

# Tarrowonga Coal Mine Community Consultative Committee Meeting #63

Quarterly Environmental Monitoring Report  
November 1 – January 31, 2020



*Photo taken in January 2021 in a section of the Northern emplacement area that was rehabilitated in July 2020, showing promising growth after rain.*

This report has been prepared for the Community Consultative Committee (CCC) meeting to show Environmental monitoring performance at Tarrowonga Coal Mine (TCM) for the reporting period from November 1 2020 to January 31, 2021. Maps with all the monitoring locations are available in *Appendix A*.

# Noise Monitoring

Attended noise monitoring was conducted at the “Bungalow” (TN4), “Barbers Lagoon” (TN3) and “Matong” (TN2) properties from 1<sup>st</sup> to the 4<sup>th</sup> of December 2020. The noise criterion for the mine is 35dB(A) Leq (15 min) for all operating times.

The results below show that noise emissions from the mine did not exceed the operational noise criterion at the “Barbers Lagoon”, “Bungalow” or “Matong” monitoring locations during the monitoring event during the entire monitoring period.

(See below summary tables extracted from 210105 RWDI report 2190007-T-06 (Q4 2020))

**Table 4-1 : Comparison of noise levels between TN2 and 573b Coomalgalah**

| Date       | Time  | Noise Limits           | TN2 Mine L <sub>Aeq</sub> Noise Level (dB) | 573b Coomalgalah Mine L <sub>Aeq</sub> Noise Level (dB) |            |
|------------|-------|------------------------|--|---|------------|
|            |       | L <sub>Aeq,15min</sub> | Measured Mine Contribution                 | Commensurate Mine Compliance Level                      | Exceedance |
| 01/12/2020 | 11:53 | 35                     | <27  | <18   | 0          |
|            | 12:10 | 35                     | <29  | <20   | 0          |
|            | 12:42 | 35                     | <27  | <18   | 0          |
|            | 21:35 | 35                     | <19 (I/A)                                  | <10 (I/A)   | 0          |
|            | 21:51 | 35                     | <20 (I/A)                                  | <11 (I/A)   | 0          |
|            | 22:07 | 35                     | <25 (I/A)                                  | <16 (I/A)   | 0          |
|            | 22:38 | 35                     | <26 (I/A)                                  | <17 (I/A)   | 0          |
| 02/12/2020 | 21:28 | 35                     | <20 (I/A)                                  | <11 (I/A)   | 0          |
|            | 21:44 | 35                     | <20 (I/A)                                  | <11 (I/A)   | 0          |
| 03/12/2020 | 11:46 | 35                     | 25   | 16  | 0          |
|            | 12:03 | 35                     | 25   | 16  | 0          |
|            | 12:18 | 35                     | 24   | 15  | 0          |
|            | 22:48 | 35                     | <17 (I/A)                                  | <8 (I/A)  | 0          |
|            | 23:03 | 35                     | <17 (I/A)                                  | <8 (I/A)  | 0          |
|            | 23:18 | 35                     | <26  | <17   | 0          |
| 04/12/2020 | 10:13 | 35                     | 30   | 21  | 0          |
|            | 21:23 | 35                     | 35   | 26  | 0          |
|            | 21:39 | 35                     | <35  | <26   | 0          |
|            | 22:00 | 35                     | <34  | <25   | 0          |
|            | 22:15 | 35                     | <33  | <24   | 0          |
|            | 22:31 | 35                     | <32  | <23   | 0          |
|            | 22:47 | 35                     | <31  | <22   | 0          |

Note: Where mine noise was inaudible throughout the entire measurement, it is assumed that the contribution is less than 10dB below the measured L<sub>Aeq</sub>.

**Table 4-3 : Summary of noise assessment at TN3**

| Date       | Time  | Noise Limits<br>$L_{Aeq,15\ min}$ | TN3<br>Mine $L_{Aeq}$ Noise Level (dB) |                       |            |
|------------|-------|-----------------------------------|--|-----------------------|------------|
|            |       |                                   | Measured Mine Contribution             | Additional LF Penalty | Exceedance |
| 01/12/2020 | 21:07 | 35                                | <29 (I/A)                              | -                     | 0          |
| 02/12/2020 | 13:30 | 35                                | <14 (I/A)                              | -                     | 0          |
|            | 14:09 | 35                                | <13 (I/A)                              | -                     | 0          |
|            | 14:54 | 35                                | <16 (I/A)                              | -                     | 0          |
|            | 21:14 | 35                                | <35 (I/A)                              | -                     | 0          |
|            | 21:29 | 35                                | <34 (I/A)                              | -                     | 0          |
|            | 23:05 | 35                                | <28 (I/A)                              | -                     | 0          |
| 03/12/2020 | 22:21 | 35                                | <35 (I/A)                              | -                     | 0          |
|            | 22:52 | 35                                | <33 (I/A)                              | -                     | 0          |
|            | 23:07 | 35                                | <33 (I/A)                              | -                     | 0          |
| 04/12/2020 | 19:47 | 35                                | <27 (I/A)                              | -                     | 0          |
|            | 20:03 | 35                                | <28 (I/A)                              | -                     | 0          |
|            | 00:40 | 35                                | 28                                     | -                     | 0          |
|            | 00:57 | 35                                | 30                                     | -                     | 0          |
|            | 01:12 | 35                                | 31                                     | -                     | 0          |
|            | 01:28 | 35                                | 32                                     | -                     | 0          |

Note: Where mine noise was inaudible throughout the entire measurement, it is assumed that the contribution is less than 10dB below the measured  $L_{A90}$ .

**Table 4-5 : Summary of noise assessment at TN4**

| Date       | Time  | Noise Limits<br>$L_{Aeq,15min}$ | TN4<br>Mine $L_{Aeq}$ Noise Level (dB) |                       |            |
|------------|-------|---------------------------------|--|-----------------------|------------|
|            |       |                                 | Measured Mine Contribution             | Additional LF Penalty | Exceedance |
| 01/12/2020 | 10:53 | 35                              | <22 (I/A)                              | -                     | 0          |
|            | 11:41 | 35                              | <21 (I/A)                              | -                     | 0          |
|            | 11:59 | 35                              | <25 (I/A)                              | -                     | 0          |
|            | 20:57 | 35                              | <26 (I/A)                              | -                     | 0          |
|            | 21:11 | 35                              | <26 (I/A)                              | -                     | 0          |
|            | 23:28 | 35                              | <28 (I/A)                              | -                     | 0          |
|            | 23:43 | 35                              | <34 (I/A)                              | -                     | 0          |
| 02/12/2020 | 11:18 | 35                              | <27 (I/A)                              | -                     | 0          |
|            | 12:08 | 35                              | <20 (I/A)                              | -                     | 0          |

|            |       |    |           |   |   |
|------------|-------|----|-----------|---|---|
|            | 12:23 | 35 | <26 (I/A) | - | 0 |
|            | 23:39 | 35 | <30       | - | 0 |
|            | 23:55 | 35 | <30       | - | 0 |
|            | 00:10 | 35 | <31 (I/A) | - | 0 |
| 03/12/2020 | 23:59 | 35 | 29        | - | 0 |
|            | 00:31 | 35 | <28 (I/A) | - | 0 |
| 04/12/2020 | 10:12 | 35 | <18 (I/A) | - | 0 |
|            | 10:30 | 35 | <17 (I/A) | - | 0 |
|            | 20:33 | 35 | <25 (I/A) | - | 0 |
|            | 20:48 | 35 | <26 (I/A) | - | 0 |
|            | 23:20 | 35 | <24 (I/A) | - | 0 |
|            | 23:36 | 35 | <26       | - | 0 |
|            | 23:52 | 35 | <26       | - | 0 |
|            | 00:08 | 35 | <26       | - | 0 |

Note: Where mine noise was inaudible throughout the entire measurement, it is assumed that the contribution is less than 10dB below the measured  $L_{A90}$ .

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

**Table 4-2 : Comparison of maximum noise events between TN2 and 573b Coomalgalah**

| Date       | Time  | Noise Limits         |              | TN2                                     | 573b Coomalgalah                        |                                    |
|------------|-------|----------------------|--------------|---|---|------------------------------------|
|            |       | L <sub>A1,1min</sub> | Noise Source | Mine L <sub>Amax</sub> Noise Level (dB) | Mine L <sub>Amax</sub> Noise Level (dB) | Commensurate Mine Compliance Level |
| 01/12/2020 | 22:07 | 45                   | -            | I/A                                     | -                                       | 0                                  |
|            | 22:38 | 45                   | -            | I/A                                     | -                                       | 0                                  |
| 03/12/2020 | 22:48 | 45                   | -            | I/A                                     | -                                       | 0                                  |
|            | 23:03 | 45                   | -            | I/A                                     | -                                       | 0                                  |
|            | 23:18 | 45                   | -            | NM                                      | -                                       | 0                                  |
| 04/12/2020 | 22:00 | 45                   | -            | NM                                      | -                                       | 0                                  |
|            | 22:15 | 45                   | -            | NM                                      | -                                       | 0                                  |
|            | 22:31 | 45                   | -            | NM                                      | -                                       | 0                                  |
|            | 22:47 | 45                   | -            | NM                                      | -                                       | 0                                  |

Note: NM indicates a significant maximum noise event was not observed.  
I/A indicates the mine was inaudible during the measurement period.

**Table 4-4 : Summary of maximum noise events at TN3**

| Date       | Time  | Noise Limits         |              | TN3                                     |            |
|------------|-------|----------------------|--------------|---|------------|
|            |       | L <sub>A1,1min</sub> | Noise Source | Mine L <sub>Amax</sub> Noise Level (dB) | Exceedance |
| 02/12/2020 | 23:05 | 45                   | -            | I/A                                     | 0          |
| 03/12/2020 | 22:21 | 45                   | -            | I/A                                     | 0          |
|            | 22:56 | 45                   | -            | I/A                                     | 0          |
|            | 23:07 | 45                   | -            | I/A                                     | 0          |
|            | 00:40 | 45                   | -            | NM                                      | 0          |
| 04/12/2020 | 00:57 | 45                   | -            | NM                                      | 0          |
|            | 01:12 | 45                   | -            | NM                                      | 0          |
|            | 01:28 | 45                   | -            | NM                                      | 0          |

Note: NM indicates a significant maximum noise event was not observed.

**Table 4-6 : Summary of maximum noise events at TN4**

| Date       | Time  | Noise Limits<br>LA1,1min | TN4<br>Mine LAmax Noise Level (dB) |                |            |
|------------|-------|--------------------------|------------------------------------|----------------|------------|
|            |       |                          | Noise Source                       | Measured Level | Exceedance |
| 01/12/2020 | 23:28 | 45                       | -                                  | NM             | 0          |
|            | 23:43 | 45                       | -                                  | NM             | 0          |
| 02/12/2020 | 23:39 | 45                       | -                                  | NM             | 0          |
|            | 23:55 | 45                       | -                                  | NM             | 0          |
|            | 00:10 | 45                       | -                                  | NM             | 0          |
| 03/12/2020 | 23:59 | 45                       | -                                  | NM             | 0          |
|            | 00:31 | 45                       | -                                  | NM             | 0          |
| 04/12/2020 | 23:20 | 45                       | -                                  | NM             | 0          |
|            | 23:36 | 45                       | -                                  | NM             | 0          |
|            | 23:52 | 45                       | -                                  | NM             | 0          |
|            | 00:08 | 45                       | -                                  | NM             | 0          |

Note: NM indicates a significant maximum noise event was not observed.

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

# Blast Monitoring

## Blasting Results

Since 2006, there have been 1024 blasts (until 31/01/2021) at TCM.

The highest result for Overpressure was 112.2dB recorded at the ‘Tarrawonga’ monitor on the 10/11/2020.

The highest result for ground vibration was 0.85 mm/s recorded at the ‘Coomalgah’ monitor on the 10/11/2020.

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

| Monitor Location | Date     | Max. Peak Overpressure (dB) | Criterion (dB) | Date     | Max. Peak Ground Pressure (mm/s) | Criterion (mm/s) |
|------------------|----------|-----------------------------|----------------|----------|----------------------------------|------------------|
| Tarrawonga*      | 10/11/20 | 112.2                       | N/A            | 04/12/20 | 0.61                             | N/A              |
| Coomalgah        | 20/11/20 | 105.9                       | 120            | 10/11/20 | 0.85                             | 10               |

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

# Air Quality Monitoring

## Dust Deposition Results

**Table 3** shows deposited dust gauge results over 12 months. All the monitors are located on project related land; as such compliance criteria (4g/m<sup>2</sup>/month) do not apply. Overall deposited dust trends remain steady during the reporting period (refer graph in *Appendix B*)

| MONTH                           | TEMPLEMORE (EB-4) | BOLLO CREEK STN (EB-5) | AMBARDO (EB-6) | TARRAWONGA (EB-7) | THUJIN (EB-8) | PINE GROVE (EB-9) | TARRAWONGA MINE (EB-10) | TARRAWONGA MINE (EB-11) | TARRAWONGA MINE (EB-14) | TARRAWONGA MINE (EB-15) | JERALONG NORTH (EB-16) |
|---------------------------------|-------------------|------------------------|----------------|-------------------|---------------|-------------------|-------------------------|-------------------------|-------------------------|-------------------------|------------------------|
| Jan-20                          | 3.5               | 29.5#                  | 3.5            | 2.5               | 3.5           | 6.8               | 10.9                    | 2.8                     | 2.5                     | 3.3                     | 2                      |
| Feb-20                          | 8.1               | +                      | 5.4            | 2.5               | 5.7           | 5                 | 4.2                     | 5.9                     | 7.6                     | 10.4                    | 3.8                    |
| Mar-20                          | 1.7               | +                      | 2.2            | 2                 | 6.2           | 2.9               | 8.3                     | 4.1                     | 2.8                     | 4                       | 2.3                    |
| April-20                        | 2.2               | 3                      | 7.7            | 0.7               | 15.9          | 0.8               | 2.5                     | 1.9                     | 1.5                     | 3.8                     | 5.2                    |
| May-20                          | 3                 | 2.5                    | 1.4            | 2.4               | 3.2           | 1.2               | 4.4                     | 2.4                     | 2.3                     | 4.4                     | 4.2                    |
| Jun-20                          | 3.1               | 2                      | 1.1            | 1                 | 2.7           | 1.5               | 1.9                     | 2.5                     | 1.8                     | 5.3                     | 2.7                    |
| Jul-20                          | 1.3               | 2.8                    | 0.9            | 2                 | 3.2           | 0.8               | 0.9                     | 2.7                     | 1.5                     | 3.4                     | 1.2                    |
| Aug-20                          | 1.1               | 1.8                    | 1.1            | 0.5               | 1.8           | 0.7               | 1.9                     | 2                       | 1.2                     | 3.7                     | 0.8                    |
| Sep-20                          | 1.4               | 19.9#                  | 1.0            | 0.9               | 2.4           | 1.9               | 0.9                     | 1.3                     | 1.7                     | 3.6                     | 1.9                    |
| Oct-20                          | 0.9               | 2.1                    | 1.3            | 1.1               | ++            | 1.2               | 3.1                     | 1.9                     | 2.3                     | 5.5                     | 2.5                    |
| Nov-20                          | 3.2               | 2.7                    | 1.1            | 1.2               | ++            | 3.1               | 5                       | 3.2                     | 2.4                     | +                       | 3                      |
| Dec-20                          | 4.3               | 2.5                    | 2              | 1.3               | ++            | 12.7#             | 3.7                     | 4.3                     | 2.6                     | +                       | 1.6                    |
| Jan-21                          | 6.7#              | 4.6#                   | 1.1            | 3.2               | ++            | 2.5               | 3.1                     | 6.7#                    | 8.4                     | 6.5                     | 4.4                    |
| <b>12 MONTH ROLLING AVERAGE</b> | 2.8               | 2.4                    | 2.2            | 1.6               | ++            | 1.8               | 3.1                     | 3.0                     | 3.0                     | 5.0 <sup>1</sup>        | 2.8                    |

#Sample was contaminated with Insects, bird droppings and plant material all noted on the field sheet.

++ EB08 was decommissioned due to reshaping activities at the Southern Emplacement area.

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

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

**Table 3 – Deposited Dust Gauge Results [g/m<sup>2</sup>/month]**

High Volume Air sampler (PM10) Results

The High Volume Air Sampler (HVAS) installed at Coomalgah property monitors level of Particle Matter under 10 micron (PM<sub>10</sub>). It operates for 24hr every 6 days. **Table 4** shows all the 24hr average values recorded for this quarter.

**Table- 4: HVAS PM10 24 hr average levels for the Quarter**

| Date       | 24hr averaged PM10 (µg/m <sup>3</sup> ) | Criterion 24hr average (µg/m <sup>3</sup> ) | Comments   |
|------------|---|---|--|
| 4/11/2020  | 22.2                                    | <b>50</b>                                   | Nil  |
| 10/11/2020 | 20.0                                    |   |  |
| 16/11/2020 | <b>148.0</b>                            |   | Considered not mining related as farming/harvest activity was noted on contractor field sheet. Wind speeds up to 6.7m/s recorded from predominantly SW direction. DPIE was notified. |
| 22/11/2020 | 26.2                                    |   | Nil  |
| 28/11/2020 | 41.5                                    |   |  |
| 4/12/2020  | 13.5                                    |   |  |
| 10/12/2020 | 33.4                                    |   |  |
| 16/12/2020 | 7.9                                     |   |  |
| 22/12/2020 | 4.9                                     |   |  |
| 28/12/2020 | 6.7                                     |   |  |
| 3/01/2021  | 6.4                                     |   |  |
| 9/01/2021  | 9.0                                     |   |  |
| 15/01/2021 | 8.9                                     |   |  |
| 21/01/2021 | 18.0                                    |   |  |
| 27/01/2021 | 23.0                                    |   |  |

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

According to the current Air Quality and Greenhouse gas Management Plan, the real time air quality unit (TEOM) installed at the “Flixton” property monitors PM<sub>10</sub> levels in ambient air. 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.



*TEOM installed at Flixton property*

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



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

# Water Monitoring

## Groundwater

Routine groundwater monitoring was undertaken in December 2020 and showed 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  | December 2019  | 7.35       | 8.0            | 3,510                       |
|      | March 2020     | 7.36       | 8.0            | 3,520                       |
|      | June 2020      | 7.42       | 7.8            | 3,490                       |
|      | September 2020 | 7.27       | 8.16           | 3,260                       |
|      | December 2020  | 6.8        | 7.9            | 3,510                       |
| MW2  | December 2019  | 4.65       | 7.1            | 560                         |
|      | March 2020     | 3.15       | 7.6            | 496                         |
|      | June 2020      | 3.18       | 7.3            | 490                         |
|      | September 2020 | 3.39       | 7.39           | 435                         |
|      | December 2020  | 3.71       | 7.3            | 535                         |
| MW4  | December 2019  | 10.14      | 7.3            | 3,530                       |
|      | March 2020     | 10.46      | 7.7            | 3,600                       |
|      | June 2020      | 10.57      | 7.4            | 3,530                       |
|      | September 2020 | 10.38      | 7.3            | 3,380                       |
|      | December 2020  | 10.35      | 7.4            | 3,640                       |
| MW5  | December 2019  | 3.25       | 7.8            | 2,080                       |
|      | March 2020     | 2.41       | 7.8            | 874                         |
|      | June 2020      | 2.29       | 7.6            | 675                         |
|      | September 2020 | 2.34       | 7.7            | 2,090                       |
|      | December 2020  | 2.67       | 7.1            | 1,960                       |
| MW8  | December 2019  | 13.76      | Casing blocked | Casing blocked              |
|      | March 2020     | 13.76      | Casing blocked | Casing blocked              |
|      | June 2020      | 13.71      | Casing blocked | Casing blocked              |
|      | September 2020 | 13.44      | Casing blocked | Casing blocked              |
|      | December 2020  | 13.57      | Casing blocked | Casing blocked              |

*Note: MW7 was decomissioned due to mine progression*

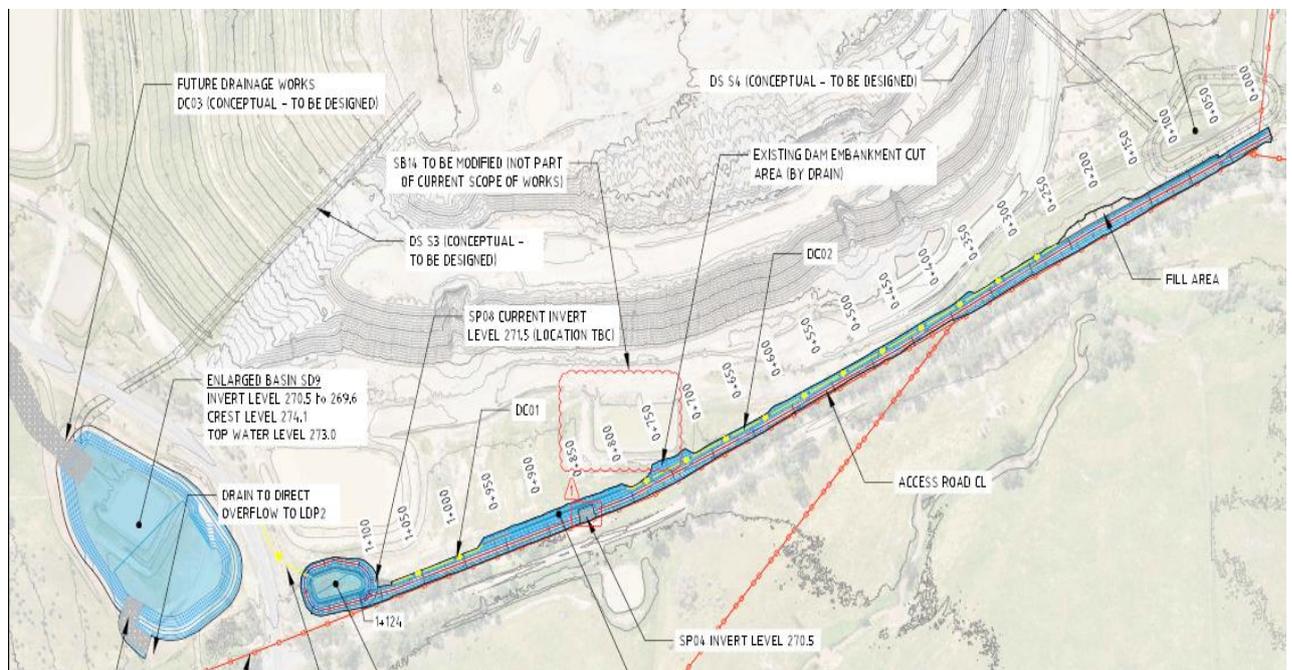
Surface Water

Water storage onsite is expected to be sufficient for at least the next 12 months.

Total Rainfall recorded onsite during Calendar Year 2020 was approximately 930mm which is almost three times the amount of rainfall recorded over a 12 month period in 2019 (277mm). During January 2021, TCM received 58.4mm..

| 2020              | Jan   | Feb             | Mar   | Apr   | May  | Jun   | Jul   | Aug   | Sep   | Oct   | Nov   | Dec   | Total |
|-------------------|-------|-----------------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| Monthly Rain (mm) | 109.2 | 261.2           | 113.2 | 65.6  | 16.0 | 23.4  | 31.0  | 38.3  | 30.2  | 55.8  | 3     | 184.4 | 931.1 |
| Cumulative (mm)   | 109.2 | 370.4           | 483.6 | 549.2 | 565  | 588.4 | 619.4 | 567.7 | 687.9 | 743.7 | 746.7 | 931.1 |       |
| 2021              | Jan   | Feb             | Mar   | Apr   | May  | Jun   | Jul   | Aug   | Sep   | Oct   | Nov   | Dec   | Total |
| Monthly Rain (mm) | 58.4  | 49.6 (to 08/02) | -     | -     | -    | -     | -     | -     | -     | -     | -     | -     |       |
| Cumulative (mm)   | 58.4  | 108 (to 08/02)  | -     | -     | -    | -     | -     | -     | -     | -     | -     | -     |       |

TCM has nearly finished construction of new water infrastructures at the entrance of the mine. Sediment dam (SD09) was enlarged from 9ML to 52 ML; two new sediment dams and drainage systems have been constructed along the front fenceline.



Plan view of new water infrastructures

# Rehabilitation and Clearing

## Rehabilitation

TCM has ordered 11,000 tubestock trees for rehabilitation purposes for CY21. Approximately 8,000 trees will be planted over 20Ha of new rehabilitation areas and approximately 3,000 trees over 35Ha of pre-existing maintenance rehabilitation areas. TCM will spread native seeds during the rehabilitation campaign. This will include native groundcover species, shrubs and sub-shrub species as per the Rehabilitation Management plan.

Reshaping activities have been completed throughout the Northern and Southern Emplacement areas. Topsoil spreading and preparation for planting will begin on the Southern Emplacement area in the next few months.

## Clearing

The next vegetation clearing campaign is scheduled to begin after the 15th February and may proceed through to April 2020. Specialists (i.e. Archeologist, RAPs, Ecologist and Soil expert) have completed pre-clearing inspections in those areas (shown as blue polygons in the figure below).



*Clearing areas - scheduled to begin works in February 2021.*

## Complaints

No complaints have been recorded through the reporting period.

## Environmental Management Plans

The Biodiversity Management Plan was approved in December 2020 and is published on WHC website

BTM Water Strategy

The BTM mines submitted an updated BTM Groundwater Model and report to DPIE in December 2020. The 3 mines are waiting on the determination.

## Annual and Compliance Reporting

Annual Review and Annual Return Reports

The Annual Return is being prepared and will be submitted to EPA by 8<sup>th</sup> March. The Annual Review is being prepared and will be submitted to DPIE by the end of March 2021.

Annual Compliance EPBC statement

Next Annual Compliance EPBC statement will be submitted to DAWE in June 2021.

Annual National Pollutant Inventory (NPI) and Greenhouse Gas Emission (NGERs) Reports 2021

Next NPI and NGERs reports will be submitted in September and October 2021 respectively.

## Audits- Compliance

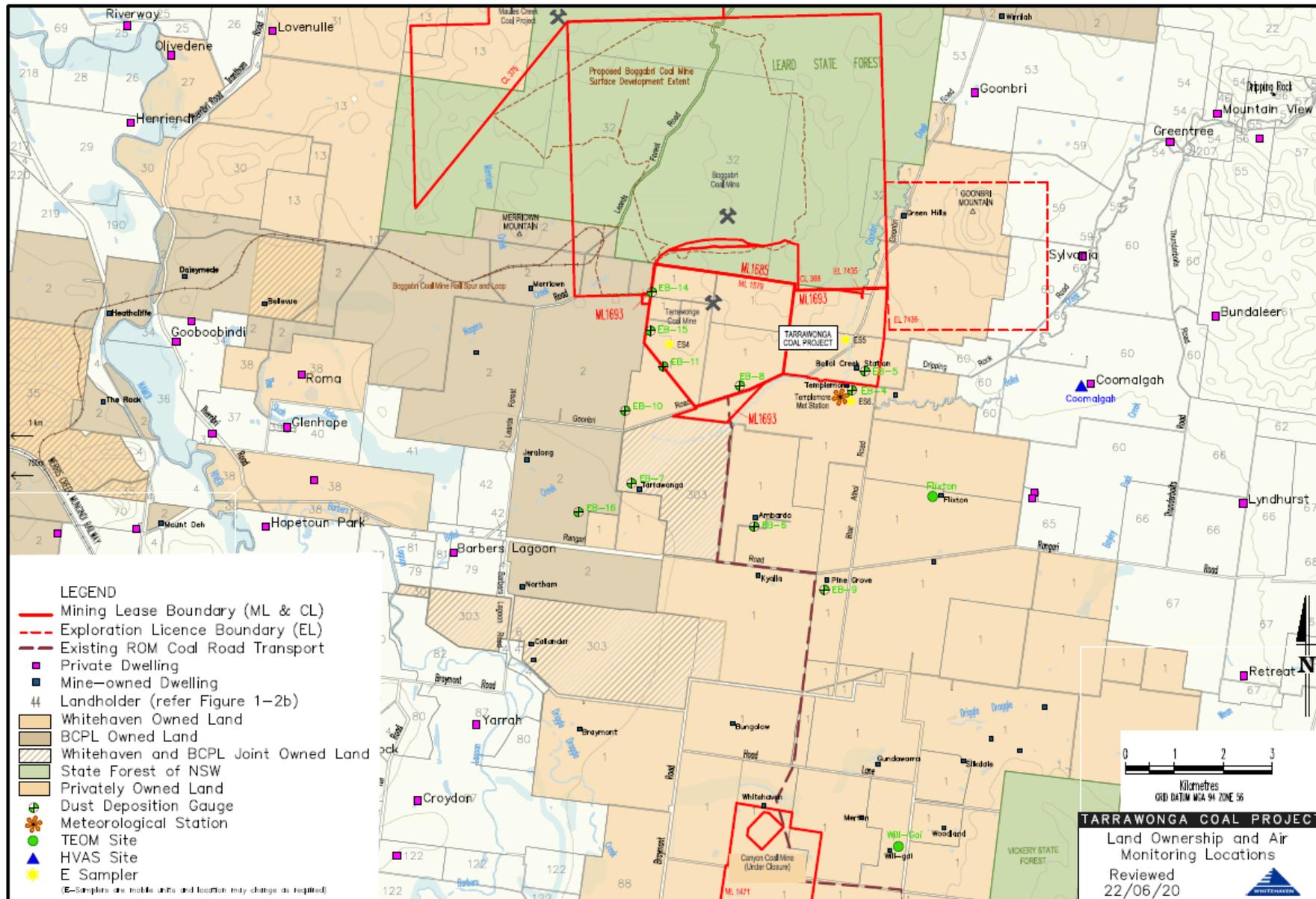
DPIE has scheduled a site inspection during vegetation clearing activities between (February- April 2021)

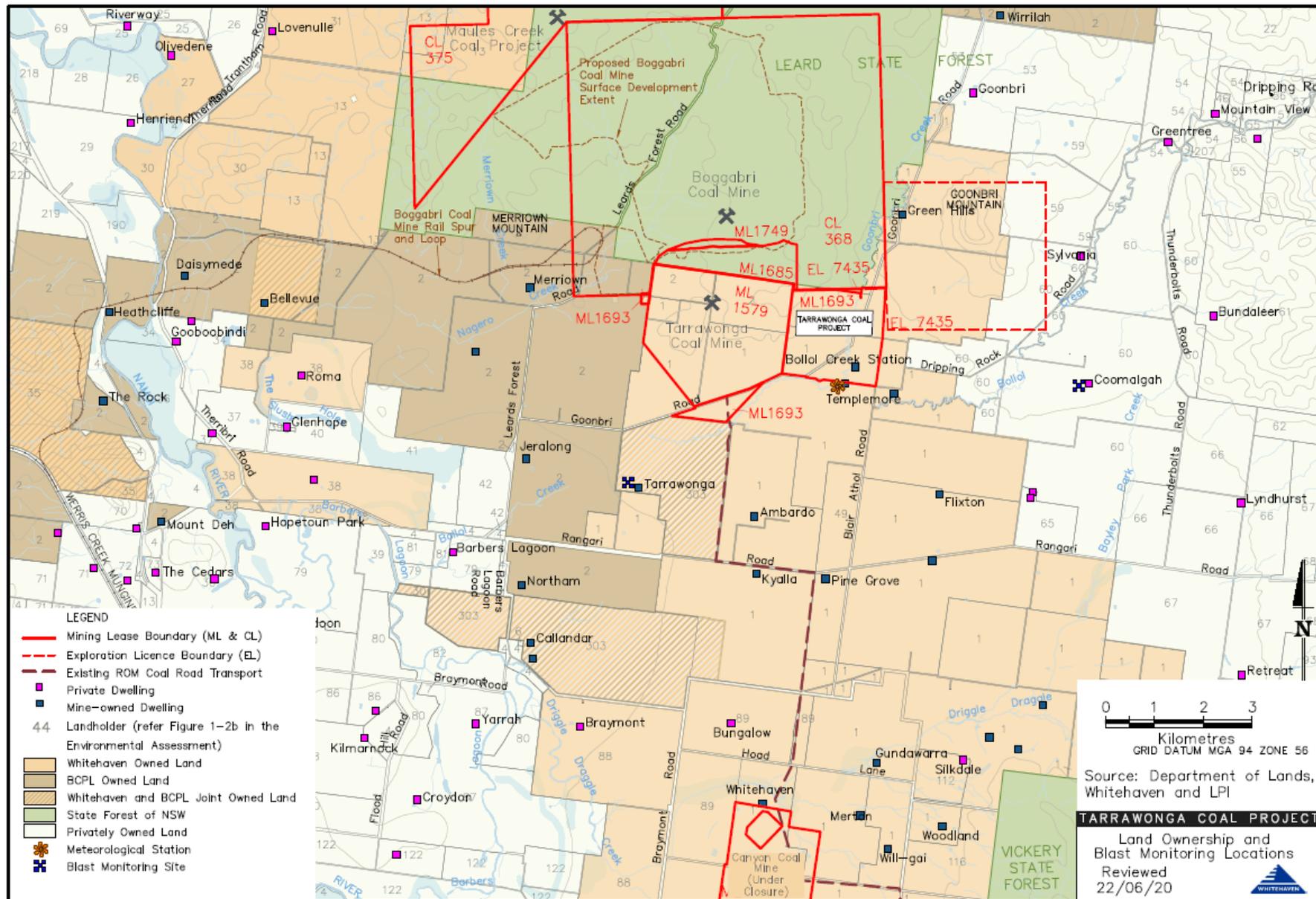
## Approval and Licencing

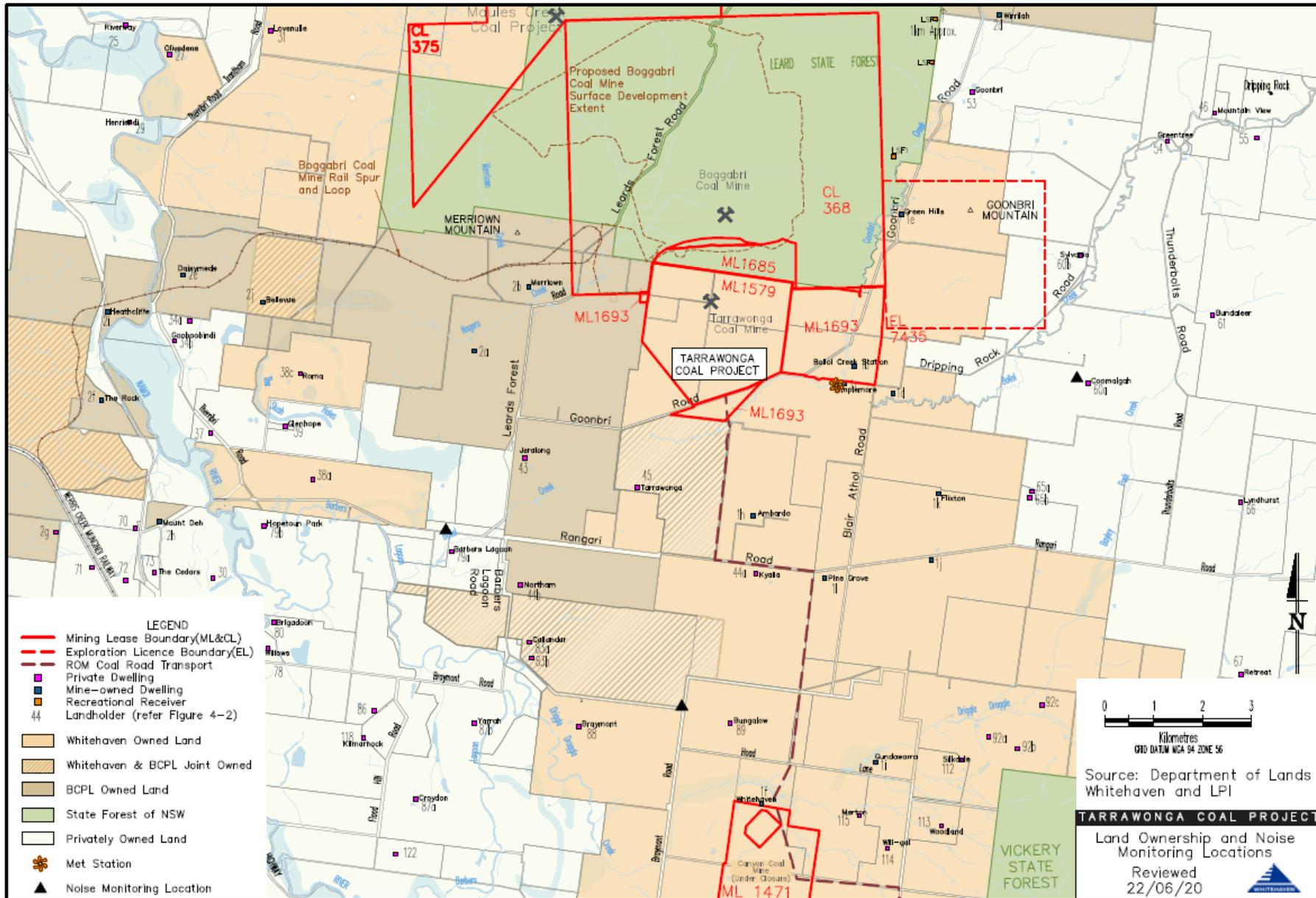
TCM received final determination and Approval of Modification (MOD7) of Project Approval (PA11\_0047) regarding the Life of Mine, in February 2021.

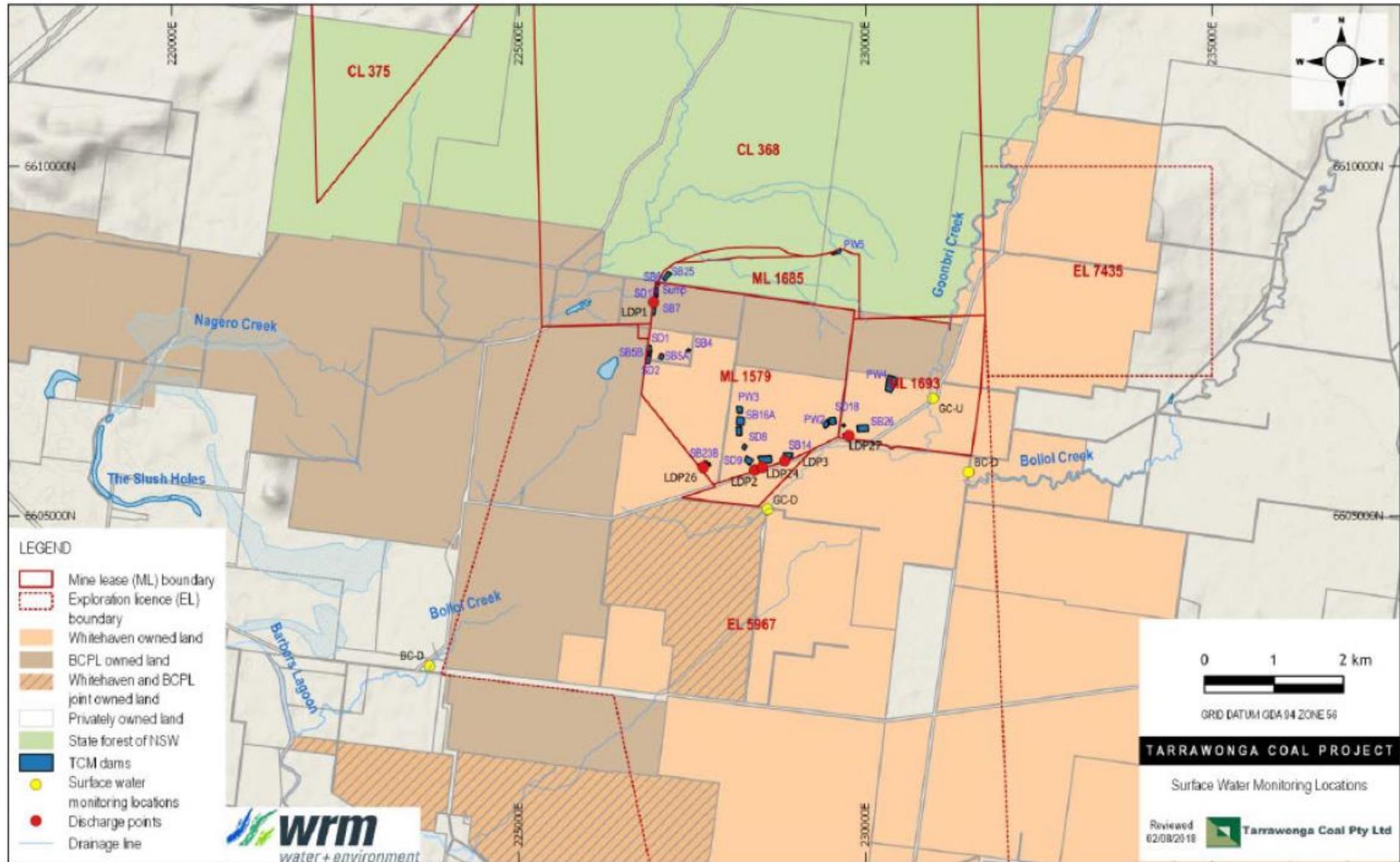
In August 2020, TCM submitted a MOP Amendment F that covers mining activities to November 2022. It was approved by the Resources Regulator on the 23<sup>rd</sup> October 2020

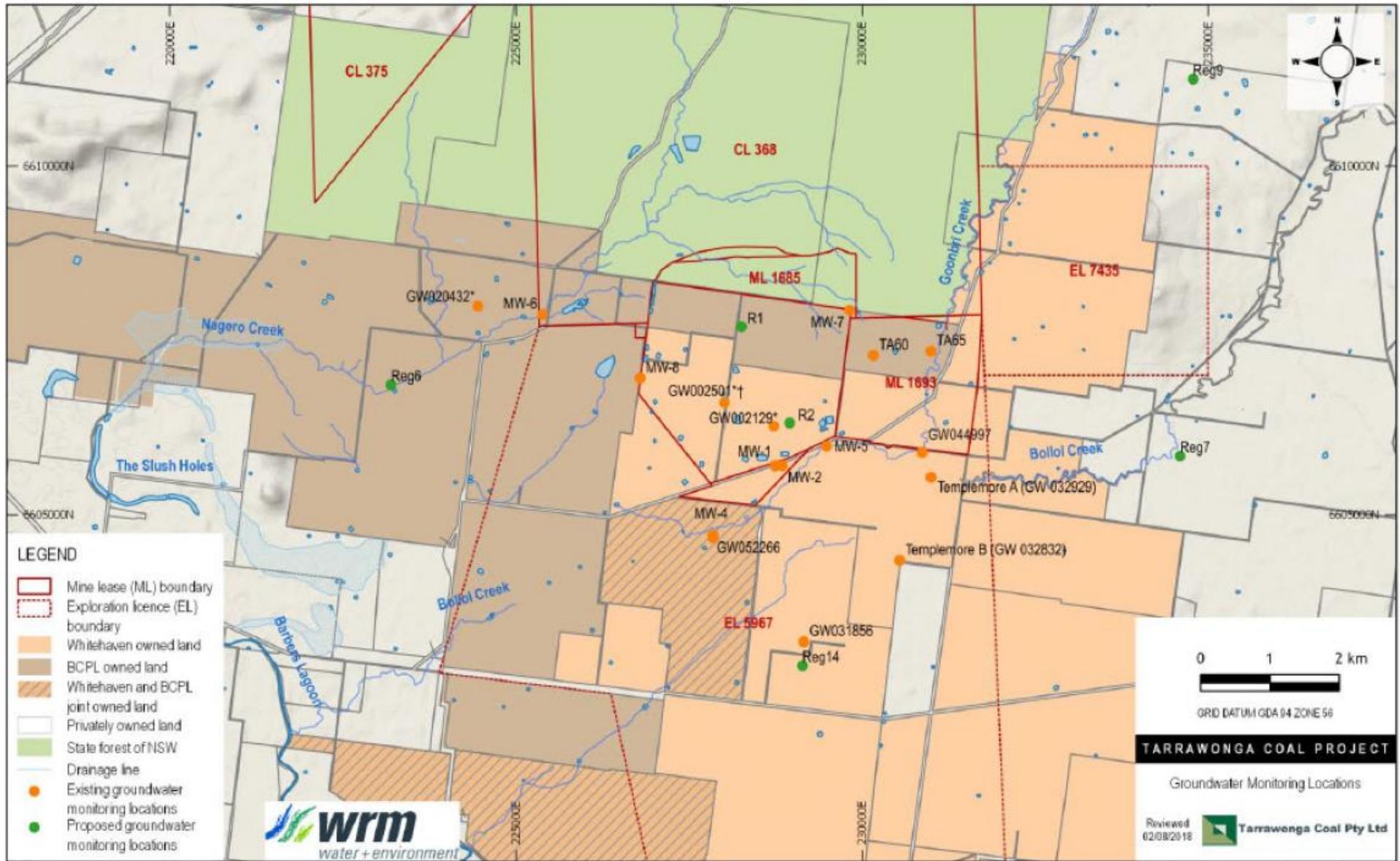
# Appendix A





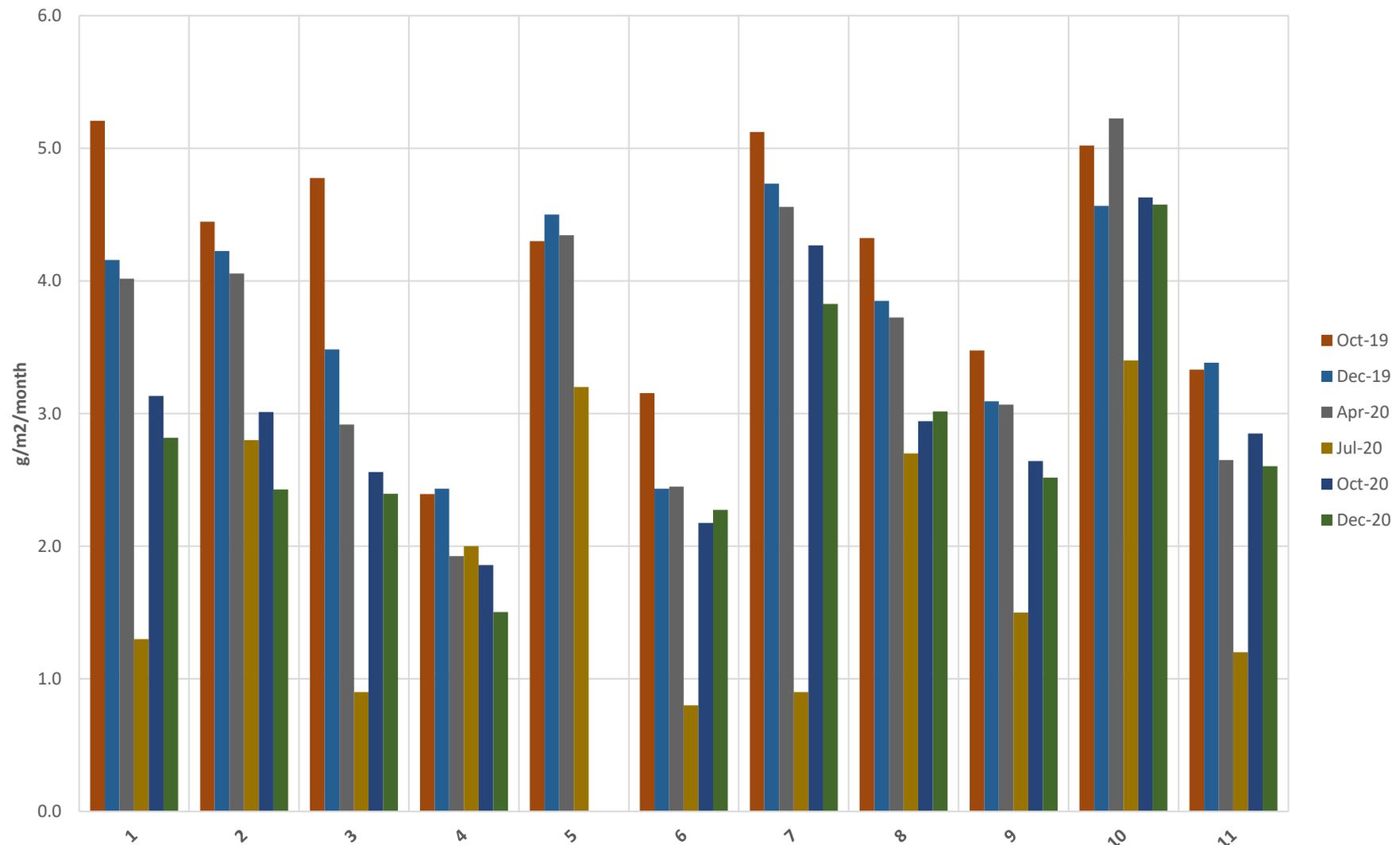




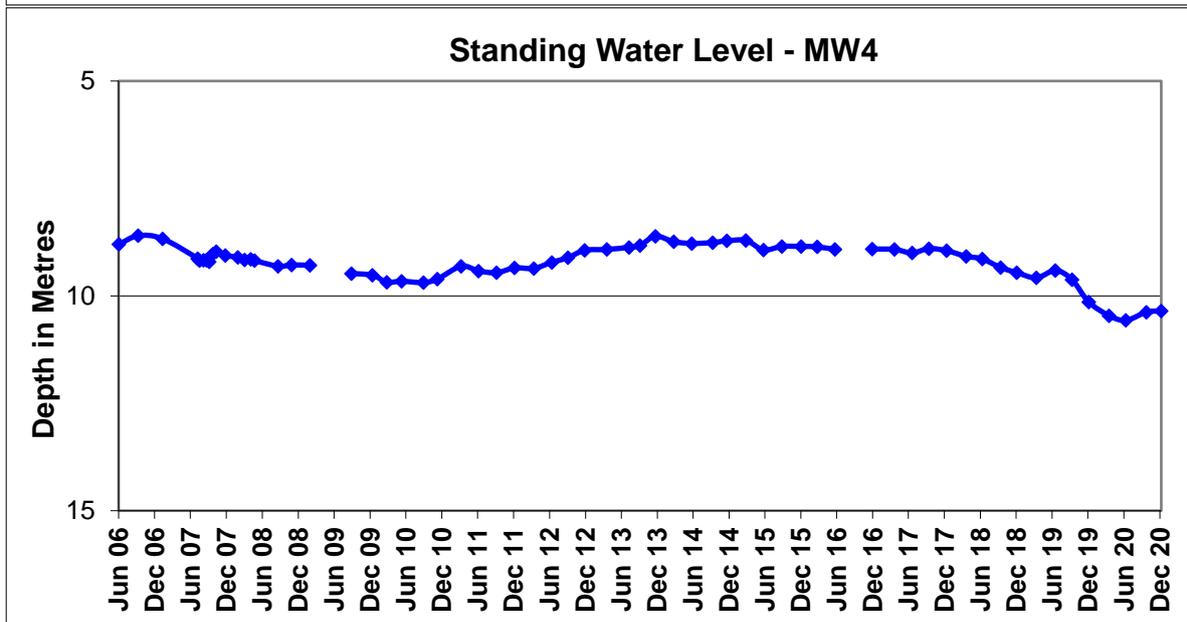
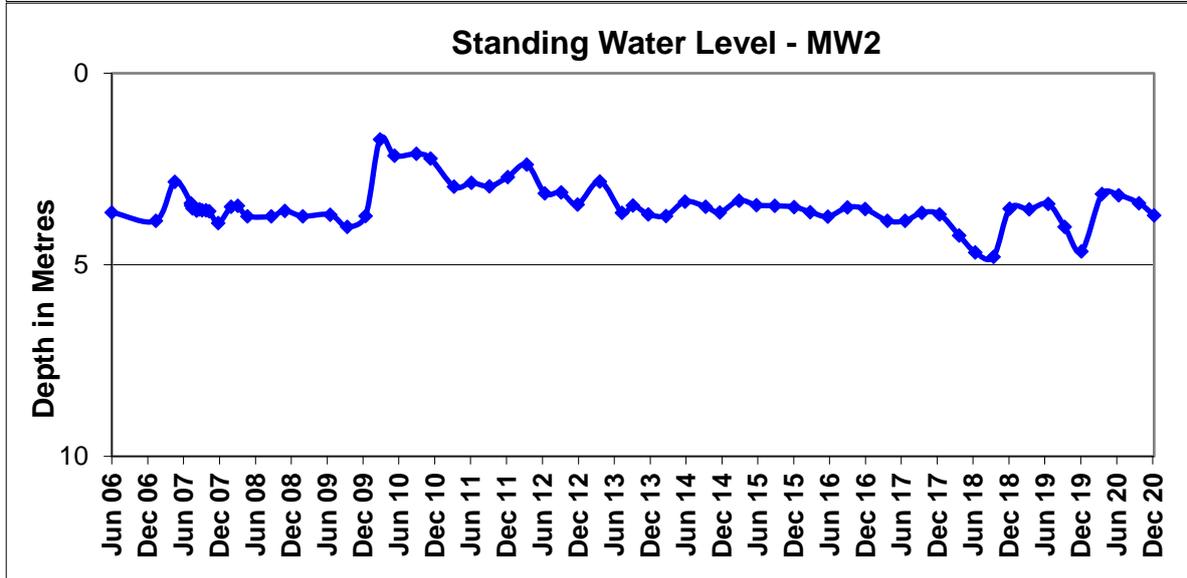
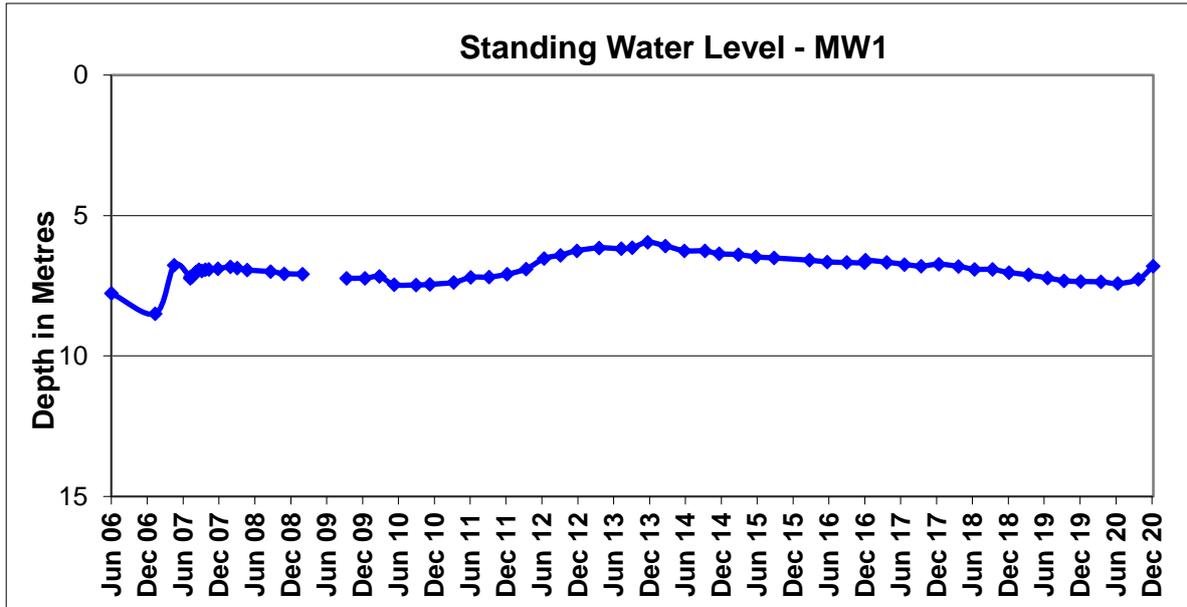


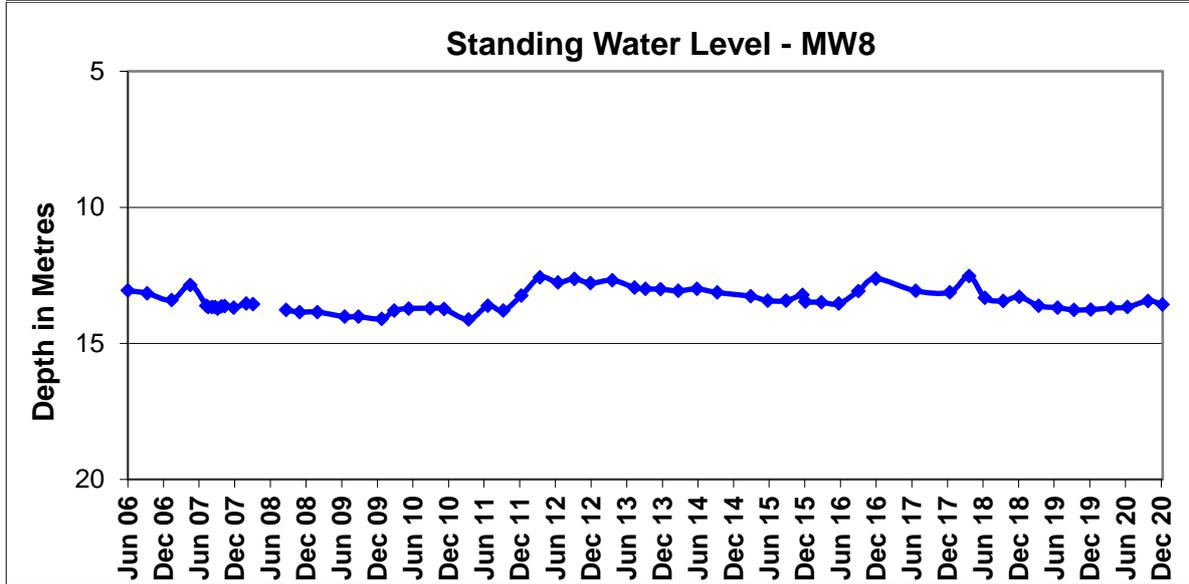
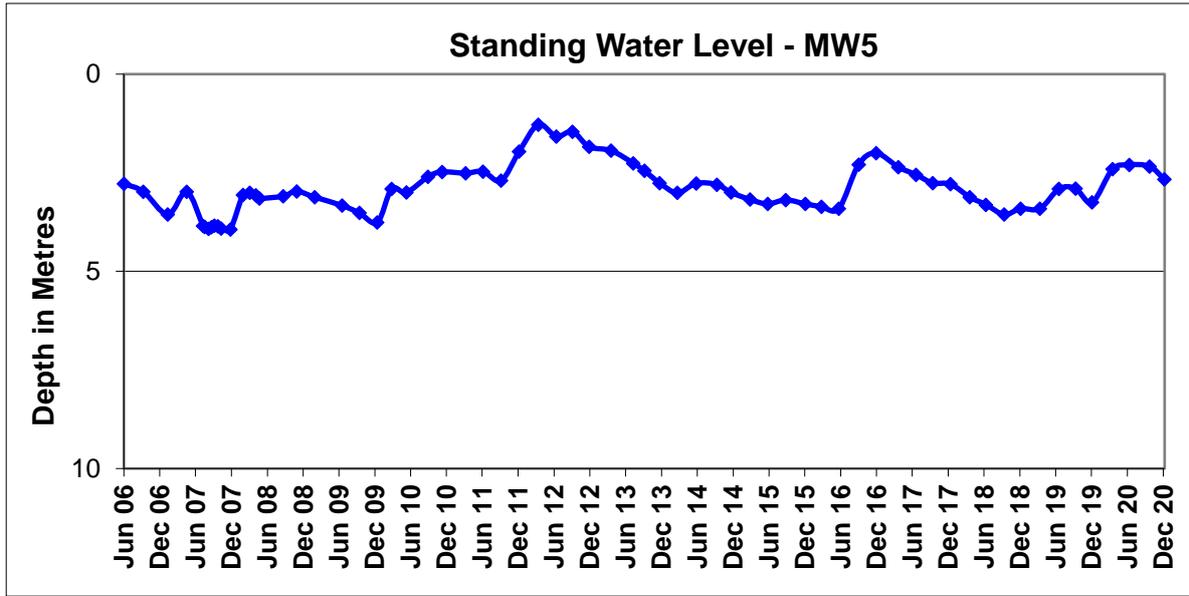
# Appendix B

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



# Appendix C





# Minutes of the 63<sup>rd</sup> Meeting of the Tarrawonga Coal Mine Community Consultative Committee (TCCC)

|                    |   |                                  |                     |
|--------------------|---|----------------------------------|---------------------|
| Meeting Held       | 17 <sup>th</sup> of February 2021 between 10:00AM- 11.00 AM |                                  |                     |
| Venue              | Tarrawonga Training Room                                    |                                  |                     |
| <b>Agenda Item</b> | <b>Discussion and Description</b>                           | <b>Action and Accountability</b> | <b>Status/ Date</b> |

|                          |  |  |  |
|--------------------------|--|--|--|
| 1. Present and Apologies | <u>Present:</u><br>Mr David Ross (DR)- Independent Chairman,<br>Mr Wade Hudson (WH)- GSC Representative<br>Mr Lloyd Finlay (LF), NSC Representative,<br>Mr Tian Oosthuizen (TOo), TCM,<br>Mr Sebastien Moreno (SM)- TCM,<br>Miss Madeleine Wright (MW), TCM,<br>Mr Jacques Du Toit (JDT) – WHC GOC General Manager |  |  |
|                          | <u>Apologies:</u><br>Mrs Rebecca Ryan (RR)- Community Representative,<br>Mr Robert Hooke (RH), GSC Representative<br>Mr David Moses (DM), GSC Representative<br>Mrs Colleen Fuller (CF), Community Representative  |  |  |

# Minutes of the 63<sup>rd</sup> Meeting of the Tarrawonga Coal Mine Community Consultative Committee (TCCC)

Meeting Held | 17<sup>th</sup> of February 2021 between 10:00AM- 11.00 AM

Venue | Tarrawonga Training Room

| <i>Agenda Item</i> | <i>Discussion and Description</i> | <i>Action and Accountability</i> | <i>Status/ Date</i> |
|--------------------|-----------------------------------|----------------------------------|---------------------|
|--------------------|-----------------------------------|----------------------------------|---------------------|

|  |  |  |                                    |
|--|--|--|------------------------------------|
| 2. Declaration of Pecuniary or Non-Pecuniary Interests | DR- declared that he has paid a fee for participation as Independent Chairman.<br>DR also discussed members departing the CCC.<br>LF declared that he leases WHC properties  | DR to write a letter to both members who resigned and thanking them for their time and contribution to the TCCC. |                                    |
| 3. Previous Minutes Actions                            | Proceed with advertisement for new TCCC members.   |  |                                    |
|  | SM- regarding 3- yearly Environmental Independent Audit report   | SM- to prepare a presentation and outline findings of the Audits   | Complete<br>Detailed in section 6. |
| 4. Business Arising                                    | No update  |  |                                    |
| 5. Mine Progress Report                                | TOo advised: <ul style="list-style-type: none"> <li>- TRIFR = 0, All numbers tracking well with reference to safety</li> <li>- On track with Overburden and Coal</li> <li>- Rehabilitation – land form for CY20 finished.</li> </ul> |  |                                    |

# Minutes of the 63<sup>rd</sup> Meeting of the Tarrawonga Coal Mine Community Consultative Committee (TCCC)

|                    |   |                                  |                     |
|--------------------|---|----------------------------------|---------------------|
| Meeting Held       | 17 <sup>th</sup> of February 2021 between 10:00AM- 11.00 AM |                                  |                     |
| Venue              | Tarrawonga Training Room                                    |                                  |                     |
| <b>Agenda Item</b> | <b>Discussion and Description</b>                           | <b>Action and Accountability</b> | <b>Status/ Date</b> |

|   |   |  |   |
|---|---|--|---|
| <p>6. Environmental Monitoring report</p> | <p>SM- Presented outcomes of the 3 yearly Audit.</p> <p>SM-</p> <ul style="list-style-type: none"> <li>- Read and explained the Quarterly Environmental Report results.</li> <li>- Reiterated that trees planted in FY21 are thriving due to favourable weather conditions.</li> <li>- Advised MOD7 has been approved in February.</li> <li>- DPIE visited on the 16 February.</li> </ul> | <p>SM – to advised link to access the Audit reports and Annual Reports</p> | <p>Complete.</p> <p>Links to 2020 Audit reports and other docuements:</p> <p>Independent Enviro Audit:<br/> <a href="https://whitehavencoal.com.au/Documentations/Tarrawonga%20Mine/Environmental%20Management,%20Monitoring%20&amp;%20Compliance/Independent%20Environmental%20Audits/TAR-Independent%20Environmental%20Audit%20Report%20-%202020.pdf">https://whitehavencoal.com.au/Documentations/Tarrawonga%20Mine/Environmental%20Management,%20Monitoring%20&amp;%20Compliance/Independent%20Environmental%20Audits/TAR-Independent%20Environmental%20Audit%20Report%20-%202020.pdf</a></p> <p>Independent Biodiversity Audit:<br/> <a href="https://whitehavencoal.com.au/Documentations/Tarrawonga%20Mine/Environmental%20Management,%20Monitoring%20&amp;%20Compliance/Independent%20Environmental%20Audits/TAR-">https://whitehavencoal.com.au/Documentations/Tarrawonga%20Mine/Environmental%20Management,%20Monitoring%20&amp;%20Compliance/Independent%20Environmental%20Audits/TAR-</a></p> |
|---|---|--|---|

# Minutes of the 63<sup>rd</sup> Meeting of the Tarrawonga Coal Mine Community Consultative Committee (TCCC)

|                    |   |                                  |                     |
|--------------------|---|----------------------------------|---------------------|
| Meeting Held       | 17 <sup>th</sup> of February 2021 between 10:00AM- 11.00 AM |                                  |                     |
| Venue              | Tarrawonga Training Room                                    |                                  |                     |
| <b>Agenda Item</b> | <b>Discussion and Description</b>                           | <b>Action and Accountability</b> | <b>Status/ Date</b> |

|                     |   |   |   |
|---------------------|---|---|---|
|                     |   |   | <a href="#">Independent%20Biodiversity%20Audit%20Report%202020.pdf</a><br><br>Link to Annual Reviews:<br><a href="https://whitehavencoal.com.au/our-business/our-assets/tarrawonga-mine/">https://whitehavencoal.com.au/our-business/our-assets/tarrawonga-mine/</a> then follow<br>> Environmental Management, Monitoring & Compliance<br>> Annual Reviews |
| 7. General business | DR – Discussed air quality committee with WH.                                 | DR - to discuss further   |   |
|                     | DR – regarding the BTM Joint CCC asked about an alternative Meeting location. | WH – to confirm with GSC if Council meeting room will be available (i.e. Town hall or the Band Hall) for next BTM CCC |   |

# Minutes of the 63<sup>rd</sup> Meeting of the Tarrawonga Coal Mine Community Consultative Committee (TCCC)

Meeting Held | 17<sup>th</sup> of February 2021 between 10:00AM- 11.00 AM

Venue | Tarrawonga Training Room

| Agenda Item | Discussion and Description | Action and Accountability | Status/ Date |
|-------------|----------------------------|---------------------------|--------------|
|-------------|----------------------------|---------------------------|--------------|

|                                    |  |  |  |
|------------------------------------|--|--|--|
|                                    | <p>DR</p> <ul style="list-style-type: none"> <li>- Discussed the preparation of the CCC Annual report, and the lack of CCC members despite the ongoing advertisement process. Will investigate if there is any interest for the Boggabri Chamber of Commerce representative to join the TCCC.</li> <li>- Advised discussion with DPIE regarding frequency of the TCCC meetings moving forward and potential to change to 6 monthly or annually meetings if members agree.</li> </ul> |  |  |
| 8.Complaints                       | SM – No complaints in this reporting period  |  |  |
| 9. Next Meeting and Other Comments | <p>DR- advised next TCCC meetings dates:</p> <ul style="list-style-type: none"> <li>- TCCC: 12<sup>th</sup> May 2021.</li> <li>- BTM CCC: 13<sup>th</sup> May 2021 –</li> <li>-TCCC: 11<sup>th</sup> August 2021</li> <li>- TCCC: 27<sup>th</sup> October 2021</li> <li>- BTM CCC: 28<sup>th</sup> October 2021</li> </ul>   |  |  |

# Tarrawonga Coal Mine Community Consultative Committee Meeting #64

Quarterly Environmental Monitoring Report  
February 1 – April 30, 2021



*Photo taken in April 2021 in a section of the Northern emplacement area that was rehabilitated in July 2020, showing promising ground cover growth..*

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 February 1 2021 to April 30, 2021. Maps with all the monitoring locations are available in *Appendix A*.

# Noise Monitoring

Attended noise monitoring was conducted at the “Bungalow” (TN4), “Barbers Lagoon” (TN3) and “Matong” (TN2) properties from 15<sup>th</sup> to the 14<sup>th</sup> of March 2021. The noise criterion for the mine is 35dB(A) Leq (15 min) for all operating times.

The results below show that noise emissions from the mine did not exceed the operational noise criterion at the “Barbers Lagoon”, “Bungalow” or “Matong” monitoring locations during the monitoring event during the entire monitoring period.

(See below summary tables extracted from 210330 RWDI report 2190007-T-07 (Q1 2021))

**Table 4-1 : Comparison of noise levels between TN2 and 573b Coomalga**

| Date       | Time  | Noise Limits | TN2 Mine LAeq Noise Level (dB) | 573b Coomalga Mine LAeq Noise Level (dB) |            |
|------------|-------|--------------|--------------------------------|--|------------|
|            |       | LAeq,15min   | Measured Mine Contribution     | Commensurate Mine Compliance Level       | Exceedance |
| 15/03/2021 | 20:54 | 35           | <36 (I/A)                      | <27 (I/A)                                | 0          |
| 16/03/2021 | 21:10 | 35           | <32 (I/A)                      | <23 (I/A)                                | 0          |
|            | 21:26 | 35           | <31 (I/A)                      | <22 (I/A)                                | 0          |
|            | 22:15 | 35           | <27 (I/A)                      | <18 (I/A)                                | 0          |
|            | 22:20 | 35           | <29 (I/A)                      | <20 (I/A)                                | 0          |
|            | 22:28 | 35           | <29 (I/A)                      | <20 (I/A)                                | 0          |
| 17/03/2021 | 11:17 | 35           | <21 (I/A)                      | <12 (I/A)                                | 0          |
|            | 21:12 | 35           | <32 (I/A)                      | <24 (I/A)                                | 0          |
| 18/03/2021 | 09:03 | 35           | <22 (I/A)                      | <13 (I/A)                                | 0          |
|            | 09:19 | 35           | <21 (I/A)                      | <12 (I/A)                                | 0          |
|            | 09:34 | 35           | <21 (I/A)                      | <12 (I/A)                                | 0          |
|            | 09:56 | 35           | <30                            | <21                                      | 0          |
|            | 10:11 | 35           | <30                            | <21                                      | 0          |
|            | 21:15 | 35           | <26 (I/A)                      | <17 (I/A)                                | 0          |
|            | 21:31 | 35           | <26 (I/A)                      | <17 (I/A)                                | 0          |

Note: Where mine noise was inaudible throughout the entire measurement, it is assumed that the contribution is less than 10dB below the measured LA90.

**Table 4-3 : Summary of noise assessment at TN3**

| Date       | Time  | Noise Limits<br><br>$L_{Aeq,15\text{ min}}$ | TN3<br>Mine $L_{Aeq}$ Noise Level (dB) |                       |            |
|------------|-------|---|--|-----------------------|------------|
|            |       |   | Measured Mine Contribution             | Additional LF Penalty | Exceedance |
| 15/03/2021 | 14:08 | 35  | <27 (I/A)                              | -                     | 0          |
|            | 14:38 | 35  | <28 (I/A)                              | -                     | 0          |
|            | 20:15 | 35  | <30                                    | -                     | 0          |
|            | 20:30 | 35  | <30                                    | -                     | 0          |
|            | 23:27 | 35  | <30 (I/A)                              | -                     | 0          |
| 16/03/2021 | 20:18 | 35  | <20                                    | -                     | 0          |
|            | 20:33 | 35  | <20                                    | -                     | 0          |
|            | 00:01 | 35  | <20                                    | -                     | 0          |
| 17/03/2021 | 20:30 | 35  | <30                                    | -                     | 0          |
|            | 20:45 | 35  | <30                                    | -                     | 0          |
|            | 23:46 | 35  | <30 (I/A)                              | -                     | 0          |
|            | 00:01 | 35  | <29 (I/A)                              | -                     | 0          |
| 18/03/2021 | 20:28 | 35  | <25                                    | -                     | 0          |
|            | 00:05 | 35  | <20                                    | -                     | 0          |

Note: Where mine noise was inaudible throughout the entire measurement, it is assumed that the contribution is less than 10dB below the measured  $L_{A90}$ .

**Table 4-5 : Summary of noise assessment at TN4**

| Date       | Time  | Noise Limits<br><br>$L_{Aeq,15\text{ min}}$ | TN4<br>Mine $L_{Aeq}$ Noise Level (dB) |                       |            |
|------------|-------|---|--|-----------------------|------------|
|            |       |   | Measured Mine Contribution             | Additional LF Penalty | Exceedance |
| 15/03/2021 | 21:30 | 35  | I/A (<30)*                             | -                     | 0          |
|            | 21:45 | 35  | I/A (<30)*                             | -                     | 0          |
|            | 21:30 | 35  | I/A (<30)*                             | -                     | 0          |
| 16/03/2021 | 22:15 | 35  | I/A (<30)*                             | -                     | 0          |
|            | 22:30 | 35  | I/A (<30)*                             | -                     | 0          |
| 17/03/2021 | 08:45 | 35  | <36 (I/A)                              | -                     | 0          |
|            | 09:00 | 35  | <40 (I/A)                              | -                     | 0          |
| 18/03/2021 | 21:30 | 35  | I/A (<30)*                             | -                     | 0          |

Note: Where mine noise was inaudible throughout the entire measurement, it is assumed that the contribution is less than 10dB below the measured  $L_{A90}$ . Contributions with an \* indicate that the mine noise was assessed using a low pass filter.

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

**Table 4-2 : Comparison of maximum noise events between TN2 and 573b Coomalgah**

| Date       | Time  | Noise Limits         | Noise Source | TN2 Mine L <sub>Amax</sub> Noise Level (dB) | 573b Coomalgah Mine L <sub>Amax</sub> Noise Level (dB) |            |
|------------|-------|----------------------|--------------|---|--|------------|
|            |       | L <sub>A1,1min</sub> |              | Measured Level                              | Commensurate Mine Compliance Level                     | Exceedance |
| 16/03/2021 | 22:15 | 45                   | -            | I/A   | -  | 0          |
|            | 22:30 | 45                   | -            | I/A   | -  | 0          |
|            | 22:45 | 45                   | -            | I/A   | -  | 0          |

Note: NM indicates a significant maximum noise event was not observed.  
I/A indicates the mine was inaudible during the measurement period.

**Table 4-3 : Summary of noise assessment at TN3**

| Date       | Time  | Noise Limits            | TN3 Mine L <sub>Aeq</sub> Noise Level (dB) |                       |            |
|------------|-------|-------------------------|--|-----------------------|------------|
|            |       | L <sub>Aeq,15 min</sub> | Measured Mine Contribution                 | Additional LF Penalty | Exceedance |
| 15/03/2021 | 14:08 | 35                      | <27 (I/A)                                  | -                     | 0          |
|            | 14:38 | 35                      | <28 (I/A)                                  | -                     | 0          |
|            | 20:15 | 35                      | <30  | -                     | 0          |
|            | 20:30 | 35                      | <30  | -                     | 0          |
|            | 23:27 | 35                      | <30 (I/A)                                  | -                     | 0          |
| 16/03/2021 | 20:18 | 35                      | <20  | -                     | 0          |
|            | 20:33 | 35                      | <20  | -                     | 0          |
|            | 00:01 | 35                      | <20  | -                     | 0          |
| 17/03/2021 | 20:30 | 35                      | <30  | -                     | 0          |
|            | 20:45 | 35                      | <30  | -                     | 0          |
|            | 23:46 | 35                      | <30 (I/A)                                  | -                     | 0          |
|            | 00:01 | 35                      | <29 (I/A)                                  | -                     | 0          |
| 18/03/2021 | 20:28 | 35                      | <25  | -                     | 0          |
|            | 00:05 | 35                      | <20  | -                     | 0          |

Note: Where mine noise was inaudible throughout the entire measurement, it is assumed that the contribution is less than 10dB below the measured L<sub>A90</sub>.

**Table 4-4 : Summary of maximum noise events at TN3**

| Date       | Time  | Noise Limits         | TN3                                     |                |            |
|------------|-------|----------------------|---|----------------|------------|
|            |       |                      | Mine L <sub>Amax</sub> Noise Level (dB) |                |            |
|            |       | L <sub>A1,1min</sub> | Noise Source                            | Measured Level | Exceedance |
| 15/03/2021 | 23:27 | 45                   | -                                       | I/A            | 0          |
| 16/03/2021 | 00:01 | 45                   | -                                       | NM             | 0          |
| 17/03/2021 | 23:46 | 45                   | -                                       | I/A            | 0          |
|            | 00:01 | 45                   | -                                       | I/A            | 0          |
| 18/03/2021 | 00:05 | 45                   | -                                       | NM             | 0          |

Note: NM indicates a significant maximum noise event was not observed.  
 I/A indicates the mine was inaudible during the measurement period.

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

# Blast Monitoring

## Blasting Results

Since 2006, there have been 1037 blasts (until 30/04/2021) at TCM.

The highest result for Overpressure was 111.6dB recorded at the ‘Tarrawonga’ monitor on the 06/03/2021.

The highest result for ground vibration was 1.01 mm/s recorded at the ‘Tarrawonga’ monitor on the 30/04/2021.

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

| Monitor Location | Date     | Max. Peak Overpressure (dB) | Criterion (dB) | Date     | Max. Peak Ground Pressure (mm/s) | Criterion (mm/s) |
|------------------|----------|-----------------------------|----------------|----------|----------------------------------|------------------|
| Tarrawonga*      | 06/03/21 | 111.6                       | N/A            | 30/04/21 | 1.01                             | N/A              |
| Coomalgah        | 30/04/21 | 107.6                       | 120            | 14/04/21 | 0.99                             | 10               |

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

# Air Quality Monitoring

## Dust Deposition Results

**Table 3** shows deposited dust gauge results over 12 months. All the monitors are located on project related land; as such compliance criteria (4g/m<sup>2</sup>/month) do not apply. Overall deposited dust trends remain steady during the reporting period (refer graph in *Appendix B*)

| MONTH                           | TEMPLEMORE (EB-4) | BOLLO CREEK STN (EB-5) | AMBARDO (EB-6) | TARRAWONGA (EB-7) | THUJIN (EB-8) | PINE GROVE (EB-9) | TARRAWONGA MINE (EB-10) | TARRAWONGA MINE (EB-11) | TARRAWONGA MINE (EB-14) | TARRAWONGA MINE (EB-15) | JERALONG NORTH (EB-16) |
|---------------------------------|-------------------|------------------------|----------------|-------------------|---------------|-------------------|-------------------------|-------------------------|-------------------------|-------------------------|------------------------|
| Mar-20                          | 1.7               | +                      | 2.2            | 2                 | 6.2           | 2.9               | 8.3                     | 4.1                     | 2.8                     | 4                       | 2.3                    |
| April-20                        | 2.2               | 3                      | 7.7            | 0.7               | 15.9          | 0.8               | 2.5                     | 1.9                     | 1.5                     | 3.8                     | 5.2                    |
| May-20                          | 3                 | 2.5                    | 1.4            | 2.4               | 3.2           | 1.2               | 4.4                     | 2.4                     | 2.3                     | 4.4                     | 4.2                    |
| Jun-20                          | 3.1               | 2                      | 1.1            | 1                 | 2.7           | 1.5               | 1.9                     | 2.5                     | 1.8                     | 5.3                     | 2.7                    |
| Jul-20                          | 1.3               | 2.8                    | 0.9            | 2                 | 3.2           | 0.8               | 0.9                     | 2.7                     | 1.5                     | 3.4                     | 1.2                    |
| Aug-20                          | 1.1               | 1.8                    | 1.1            | 0.5               | 1.8           | 0.7               | 1.9                     | 2                       | 1.2                     | 3.7                     | 0.8                    |
| Sep-20                          | 1.4               | 19.9#                  | 1.0            | 0.9               | 2.4           | 1.9               | 0.9                     | 1.3                     | 1.7                     | 3.6                     | 1.9                    |
| Oct-20                          | 0.9               | 2.1                    | 1.3            | 1.1               | ++            | 1.2               | 3.1                     | 1.9                     | 2.3                     | 5.5                     | 2.5                    |
| Nov-20                          | 3.2               | 2.7                    | 1.1            | 1.2               | ++            | 3.1               | 5                       | 3.2                     | 2.4                     | +                       | 3                      |
| Dec-20                          | 4.3               | 2.5                    | 2              | 1.3               | ++            | 12.7#             | 3.7                     | 4.3                     | 2.6                     | +                       | 1.6                    |
| Jan-21                          | 6.7#              | 4.6#                   | 1.1#           | 3.2               | ++            | 1.3               |                         | 3.1                     | 8.4                     | 6.5                     | 4.4                    |
| Feb-21                          | 2.4               | 8.1#                   | 2.8            | 1.4               | ++            | 1.1               | 3.6#                    | 5.9#                    | 4.4#                    | 1.8                     | 1                      |
| Mar-21                          | 0.8               | 2.2                    | 4.8#           | 1.5               | ++            | 1.2               | 5.4#                    | 5.9#                    | 11.1#                   | 0.7                     | 5.8#                   |
| Apr-21                          | 12.6#             | 5                      | 1.6            | 0.3               | ++            | 0.6               | 19.1#                   | 3.7                     | 0.5                     | 0.7                     | 3                      |
| <b>12 MONTH ROLLING AVERAGE</b> | 3.2               | 2.6                    | 1.4            | 1.3               | ++            | 1.3               | 4.4                     | 2.9                     | 2.5                     | 3.4                     | 2.2                    |

# Analysis done 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.

++ EB08 was decommissioned due to reshaping activities at the Southern Emplacement area.

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

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

**Table 3 – Deposited Dust Gauge Results [g/m<sup>2</sup>/month]**

High Volume Air sampler (PM10) Results

The High Volume Air Sampler (HVAS) installed at Coomalgah property monitors level of Particle Matter under 10 micron (PM<sub>10</sub>). It operates for 24hr every 6 days. **Table 4** shows all the 24hr average values recorded for this quarter are below the 50µg/m<sup>3</sup> criteria.

**Table- 4: HVAS PM10 24 hr average levels for the Quarter**

| Date       | 24hr averaged PM10 (µg/m <sup>3</sup> ) | Criterion 24hr average (µg/m <sup>3</sup> ) | Comments |
|------------|---|---|----------|
| 3/01/2021  | 6.4                                     | <b>50</b>                                   | Nil      |
| 9/01/2021  | 9.0                                     |   |          |
| 15/01/2021 | 8.9                                     |   |          |
| 21/01/2021 | 18.0                                    |   |          |
| 27/01/2021 | 23.0                                    |   |          |
| 2/02/2021  | 3.7                                     |   |          |
| 8/02/2021  | 8.2                                     |   |          |
| 14/02/2021 | 6.4                                     |   |          |
| 20/02/2021 | 4.0                                     |   |          |
| 26/02/2021 | 6.7                                     |   |          |
| 4/03/2021  | 7.0                                     |   |          |
| 10/03/2021 | 7.2                                     |   |          |
| 16/03/2021 | 4.6                                     |   |          |
| 22/03/2021 | 2.6                                     |   |          |
| 28/03/2021 | 5.1                                     |   |          |
| 3/04/2021  | 5.5                                     |   |          |
| 9/04/2021  | 9.0                                     |   |          |
| 15/04/2021 | 20.1                                    |   |          |
| 21/04/2021 | 13.2                                    |   |          |
| 27/04/2021 | 8.4                                     |   |          |

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

According to the current Air Quality and Greenhouse gas Management Plan, the real time air quality unit (TEOM) installed at the “Flixton” property monitors PM<sub>10</sub> levels in ambient air. 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.



*TEOM installed at Flixton property*

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



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

# Water Monitoring

## Groundwater

Routine groundwater monitoring was undertaken in March 2021 and showed 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  | March 2020     | 7.36       | 8.0            | 3,520                       |
|      | June 2020      | 7.42       | 7.8            | 3,490                       |
|      | September 2020 | 7.27       | 8.16           | 3,260                       |
|      | December 2020  | 6.8        | 7.9            | 3,510                       |
|      | March 2021     | 6.75       | 7.97           | 3,390                       |
| MW2  | March 2020     | 3.15       | 7.6            | 496                         |
|      | June 2020      | 3.18       | 7.3            | 490                         |
|      | September 2020 | 3.39       | 7.39           | 435                         |
|      | December 2020  | 3.71       | 7.3            | 535                         |
|      | March 2021     | 3.46       | 6.99           | 462                         |
| MW4  | March 2020     | 10.46      | 7.7            | 3,600                       |
|      | June 2020      | 10.57      | 7.4            | 3,530                       |
|      | September 2020 | 10.38      | 7.3            | 3,380                       |
|      | December 2020  | 10.35      | 7.4            | 3,640                       |
|      | March 2021     | 15.66      | 7.62           | 2,182                       |
| MW5  | March 2020     | 2.41       | 7.8            | 874                         |
|      | June 2020      | 2.29       | 7.6            | 675                         |
|      | September 2020 | 2.34       | 7.7            | 2,090                       |
|      | December 2020  | 2.67       | 7.1            | 1,960                       |
|      | March 2021     | 2.56       | 7.36           | 874                         |
| MW8  | March 2020     | 13.76      | Casing blocked | Casing blocked              |
|      | June 2020      | 13.71      |                |                             |
|      | September 2020 | 13.44      |                |                             |
|      | December 2020  | 13.57      |                |                             |
|      | March 2021     | 13.42      |                |                             |

*Note: MW7 was decomissioned due to mine progression*

Surface Water

Water storage onsite is expected to be sufficient for at least the next 12 months.

Since beginning of 2021, TCM has recorded 337.0mm of rain.

| <b>2020</b>       | <b>Jan</b> | <b>Feb</b> | <b>Mar</b> | <b>Apr</b> | <b>May</b> | <b>Jun</b> | <b>Jul</b> | <b>Aug</b> | <b>Sep</b> | <b>Oct</b> | <b>Nov</b> | <b>Dec</b> | <b>Total</b> |
|-------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--------------|
| Monthly Rain (mm) | 109.2      | 261.2      | 113.2      | 65.6       | 16.0       | 23.4       | 31.0       | 38.3       | 30.2       | 55.8       | 3          | 184.4      | 931.1        |
| Cumulative (mm)   | 109.2      | 370.4      | 483.6      | 549.2      | 565        | 588.4      | 619.4      | 567.7      | 687.9      | 743.7      | 746.7      | 931.1      |              |
| <b>2021</b>       | <b>Jan</b> | <b>Feb</b> | <b>Mar</b> | <b>Apr</b> | <b>May</b> | <b>Jun</b> | <b>Jul</b> | <b>Aug</b> | <b>Sep</b> | <b>Oct</b> | <b>Nov</b> | <b>Dec</b> | <b>Total</b> |
| Monthly Rain (mm) | 58.4       | 115.4      | 141.2      | 22.0       | -          | -          | -          | -          | -          | -          | -          | -          | 337.0        |
| Cumulative (mm)   | 58.4       | 173.8      | 315.0      | 337.0      | -          | -          | -          | -          | -          | -          | -          | -          |              |

In March 23, TCM had an uncontrolled water released from the Licenced Discharge Point 3 (LDP3). TCM collected water samples during the discharge event and the results exceeded water quality criteria specified in the EPL12365. Relevant agencies were notified and EPA is currently conducting an investigation.

# Rehabilitation and Clearing

## Rehabilitation

TCM has ordered approximately 11,000 tubestock trees for rehabilitation purposes for CY21 to be planted on new rehabilitation areas and over pre-existing maintenance rehabilitation areas. TCM will spread native seeds during the rehabilitation campaign. This will include native groundcover species, shrubs and sub-shrub species as per the Rehabilitation Management plan.

In preparation for seed spreading and tree planting, topsoil placement activity is underway on the Southern Emplacement Area.

## Clearing

Approximately 31.4Ha of vegetation were cleared between February and April 2021 under the supervision of a qualified ecologist and in accordance with the current MOP and Biodiversity Management Plan.

A microbat radio tracking program was successfully completed during the clearing campaign.



*Strophurus intermedius captured and released safely during clearance supervision.*



*Ozimops petersi (inland free-tailed bat) with attached radio transmitter.*

# Complaints

No complaints have been recorded through the reporting period.

# Environmental Management Plans

## Management Plans

Following approval of Modification 7 of PA11\_0047, TCM has conducted a review of all the Management Plans. Updated Management Plans will be submitted via DPIE portal for approval in May 2021 including, Air Quality Management Plan, Noise Management Plan, Blast Management Plan, Heritage Management Plan and Water Management Plan.

## BTM Water Strategy

The BTM mines submitted an updated BTM Groundwater Model and report to DPIE in December 2020. The 3 mines are still awaiting on the determination.

# Annual and Compliance Reporting

## Annual Review and Annual Return Reports

The Annual Return was submitted to EPA on the 1<sup>st</sup> of March 2021.

The Annual Review was submitted to DPIE on the 26<sup>th</sup> of March 2021.

## Annual Compliance EPBC statement

Next Annual Compliance EPBC statement will be submitted to DAWE in June 2021.

## Annual National Pollutant Inventory (NPI) and Greenhouse Gas Emission (NGERs) Reports 2021

Next NPI and NGERs reports will be submitted in September and October 2021 respectively.

# Audits- Compliance

In February, DPIE conducted a site inspection during vegetation clearing activities.

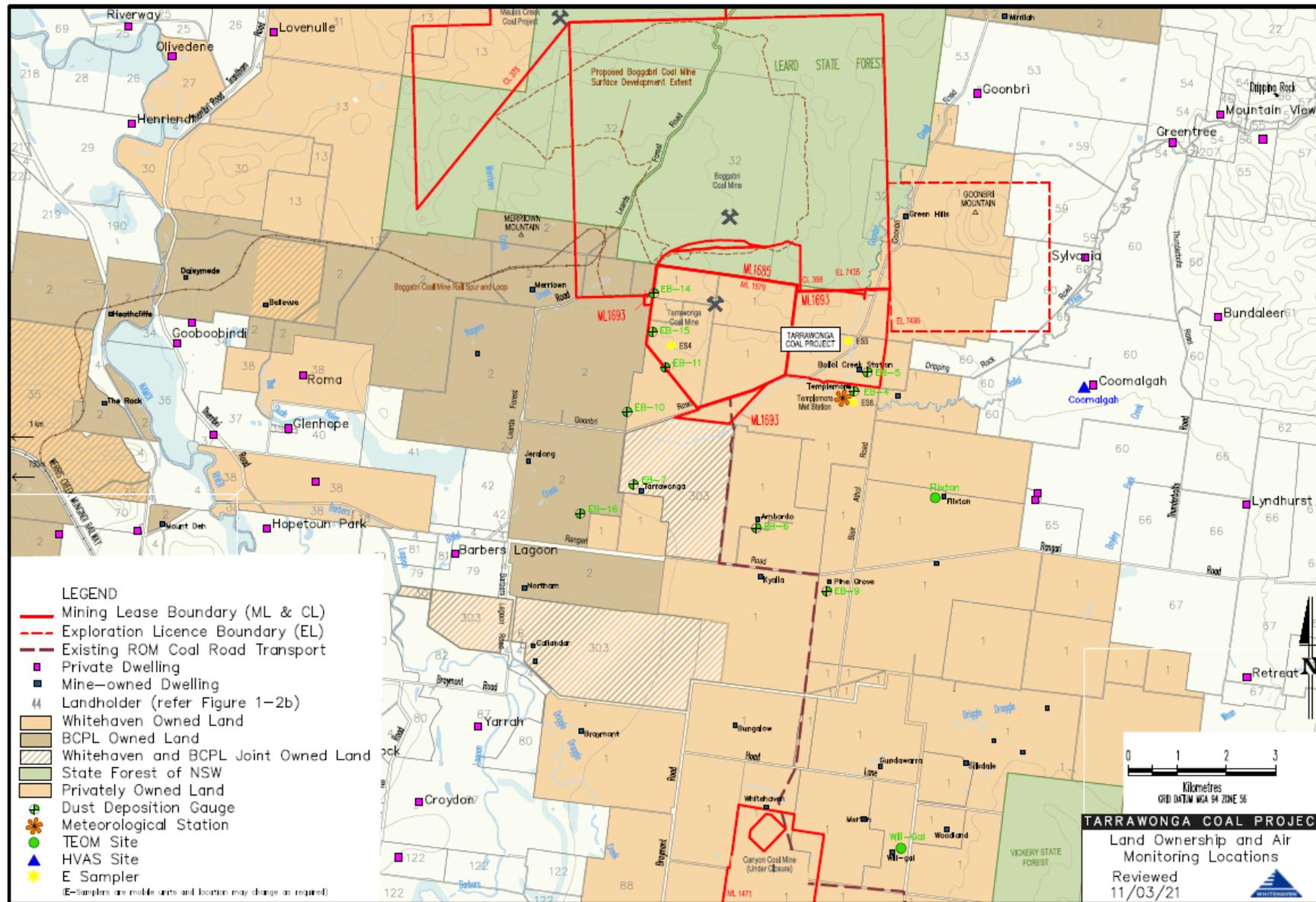
The NSW EPA also conducted a site inspection on the 14<sup>th</sup> of April 2021.

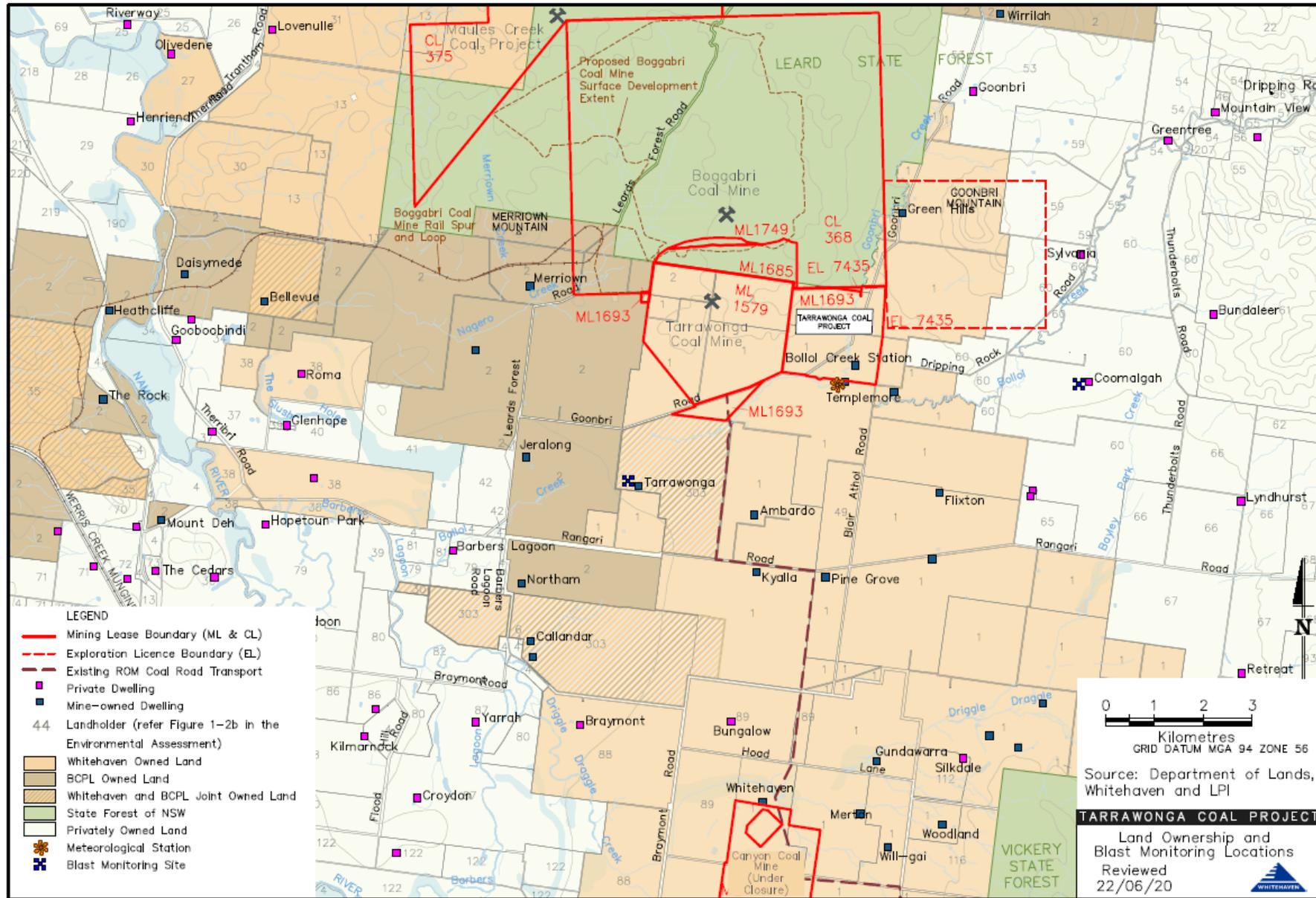
# Approval and Licencing

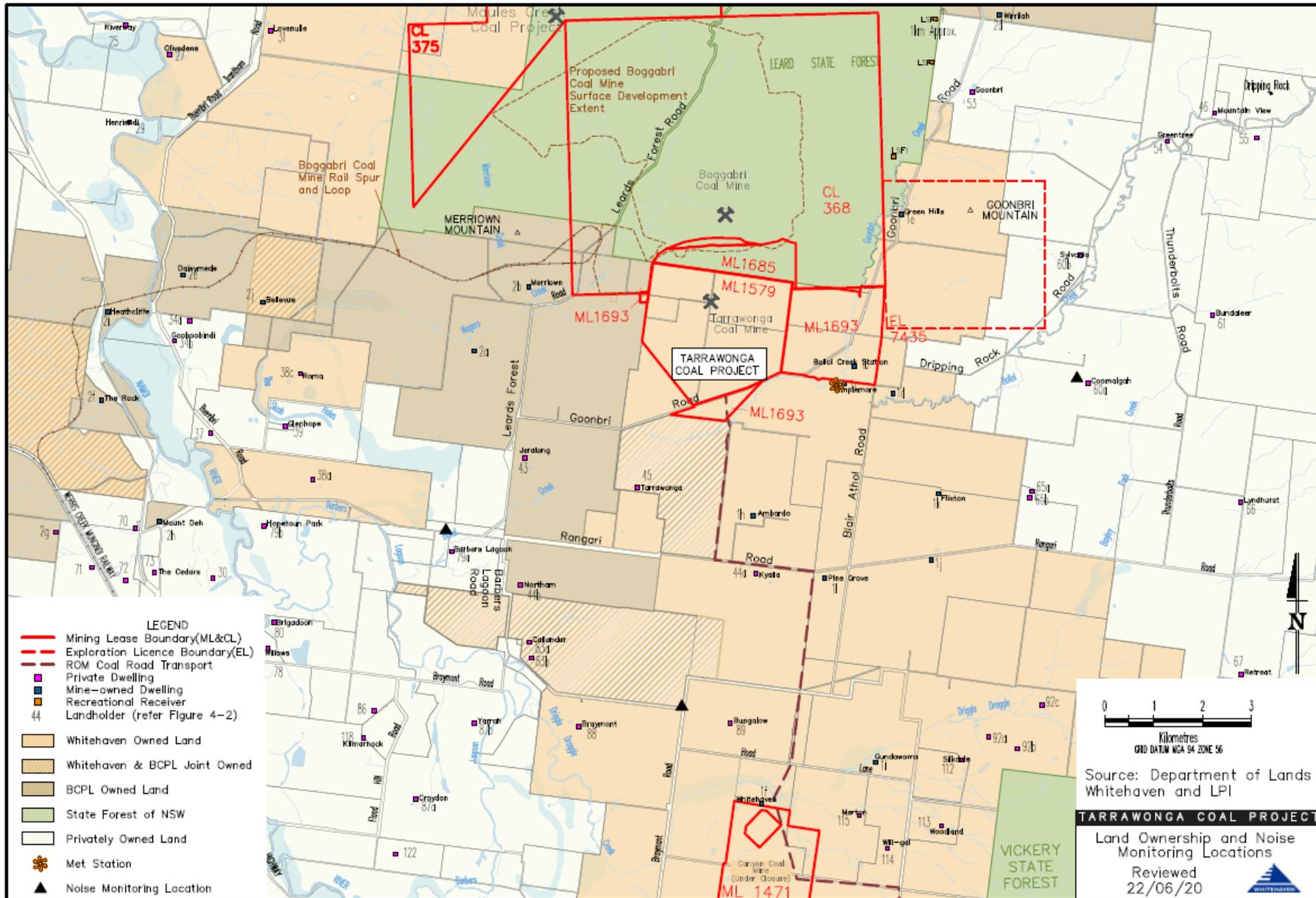
TCM received final determination and Approval of Modification (MOD7) of Project Approval (PA11\_0047) regarding the Life of Mine, in February 2021.

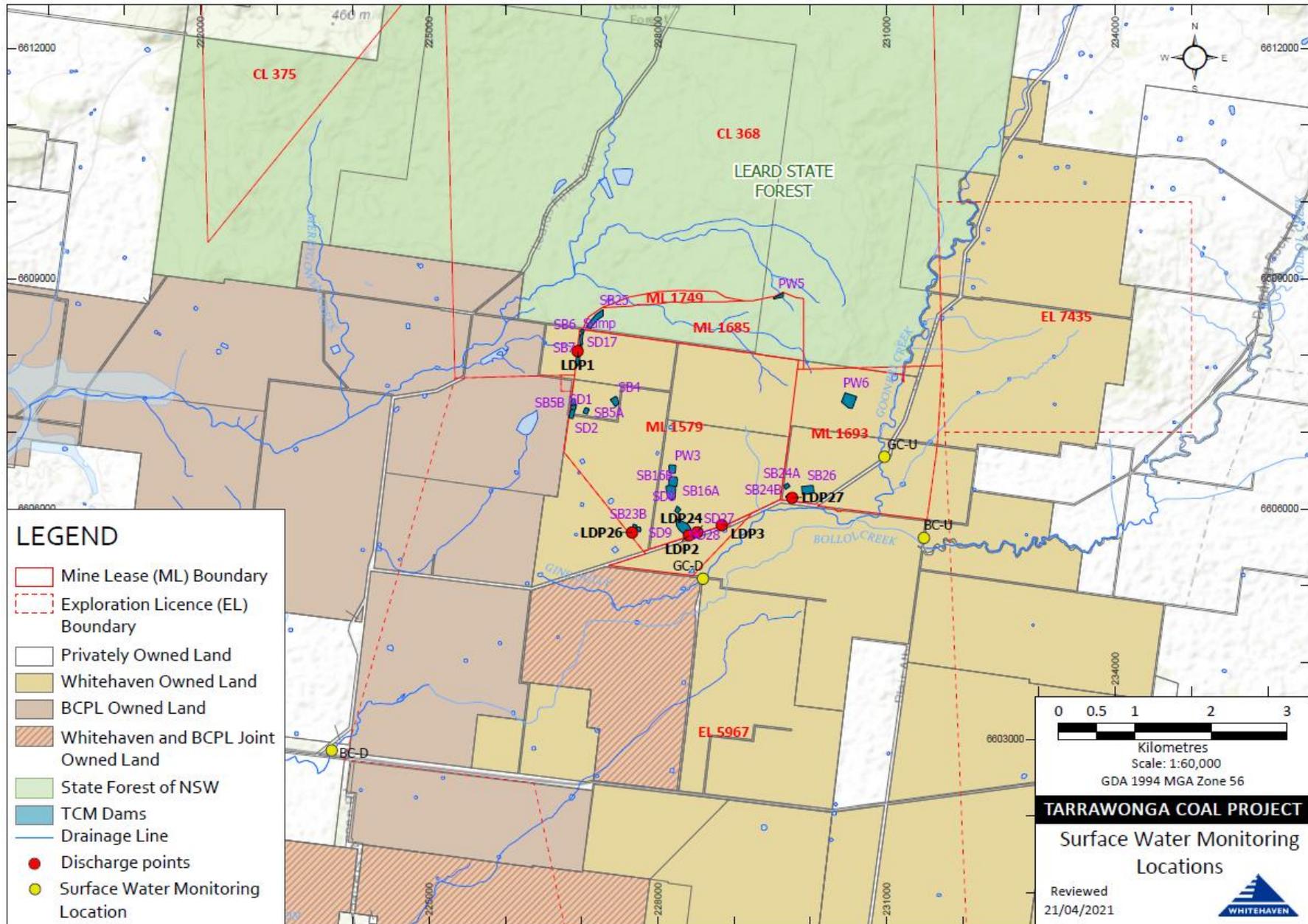
In March 2021, TCM submitted to DPIE a Modification 9 (MOD9-Waste Tyres Disposal) of PA11\_0047.

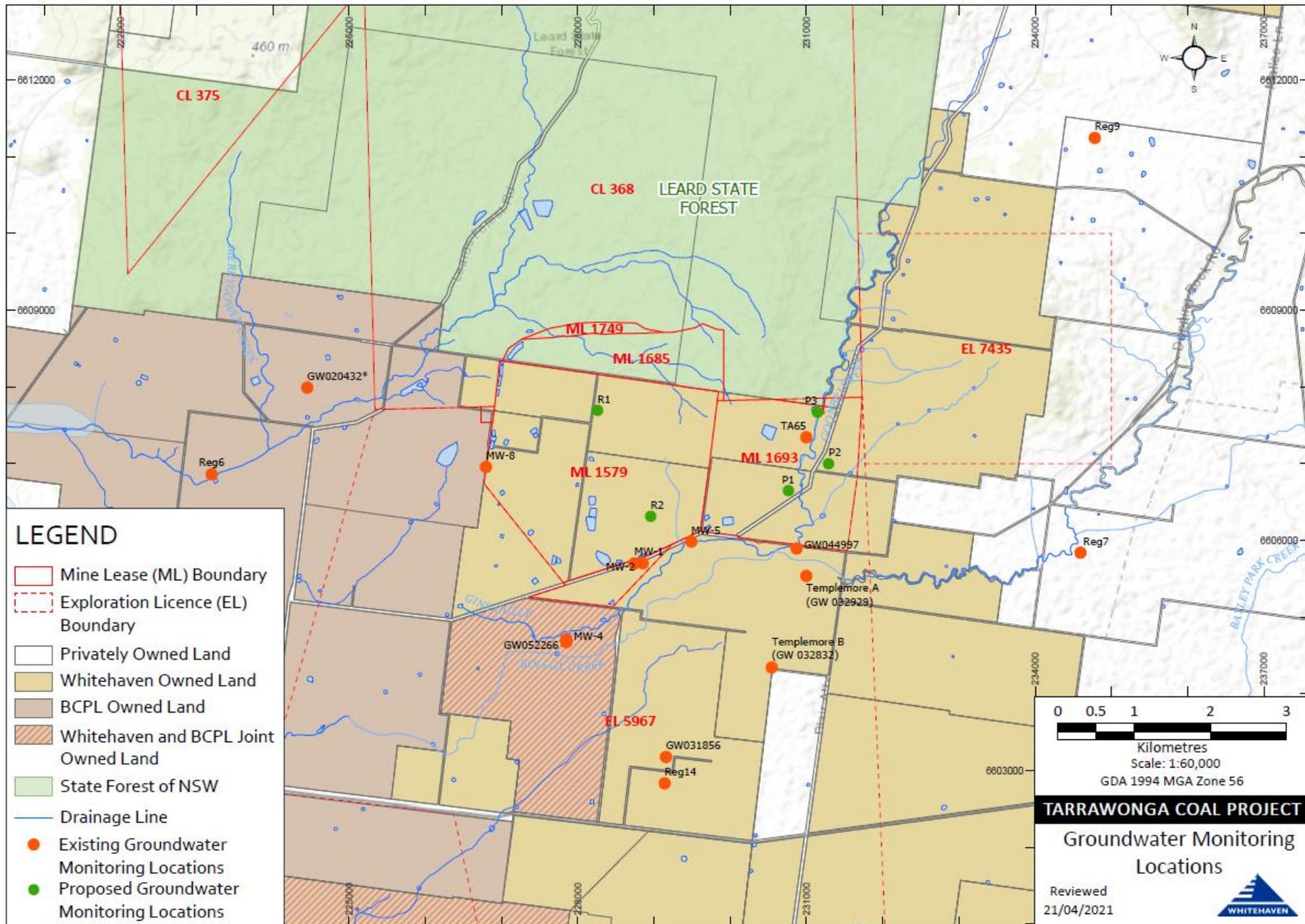
# Appendix A





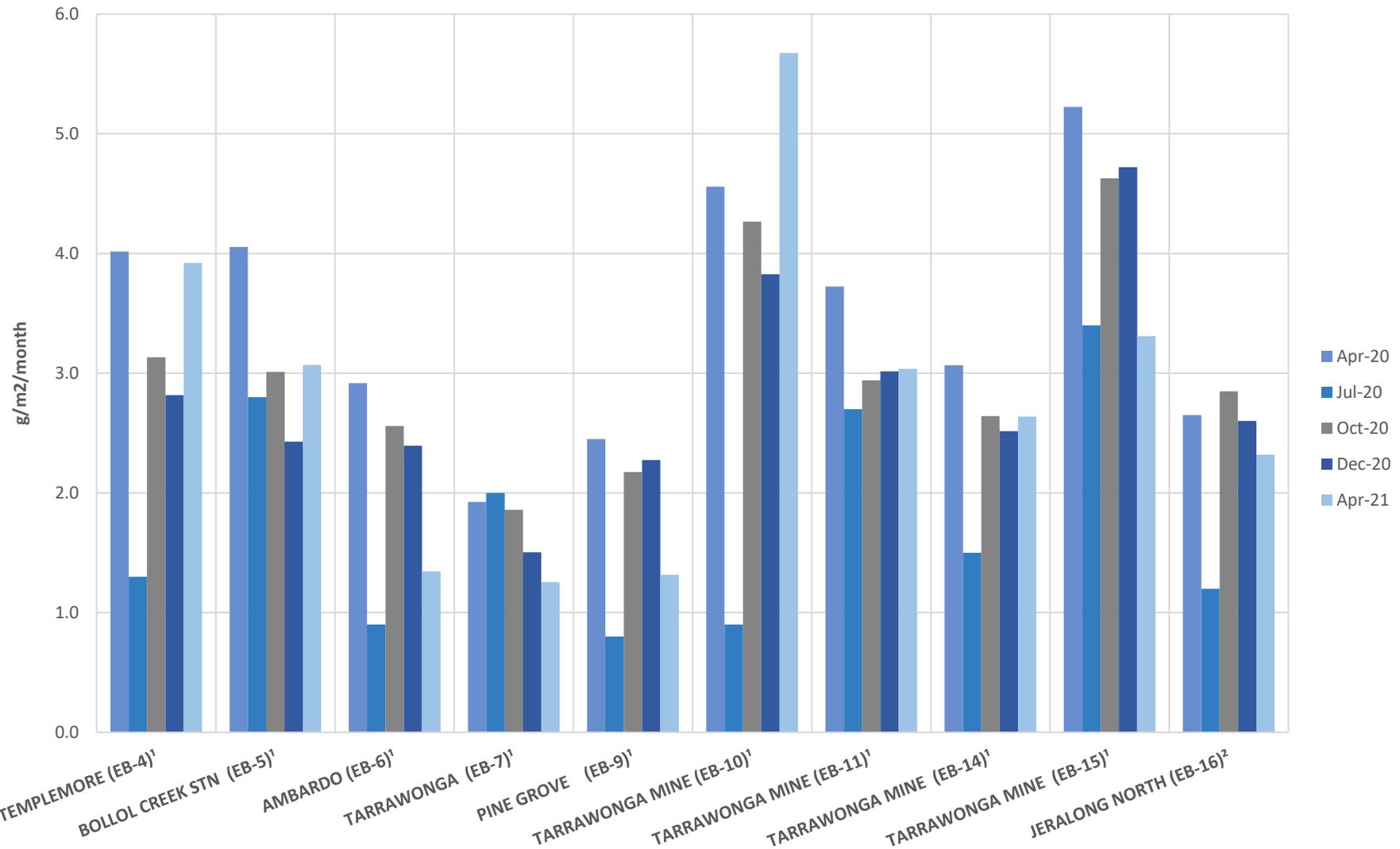




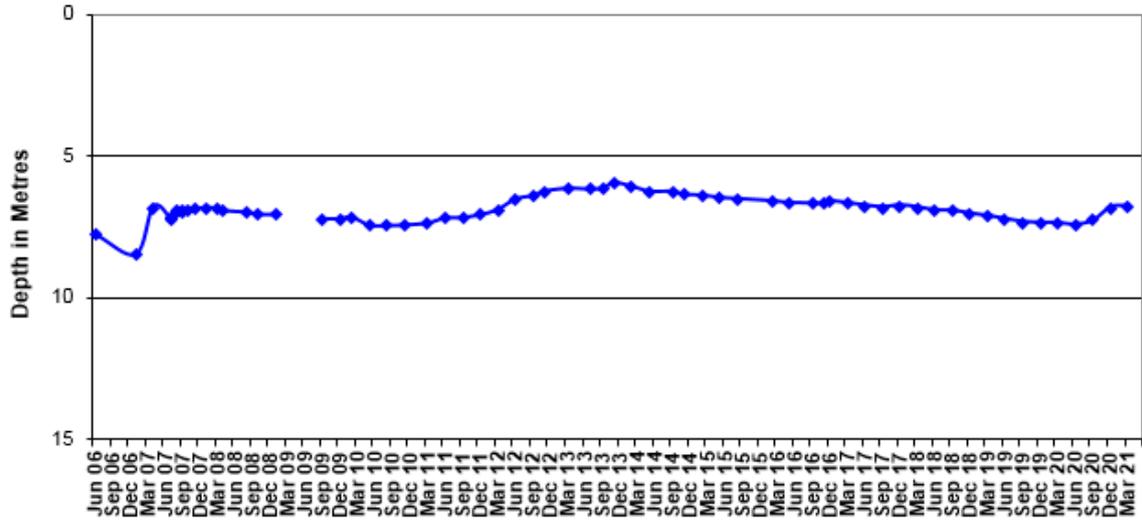
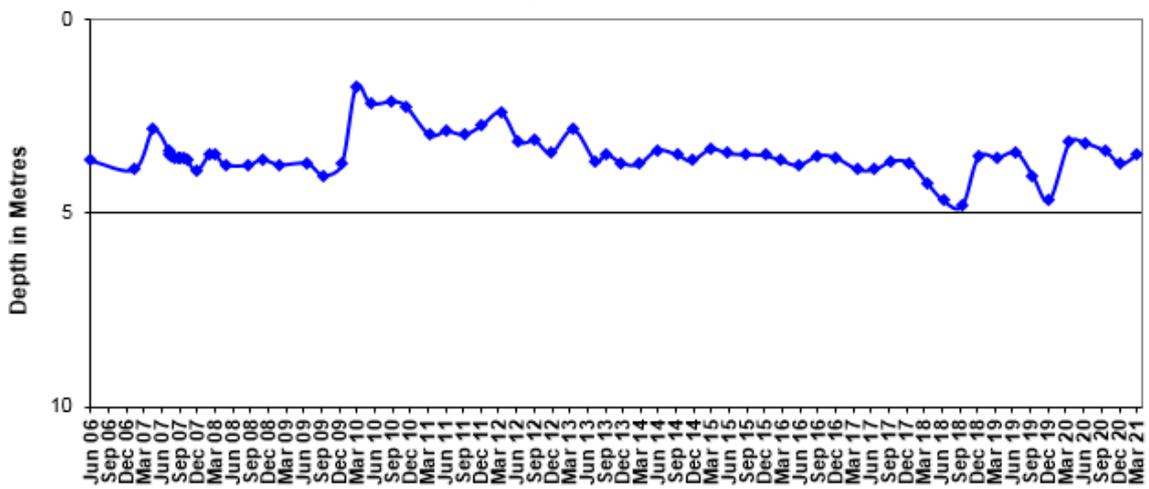
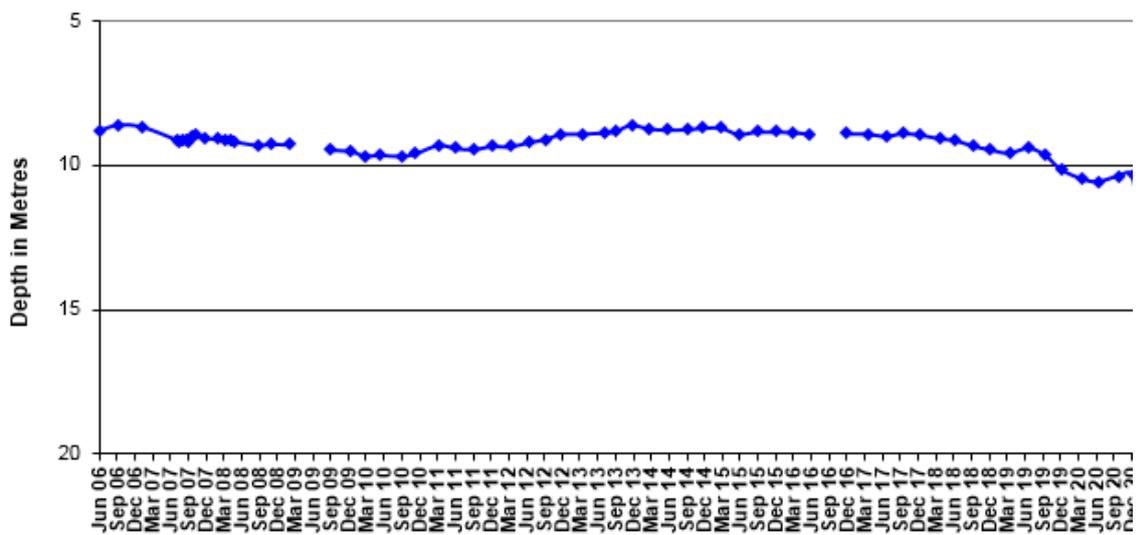


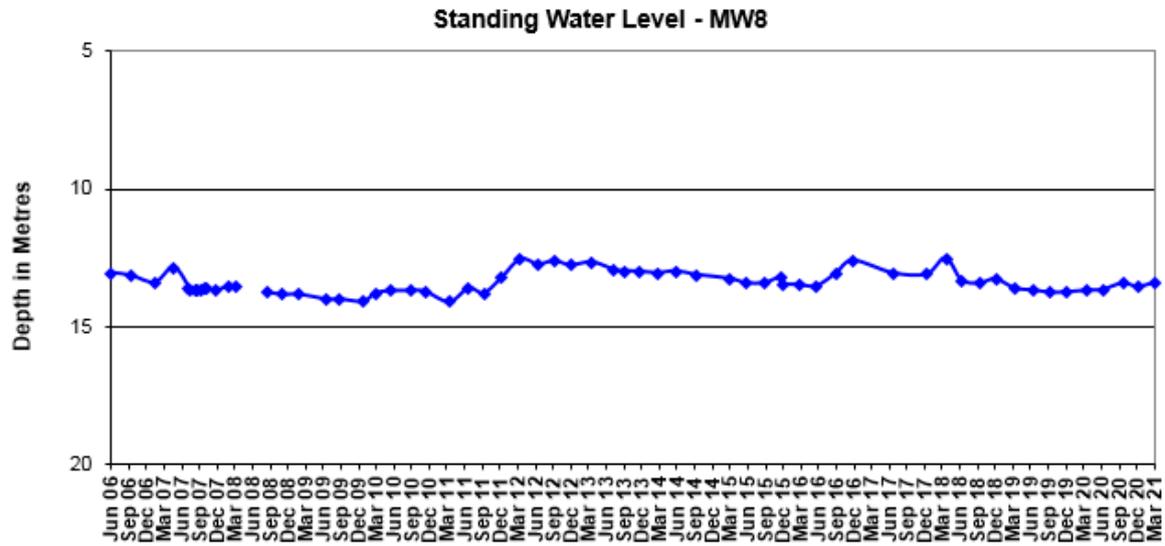
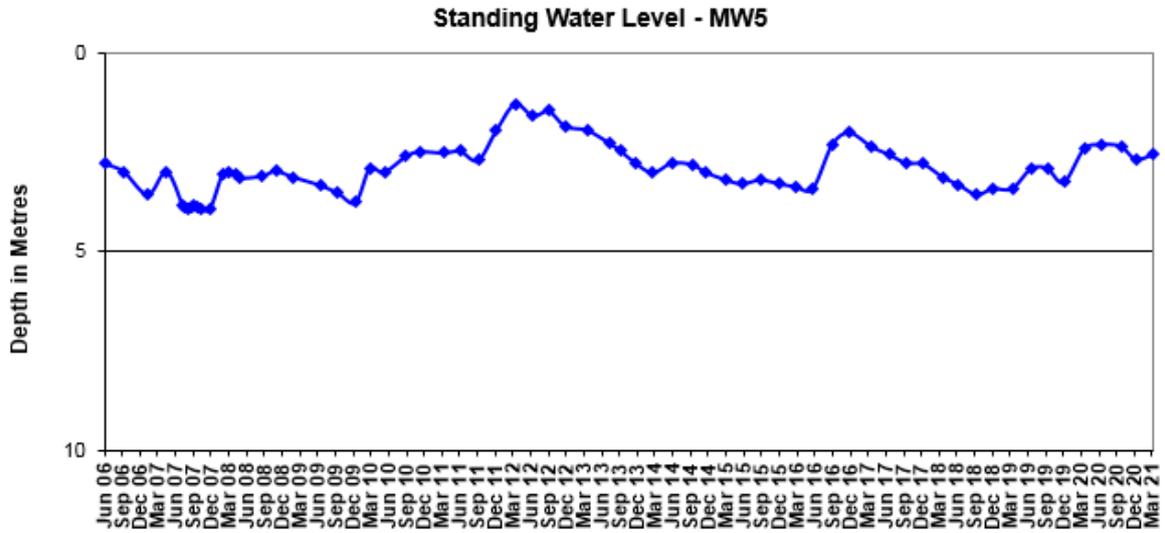
# Appendix B

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



# Appendix C

**Standing Water Level - MW1**

**Standing Water Level - MW2**

**Standing Water Level - MW4**




# Minutes of the 64<sup>th</sup> Meeting of the Tarrawonga Coal Mine Community Consultative Committee (TCCC)

|              |  |
|--------------|--|
| Meeting Held | 12 <sup>th</sup> of May 2021 between 10:00AM- 11.45 AM |
|--------------|--|

|       |                          |
|-------|--------------------------|
| Venue | Tarrawonga Training Room |
|-------|--------------------------|

| <i>Agenda Item</i> | <i>Discussion and Description</i> | <i>Action and Accountability</i> | <i>Status/ Date</i> |
|--------------------|-----------------------------------|----------------------------------|---------------------|
|--------------------|-----------------------------------|----------------------------------|---------------------|

|                          |  |  |  |
|--------------------------|--|--|--|
| 1. Present and Apologies | <p><u>Present:</u><br/>           Mr David Ross (DR)- Independent Chairman,<br/>           Mr Wade Hudson (WH)- GSC Representative<br/>           Mr David Moses (DM)- GSC Representative<br/>           Mr Lloyd Finlay (LF)- NSC Representative,<br/>           Mrs Rebecca Ryan (RR)- Community Representative,<br/>           Mr Jack Morrissey (JM)- GSC Representative<br/>           Mr Tian Oosthuizen (TOo)- TCM,<br/>           Mr Tony Dwyer (TD)- WHC,<br/>           Mr Darren Swain (DS)- WHC,<br/>           Mr Sebastien Moreno (SM)- TCM,<br/>           Miss Madeleine Wright (MW)- TCM,</p> |  |  |
|                          | <p><u>Apologies:</u><br/>           Mrs Colleen Fuller (CF)- Community Representative</p>  |  |  |

# Minutes of the 64<sup>th</sup> Meeting of the Tarrawonga Coal Mine Community Consultative Committee (TCCC)

|              |  |
|--------------|--|
| Meeting Held | 12 <sup>th</sup> of May 2021 between 10:00AM- 11.45 AM |
|--------------|--|

|       |                          |
|-------|--------------------------|
| Venue | Tarrawonga Training Room |
|-------|--------------------------|

| <i>Agenda Item</i> | <i>Discussion and Description</i> | <i>Action and Accountability</i> | <i>Status/ Date</i> |
|--------------------|-----------------------------------|----------------------------------|---------------------|
|--------------------|-----------------------------------|----------------------------------|---------------------|

|  |   |   |  |
|--|---|---|--|
| 2. Declaration of Pecuniary or Non-Pecuniary Interests | DR- declared that he is paid a fee for participation as Independent Chairman.<br>DR also discussed members departing the CCC and the difficulties identifying potential replacements.<br>LF declared that he leases WHC properties  |   |  |
| 3. Previous Minutes Actions                            | Proceed with advertisement for new TCCC members.  | DR- Chamber of Commerce member interested in joining TCCC and will have to fill the application form.   |  |
|  | RR- regarding blasting and road closure. ~30min wait on the 27 April 2021.<br><br>SM - advised that all the neighbours who have requested to are informed by email or sms prior to a blast. Anyone can be added to that list at any time. The general public can also check the WHC website for day and date of blast and if a road closure will be in place.<br><br>TOo- added there is always a good reason | RR- To provide the details of the person who commented on the road closure wait, so SM can contact this person and add her to blast notification list if requested. |  |

# Minutes of the 64<sup>th</sup> Meeting of the Tarrawonga Coal Mine Community Consultative Committee (TCCC)

|                    |  |                                  |                     |
|--------------------|--|----------------------------------|---------------------|
| Meeting Held       | 12 <sup>th</sup> of May 2021 between 10:00AM- 11.45 AM |                                  |                     |
| Venue              | Tarrawonga Training Room                               |                                  |                     |
| <b>Agenda Item</b> | <b>Discussion and Description</b>                      | <b>Action and Accountability</b> | <b>Status/ Date</b> |

|                                    |   |  |  |
|------------------------------------|---|--|--|
|                                    | for delaying a blast. For example to meet environmental obligations or sometimes due to technical challenge on the ground but TCM always tries to minimize the time for a road closure.   |  |  |
| 4. Business Arising                | No update   |  |  |
| 5. Mine Progress Report            | <p>TOo advised:</p> <ul style="list-style-type: none"> <li>- TRIFR = 2.65 as a result of an operator standing on a rock, LTI free = 897 days</li> <li>- Production impacted by rainfall in March but on track with Overburden and Coal for the Quarter and below budget.</li> </ul> |  |  |
| 6. Environmental Monitoring report | <p>MW</p> <ul style="list-style-type: none"> <li>- Read and explained the Quarterly Environmental Report results.</li> <li>- Advised MOD9 was submitted in March.</li> <li>- Several EMPs are being updated</li> <li>- Annual Return and Review 2020</li> </ul>                     |  |  |

# Minutes of the 64<sup>th</sup> Meeting of the Tarrawonga Coal Mine Community Consultative Committee (TCCC)

|                    |  |                                  |                     |
|--------------------|--|----------------------------------|---------------------|
| Meeting Held       | 12 <sup>th</sup> of May 2021 between 10:00AM- 11.45 AM |                                  |                     |
| Venue              | Tarrawonga Training Room                               |                                  |                     |
| <b>Agenda Item</b> | <b>Discussion and Description</b>                      | <b>Action and Accountability</b> | <b>Status/ Date</b> |

|  |   |  |  |
|--|---|--|--|
|  | <p>were submitted in March</p> <ul style="list-style-type: none"> <li>- BTM GW model was submitted and NRAR comments being reviewed. Model to be reviewed in 3 years and some of those comments to be addressed then.</li> </ul> <p>TD</p> <ul style="list-style-type: none"> <li>- Presented MOD9 (Waste tyres disposal) submission</li> <li>- Commitments for in pit tyres disposal include recording, monitoring and development of risk assessment. WHC will regularly assess technology and industry best practices to manage end of life large tyres and will use the waste hierarchy priority matrix to reuse as much as possible. At present, burial of tyres is the only feasible option for WHC. It is also a common practice across the mining industry. TCM received comments from</li> </ul> |  |  |
|--|---|--|--|

# Minutes of the 64<sup>th</sup> Meeting of the Tarrawonga Coal Mine Community Consultative Committee (TCCC)

|                    |  |                                  |                     |
|--------------------|--|----------------------------------|---------------------|
| Meeting Held       | 12 <sup>th</sup> of May 2021 between 10:00AM- 11.45 AM |                                  |                     |
| Venue              | Tarrawonga Training Room                               |                                  |                     |
| <b>Agenda Item</b> | <b>Discussion and Description</b>                      | <b>Action and Accountability</b> | <b>Status/ Date</b> |

|  |   |  |  |
|--|---|--|--|
|  | <p>agencies including from NSC and is now awaiting determination from DPIE. EPA is the regulator for waste management matters but MOD9 is required prior to EPA assessment.</p> <p>DM- How many tyres in total?</p> <p>TD- More than 350 tyres will be buried over the life of mine.</p> <p>DR- Members of community raised concerns that MOD9 was not discussed at the February TCCC meeting.</p> <p>TD – It was an oversight. The draft MOD9 report was prepared in late 2020 but submitted to DPIE in March 2021. The wording referring to February TCCC was not updated before the submission.</p> <p>TOo- reiterated that any community concern should not wait for next CCC meeting and</p> |  |  |
|--|---|--|--|

# Minutes of the 64<sup>th</sup> Meeting of the Tarrawonga Coal Mine Community Consultative Committee (TCCC)

|                    |  |                                  |                     |
|--------------------|--|----------------------------------|---------------------|
| Meeting Held       | 12 <sup>th</sup> of May 2021 between 10:00AM- 11.45 AM |                                  |                     |
| Venue              | Tarrawonga Training Room                               |                                  |                     |
| <b>Agenda Item</b> | <b>Discussion and Description</b>                      | <b>Action and Accountability</b> | <b>Status/ Date</b> |

|                     |  |   |  |
|---------------------|--|---|--|
|                     | <p>should be raised with TCM immediately. TCM would be happy to clarify any concern in a timely manner.</p>  |   |  |
| 7. General business | <p>DR- Asked if there was anything the community should be mindful of about the mining operation?</p> <p>TOo- There is no major change to expect in coming months. Rocglen mine crew will finish soon and will come over to assist TCM with rehabilitation. This will provide employment opportunity for those operators and accelerate TCM rehabilitation process.</p> <p>DR- Discussion around what can be changed in the next 12 months and what could be done during next CCC meeting<br/>         CCC members showed interest in</p> <ul style="list-style-type: none"> <li>- doing a tour of the rehabilitation areas</li> <li>- doing a mine tour</li> <li>- seeing a presentation of the blasting</li> </ul> | <p>TCM - to organise a mine or rehab tour</p> |  |

# Minutes of the 64<sup>th</sup> Meeting of the Tarrawonga Coal Mine Community Consultative Committee (TCCC)

|              |  |
|--------------|--|
| Meeting Held | 12 <sup>th</sup> of May 2021 between 10:00AM- 11.45 AM |
|--------------|--|

|       |                          |
|-------|--------------------------|
| Venue | Tarrawonga Training Room |
|-------|--------------------------|

| <i>Agenda Item</i> | <i>Discussion and Description</i> | <i>Action and Accountability</i> | <i>Status/ Date</i> |
|--------------------|-----------------------------------|----------------------------------|---------------------|
|--------------------|-----------------------------------|----------------------------------|---------------------|

|                                    |  |  |  |
|------------------------------------|--|--|--|
|                                    | processes<br>- understand training/ education programs or opportunities  |  |  |
| 8.Complaints                       | MW – No complaints in this reporting period  |  |  |
| 9. Next Meeting and Other Comments | DR- advised next CCC meetings dates:<br>-TCCC: 11 <sup>th</sup> August 2021<br>- TCCC: 27 <sup>th</sup> October 2021<br>- BTM CCC: 28 <sup>th</sup> October 2021 |  |  |

# Tarrawonga Coal Mine Community Consultative Committee Meeting #65

Quarterly Environmental Monitoring Report  
May 1 – July 31, 2021



*Photo taken in July 2021 in a section of the Northern Emplacement Area that was rehabilitated in July 2020, showing promising vegetation growth.*

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 May 1 2021 to July 31, 2021. Maps with all the monitoring locations are available in *Appendix A*.

# Noise Monitoring

Attended noise monitoring was conducted at the “Bungalow” (TN4), “Barbers Lagoon” (TN3) and “Matong” (TN2) properties from 7<sup>th</sup> to the 10<sup>th</sup> of June 2021. The noise criterion for the mine is 35dB(A) Leq (15 min) for all operating times.

The results below show that noise emissions from the mine did not exceed the operational noise criterion at the “Barbers Lagoon”, “Bungalow” or “Matong” monitoring locations during the monitoring event during the entire monitoring period.

(See below summary tables extracted from 210708 RWDI report 2190007-T-08 (Q2 2021))

**Table 4-1: Comparison of noise levels between TN2 and 573b Coomalgalah**

| Date     | Time  | Noise Limits<br>L <sub>Aeq,15min</sub> | TN2  | 573b Coomalgalah   |            |
|----------|-------|--|--|--|------------|
|          |       |  | Mine L <sub>Aeq</sub> Noise Level (dB)<br>Measured Mine Contribution | Mine L <sub>Aeq</sub> Noise Level (dB)<br>Commensurate Mine Compliance Level | Exceedance |
| 07/06/21 | 12:44 | 35                                     | 26   | 17   | 0          |
|          | 13:04 | 35                                     | 27   | 18   | 0          |
|          | 13:44 | 35                                     | <25  | <16  | 0          |
|          | 14:01 | 35                                     | <25  | <16  | 0          |
|          | 14:19 | 35                                     | <25  | <16  | 0          |
|          | 21:12 | 35                                     | 29   | 20   | 0          |
|          | 22:00 | 35                                     | 34   | 25   | 0          |
|          | 22:15 | 35                                     | <35  | <26  | 0          |
|          | 22:30 | 35                                     | 30   | 21   | 0          |
| 08/06/21 | 22:46 | 35                                     | 30   | 21   | 0          |
|          | 22:22 | 35                                     | 38 <sup>1</sup>  | 29   | 0          |

Note: Where mine noise was inaudible throughout the entire measurement, it is assumed that the contribution is less than 10dB below the measured L<sub>A90</sub>.

Note <sup>1</sup> Due to poor road conditions these measurements were taken approximately 1.1km closer to the mine on Dripping Rock Road

**Table 4-3: Summary of noise assessment at TN3**

| Date     | Time  | Noise Limits<br>$L_{Aeq,15\ min}$ | TN3<br>Mine $L_{Aeq}$ Noise Level (dB) |                       |            |
|----------|-------|-----------------------------------|--|-----------------------|------------|
|          |       |                                   | Measured Mine Contribution             | Additional LF Penalty | Exceedance |
| 07/06/21 | 15:06 | 35                                | <22                                    | -                     | 0          |
|          | 15:22 | 35                                | <22                                    | -                     | 0          |
|          | 15:37 | 35                                | <21                                    | -                     | 0          |
|          | 15:53 | 35                                | <12 (I/A)                              | -                     | 0          |
|          | 16:08 | 35                                | <13 (I/A)                              | -                     | 0          |
|          | 16:23 | 35                                | <16 (I/A)                              | -                     | 0          |
|          | 19:40 | 35                                | <30                                    | -                     | 0          |
|          | 19:55 | 35                                | <30                                    | -                     | 0          |
|          | 23:15 | 35                                | <30                                    | -                     | 0          |
|          | 23:30 | 35                                | <30                                    | -                     | 0          |
|          | 23:45 | 35                                | <30                                    | -                     | 0          |
|          | 00:00 | 35                                | <30                                    | -                     | 0          |
| 08/06/21 | 14:23 | 35                                | <31 (I/A)                              | -                     | 0          |
|          | 15:03 | 35                                | <29 (I/A)                              | -                     | 0          |
|          | 15:18 | 35                                | <31 (I/A)                              | -                     | 0          |

Note: Where mine noise was inaudible throughout the entire measurement, it is assumed that the contribution is less than 10dB below the measured  $L_{A90}$ .

**Table 4-5: Summary of noise assessment at TN4**

| Date     | Time  | Noise Limits    |              | TN4 Mine $L_{Aeq}$ Noise Level (dB) |                       |            |
|----------|-------|-----------------|--------------|-------------------------------------|-----------------------|------------|
|          |       | $L_{Aeq,15min}$ | Noise Source | Measured Mine Contribution          | Additional LF Penalty | Exceedance |
| 07/06/21 | 13:21 | 35              |              | <26 (I/A)                           | -                     | 0          |
|          | 13:36 | 35              |              | <26 (I/A)                           | -                     | 0          |
|          | 13:51 | 35              |              | <25 (I/A)                           | -                     | 0          |
|          | 14:06 | 35              |              | <26 (I/A)                           | -                     | 0          |
|          | 14:21 | 35              |              | <26 (I/A)                           | -                     | 0          |
|          | 14:36 | 35              |              | <26 (I/A)                           | -                     | 0          |
|          | 21:45 | 35              |              | <30                                 | -                     | 0          |
|          | 22:00 | 35              |              | <30                                 | -                     | 0          |
|          | 22:15 | 35              |              | <30                                 | -                     | 0          |
|          | 22:30 | 35              |              | <30                                 | -                     | 0          |
| 08/06/21 | 22:45 | 35              |              | <30                                 | -                     | 0          |
|          | 22:12 | 35              |              | <25                                 | -                     | 0          |
|          | 22:29 | 35              |              | <27                                 | -                     | 0          |
|          | 22:44 | 35              |              | <28                                 | -                     | 0          |

Note: Where mine noise was inaudible throughout the entire measurement, it is assumed that the contribution is less than 10dB below the measured  $L_{A90}$ .

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

**Table 4-2: Comparison of maximum noise events between TN2 and 573b Coomalgah**

| Date       | Time  | Noise Limits  |              | TN2 Mine $L_{Amax}$ Noise Level (dB) | 573b Coomalgah Mine $L_{Amax}$ Noise Level (dB) |            |
|------------|-------|---------------|--------------|--------------------------------------|---|------------|
|            |       | $L_{A1,1min}$ | Noise Source | Measured Level                       | Commensurate Mine Compliance Level              | Exceedance |
| 07/06/2021 | 22:00 | 45            | Horn         | 45                                   | 36  | 0          |
|            | 22:15 | 45            | Horn         | 32                                   | 23  | 0          |
|            | 22:30 | 45            | Engine       | 36                                   | 27  | 0          |
|            | 22:46 | 45            | -            | NM                                   | -   | 0          |
| 08/06/2021 | 22:22 | 45            | Engine       | 43                                   | 34  | 0          |

Note: NM indicates a significant maximum noise event was not observed.  
I/A indicates the mine was inaudible during the measurement period.

**Table 4-4: Summary of maximum noise events at TN3**

| Date     | Time  | Noise Limits         | TN3                                     |                |            |
|----------|-------|----------------------|---|----------------|------------|
|          |       |                      | Mine L <sub>Amax</sub> Noise Level (dB) |                |            |
|          |       | L <sub>A1,1min</sub> | Noise Source                            | Measured Level | Exceedance |
| 07/06/21 | 23:15 | 45                   | Horn                                    | 36             | 0          |
|          | 23:30 | 45                   | Horn                                    | 36             | 0          |
|          | 23:45 | 45                   | Horn                                    | 36             | 0          |
|          | 00:00 | 45                   | Horn                                    | 37             | 0          |

Note: NM indicates a significant maximum noise event was not observed.  
I/A indicates the mine was inaudible during the measurement period.

**Table 4-6: Summary of maximum noise events at TN4**

| Date     | Time  | Noise Limits         | TN4                                     |                |            |
|----------|-------|----------------------|---|----------------|------------|
|          |       |                      | Mine L <sub>Amax</sub> Noise Level (dB) |                |            |
|          |       | L <sub>A1,1min</sub> | Noise Source                            | Measured Level | Exceedance |
| 07/06/21 | 22:00 | 45                   | Horn                                    | 29             | 0          |
|          | 22:15 | 45                   | Horn                                    | 29             | 0          |
|          | 22:30 | 45                   | Horn                                    | 29             | 0          |
|          | 22:45 | 45                   | Horn                                    | 29             | 0          |
| 08/06/21 | 22:12 | 45                   | -                                       | NM             | 0          |
|          | 22:29 | 45                   | -                                       | NM             | 0          |
|          | 22:44 | 45                   | -                                       | NM             | 0          |

Note: NM indicates a significant maximum noise event was not observed.  
I/A indicates the mine was inaudible during the measurement period.

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

# Blast Monitoring

## Blasting Results

Since 2006, there have been 1056 blasts (until 31/07/2021) at TCM.

The highest result for Overpressure was 132.2dB recorded at the ‘Tarrawonga’ monitor on the 25/05/2021. This high result was not reported, as this monitor resides on a mine owned property and compliance limits do not apply.

The highest result for ground vibration was 0.61 mm/s recorded at the ‘Coomalgah’ monitor on the 30/04/2021.

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

| Monitor Location | Date     | Max. Peak Overpressure (dB) | Criterion (dB) | Date     | Max. Peak Ground Pressure (mm/s) | Criterion (mm/s) |
|------------------|----------|-----------------------------|----------------|----------|----------------------------------|------------------|
| Tarrawonga*      | 25/05/21 | 132.2                       | N/A            | 25/05/21 | 0.51                             | N/A              |
| Coomalgah        | 05/07/21 | 110.6                       | 120            | 25/05/21 | 0.61                             | 10               |

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

# Air Quality Monitoring

## Dust Deposition Results

**Table 3** shows deposited dust gauge results over 12 months. All the monitors are located on project related land; as such compliance criteria (4g/m<sup>2</sup>/month) do not apply. Overall deposited dust trends remain steady during the reporting period (refer graph in *Appendix B*)

| MONTH                           | TEMPLEMORE (EB-4) | BOLLO CREEK STN (EB-5) | AMBARDO (EB-6) | TARRAWONGA (EB-7) | THUJIN (EB-8) | PINE GROVE (EB-9) | TARRAWONGA MINE (EB-10) | TARRAWONGA MINE (EB-11) | TARRAWONGA MINE (EB-14) | TARRAWONGA MINE (EB-15) | JERALONG NORTH (EB-16) |
|---------------------------------|-------------------|------------------------|----------------|-------------------|---------------|-------------------|-------------------------|-------------------------|-------------------------|-------------------------|------------------------|
| Jun-20                          | 3.1               | 2                      | 1.1            | 1                 | 2.7           | 1.5               | 1.9                     | 2.5                     | 1.8                     | 5.3                     | 2.7                    |
| Jul-20                          | 1.3               | 2.8                    | 0.9            | 2                 | 3.2           | 0.8               | 0.9                     | 2.7                     | 1.5                     | 3.4                     | 1.2                    |
| Aug-20                          | 1.1               | 1.8                    | 1.1            | 0.5               | 1.8           | 0.7               | 1.9                     | 2                       | 1.2                     | 3.7                     | 0.8                    |
| Sep-20                          | 1.4               | 19.9#                  | 1.0            | 0.9               | 2.4           | 1.9               | 0.9                     | 1.3                     | 1.7                     | 3.6                     | 1.9                    |
| Oct-20                          | 0.9               | 2.1                    | 1.3            | 1.1               | ++            | 1.2               | 3.1                     | 1.9                     | 2.3                     | 5.5                     | 2.5                    |
| Nov-20                          | 3.2               | 2.7                    | 1.1            | 1.2               | ++            | 3.1               | 5                       | 3.2                     | 2.4                     | +                       | 3                      |
| Dec-20                          | 4.3               | 2.5                    | 2              | 1.3               | ++            | 12.7#             | 3.7                     | 4.3                     | 2.6                     | +                       | 1.6                    |
| Jan-21                          | 6.7#              | 4.6#                   | 1.1#           | 3.2               | ++            | 1.3               |                         | 3.1                     | 8.4                     | 6.5                     | 4.4                    |
| Feb-21                          | 2.4               | 8.1#                   | 2.8            | 1.4               | ++            | 1.1               | 3.6#                    | 5.9#                    | 4.4#                    | 1.8                     | 1                      |
| Mar-21                          | 0.8               | 2.2                    | 4.8#           | 1.5               | ++            | 1.2               | 5.4#                    | 5.9#                    | 11.1#                   | 0.7                     | 5.8#                   |
| Apr-21                          | 12.6#             | 5                      | 1.6            | 0.3               | ++            | 0.6               | 19.1#                   | 3.7                     | 0.5                     | 0.7                     | 3                      |
| May-21                          | 10.5              | 6.5                    | 0.5            | 0.7               | ++            | 1                 | 14.5                    | 4.5                     | 0.8                     | 2.5                     | 4                      |
| Jun-21                          | 2.2               | 4.2                    | 0.3            | 0.2               | ++            | 0.4               | 3.3                     | 1.9                     | 0.5                     | 3.3                     | 3.2                    |
| Jul-21                          | 12.9              | 12.5                   | 0.2            | 0.3               | ++            | 0.2               | 6.6                     | 2.3                     | 0.7                     | 1.6                     | 3.2                    |
| <b>12 MONTH ROLLING AVERAGE</b> | 5.4               | 4.7                    | 1.2            | 1.1               | ++            | 1.2               | 7.2                     | 3.0                     | 1.1                     | 3.8                     | 3.1                    |

# Analysis done 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.

++ EB08 was decommissioned due to reshaping activities at the Southern Emplacement area.

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

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

**Table 3 – Deposited Dust Gauge Results [g/m<sup>2</sup>/month]**

High Volume Air sampler (PM10) Results

The High Volume Air Sampler (HVAS) installed at Coomalgah property monitors level of Particle Matter under 10 micron (PM<sub>10</sub>). It operates for 24hr every 6 days. **Table 4** shows all the 24hr average values recorded for this quarter are below the 50µg/m<sup>3</sup> criteria.

**Table- 4: HVAS PM10 24 hr average levels for the Quarter**

| Date       | 24hr averaged PM10 (µg/m <sup>3</sup> ) | Criterion 24hr average (µg/m <sup>3</sup> ) | Comments |
|------------|---|---|----------|
| 3/05/2021  | 7.4                                     | <b>50</b>                                   | Nil      |
| 9/05/2021  | 3.4                                     |   |          |
| 15/05/2021 | 4.9                                     |   |          |
| 21/05/2021 | 11.8                                    |   |          |
| 27/05/2021 | 4.5                                     |   |          |
| 2/06/2021  | 27.8                                    |   |          |
| 8/06/2021  | 3.9                                     |   |          |
| 14/06/2021 | 1.2                                     |   |          |
| 20/06/2021 | 1.2                                     |   |          |
| 26/06/2021 | 0.7                                     |   |          |
| 2/07/2021  | 1.2                                     |   |          |
| 8/07/2021  | 4.2                                     |   |          |
| 14/07/2021 | 2.8                                     |   |          |
| 20/07/2021 | 3.1                                     |   |          |
| 26/07/2021 | 3.7                                     |   |          |

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

According to the current Air Quality and Greenhouse gas Management Plan, the real time air quality unit (TEOM) installed at the “Flixton” property monitors PM<sub>10</sub> levels in ambient air. 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.



*TEOM installed at Flixton property*

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



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

# Water Monitoring

## Groundwater

Routine groundwater monitoring was undertaken in March 2021 and showed 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 2020      | 7.42       | 7.8            | 3,490                       |
|      | September 2020 | 7.27       | 8.16           | 3,260                       |
|      | December 2020  | 6.8        | 7.9            | 3,510                       |
|      | March 2021     | 6.75       | 7.97           | 3,390                       |
|      | June 2021      | 6.9        | 7.84           | 3,480                       |
| MW2  | June 2020      | 3.18       | 7.3            | 490                         |
|      | September 2020 | 3.39       | 7.39           | 435                         |
|      | December 2020  | 3.71       | 7.3            | 535                         |
|      | March 2021     | 3.46       | 6.99           | 462                         |
|      | June 2021      | 3.46       | 7.05           | 527                         |
| MW4  | June 2020      | 10.57      | 7.4            | 3,530                       |
|      | September 2020 | 10.38      | 7.3            | 3,380                       |
|      | December 2020  | 10.35      | 7.4            | 3,640                       |
|      | March 2021     | 9.56       | 7.26           | 3,530                       |
|      | June 2021      | 9.53       | 7.26           | 3,250                       |
| MW5  | June 2020      | 2.29       | 7.6            | 675                         |
|      | September 2020 | 2.34       | 7.7            | 2,090                       |
|      | December 2020  | 2.67       | 7.1            | 1,960                       |
|      | March 2021     | 2.56       | 7.36           | 874                         |
|      | June 2021      | 2.07       | 7.56           | 766                         |
| MW8  | June 2020      | 13.71      | Casing blocked | Casing blocked              |
|      | September 2020 | 13.44      |                |                             |
|      | December 2020  | 13.57      |                |                             |
|      | March 2021     | 13.42      |                |                             |
|      | June 2021      | 13.07      |                |                             |

## Surface Water

Water storage onsite is expected to be sufficient for at least the next 12 months.

TCM undertook a trial to treat (flocculate) of sediment dam SB23B and released treated water from the Licence Discharge Point (LDP) 26 in accordance with the Water Management plan. Two (2) ML of suitable quality water (within EPL1265 limits) were discharged in July.

Since beginning of 2021, TCM has recorded 582.4mm of rain which is the equivalent to an average year rainfall.

| 2020              | Jan   | Feb   | Mar   | Apr   | May  | Jun   | Jul   | Aug   | Sep   | Oct   | Nov   | Dec   | Total |
|-------------------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| Monthly Rain (mm) | 109.2 | 261.2 | 113.2 | 65.6  | 16.0 | 23.4  | 31.0  | 38.3  | 30.2  | 55.8  | 3     | 184.4 | 931.1 |
| Cumulative (mm)   | 109.2 | 370.4 | 483.6 | 549.2 | 565  | 588.4 | 619.4 | 567.7 | 687.9 | 743.7 | 746.7 | 931.1 |       |

| 2021              | Jan  | Feb   | Mar   | Apr   | May   | Jun   | Jul   | Aug | Sep | Oct | Nov | Dec | Total |
|-------------------|------|-------|-------|-------|-------|-------|-------|-----|-----|-----|-----|-----|-------|
| Monthly Rain (mm) | 58.4 | 115.4 | 141.2 | 22.0  | 66.6  | 105   | 73.8  | -   | -   | -   | -   | -   | 582.4 |
| Cumulative (mm)   | 58.4 | 173.8 | 315.0 | 337.0 | 403.6 | 508.6 | 582.4 | -   | -   | -   | -   | -   |       |

## Rehabilitation and Clearing

### Rehabilitation

TCM has ordered approximately 11,000 tubestock trees for rehabilitation purposes for CY21, to be planted on new rehabilitation areas and over pre-existing maintenance rehabilitation areas. TCM will spread native seeds during the rehabilitation campaign. This will include native groundcover species, shrubs and sub-shrub species as per the Rehabilitation Management plan.

In preparation for spreading and tree planting, topsoil spreading and landshaping activities are underway on the Southern Emplacement Area. Rehabilitation activities are expected to begin as soon as the drainage system is completed.

### Clearing

The next clearing campaign will take place between February and April 2022.

## Complaints

One complaint was received in regards to a blast on the 7<sup>th</sup> of June. The complaint was received from a local farm worker regarding dust and potential fume following the blast event. Tarrawonga reviewed monitoring data and footage for the blast and provided a response to the complainant and the EPA. The EPA has started an investigation.

## Environmental Management Plans

### Management Plans

Following approval of Modification 7 of PA11\_0047, TCM has conducted a review of all the Management Plans. Updated Management Plans were submitted via DPIE portal for approval in May 2021 including, Air Quality Management Plan, Noise, Management Plan, Blast Management Plan and Water Management Plan.

The Water Management Plan is being review by DPIE, but all the other updated management plans were approved and are available on WHC website.

## BTM Water Strategy

The BTM mines submitted an updated BTM Groundwater Model and report to DPIE in December 2020. After consultation with DPIE, a final report will be provided to DPIE in August.

# Annual and Compliance Reporting

## Annual Review and Annual Return Reports

The Annual Review was submitted to DPIE on the 26<sup>th</sup> of March 2021 and information was requested by the DPIE on the 18<sup>th</sup> of June. This included requests for reference to attended noise compliance and rehabilitation results. Subsequently, TCM submitted an updated Annual Review 2020 to the satisfaction of DPIE and the report was uploaded to the WHC website on the 1<sup>st</sup> of July 2021.

## Annual Compliance EPBC statement

The Annual Compliance EPBC statement was submitted to DAWE in June 2021.

## Annual National Pollutant Inventory (NPI) and Greenhouse Gas Emission (NGERs) Reports 2021

TCM prepares the NPI and NGERs reports that will be submitted in September and October 2021 respectively.

# Audits- Compliance

In June, an audit was conducted by an external consultant to verify implementation of Environmental Critical Controls.

# Approval and Licencing

In March 2021, TCM submitted to DPIE a Modification 9 (MOD9-Waste Tyres Disposal) of PA11\_0047 and approval was received in May 2021.

Subsequently, TCM submitted a variation of EPL12365 that includes conditions for in pit Waste Tyres disposal and received approval in June 2021. In-pit disposal of mine equipment end of life tyres began on the week starting the 2<sup>nd</sup> of August 2021 on the 300RL in accordance with the approvals. Approximately 353 tonnes of historical waste tyres were disposed and buried in pit as shown in the following images.

Waste Tyres disposed prior to burial

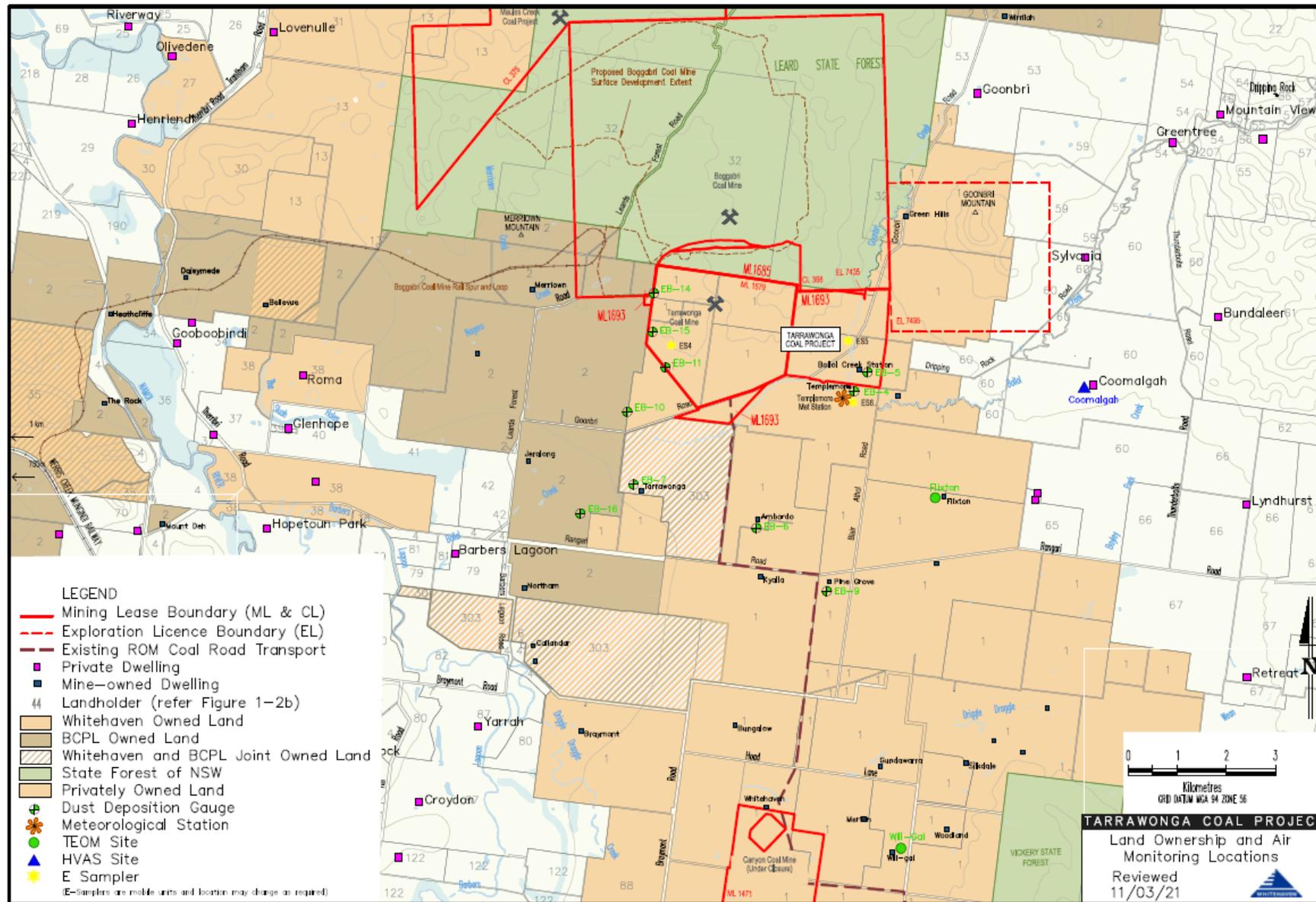


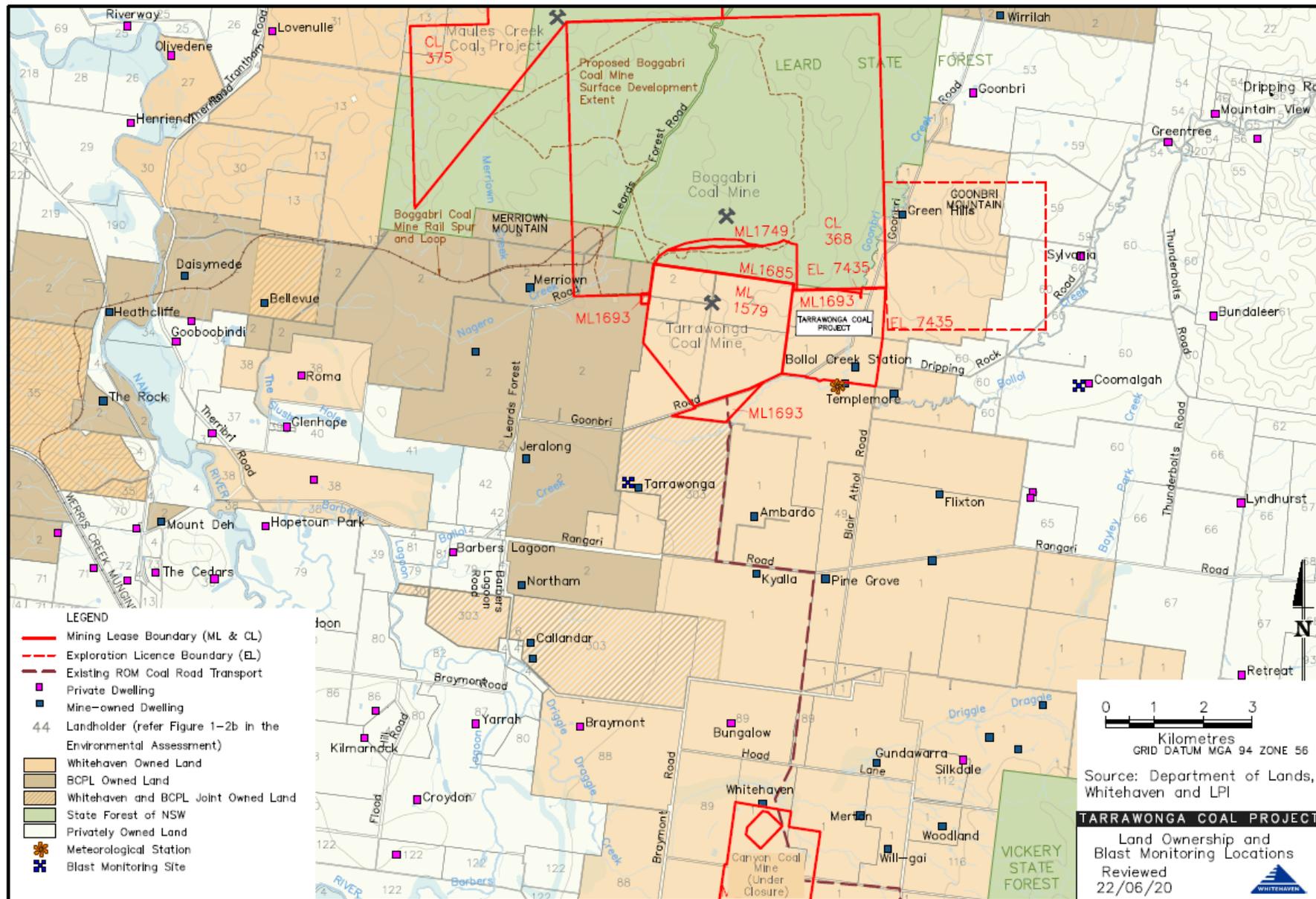
Waste Tyres being buried

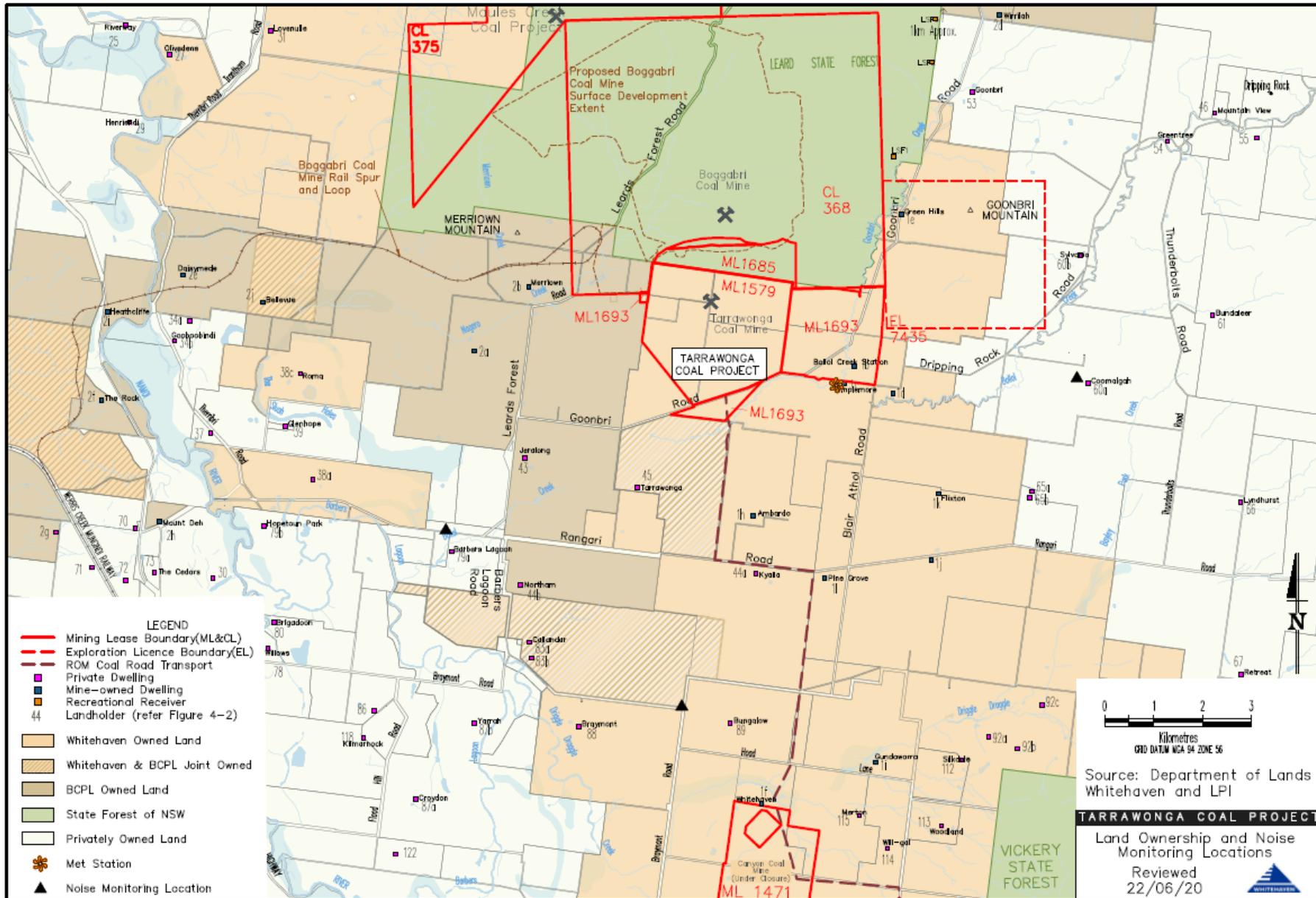


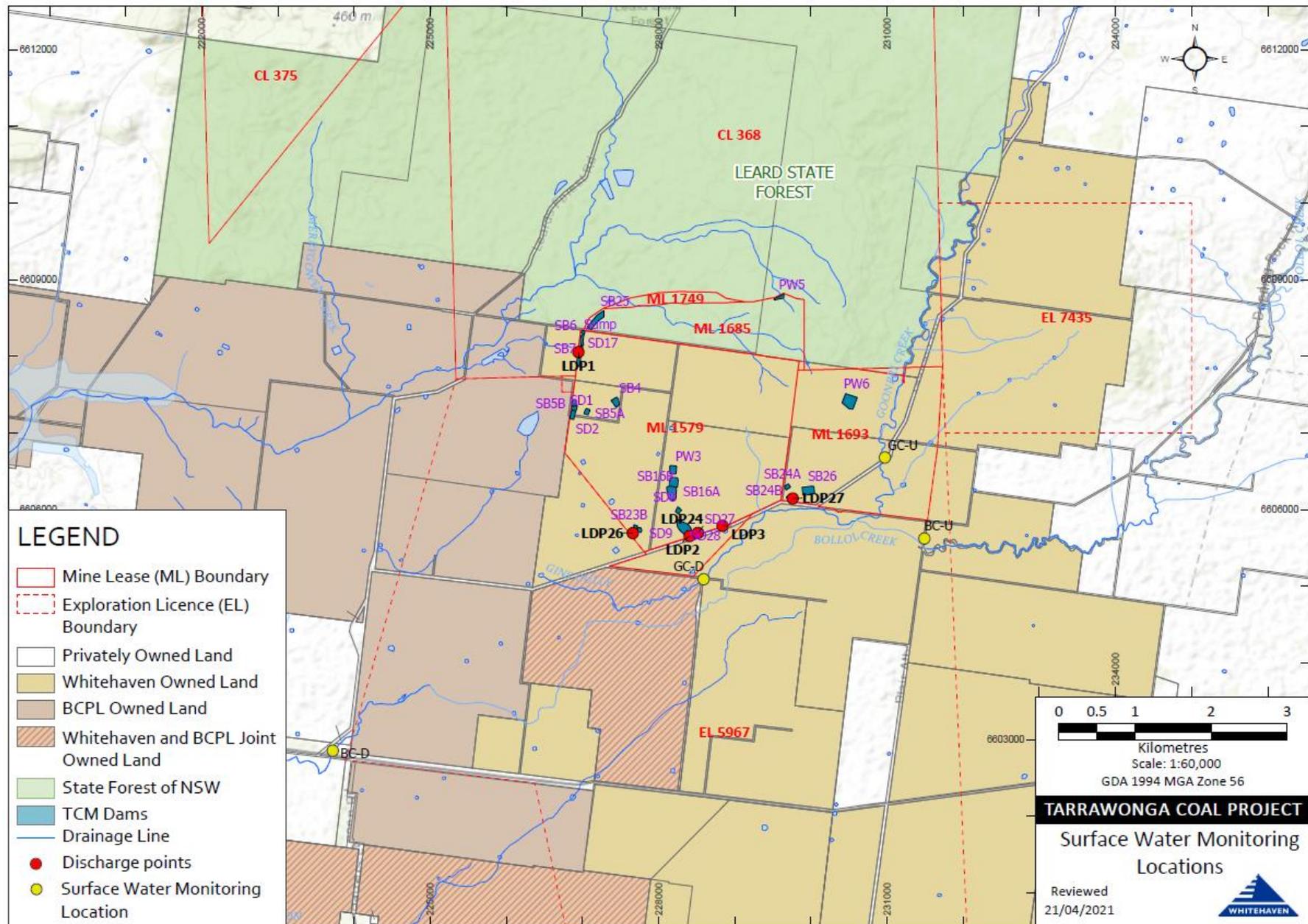


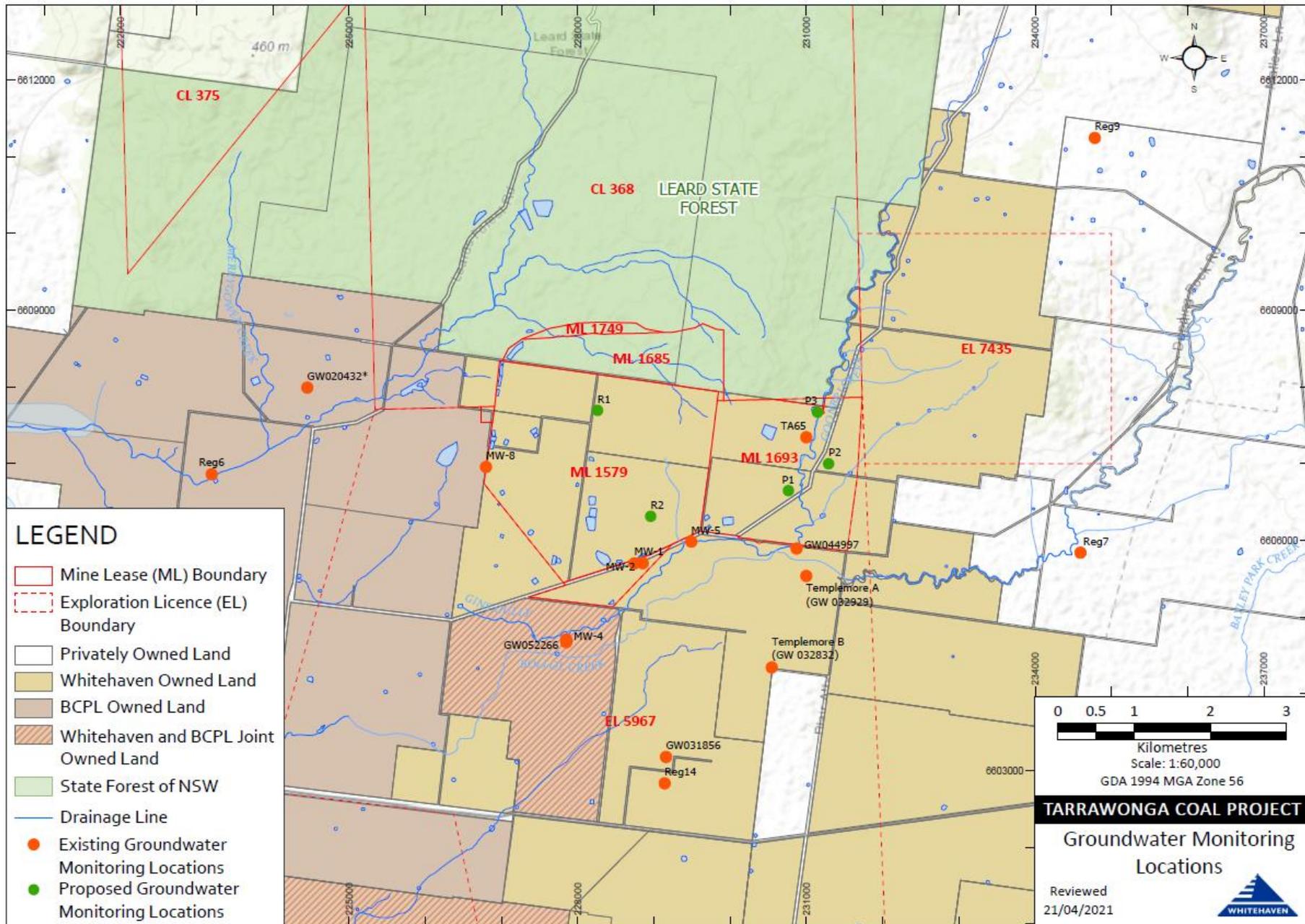
# Appendix A





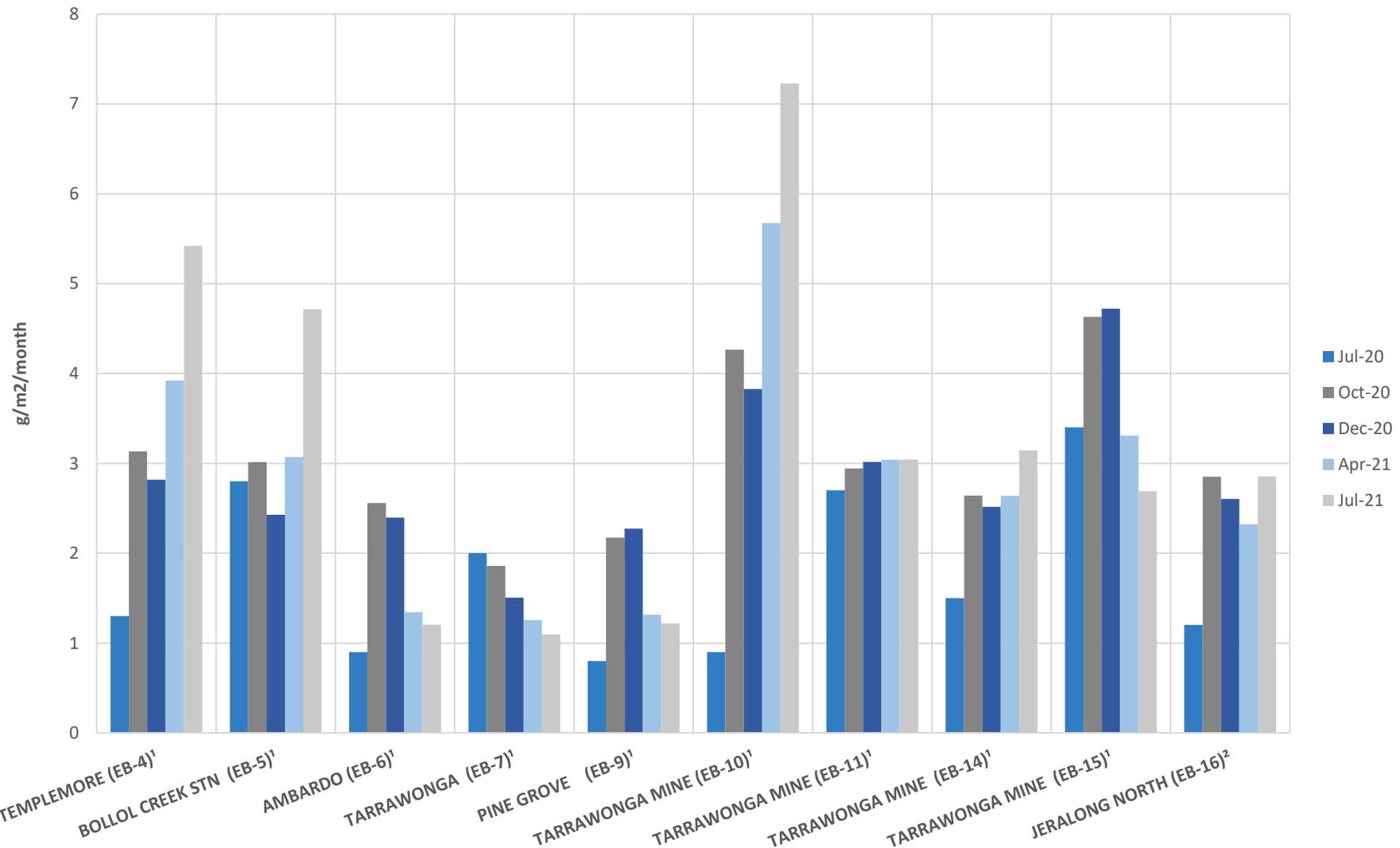




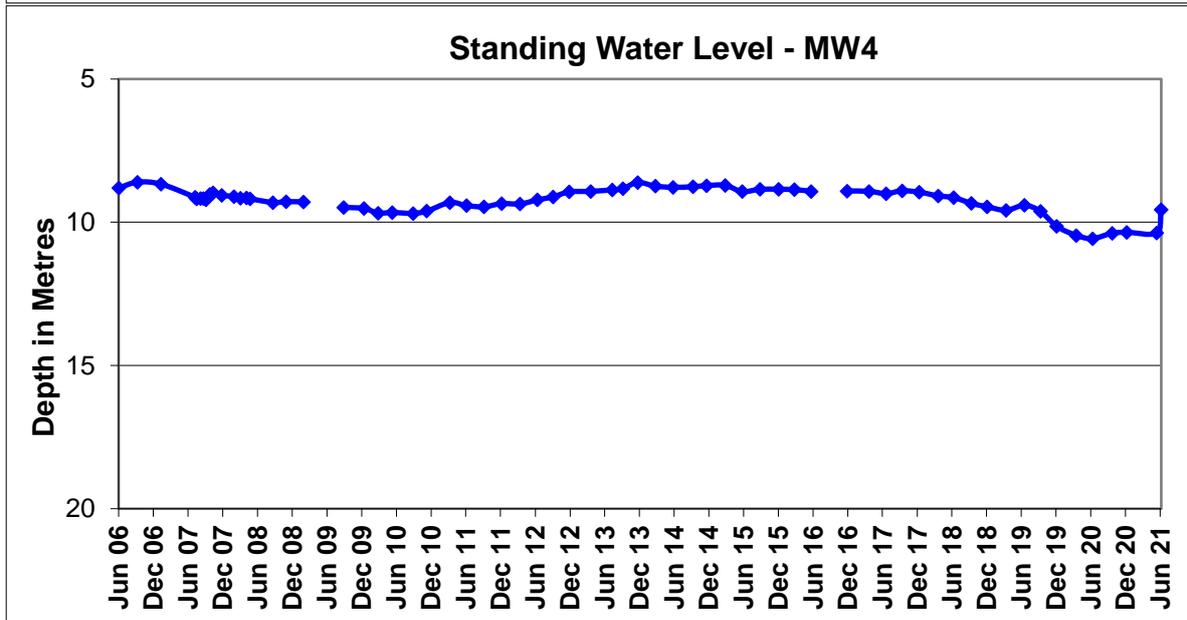
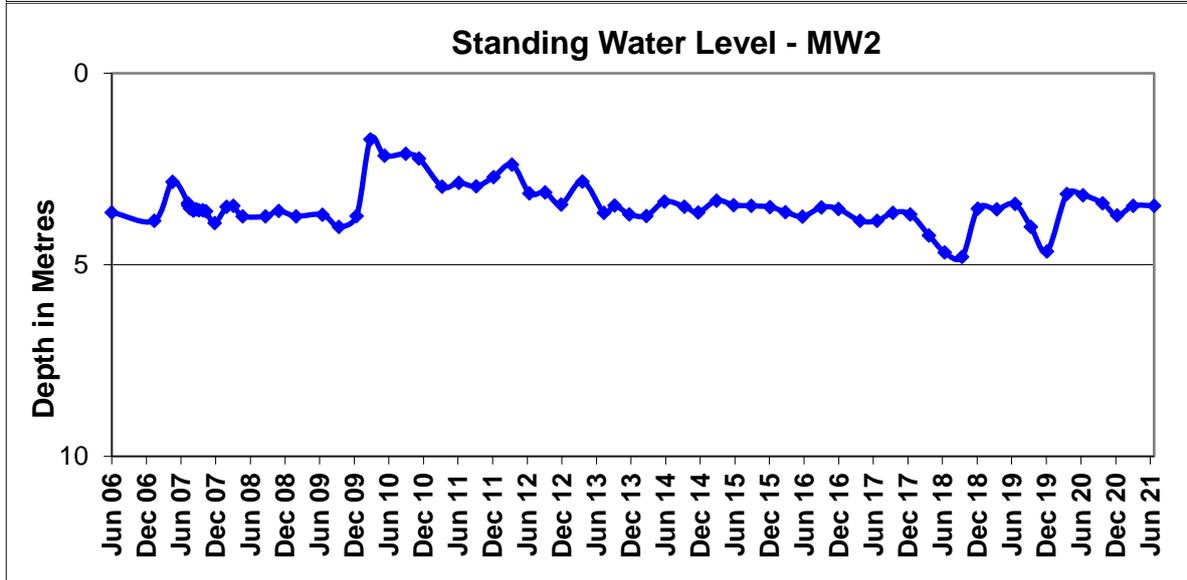
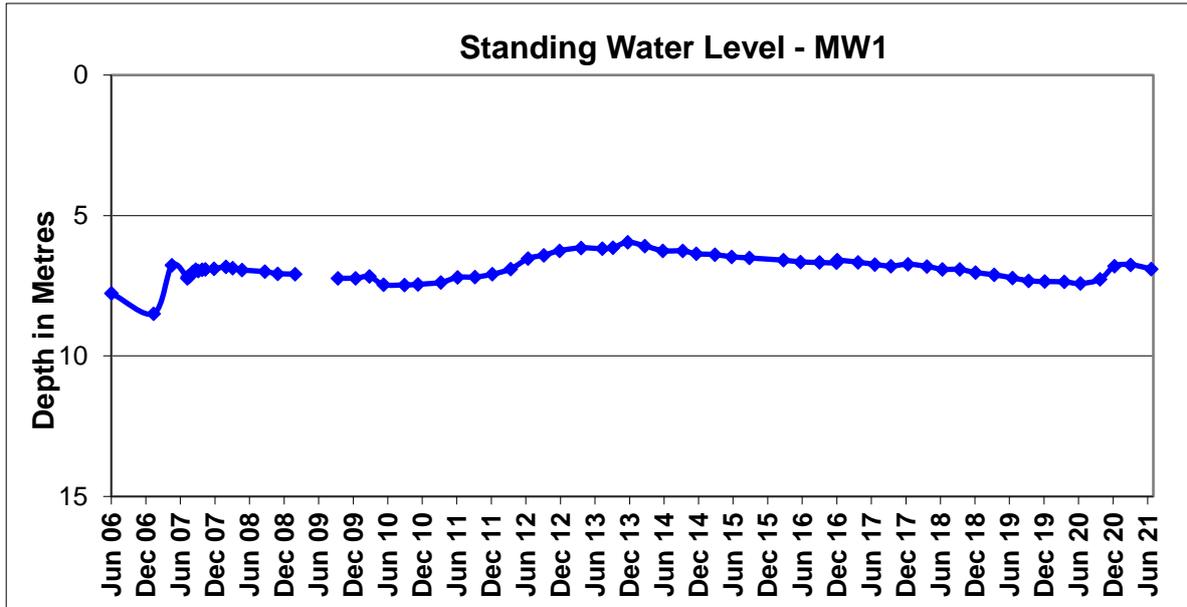


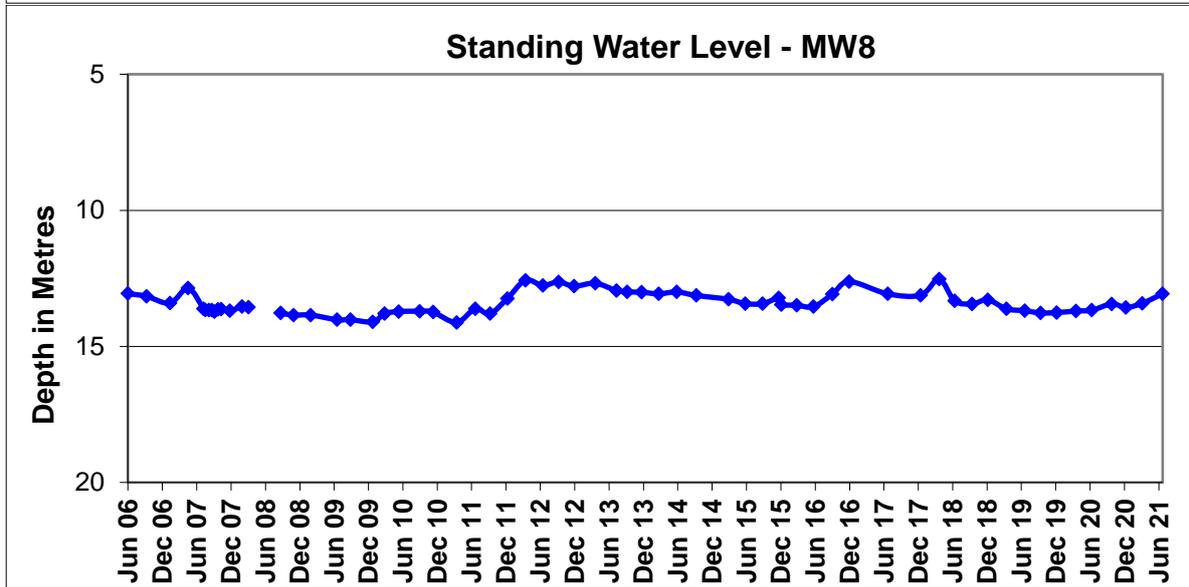
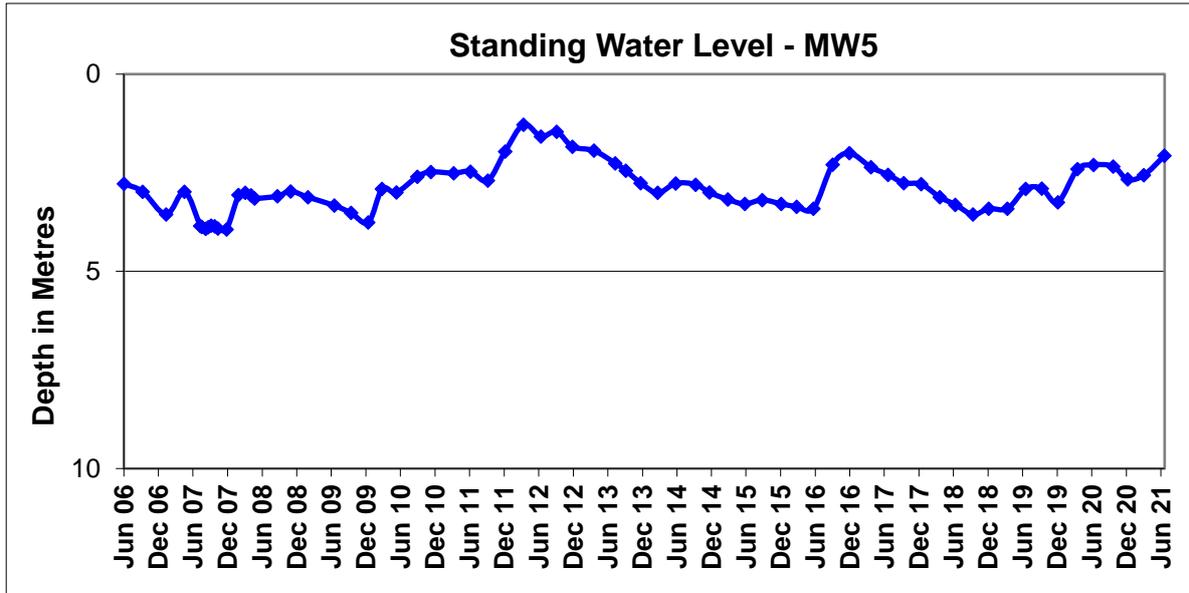
# Appendix B

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



# Appendix C





# Minutes of the 65<sup>th</sup> Meeting of the Tarrawonga Coal Mine Community Consultative Committee (TCCC)

|              |   |
|--------------|---|
| Meeting Held | 18 <sup>th</sup> of August 2021 between 10:00AM- 11.05 AM |
|--------------|---|

|       |           |
|-------|-----------|
| Venue | Via Zoom. |
|-------|-----------|

| <i>Agenda Item</i> | <i>Discussion and Description</i> | <i>Action and Accountability</i> | <i>Status/ Date</i> |
|--------------------|-----------------------------------|----------------------------------|---------------------|
|--------------------|-----------------------------------|----------------------------------|---------------------|

|  |  |  |  |
|--|--|--|--|
| 1. Present and Apologies                               | <p><u>Present:</u><br/>           Mr David Ross (DR)- Independent Chairman,<br/>           Mr Lloyd Finlay (LF)- NSC Representative,<br/>           Mrs Rebecca Ryan (RR)- Community Representative,<br/>           Mr Jack Morrissey (JM)- GSC Representative<br/>           Mr David Moses (DM)- GSC Representative<br/>           Mr Tian Oosthuizen (TOo)- TCM,<br/>           Mr Darren Swain (DS)- WHC,<br/>           Mr Sebastien Moreno (SM)- TCM,<br/>           Miss Madeleine Wright (MW)- TCM</p> |  |  |
|  | <p><u>Apologies:</u><br/>           Mrs Colleen Fuller (CF)- Community Representative<br/>           Mr Wade Hudson (WH)- GSC Representative</p>   |  |  |
| 2. Declaration of Pecuniary or Non-Pecuniary Interests | <p>DR- declared that he is paid a fee for participation as Independent Chairman.<br/>           LF declared that he leases WHC properties</p>  |  |  |

# Minutes of the 65<sup>th</sup> Meeting of the Tarrawonga Coal Mine Community Consultative Committee (TCCC)

|              |   |
|--------------|---|
| Meeting Held | 18 <sup>th</sup> of August 2021 between 10:00AM- 11.05 AM |
|--------------|---|

|       |           |
|-------|-----------|
| Venue | Via Zoom. |
|-------|-----------|

| <i>Agenda Item</i> | <i>Discussion and Description</i> | <i>Action and Accountability</i> | <i>Status/ Date</i> |
|--------------------|-----------------------------------|----------------------------------|---------------------|
|--------------------|-----------------------------------|----------------------------------|---------------------|

|                             |   |   |  |
|-----------------------------|---|---|--|
| 3. Previous Minutes Actions | Proceed with advertisement for new TCCC members.  | <p>DR- Chamber of Commerce member interested in joining TCCC and will have to fill the application form – this remains, but is challenging due to Covid restrictions.</p> <p>RR to provide the details of the person who commented on the road closure wait, so SM can contact this person and add her to blast notification list if requested, action from previous CCC meeting.</p> |  |
| 4. Business Arising         | No update   |   |  |
| 5. Mine Progress Report     | <p>TOo advised:</p> <ul style="list-style-type: none"> <li>- TRIFR = 1.98 as a result of an operator with a minor ankle injury, LTI free = 995 days</li> <li>- Production impacted by rainfall in July but on track with Overburden and Coal for the Quarter and below</li> </ul> | <p>TOo to produce a presentation on blasting procedure.</p> <p>TOo to take members on a tour of the site, including mining and rehabilitation areas.</p>  |  |

# Minutes of the 65<sup>th</sup> Meeting of the Tarrawonga Coal Mine Community Consultative Committee (TCCC)

|              |   |
|--------------|---|
| Meeting Held | 18 <sup>th</sup> of August 2021 between 10:00AM- 11.05 AM |
|--------------|---|

|       |           |
|-------|-----------|
| Venue | Via Zoom. |
|-------|-----------|

| <i>Agenda Item</i> | <i>Discussion and Description</i> | <i>Action and Accountability</i> | <i>Status/ Date</i> |
|--------------------|-----------------------------------|----------------------------------|---------------------|
|--------------------|-----------------------------------|----------------------------------|---------------------|

|                                    |   |  |  |
|------------------------------------|---|--|--|
|                                    | <p>budget.</p> <ul style="list-style-type: none"> <li>- Discussion surrounding increased Covid measures including mask wearing and limited people per four square meters. TCM has also increased processes surrounding visitors and contractors access to site, and some are being turned around and work being postponed. Where possible Office staff are limiting site presence to minimise interaction.</li> </ul> |  |  |
| 6. Environmental Monitoring report | <p>SM</p> <ul style="list-style-type: none"> <li>- Read and explained the Quarterly Environmental Report results.</li> <li>- Mentioned a large overpressure event at privately own property Tarrawonga. (No limit applies)</li> </ul> <p>DR asked about internal investigations regarding this overpressure.<br/>SM confirmed that internal investigation does occur regardless of compliance limits.<br/>SM</p>      |  |  |

# Minutes of the 65<sup>th</sup> Meeting of the Tarrawonga Coal Mine Community Consultative Committee (TCCC)

|              |   |
|--------------|---|
| Meeting Held | 18 <sup>th</sup> of August 2021 between 10:00AM- 11.05 AM |
|--------------|---|

|       |           |
|-------|-----------|
| Venue | Via Zoom. |
|-------|-----------|

| <i>Agenda Item</i> | <i>Discussion and Description</i> | <i>Action and Accountability</i> | <i>Status/ Date</i> |
|--------------------|-----------------------------------|----------------------------------|---------------------|
|--------------------|-----------------------------------|----------------------------------|---------------------|

|  |  |  |  |
|--|--|--|--|
|  | <ul style="list-style-type: none"> <li>- Discussed the water management challenge on site, and rainfall being above median for the previous year and for this year. This has triggered TCM to treat water and release offsite in accordance with relevant approvals and management plans</li> </ul> <p>DR asked what the forecast is for spring.<br/>SM discussed the BOM forecast for spring indicating above median rainfall expected due to a negative Indian Ocean Dipole.</p> <p>SM</p> <ul style="list-style-type: none"> <li>- Discussed the disposal of approx. 353 tonnes of tyres in the pit.</li> </ul> <p>DM asked about the depth of the tyres.<br/>TOo advised that tyres will be approx. 70 metres below the final level.<br/>JM asked what the length of the line of tyres buried is.<br/>SM could not recall the length but discussed the licence and approval conditions that had to be met for burial.<br/>JM asked if monitoring will continue after</p> |  |  |
|--|--|--|--|

# Minutes of the 65<sup>th</sup> Meeting of the Tarrawonga Coal Mine Community Consultative Committee (TCCC)

|              |   |
|--------------|---|
| Meeting Held | 18 <sup>th</sup> of August 2021 between 10:00AM- 11.05 AM |
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|       |           |
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|-------|-----------|

| <i>Agenda Item</i> | <i>Discussion and Description</i> | <i>Action and Accountability</i> | <i>Status/ Date</i> |
|--------------------|-----------------------------------|----------------------------------|---------------------|
|--------------------|-----------------------------------|----------------------------------|---------------------|

|                     |   |  |  |
|---------------------|---|--|--|
|                     | <p>the burial.</p> <p>SM advised burial will be conducted in accordance with EPL requirements and the mine will assess alternative to in pit disposal practice every two years.</p> <p>DR reiterated the action on the BTM CCC, to provide any updates regarding the discussion and investigation into alternatives to in pit disposal.</p>   |  |  |
| 7. General business | <p>RR asked if WHC is lobbying for any vaccinations to workforce and in the area.</p> <p>DS advised that this is included in the letter from WHC that was sent out in the week prior.</p> <p>RR discussed the recent false positive in BCM and regarding the panic buying in the community, being such a small community.</p> <p>RR hoped that WHC will get on the front foot with notification and community awareness if this situation was to occur again.</p> |  |  |

# Minutes of the 65<sup>th</sup> Meeting of the Tarrawonga Coal Mine Community Consultative Committee (TCCC)

|              |   |
|--------------|---|
| Meeting Held | 18 <sup>th</sup> of August 2021 between 10:00AM- 11.05 AM |
|--------------|---|

|       |           |
|-------|-----------|
| Venue | Via Zoom. |
|-------|-----------|

| <i>Agenda Item</i> | <i>Discussion and Description</i> | <i>Action and Accountability</i> | <i>Status/ Date</i> |
|--------------------|-----------------------------------|----------------------------------|---------------------|
|--------------------|-----------------------------------|----------------------------------|---------------------|

|                                    |   |  |  |
|------------------------------------|---|--|--|
|                                    | <p>DS appreciated the comment, to be taken on board by WHC.</p> <p>SM advised of his departure from WHC and that this will be his last CCC meeting.<br/>DR thanked SM for his time and contribution to TCM CCC and TCM in general.</p> <p>No other general business from community members.</p> |  |  |
| 8.Complaints                       | SM – discussed in the environmental report, one complaint received regarding fume which is still under investigation.   |  |  |
| 9. Next Meeting and Other Comments | <p>DR- advised next CCC meetings dates:<br/>- TCCC: 27<sup>th</sup> October 2021<br/>- BTM CCC: 28<sup>th</sup> October 2021</p> <p>DR discussed this possibly being moved back into November if Covid will allow face to face meetings, if this is okay with</p>                               |  |  |

# Minutes of the 65<sup>th</sup> Meeting of the Tarrawonga Coal Mine Community Consultative Committee (TCCC)

|                           |   |   |                            |
|---------------------------|---|---|----------------------------|
| Meeting Held              | 18 <sup>th</sup> of August 2021 between 10:00AM- 11.05 AM               |   |                            |
| Venue                     | Via Zoom.   |   |                            |
| <b><i>Agenda Item</i></b> | <b><i>Discussion and Description</i></b>                                | <b><i>Action and Accountability</i></b> | <b><i>Status/ Date</i></b> |
|                           | community members.<br>No comments or aversion to this from any members. |   |                            |

# Tarrawonga Coal Mine Community Consultative Committee Meeting #65

Quarterly Environmental Monitoring Report  
August 1 – October 31, 2021



*Photo taken in July 2021 in a section of the Northern Emplacement Area that was rehabilitated in July 2020, showing promising vegetation growth.*

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 August 1 2021 to October 31, 2021. Maps with all the monitoring locations are available in *Appendix A*.

# Noise Monitoring

Attended noise monitoring was conducted at the “Bungalow” (TN4), “Barbers Lagoon” (TN3) and “Matong” (TN2) properties from 13<sup>th</sup> to the 16<sup>th</sup> of September 2021. The noise criterion for the mine is 35dB(A) Leq (15 min) for all operating times.

The results below show that noise emissions from the mine did not exceed the operational noise criterion at the “Barbers Lagoon”, “Bungalow” or “Matong” monitoring locations during the monitoring event during the entire monitoring period.

*(See below summary tables extracted from 211008 RWDI report 2190007-T-08 (Q4 2021))*

**Table 4-1: Comparison of noise levels between TN2 and 573b Coomalgalah**

| Date       | Time  | Noise Limits | TN2 Mine LAeq Noise Level (dB) | 573b Coomalgalah Mine LAeq Noise Level (dB) |            |
|------------|-------|--------------|--------------------------------|---|------------|
|            |       | LAeq 15min   | Measured mine contribution     | Commensurate Mine Compliance Level          | Exceedance |
| 13/09/2021 | 09:26 | 35           | 26                             | 17  | 0          |
|            | 09:42 | 35           | 26                             | 17  | 0          |
|            | 09:58 | 35           | <30                            | <21   | 0          |
|            | 10:14 | 35           | <30                            | <21   | 0          |
|            | 11:30 | 35           | <35                            | <26   | 0          |
|            | 21:26 | 35           | 31                             | 22  | 0          |
|            | 21:42 | 35           | 33                             | 24  | 0          |
|            | 22:00 | 35           | 31                             | 22  | 0          |
|            | 22:16 | 35           | 30                             | 21  | 0          |
|            | 22:32 | 35           | 28                             | 19  | 0          |
| 14/09/2021 | 22:47 | 35           | 25                             | 16  | 0          |
|            | 12:24 | 35           | <30                            | <21   | 0          |
|            | 21:24 | 35           | <20                            | <11   | 0          |
|            | 22:00 | 35           | <9 (I/A)                       | <0 (I/A)                                    | 0          |
|            | 22:15 | 35           | <18                            | <9  | 0          |

| Date       | Time  | Noise Limits | TN2 Mine LAeq Noise Level (dB) | 573b Coomalgah Mine LAeq Noise Level (dB) |            |
|------------|-------|--------------|--------------------------------|---|------------|
|            |       | LAeq 15min   | Measured mine contribution     | Commensurate Mine Compliance Level        | Exceedance |
|            | 22:30 | 35           | <6 (I/A)                       | <0 (I/A)                                  | 0          |
|            | 22:46 | 35           | <6 (I/A)                       | <0 (I/A)                                  | 0          |
| 15/09/2021 | 10:31 | 35           | <28                            | <19                                       | 0          |
|            | 10:49 | 35           | <26                            | <17                                       | 0          |
|            | 11:04 | 35           | <26                            | <17                                       | 0          |
|            | 21:09 | 35           | <19                            | <10                                       | 0          |
|            | 21:25 | 35           | <14 (I/A)                      | <5 (I/A)                                  | 0          |
|            | 22:00 | 35           | <20                            | <11                                       | 0          |
|            | 22:17 | 35           | <18                            | <9  | 0          |
|            | 22:33 | 35           | <9 (I/A)                       | <0 (I/A)                                  | 0          |
| 22:49      | 35    | <7 (I/A)     | <0 (I/A)                       | 0   |            |
| 16/09/2021 | 12:01 | 35           | <25                            | <16                                       | 0          |
|            | 13:46 | 35           | 25                             | 16  | 0          |
|            | 14:02 | 35           | <27                            | <18                                       | 0          |
|            | 14:19 | 35           | <26                            | <17                                       | 0          |
|            | 21:21 | 35           | 20                             | 11  | 0          |
|            | 21:39 | 35           | 24                             | 15  | 0          |
|            | 22:00 | 35           | <25                            | <16                                       | 0          |
|            | 22:17 | 35           | 23                             | 14  | 0          |
| 22:48      | 35    | 22           | 13                             | 0   |            |

Note: Where mine noise was inaudible throughout the entire measurement, it is assumed that the contribution is less than 10dB below the measured LAeq.

**Table 4-3: Summary of noise assessment at TN3**

| Date       | Time  | Noise Limits<br>L <sub>Aeq,15 min</sub> | TN3<br>Mine L <sub>Aeq</sub> Noise Level (dB) |                       |            |
|------------|-------|---|---|-----------------------|------------|
|            |       |   | Measured mine contribution                    | Additional LF Penalty | Exceedance |
| 13/09/2021 | 20:35 | 35                                      | <11 (I/A)                                     | -                     | 0          |
|            | 20:50 | 35                                      | <7 (I/A)                                      | -                     | 0          |
|            | 23:22 | 35                                      | <7 (I/A)                                      | -                     | 0          |
|            | 23:38 | 35                                      | <6 (I/A)                                      | -                     | 0          |
|            | 23:55 | 35                                      | <6 (I/A)                                      | -                     | 0          |
| 14/09/2021 | 00:10 | 35                                      | <7 (I/A)                                      | -                     | 0          |
|            | 20:25 | 35                                      | 20  | -                     | 0          |
|            | 23:25 | 35                                      | 27  | -                     | 0          |
|            | 23:45 | 35                                      | 23  | -                     | 0          |
|            | 00:00 | 35                                      | 24  | -                     | 0          |
| 15/09/2021 | 00:19 | 35                                      | <25   | -                     | 0          |
|            | 14:05 | 35                                      | <15 (I/A)                                     | -                     | 0          |
|            | 20:04 | 35                                      | <20   | -                     | 0          |
|            | 20:20 | 35                                      | <20   | -                     | 0          |
|            | 23:31 | 35                                      | 21  | -                     | 0          |
| 16/09/2021 | 23:47 | 35                                      | 22  | -                     | 0          |
|            | 00:02 | 35                                      | <21   | -                     | 0          |
|            | 00:18 | 35                                      | 26  | -                     | 0          |
|            | 11:36 | 35                                      | <20 (I/A)                                     | -                     | 0          |
|            | 11:58 | 35                                      | <16 (I/A)                                     | -                     | 0          |
| 16/09/2021 | 12:22 | 35                                      | <24 (I/A)                                     | -                     | 0          |
|            | 12:46 | 35                                      | <23 (I/A)                                     | -                     | 0          |
|            | 13:04 | 35                                      | <21 (I/A)                                     | -                     | 0          |
|            | 13:34 | 35                                      | <17 (I/A)                                     | -                     | 0          |
|            | 20:15 | 35                                      | 19  | -                     | 0          |
| 16/09/2021 | 20:32 | 35                                      | <9 (I/A)                                      | -                     | 0          |
|            | 23:26 | 35                                      | <30   | -                     | 0          |
|            | 23:45 | 35                                      | <30   | -                     | 0          |
|            | 00:15 | 35                                      | <30   | -                     | 0          |
|            |       | 00:00                                   | 35  | <30                   | -          |

Note: Where mine noise was inaudible throughout the entire measurement, it is assumed that the contribution is less than 10dB below the measured LA90.

**Table 4-2: Comparison of maximum noise events between TN2 and 573b Coomalgalah**

| Date       | Time  | Noise Limits<br>L <sub>A1,1min</sub> | Noise source | TN2  | 573b Coomalgalah                         |            |
|------------|-------|--------------------------------------|--------------|--|--|------------|
|            |       |                                      |              | Mine L <sub>Amax</sub><br>Noise Level (dB) | Mine L <sub>Amax</sub> Noise Level (dB)  |            |
|            |       |                                      |              | Measured Level                             | Commensurate<br>Mine Compliance<br>Level | Exceedance |
| 13/09/2021 | 22:00 | 45                                   | Engine       | 37   | 28                                       | 0          |
|            | 22:16 | 45                                   | Engine       | 40   | 31                                       | 0          |
|            | 22:32 | 45                                   | Engine       | 39   | 30                                       | 0          |
|            | 22:47 | 45                                   | Engine       | 34   | 25                                       | 0          |
| 14/09/2021 | 22:00 | 45                                   | -            | I/A  | -  | 0          |
|            | 22:15 | 45                                   | -            | NM   | -  | 0          |
|            | 22:30 | 45                                   | -            | I/A  | -  | 0          |
|            | 22:46 | 45                                   | -            | I/A  | -  | 0          |
| 15/09/2021 | 22:00 | 45                                   | -            | NM   | -  | 0          |
|            | 22:17 | 45                                   | -            | NM   | -  | 0          |
|            | 22:33 | 45                                   | -            | I/A  | -  | 0          |
|            | 22:49 | 45                                   | -            | I/A  | -  | 0          |
| 16/09/2021 | 22:00 | 45                                   | -            | NM   | -  | 0          |
|            | 22:17 | 45                                   | Engine       | 31   | 22                                       | 0          |
|            | 22:48 | 45                                   | Engine       | 35   | 26                                       | 0          |

Note 1: NM indicates a significant maximum noise event was not observed.

Note 2: I/A indicates the mine was inaudible during the measurement period.

**Table 4-4: Summary of maximum noise events at TN3**

| Date       | Time  | Noise Limits  | TN3<br>Mine $L_{Amax}$ Noise Level (dB) |                |            |
|------------|-------|---------------|---|----------------|------------|
|            |       | $L_{A1,1min}$ | Noise source                            | Measured Level | Exceedance |
| 13/09/2021 | 23:22 | 45            | -                                       | I/A            | 0          |
|            | 23:38 | 45            | -                                       | I/A            | 0          |
|            | 23:55 | 45            | -                                       | I/A            | 0          |
|            | 00:10 | 45            | -                                       | I/A            | 0          |
| 14/09/2021 | 23:25 | 45            | Horn                                    | 34             | 0          |
|            | 23:45 | 45            | -                                       | NM             | 0          |
|            | 00:00 | 45            | -                                       | NM             | 0          |
|            | 00:19 | 45            | -                                       | NM             | 0          |
| 15/09/2021 | 23:31 | 45            | -                                       | NM             | 0          |
|            | 23:47 | 45            | -                                       | NM             | 0          |
|            | 00:02 | 45            | -                                       | NM             | 0          |
| 16/09/2021 | 23:26 | 45            | -                                       | NM             | 0          |
|            | 23:45 | 45            | -                                       | NM             | 0          |
|            | 00:00 | 45            | -                                       | NM             | 0          |
|            | 00:15 | 45            | -                                       | NM             | 0          |

Note 1: NM Indicates a significant maximum noise event was not observed.

Note 2: I/A Indicates the mine was inaudible during the measurement period.

**Table 4-5: Summary of noise assessment at TN4**

| Date       | Time  | Noise Limits    | TN4 Mine $L_{Aeq}$ Noise Level (dB) |                       |            |
|------------|-------|-----------------|-------------------------------------|-----------------------|------------|
|            |       | $L_{Aeq,15min}$ | Measured mine contribution          | Additional LF Penalty | Exceedance |
| 13/09/2021 | 09:17 | 35              | <15 (I/A)                           | -                     | 0          |
|            | 09:36 | 35              | <15 (I/A)                           | -                     | 0          |
|            | 10:08 | 35              | <17 (I/A)                           | -                     | 0          |
|            | 21:36 | 35              | 20                                  | -                     | 0          |
|            | 21:53 | 35              | 19                                  | -                     | 0          |
|            | 22:13 | 35              | 22                                  | -                     | 0          |
|            | 22:31 | 35              | 20                                  | -                     | 0          |
|            | 22:48 | 35              | 21                                  | -                     | 0          |
|            | 23:04 | 35              | 19                                  | -                     | 0          |
| 14/09/2021 | 10:35 | 35              | <13 (I/A)                           | -                     | 0          |
|            | 10:53 | 35              | <14 (I/A)                           | -                     | 0          |
|            | 11:09 | 35              | <21 (I/A)                           | -                     | 0          |
|            | 21:20 | 35              | <12 (I/A)                           | -                     | 0          |
|            | 22:01 | 35              | <9 (I/A)                            | -                     | 0          |
|            | 22:16 | 35              | <10 (I/A)                           | -                     | 0          |
|            | 22:36 | 35              | <8 (I/A)                            | -                     | 0          |
|            | 22:52 | 35              | <10 (I/A)                           | -                     | 0          |
|            | 09:34 | 35              | <17 (I/A)                           | -                     | 0          |
| 15/09/2021 | 11:05 | 35              | <20 (I/A)                           | -                     | 0          |
|            | 21:28 | 35              | <8 (I/A)                            | -                     | 0          |
|            | 21:44 | 35              | <8 (I/A)                            | -                     | 0          |
|            | 22:00 | 35              | <8 (I/A)                            | -                     | 0          |
|            | 22:18 | 35              | <8 (I/A)                            | -                     | 0          |
|            | 22:34 | 35              | <7 (I/A)                            | -                     | 0          |
|            | 22:49 | 35              | <7 (I/A)                            | -                     | 0          |
| 16/09/2021 | 09:34 | 35              | <14 (I/A)                           | -                     | 0          |
|            | 21:29 | 35              | <8 (I/A)                            | -                     | 0          |
|            | 21:45 | 35              | <10 (I/A)                           | -                     | 0          |
|            | 22:00 | 35              | 23                                  | -                     | 0          |
|            | 22:16 | 35              | 23                                  | -                     | 0          |
|            | 22:39 | 35              | 25                                  | -                     | 0          |
|            | 22:58 | 35              | 26                                  | -                     | 0          |

Note: Where mine noise was inaudible (I/A) throughout the entire measurement, it is assumed that the contribution is less than 10dB below the measured  $L_{Aeq}$ .

**Table 4-6: Summary of maximum noise events at TN4**

| Date       | Time  | Noise Limits<br>L <sub>A1,1min</sub> | TN4<br>Mine L <sub>Amax</sub> Noise Level (dB) |                |            |
|------------|-------|--------------------------------------|--|----------------|------------|
|            |       |                                      | Noise source                                   | Measured Level | Exceedance |
| 13/09/2021 | 22:13 | 45                                   | -  | NM             | 0          |
|            | 22:31 | 45                                   | -  | NM             | 0          |
|            | 22:48 | 45                                   | -  | NM             | 0          |
|            | 23:04 | 45                                   | -  | NM             | 0          |
| 14/09/2021 | 22:01 | 45                                   | -  | I/A            | 0          |
|            | 22:16 | 45                                   | -  | I/A            | 0          |
|            | 22:36 | 45                                   | -  | I/A            | 0          |
|            | 22:52 | 45                                   | -  | I/A            | 0          |
| 15/09/2021 | 22:00 | 45                                   | -  | I/A            | 0          |
|            | 22:18 | 45                                   | -  | I/A            | 0          |
|            | 22:34 | 45                                   | -  | I/A            | 0          |
| 16/09/2021 | 22:49 | 45                                   | -  | NM             | 0          |
|            | 22:00 | 45                                   | -  | NM             | 0          |
|            | 22:16 | 45                                   | -  | NM             | 0          |
|            | 22:39 | 45                                   | -  | NM             | 0          |
|            | 22:58 | 45                                   | -  | 29             | 0          |

Note 1: NM indicates a significant maximum noise event was not observed.

Note 2: I/A indicates the mine was inaudible during the measurement period.

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

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

# Blast Monitoring

## Blasting Results

Since 2006, there have been 1072 blasts (until 27/10/2021) at TCM.

The highest result for Overpressure was 116.3dB recorded at the ‘Tarrawonga’ monitor on the 30/08/2021. This high result was not reported, as this monitor resides on a mine owned property and compliance limits do not apply.

The highest result for ground vibration was 1.40 mm/s recorded at the ‘Coomalgah’ monitor on the 17/09/2021.

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

| Monitor Location | Date       | Max. Peak Overpressure (dB) | Criterion (dB) | Date       | Max. Peak Ground Pressure (mm/s) | Criterion (mm/s) |
|------------------|------------|-----------------------------|----------------|------------|----------------------------------|------------------|
| Tarrawonga*      | 30/08/2021 | 116.3                       | N/A            | 03/09/2021 | 0.58                             | N/A              |
| Coomalgah        | 30/08/2021 | 113.4                       | 120            | 17/09/2021 | 1.4                              | 10               |

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

# Air Quality Monitoring

## Dust Deposition Results

**Table 3** shows deposited dust gauge results over 12 months. All the monitors are located on project related land; as such compliance criteria (4g/m<sup>2</sup>/month) do not apply. Overall deposited dust trends remain steady during the reporting period (refer graph in *Appendix B*)

| 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) | TARRAWONGA MINE (EB-14) | TARRAWONGA MINE (EB-15) | JERALONG NORTH (EB-16) |
|---------------------------------|--|-------------------------|----------------|-------------------|-------------------|-------------------------|-------------------------|-------------------------|-------------------------|------------------------|
| Aug-20                          | 1.1  | 1.8                     | 1.1            | 0.5               | 0.7               | 1.9                     | 2                       | 1.2                     | 3.7                     | 0.8                    |
| Sep-20                          | 1.4  | 19.9#                   | 1.0            | 0.9               | 1.9               | 0.9                     | 1.3                     | 1.7                     | 3.6                     | 1.9                    |
| Oct-20                          | 0.9  | 2.1                     | 1.3            | 1.1               | 1.2               | 3.1                     | 1.9                     | 2.3                     | 5.5                     | 2.5                    |
| Nov-20                          | 3.2  | 2.7                     | 1.1            | 1.2               | 3.1               | 5                       | 3.2                     | 2.4                     | +                       | 3                      |
| Dec-20                          | 4.3  | 2.5                     | 2              | 1.3               | 12.7#             | 3.7                     | 4.3                     | 2.6                     | +                       | 1.6                    |
| Jan-21                          | 6.7#   | 4.6#                    | 1.1#           | 3.2               | 1.3               |                         | 3.1                     | 8.4                     | 6.5                     | 4.4                    |
| Feb-21                          | 2.4  | 8.1#                    | 2.8            | 1.4               | 1.1               | 3.6#                    | 5.9#                    | 4.4#                    | 1.8                     | 1                      |
| Mar-21                          | 0.8  | 2.2                     | 4.8#           | 1.5               | 1.2               | 5.4#                    | 5.9#                    | 11.1#                   | 0.7                     | 5.8#                   |
| Apr-21                          | 12.6#  | 5                       | 1.6            | 0.3               | 0.6               | 19.1#                   | 3.7                     | 0.5                     | 0.7                     | 3                      |
| May-21                          | 10.5   | 6.5                     | 0.5            | 0.7               | 1                 | 14.5                    | 4.5                     | 0.8                     | 2.5                     | 4                      |
| Jun-21                          | 2.2  | 4.2                     | 0.3            | 0.2               | 0.4               | 3.3                     | 1.9                     | 0.5                     | 3.3                     | 3.2                    |
| Jul-21                          | 12.9   | 12.5                    | 0.2            | 0.3               | 0.2               | 6.6                     | 2.3                     | 0.7                     | 1.6                     | 3.2                    |
| Aug-21                          | 1.9  | 37.5#                   | 0.8            | 0.9               | 1.8               | 47.7#                   | 2.4                     | 4.2                     | 1.4                     | 4.9                    |
| Sep-21                          | 5.9  | 2.8                     | 0.4            | 0.4               | 0.4               | 68.1#                   | 1.7                     | 3.1#                    | 0.6                     | 0.4                    |
| Oct-21                          | Awaiting October results. Below rolling average will be to September |                         |                |                   |                   |                         |                         |                         |                         |                        |
| <b>12 MONTH ROLLING AVERAGE</b> | 6.0  | 4.8                     | 1.1            | 1.0               | 1.1               | 9.3                     | 3.1                     | 3.5                     | 2.3                     | 2.9                    |

# Analysis done 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.

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

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

**Table 3 – Deposited Dust Gauge Results [g/m<sup>2</sup>/month]**

High Volume Air sampler (PM10) Results

The High Volume Air Sampler (HVAS) installed at Coomalgah property monitors level of Particle Matter under 10 micron (PM<sub>10</sub>). It operates for 24hr every 6 days. **Table 4** shows all the 24hr average values recorded for this quarter are below the 50µg/m<sup>3</sup> criteria.

**Table- 4: HVAS PM10 24 hr average levels for the Quarter**

| Date       | 24hr averaged PM10 (µg/m <sup>3</sup> ) | Criterion 24hr average (µg/m <sup>3</sup> ) | Comments |
|------------|---|---|----------|
| 01/08/2021 | 9.2                                     | <b>50</b>                                   | Nil      |
| 07/08/2021 | 2.4                                     |   |          |
| 13/08/2021 | 2.5                                     |   |          |
| 19/08/2021 | 11.5                                    |   |          |
| 25/08/2021 | 2.2                                     |   |          |
| 31/08/2021 | 8.5                                     |   |          |
| 06/09/2021 | 25.4                                    |   |          |
| 12/09/2021 | 0.1                                     |   |          |
| 18/09/2021 | 18.5                                    |   |          |
| 24/09/2021 | 10.4                                    |   |          |
| 30/09/2021 | 3.6                                     |   |          |
| 6/10/2021  | 9.0                                     |   |          |
| 12/10/2021 | 3.9                                     |   |          |

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

According to the current Air Quality and Greenhouse gas Management Plan, the real time air quality unit (TEOM) installed at the “Flixton” property monitors PM<sub>10</sub> levels in ambient air. 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.



*TEOM installed at Flixton property*

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



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

# Water Monitoring

## Groundwater

Routine groundwater monitoring was undertaken in March 2021 and showed 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 2020      | 7.42       | 7.8            | 3,490                       |
|      | September 2020 | 7.27       | 8.16           | 3,260                       |
|      | December 2020  | 6.8        | 7.9            | 3,510                       |
|      | March 2021     | 6.75       | 7.97           | 3,390                       |
|      | June 2021      | 6.9        | 7.84           | 3,480                       |
|      | September 2021 | 8.14       | 7.57           | 3,530                       |
| MW2  | June 2020      | 3.18       | 7.3            | 490                         |
|      | September 2020 | 3.39       | 7.39           | 435                         |
|      | December 2020  | 3.71       | 7.3            | 535                         |
|      | March 2021     | 3.46       | 6.99           | 462                         |
|      | June 2021      | 3.46       | 7.05           | 527                         |
|      | September 2021 | 3.42       | 6.97           | 615                         |
| MW4  | June 2020      | 10.57      | 7.4            | 3,530                       |
|      | September 2020 | 10.38      | 7.3            | 3,380                       |
|      | December 2020  | 10.35      | 7.4            | 3,640                       |
|      | March 2021     | 9.56       | 7.26           | 3,530                       |
|      | June 2021      | 9.53       | 7.26           | 3,250                       |
|      | September 2021 | 9.48       | 7.62           | 3,100                       |
| MW5  | June 2020      | 2.29       | 7.6            | 675                         |
|      | September 2020 | 2.34       | 7.7            | 2,090                       |
|      | December 2020  | 2.67       | 7.1            | 1,960                       |
|      | March 2021     | 2.56       | 7.36           | 874                         |
|      | June 2021      | 2.07       | 7.56           | 766                         |
|      | September 2021 | 1.84       | 7.7            | 1,810                       |
| MW8  | June 2020      | 13.71      | Casing blocked | Casing blocked              |
|      | September 2020 | 13.44      |                |                             |
|      | December 2020  | 13.57      |                |                             |
|      | March 2021     | 13.42      |                |                             |
|      | June 2021      | 13.07      |                |                             |
|      | September 2021 | 12.7       |                |                             |

## Surface Water

Water storage onsite is expected to be sufficient for at least the next 12 months.

TCM has continued to treat (flocculate) sediment dam SD9 and release treated water from the Licence Discharge Point (LDP) 2 in accordance with the Water Management plan. Fourteen (14) ML of suitable quality water (within EPL1265 limits) was discharged in September with more to be discharged at the beginning of November.

Since beginning of 2021, TCM has recorded 732mm of rain which is the equivalent to an average year rainfall.

| <b>2020</b>       | <b>Jan</b> | <b>Feb</b> | <b>Mar</b> | <b>Apr</b> | <b>May</b> | <b>Jun</b> | <b>Jul</b> | <b>Aug</b> | <b>Sep</b> | <b>Oct</b> | <b>Nov</b> | <b>Dec</b> | <b>Total</b> |
|-------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--------------|
| Monthly Rain (mm) | 109.2      | 261.2      | 113.2      | 65.6       | 16.0       | 23.4       | 31.0       | 38.3       | 30.2       | 55.8       | 3          | 184.4      | 931.1        |
| Cumulative (mm)   | 109.2      | 370.4      | 483.6      | 549.2      | 565        | 588.4      | 619.4      | 567.7      | 687.9      | 743.7      | 746.7      | 931.1      |              |
| <b>2021</b>       | <b>Jan</b> | <b>Feb</b> | <b>Mar</b> | <b>Apr</b> | <b>May</b> | <b>Jun</b> | <b>Jul</b> | <b>Aug</b> | <b>Sep</b> | <b>Oct</b> | <b>Nov</b> | <b>Dec</b> | <b>Total</b> |
| Monthly Rain (mm) | 58.4       | 115.4      | 141.2      | 22.0       | 66.6       | 105        | 73.8       | 41.8       | 18.3       | 54.2       | -          | -          | 732.0        |
| Cumulative (mm)   | 58.4       | 176.8      | 317.4      | 339.6      | 406.2      | 511.2      | 585        | 626.8      | 683        | -          | -          | -          |              |

## Rehabilitation and Clearing

### Rehabilitation

TCM has ordered approximately 11,000 tubestock trees for rehabilitation purposes for CY21, to be planted on new rehabilitation areas and over pre-existing maintenance rehabilitation areas. TCM has recently spread native seeds over the SEA (along the entrance to the mine) and more will be spread in the coming weeks as the rehabilitation landform is completed. The seed mix includes native groundcover species, shrubs, sub-shrubs and canopy species as per the Rehabilitation Management plan. It also includes oats and Japanese millet as a sterile cover crop to establish groundcover to prevent erosion.

In preparation for seeding and tree planting, topsoil spreading and landshaping activities are underway on the Northern Emplacement Area.

### Clearing

The next clearing campaign will take place between February and April 2022.

## Complaints

No complaints received for the reporting period.

## Environmental Management Plans

### Management Plans

Following approval of Modification 7 of PA11\_0047, TCM has conducted a review of all the Management Plans. Updated Management Plans were submitted via DPIE portal for approval in May 2021 including, Air Quality Management Plan, Noise, Management Plan, Blast Management Plan and Water Management Plan.

The Water Management Plan is still under review, but all the other updated management plans were approved and are available on the WHC website.

#### BTM Water Strategy

The BTM mines submitted an updated BTM Groundwater Model and report to DPIE in December 2020. After consultation with DPIE, a final report was provided to DPIE in August.

The BTM Noise Management Strategy has also been reviewed and will be submitted by MCCM in the coming weeks.

## Annual and Compliance Reporting

#### Annual Review and Annual Return Reports

Next Annual Review and Return reports to be commenced in the new year.

#### Annual Compliance EPBC statement

The Annual Compliance EPBC statement was submitted to DAWE in June 2021.

#### Annual National Pollutant Inventory (NPI) and Greenhouse Gas Emission (NGERs) Reports 2021

The TCM NPI and NGERs reports were submitted in September and October 2021 respectively.

## Audits- Compliance

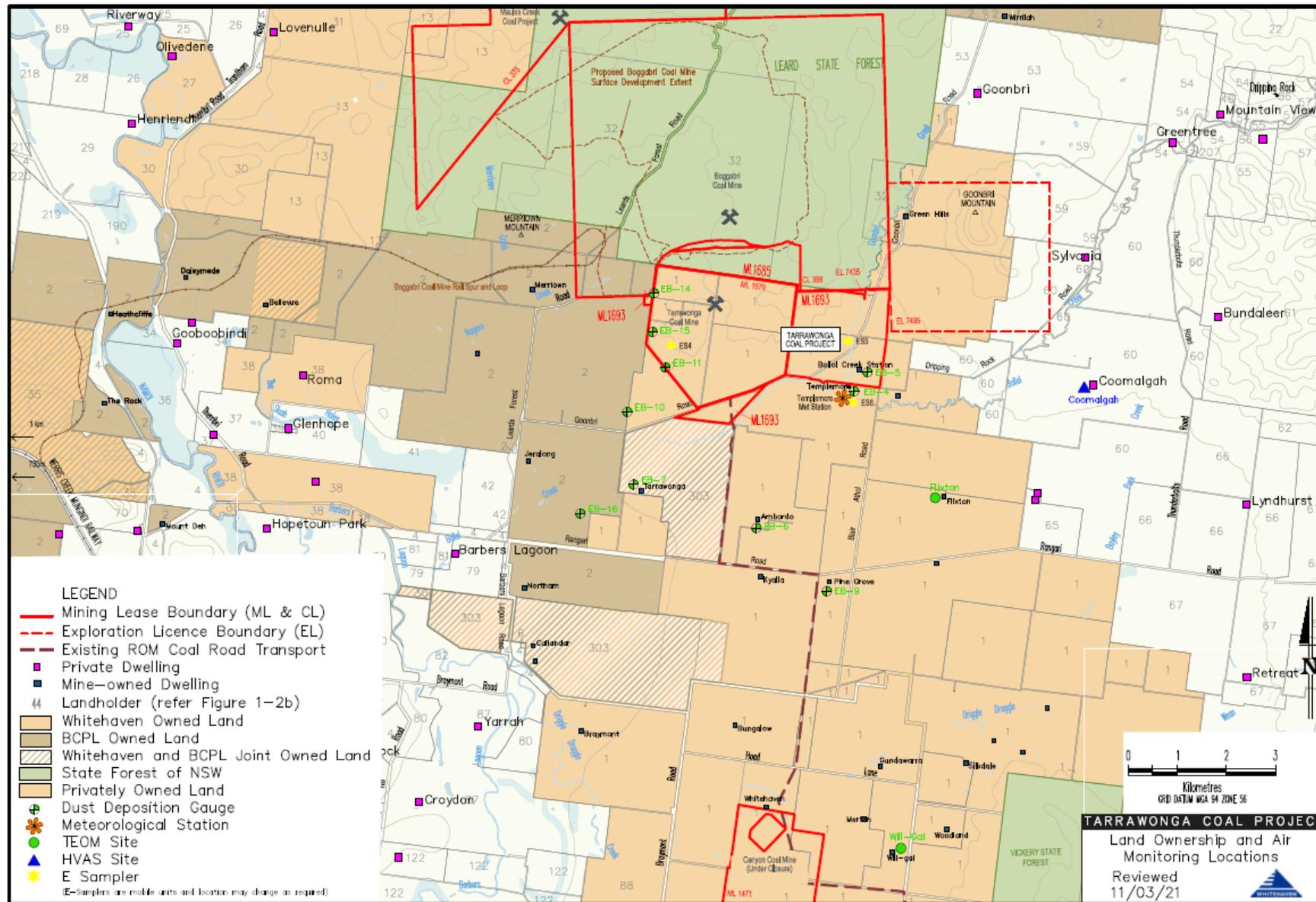
The EPA have requested that TCM complete a water management system audit by a certified external contractor/consultant. Preparations for this are currently underway.

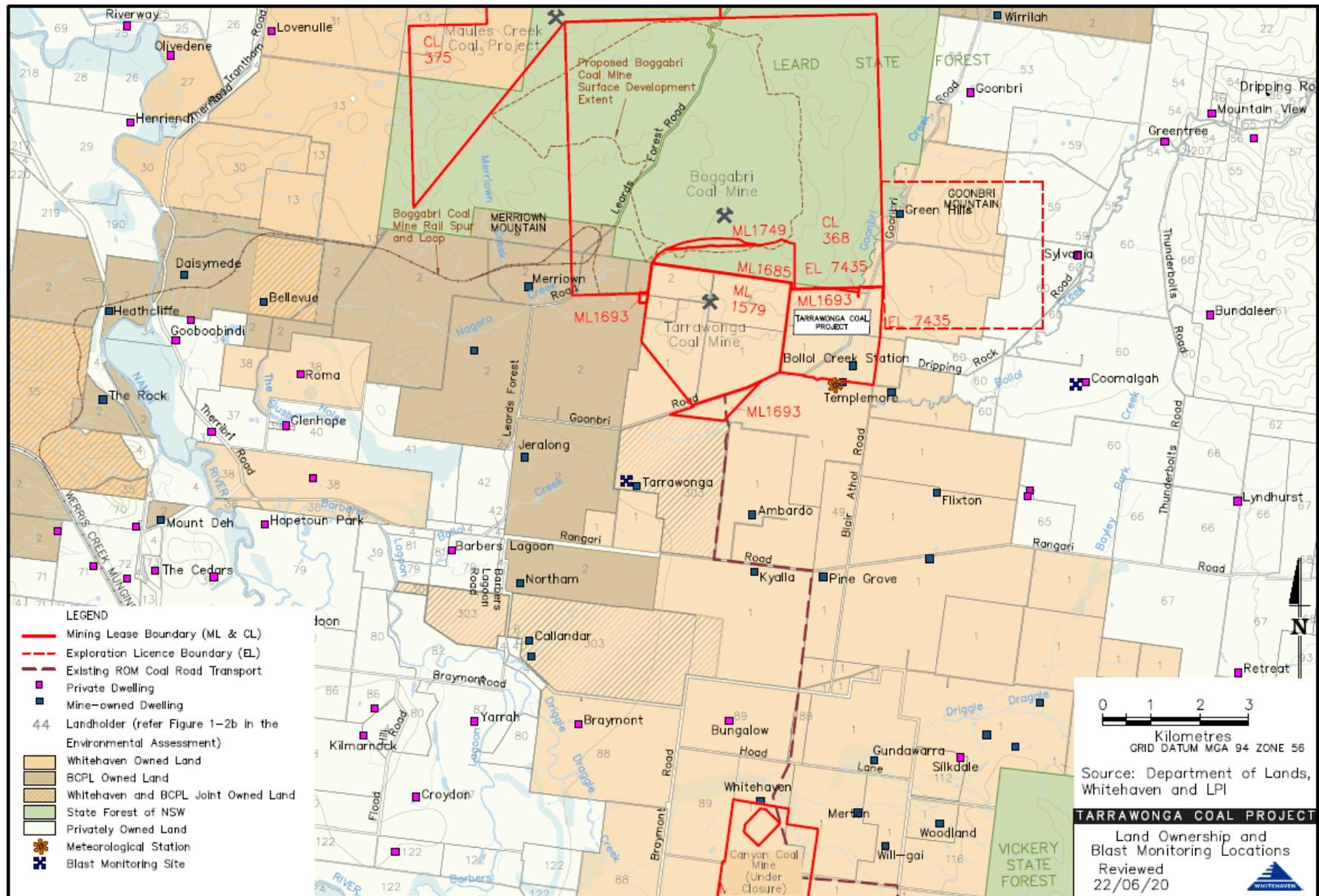
TCM is corresponding with the EPA regarding water management on site.

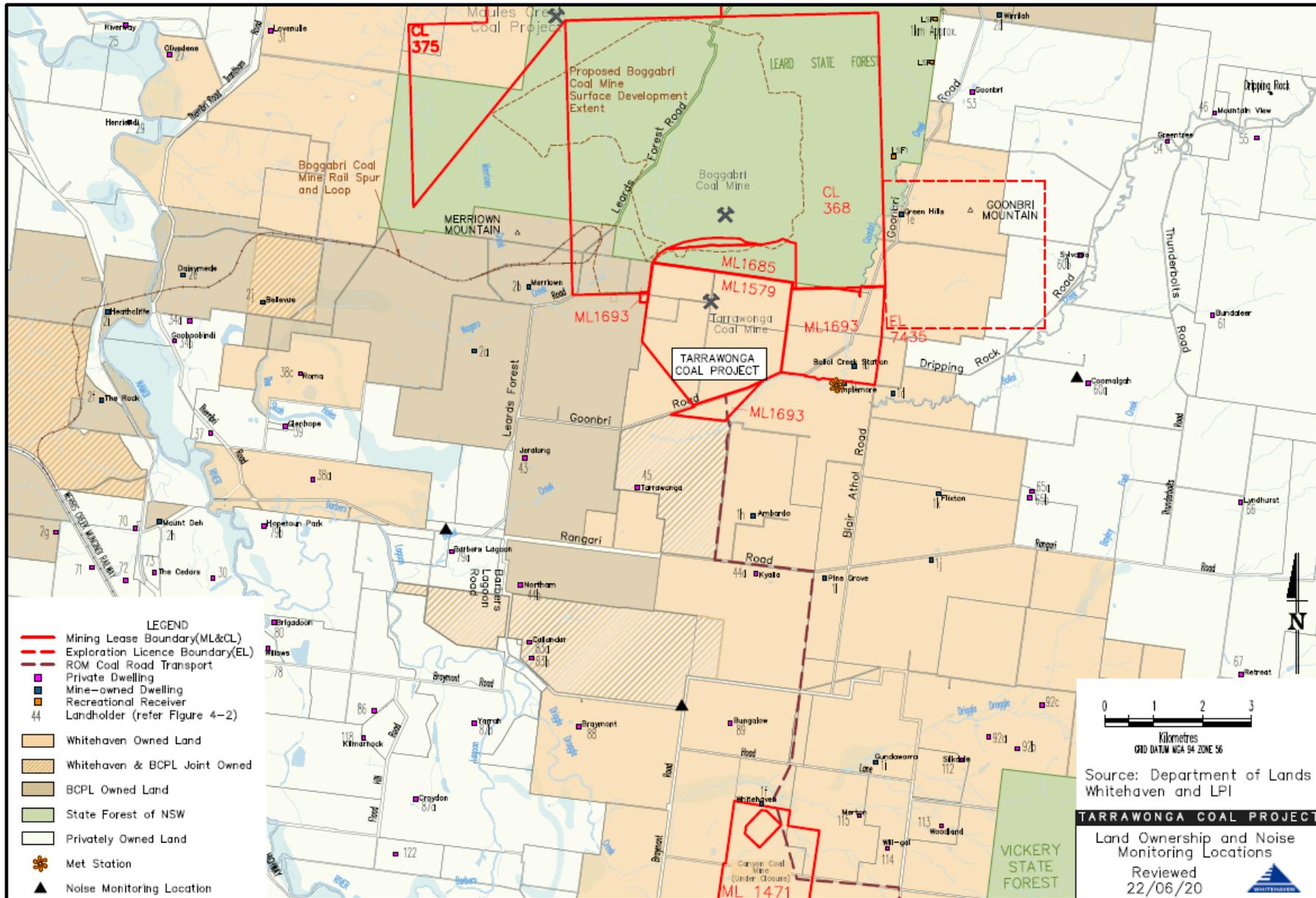
## Approval and Licencing

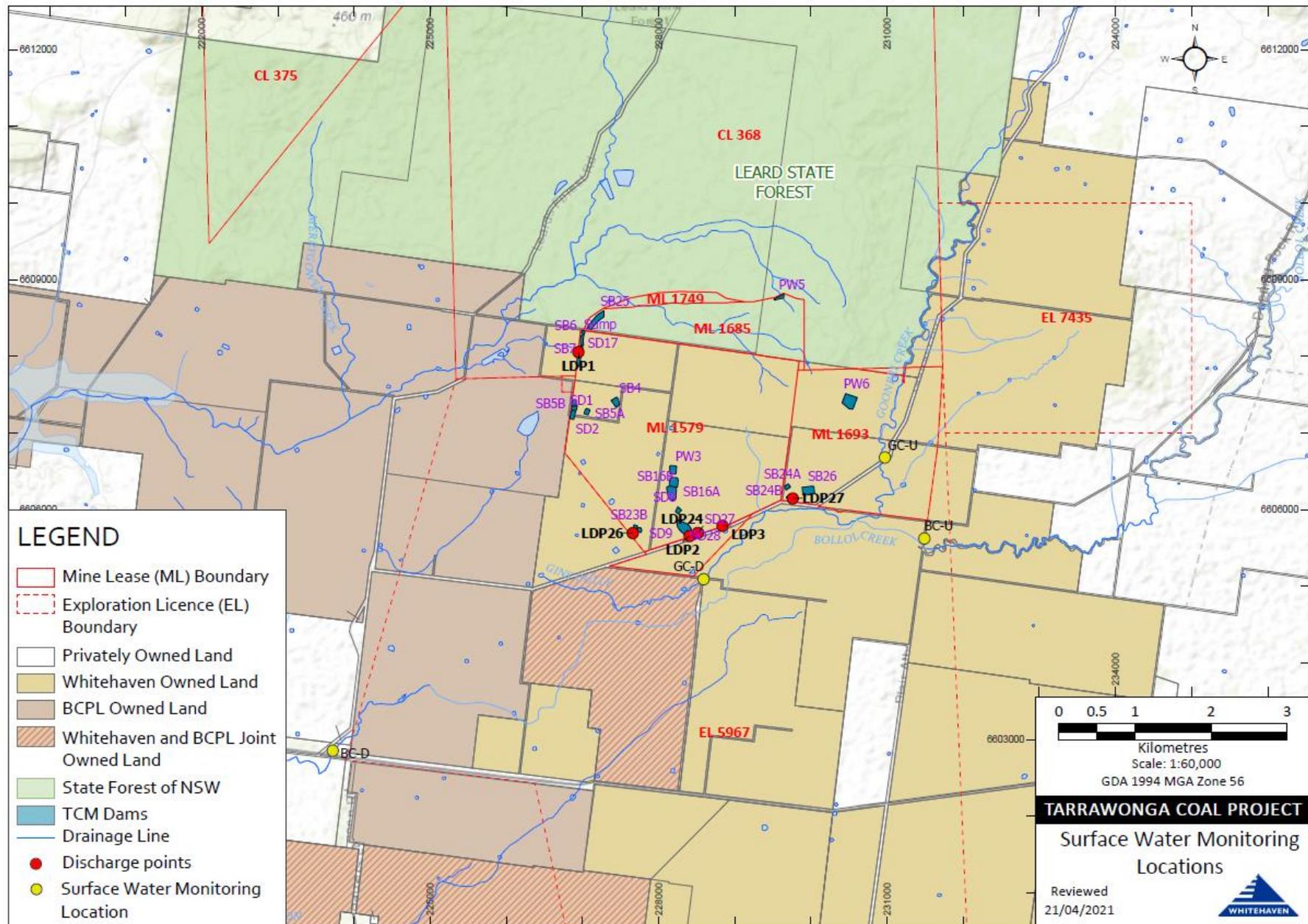
TCM is currently undergoing a review of the planned rehabilitation for CY21 and CY22. This will result in more cumulative rehabilitation being achieved by the end of CY22. We plan to submit a letter requesting a minor amendment in the coming weeks.

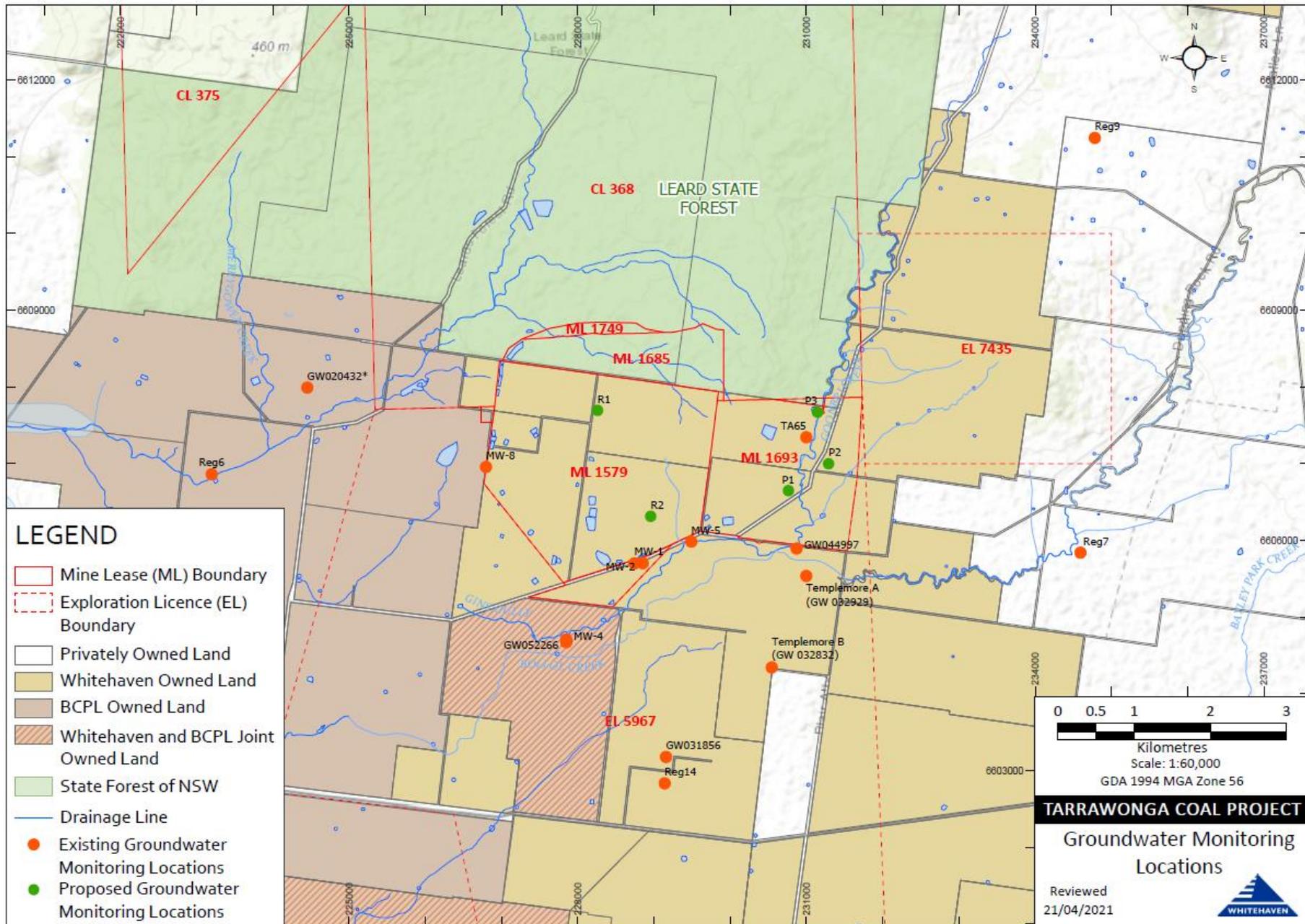
# Appendix A





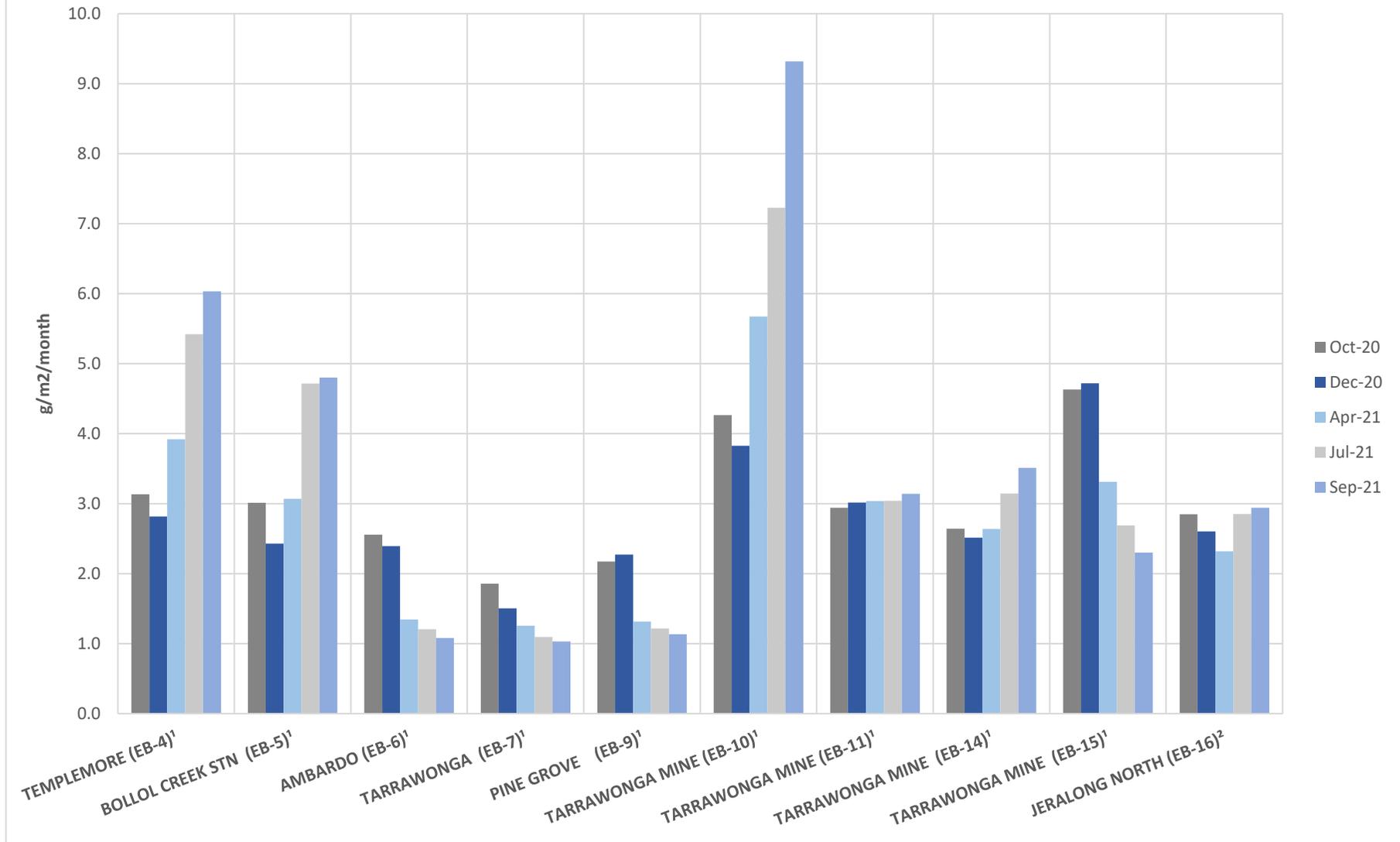




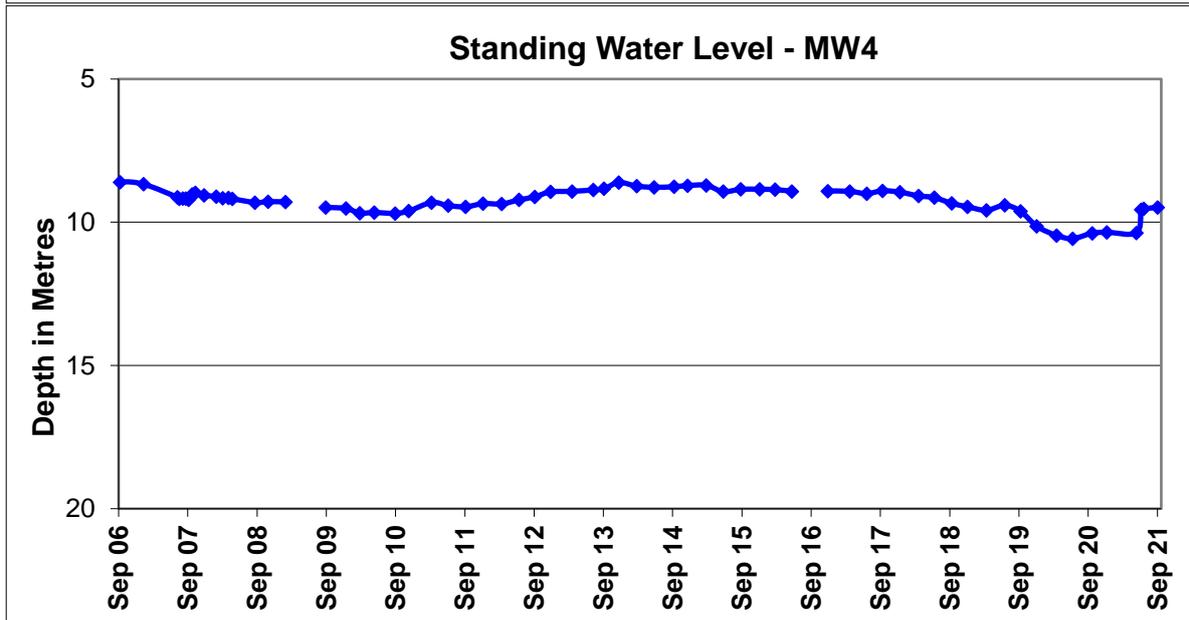
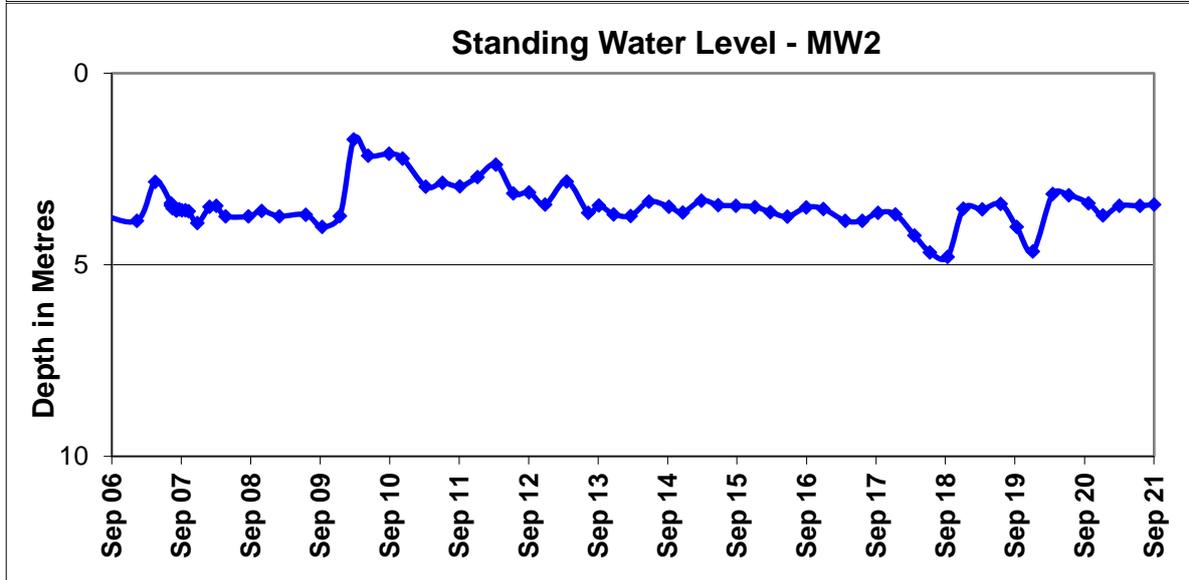
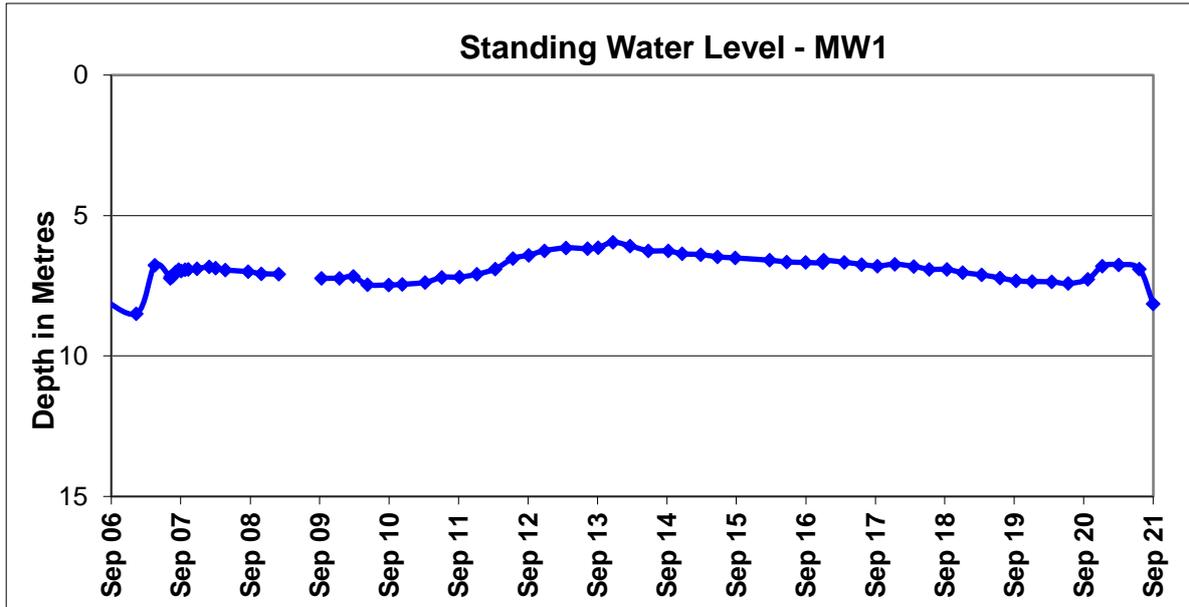


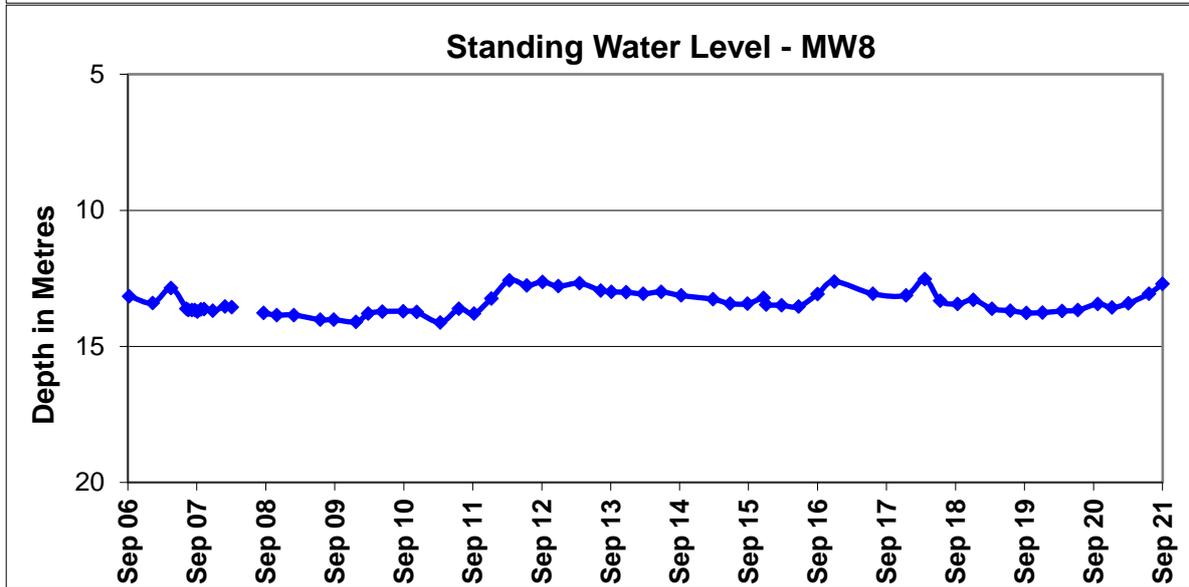
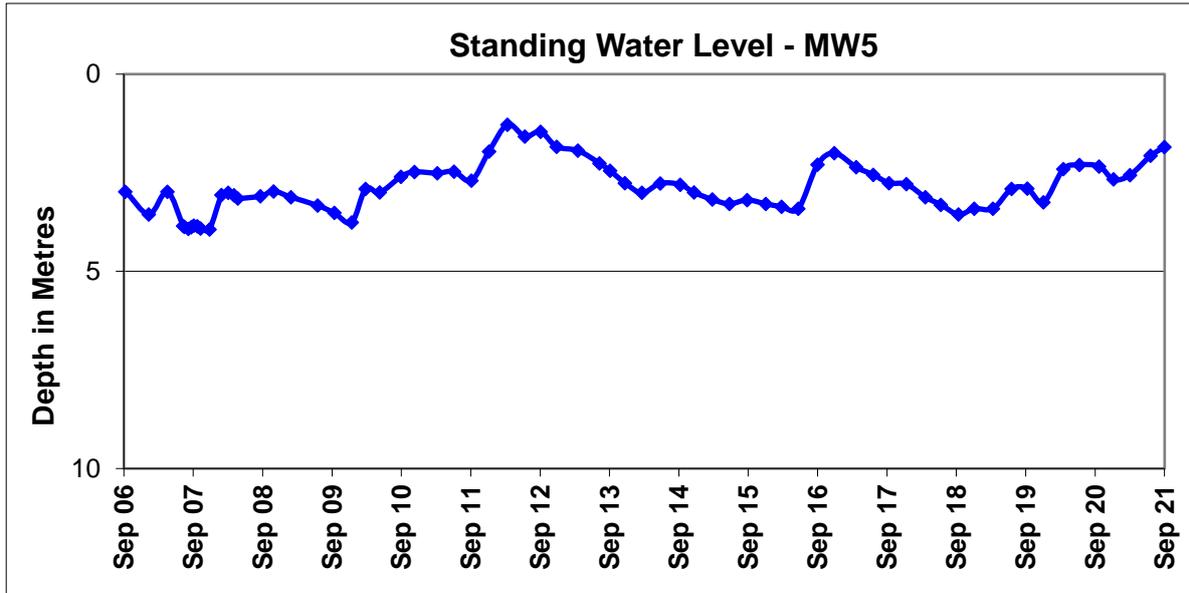
# Appendix B

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



# Appendix C





# Minutes of the 66<sup>th</sup> Meeting of the Tarrawonga Coal Mine Community Consultative Committee (TCCC)

Meeting Held 3<sup>rd</sup> of November 2021 between 10:00AM- 11.15 AM

Venue Tarrawonga Coal Mine Training Room.

| Agenda Item | Discussion and Description | Action and Accountability | Status/ Date |
|-------------|----------------------------|---------------------------|--------------|
|-------------|----------------------------|---------------------------|--------------|

|  |   |  |  |
|--|---|--|--|
| 1. Present and Apologies                               | <p><u>Present:</u><br/>           Mr David Ross (DR)- Independent Chairman,<br/>           Mrs Colleen Fuller (CF)- Community Representative<br/>           Mr Wade Hudson (WH)- GSC Representative<br/>           Mr David Moses (DM)- GSC Representative<br/>           Mr Tian Oosthuizen (TOo)- TCM<br/>           Mr Gregg McEllister (GM)- TCM<br/>           Mr Darren Swain (DS)- WHC,<br/>           Ms Megan Martin (MM)- TCM</p> |  |  |
|  | <p><u>Apologies:</u><br/>           Mr Lloyd Finlay (LF)- NSC Representative,<br/>           Mrs Rebecca Ryan (RR)- Community Representative<br/>           Ms Madeleine Wright (TCM)</p>   |  |  |
| 2. Declaration of Pecuniary or Non-Pecuniary Interests | DR- declared that he is paid a fee for participation as Independent Chairman.   |  |  |

# Minutes of the 66<sup>th</sup> Meeting of the Tarrawonga Coal Mine Community Consultative Committee (TCCC)

|                    |  |                                  |                     |
|--------------------|--|----------------------------------|---------------------|
| Meeting Held       | 3 <sup>rd</sup> of November 2021 between 10:00AM- 11.15 AM |                                  |                     |
| Venue              | Tarrawonga Coal Mine Training Room.                        |                                  |                     |
| <b>Agenda Item</b> | <b>Discussion and Description</b>                          | <b>Action and Accountability</b> | <b>Status/ Date</b> |

|                             |  |   |  |
|-----------------------------|--|---|--|
| 3.                          | GM delivered a presentation on blasting.   |   |  |
| 4. Previous Minutes Actions | <p>Proceed with advertisement for new TCCC members. Advertisement placed on website and in Green flyer and Gunnedah Times.</p> <p>DS planning on attending next CoC meeting and said he will raise this to see if any members might want to join the TCCC.</p> | <p>DR/DS- Chamber of Commerce member interested in joining TCCC and will have to fill the application form</p> <p>DS to raise this to see if any members might want to join the TCCC.</p> <p>RR to provide the details of the person who commented on the road closure wait, so MM can contact this person and add her to blast notification list if requested, action from previous CCC meeting.</p> |  |
| 5. Business Arising         | No update  |   |  |

# Minutes of the 66<sup>th</sup> Meeting of the Tarrawonga Coal Mine Community Consultative Committee (TCCC)

|                    |  |                                  |                     |
|--------------------|--|----------------------------------|---------------------|
| Meeting Held       | 3 <sup>rd</sup> of November 2021 between 10:00AM- 11.15 AM |                                  |                     |
| Venue              | Tarrawonga Coal Mine Training Room.                        |                                  |                     |
| <b>Agenda Item</b> | <b>Discussion and Description</b>                          | <b>Action and Accountability</b> | <b>Status/ Date</b> |

|                                    |  |  |   |
|------------------------------------|--|--|---|
| 6. Mine Progress Report            | <p>TOo advised:</p> <ul style="list-style-type: none"> <li>- TRIFR = 3.7 as a result of an operator injured while tipping a load, LTI free = 1070 days</li> <li>- Production impacted by wet weather, below budget on OB due to reduced cast blasts and dozer push but ROM coal is on track. Current coal price is having a positive effect.</li> <li>- Topsoil on SEA has been placed. Areas to be rehabilitated by end of Dec 31 described and rehabilitation to be completed in 2022 laid out.</li> <li>- In pit disposal of tyres completed for CY2021 and in line with requirements.</li> </ul> | <p>TOo to take members on a tour of the site, including mining and rehabilitation areas.</p> <p>CF requested more information on rehabilitation including updates. MM will provide more information during the site tour and answer any questions. Rehab updates in the quarterly report can be enhanced with more information and photographs including a summary of spring rehab monitoring.</p> | <p>Site tour to occur at next CCC meeting.</p> <p>Site tour will include a tour of the rehabilitation. Next quarterly report will contain enhanced rehab information.</p> |
| 7. Environmental Monitoring report | <p>MM</p> <ul style="list-style-type: none"> <li>- Read and explained the Quarterly Environmental Report results.</li> <li>- Weather is expected to include higher than average rainfall into 2022 following La Nina event becoming more likely.</li> </ul>  |  |   |

# Minutes of the 66<sup>th</sup> Meeting of the Tarrawonga Coal Mine Community Consultative Committee (TCCC)

|                    |  |                                  |                     |
|--------------------|--|----------------------------------|---------------------|
| Meeting Held       | 3 <sup>rd</sup> of November 2021 between 10:00AM- 11.15 AM |                                  |                     |
| Venue              | Tarrawonga Coal Mine Training Room.                        |                                  |                     |
| <b>Agenda Item</b> | <b>Discussion and Description</b>                          | <b>Action and Accountability</b> | <b>Status/ Date</b> |

|                            |   |  |  |
|----------------------------|---|--|--|
| <p>8. General business</p> | <p>DS provided information on WHC’s stakeholder investment strategy. This includes \$200,000 to be spent in the community across all the affected LGAs. It includes community reps from all LGAs including some council members. The criteria for spending this money are that it is to promote health, education and must have a whole community benefit. Next meeting 22<sup>nd</sup> Nov and next round of funds to be awarded in February.</p> <p>DR and DS discussed the LF Environmental Trust. It has been difficult in the past to get applications for funding.</p> <p>CF indicated that regardless of the Council election outcome she would be interested in remaining on the CCC as a community representative.</p> <p>CF asked about whether there had been any communication received by WHC on the</p> |  |  |
|----------------------------|---|--|--|

# Minutes of the 66<sup>th</sup> Meeting of the Tarrawonga Coal Mine Community Consultative Committee (TCCC)

|              |  |
|--------------|--|
| Meeting Held | 3 <sup>rd</sup> of November 2021 between 10:00AM- 11.15 AM |
|--------------|--|

|       |                                     |
|-------|-------------------------------------|
| Venue | Tarrawonga Coal Mine Training Room. |
|-------|-------------------------------------|

| <i>Agenda Item</i> | <i>Discussion and Description</i> | <i>Action and Accountability</i> | <i>Status/ Date</i> |
|--------------------|-----------------------------------|----------------------------------|---------------------|
|--------------------|-----------------------------------|----------------------------------|---------------------|

|                                     |  |   |  |
|-------------------------------------|--|---|--|
|                                     | <p>Namoi Regional Air Quality committee. Would WHC consider sending a letter to the Minister?</p> <p>No other general business from community members.</p> | DS to take the issue to WHC's corporate team.                         |  |
| 9.Complaints                        |  |   |  |
| 10. Next Meeting and Other Comments | <p>DR- advised next CCC meetings dates:<br/>- TCCC: 23<sup>rd</sup> February 2022</p>  | Next CCC meeting to start earlier (9am) to accommodate the site tour. |  |