |
|--|---------|------------------------------|---------------------------------|---|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 1:05am | 32 | 2.6 / 109 / E | Insects (32), TCM (<20) |
| Barbers Lagoon – TN3 | 10:32pm | 33 | 1.6 / 148 / E | Insects (30), TCM (30) |
| Bungalow – TN4 | 11:45pm | 41 | 2.9 / 107 / E | Dog (40), insects (34), traffic (23), TCM (<20) |

| Table 3 TCM Operational Noise Monitoring Results – 12 March 2024 (Day) | | | | |
|---|---------|------------------------------|---------------------------------|---|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 10:40am | 34 | 2.4 / 222 / A | Birds (33), traffic (26), TCM (20) |
| Barbers Lagoon – TN3 | 2:17pm | 53 | 3.8 / 179 / B | Traffic (53), birds (38), TCM (<20) |
| Bungalow – TN4 | 12:34pm | 40 | 3.9 / 178 / B | Traffic (37), birds (37), TCM (<20) |

| Table 4 TCM Operational Noise Monitoring Results – 12 March 2024 (Evening) | | | | |
|---|--------|------------------------------|---------------------------------|---|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 8:00pm | 39 | 1.5 / 063 / E | Insects (39), TCM (<20) |
| Barbers Lagoon – TN3 | 9:27pm | 33 | 1.1 / 061 / E | Insects (31), traffic (29), TCM (<20) |
| Bungalow – TN4 | 8:46pm | 35 | 1.2 / 063 / E | Traffic (33), insects (31), TCM (<20) |

| Table 5 TCM Operational Noise Monitoring Results – 12-13 March 2024 (Night) | | | | |
|--|---------|------------------------------|---------------------------------|--------------------------------------|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 12:21am | 37 | 1.7 / 103 / E | Insects (37), TCM (<20) |
| Barbers Lagoon – TN3 | 1:40am | 26 | 2.0 / 108 / E | Insects (26), TCM (<20) |
| Bungalow – TN4 | 11:02pm | 38 | 1.8 / 079 / E | Traffic (35), insects (24), TCM (26) |

| Table 6 TCM Operational Noise Monitoring Results – 13 March 2024 (Day) | | | | |
|---|---------|------------------------------|---------------------------------|---|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 10:32am | 46 | 2.4 / 237 / B | Traffic (45), birds (40), insects (29), TCM (<20) |
| Barbers Lagoon – TN3 | 2:01pm | 58 | 4.1 / 195 / B | Traffic (58), birds (33), insects (22), TCM (<20) |
| Bungalow – TN4 | 12:19pm | 44 | 2.7 / 240 / B | Traffic (43), birds (38), TCM (<20) |

| Table 7 TCM Operational Noise Monitoring Results – 13 March 2024 (Evening) | | | | |
|---|--------|------------------------------|---------------------------------|---------------------------------------|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 6:46pm | 35 | 1.3 / 188 / E | Birds (35), insects (25), TCM (<20) |
| Barbers Lagoon – TN3 | 8:17pm | 31 | 2.7 / 038 / F | Insects (31), TCM (<20) |
| Bungalow – TN4 | 7:35pm | 29 | 1.2 / 057 / E | Insects (26), traffic (26), TCM (<20) |

| Table 8 TCM Operational Noise Monitoring Results – 13-14 March 2024 (Night) | | | | |
|--|---------|------------------------------|---------------------------------|---------------------------------------|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 11:30pm | 29 | 1.1 / 095 / E | Insects (29), TCM (<20) |
| Barbers Lagoon – TN3 | 10:11pm | 58 | 1.7 / 068 / E | Traffic (58), insects (29), TCM (<20) |
| Bungalow – TN4 | 12:50am | 30 | 1.2 / 133 / E | Insects (30), TCM (<20) |

| Table 9 TCM Operational Noise Monitoring Results – 14 March 2024 (Day) | | | | |
|---|---------|------------------------------|---------------------------------|-------------------------------------|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 9:00am | 62 | 1.9 / 244 / A | Birds (29), insects (29), TCM (<20) |
| Barbers Lagoon – TN3 | 12:20pm | 56 | 2.4 / 268 / B | Traffic (56), birds (26), TCM (<20) |
| Bungalow – TN4 | 10:38am | 36 | 2.3 / 259 / A | Traffic (35), birds (28), TCM (24) |

| Table 10 TCM Operational Noise Monitoring Results – 14 March 2024 (Evening) | | | | |
|--|--------|------------------------------|---------------------------------|-------------------------------------|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 8:47pm | 38 | 1.6 / 067 / E | Traffic (38), TCM (21) |
| Barbers Lagoon – TN3 | 6:34pm | 56 | 0.7 / 216 / F | Traffic (56), birds (30), TCM (<20) |
| Bungalow – TN4 | 7:27pm | 41 | 1.2 / 072 / E | Traffic (40), birds (33), TCM (<20) |

| Table 11 TCM Operational Noise Monitoring Results – 14-15 March 2024 (Night) | | | | |
|---|---------|------------------------------|---------------------------------|--------------------------------------|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 1:05am | 32 | 2.0 / 129 / E | Insects (32), TCM (<20) |
| Barbers Lagoon – TN3 | 11:50pm | 31 | 1.6 / 050 / E | Insects (31), TCM (20) |
| Bungalow – TN4 | 10:37pm | 41 | 1.6 / 058 / E | Traffic (40), insects (33), TCM (31) |

| Table 12 TCM Operational Noise Monitoring Results – 15 March 2024 (Day) | | | | |
|--|---------|------------------------------|---------------------------------|---|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 9:34am | 36 | 4.6 / 151 / C | Traffic (34), birds (31), TCM (<20) |
| Barbers Lagoon – TN3 | 1:05pm | 62 | 5.2 / 136 / C | Traffic (62), wind in trees (33), TCM (<20) |
| Bungalow – TN4 | 11:22am | 57 | 4.8 / 147 / C | Traffic (57), wind in trees (40), birds (38), 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. Low-frequency analysis – Bungalow – TN4 10:37 pm | | | | | | | | | | | | | |
|--|---|------|----|----|----|------|----|----|----|----|-----|-----|-----|
| Hz/dB(Z) | One-third octave LZeq,15min threshold level | | | | | | | | | | | | |
| Frequency (Hz) | 10 | 12.5 | 16 | 20 | 25 | 31.5 | 40 | 50 | 63 | 80 | 100 | 125 | 160 |
| Bungalow – TN4, dB(Z) | -- | 50 | 61 | 60 | 59 | 57 | 46 | 50 | 45 | 44 | 43 | 40 | 36 |
| Threshold, dB(Z) | 92 | 89 | 86 | 77 | 69 | 61 | 54 | 50 | 50 | 48 | 48 | 46 | 44 |
| Exceedance, dB | -- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

The results in Table 13 show no exceedance of the low-frequency criteria.

| Table 14 TCM Sleep Disturbance Monitoring Results – 11-12 March 2024 (Night) | | | | | |
|---|---------|----------------------------------|----------------------------------|-----------|---------------------------------|
| Location | Time | dB(A) L1 (1 min) ¹ | dB(A) L1 (1 min) ² | L1 Source | Wind speed / direction / PSC |
| Matong – TN2 | 1:05am | <20 | 39 | Insects | 2.6 / 109 / E |
| Barbers Lagoon – TN3 | 10:32pm | 34 | 39 | Insects | 1.6 / 148 / E |
| Bungalow – TN4 | 11:45pm | <20 | 73 | Dog | 2.9 / 107 / E |

1. L1 (1 min) – total measured level.

2. L1 (1 min) – TCM noise only.

| Table 15 TCM Sleep Disturbance Monitoring Results – 12-13 March 2024 (Night) | | | | | |
|---|---------|----------------------------------|----------------------------------|-----------|---------------------------------|
| Location | Time | dB(A) L1 (1 min) ¹ | dB(A) L1 (1 min) ² | L1 Source | Wind speed / direction / PSC |
| Matong – TN2 | 12:21am | <20 | 50 | Insects | 1.7 / 103 / E |
| Barbers Lagoon – TN3 | 1:40am | <20 | 44 | Insects | 2.0 / 108 / E |
| Bungalow – TN4 | 11:02pm | 30 | 58 | Insects | 1.8 / 079 / E |

| Table 16 TCM Sleep Disturbance Monitoring Results – 13-14 March 2024 (Night) | | | | | |
|---|---------|----------------------------------|----------------------------------|-----------|---------------------------------|
| Location | Time | dB(A) L1 (1 min) ¹ | dB(A) L1 (1 min) ² | L1 Source | Wind speed / direction / PSC |
| Matong – TN2 | 11:30pm | <20 | 42 | Insects | 1.1 / 095 / E |
| Barbers Lagoon – TN3 | 10:11pm | <20 | 93 | Traffic | 1.7 / 068 / E |
| Bungalow – TN4 | 12:50am | <20 | 45 | Insects | 1.2 / 133 / E |

| Table 17 TCM Sleep Disturbance Monitoring Results – 14-15 March 2024 (Night) | | | | | |
|---|---------|----------------------------------|----------------------------------|-----------|---------------------------------|
| Location | Time | dB(A) L1 (1 min) ¹ | dB(A) L1 (1 min) ² | L1 Source | Wind speed / direction / PSC |
| Matong – TN2 | 1:05am | <20 | 48 | Insects | 2.0 / 129 / E |
| Barbers Lagoon – TN3 | 11:50pm | 26 | 50 | Insects | 1.6 / 050 / E |
| Bungalow – TN4 | 10:37pm | 35 | 72 | Traffic | 1.6 / 058 / 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 1265 blasts (until 31/03/2024) at TCM.

The highest result for Overpressure last quarter was 110.1dB recorded at the compliance monitor on the 23/03/2024.

The highest result for ground vibration last quarter was 0.59 mm/s recorded on the 01/02/2024.

TCM overpressure and 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) |
|------------------|------------|-----------------------------|----------------|------------|----------------------------------|------------------|
| Coomalgah | 23/03/2024 | 110.1 | 120 | 01/02/2024 | 0. | 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/m²/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/m²/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/m2/month]¹²¹

| MONTH | TEMPLEMORE (EB-4) | BOLLOL CREEK STN (EB-5) | AMBARD (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) |
|---------------------------------|----------------------|----------------------------|------------------|----------------------|----------------------|----------------------------|----------------------------|----------------------------|----------------------------|---------------------------|
| 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 |
| Oct-23 | 0.5 | 1.3 | 1.1 | 1.5 | 0.5 | 2.6 | 3.3 | 2.2 | 1.9 | 2.0 |
| Nov-23 | 0.3 | 0.7 | 0.4 | 0.6+ | 0.6 | 0.8 | 2.0 | 3.2 | 1.0 | 1.2 |
| Dec-23 | 1.6 | 1.5 | 0.7 | 0.4+ | 1.2 | 0.8 | 3.1 | 4.7+ | 2.9 | 0.5+ |
| Jan-24 | 0.3 | 1.2 | 0.9 | 1 | 1.2 | 1.9 | 2.3 | 2.1 | 2.2 | 1.1 |
| Feb-24 | 0.8 | 0.4 | 0.8 | 0.6 | 0.6 | 1 | 3.4 | 3.7 | 1 | 0.7 |
| Mar-24 | 0.8 | 2.8 | 1 | 2.7 | 0.8 | 0.6 | 4.2 | 5# | 9# | 1.6 |
| 12 MONTH ROLLING AVERAGE | 0.8 | 1.9 | 0.9 | 0.8 | 0.7 | 1.1 | 3.0 | 3.8 | 2.1 | 1.1 |

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 not compliant for DDG testing, so results are not to be assessed against criteria alone. Still used to calculate average

¹DDG 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 (PM₁₀). It operates for 24hr every 6 days. **Table 3** shows that all 24hr average values recorded for this quarter are below 50µg/m³.

Table 3: HVAS PM₁₀ 24hr Quarterly Average levels

| Date | 24hr averaged PM ₁₀ (µg/m ³) | Criterion 24hr average (µg/m ³) | Comments |
|------------|--|--|---|
| 6/01/2024 | 5.8 | 50 | Power outage at HVAS monitor on the 23 rd of Feb 24. |
| 12/01/2024 | 5.2 | | |
| 18/01/2024 | 8 | | |
| 24/01/2024 | 11.7 | | |
| 30/01/2024 | 8.2 | | |
| 5/02/2024 | 17.8 | | |
| 11/02/2024 | 6.2 | | |
| 17/02/2024 | 6.8 | | |
| 23/02/2024 | NA | | |
| 29/02/2024 | 18.1 | | |
| 6/03/2024 | 25.1 | | |
| 12/03/2024 | 14 | | |
| 18/03/2024 | 15.5 | | |
| 24/03/2024 | 10.4 | | |
| 30/03/2024 | 9.9 | | |

Real-time Air monitoring (PM₁₀)

A real time air quality unit (TEOM) is located at the “Flixton” property to monitor PM₁₀ 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 (PM₁₀) 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 March 2023 and March 2024 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) |
|-------------|--------------|----------------|----------------|-----------------------------|
| MW1 | March 23 | 5.74 | 7.37 | 3,600 |
| | June 23 | 5.73 | 7.73 | 3,830 |
| | September 23 | 5.61 | 6.98 | 3,390 |
| | December 23 | 5.45 | 7.24 | 2,810 |
| | March 24 | 6.33 | 7.25 | 3,260 |
| MW2 | March 23 | 3.1 | 6.41 | 946 |
| | June 23 | 3.53 | 6.87 | 979 |
| | September 23 | 3.58 | 6.31 | 778 |
| | December 23 | 3.61 | 7.15 | 729 |
| | March 24 | 4.6 | 6.89 | 716 |
| MW4 | March 23 | 8.5 | 7.04 | 2,900 |
| | June 23 | 9.05 | 7.43 | 3,380 |
| | September 23 | 8.31 | 6.62 | 2,990 |
| | December 23 | 8.24 | 7.49 | 3,100 |
| | March 24 | 8.89 | 7.43 | 3,190 |
| MW5 | March 23 | 1.8 | 7.13 | 1,412 |
| | June 23 | 2.12 | 7.45 | 757 |
| | September 23 | 2.29 | 6.97 | 1,862 |
| | December 23 | 2.47 | 7.52 | 2,004 |
| | March 24 | 3.46 | 7.57 | 1,321 |
| MW8* | March 23 | Sampling error | Casing blocked | Casing blocked |
| | June 23 | 12.3 | | |
| | September 23 | 12.54 | | |
| | December 23 | Sampling error | | |
| | March 24 | 12.91 | | |

*Bore scheduled to be assessed by consultant using a borehole camera, and any problems rectified this year.

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 154.6mm of rain thus far in 2024.

Table 5: Annual rainfall

| 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 | 18.6 | 123 | 79.4 | 518.2 |
| Cumulative (mm) | 21.2 | 32.2 | 202 | 239.2 | 240 | 275.8 | 283.8 | 295.2 | 297.2 | 315.8 | 438.8 | 518.2 | |
| 2024 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
| Monthly Rain (mm) | 53.6 | 56.8 | 26 | 84.6 | | | | | | | | | |
| Cumulative (mm) | 53.6 | 110.4 | 136.4 | 221 | | | | | | | | | |

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 for the upcoming winter season.

Rehabilitation and Clearing

Rehabilitation

By the close of December 2024, TCM prepared approximately 42Ha of Ecosystem compared to a target of 37Ha. TCM also achieved 24Ha of landform against a target of 27Ha. The remaining hectares of landform was absorbed through the Ecosystem establishment phase.

By the close of March this year, the areas highlighted in blue below (Figure 4) were having topsoil placed from our historical clearing areas and stockpiles, and being pushed down the landform slopes. Topsoil spreading is expected to be complete mid-May, and then seeding (including crop cover and natives) will occur soon after.

Tubestock planting is scheduled to occur from April this year. Tubestock planting will encapsulate approximately 55ha, as well as infill planting as required in some areas on the southern rehab.

Trees on the both the North and South rehab areas continue to successfully establish and grow on our rehabilitation area. Ecologists were here during September to assess the success rate of reha, and this monitoring report has now been received and any actions will be addressed throughout this maintenance tree planting program.



Figure 3 Topsoil being spread on the TN Rehab



Figure 4: Rehabilitation areas for ecosystem Establishment

Clearing

Clearing for 2024 began in the second week of March 2024. Approximately 20ha was cleared using a dozer and excavator (for habitat tree felling).

The area will then be mulched with tracked mulchers in the coming weeks.

Ecologists were engaged to do the preclearance checks and mark habitat trees for the clearing process. Archaeologists surveyed the area and reported no new archaeological sites, and no sites to salvage.



Figure 5 Cleared areas 2024

Complaints

Two complaints received during the reporting period.

The first was reported in the last CCC report, but actually came in on the 18th of January. This pertained to a shattered shower screen in Boggabri. The home owner came home after being away to a shattered shower screen. A neighbour commented about a blast that was held at TCM the day prior, and suggested that this may have been the cause. After reviewing our monitoring data, TCMs monitor located at Tarrawonga property did not register a vibration outside of compliance levels for blasting. No further communication has been received from the complainant.

The second complaint pertained to a vehicle driving along Blue Vale Rd whose windscreen was hit by some fly rock off of a haul truck, resulting in a large chip. A mutually agreeable outcome has been reached between the complainant and WHC and this is now considered closed.

Environmental Management Plans

TAR Management Plans

TCMs Noise Management Plan was reviewed and submitted in response to Modification 10 requirements in January 2024. No comments have yet been received.

TCMs Traffic Management Plan was also reviewed and submitted for consultation. Requests were received from Narrabri Shire Council that are being addressed. This plan will be resubmitted in the coming months.

BTM Strategies

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 been reviewed and will be submitted by MCCM once finalised.

The BTM Blast Management Strategy has 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 2024.

Tyre Disposal

TCM completed one round of tyre disposal in Q4, 2023. TCM disposed of 98 heavy Vehicle tyres through in pit disposal. These were disposed of in the TC Pit as per approval conditions, and this was included in the Annual Return for the EPA.

Another round of disposal will likely be conducted in the Q2, 2024.

Annual Compliance EPBC statement

The Annual Compliance EPBC statement will be compiled and submitted to DAWE in June 2024.

Annual National Pollutant Inventory (NPI) and Greenhouse Gas Emission (NGERs) Reports 2024

TCM has submitted information for the NPI and NGERs reports and these were approved and reports published at the close of September 2023. TCM will prepare for these reports at the same time this year.

Audits - Compliance

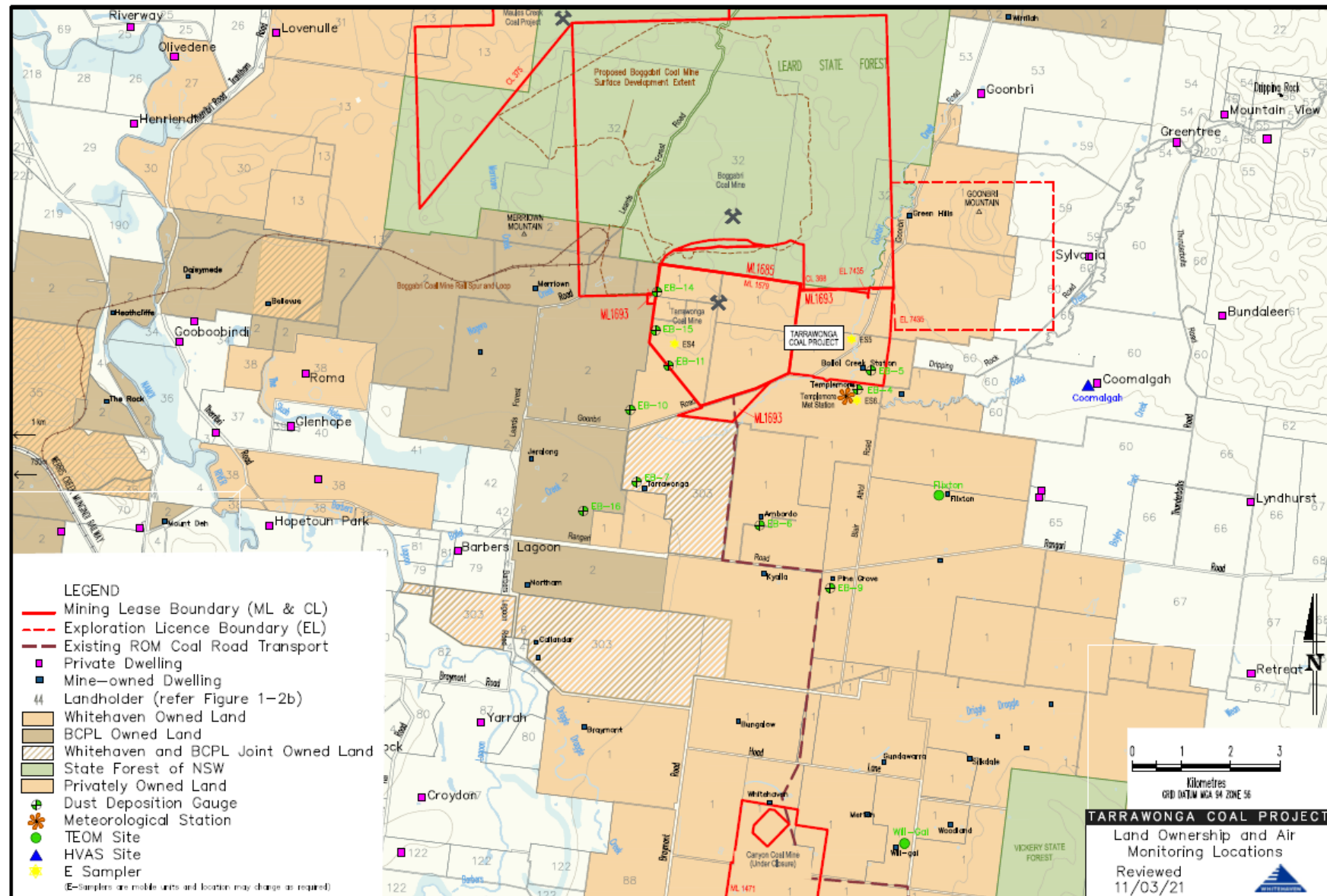
Tarrawonga underwent their Independent Environmental Audit and Independent Biodiversity Audit, last year. These audits are required by the Project Approval PA11_0047, and EPBC Act respectively. These audits were carried out in June 2024. The next audit will be conducted in three years, in June of 2026.

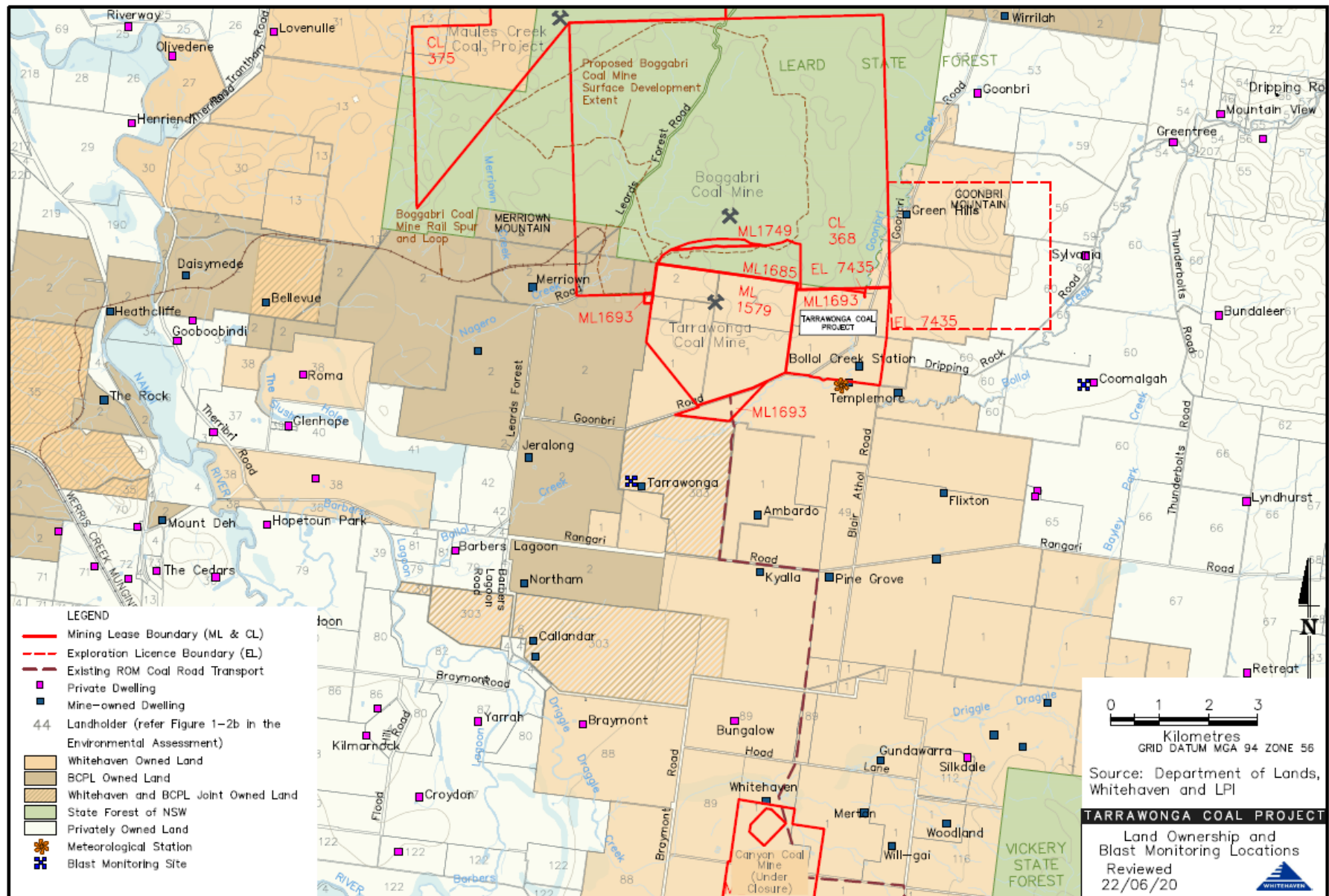
Approvals and Licencing

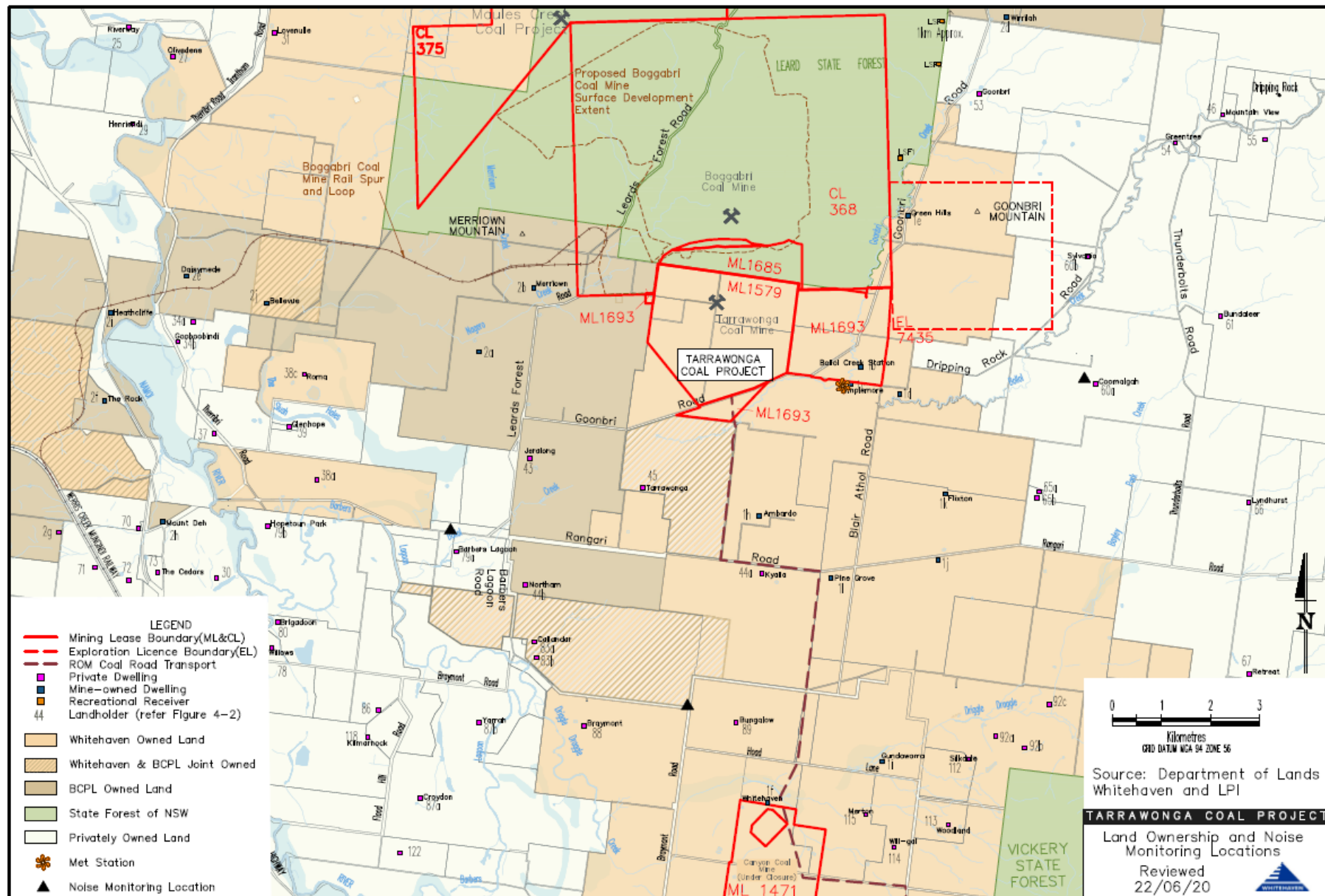
Tarrawongas MP11_0047 Modification 10 was approved on the 19th October 2023. This modification is in relation to Haul truck hours. Tarrawonga has updated and submitted relevant management plans (Noise and Traffic) to align with this modification. These hours were enacted on the 12th of December 2023, and communication was sent out to stakeholders regarding this.

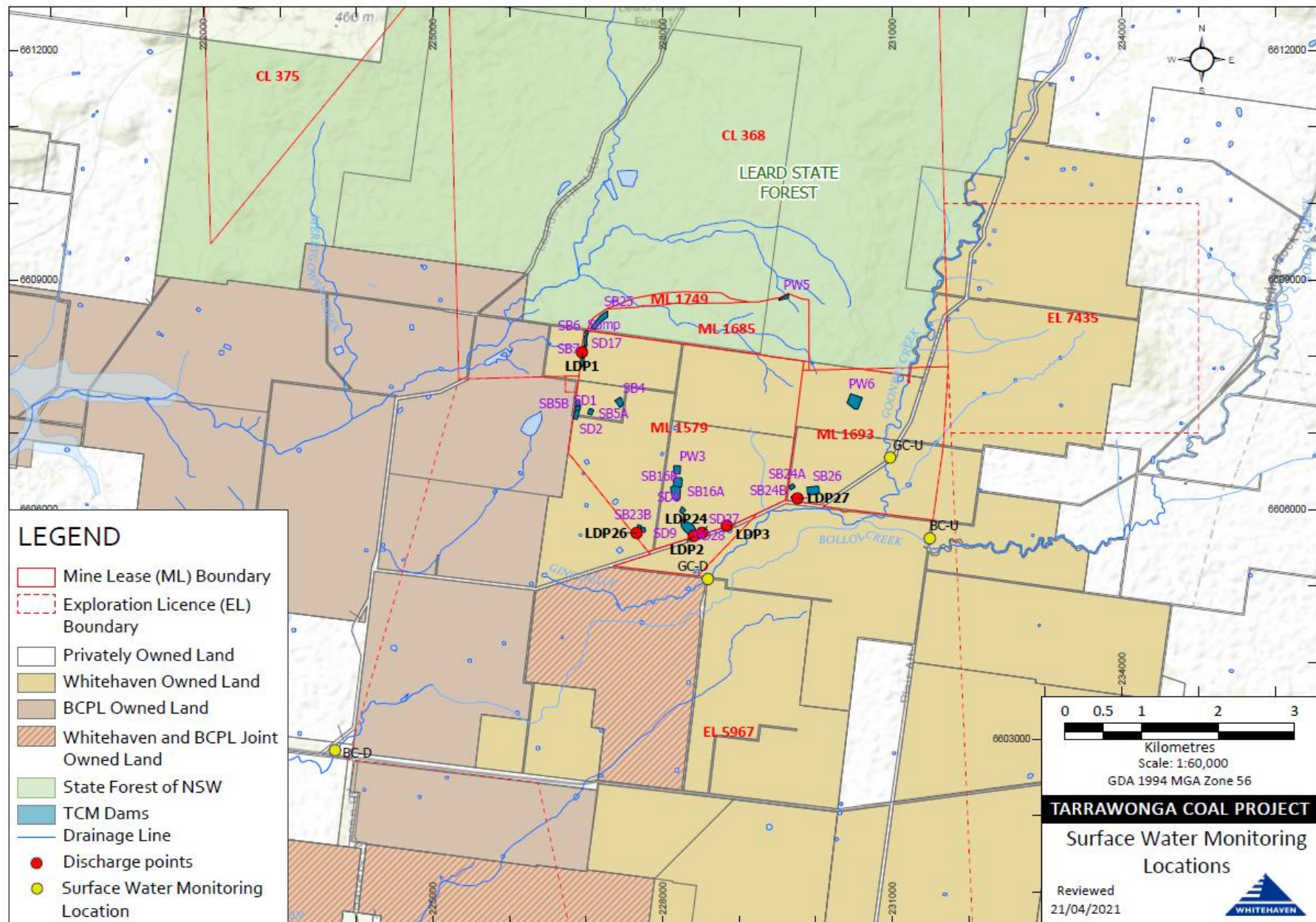
No additional modifications are expected in the foreseeable future.

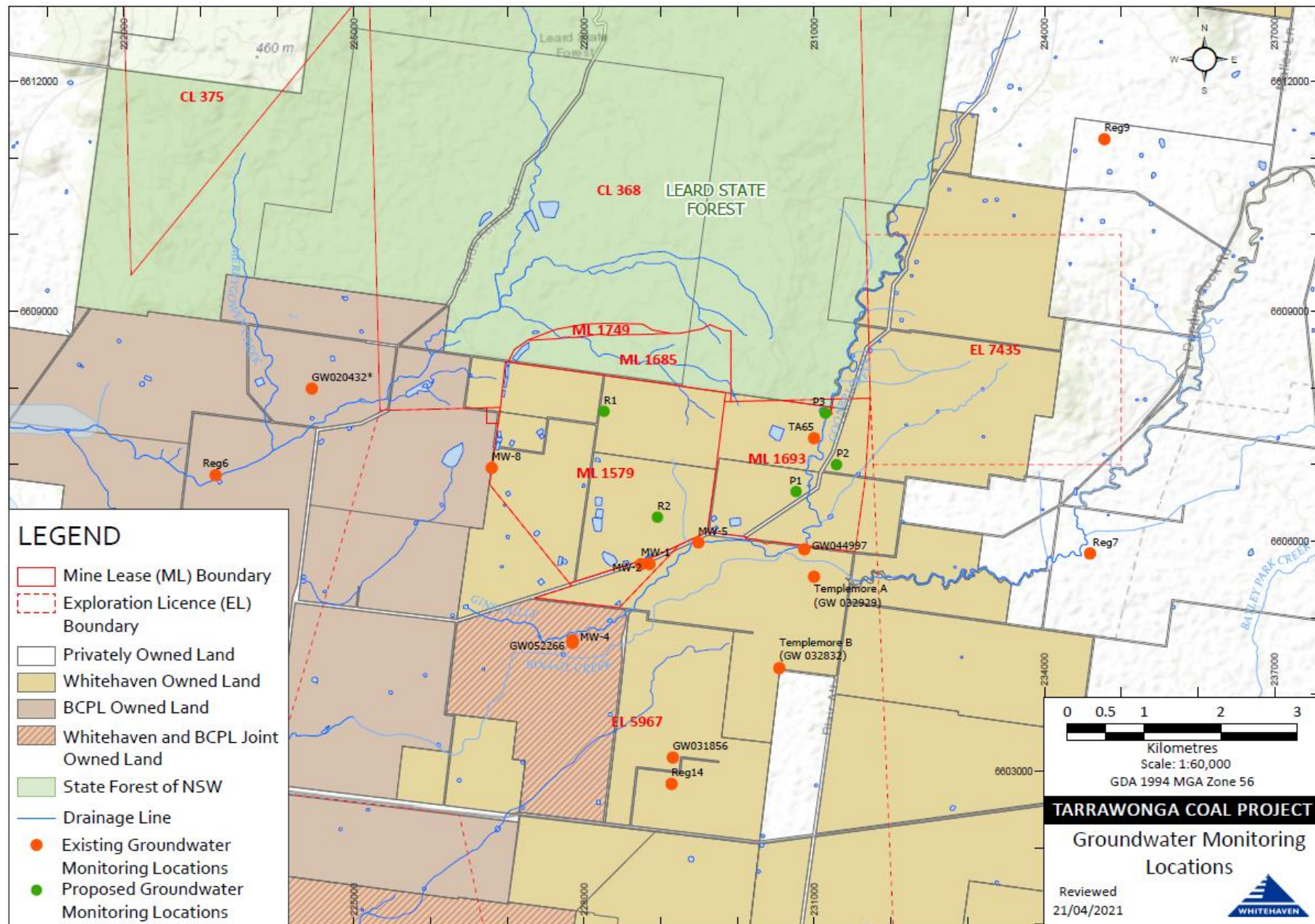
Appendix A





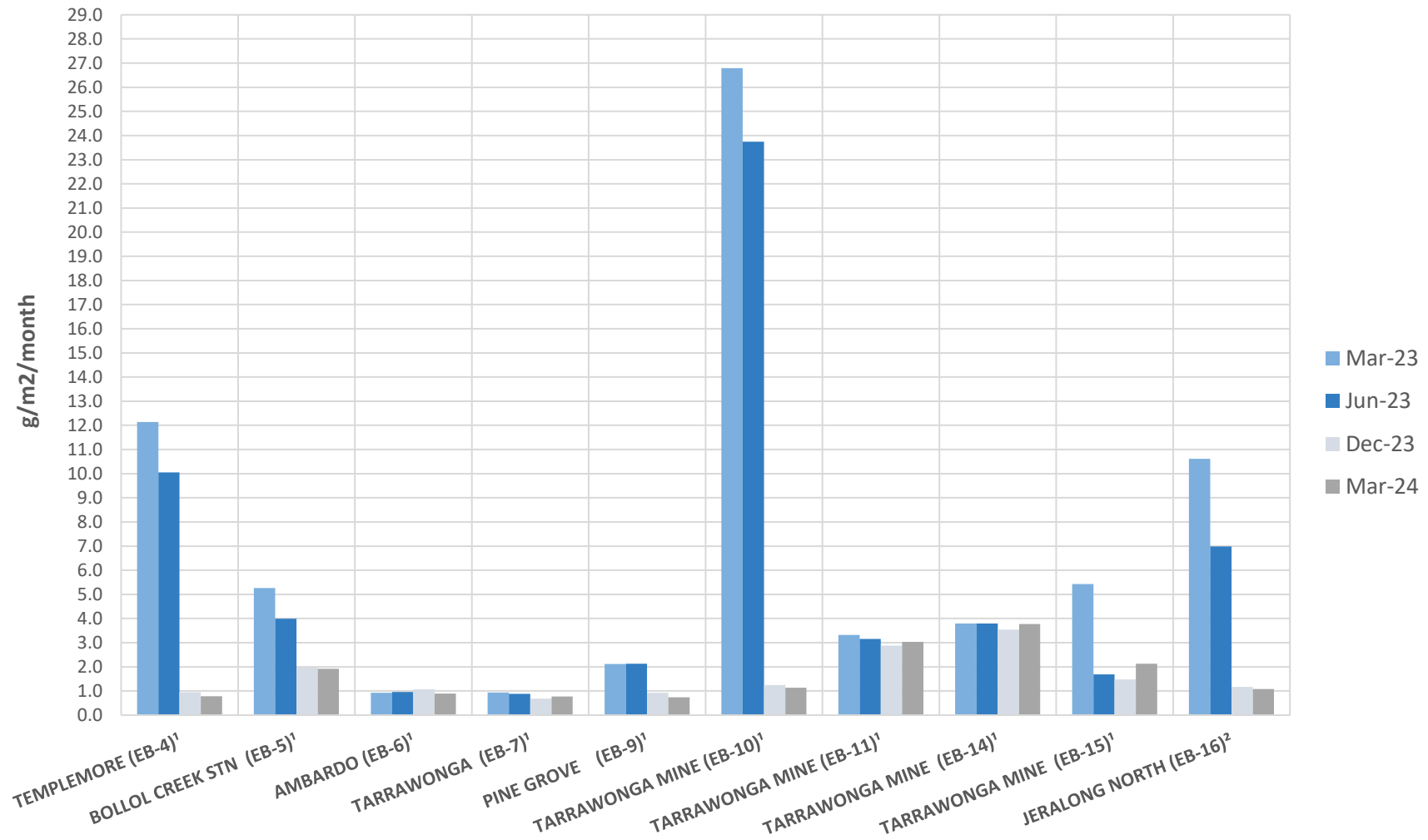




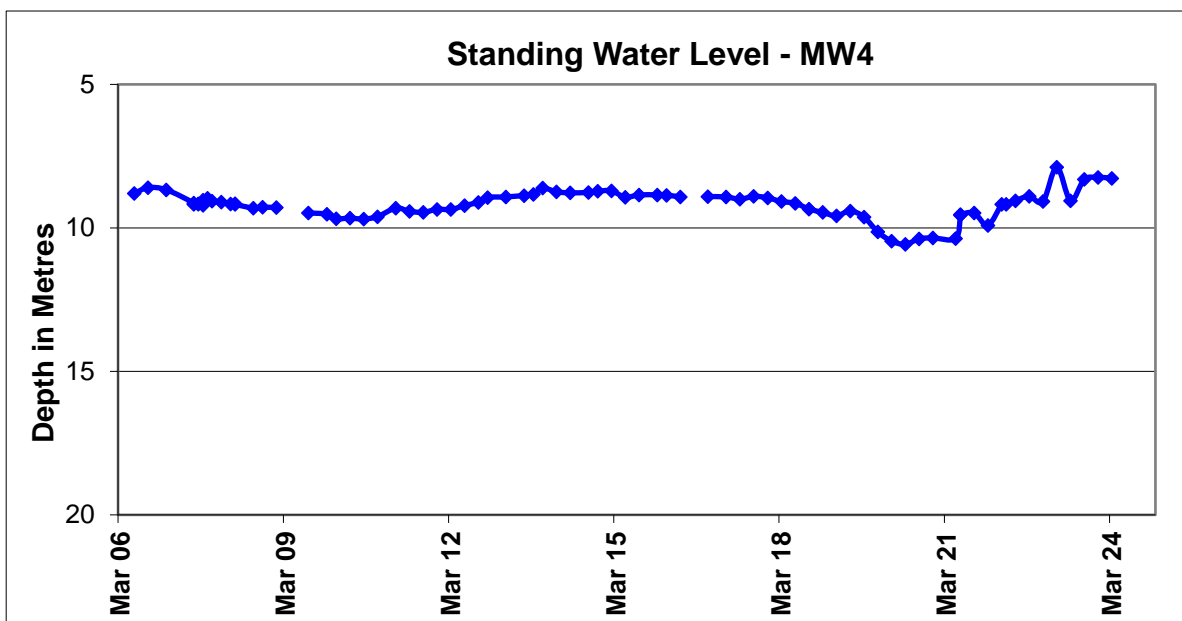
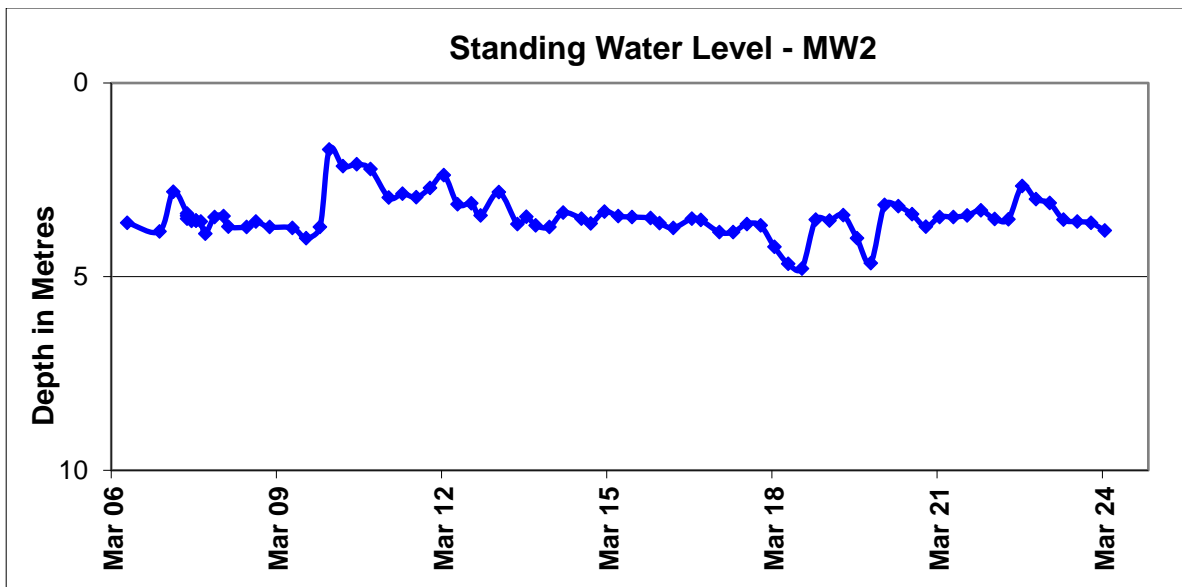
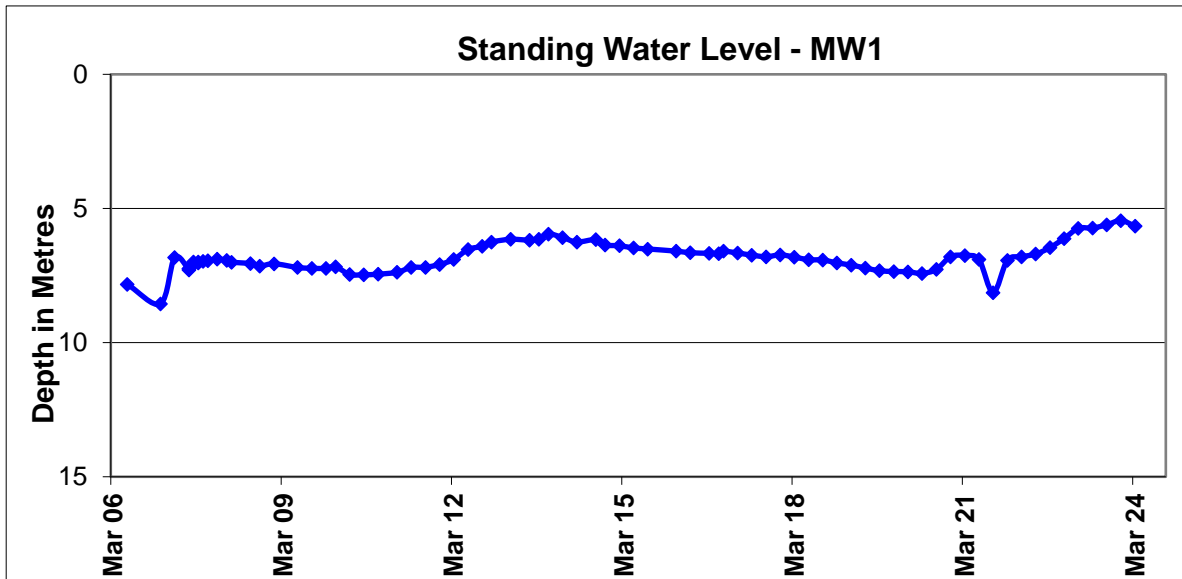


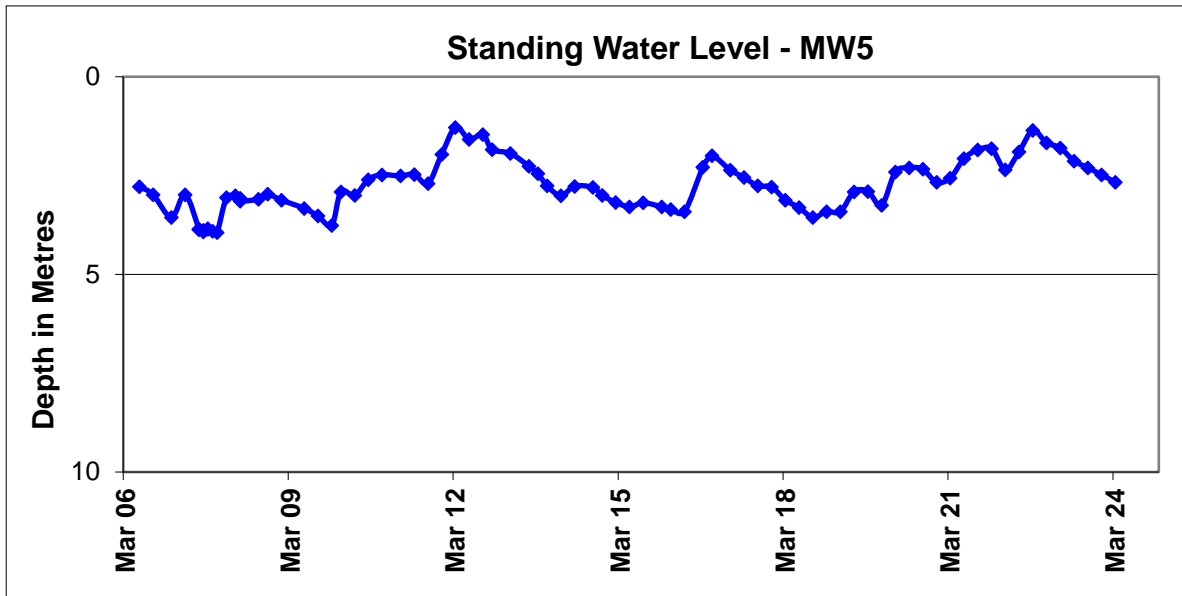
Appendix B

Deposited Dust Gauge Results- Quarterly rolling average [g/m²/month]



Appendix C





Minutes: Minutes of the 76th Meeting of the Tarrawonga Coal Community Consultative Committee held at the Boggabri Golf Club, Kamilaroi Highway, Boggabri on Wednesday 15 May 2024 commencing at 10.05 am.

Members Present: Elizabeth O’Hara (EOH) – Community Representative, Lloyd Finlay (LF) – Community Representative, Cr David Moses (DM) - Gunnedah Shire Council (alternate), Wade Hudson (WH) Gunnedah Shire Council, Matt Hollis – Tarrawonga Coal Mine, Maddi Wright (MW) – Tarrawonga Coal Mine.

Observer: Jaben De Kaiser (JDK) – Whitehaven Coal

Apologies: Mark Hathway (MHa) – Community Representative, Colleen Fuller (CF) – Community Representative, Cr Rob Hooke – Gunnedah Shire Council (RH).

Independent Chair: Michael Silver (MJS)

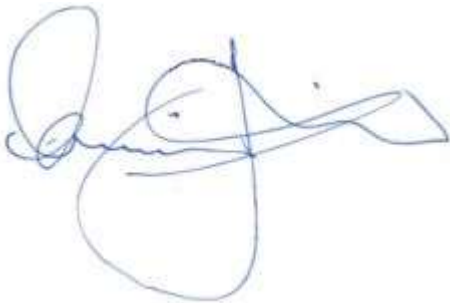
| Agenda Item | Discussion | Action/By Whom |
|-------------|---|----------------|
| 1. | <p>Welcome and Apologies – MJS welcomed everyone to the meeting.</p> <p>In response to a question from EOH regarding attendance of observers, MJS indicated that if a member wishes to invite an observer to a CCC meeting they should advise the Chair who will seek any objections from the Committee to that person's attendance. Should there be objections, the Chair will determine whether that person may or may not attend. MJS also advised that observers may only speak at meetings with the approval of the Chair.</p> | |
| 2. | <p>Acknowledgement of Country - The Chair acknowledged the Traditional Owners of the land on which the meeting is being held and their continuing connection to land, water, and culture, paying respects to their Elders past, present and emerging.</p> | |
| 3. | <p>Declaration of pecuniary or other interests – EOH has a small package of WHC shares. LF leases country from WHC. MJS expenses as chair are borne by TCM.</p> | |
| 4. | <p>Minutes from Previous Meeting – Members accepted that the minutes of the meeting of 14 February 2024 appropriately reflected what was discussed.</p> <p>EOH sought clarification on the extent of rehabilitation (107 hectares) noted in the minutes. MW advised that the Sustainability Report was a Whitehaven wide document and the area rehabilitated related to the aggregation of all Whitehaven mines and not just Tarrawonga Coal Mine.</p> | |
| 5. | <p>Actions from Previous Meeting</p> <p>7.1 TCM to explore feasibility of presenting a slide in future of injuries falling /arising. Response: This information can be provided, and we will endeavour to have this by the next meeting</p> <p>7.2 TCM to provide link to Sustainability Report Response: The Sustainability Report can be found at https://whitehavencoal.com.au/sustainability/</p> <p>7.3 MW to investigate if Social Impact Plan was available. Response: No Social Impact Management Plan required by TCMs Project Approval/Development Consent. Socio Economic Assessment was conducted by TCM during Environmental Assessment phase, this is available for public view at https://whitehavencoal.com.au/our-business/our-assets/tarrawonga-mine/</p> | |
| 6. | <p>Correspondence</p> <p>6.1 R. Druce – Bushfire Equipment</p> | |

| | | |
|----|---|---|
| | <p>The Committee received the correspondence from Ms Roselyn Druce seeking support for an additional bushfire management vehicle at Maules Creek in the Narrabri Rural Fire Service District. MH advised that TCM has its own mine fire control equipment and protocols. It is currently finalising a draft Bush Fire Management Plan and will shortly be discussing key aspects of the draft plan with the Narrabri Shire LEMO with a focus on fire management within the Leard State Forest. EOH commented that mines have an opportunity to assist rural communities in bush fire management. DM stated that it was important for local Emergency Services authorities to work collaboratively. MH noted that asset management and maintenance of bush fire equipment was a responsibility of local government, accordingly the proposal for additional or alternative equipment should be taken up with Narrabri Shire Council (NSC) and the Rural Fire Service (RFS).</p> <p>6.2 Department of Planning Housing and Infrastructure – Appointment of Independent Chair Advising the appointment of MJS as Independent Chair of Tarrawonga Coal Community Consultative Committee.</p> | <p>ACTION: MJS to advise Ms Druce that the proposition should be discussed with NSC and RFS.</p> |
| 7. | <p>Proponent's Report <i>A copy of the Proponent's Report and Quarterly Environmental Report is attached to the minutes.</i></p> <p>MW commenced the report by providing members with an update on the mine's current safety performance with a Total Recordable Incident Frequency Rate (TRIFR) of 1.35.</p> <p>JDK provided an overview of Whitehaven's contributions to the community during the first quarter of 2024, amounting to \$183, 960. He highlighted the broad spread of contributions across the region.</p> <p>MW provided an overview of environmental monitoring and compliance.</p> <ul style="list-style-type: none"> ○ Noise – no exceedances during attended monitoring. ○ Blasting – all blasts within blasting criteria. ○ Air – Dust deposition steady with no exceedance on operational system monitoring. ○ Water – No discharges <p>MW referred members to the Quarterly Environmental Report for more detail.</p> <p>MW outlined the work being undertaken on the north and south rehabilitation areas. She explained the process and the pushing of topsoil downhill with work now underway to trim back the level of cover to 200 millimetres.</p> <p>MW provided an environmental summary, noting as follows:</p> <ul style="list-style-type: none"> ○ Complaints – one received relating to an offsite vehicle complaint. ○ Tree clearing – clearing commenced mid-March with mulching to occur in May. ○ Annual Reporting – documentation submitted to the relevant authorities. ○ Pest control - herding of goats and pig baiting ongoing with fox baiting to be undertaken during winter. Weed control undertaken by contractors quarterly. | |

| | | |
|-----|---|--|
| | <p>MW outlined works to be undertaken during the second quarter of 2024. She advised that 11,500 trees have been ordered, with 8,000 already in the ground after ideal weather conditions.</p> <p>WH sought clarification on the noise exceedances identified within the Proponent's Report, to confirm that the measured exceedances from road traffic were not from Whitehaven traffic. MW confirmed that the exceedances did not relate to Whitehaven traffic.</p> | |
| 8. | Other Agenda Items Nil | |
| 9. | General Business 9.1 Land and Environment Court – EOH enquired whether the matter Maules Creek Community Council v EPA has any implications for Tarrawonga Coal Mine. MH took the matter on notice. 9.2 Future Meetings – DM advised that meetings scheduled for the first and third Wednesdays of the month does conflict with Gunnedah Shire Council meeting days. | |
| 10. | Next Meeting The next meeting is scheduled for August. MJS advised he would be establishing a meeting schedule for members consideration shortly. | |

Meeting closed at 10.40 am.

Approved:



Michael J. Silver OAM
Independent Chair

6 June 2024

Appendix 1: Actions

| Action No | Description | Date Raised | Page No | Status |
|-----------|---|-------------|---------|-----------------------|
| 1 | TCM to explore feasibility of presenting a slide in future of injuries falling / rising | 14.02.24 | 3 | ONGOING |
| 2 | TCM to provide link to Sustainability Report | 14.02.24 | 3 | COMPLETED 15.05.24 |
| 3 | MW to investigate if Social Impact Plan was available | 14.02.24 | 4 | COMPLETED 15.05.24 |
| 4 | MJS to advise Ms Druce that the proposition should be discussed with NSC and RFS. | 15.05.24 | 2 | |
| 5 | MH to investigate response to 9.1 Land and Environment Court matter. | 15.05.24 | 4 | |

Tarrawonga Coal Mine Community Consultative Committee Meeting #77

**Quarterly Environmental Monitoring Report
April 2024 – June 2024**



Photo taken in July 2024 showing rehabilitation progression of the South Rehab with fresh vegetation

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 April 1 2024 to June 30 2024. 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 17th to the 21st of June 2024. 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 – Q2 June 2024)

| Table 1 TCM Operational Noise Monitoring Results – 17 June 2024 (Evening) | | | | |
|--|--------|------------------------------|--|--------------------------------------|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC ¹ | Identified Noise Sources |
| Matong – TN2 | 8:20pm | 28 | 0.5 / 133 / D | Birds (27), insects (22), TCM (<20) |
| Barbers Lagoon – TN3 | 6:30pm | 25 | 1.1 / 273 / E | TCM (25), traffic (21) |
| Bungalow – TN4 | 9:13pm | 33 | 1.0 / 266 / E | TCM (30), insects (29), traffic (22) |

1. Coal trucks on private haul road

| Table 2 TCM Operational Noise Monitoring Results – 17-18 June 2024 (Night) | | | | |
|---|---------|------------------------------|---------------------------------|--------------------------|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 1:06am | 23 | 2.0 / 031 / D | Insects (23), TCM (<20) |
| Barbers Lagoon – TN3 | 11:40pm | 25 | 1.8 / 031 / E | TCM (25) |
| Bungalow – TN4 | 10:24pm | 29 | 1.6 / 078 / E | TCM (28), insects (21) |

| Table 3 TCM Operational Noise Monitoring Results – 18 June 2024 (Day) | | | | |
|--|---------|------------------------------|---------------------------------|-------------------------------------|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 12:22pm | 31 | 1.5 / 264 / A | Birds (30), traffic (24), TCM (<20) |
| Barbers Lagoon – TN3 | 3:53pm | 48 | 1.4 / 264 / C | Traffic (48), birds (23), TCM (<20) |
| Bungalow – TN4 | 2:13pm | 44 | 1.9 / 274 / C | Traffic (44), birds (27), TCM (<20) |

| Table 4 TCM Operational Noise Monitoring Results – 18 June 2024 (Evening) | | | | |
|--|--------|------------------------------|---------------------------------|-------------------------------------|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 8:23pm | 29 | 2.3 / 029 / D | Insects (28), TCM (21) |
| Barbers Lagoon – TN3 | 6:53pm | 47 | 1.5 / 026 / D | Traffic (47), birds (26), TCM (<20) |
| Bungalow – TN4 | 7:34pm | 30 | 2.0 / 202 / E | Birds (29), TCM (24) |

| Table 5 TCM Operational Noise Monitoring Results – 18-19 June 2024 (Night) | | | | |
|---|---------|------------------------------|---------------------------------|--------------------------|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 10:11pm | 21 | 1.7 / 025 / D | Cows (21), TCM (<20) |
| Barbers Lagoon – TN3 | 1:50am | 23 | 1.5 / 040 / E | Birds (23), TCM (<20) |
| Bungalow – TN4 | 12:05am | 24 | 1.0 / 038 / E | Insects (24), TCM (<20) |

| Table 6 TCM Operational Noise Monitoring Results – 19 June 2024 (Day) | | | | |
|--|---------|------------------------------|---------------------------------|---------------------------------------|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 12:19pm | 34 | 1.8 / 212 / B | Birds (34), cows (23), TCM (<20) |
| Barbers Lagoon – TN3 | 3:56pm | 48 | 1.0 / 198 / C | Traffic (48), birds (22), TCM (<20) |
| Bungalow – TN4 | 2:13pm | 30 | 1.6 / 241 / B | Birds (28), aeroplane (25), TCM (<20) |

| Table 7 TCM Operational Noise Monitoring Results – 19 June 2024 (Evening) | | | | |
|--|--------|------------------------------|---------------------------------|-------------------------------------|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 7:51pm | 28 | 1.5 / 028 / D | Cows (26), TCM (23) |
| Barbers Lagoon – TN3 | 6:14pm | 54 | 1.4 / 087 / E | Traffic (54), birds (27), TCM (<20) |
| Bungalow – TN4 | 6:57pm | 44 | 1.9 / 030 / D | Traffic (44), TCM (<20) |

| Table 8 TCM Operational Noise Monitoring Results – 19-20 June 2024 (Night) | | | | |
|---|---------|------------------------------|---------------------------------|--------------------------|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 10:20pm | 28 | 1.2 / 097 / E | Cows (27), TCM (22) |
| Barbers Lagoon – TN3 | 12:55am | 24 | 1.4 / 064 / E | Birds (24), TCM (<20) |
| Bungalow – TN4 | 11:41pm | 31 | 1.5 / 053 / E | Traffic (30), TCM (22) |

| Table 9 TCM Operational Noise Monitoring Results – 20 June 2024 (Day) | | | | |
|--|---------|------------------------------|---------------------------------|------------------------------------|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 10:53am | 38 | 1.0 / 132 / B | Birds (37), TCM (30) |
| Barbers Lagoon – TN3 | 2:34pm | 49 | 1.1 / 186 / C | Traffic (49), TCM (27), birds (22) |
| Bungalow – TN4 | 12:50pm | 42 | 1.6 / 206 / C | Traffic (42), birds (31), TCM (24) |

| Table 10 TCM Operational Noise Monitoring Results – 20 June 2024 (Evening) | | | | |
|---|--------|------------------------------|---------------------------------|--------------------------|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 7:40pm | 38 | 1.1 / 263 / E | Cows (38), TCM (29) |
| Barbers Lagoon – TN3 | 6:05pm | 56 | 1.0 / 103 / E | Traffic (56), TCM (24) |
| Bungalow – TN4 | 6:48pm | 44 | 1.6 / 251 / E | Traffic (44), TCM (22) |

| Table 11 TCM Operational Noise Monitoring Results – 20-21 June 2024 (Night) | | | | |
|--|---------|------------------------------|---------------------------------|------------------------------------|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 10:18pm | 25 | 0.9 / 066 / E | Cows (25), TCM (<20) |
| Barbers Lagoon – TN3 | 12:53am | 35 | 1.6 / 067 / E | Traffic (34), TCM (27), frogs (22) |
| Bungalow – TN4 | 11:40pm | 34 | 1.0 / 114 / E | Traffic (32), TCM (28), frogs (22) |

| Table 12 TCM Operational Noise Monitoring Results – 21 June 2024 (Day) | | | | |
|---|---------|------------------------------|---------------------------------|---|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 11:02am | 34 | 3.4 / 300 / C | Birds (32), residential (30), TCM (<20) |
| Barbers Lagoon – TN3 | 2:37pm | 52 | 4.8 / 279 / D | Traffic (52), birds (30), TCM (<20) |
| Bungalow – TN4 | 12:56pm | 48 | 5.4 / 282 / D | Traffic (48), birds (25), 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 – 17-18 June 2024 (Night) | | | | | |
|--|---------|----------------------------------|----------------------------------|---------------------|---------------------------------|
| Location | Time | dB(A) L1 (1 min) ¹ | dB(A) L1 (1 min) ² | L1 Source | Wind speed / direction / PSC |
| Matong – TN2 | 1:06am | 47 | <20 | Insects | 2.0 / 031 / D |
| Barbers Lagoon – TN3 | 11:40pm | 31 | 31 | General mine hum | 1.8 / 031 / E |
| Bungalow – TN4 | 10:24pm | 35 | 35 | General mine hum | 1.6 / 078 / E |

1. L1 (1 min) – total measured level.

2. L1 (1 min) – TCM noise only.

| Table 14 TCM Sleep Disturbance Monitoring Results – 18-19 June 2024 (Night) | | | | | |
|--|---------|----------------------------------|----------------------------------|-----------|---------------------------------|
| Location | Time | dB(A) L1 (1 min) ¹ | dB(A) L1 (1 min) ² | L1 Source | Wind speed / direction / PSC |
| Matong – TN2 | 10:11pm | 31 | <20 | Cows | 1.7 / 025 / D |
| Barbers Lagoon – TN3 | 1:50am | 30 | <20 | Birds | 1.5 / 040 / E |
| Bungalow – TN4 | 12:05am | 41 | <20 | Insects | 1.0 / 038 / E |

| Table 15 TCM Sleep Disturbance Monitoring Results – 19-20 June 2024 (Night) | | | | | |
|--|---------|----------------------------------|----------------------------------|-----------|---------------------------------|
| Location | Time | dB(A) L1 (1 min) ¹ | dB(A) L1 (1 min) ² | L1 Source | Wind speed / direction / PSC |
| Matong – TN2 | 10:20pm | 37 | 25 | Cows | 1.2 / 097 / E |
| Barbers Lagoon – TN3 | 12:55am | 29 | <20 | Bird | 1.4 / 064 / E |
| Bungalow – TN4 | 11:41pm | 39 | 26 | Car | 1.5 / 053 / E |

| Table 16 TCM Sleep Disturbance Monitoring Results – 20-21 June 2024 (Night) | | | | | |
|--|---------|----------------------------------|----------------------------------|-----------|---------------------------------|
| Location | Time | dB(A) L1 (1 min) ¹ | dB(A) L1 (1 min) ² | L1 Source | Wind speed / direction / PSC |
| Matong – TN2 | 10:18pm | 41 | <20 | Cows | 0.9 / 066 / E |
| Barbers Lagoon – TN3 | 12:53am | 4 | 35 | Traffic | 1.6 / 067 / E |
| Bungalow – TN4 | 11:40pm | 47 | 33 | Traffic | 1.0 / 114 / 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 1292 blasts (until 30/06/2024) at TCM with 27 blasts occurring during the April – June 2024 reporting period.

Table 1 below displays the peak ground vibration and overpressure (air blast) values recorded and dates at the compliance monitor on Coomalgah property during the quarter.

TCM overpressure and ground vibration for the quarter was compliant and did not exceed the blasting criteria declared in the TCM 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 Vibration (mm/s) | Criterion (mm/s) |
|------------------|------------|-----------------------------|----------------|------------|-----------------------------------|------------------|
| Coomalgah | 24/05/2024 | 111.2 | 120 | 24/05/2024 | 0.98 | 10 |

Table 2 below displays the average ground vibration and overpressure (air blast) values recorded and dates at the compliance monitor on Coomalgah property during the quarter.

TCM overpressure and ground vibration for the quarter was well below the blasting criteria declared in the TCM project approval and Blast Management Plan (BMP).

Table 2 - Max Peak Overpressure and Ground Pressure for the Quarter

| Monitor Location | Period | Average. Peak Overpressure (dB) | Criterion (dB) | Number of Blasts | Average Peak Ground Vibration (mm/s) | Criterion (mm/s) |
|------------------|------------------|---------------------------------|----------------|------------------|--------------------------------------|------------------|
| Coomalgah | 1/4/24 – 30/6/24 | 95.2 | 120 | 27 | 0.22 | 10 |

Air Quality Monitoring

Dust Deposition Gauge 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/m²/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/m²/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 3 - Deposited Dust Gauge Results [g/m2/month]¹²¹

| MONTH | TEMPLEMORE (EB-4) | BOLLOL CREEK STN (EB-5) | AMBARD (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) |
|---------------------------------|----------------------|----------------------------|------------------|----------------------|----------------------|----------------------------|----------------------------|----------------------------|----------------------------|---------------------------|
| 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 |
| Oct-23 | 0.5 | 1.3 | 1.1 | 1.5 | 0.5 | 2.6 | 3.3 | 2.2 | 1.9 | 2.0 |
| Nov-23 | 0.3 | 0.7 | 0.4 | 0.6+ | 0.6 | 0.8 | 2.0 | 3.2 | 1.0 | 1.2 |
| Dec-23 | 1.6 | 1.5 | 0.7 | 0.4+ | 1.2 | 0.8 | 3.1 | 4.7+ | 2.9 | 0.5+ |
| Jan-24 | 0.3 | 1.2 | 0.9 | 1 | 1.2 | 1.9 | 2.3 | 2.1 | 2.2 | 1.1 |
| Feb-24 | 0.8 | 0.4 | 0.8 | 0.6 | 0.6 | 1 | 3.4 | 3.7 | 1 | 0.7 |
| Mar-24 | 0.8 | 2.8 | 1 | 2.7 | 0.8 | 0.6 | 4.2 | 5# | 9# | 1.6 |
| Apr-24 | 0.4 | 2.3 | 0.9 | 0.4 | 0.8 | 2.2 | 4.4 | 3.9c | 3.1 | 0.6 |
| May-24 | N/A | 0.9 | 0.6 | 0.6 | 0.4 | 1.6 | 5.2 | 2.6 | 1.0 | 0.8 |
| Jun-24 | 1.5 | 0.2 | 0.4 | 0.2 | 0.4 | 0.5 | 7.4 | 4 | 0.7 | 1 |
| 12 MONTH ROLLING AVERAGE | 0.8 | 1.3 | 0.9 | 0.8 | 0.6 | 1.2 | 3.7 | 3.6 | 2.4 | 1.1 |

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 not compliant for DDG testing, so results are not to be assessed against criteria alone. Still used to calculate average

¹DDG bottle on the fenceline between TCM and BCM ROM.

^{N/A} bottle was removed with a fence by land occupant. No result available.

High Volume Air sampler (PM10) Results

The High Volume Air Sampler (HVAS) installed at Coomalgah property monitors levels of Particle Matter under 10 micron (PM₁₀). It operates for 24hr every 6 days. **Table 4** shows that all 24hr average values recorded for this quarter are below 50µg/m³.

Table 4: HVAS PM10 24hr Quarterly Average levels

| Date | 24hr averaged PM10 (µg/m ³) | Criterion 24hr average (µg/m ³) | Comments |
|------------|---|---|----------|
| 11/04/2024 | 10.6 | 50 | |
| 17/04/2024 | 7.6 | | |
| 23/04/2024 | 6.4 | | |
| 29/04/2024 | 11.0 | | |
| 5/05/2024 | 2.5 | | |
| 11/05/2024 | 3.1 | | |
| 17/05/2024 | 14.4 | | |
| 23/05/2024 | 15.7 | | |
| 29/05/2024 | 22.7 | | |
| 4/06/2024 | 6.5 | | |
| 10/06/2024 | 3.9 | | |
| 16/06/2024 | 4.5 | | |
| 22/06/2024 | 6.3 | | |
| 28/06/2024 | 14.6 | | |

Real-time Air monitoring (PM₁₀)

A real time air quality unit (TEOM) is located at the “Flixton” property to monitor PM₁₀ 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 (PM₁₀) 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 June 2023 and June 2024 are shown in **Table 5** (refer to graphs in *Appendix C*).

Table 5: Groundwater results summary

| Site | Date | SWL (mbgl) | pH (units) | Elect. Conductivity (µS/cm) |
|-------------|--------------|----------------|----------------|-----------------------------|
| MW1 | June 23 | 5.73 | 7.73 | 3,830 |
| | September 23 | 5.61 | 6.98 | 3,390 |
| | December 23 | 5.45 | 7.24 | 2,810 |
| | March 24 | 6.33 | 7.25 | 3,260 |
| | June 24 | 6.36 | 7.22 | 3,880 |
| MW2 | June 23 | 3.53 | 6.87 | 979 |
| | September 23 | 3.58 | 6.31 | 778 |
| | December 23 | 3.61 | 7.15 | 729 |
| | March 24 | 4.6 | 6.89 | 716 |
| | June 24 | 4.58 | 7.64 | 831 |
| MW4 | June 23 | 9.05 | 7.43 | 3,380 |
| | September 23 | 8.31 | 6.62 | 2,990 |
| | December 23 | 8.24 | 7.49 | 3,100 |
| | March 24 | 8.89 | 7.43 | 3,190 |
| | June 24 | 8.78 | 7.51 | 3,680 |
| MW5 | June 23 | 2.12 | 7.45 | 757 |
| | September 23 | 2.29 | 6.97 | 1,862 |
| | December 23 | 2.47 | 7.52 | 2,004 |
| | March 24 | 3.46 | 7.57 | 1,321 |
| | June 24 | 3.61 | 7.85 | 892 |
| MW8* | June 23 | 12.3 | Casing blocked | Casing blocked |
| | September 23 | 12.54 | | |
| | December 23 | Sampling error | | |
| | March 24 | 12.91 | | |
| | June 24 | Sampling error | | |

*Bore scheduled to be assessed by consultant using a borehole camera, and any problems rectified this year.

Surface Water

Water storage onsite is expected to be sufficient for at least the next 12 months. TCM has not undertaken any discharging of treated water during the reporting period.

TCM has recorded 314.4mm of rain to June 30 during 2024.

Table 6: Annual rainfall

| 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 | 18.6 | 123 | 79.4 | 518.2 |
| Cumulative (mm) | 21.2 | 32.2 | 202 | 239.2 | 240 | 275.8 | 283.8 | 295.2 | 297.2 | 315.8 | 438.8 | 518.2 | |
| 2024 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
| Monthly Rain (mm) | 53.6 | 56.8 | 26 | 84.6 | 39.2 | 54.2 | | | | | | | |
| Cumulative (mm) | 53.6 | 110.4 | 136.4 | 221 | 260.2 | 314.4 | | | | | | | |

Evaporator Fans

During the reporting period, Tarrawonga did not use the Evaporator fans to evaporate mine water. TCM may consider utilising the evaporator fans should the wet weather persist throughout the remainder of 2024 or during early 2025.

Rehabilitation and Clearing

Rehabilitation

By the close of June 2024, TCM prepared approximately 30Ha of Ecosystem, reaching target for the calendar year for ecosystem establishment. TCM is currently preparing a landform space of 26Ha to be completed by December 2024.

During the last weeks of May, the areas highlighted in blue below (Figure 4) were having topsoil trimmed and shaped down the landform slopes. During June, a cover crop and native seed mix were sown in the newly topsoiled areas.

Tubestock planting occurred in May, through to July. Tubestock planting encapsulated approximately 55ha, as well as infill planting as required in some areas on the southern rehab. Most seedlings were planted in previously rehabilitated and vegetated areas. This allows a large portion of the year for vegetation to establish prior to seedlings going in, creating organic matter content and other essential elements within the soil. This gives seedlings the best chance of survival.

Trees on the both the North and South rehab areas continue to successfully establish and grow on our historical rehabilitation areas. Ecologists are scheduled to inspect the rehabilitation areas during September to assess the success rate and performance of the TCM rehabilitation areas. The previous years (2023) rehabilitation monitoring report has informed the development of a maintenance schedule and program for all existing rehabilitation areas at TCM for the coming years. This maintenance schedule is updated periodically in accordance with completed and required maintenance works relative to seasonal influences and future rehabilitation monitoring report recommendations.



Figure 3 Completed North Rehab prior to seeding



Figure 4: Rehabilitation areas that reached Ecosystem Establishment during reporting period

Clearing

Clearing for 2024 began in the second week of March 2024. Approximately 20ha was cleared using a dozer and excavator (for habitat tree felling).

The area was then mulched during the reporting period (May/June) using tracked mulchers. This mulch is spread over the topsoil (as pictured below) to incorporate organic material into the topsoil layers and protect the topsoil until it is ready for stripping.

Ecologists were engaged to do the preclearance checks and mark habitat trees for the clearing process. Archaeologists surveyed the area and reported no new archaeological sites, and no sites to salvage.



Figure 5 Cleared areas during mulching (July 2024)

Complaints

No complaints were received during the reporting period.

Environmental Management Plans

TAR Management Plans

TCMs Noise Management Plan was reviewed and submitted in response to Modification 10 requirements in January 2024. This plan was approved.

TCMs Traffic Management Plan was also reviewed and submitted for consultation. Requests were received from Narrabri Shire Council that are being addressed. This plan has been submitted to NSW DPHI for further review and approval.

TCMs revised and updated Air Quality Greenhouse Gas Management Plan has been submitted to NSW DPHI for review and approval.

TCMs Heritage Management Plan and Rehabilitation Management Plan are also currently undergoing internal review, with the main purpose being to transfer to the new WHC Management Plan template. These management plans will be submitted to NSW DPHI for review and approval during Q3 - 2024.

BTM Strategies

The BTM Noise Management Strategy and Blast Management Strategy has been submitted to and approved by NSW DPHI during the reporting period.

The BTM Air Quality Management Strategy is undergoing internal review and is expected to be submitted to the Department by the end of 2024.

Annual and Compliance Reporting

Annual Review and Annual Return Reports

The Annual Return and Annual Review were submitted in March 2024. DPHI approved the Annual Review during June 2024.

Tyre Disposal

TCM completed one round of tyre disposal in is scheduled for Q3 (July) 2024. TCM intends to dispose of approximately 100 HV tyres through in-pit disposal. These tyres will be disposed of in the TN Pit as per approval conditions, and this will be reported in the Annual Return for the EPA in January 2025.

Annual Compliance EPBC statement

The Annual Compliance EPBC statement was submitted to DAWE in June 2024.

Annual National Pollutant Inventory (NPI) and Greenhouse Gas Emission (NGERs) Reports 2024

TCM has submitted information for the NPI and NGERs reports and these were approved and reports are expected to be finalised at the close of September 2024.

Audits - Compliance

Tarrawonga underwent their Independent Environmental Audit and Independent Biodiversity Audit, last year. These audits are required by the Project Approval PA11_0047, and EPBC Act respectively. These audits were carried out in June 2023.

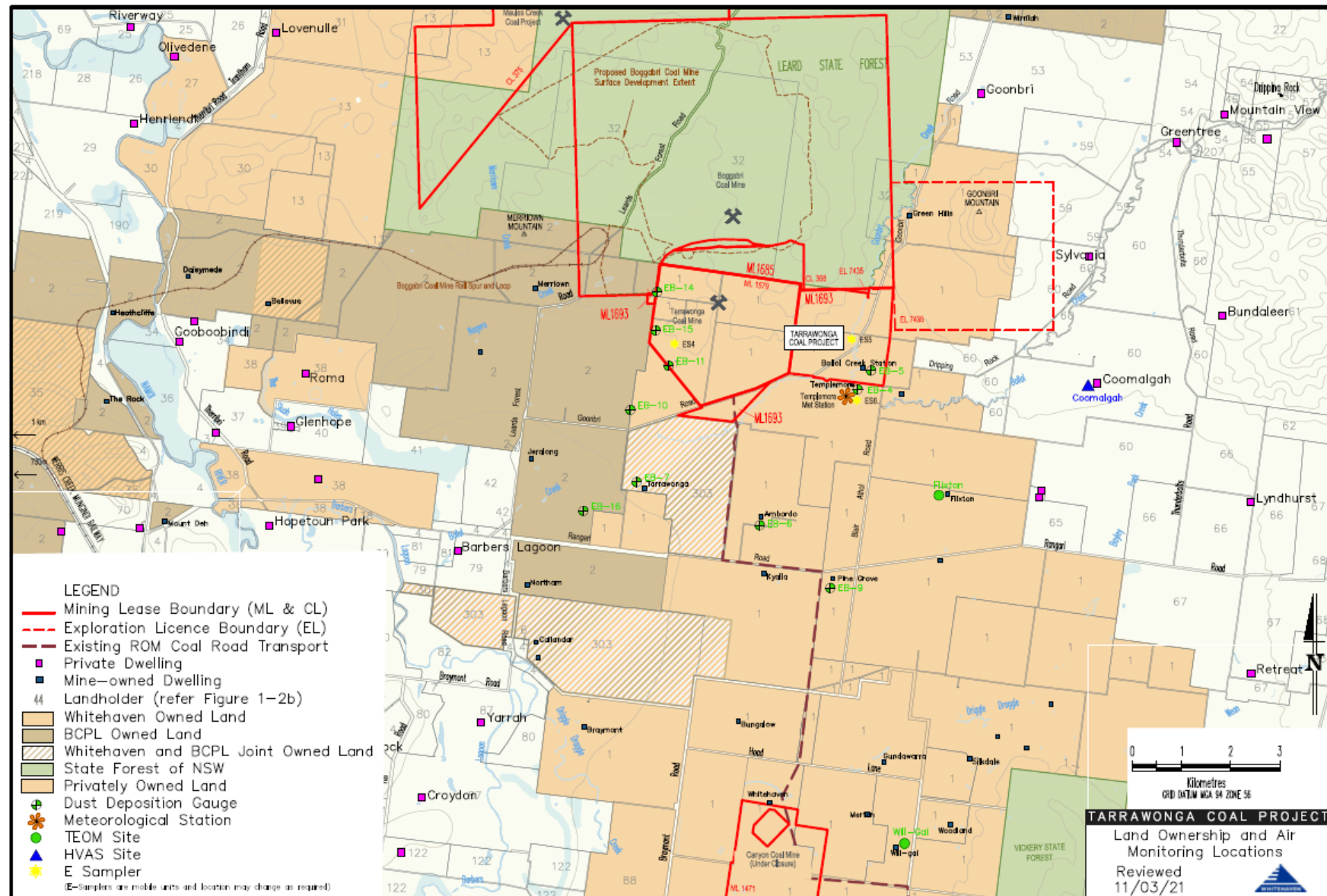
The next audit will be conducted on a three year cycle, expected in June of 2026.

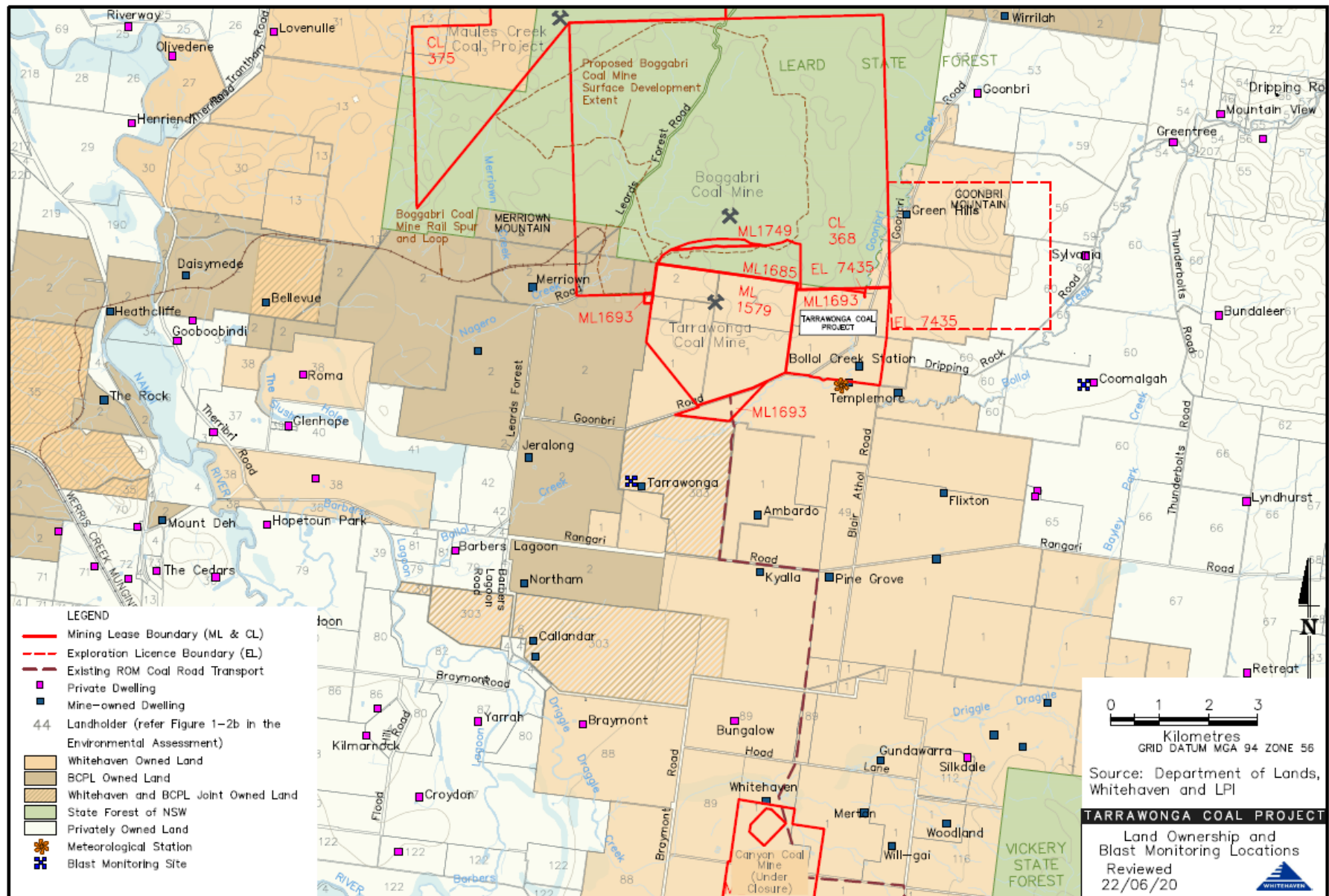
Approvals and Licencing

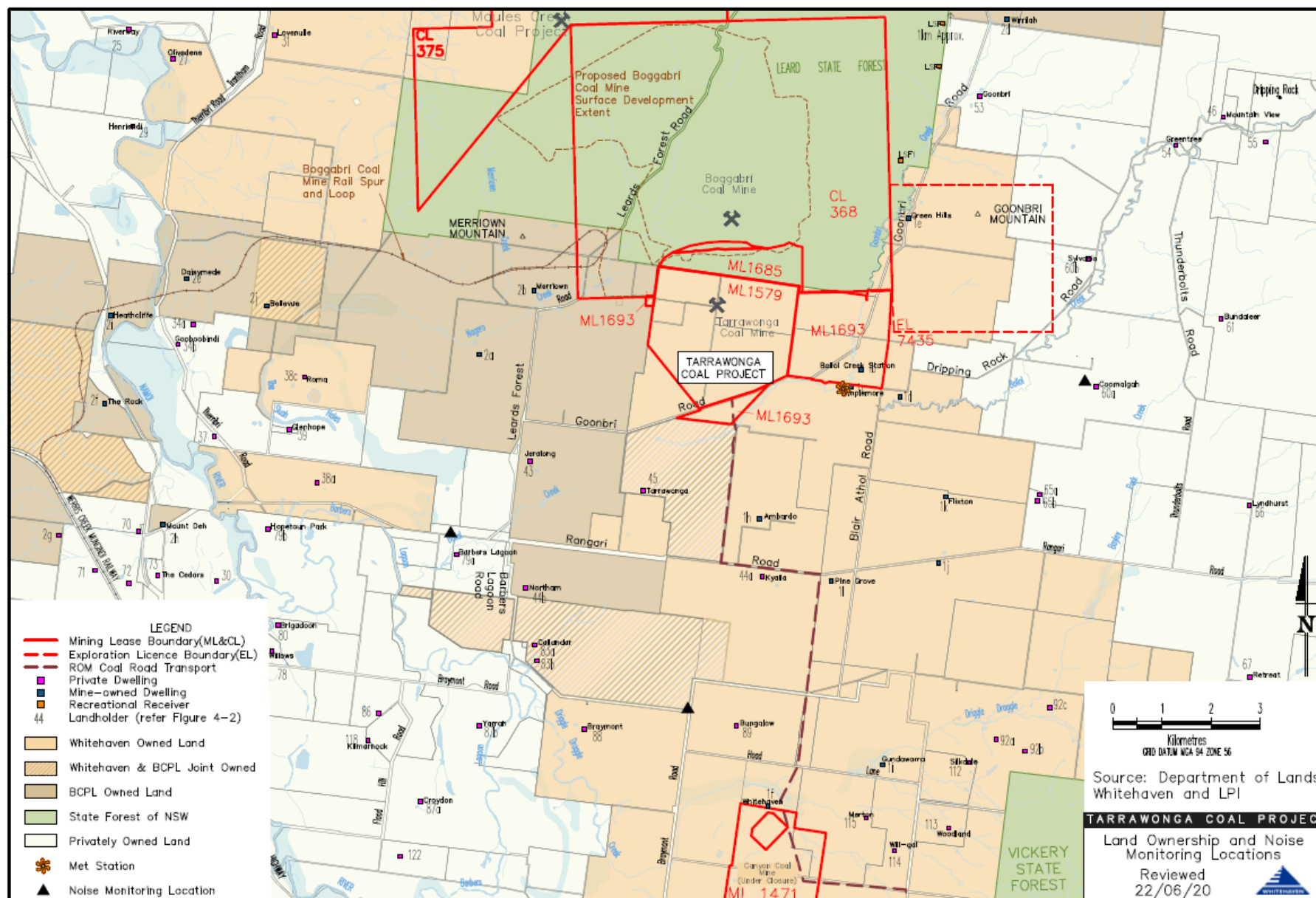
Tarrawongas MP11_0047 Modification 10 was approved on the 19th October 2023. This modification is in relation to Haul truck hours. Tarrawonga has updated and submitted relevant management plans (Noise and Traffic) to align with this modification. These hours were enacted on the 12th of December 2023, and communication was sent out to stakeholders regarding this.

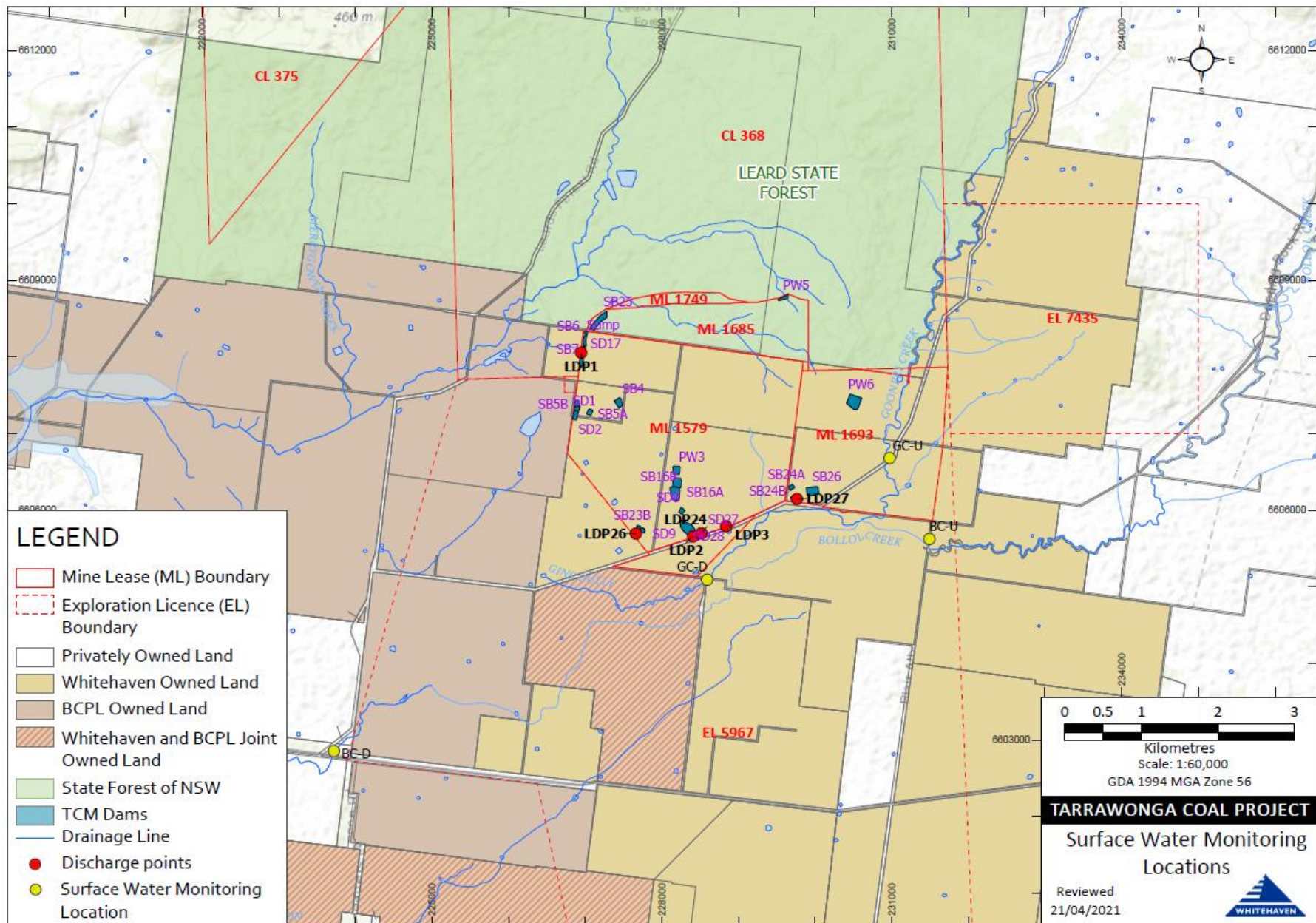
No additional modifications are expected in the foreseeable future.

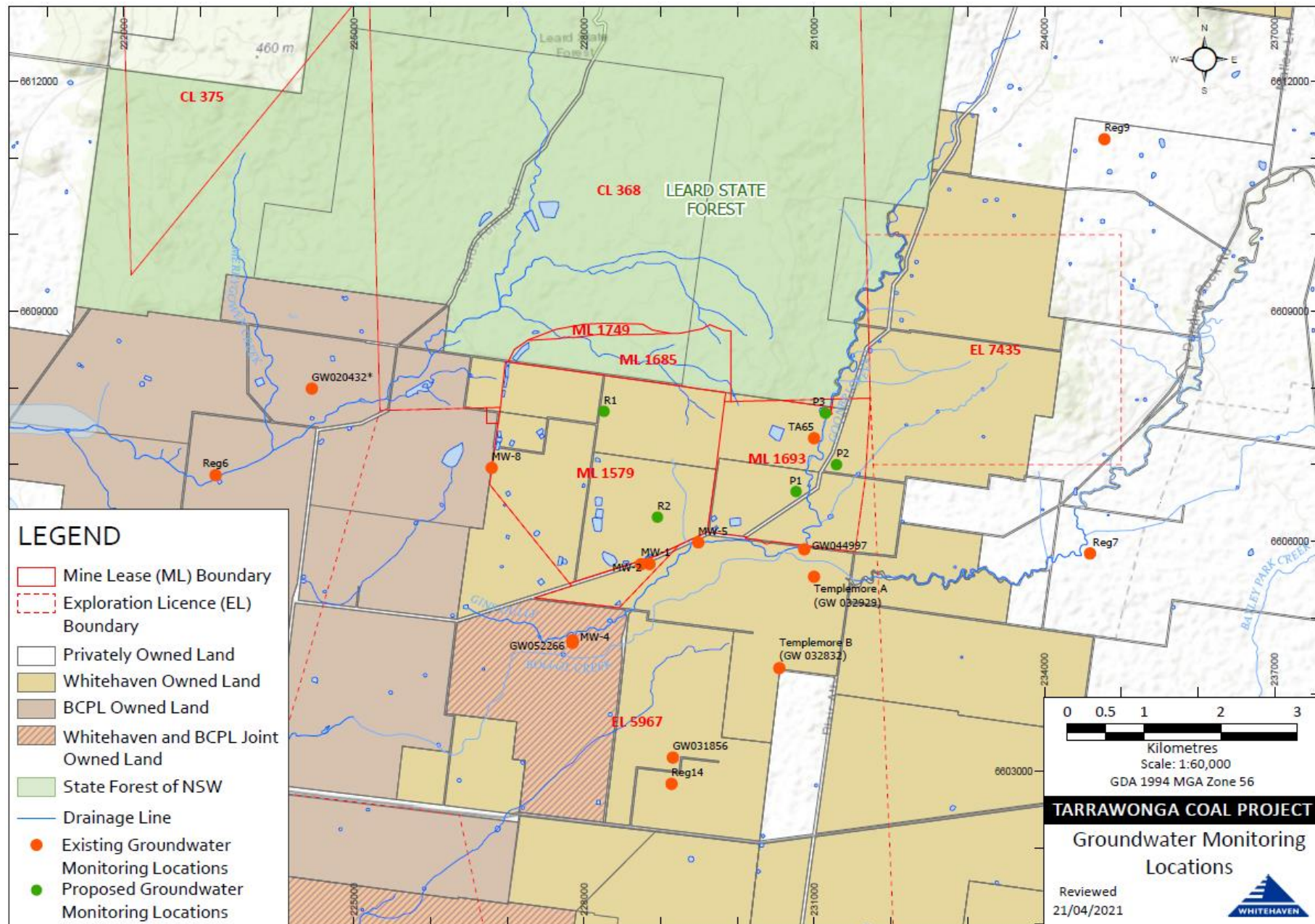
Appendix A





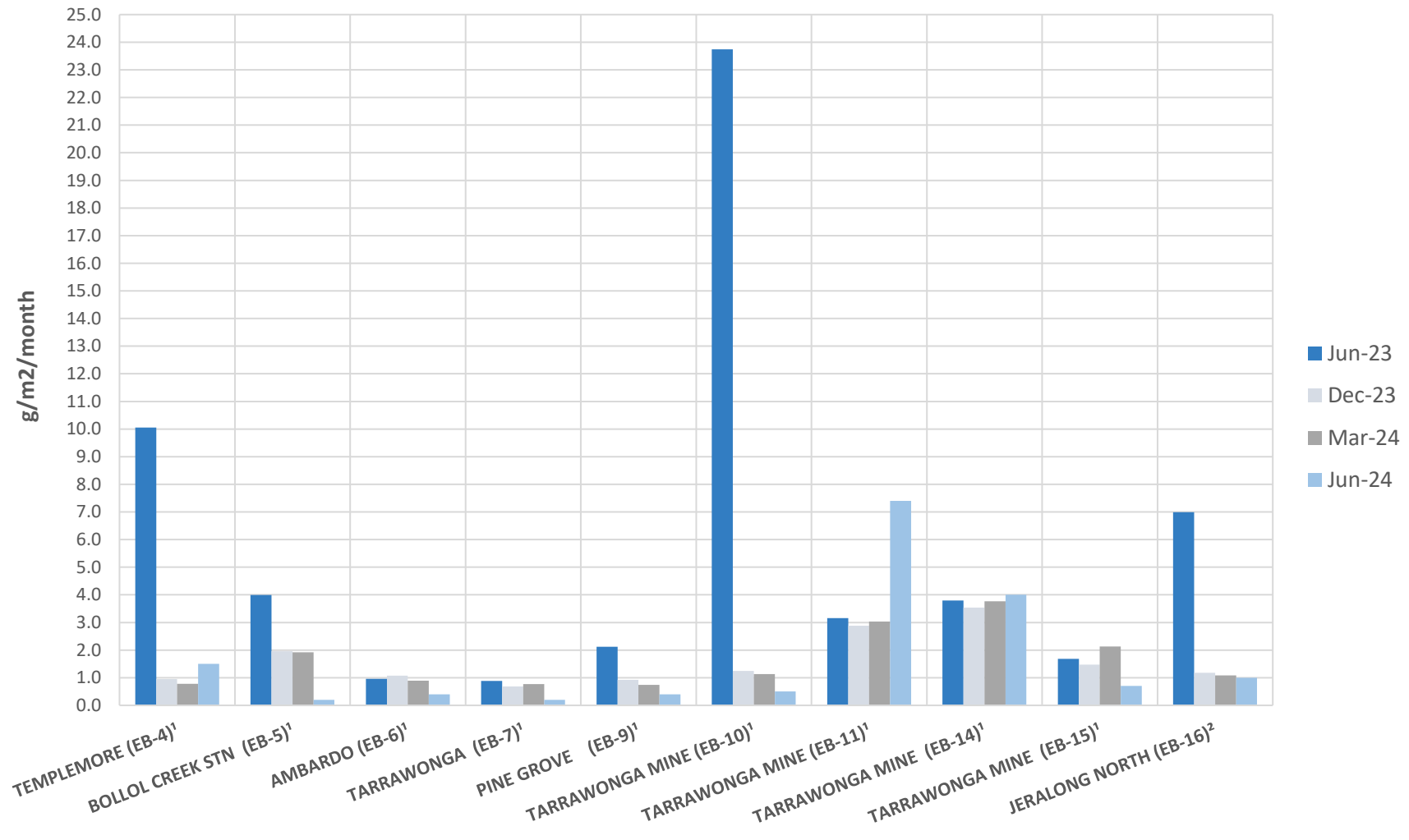




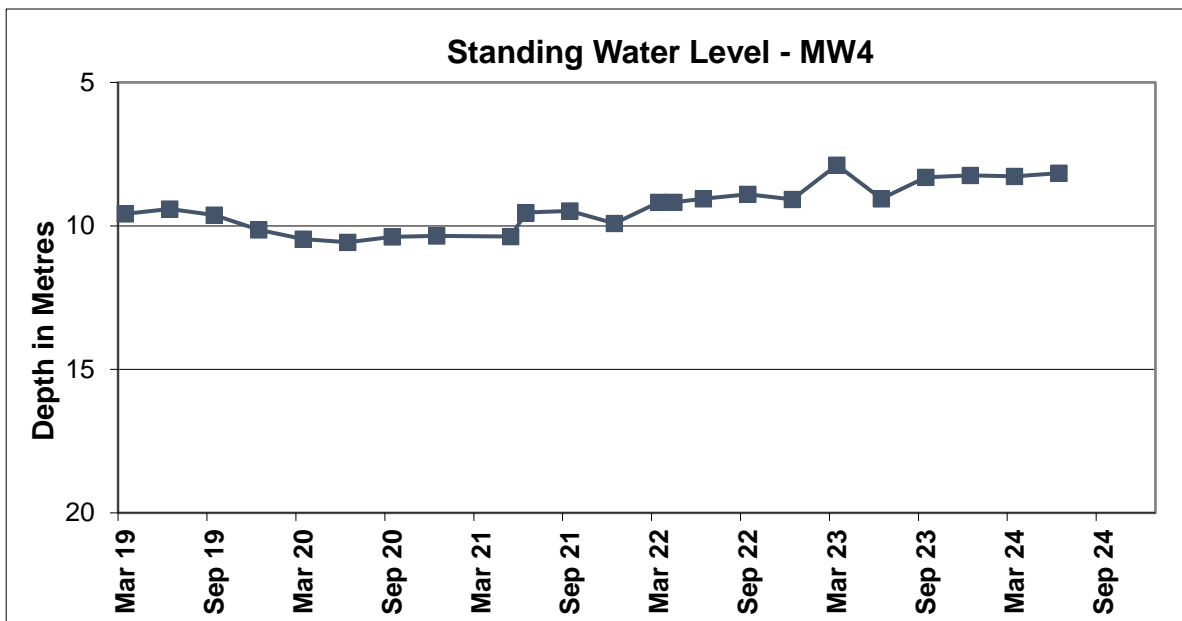
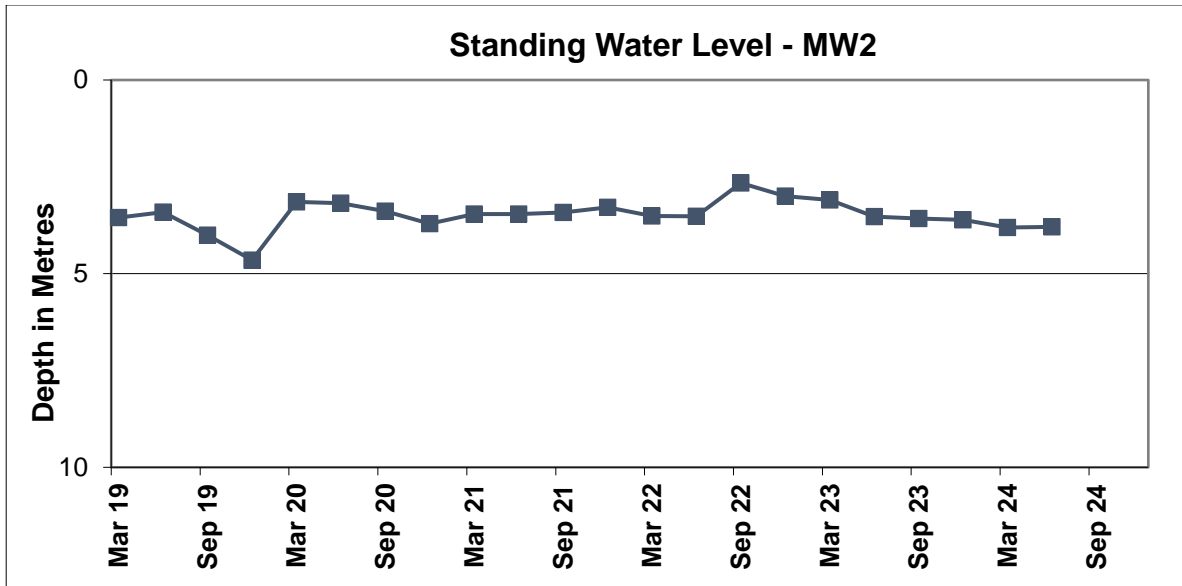
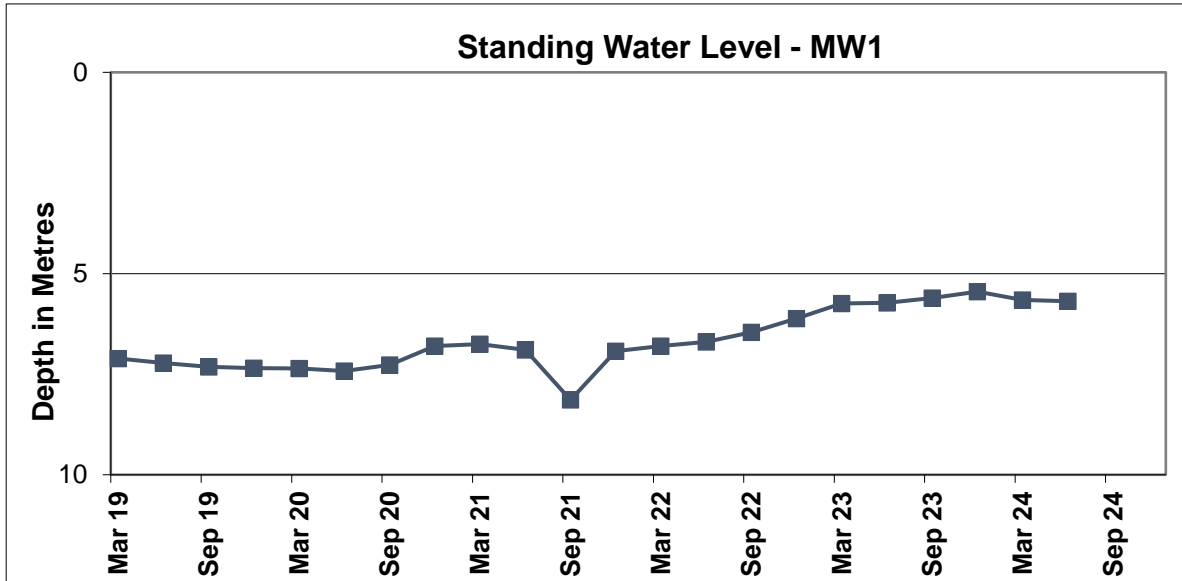


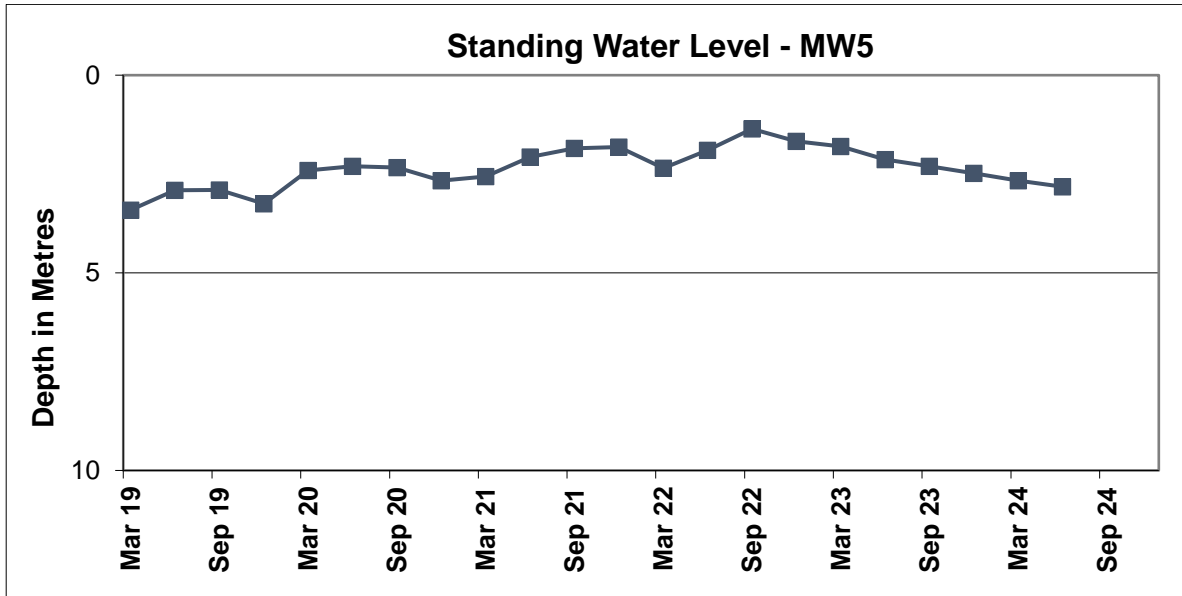
Appendix B

Deposited Dust Gauge Results- Quarterly rolling average [g/m²/month]



Appendix C





Minutes: Minutes of the 77th Meeting of the Tarrawonga Coal Community Consultative Committee held at the Boggabri Golf Club, Kamilaroi Highway, Boggabri on Wednesday 28 August 2024 commencing at 10.08 am.

Members Present: Elizabeth O’Hara (EOH) – Community Representative, Lloyd Finlay (LF) – Community Representative, Mark Hathway (MHa) – Community Representative, Matt Hollis (MH) – Tarrawonga Coal Mine, Maddi Wright (MW) – Tarrawonga Coal Mine, Darren Swain (DS) - Whitehaven Coal .

Apologies: Colleen Fuller (CF) – Community Representative, Cr Rob Hooke (RH) – Gunnedah Shire Council, Wade Hudson (WH) - Gunnedah Shire Council.

Independent Chair: Michael J. Silver (MJS)

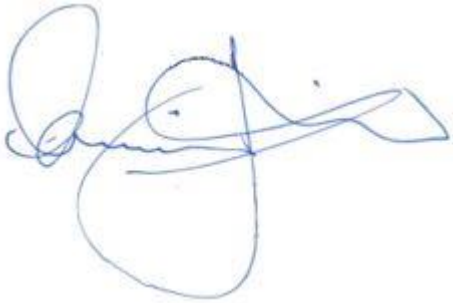
| Agenda Item | Discussion | Action/By Whom |
|-------------|--|----------------|
| 1. | Welcome and Apologies – MJS welcomed everyone to the meeting. | |
| 2. | Acknowledgement of Country - The Chair acknowledged the Traditional Owners of the land on which the meeting is being held and their continuing connection to land, water, and culture, paying respects to their Elders past, present and emerging. | |
| 3. | Declaration of pecuniary or other interests – EOH has a small package of WHC shares. LF leases country from WHC. MJS expenses as chair are borne by TCM. | |
| 4. | Minutes from Previous Meeting – Members noted that the minutes of the meeting of 15 May 2024 were approved on 6 June 2024 and appropriately reflected what was discussed. | |
| 5. | Actions from Previous Meeting 6.1 TCM to explore feasibility of presenting a slide in future of injuries falling /arising. <i>Response: This information will be provided at the October meeting.</i> 6.2 MJS to advise Ms R. Druce that the proposition should be discussed with NSC and RFS. <i>Response: Action completed – Ms Druce advised on 6 June 2024.</i> 6.3 MH to investigate response to 9.1 Land and Environment Court matter. <i>Response: This pertains to a Land and Environment Court matter (Maules Creek Community v EPA) regarding the issuing of an EPL to Maules Creek Coal Mine that did not state a requirement for Methane (CH4) monitoring. As per the court decision, this currently has no effect on TCM but if the EPA or other regulating bodies should wish to issue a Licence variation TCM would, of course, comply to that ruling.</i> | |
| 6. | Correspondence Nil | |
| 7. | Environmental Monitoring Report <i>A copy of the Quarterly Environmental Report is attached to the minutes</i> The Environmental Monitoring Report was distributed to members with the agenda prior to the meeting. No matters in the report were raised for discussion. | |
| 8. | Proponent's Report <i>A copy of the Proponent's Report is attached to the minutes.</i> MH commenced the presentation by providing members with an update on the mine's current safety performance with a Total Recordable Incident Frequency Rate (TRIFR) sitting at zero. | |

| | | |
|----|---|---|
| | <p>DS provided an overview of community involvement and support noting that \$400,000 in donations and sponsorship has been provided to the local community in the first half of 2024.</p> <p>MW spoke to the monitoring and compliance requirements for the second quarter of 2024, with no exceedances in noise, blasting, air monitoring and no water discharges undertaken.</p> <p>MW stepped the Committee through the current rehabilitation program, noting that a total of 30 hectares has been completed on the North and South Rehabilitation areas. MH added that the final landform shape has been revised, with a geomorphic landform being adopted. The goal is to mimic the geomorphic patterns of nature to provide a more stable (with less erosion), ecologically functional and aesthetically pleasing outcome. This also reduces the amount of ongoing long term maintenance being required.</p> <p>MW provided an overview of the environmental activities during the first quarter of 2024 – refer slide 7. EOH questioned whether there was any requirement to report on specific air quality issues and greenhouse gas emissions. MW responded that there was no requirement on the industry. The environmental reporting relates to operational aspects – there is no requirement to report on methane discharge.</p> <p>MHa noted issues with the Sunnyside cliff face (high wall). In response, MH indicated that the Sunnyside site is in rehabilitation works have been completed in accordance with the approved criteria and final landform to the satisfaction of the Resource Regulator.</p> <p>MW reported on the current management plan reviews. The management plan reviews will be based on the WHC template with attention to the Rehabilitation Management Plan and the Offset Management Plan. These reviewed plans will be subject to approval by the Resource Regulator. MW highlighted the processes to be followed in the rehabilitation process to deliver the final land use type at closure. MH advised it is important that the rehabilitation objectives are set and achieved through the management plan. EOH requested that the rehabilitation objectives be presented for discussion. MW indicated that this would occur at the October 2024 meeting.</p> <p>MW provided a snapshot of activities coming up in the third quarter of 2024. EOH asked what progress has been made on alternative management/disposal of tyres. MH responded that options are still being examined, however he is unaware of any further advances and is awaiting industry directions regarding best management practices for future tyre disposal.</p> | <p>ACTION: That the Tarrawonga Coal Mine Rehabilitation Objectives be presented at the October 2024 CCC meeting.</p> |
| 9. | <p>Tarrawonga Coal Mine Offset Management Plan (OMP) <i>A copy of the presentation is attached to the minutes.</i></p> <p>MH explained the review of the OMP relative to the provisions of the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). He advised that a new plan is about to go on public exhibition.</p> | |

| | | |
|-----|---|--|
| | <p>EOH questioned the consultation process. MH advised that the presentation to the CCC was an early phase of the consultation process – essentially a “heads up” advice. The CCC members will be provided with the draft OMP when finalised.</p> <p>MH provided an overview of the presentation and suggested CCC members examined it in their own time, given the extensive amount of information provided.</p> <p>MH advised that it is intended to lodge the draft OMP with the Commonwealth by the end of 2024.</p> <p>MH informed the Committee that the new plan will replace the 2022 Biodiversity Management Plan.</p> <p>MJS indicated that there is considerable scrutiny on the management of offsets following the independent review of the Biodiversity Conservation Act 2016 in 2023. This will result in legislative reforms and stringent auditing processes. MH responded that the land area dedicated to meet the offset requirements is considerably higher than what is lost to the mining project’s footprint. MJS noted that the Native Markets and Offsets (NMO) division reviews the vegetation mapping and calculates the liability. MJS questioned whether the revised Plan incorporated the consideration of offset credits. MH responded that it is not in this Plan and would need to be a future business decision.</p> | |
| 10. | <p>Other Agenda Items</p> <p>Nil</p> | |
| 12. | <p>General Business</p> <p>10.1 Meeting Schedule– EOH enquired whether the meeting could be held on a Thursday or Friday in lieu of a Wednesday. DS indicated Fridays may be difficult for staff availability. MJS advised he would examine the request but that it would also have implications for the other CCC meetings. He indicated that it would be difficult to co-ordinate the Joint CCC meeting.</p> <p>10.2 Community Open Day – DS advised that a Whitehaven Community Open Day will be held on Saturday, 31 August 2024 at the Boggabri Showground commencing at 10.00 am.</p> | |
| 13. | <p>Next Meeting</p> <p>The next meeting is scheduled for October 2024. The Chair noted that EOH had requested consideration of adjusting the meeting dates. He advised he would review her request but it was unlikely the October 2024 dates would change.</p> | |

Meeting closed at 11.21 am.

Approved:

A handwritten signature in blue ink, appearing to read 'Michael J. Silver', with a large loop at the end.

Michael J. Silver OAM
Independent Chair

25 September 2024

Appendix 1: Actions

| Action No | Description | Date Raised | Page No | Status |
|-----------|---|-------------|---------|-----------------------|
| 1 | TCM to explore feasibility of presenting a slide in future of injuries falling / rising | 14.02.24 | 3 | ONGOING |
| 2 | TCM to provide link to Sustainability Report | 14.02.24 | 3 | COMPLETED 15.05.24 |
| 3 | MW to investigate if Social Impact Plan was available | 14.02.24 | 4 | COMPLETED 15.05.24 |
| 4 | MJS to advise Ms Druce that the proposition should be discussed with NSC and RFS. | 15.05.24 | 2 | COMPLETED 06.06.24 |
| 5 | That the Tarrawonga Coal Mine Rehabilitation Objectives be presented at the October 2024 CCC meeting. | 29.08.2024 | 3 | |

Tarrawonga Coal Mine Community Consultative Committee Meeting #78

**Quarterly Environmental Monitoring Report
July 2024 – September 2024**



Photo taken in July 2024 showing rehabilitation progression of the South Rehab with fresh vegetation

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 2024 to September 30 2024. 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 16th to the 20th of September 2024. 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 2024**)

| Table 1 TCM Operational Noise Monitoring Results – 16 September 2024 (Evening) | | | | |
|---|--------|------------------------------|--|---------------------------------------|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC ¹ | Identified Noise Sources |
| Matong – TN2 | 8:35pm | 29 | 1.3 / 174 / F | Traffic (27), cows (24), TCM (<20) |
| Barbers Lagoon – TN3 | 7:06pm | 45 | 0.5 / 286 / E | Traffic (45), TCM (<20) |
| Bungalow – TN4 | 7:45pm | 41 | 0.9 / 191 / E | Traffic (41), insects (23), TCM (<20) |

1. Coal trucks on private haul road

| Table 2 TCM Operational Noise Monitoring Results – 16-17 September 2024 (Night) | | | | |
|--|---------|------------------------------|---------------------------------|------------------------------------|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 10:00pm | 29 | 1.7 / 061 / E | Cows (28), traffic (21), TCM (<20) |
| Barbers Lagoon – TN3 | 11:20pm | 27 | 1.7 / 044 / E | Dogs (27), TCM (<20) |
| Bungalow – TN4 | 12:32am | 27 | 1.5 / 046 / E | TCM (27) |

| Table 3 TCM Operational Noise Monitoring Results – 17 September 2024 (Day) | | | | |
|---|---------|------------------------------|---------------------------------|-------------------------------------|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 2:25pm | 35 | 2.9 / 235 / C | Birds (35), TCM (<20) |
| Barbers Lagoon – TN3 | 11:04am | 52 | 2.2 / 235 / B | Traffic (52), birds (32), TCM (<20) |
| Bungalow – TN4 | 12:45pm | 43 | 2.5 / 245 / B | Traffic (43), birds (25), TCM (<20) |

| Table 4 TCM Operational Noise Monitoring Results – 17 September 2024 (Evening) | | | | |
|---|--------|------------------------------|---------------------------------|------------------------------------|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 9:09pm | 29 | 1.9 / 053 / E | Cows (29), TCM (<20) |
| Barbers Lagoon – TN3 | 7:40pm | 27 | 1.8 / 056 / E | Traffic (23), TCM (22), birds (21) |
| Bungalow – TN4 | 8:19pm | 25 | 1.5 / 039 / D | Traffic (23), TCM (21) |

| Table 5 TCM Operational Noise Monitoring Results – 17-18 September 2024 (Night) | | | | |
|--|---------|------------------------------|---------------------------------|------------------------------------|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 10:00pm | 24 | 2.0 / 052 / E | TCM (24) |
| Barbers Lagoon – TN3 | 12:35am | 30 | 2.0 / 040 / E | TCM (27), birds (27) |
| Bungalow – TN4 | 11:26pm | 47 | 1.6 / 059 / E | Traffic (47), dogs (23), TCM (<20) |

| Table 6 TCM Operational Noise Monitoring Results – 18 September 2024 (Day) | | | | |
|---|---------|------------------------------|---------------------------------|---|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 2:19pm | 45 | 4.1 / 293 / C | Traffic (44), birds (38), TCM (<20) |
| Barbers Lagoon – TN3 | 10:49am | 53 | 3.5 / 286 / C | Traffic (53), birds (38), insects (23), TCM (<20) |
| Bungalow – TN4 | 12:29pm | 33 | 4.2 / 294 / C | Birds (33), TCM (<20) |

| Table 7 TCM Operational Noise Monitoring Results – 18 September 2024 (Evening) | | | | |
|---|--------|------------------------------|---------------------------------|--------------------------|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 8:36pm | 23 | 1.7 / 024 / E | Traffic (23), TCM (<20) |
| Barbers Lagoon – TN3 | 7:04pm | 26 | 1.6 / 113 / D | Dogs (24), TCM (22) |
| Bungalow – TN4 | 7:45pm | 25 | 2.2 / 035 / E | Insects (25), TCM (<20) |

| Table 8 TCM Operational Noise Monitoring Results – 18-19 September 2024 (Night) | | | | |
|--|---------|------------------------------|---------------------------------|--------------------------|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 10:03pm | 24 | 1.9 / 028 / E | Cows (24), TCM (<20) |
| Barbers Lagoon – TN3 | 12:33am | 29 | 1.7 / 038 / E | TCM (27), insects (25) |
| Bungalow – TN4 | 11:21pm | 22 | 2.0 / 025 / E | Dogs (22), TCM (<20) |

| Table 9 TCM Operational Noise Monitoring Results – 19 September 2024 (Day) | | | | |
|---|---------|------------------------------|---------------------------------|-------------------------------------|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 1:34pm | 46 | 6.0 / 307 / C | Traffic (46), birds (35), TCM (<20) |
| Barbers Lagoon – TN3 | 10:02am | 53 | 5.0 / 303 / C | Traffic (53), birds (34), TCM (<20) |
| Bungalow – TN4 | 11:43am | 45 | 5.8 / 306 / C | Traffic (45), birds (34), TCM (<20) |

| Table 10 TCM Operational Noise Monitoring Results – 19 September 2024 (Evening) | | | | |
|--|--------|------------------------------|---------------------------------|--------------------------|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 8:47pm | 23 | 0.8 / 168 / E | Dogs (23), TCM (<20) |
| Barbers Lagoon – TN3 | 7:12pm | 23 | 4.2 / 264 / D | Birds (23), TCM (<20) |
| Bungalow – TN4 | 7:54pm | 23 | 1.8 / 297 / E | Birds (23), TCM (<20) |

| Table 11 TCM Operational Noise Monitoring Results – 19-20 September 2024 (Night) | | | | |
|---|---------|------------------------------|---------------------------------|--------------------------|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 10:10pm | 22 | 2.1 / 037 / E | Birds (22), TCM (<20) |
| Barbers Lagoon – TN3 | 12:54am | 23 | 1.7 / 045 / E | Insects (23), TCM (<20) |
| Bungalow – TN4 | 11:42pm | 23 | 1.4 / 129 / F | Traffic (23), TCM (<20) |

| Table 12 TCM Operational Noise Monitoring Results – 20 September 2024 (Day) | | | | |
|--|---------|------------------------------|---------------------------------|-------------------------------------|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 9:22am | 45 | 1.4 / 273 / A | Birds (45), traffic (31), TCM (<20) |
| Barbers Lagoon – TN3 | 11:18am | 42 | 1.9 / 236 / A | Traffic (40), birds (38), TCM (<20) |
| Bungalow – TN4 | 12:59pm | 39 | 2.5 / 250 / B | Birds (39), TCM (<20) |

Noise from the mine must not exceed 45 dB(A) L1 (1 min) between 10 pm and 7 am. This criterion is to minimise the potential for sleep disturbance because 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 – 16-17 September 2024 (Night) | | | | | |
|---|---------|----------------------------------|----------------------------------|-----------|---------------------------------|
| Location | Time | dB(A) L1 (1 min) ¹ | dB(A) L1 (1 min) ² | L1 Source | Wind speed / direction / PSC |
| Matong – TN2 | 10:00pm | <20 | 56 | Cows | 1.7 / 061 / E |
| Barbers Lagoon – TN3 | 11:20pm | <20 | 39 | Dogs | 1.7 / 044 / E |
| Bungalow – TN4 | 12:32am | 33 | 33 | Mine revs | 1.5 / 046 / E |

1. L1 (1 min) – total measured level.

2. L1 (1 min) – TCM noise only.

| Table 14 TCM Sleep Disturbance Monitoring Results – 17-18 September 2024 (Night) | | | | | |
|---|---------|----------------------------------|----------------------------------|-----------|---------------------------------|
| Location | Time | dB(A) L1 (1 min) ¹ | dB(A) L1 (1 min) ² | L1 Source | Wind speed / direction / PSC |
| Matong – TN2 | 10:00pm | 27 | 27 | Mine revs | 2.0 / 052 / E |
| Barbers Lagoon – TN3 | 12:35am | 32 | 32 | Mine revs | 2.0 / 040 / E |
| Bungalow – TN4 | 11:26pm | <20 | 67 | Traffic | 1.6 / 059 / E |

| Table 15 TCM Sleep Disturbance Monitoring Results – 19-20 June 2024 (Night) | | | | | |
|--|---------|----------------------------------|----------------------------------|-----------|---------------------------------|
| Location | Time | dB(A) L1 (1 min) ¹ | dB(A) L1 (1 min) ² | L1 Source | Wind speed / direction / PSC |
| Matong – TN2 | 10:20pm | 37 | 25 | Cows | 1.2 / 097 / E |
| Barbers Lagoon – TN3 | 12:55am | 29 | <20 | Bird | 1.4 / 064 / E |
| Bungalow – TN4 | 11:41pm | 39 | 26 | Car | 1.5 / 053 / E |

| Table 16 TCM Sleep Disturbance Monitoring Results – 20-21 June 2024 (Night) | | | | | |
|--|---------|----------------------------------|----------------------------------|-----------|---------------------------------|
| Location | Time | dB(A) L1 (1 min) ¹ | dB(A) L1 (1 min) ² | L1 Source | Wind speed / direction / PSC |
| Matong – TN2 | 10:18pm | 41 | <20 | Cows | 0.9 / 066 / E |
| Barbers Lagoon – TN3 | 12:53am | 4 | 35 | Traffic | 1.6 / 067 / E |
| Bungalow – TN4 | 11:40pm | 47 | 33 | Traffic | 1.0 / 114 / E |

| Table 15 TCM Sleep Disturbance Monitoring Results – 18-19 September 2024 (Night) | | | | | |
|---|---------|----------------------------------|----------------------------------|-----------|---------------------------------|
| Location | Time | dB(A) L1 (1 min) ¹ | dB(A) L1 (1 min) ² | L1 Source | Wind speed / direction / PSC |
| Matong – TN2 | 10:03pm | <20 | 38 | Cows | 1.9 / 028 / E |
| Barbers Lagoon – TN3 | 12:33am | 32 | 35 | Insects | 1.7 / 038 / E |
| Bungalow – TN4 | 11:21pm | <20 | 35 | Dogs | 2.0 / 025 / E |

| Table 16 TCM Sleep Disturbance Monitoring Results – 19-20 September 2024 (Night) | | | | | |
|---|---------|----------------------------------|----------------------------------|-----------|---------------------------------|
| Location | Time | dB(A) L1 (1 min) ¹ | dB(A) L1 (1 min) ² | L1 Source | Wind speed / direction / PSC |
| Matong – TN2 | 10:10pm | <20 | 29 | Birds | 2.1 / 037 / E |
| Barbers Lagoon – TN3 | 12:54am | <20 | 35 | Insects | 1.7 / 045 / E |
| Bungalow – TN4 | 11:42pm | <20 | 29 | Traffic | 1.4 / 129 / F |

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 1318 blasts (until 30/09/2024) at TCM.

Table 1 below displays the peak ground pressure and overpressure values recorded and dated at the compliance monitor on Coomalgalah property during the quarter.

TCM overpressure and 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) |
|------------------|----------|-----------------------------|----------------|------------|----------------------------------|------------------|
| Coomalgalah | 21-08-24 | 106.3 | 120 | 02-08-2024 | 042 | 10 |

Air Quality Monitoring

Dust Deposition Gauge 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/m²/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/m²/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/m2/month]

| MONTH | TEMPLEMORE (EB-4) | BOLLOL CREEK STN (EB-5) | AMBARDO (EB-6) | TARRAWONGA (EB-7) | PINE GROVE (EB-9) | TARRAWONGA MINE (EB-10) | TARRAWONGA MINE (EB-11) ¹ | TARRAWONGA MINE (EB-14) | TARRAWONGA MINE (EB-15) | JERALONG NORTH (EB-16) |
|---------------------------------|----------------------|----------------------------|-------------------|----------------------|----------------------|----------------------------|---|----------------------------|----------------------------|---------------------------|
| Oct-23 | 0.5 | 1.3 | 1.1 | 1.5 | 0.5 | 2.6 | 3.3 | 2.2 | 1.9 | 2.0 |
| Nov-23 | 0.3 | 0.7 | 0.4 | 0.6+ | 0.6 | 0.8 | 2.0 | 3.2 | 1.0 | 1.2 |
| Dec-23 | 1.6 | 1.5 | 0.7 | 0.4+ | 1.2 | 0.8 | 3.1 | 4.7+ | 2.9 | 0.5+ |
| Jan-24 | 0.3 | 1.2 | 0.9 | 1 | 1.2 | 1.9 | 2.3 | 2.1 | 2.2 | 1.1 |
| Feb-24 | 0.8 | 0.4 | 0.8 | 0.6 | 0.6 | 1 | 3.4 | 3.7 | 1 | 0.7 |
| Mar-24 | 0.8 | 2.8 | 1 | 2.7 | 0.8 | 0.6 | 4.2 | 5# | 9# | 1.6 |
| Apr-24 | 0.4 | 2.3 | 0.9 | 0.4 | 0.8 | 2.2 | 4.4 | 3.9c | 3.1 | 0.6 |
| May-24 | N/A | 0.9 | 0.6 | 0.6 | 0.4 | 1.6 | 5.2 | 2.6 | 1.0 | 0.8 |
| Jun-24 | 1.5 | 0.2 | 0.4 | 0.2 | 0.4 | 0.5 | 7.4 | 4 | 0.7 | 1 |
| Jul-24 | 1.5 | 1.2 | 0.3 | 0.4 | 0.7 | 0.6 | 5.5 | 4.2 | 1.7 | 0.5 |
| Aug-24 | 1 | 1.5 | 0.2 | 0.2 | 0.7 | 0.3 | 3.6 | 3.3 | 0.2 | 0.6 |
| Sep-24 | 1 | 1 | 0.2 | 0.4 | 0.2 | 2.1 | 4.7 | 2.8 | 0.9 | 0.5 |
| 12 MONTH ROLLING AVERAGE | 1.9 | 2.3 | 1.2 | 1.2 | 1.2 | 1.3 | 4.3 | 3 | 1.2 | 1.4 |

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 not compliant for DDG testing, so results are not to be assessed against criteria alone. Still used to calculate average

¹DDG bottle on the fenceline between TCM and BCM ROM.

^{N/A} bottle was removed with a fence by land occupant. No result available.

High Volume Air sampler (PM10) Results

The High Volume Air Sampler (HVAS) installed at Coomalgah property monitors levels of Particle Matter under 10 micron (PM₁₀). It operates for 24hr every 6 days. **Table 3** shows that all 24hr average values recorded for this quarter are below 50µg/m³.

Table 3: HVAS PM10 24hr Quarterly Average levels

| Date | 24hr averaged PM10 (µg/m ³) | Criterion 24hr average (µg/m ³) | Comments |
|------------|---|---|----------|
| 4/07/2024 | 8.0 | 50 | |
| 10/07/2024 | 3.4 | | |
| 16/07/2024 | 6.4 | | |
| 22/07/2024 | 5.3 | | |
| 28/07/2024 | 2.5 | | |
| 3/08/2024 | 4.0 | | |
| 9/08/2024 | 4.2 | | |
| 15/08/2024 | 1.9 | | |
| 21/08/2024 | 19.3 | | |
| 27/08/2024 | 19.5 | | |
| 02/09/2024 | 20.0 | | |
| 08/09/2024 | 19.9 | | |
| 14/09/2024 | 4.2 | | |
| 20/09/2024 | 13.4 | | |
| 26/09/2024 | 14.8 | | |

Real-time Air monitoring (PM₁₀)

A real time air quality unit (TEOM) is located at the “Flixton” property to monitor PM₁₀ 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 (PM₁₀) 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 March 2023 and March 2024 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) |
|-------------|--------------|----------------|----------------|-----------------------------|
| MW1 | September 23 | 5.61 | 6.98 | 3,390 |
| | December 23 | 5.45 | 7.24 | 2,810 |
| | March 24 | 6.33 | 7.25 | 3,260 |
| | June 24 | 6.36 | 7.22 | 3,880 |
| | September 24 | 2.61 | 7.53 | 3,470 |
| MW2 | September 23 | 3.58 | 6.31 | 778 |
| | December 23 | 3.61 | 7.15 | 729 |
| | March 24 | 4.6 | 6.89 | 716 |
| | June 24 | 4.58 | 7.64 | 831 |
| | September 24 | 4.22 | 7.18 | 669 |
| MW4 | September 23 | 8.31 | 6.62 | 2,990 |
| | December 23 | 8.24 | 7.49 | 3,100 |
| | March 24 | 8.89 | 7.43 | 3,190 |
| | June 24 | 8.78 | 7.51 | 3,680 |
| | September 24 | 8.66 | 7.70 | 3,410 |
| MW5 | September 23 | 2.29 | 6.97 | 1,862 |
| | December 23 | 2.47 | 7.52 | 2,004 |
| | March 24 | 3.46 | 7.57 | 1,321 |
| | June 24 | 3.61 | 7.85 | 892 |
| | September 24 | 3.50 | 7.69 | 2,420 |
| MW8* | September 23 | 12.54 | Casing blocked | Casing blocked |
| | December 23 | Sampling error | | |
| | March 24 | 12.91 | | |
| | June 24 | Sampling error | | |
| | September 24 | 12.70 | | |

*Bore scheduled to be assessed by consultant using a borehole camera, and any problems rectified this year.

Surface Water

Water storage onsite is expected to be sufficient for at least the next 12 months. TCM undertook one controlled discharge event on August 6th-August 9th. An approximate 7ML was discharged through Licenced Discharge Points at this time.

TCM has recorded 475.4mm of rain thus far in 2024.

Table 5: Annual rainfall

| 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 | 18.6 | 123 | 79.4 | 518.2 |
| Cumulative (mm) | 21.2 | 32.2 | 202 | 239.2 | 240 | 275.8 | 283.8 | 295.2 | 297.2 | 315.8 | 438.8 | 518.2 | |
| 2024 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
| Monthly Rain (mm) | 53.6 | 56.8 | 26 | 84.6 | 39.2 | 54.2 | 45.2 | 62.4 | 53.4 | | | | |
| Cumulative (mm) | 53.6 | 110.4 | 136.4 | 221 | 260.2 | 314.4 | 359.6 | 422 | 475.4 | | | | |

Evaporator Fans

During the reporting period, Tarrawonga did not use the Evaporator fans to evaporate mine water. TCM may consider utilising the evaporator fans should the wet weather persist throughout the rest of the year.

Rehabilitation and Clearing

Rehabilitation

By the close of September 2024, TCM prepared approximately 12.3Ha of Landform, reaching almost half of the target 25Ha for the calendar year for landform establishment.

Trees on the both the North and South rehab areas continue to successfully establish and grow on our historical rehabilitation areas. Ecologists are scheduled to come during October to assess the success rate of rehab, and the previous years monitoring report has assisted in building a maintenance schedule on the rehabilitation areas for the coming years.



Figure 3 South Rehab (Sept 30) after cover crop and seed (planted June 2024) have sprouted.

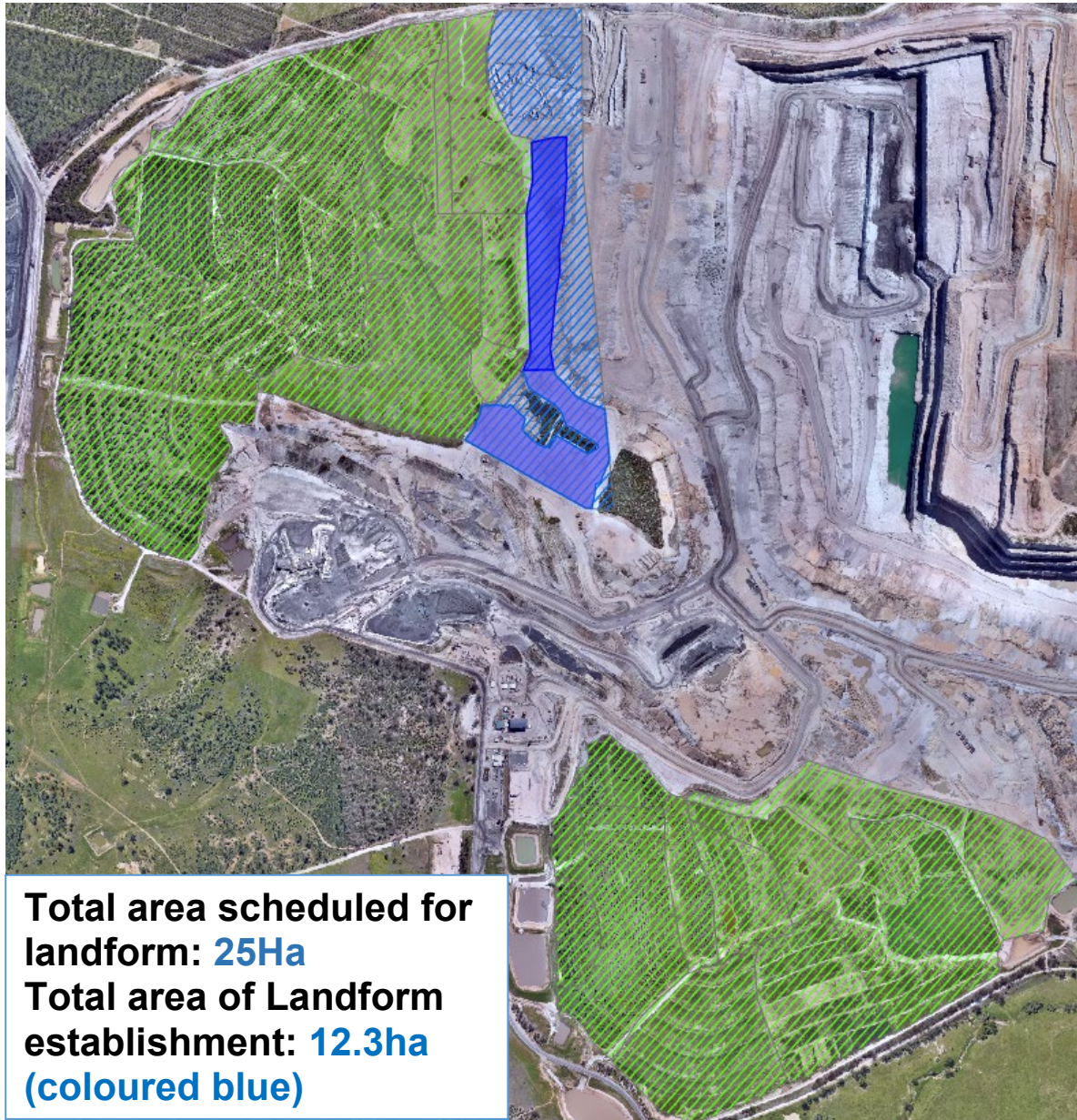


Figure 4: Rehabilitation areas that reached Landform Establishment during reporting period

Clearing

No Clearing activities occurred during the reporting period. Clearing will not begin again until the clearing period between February and April, 2025.

Complaints

No complaints were received during the reporting period.

Environmental Management Plans

TAR Management Plans

TCMs Traffic Management Plan was reviewed and submitted for approval after the consultation process. An RFI has been received by the DPHI which is currently being addressed.

TCMs Air Quality Greenhouse Gas Management Plan was submitted for approval during the reporting period. An RFI has been received by the DPHI which is currently being addressed.

TCMs Heritage Management Plan was approved by the DPHI during the reporting period.

The Rehabilitation Management Plan is still undergoing internal review, with the main purpose being to transfer to the new WHC Management Plan template.

BTM Strategies

The BTM Water Management Strategy has been submitted to and approved by the Department during the reporting period.

The BTM Air Quality Management Strategy is undergoing internal review and is expected to be submitted to the Department by the close of the year.

Annual and Compliance Reporting

Annual Review and Annual Return Reports

The Annual Return and Annual Review periods are coming up during the next reporting period (December-March).

Tyre Disposal

TCM completed its a round of tyre disposal in July, 2024. TCM disposed of 94 HV tyres through in-pit disposal. These were disposed of in the TN Pit as per approval conditions, and this will be reported in the Annual Return for the EPA in January 2025.

Annual Compliance EPBC statement

The Annual Compliance EPBC statement was submitted to DAWE in June 2024.

Annual National Pollutant Inventory (NPI) and Greenhouse Gas Emission (NGERs) Reports 2024

TCM has submitted information for the NPI and NGERs reports and these were approved and reports are expected to be finalised in the coming weeks.

Audits - Compliance

Tarrawonga underwent their Independent Environmental Audit and Independent Biodiversity Audit, last year. These audits are required by the Project Approval PA11_0047, and EPBC Act respectively. These audits were carried out in June 2023.

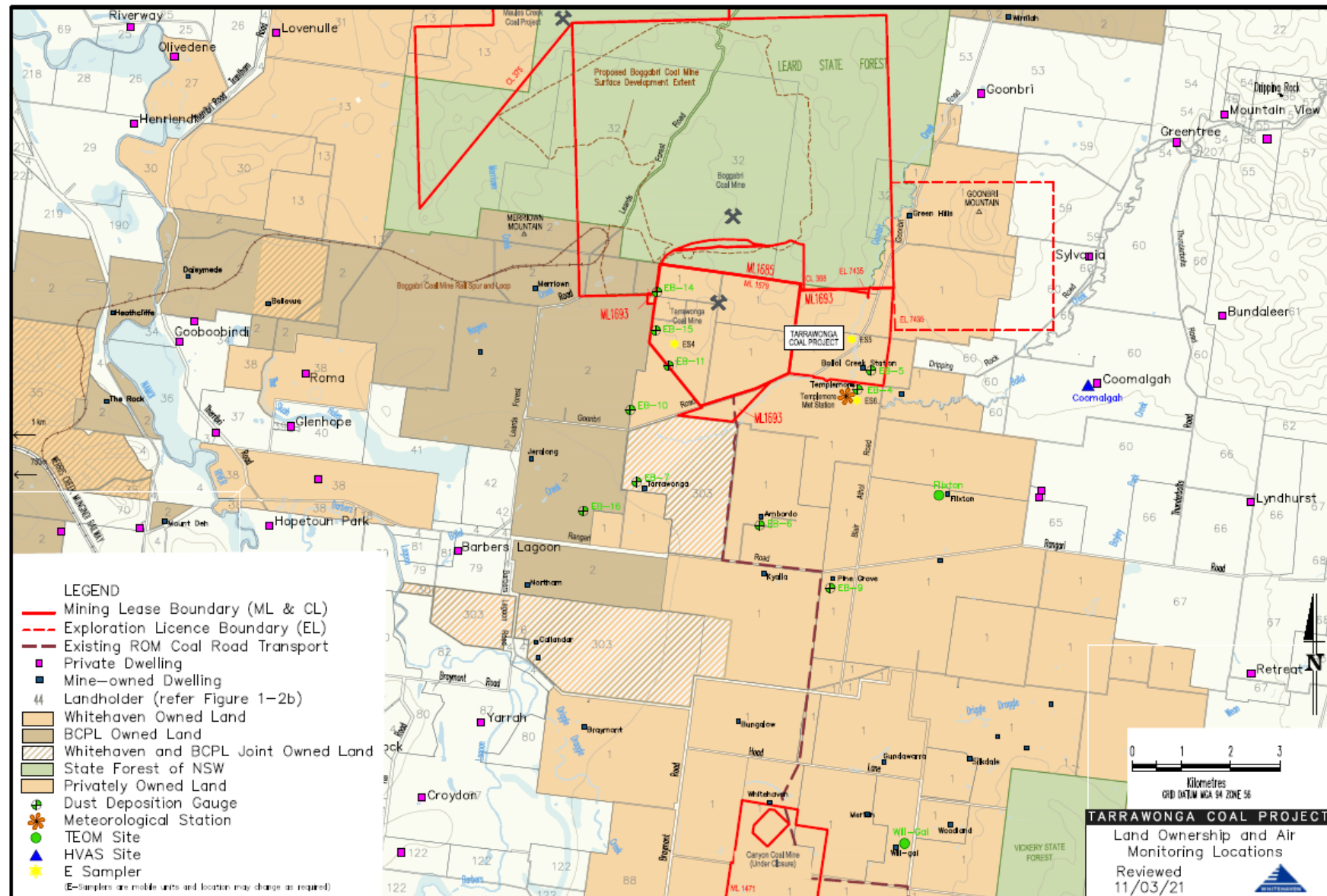
The next audit will be conducted on a three year cycle, expected in June of 2026.

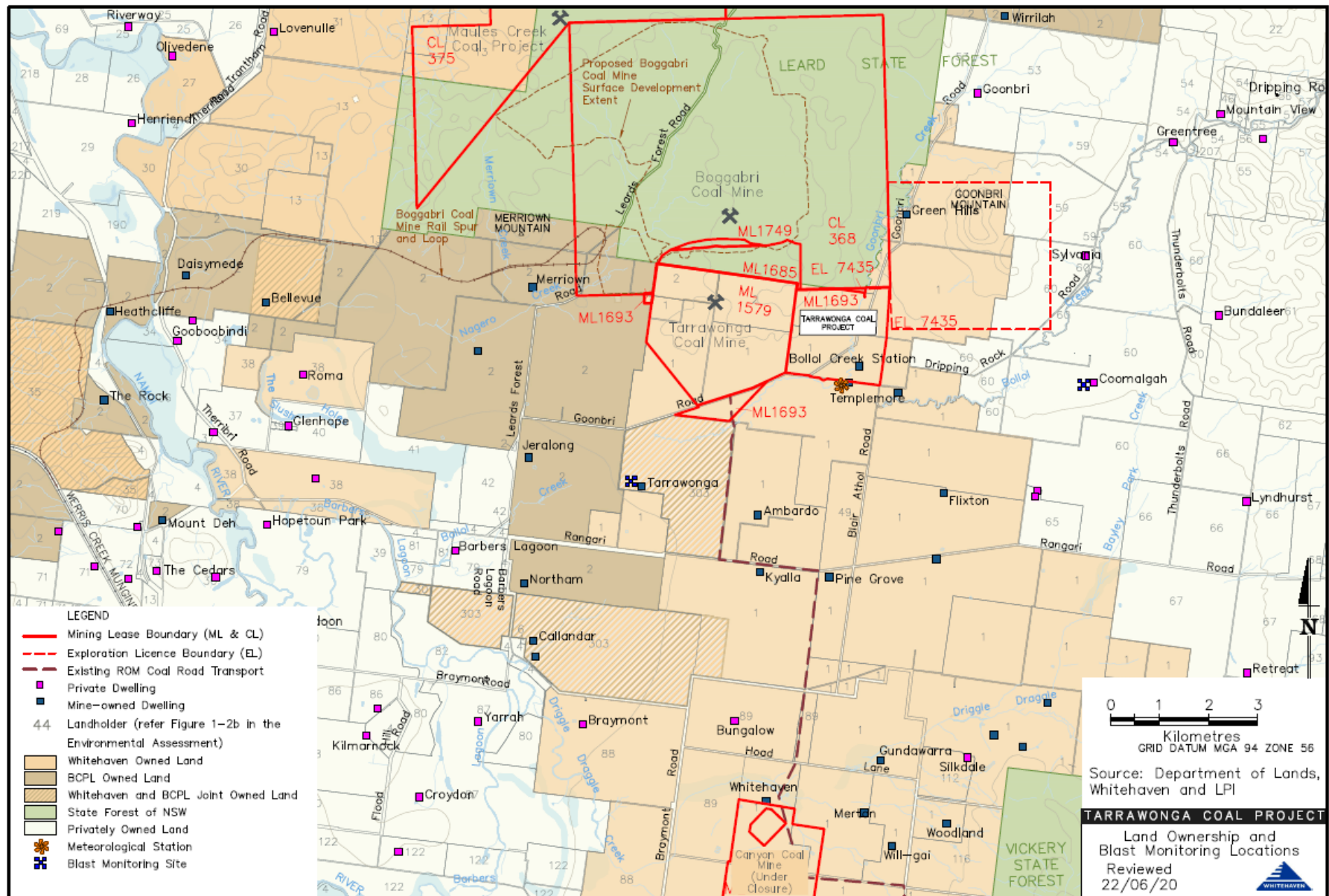
Approvals and Licencing

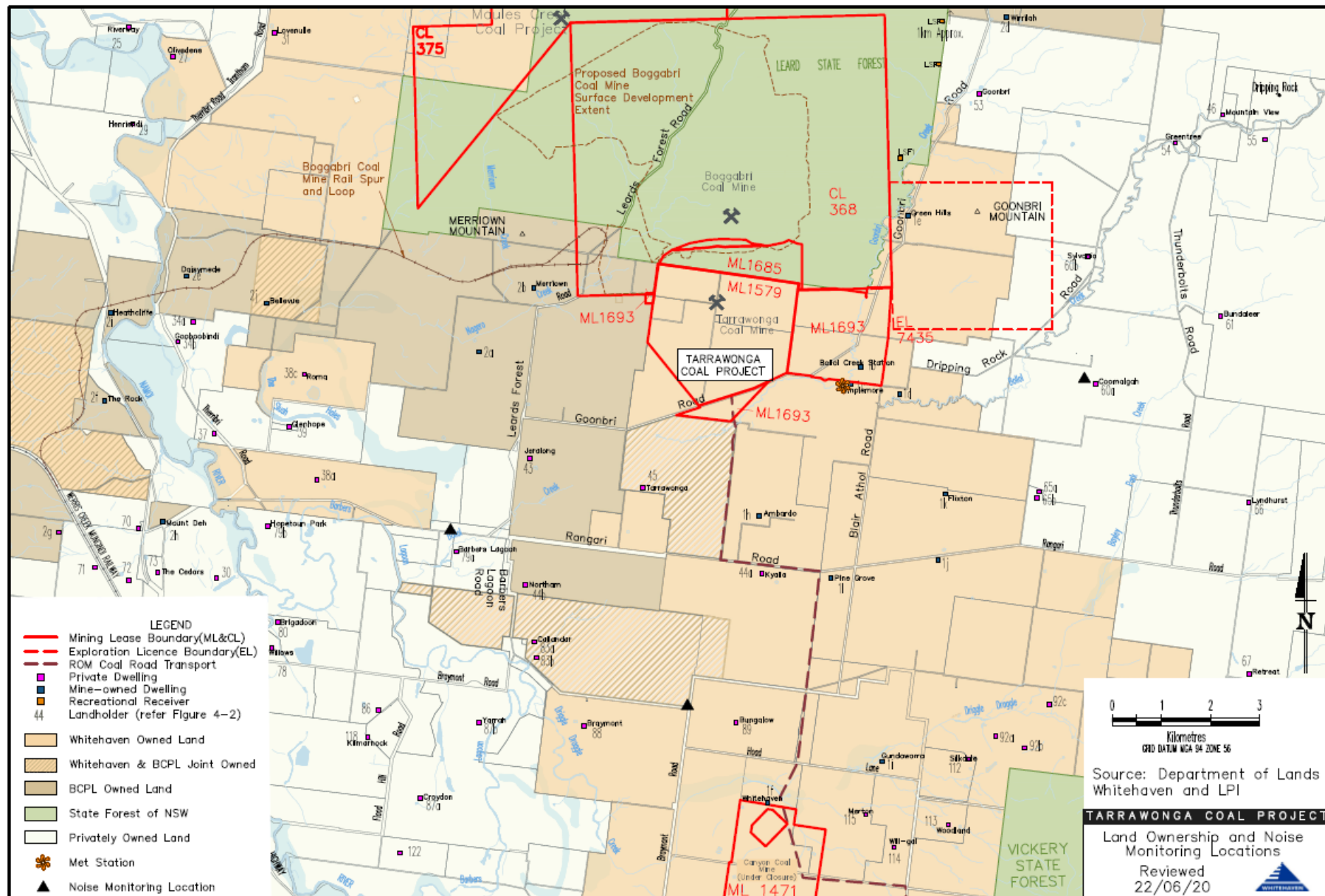
Tarrawonga's MP11_0047 Modification 10 was approved on the 19th October 2023. This modification is in relation to Haul truck hours. Tarrawonga has updated and submitted relevant management plans (Noise and Traffic) to align with this modification. These hours were enacted on the 12th of December 2023, and communication was sent out to stakeholders regarding this.

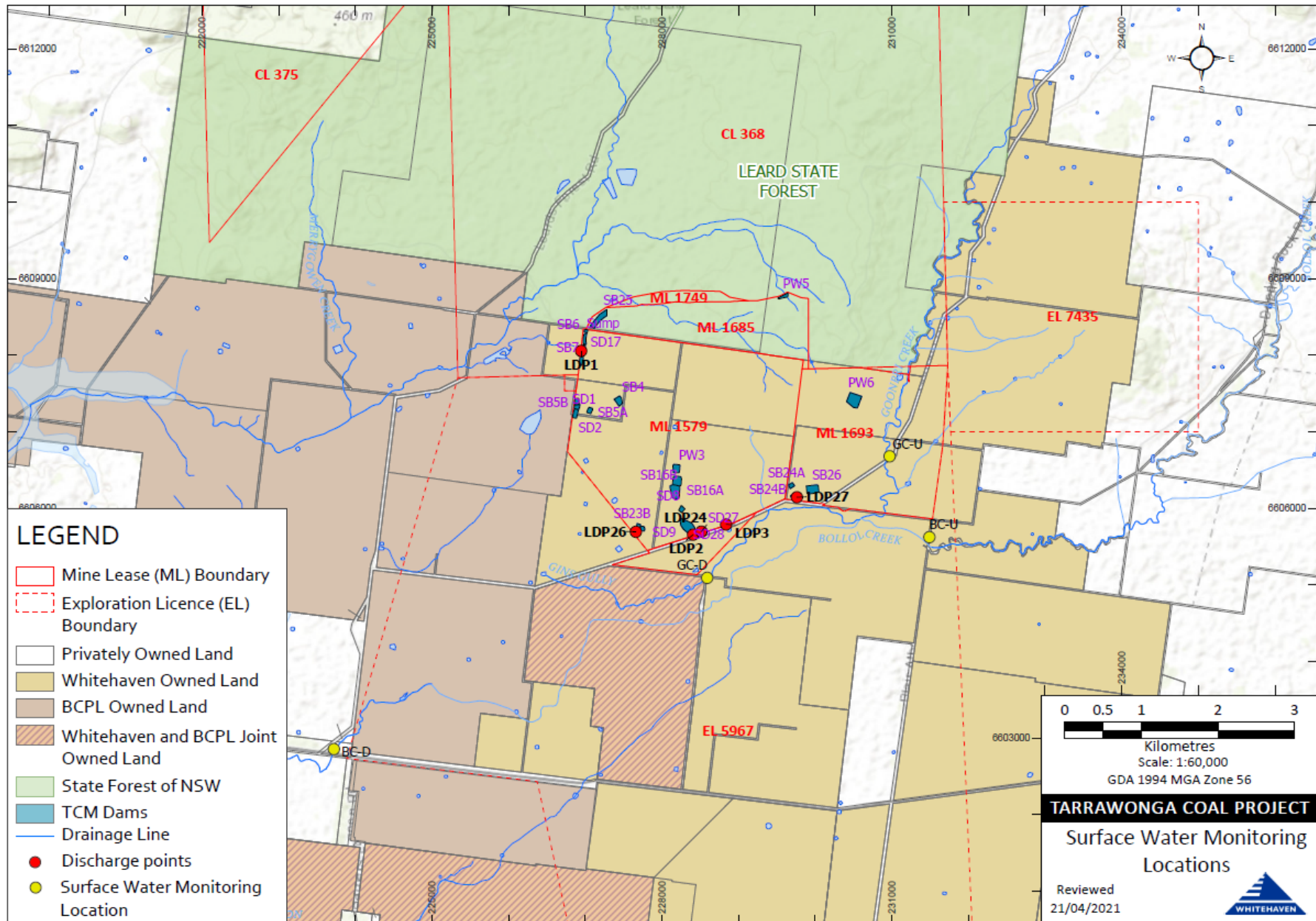
No additional modifications are expected in the foreseeable future.

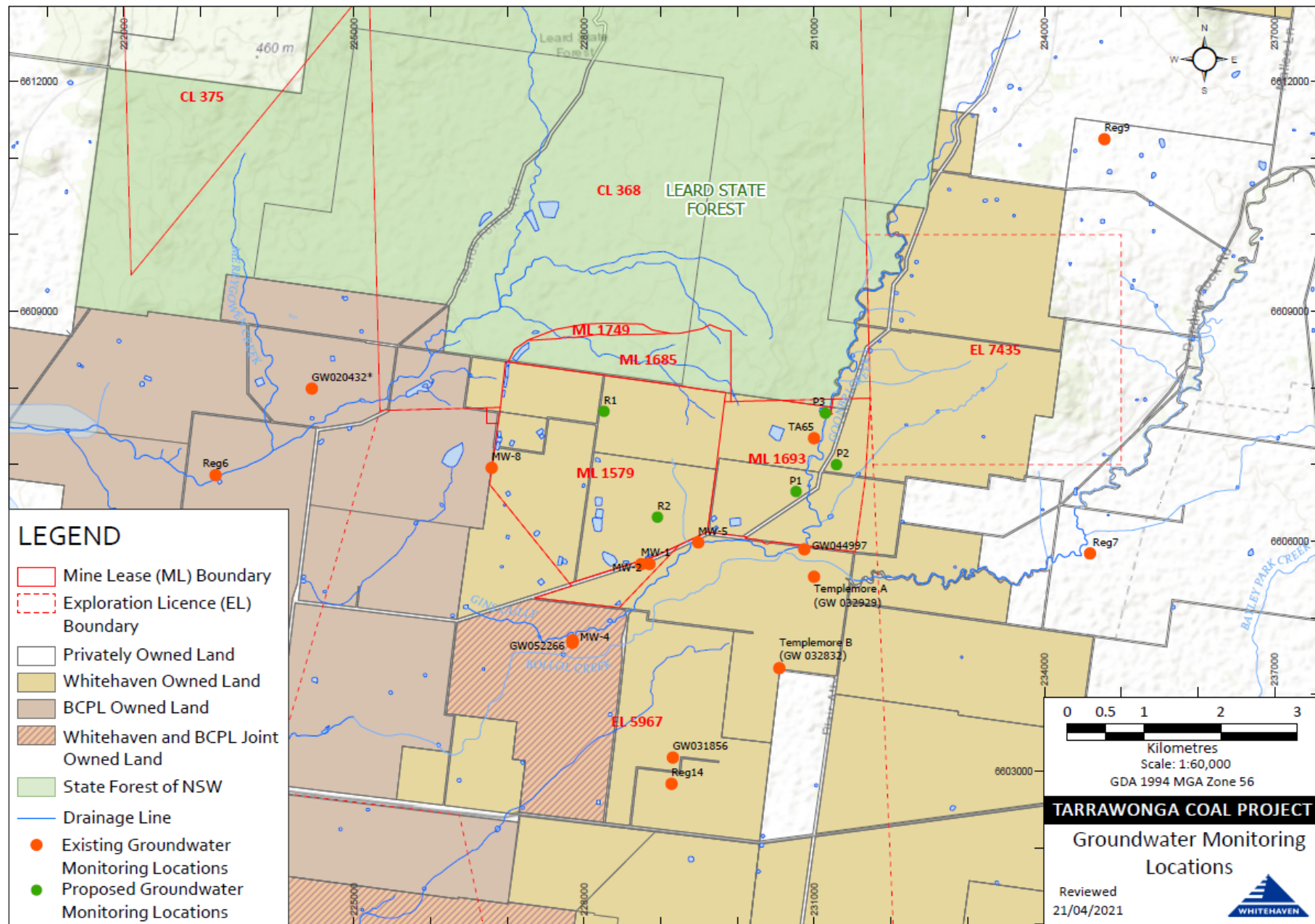
Appendix A





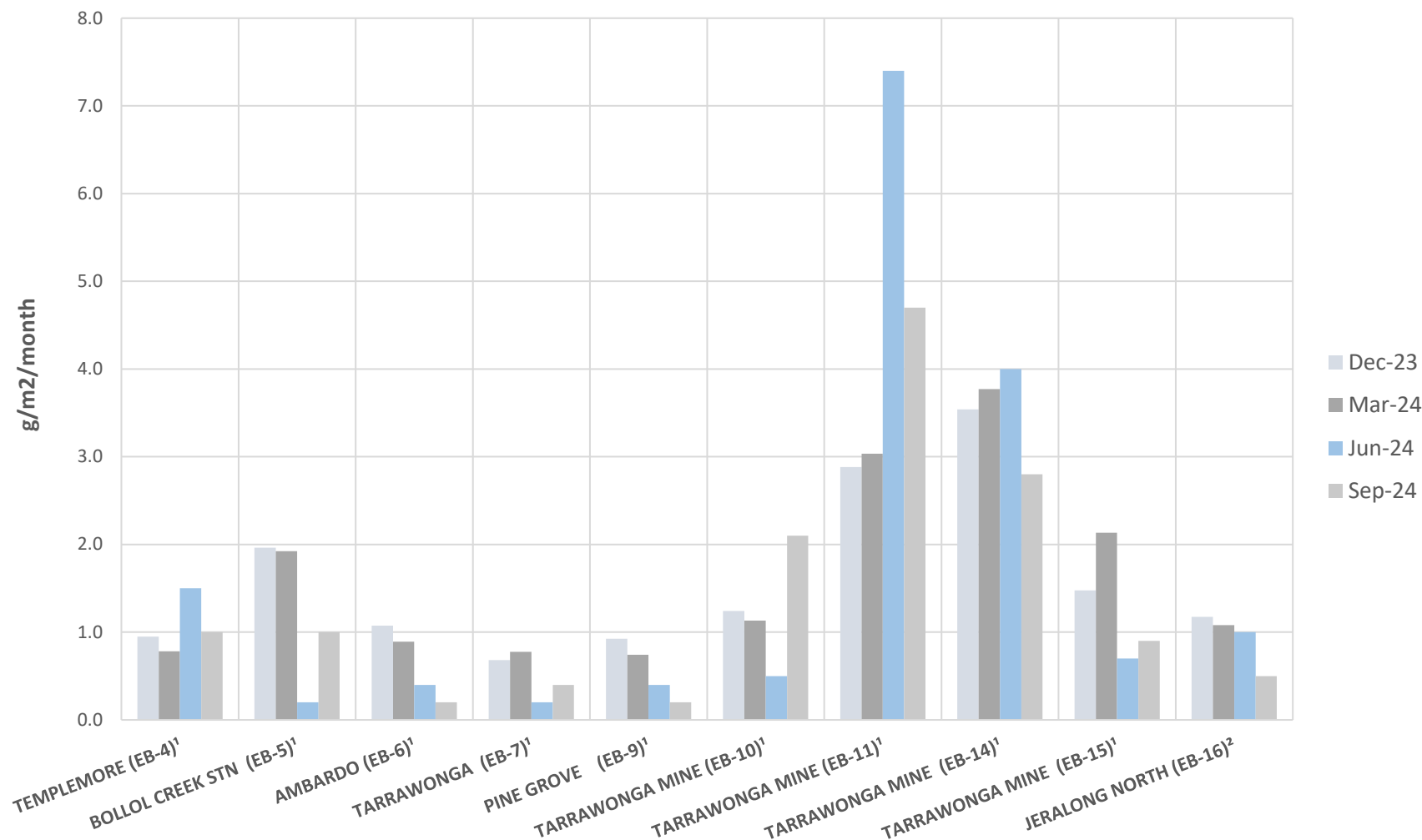




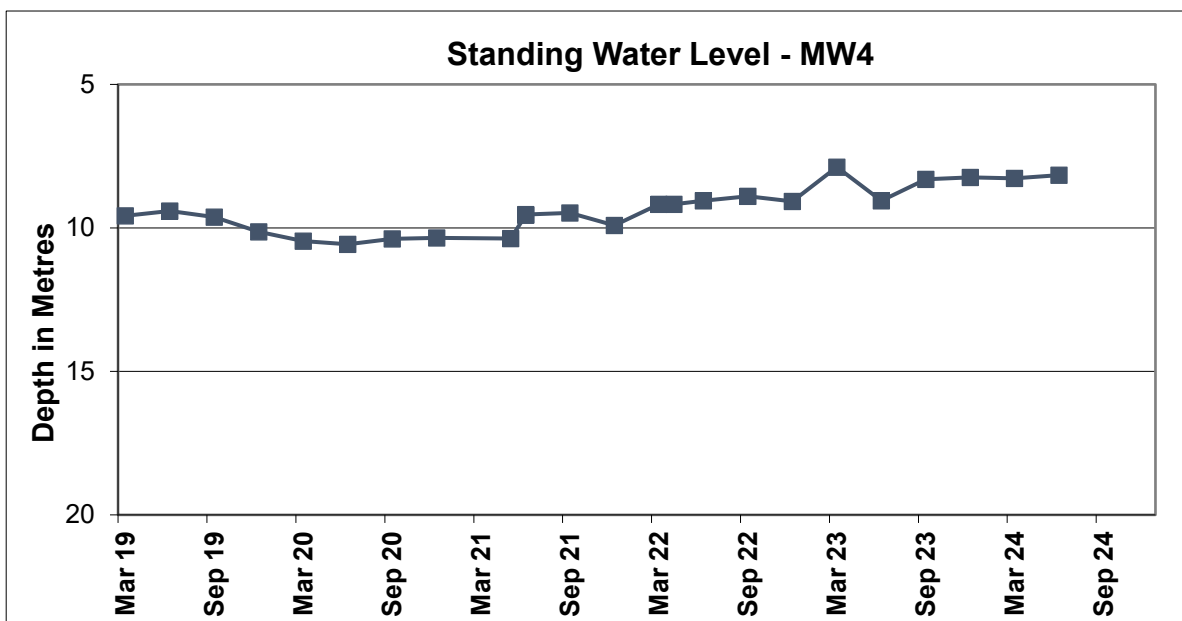
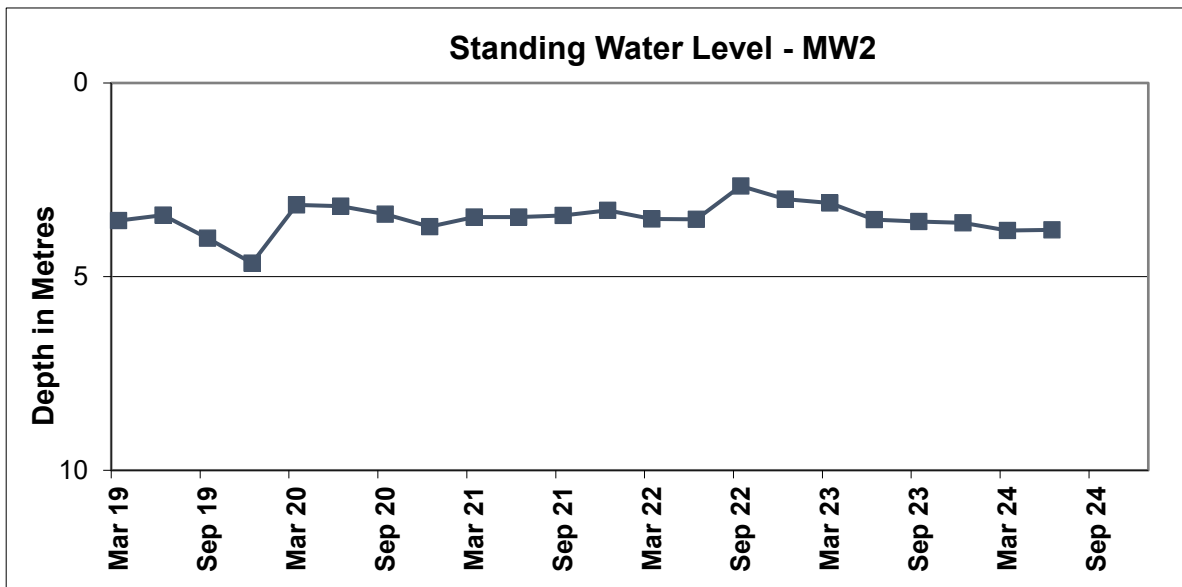
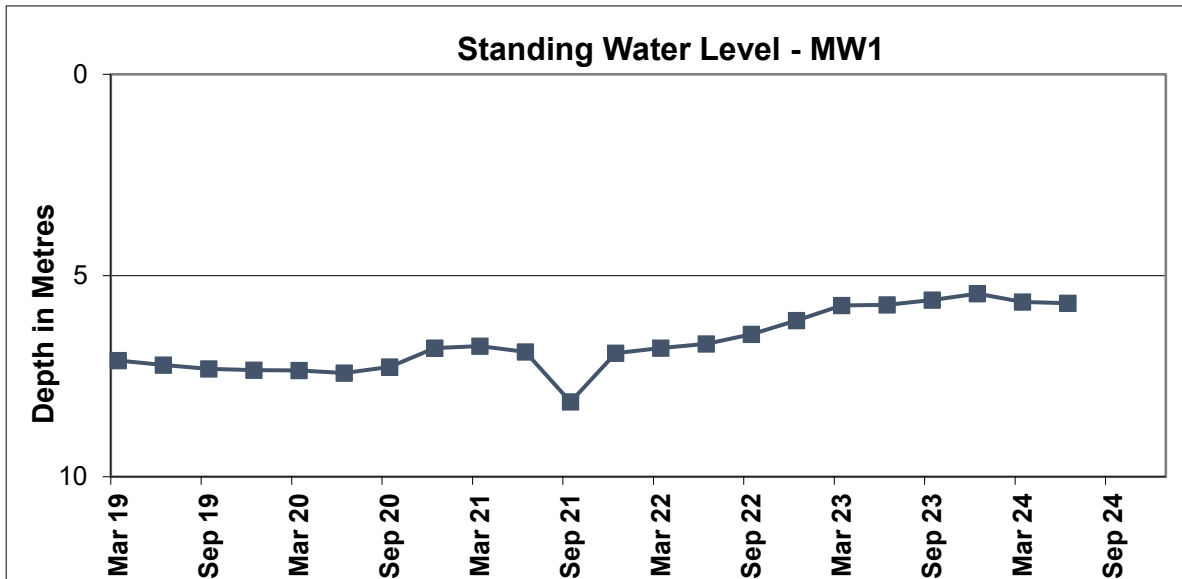


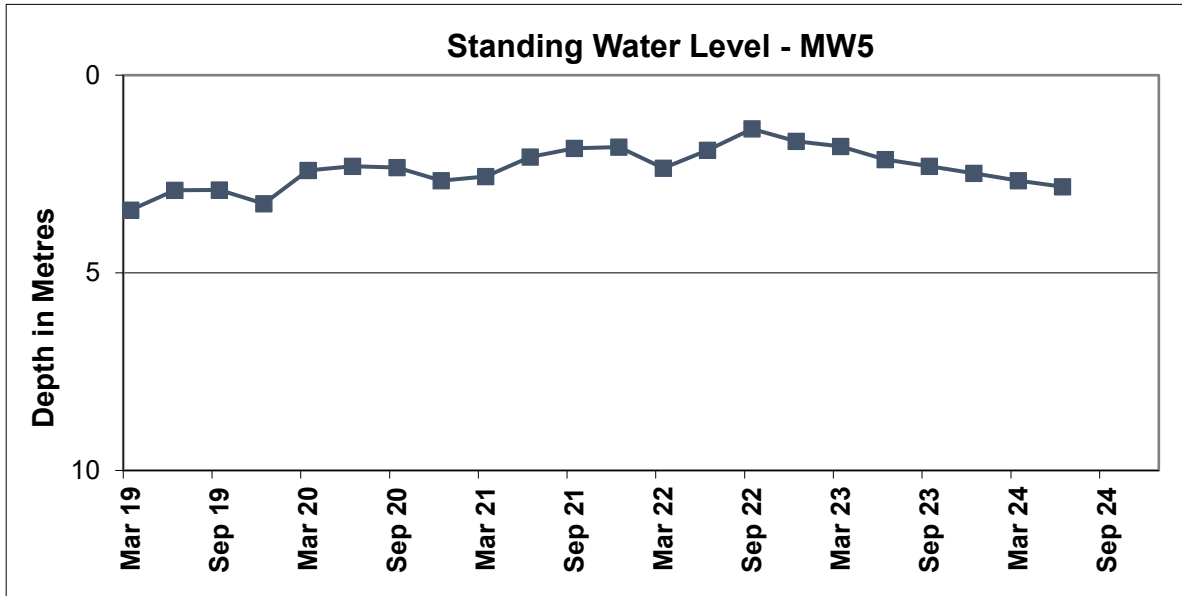
Appendix B

Deposited Dust Gauge Results- Quarterly rolling average [g/m2/month]



Appendix C





- Minutes:** Minutes of the 78th Meeting of the Tarrawonga Coal Community Consultative Committee held at the Boggabri Golf Club, Kamilaroi Highway, Boggabri on Wednesday 13 November 2024 commencing at 10.05 am.
- Members Present:** Elizabeth O’Hara (EOH) – Community Representative, Matt Hollis (MH) – Tarrawonga Coal Mine, Maddi Wright (MW) – Tarrawonga Coal Mine, Wade Hudson (WH) - Gunnedah Shire Council
- Apologies:** Lloyd Finlay (LF) – Community Representative, Cr J. Jansson – Narrabri Shire Council, Cr E. Towns – Narrabri Shire Council, Gunnedah Shire Council delegate*, Darren Swain (DS) - Whitehaven Coal.
- Independent Chair:** Michael J. Silver OAM (MJS)

**Council’s delegate has not been appointed.*

| Agenda Item | Discussion | Action/By Whom |
|-------------|--|----------------|
| 1. | Welcome and Apologies – MJS welcomed everyone to the meeting. | |
| 2. | Acknowledgement of Country - The Chair acknowledged the Traditional Owners of the land on which the meeting is being held and their continuing connection to land, water, and culture, paying respects to their Elders past, present and emerging. | |
| 3. | Declaration of pecuniary or other interests – EOH has a small package of WHC shares. MJS expenses as chair are borne by TCM. | |
| 4. | Minutes from Previous Meeting – Members noted that the minutes of the meeting of 28 August 2024 were approved on 25 September 2024 and appropriately reflected what was discussed. | |
| 5. | Business Arising EOH questioned how the auditing of offsets in the Tarrawonga Coal Mine Offset Management Plan (OMP) will be implemented. MH advised that the auditing process is fully outlined in the draft Plan. | |
| 6. | Actions from Previous Meeting 6.1 TCM to explore feasibility of presenting a slide in future of injuries falling / rising. <i>A table outlining the current safety performance was presented as part of the Proponent's Report.</i> 6.2 That the Tarrawonga Coal Mine Rehabilitation Objectives be presented at the October 2024 CCC meeting. <i>A comprehensive presentation on the mines Rehabilitation Objects was presented as part of the Proponent's Report.</i> | |
| 7. | Correspondence Nil | |
| 8. | Environmental Monitoring Report <i>A copy of the Quarterly Environmental Report is attached to the minutes.</i> The Environmental Monitoring Report was distributed to members with the agenda prior to the meeting. No matters in the report were raised for discussion. | |
| 9. | Proponent's Report <i>A copy of the Proponent's Report is attached to the minutes.</i> MH commenced the presentation by providing members with an update on the mine's current safety performance. with a Total Recordable Incident Frequency Rate (TRIFR) sitting at zero. He did highlight a safety incident on 16 September 2024 where workers were working at height without appropriate fall protection. He then stepped the Committee through the Significant Incidents graphs noting that green are hazards whilst orange is a breach. MH added that were incidents are identified corrective action is initiated to avert the risk or hazard. He proceeded to provide examples of risks and hazards that may be identified, and the mechanisms employed to reduce or mitigate the risk. In particular, he highlighted the use of radar monitoring in areas that are subject to failure due to 'ground strata issues', and the establishment of 'no go zones' in high-risk | |

hazard locations. These actions are supported by daily inspections of hazard locations and specialist geological advice. This addressed the Action relating to safety performance.

EOH questioned what punitive action is taken where a breach of safety occurs. MH responded that it is dependent on the nature and seriousness of the breach and may result in reinforcement of induction procedures up to employment dismissal and in the case of contractors, dissolution of the contract.

MH provided an overview of community involvement and support noting that \$217,566.43 in donations and sponsorship has been provided to the local community in the first quarter of 2025.

In respect of Monitoring and Compliance, MH advised that there had been no compliance issues during the period with one controlled water discharge on 6 August 2024.

MH advised that in respect of rehabilitation the current focus is on land forming and shaping in the northern rehabilitation sector. He indicated that the rehabilitation work is now linking up with the Boggabri Coal boundary. The rehabilitation process being followed is July to December – land forming with top soiling and seeding undertaken in the autumn, generally March to May. WH enquired as to the success rate, to which MH responded that this strategically staged process provides the best outcome.

On other environmental matters, MH advised there had been no complaints during the period. He noted there had been reasonable success with the control of feral pigs using the poison ‘Hoggone’. He also noted that considerable eradication work was being undertaken to control outbreaks of Patterson’s Curse throughout the rehabilitation areas.

In response to the Action requesting presentation of the Tarrawonga Coal Mine Rehabilitation Objectives, MH provided a detailed overview of the rehabilitation objectives. He stepped the Committee through the various critical areas of the rehabilitation process and explained the rational and impact/issues to be addressed. He highlighted the overarching criteria that must be addressed and advised that the Final Void Closure Management Plan is currently being prepared by consultants.

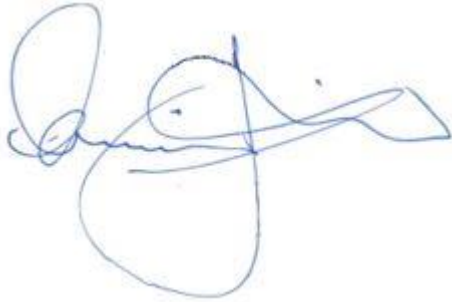
MH advised that a minimum of 257 hectares of Class 3 agricultural land will be established. The landform created will be consistent with the surrounding landform and the ecosystem function will be restored. In respect of structures, some may remain whilst others will be removed. The treatment and management of these structures will be discussed with the Regulator. In respect of disposal of ‘rejects’, these will be buried at an adequate depth.

MH did point out that some objectives may change over the next two years given possible variations in approach to closure actions. MH added that in the last quarter of 2024, twenty-six hectares of rehabilitation will be land formed, with the last tyres to be disposed of in the pit under the current approval.

| | | |
|-----|--|--|
| | <p>MH advised that excess sediment water captured onsite will be discharged off site after treatment in accordance with Environmental Protections License requirements. The extent of any discharge depends on the volume of water stored onsite and the ongoing management of water on the site to maintains site demands for dust suppression activities. WH asked, what implications the Vickery-Tarrawonga pipeline would have? MH responded that it would provide greater flexibility over water management. WH enquired whether there were long term plans to extend the pipeline to Maules Creek? MH indicated there is an existing approval for a pipeline from Vickery to Tarrawonga and that the pipeline linking Maules Creek Mine to Tarrawonga and Vickery mines is a concept that is still subject to approval within a future project approval modification for both Maules Creek and Tarrawonga Mines, if the concept were to proceed.</p> <p>EOH noted that Maules Creek Coal has a high priority water licence with the potential to feed water from that licence into the pipeline. She indicated that there is considerable community concern that water from this licence will be pumped to Tarrawonga.</p> <p>MH advised that the Tarrawonga mine has no surface water extraction approval but does have an interception license where groundwater is taken by virtue of the mining operations whilst both Vickery and Maules Creek Coal have existing surface and groundwater water entitlements. He indicated that water from the former Canyon mine void – now part of the Vickery mine operation was previously trucked via road transport to Tarrawonga during extended dry period in 2019. The existing approved Tarrawonga to Vickery mine pipeline will permit the transfer back and forward to Tarrawonga in the future thus reducing the risk in future dry times. Ultimately the post closure Tarrawonga mine void may be used for storage of surplus water from Vickery Mine and consequently to derisk the need to buy water in the future.</p> | |
| 10. | <p>Tarrawonga Coal Mine Offset Management Plan (OMP)</p> <p>MH provided an update on consultation associated with the OMP. He encouraged members with matters of concern to send comments to tarrawongaenvironment@whitehavencoal.com.au . MH advised that considerable consultation has been undertaken with various government agencies.</p> | |
| 11. | <p>Other Agenda Items</p> <p>Nil</p> | |
| 12. | <p>General Business</p> <p>Nil</p> | |
| 13. | <p>Next Meeting</p> <p>The next meeting is scheduled for 12 February 2025.</p> | |

Meeting closed at 11.17 am.

Approved:



Michael J. Silver OAM
Independent Chair

17 November 2024

Appendix 1: Actions

| Action No | Description | Date Raised | Page No | Status |
|-----------|---|-------------|---------|------------------------|
| 1 | TCM to explore feasibility of presenting a slide in future of injuries falling / rising | 14.02.24 | 3 | COMPLETED 13.11.24 |
| 2 | TCM to provide link to Sustainability Report | 14.02.24 | 3 | COMPLETED 15.05.24 |
| 3 | MW to investigate if Social Impact Plan was available | 14.02.24 | 4 | COMPLETED 15.05.24 |
| 4 | MJS to advise Ms Druce that the proposition should be discussed with NSC and RFS. | 15.05.24 | 2 | COMPLETED 06.06.24 |
| 5 | That the Tarrawonga Coal Mine Rehabilitation Objectives be presented at the October 2024 CCC meeting. | 29.08.2024 | 3 | COMPLETED 13.11.224 |

Tarrawonga Coal Mine Community Consultative Committee Meeting #79

**Quarterly Environmental Monitoring Report
October 2024 –December 2024**



Photo taken in July 2024 showing rehabilitation progression of the South Rehab with fresh vegetation

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 October 1 2024 to December 30 2024. 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 9th to the 13th of December 2024. 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 – Q4 December 2024)

| Table 1 TCM Operational Noise Monitoring Results – 9 December 2024 (Evening) | | | | |
|---|--------|------------------------------|---------------------------------|---|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 7:41pm | 35 | 0.9 / 249 / E | Insects (34), TCM (29) |
| Barbers Lagoon – TN3 | 6:07pm | 48 | 2.8 / 250 / E | Traffic (48), insects (31), birds (23), TCM (<20) |
| Bungalow – TN4 | 6:50pm | 29 | 2.0 / 221 / E | Insects (28), TCM (22) |

| Table 2 TCM Operational Noise Monitoring Results – 9-10 December 2024 (Night) | | | | |
|--|---------|------------------------------|---------------------------------|--------------------------|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 10:11pm | 34 | 1.4 / 087 / E | Insects (33), TCM (28) |
| Barbers Lagoon – TN3 | 12:34am | 32 | 1.3 / 050 / D | Insects (32), TCM (<20) |
| Bungalow – TN4 | 11:27pm | 32 | 1.3 / 090 / E | Insects (32), TCM (<20) |

| Table 3 TCM Operational Noise Monitoring Results – 10 December 2024 (Day) | | | | |
|--|---------|------------------------------|---------------------------------|--|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 12:54pm | 38 | 3.0 / 206 / B | Aeroplanes (35), birds (32), wind in trees (29), insects (29), TCM (<20) |
| Barbers Lagoon – TN3 | 9:21am | 45 | 2.4 / 296 / B | Traffic (45), birds (35), TCM (<20) |
| Bungalow – TN4 | 11:03am | 42 | 1.6 / 193 / B | Traffic (42), birds (28), insects (23), TCM (<20) |

| Table 4 TCM Operational Noise Monitoring Results – 10 December 2024 (Evening) | | | | |
|--|--------|------------------------------|---------------------------------|---|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 6:06pm | 38 | 4.0 / 203 / D | Traffic (37), insects (29), birds (28), TCM (<20) |
| Barbers Lagoon – TN3 | 7:41pm | 56 | 1.1 / 208 / E | Birds (54), traffic (50), insects (27), TCM (<20) |
| Bungalow – TN4 | 7:00pm | 52 | 2.2 / 190 / D | Traffic (52), birds (26), insects (24), TCM (<20) |

| Table 5 TCM Operational Noise Monitoring Results – 10-11 December 2024 (Night) | | | | |
|---|---------|------------------------------|---------------------------------|---------------------------------------|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 1:21am | 31 | 1.5 / 131 / E | Traffic (30), insects (21), TCM (<20) |
| Barbers Lagoon – TN3 | 10:12pm | 40 | 0.9 / 132 / E | Traffic (39), insects (32), TCM (27) |
| Bungalow – TN4 | 11:24pm | 35 | 2.3 / 168 / E | Traffic (33), insects (28), TCM (27) |

| Table 6 TCM Operational Noise Monitoring Results – 11 December 2024 (Day) | | | | |
|--|---------|------------------------------|---------------------------------|---|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 1:26pm | 44 | 4.0 / 187 / B | Traffic (42), birds (40), insects (23), TCM (<20) |
| Barbers Lagoon – TN3 | 10:13am | 40 | 2.3 / 187 / B | Birds (39), traffic (32), insects (22), TCM (<20) |
| Bungalow – TN4 | 11:50am | 35 | 3.8 / 187 / B | Traffic (33), birds (30), insects (25), TCM (<20) |

| Table 7 TCM Operational Noise Monitoring Results – 11 December 2024 (Evening) | | | | |
|--|--------|------------------------------|---------------------------------|---|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 7:55pm | 55 | 1.8 / 212 / E | Traffic (55), birds (41), insects (24), TCM (<20) |
| Barbers Lagoon – TN3 | 6:05pm | 45 | 4.6 / 212 / D | Traffic (44), birds (38), insects (24), TCM (<20) |
| Bungalow – TN4 | 6:52pm | 45 | 3.1 / 222 / E | Traffic (45), birds (31), insects (21), TCM (<20) |

| Table 8 TCM Operational Noise Monitoring Results – 11-12 December 2024 (Night) | | | | |
|---|---------|------------------------------|---------------------------------|--|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 12:41am | 38 | 1.9 / 044 / E | Agricultural (38), insects (21), TCM (<20) |
| Barbers Lagoon – TN3 | 10:04pm | 28 | 1.5 / 042 / E | Traffic (27), insects (21), TCM (<20) |
| Bungalow – TN4 | 11:13pm | 57 | 1.7 / 134 / E | Traffic (57), insects (27), TCM (<20) |

| Table 9 TCM Operational Noise Monitoring Results – 12 December 2024 (Day) | | | | |
|--|---------|------------------------------|---------------------------------|-------------------------------------|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 12:52pm | 28 | 3.2 / 261 / B | Insects (28), TCM (<20) |
| Barbers Lagoon – TN3 | 9:21am | 49 | 3.2 / 259 / B | Traffic (49), birds (33), TCM (<20) |
| Bungalow – TN4 | 11:02am | 44 | 3.9 / 283 / B | Birds (44), traffic (33), TCM (<20) |

| Table 10 TCM Operational Noise Monitoring Results – 12 December 2024 (Evening) | | | | |
|---|--------|------------------------------|---------------------------------|--------------------------|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 6:26pm | 31 | 3.9 / 262 / D | Insects (31), TCM (<20) |
| Barbers Lagoon – TN3 | 7:50pm | 32 | 1.1 / 274 / E | Insects (32), TCM (<20) |
| Bungalow – TN4 | 7:08pm | 32 | 2.5 / 249 / E | Insects (32), TCM (<20) |

| Table 11 TCM Operational Noise Monitoring Results – 12-13 December 2024 (Night) | | | | |
|--|---------|------------------------------|---------------------------------|------------------------------------|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 12:42am | 31 | 1.4 / 053 / E | Insects (30), cows (23), TCM (<20) |
| Barbers Lagoon – TN3 | 10:09pm | 32 | 1.7 / 035 / E | Insects (32), TCM (20) |
| Bungalow – TN4 | 11:20pm | 32 | 1.9 / 037 / E | Insects (32), TCM (<20) |

| Table 12 TCM Operational Noise Monitoring Results – 13 December 2024 (Day) | | | | |
|---|---------|------------------------------|---------------------------------|---|
| Location | Time | Total dB(A), Leq (15 min) | Wind speed / direction / PSC | Identified Noise Sources |
| Matong – TN2 | 1:19pm | 37 | 4.5 / 273 / C | Insects (35), wind in trees (30), birds (29), TCM (<20) |
| Barbers Lagoon – TN3 | 9:22am | 62 | 5.2 / 298 / C | Insects (61), birds (53), tractor (36), TCM (<20) |
| Bungalow – TN4 | 11:21am | 41 | 6.1 / 302 / C | Insects (38), traffic (37), birds (30), TCM (<20) |

Noise from the mine must not exceed 45 dB(A) L1 (1 min) between 10 pm and 7 am. This criterion is to minimise the potential for sleep disturbance because 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 – 9-10 December 2024 (Night) | | | | | |
|---|---------|----------------------------------|----------------------------------|-----------|---------------------------------|
| Location | Time | dB(A) L1 (1 min) ¹ | dB(A) L1 (1 min) ² | L1 Source | Wind speed / direction / PSC |
| Matong – TN2 | 10:11pm | 46 | 32 | Insects | 1.4 / 087 / E |
| Barbers Lagoon – TN3 | 12:30am | 40 | <20 | Insects | 1.3 / 050 / D |
| Bungalow – TN4 | 11:27pm | 39 | <20 | Insects | 1.3 / 090 / E |

1. L1 (1 min) – total measured level.

2. L1 (1 min) – TCM noise only.

| Table 14 TCM Sleep Disturbance Monitoring Results – 10-11 December 2024 (Night) | | | | | |
|--|---------|----------------------------------|----------------------------------|-----------|---------------------------------|
| Location | Time | dB(A) L1 (1 min) ¹ | dB(A) L1 (1 min) ² | L1 Source | Wind speed / direction / PSC |
| Matong – TN2 | 1:21am | 46 | <20 | Traffic | 1.5 / 131 / E |
| Barbers Lagoon – TN3 | 10:12pm | 67 | 33 | Traffic | 0.9 / 132 / E |
| Bungalow – TN4 | 11:24pm | 50 | 31 | Traffic | 2.3 / 168 / E |

| Table 15 TCM Sleep Disturbance Monitoring Results – 11-12 December 2024 (Night) | | | | | |
|--|---------|----------------------------------|----------------------------------|--------------|---------------------------------|
| Location | Time | dB(A) L1 (1 min) ¹ | dB(A) L1 (1 min) ² | L1 Source | Wind speed / direction / PSC |
| Matong – TN2 | 12:41am | 46 | <20 | Agricultural | 1.9 / 044 / E |
| Barbers Lagoon – TN3 | 10:04pm | 35 | <20 | Insects | 1.5 / 042 / E |
| Bungalow – TN4 | 11:13pm | 83 | <20 | Traffic | 1.7 / 134 / E |

| Table 16 TCM Sleep Disturbance Monitoring Results – 12-13 December 2024 (Night) | | | | | |
|--|---------|----------------------------------|----------------------------------|-----------|---------------------------------|
| Location | Time | dB(A) L1 (1 min) ¹ | dB(A) L1 (1 min) ² | L1 Source | Wind speed / direction / PSC |
| Matong – TN2 | 12:42am | 37 | <20 | Insects | 1.4 / 053 / E |
| Barbers Lagoon – TN3 | 10:09pm | 42 | 25 | Insects | 1.7 / 035 / E |
| Bungalow – TN4 | 11:20pm | 39 | <20 | Insects | 1.9 / 037 / 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 1344 blasts (until 31/12/2024) at TCM. 52 of these were during the reporting period.

Table 1 below displays the peak ground pressure and overpressure values recorded and dated at the compliance monitor on Coomalgah property during the quarter.

TCM overpressure and 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) |
|------------------|------------|-----------------------------|----------------|------------|----------------------------------|------------------|
| Coomalgah | 16-12-2024 | 108.3 | 120 | 25-11-2024 | 0.39 | 10 |

Air Quality Monitoring

Dust Deposition Gauge 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/m²/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/m²/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/m2/month]

| 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) ¹ | TARRAWONGA MINE (EB-14) | TARRAWONGA MINE (EB-15) | JERALONG NORTH (EB-16) |
|---------------------------------|----------------------|----------------------------|--------------------|----------------------|----------------------|----------------------------|---|----------------------------|----------------------------|---------------------------|
| Jan-24 | 0.3 | 1.2 | 0.9 | 1.0 | 1.2 | 1.9 | 2.3 | 2.1 | 2.2 | 1.1 |
| Feb-24 | 0.8 | 0.4 | 0.8 | 0.6 | 0.6 | 1.0 | 3.4 | 3.7 | 1.0 | 0.7 |
| Mar-24 | 0.8 | 2.8 | 1.0 | 2.7 | 0.8 | 0.6 | 4.2 | 5.0 | 9.0c | 1.6 |
| Apr-24 | 0.4 | 2.3 | 0.9 | 0.4 | 0.8 | 2.2 | 4.4 | 3.9c | 3.1 | 0.6 |
| May-24 | NA | 0.9 | 0.6 | 0.6 | 0.4 | 1.6 | 5.2c | 2.6 | 1.0 | 0.8 |
| Jun-24 | 1.5 | 0.2 | 0.4 | 0.2 | 0.4 | 0.5 | 7.4c | 4 | 0.7 | 1 |
| Jul-24 | 1.5 | 1.2 | 0.3 | 0.4 | 0.7 | 0.6 | 5.5c | 4.2 | 1.7 | 0.5 |
| Aug-24 | 1.0 | 1.5 | 0.2 | 0.2 | 0.7 | 0.3 | 3.6 | 3.3 | 0.2 | 0.6 |
| Sep-24 | 1.0 | 1.0 | 0.2 | 0.4 | 0.2 | 2.1 | 4.7 | 2.8 | 0.9 | 0.5 |
| Oct-24 | 3.1 | 1.4 | 0.8 | 0.7 | 1.2 | 1.5 | 3.3 | 6.3 | 1.4 | 0.5 |
| Nov-24 | 1.8 | 0.6 | 0.4 | 0.4 | 0.5 | 0.8 | 3.0 | 2.1 | 0.7 | 3.3 |
| Dec-24 | 2.2 | 1.5 | 1.2 | 2.3 | 3.3c | 4.6 | 3.0 | 3.8 | 3.5c | 4.3c |
| 12 MONTH ROLLING AVERAGE | 1.3 | 1.3 | 0.6 | 0.8 | 0.7 | 1.5 | 4.2 | 3.7 | 1.3 | 1.0 |

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 not compliant for DDG testing, so results are not to be assessed against criteria alone. Still used to calculate average

¹DDG bottle on the fenceline between TCM and BCM ROM.

^{NA} bottle was removed with a fence by land occupant. No result available.

High Volume Air sampler (PM10) Results

The High Volume Air Sampler (HVAS) installed at Coomalgah property monitors levels of Particle Matter under 10 micron (PM₁₀). It operates for 24hr every 6 days. **Table 3** shows that all 24hr average values recorded for this quarter are below 50µg/m³.

Table 3: HVAS PM10 24hr Quarterly Average levels

| Date | 24hr averaged PM10 (µg/m ³) | Criterion 24hr average (µg/m ³) | Comments |
|------------|---|---|----------|
| 2/10/2024 | 9.6 | 50 | |
| 8/10/2024 | 11.0 | | |
| 14/10/2024 | 6.0 | | |
| 20/10/2024 | 8.7 | | |
| 26/10/2024 | 10.7 | | |
| 1/11/2024 | 16.6 | | |
| 7/11/2024 | 39.6 | | |
| 13/11/2024 | 18.2 | | |
| 19/11/2024 | 12.4 | | |
| 25/11/2024 | 19.5 | | |
| 1/12/2024 | 11.9 | | |
| 7/12/2024 | 14.2 | | |
| 13/12/2024 | 27.0 | | |
| 19/12/2024 | 18.6 | | |
| 25/12/2024 | 11.4 | | |
| 31/12/2024 | 14.9 | | |

* results pending - lab report delayed.

Real-time Air monitoring (PM₁₀)

A real time air quality unit (TEOM) is located at the “Flixton” property to monitor PM₁₀ 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 (PM₁₀) 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 March 2023 and March 2024 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) |
|-------------|--------------|-----------------------|----------------|-----------------------------|
| MW1 | December 23 | 5.45 | 7.24 | 2,810 |
| | March 24 | 6.33 | 7.25 | 3,260 |
| | June 24 | 6.36 | 7.22 | 3,880 |
| | September 24 | 2.61 – sampling error | 7.53 | 3,470 |
| | December 24 | 6.36 | 7.12 | 3,360 |
| MW2 | December 23 | 3.61 | 7.15 | 729 |
| | March 24 | 4.6 | 6.89 | 716 |
| | June 24 | 4.58 | 7.64 | 831 |
| | September 24 | 4.22 | 7.18 | 669 |
| | December 24 | 4.6 | 7.55 | 592 |
| MW4 | December 23 | 8.24 | 7.49 | 3,100 |
| | March 24 | 8.89 | 7.43 | 3,190 |
| | June 24 | 8.78 | 7.51 | 3,680 |
| | September 24 | 8.66 | 7.70 | 3,410 |
| | December 24 | 8.59 | 7.4 | 3,110 |
| MW5 | December 23 | 2.47 | 7.52 | 2,004 |
| | March 24 | 3.46 | 7.57 | 1,321 |
| | June 24 | 3.61 | 7.85 | 892 |
| | September 24 | 3.50 | 7.69 | 2,420 |
| | December 24 | 2.77 | 7.17 | 2,720 |
| MW8* | December 23 | Sampling error | Casing blocked | Casing blocked |
| | March 24 | 12.91 | | |
| | June 24 | Sampling error | | |
| | September 24 | 12.70 | | |
| | December 24 | 13.13 | | |

*Bore scheduled to be assessed by consultant using a borehole camera, and any problems rectified this year.

Surface Water

Water storage onsite is expected to be sufficient for at least the next 12 months. TCM undertook one controlled discharge event on the 4th October 2024. An approximate 5ML was discharged through Licenced Discharge Points at this time.

TCM recorded 697.2mm of rain in 2024.

Table 5: Annual rainfall

| 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 | 18.6 | 123 | 79.4 | 518.2 |
| Cumulative (mm) | 21.2 | 32.2 | 202 | 239.2 | 240 | 275.8 | 283.8 | 295.2 | 297.2 | 315.8 | 438.8 | 518.2 | |
| 2024 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
| Monthly Rain (mm) | 71.4 | 57.2 | 26 | 107 | 39.2 | 54.2 | 45.2 | 62.4 | 53.4 | 46 | 74 | 61.2 | 697.2 |
| Cumulative (mm) | 71.4 | 128.6 | 154.6 | 261.6 | 300.8 | 355 | 400.2 | 462.6 | 516 | 562 | 636 | 697.2 | |

Evaporator Fans

During the reporting period, Tarrawonga did not use the Evaporator fans to evaporate mine water. TCM disconnected and dismantled the Evaporator fans at the close of the reporting period, due to the progression of the pit, and these will no longer be operable for TCM for the foreseeable future.

Rehabilitation and Clearing

Rehabilitation

By the close of December 2024, TCM prepared approximately 15Ha of Landform, reaching almost half of the target 30.1Ha (corrected target) for the calendar year for landform establishment.

As the Landform is now complete, movement of topsoil and subsoil is underway to this area, to have the landform completed as Ecosystem Establishment by the end of the financial year.

The Annual Report for Rehabilitation will be submitted throughout this reporting period, and this year's commitments will be reviewed in regards to the mine plan (soil storage areas may have to be included), and the final commitments for years 2025-2027 will be presented once this is updated.

Trees on both the North and South rehab areas continue to successfully establish and grow on our historical rehabilitation areas. Ecologists attended site during November to assess the success of the rehabilitation. The resulting report will assist in building a maintenance schedule on the rehabilitation areas for the coming years.



Figure 3 North Rehab – Subsoil being pushed out over recently landformed area (January 2025).



Figure 4: Rehabilitation areas that reached Landform Establishment during reporting period

Clearing

No Clearing activities occurred during the reporting period. Clearing will not begin again until the clearing period between February and April, 2025.

Complaints

No complaints were received during the reporting period.

Environmental Management Plans

TAR Management Plans

TCMs Traffic Management Plan was approved by DPHI during the reporting period. This is now available on TCMs public website

TCMs Air Quality Greenhouse Gas Management Plan was approved by DPHI during the reporting period. This is now available on TCMs public website.

The Rehabilitation Management Plan was updated and is now available on TCMs public website.

BTM Strategies

The BTM Air Quality Management Strategy is undergoing internal review and is expected to be submitted to the Department as soon as possible.

Annual and Compliance Reporting

Annual Review and Annual Return Reports

The Annual Return and Annual Review periods are coming up during the next reporting period (January-March).

Tyre Disposal

TCM completed its a round of tyre disposal in July, 2024. TCM disposed of 94 HV tyres through in-pit disposal. These were disposed of in the TN Pit as per approval conditions, and this will be reported in the Annual Return for the EPA in January 2025.

TCM (and all other mines throughout NSW) no longer retains the licence to dispose of tyres in pit after expiry. The EPA are currently reassessing all EPLs and this licence condition. Until such a time as a licence is reissued or other decision is made regarding HV tyres, TCM will be storing tyres on the surface level on site as per the previous licence conditions (200m2).

Annual Compliance EPBC statement

The Annual Compliance EPBC statement was submitted to DAWE in June 2024.

Annual National Pollutant Inventory (NPI) and Greenhouse Gas Emission (NGERs) Reports 2024

TCM has submitted information for the NPI and NGERs reports and these were approved and reports are available.

Audits - Compliance

Tarrawonga underwent their Independent Environmental Audit and Independent Biodiversity Audit, last year. These audits are required by the Project Approval PA11_0047, and EPBC Act respectively. These audits were carried out in June 2023.

The next audit will be conducted on a three year cycle, expected in June of 2026.

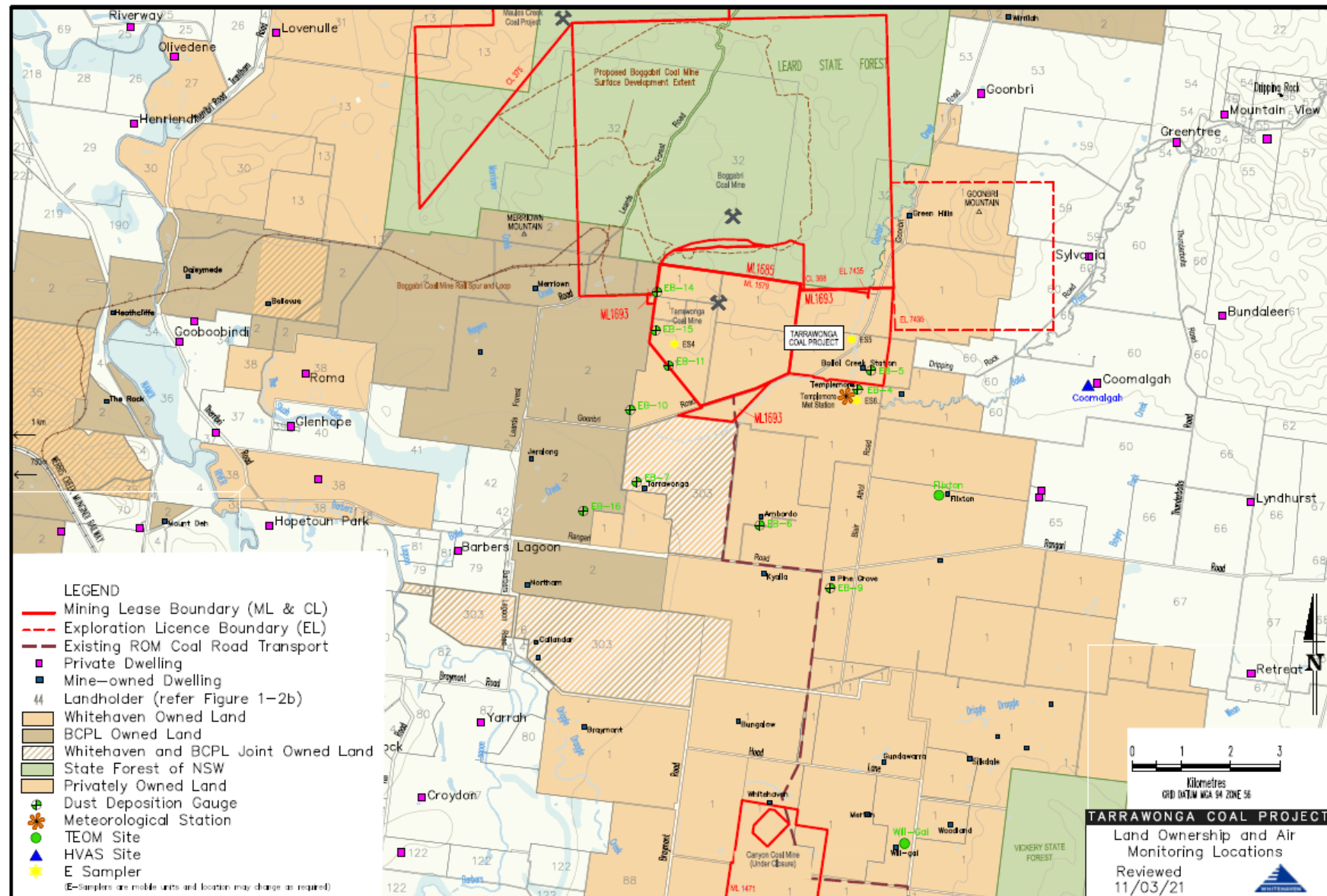
Approvals and Licencing

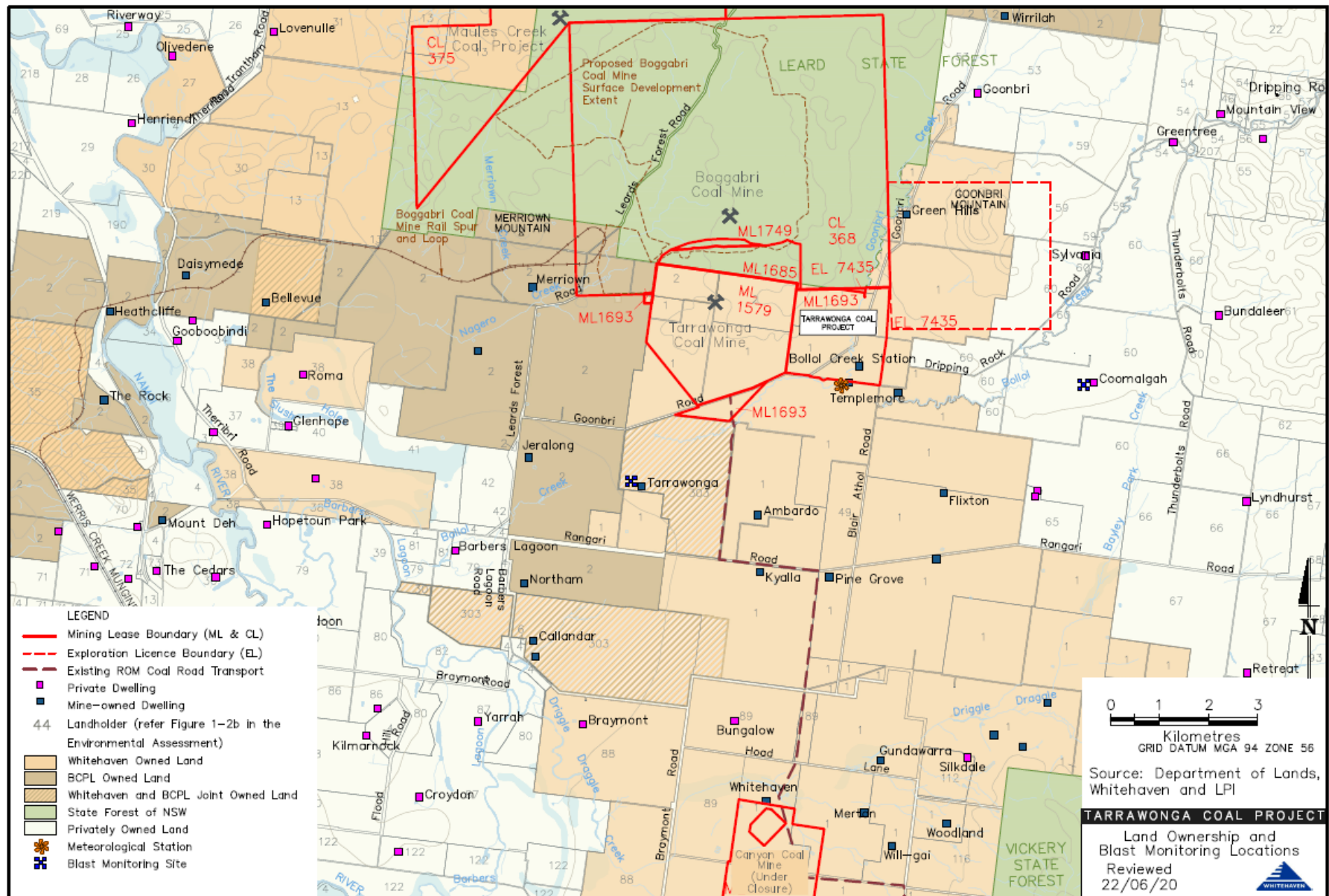
Tarrawonga's MP11_0047 Modification 10 was approved on the 19th October 2023. This modification is in relation to Haul truck hours. Tarrawonga has updated and submitted relevant management plans (Noise and Traffic) to align with this modification. These hours were enacted on the 12th of December 2023, and communication was sent out to stakeholders regarding this.

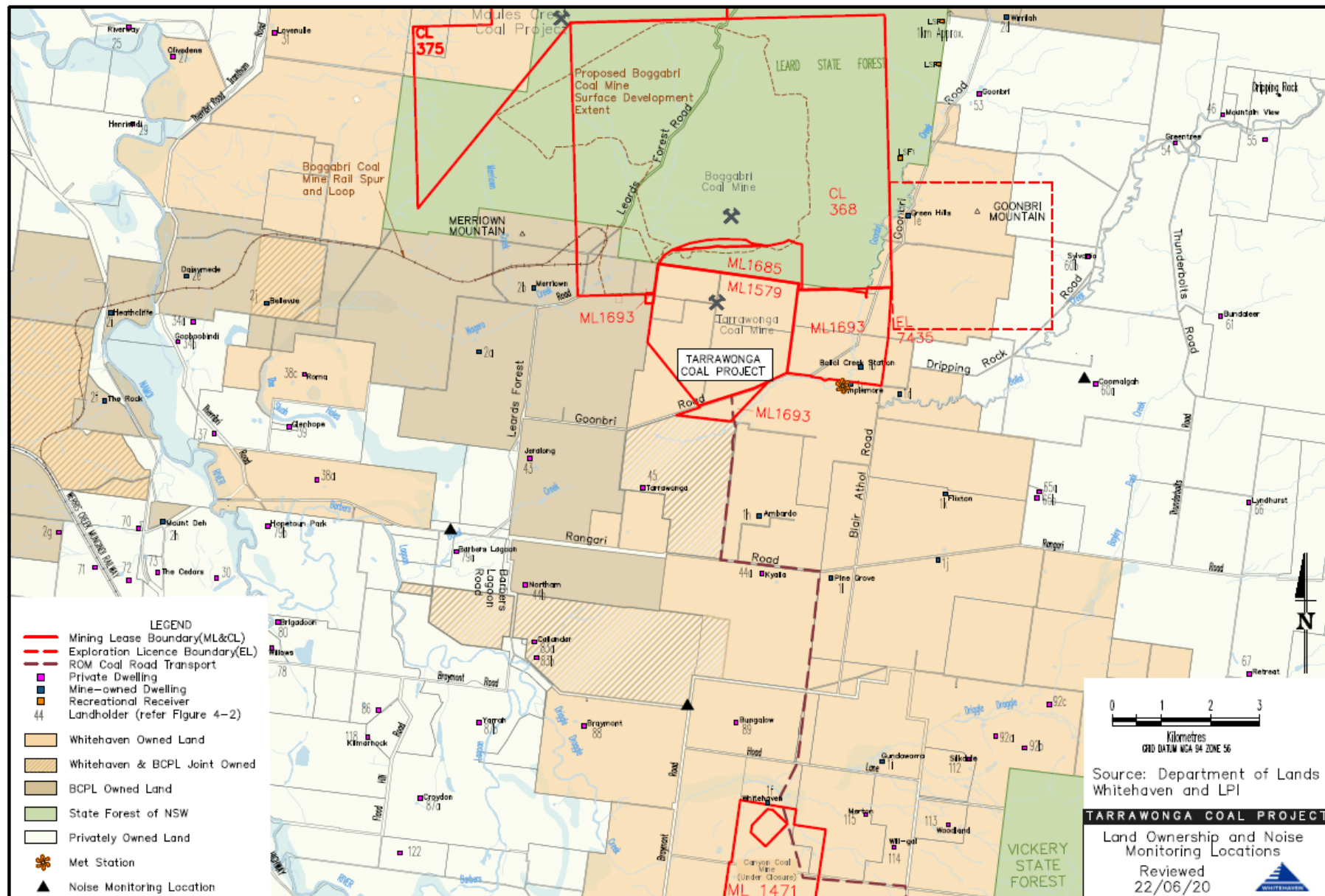
No additional modifications are expected in the foreseeable future.

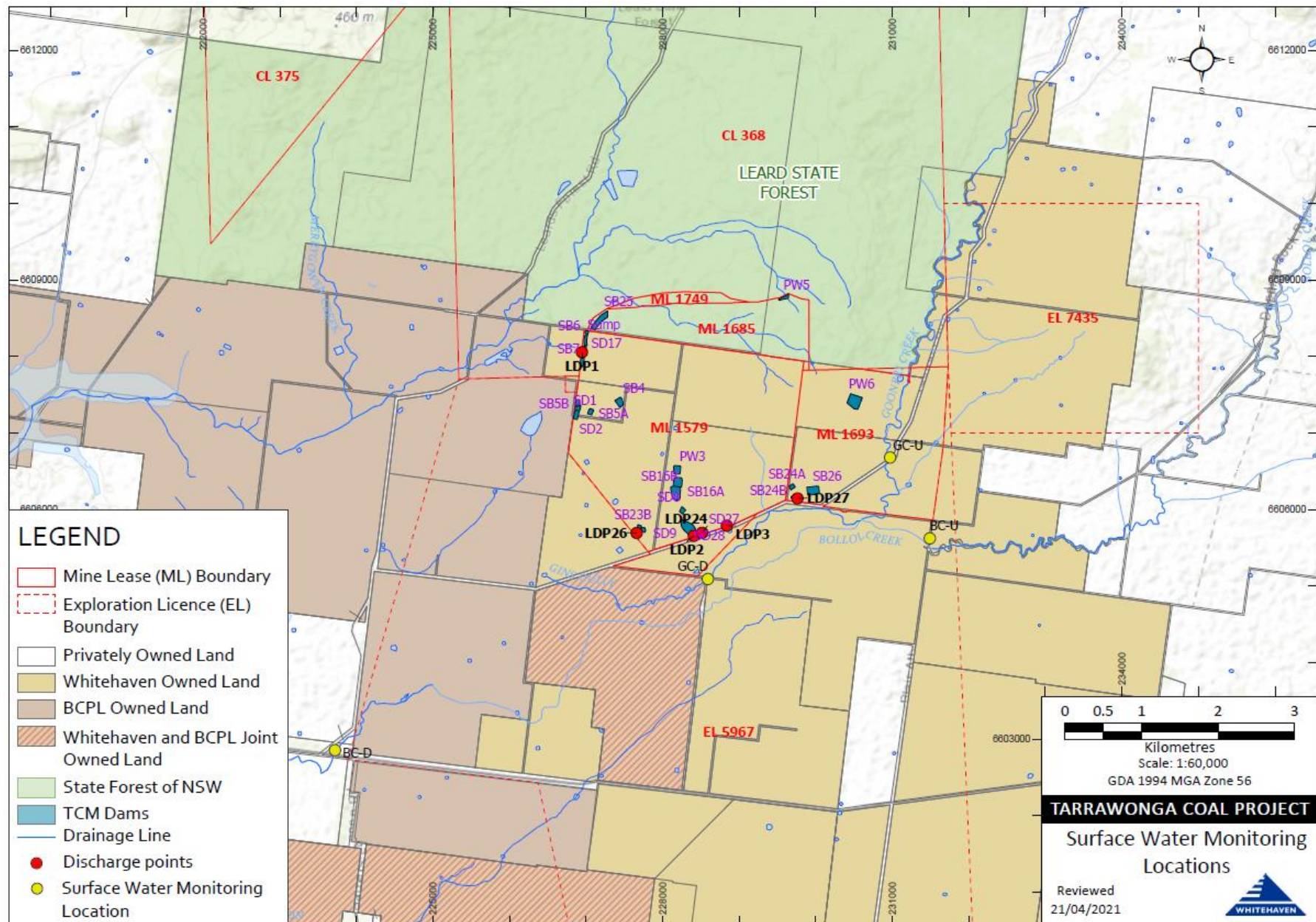
As previously mentioned, TCMs licence to bury tyres through in pit disposal has now ceased. Further updates to these conditions or any further decisions regarding HV Tyres will be communicated here.

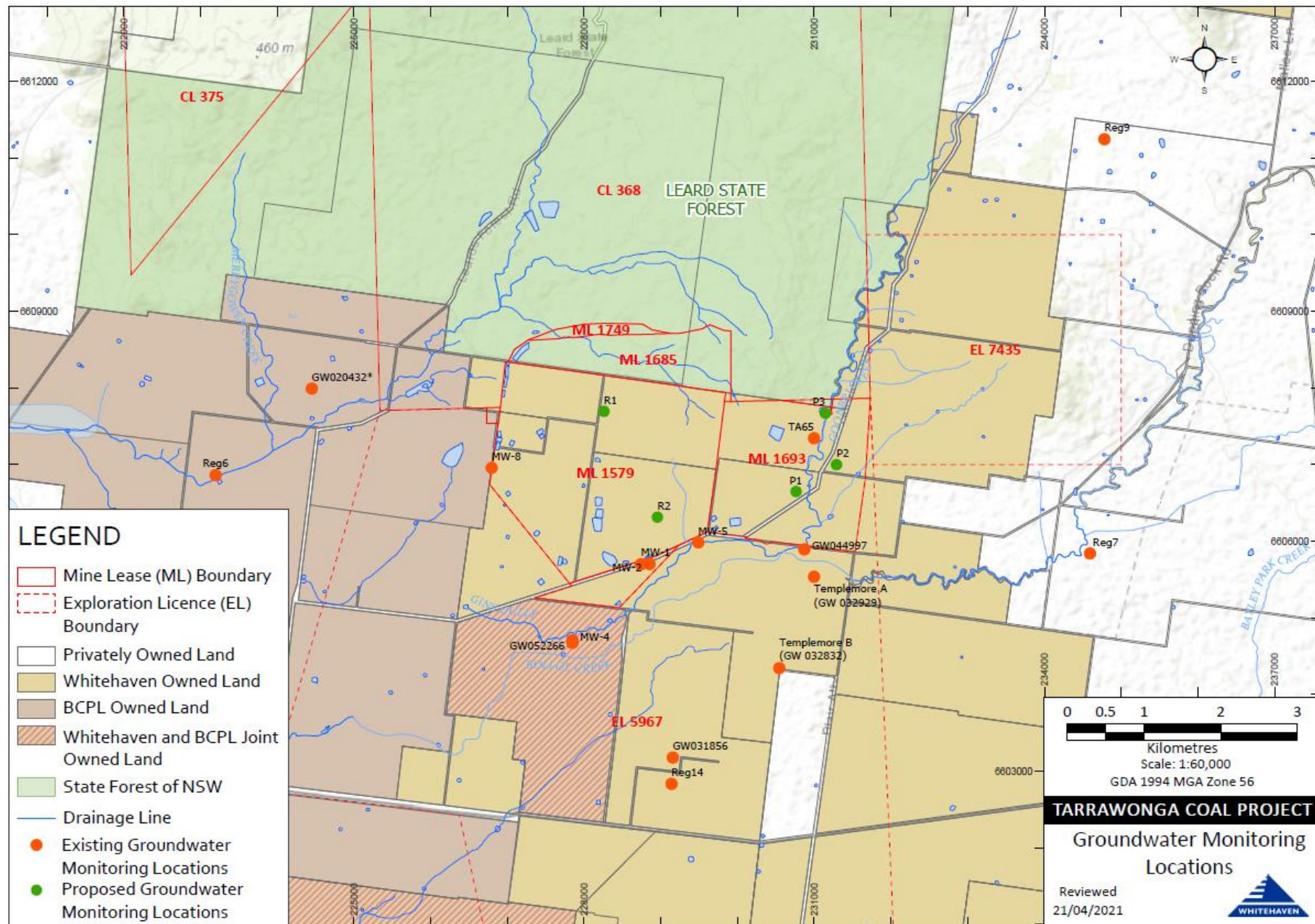
Appendix A





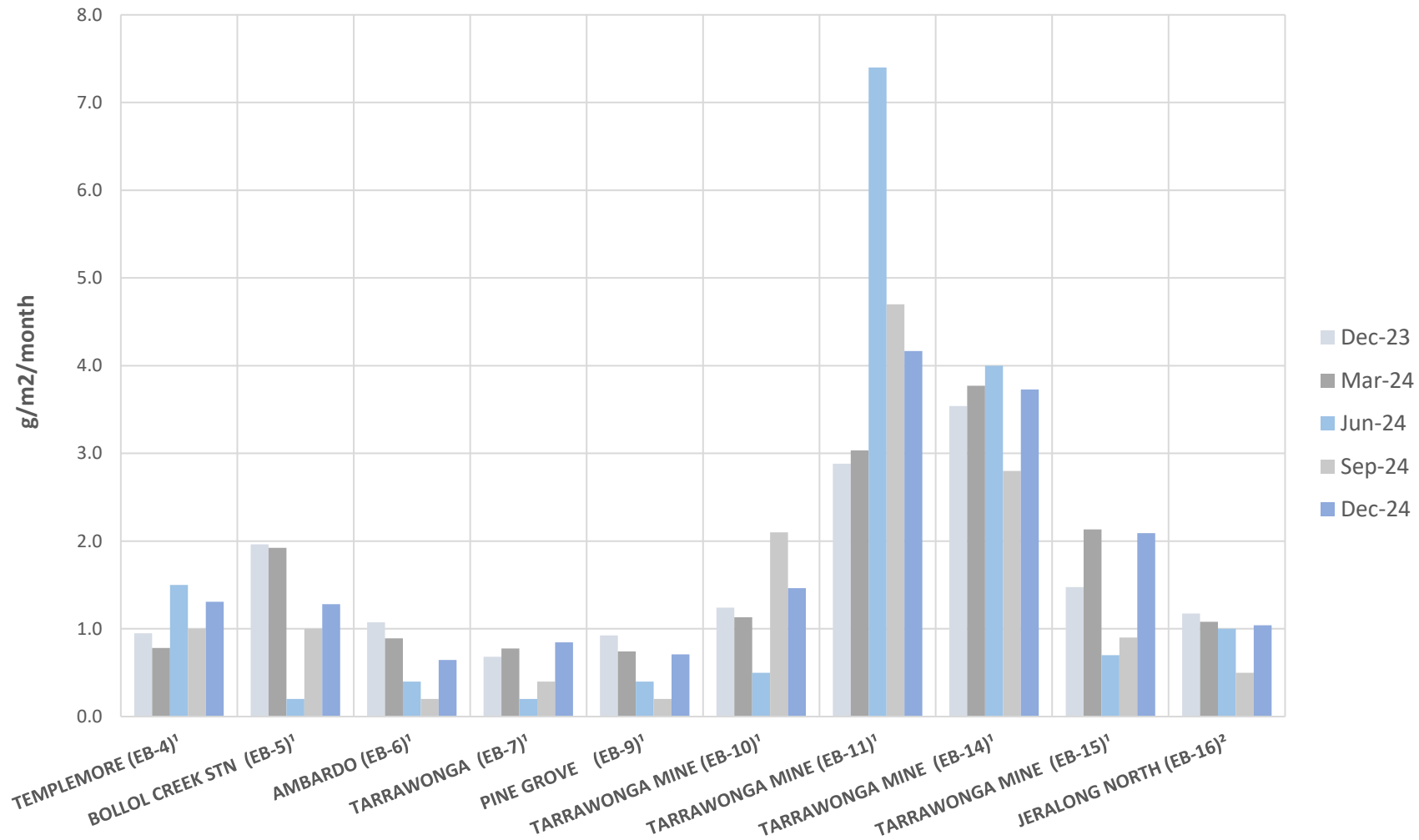




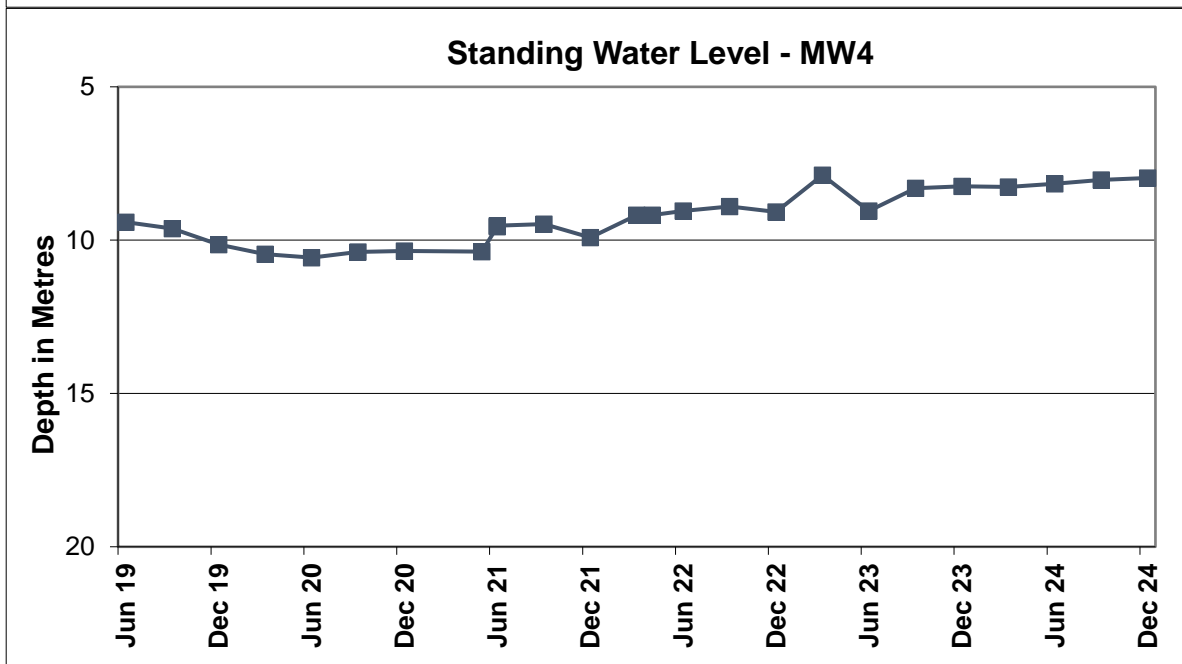
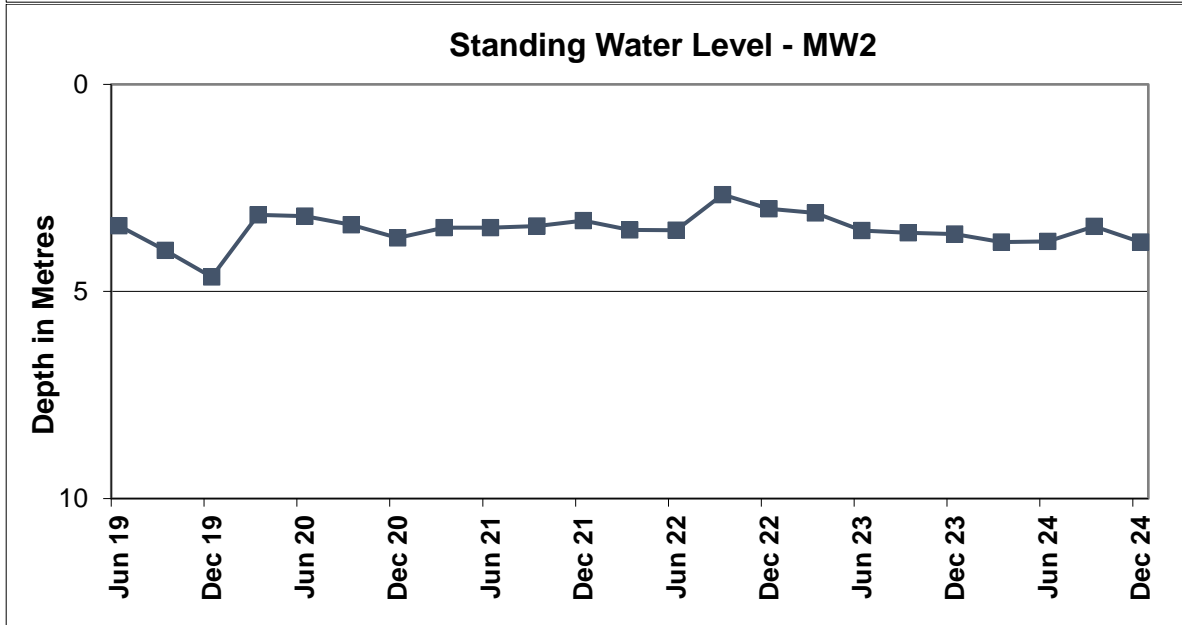
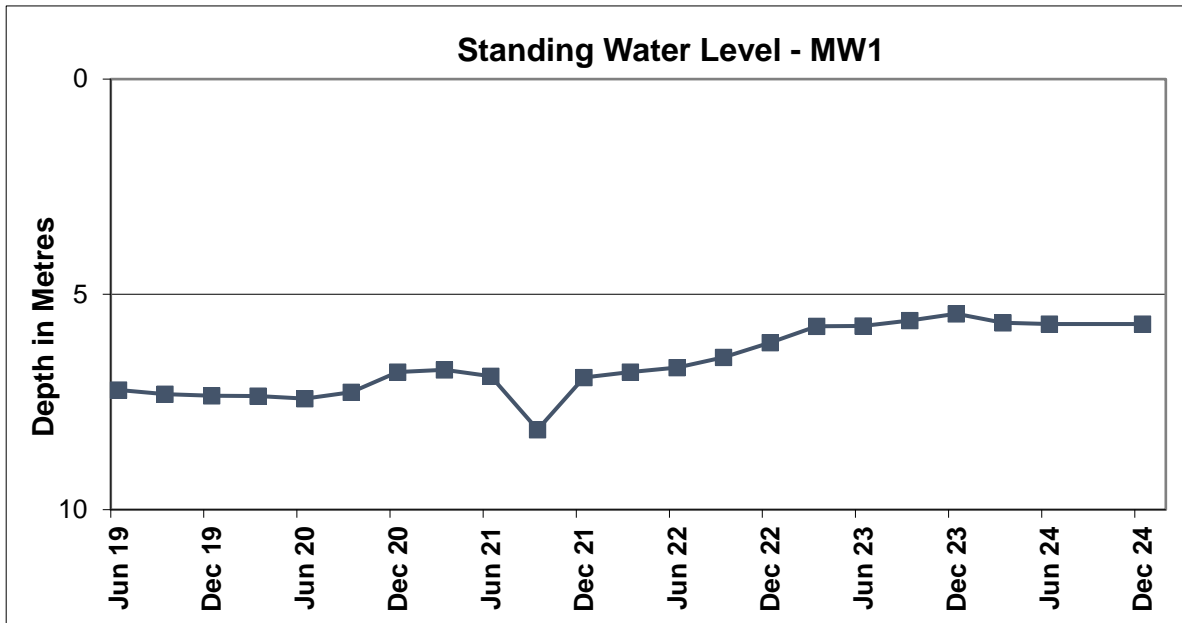


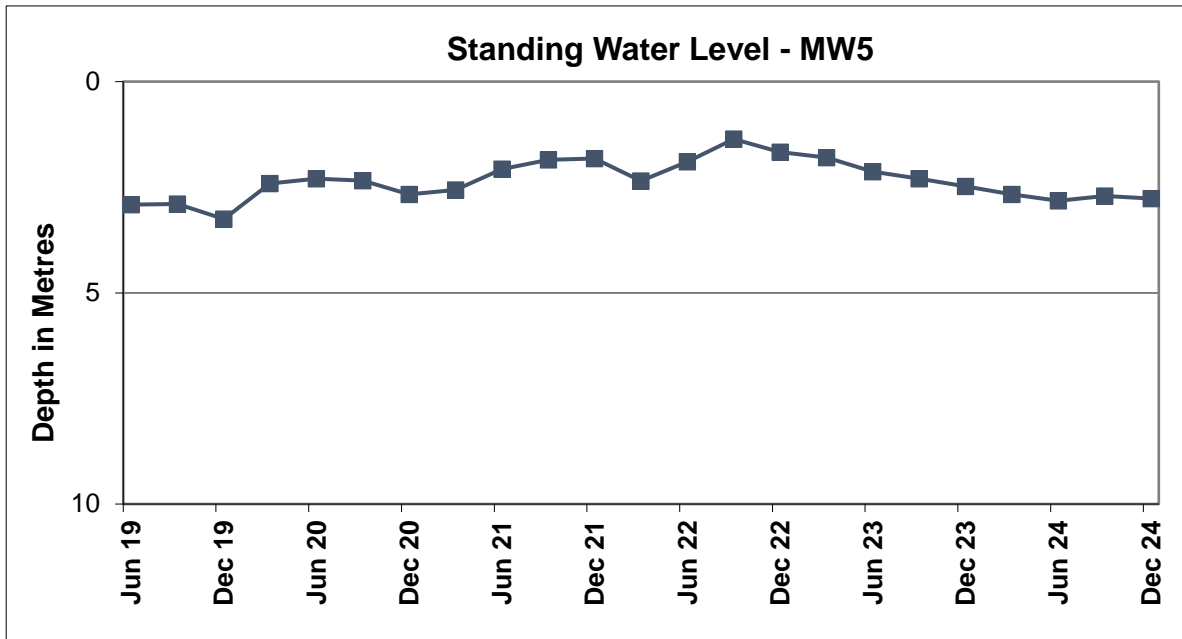
Appendix B

Deposited Dust Gauge Results- Quarterly rolling average [g/m2/month]



Appendix C





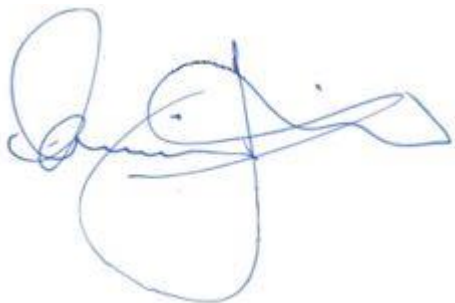
- Minutes:** Minutes of the 79th Meeting of the Tarrawonga Coal Community Consultative Committee held at the Boggabri Golf Club, Kamilaroi Highway, Boggabri on Wednesday 12 February 2025 commencing at 1.00pm.
- Members Present:** Lloyd Finlay (LF) – Community Representative, Matt Hollis (MH) – Tarrawonga Coal Mine, Maddi Wright (MW) – Tarrawonga Coal Mine, Wade Hudson (WH) - Gunnedah Shire Council
- Apologies:** Elizabeth O’Hara (EOH) – Community Representative, Cr E. Towns – Narrabri Shire Council, Cr J. Jansson – Narrabri Shire Council, Cr Rob Hooke – Gunnedah Shire Council, Darren Swain (DS) - Whitehaven Coal.
- Independent Chair:** Michael J. Silver OAM (MJS)

| Agenda Item | Discussion | Action/By Whom |
|-------------|---|----------------|
| 1. | Welcome and Apologies – MJS welcomed everyone to the meeting. | |
| 2. | Acknowledgement of Country - The Chair acknowledged the Traditional Owners of the land on which the meeting is being held and their continuing connection to land, water, and culture, paying respects to their Elders past, present and emerging. | |
| 3. | Declaration of pecuniary or other interests – MJS expenses as chair are borne by TCM. | |
| 4. | Minutes from Previous Meeting – Members noted that the minutes of the meeting of 13 November 2025 were approved on 17 December 2024 and appropriately reflected what was discussed. | |
| 5. | Business Arising Nil | |
| 6. | Actions from Previous Meeting Nil | |
| 7. | Correspondence 7.1 Gunnedah Shire Council – advising delegates to the CCC. | |
| 8. | <p>Proponent’s Environmental Monitoring Report <i>A copy of the Quarterly Environmental Report is attached to the minutes.</i></p> <p>MH stepped the Committee through the report. He apologised that the report had not been forwarded to members before the meeting.</p> <p>MH noted that attended noise monitoring was conducted during the period October 1 to December 30, 2024 with emissions not exceeding the operational noise criteria.</p> <p>In terms of blasting MH reported that the overpressure and ground vibration for the quarter was compliant and did not exceed the blasting criteria declared in the project approval and Blast Management Plan.</p> <p>MH explained the air quality monitoring results noting that deposited dust trends remain steady during the reporting period although 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, or they may be in farming locations.</p> <p>MH noted the groundwater monitoring results. He indicated site MW8 will be assessed by consultant to determine the issues with its operation during FY26 and rectification works will be undertaken were deemed necessary. In terms of surface water, he advised that water storage onsite is expected to be sufficient for at least the next 12 months. He further advised that the</p> | |

| | | |
|-----|--|--|
| | <p>Evaporator fans have been disconnected and dismantled due to the progression of the pit, and these will no longer be operable for TCM for the foreseeable future. 697mm of rain was received during 2024.</p> <p>MH explained the status of rehabilitation on the site. He advised that approximately 15ha of subsoil placement has been undertaken on the 2024 landform area, reaching almost half of the target of 30.1Ha for the 2025 calendar year for landform establishment. He noted that as the 2024 landform was completed in December 2024 with movement of topsoil and subsoil currently underway to this area, to have the landform completed as Ecosystem Establishment by the end of the financial year. The Committee reviewed with interest the before and after photographs of rehabilitation.</p> <p>MH advised that the next round of clearing will commence in March 2025 with specialists on site reviewing the environmental impact. MW explained the reporting protocols associated with recording fauna that may be lost/killed in the vegetation clearing process.</p> <p>It was noted that various management plans have been reviewed recently with the revised Traffic Management Plan, Air Quality Greenhouse Gas Management Plan and Rehabilitation Management Plan all now available on the Proponent's website. The BTM Air Quality Management Strategy is undergoing internal review and is expected to be submitted to DPHI shortly.</p> <p>In respect of tyre disposal, MH indicated that tyre disposal was completed in July, 2024. TCM disposed of 94 HV tyres through in-pit disposal. In response to a question from the Chair, MH advised that the current tyre disposal licence lapsed in January 2025. He indicated that future tyre disposal methods had not been determined with a variety of factors to be considered.</p> <p>MH provided an update on safety at the site. He noted two minor reportable injuries at the site which impacted the overall safety performance. This was disappointing and action is being taken to reinforce the safety and compliance message across the Tarrawonga site.</p> | |
| 9. | <p>Other Agenda Items</p> <p>Nil</p> | |
| 10. | <p>General Business</p> <p>10.1 Fire at Goonbri – LF provided a summary of the fire at Goonbri on 25 January 2025 and expressed appreciation to Tarrawonga Coal for the provision of a grader and water cart to control the fire on Boggabri Coal land. He indicated that the outcome had stopped the fire getting into the Leard Forest. He advised the Maules Creek community was most appreciative of the assistance provided.</p> | |
| 13. | <p>Next Meeting</p> <p>The next meeting is scheduled for 14 May 2025.</p> | |

Meeting closed at 1.50pm.

Approved:



Michael J. Silver OAM
Independent Chair

13 March 2025

Appendix 1: Actions

| Action No | Description | Date Raised | Page No | Status |
|-----------|---|-------------|---------|------------------------|
| 1 | TCM to explore feasibility of presenting a slide in future of injuries falling / rising | 14.02.24 | 3 | COMPLETED 13.11.24 |
| 2 | TCM to provide link to Sustainability Report | 14.02.24 | 3 | COMPLETED 15.05.24 |
| 3 | MW to investigate if Social Impact Plan was available | 14.02.24 | 4 | COMPLETED 15.05.24 |
| 4 | MJS to advise Ms Druce that the proposition should be discussed with NSC and RFS. | 15.05.24 | 2 | COMPLETED 06.06.24 |
| 5 | That the Tarrawonga Coal Mine Rehabilitation Objectives be presented at the October 2024 CCC meeting. | 29.08.2024 | 3 | COMPLETED 13.11.224 |