This report has been prepared in accordance with:

Schedule 3, Condition 16 of the Dendrobium Area 3C (DA3C), Longwall 22 and 23 SMP Approval, granted 20 December 2022 which states:

During the extraction of longwalls in Area 3C, the Applicant must submit a summary report to the Secretary every four months (unless some other period is agreed with the Secretary) which reflects Recommendation 20 of the Independent Expert Panel's Final Report (Part 2), and which includes:

a) consolidated summary of the monitoring results gathered during each 4-month period;

b) an assessment of compliance with the performance measures listed in Table 1;

c) assessment of any exceedances of predictions in the Subsidence Management Plan 2019 and Subsidence Management Plan 2021;

d) assessment of any exceedances of Level 2 or Level 3 Triggers in the TARPs;

e) details of any actions taken, or measures implemented in response to any such exceedance; and

f) accurately records of the seam mining height during the period (Table 4).

Extraction of Longwall 22 commenced on 11 August 2024 and is currently being extracted.

1. Monitoring Results (1 June – 30th September 2025)

This section details the impacts observed during the monitoring period (Figure 1). A summary is presented in Table 1.

1.1 Landscape Impacts

DA3C_LW22_063 (E 292160, N 6194458)

Impact *DA3C_LW22_063* consists of rock fracturing to a rock outcrop situated in bushland over Longwall 22 (Figure 1). The continuous and discontinuous length of rock fracturing is the same which was measured as 0.55m in length, with a maximum width of 0.01m and a maximum measurable depth of 0.125m.

DA3C_LW22_063 is a Level 1 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture up to 100mm width;
- Crack or fracture up to 10m length.

DA3C_LW22_064 (E 292164, N 6194443)

Impact *DA3C_LW22_064* consists of rock fracturing and fragmentation to a rock outcrop situated in bushland over Longwall 22 (Figure 1). The continuous and discontinuous length of rock fracturing is the same which was measured as 1.07m in length, with a maximum width of 0.011m and a maximum measurable depth of 0.6m.

DA3C_LW22_064 is a Level 1 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture up to 10m length;
- Crack or fracture up to 100mm width.

DA3C_LW22_065 (E 292246, N 6194460)

Impact *DA3C_LW22_065* consists of rock fracturing along LC5_Rockbar 11, located directly above Longwall 22 (Figure 1). The continuous and discontinuous length of rock fracturing is the same

which was measured as 1.96m in length, with a maximum width of 0.01m and a maximum measurable depth of 0.135m. The fracture runs across the main flow path of the tributary, and some flow diversion was observed. Water level monitoring data from LC5_Rockbar 11 shows a reduction in water level at the site.

DA3C_LW22_065 is a Level 2 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Any fracture which results in observable loss of surface water or erosion.

DA3C_LW22_066 (E 292127, N 6194536)

Impact *DA3C_LW22_066* consists of rock fracturing, rock movement and soil cracking in bushland over Longwall 22 (Figure 1). The impact has a continuous length of 2.1m, a discontinuous length of 14.2m, a maximum width of 0.035m and a maximum measurable depth of 0.9m.

DA3C_LW22_066 is a Level 1 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture up to 10m length;
- Crack or fracture up to 100mm width.

DA3C_LW22_067 (E 292126, N 6194506)

Impact *DA3C_LW22_067* consists of a rock fracture along a rock outcrop over Longwall 22 (Figure 1). The fracture transitions into soil cracking towards the middle of the fracture, before it continues to a fracture. Vertical displacement of 0.065m was displayed. The impact has a continuous and discontinuous length of 14.5m in length, a maximum width of 0.105m and a maximum measurable depth of 3.27m.

DA3C_LW22_067 is a Level 2 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture between 100mm and 300mm width;
- Crack or fracture between 10m and 50m length.

DA3C_LW22_068 (E 292119, N 6194484)

Impact *DA3C_LW22_068* consists of rock movement between a rock outcrop and soil over Longwall 22 (Figure 1). The impact has a continuous and discontinuous length of 9.8m, a maximum width of 0.03m and a maximum measurable depth of 0.3m.

DA3C_LW22_068 is a Level 1 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture up to 10m length;
- Crack or fracture up to 100mm width.

DA3C_LW22_069 (E 292057, N 6194512)

Impact *DA3C_LW22_069* consists of multiple sections of rock movement along a rock outcrop over Longwall 22 (Figure 1). The impact has a continuous length of 3.75m, a discontinuous length of approximately 10m, a maximum width of 0.065m and a maximum measurable depth of 0.8m.

DA3C_LW22_069 is a Level 1 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture up to 10m length;
- Crack or fracture up to 100mm width.

DA3C_LW22_070 (E 292054, N 6194533)

Impact *DA3C_LW22_070* consists of rock movement along a rock outcrop over Longwall 22 (Figure 1). The impact has a continuous and discontinuous length of 1.9m, a maximum width of 0.035m and a maximum measurable depth of 0.43m. A small amount of water was present on feature during inspection.

DA3C_LW22_070 is a Level 1 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture up to 10m length;

- Crack or fracture up to 100mm width.

DA3C_LW22_071 (E 292038, N 6194549)

Impact *DA3C_LW22_071* consists of multiple sections of rock movement along a small rock step over Longwall 22 (Figure 1). The impact has a continuous length of 5.52m, a discontinuous length of approximately 13.22m, a maximum width of 0.07m and a maximum measurable depth of 0.21m.

DA3C_LW22_071 is a Level 1 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture up to 10m length;
- Crack or fracture up to 100mm width.

DA3C_LW22_072 (E 292072, N 6194455)

Impact *DA3C_LW22_072* consists of rock movement in bushland over Longwall 22 (Figure 1). Multiple sections of rock movement are evident in a 14m by 4m area (56m²). The longest section of movement has a continuous length of 1.68m, a maximum width of 0.025m and a maximum measurable depth of 0.19m.

DA3C_LW22_072 is a Level 1 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture up to 10m length;
- Crack or fracture up to 100mm width.

DA3C_LW22_073 (E 292253, N 6194424)

Impact *DA3C_LW22_073* consists of rock fracturing along a channel on *LC5*, a tributary to Lake Cordeaux (Figure 1). The rock fracturing is situated on mapped feature *LC5_Channel 7* and has a maximum continuous length of 1.05m, which runs across the flow path. The rock fracturing has a

maximum discontinuous length of 1.9m and a maximum width of 0.002m, with the depth unmeasurable due to the thin nature of the rock fracture. No change in surface flow or diversion was observed.

DA3C_LW22_073 is a Level 1 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture up to 10m length;
- Crack or fracture up to 100mm width.

DA3C_LW22_074 (E 292971, N 6194520)

Impact *DA3C_LW22_074* consists of rock fracturing on a rock step over Longwall 22 (Figure 1). The rock fracturing runs vertically up the step before disappearing beneath a ledge and then reappears further up the rock face. The rock fracturing has a maximum continuous length of 3.2m, a maximum discontinuous length of 6.3m, a maximum width of 0.01m and a maximum measurable depth of 0.18m.

DA3C_LW22_074 is a Level 1 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture up to 10m length;
- Crack or fracture up to 100mm width.

DA3C_LW22_075 (E 292989, N 6194545)

Impact *DA3C_LW22_075* consists of rock fracturing on a rock step over Longwall 22 (Figure 1). The fracturing runs vertically up the step with a maximum continuous length of 2.02m before disappearing beneath leaf litter. It has a maximum width of 0.019m and a maximum measurable depth of 0.47m.

DA3C_LW22_075 is a Level 1 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture up to 10m length;

- Crack or fracture up to 100mm width.

DA3C_LW22_076 (E 293257, N 6194547)

Impact *DA3C_LW22_076* consists of iron staining in bushland which flows into *LC6*, a tributary to Lake Cordeaux (Figure 1). The iron staining appears approximately 18m to the south of *LC6_Pool 16* from an iron spring which then flows onto mapped tributary feature *LC6_Cascade 2.*

DA3C_LW22_076 is a Level 1 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Observable increase in iron staining within the mining area.

DA3C_LW22_008 (Update) (E 293195, N 6194495)

Impact *DA3C_LW22_008* was originally reported on 15 November 2024 as localised iron staining within LC6, a tributary to Lake Cordeaux (Figure 1). The iron staining was originally reported in mapped stream feature *LC6_Pool 22,* however during a recent inspection it was identified that the iron staining now extends for approximately 530m downstream to *LC6_Rockbar 1,* although becomes patchy and not present in all sections of the tributary.

DA3C_LW22_008 is now a Level 2 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Observable increase in iron staining within the mining area continues to outside the mining area i.e. 400m from the longwall

DA3C_LW22_077 (E 292053, N 6194472)

Impact *DA3C_LW22_077* consists of soil cracking in bushland east of the powerline easement over Longwall 22 (Figure 1). The soil cracking has a maximum continuous length of 3.5m, a maximum discontinuous length of 6.6m, a maximum width of 0.07m and a maximum measurable depth of 0.2m.

DA3C_LW22_077 is a Level 1 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture up to 100mm width;
- Crack or fracture up to 10m length.

DA3C_LW22_078 (E 291961, N 6194478)

Impact *DA3C_LW22_078* consists of two rock fractures on a rock outcrop over Longwall 22 (Figure 1). The fracturing has a maximum continuous length of 1.4m, a maximum discontinuous length of 4m, a maximum width of 0.02m and a maximum measurable depth of 0.5m.

DA3C_LW22_078 is a Level 1 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture up to 100mm width;
- Crack or fracture up to 10m length.

DA3C_LW22_079 (E 291923, N 6194489)

Impact *DA3C_LW22_079* consists of soil cracking along powerline easement over Longwall 22 (Figure 1). Multiple discontinuous soil cracks are located within in an area of approximately 5m by 20m. The soil cracking has a maximum continuous length of 5.8m, a maximum discontinuous length of 20m and a maximum width of 0.025m.

DA3C_LW22_079 is a Level 1 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture up to 100mm width;
- Crack or fracture up to 10m length.

DA3C_LW22_080 (E 291919, N 6194516)

Impact *DA3C_LW22_080* consists of rock fracturing on a rock outcrop over Longwall 22 (Figure 1). Rock fracturing extends into soil cracking before reappearing into another rock fracture with

associated uplift. The uplift has a maximum height of 0.180m. The fracturing has a maximum continuous length of 4.8m, a maximum discontinuous length of 21.6m, a maximum width of 0.073m and a maximum measurable depth of 0.8m.

DA3C_LW22_080 is a Level 1 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture up to 100mm width;
- Crack or fracture up to 10m length.

DA3C_LW22_081 (E 291902, N 6194602)

Impact *DA3C_LW22_081* consists of soil cracking and rock fracturing along the powerline easement over Longwall 22 (Figure 1). The soil cracking and rock fracturing is located within an area of approximately 80m by 10m. The soil cracking and rock fracturing has a maximum continuous length of 8.2m, a maximum discontinuous length of 80m and a maximum width of 0.068m.

DA3C_LW22_081 is a Level 1 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture up to 100mm width;
- Crack or fracture up to 10m length.

DA3C_LW22_082 (E 291886, N 6194514)

Impact *DA3C_LW22_082* consists of multiple soil cracks, a rock fracture and associated uplift in an area of approximately 50m x 20m along the powerline easement over Longwall 22 (Figure 1).The soil cracking has a maximum continuous length of 2.55m, with a maximum discontinuous length of 50m, a maximum width of 0.03m, a maximum measurable depth of 0.54m and a 5m section displaying uplift of 0.03m. The rock fracturing has a maximum length of 0.92m and a maximum width of 0.015m.

DA3C_LW22_082 is a Level 1 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture up to 100mm width;
- Crack or fracture up to 10m length.

DA3C_LW22_083 (E 291874, N 6194662)

Impact *DA3C_LW22_083* consists of a soil cracking and associated uplift over Longwall 22, along the powerline easement (Figure 1). The fracturing has a maximum continuous length of 9m, a maximum discontinuous length of 75m, a maximum width of 0.07m, a maximum measurable depth of 0.89m and includes a section of uplift of approximately 0.05m.

DA3C_LW22_083 is a Level 1 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture up to 100mm width;
- Crack or fracture up to 10m length.

DA3C_LW22_084 (E 291824, N 6194669)

Impact *DA3C_LW22_084* is located on Fire Road 6F and consists of multiple soil cracks in an area of approximately 70m x 6m over Longwall 22 (Figure 1). The soil cracking has a maximum continuous length of 18.9m, a maximum width of 0.105m and a maximum measurable depth of 1.4m. There are some smaller associated cracks in the same area. The impacts do not currently impede vehicle or pedestrian access however, increased rainfall or vehicle movements could result in erosion of the soil cracks, Fire Road 6F will continue to be monitored for any changes. Traffic cones and safety signage have been erected in the area to alert oncoming traffic, and remediation of the impacts will be scheduled as soon as weather permits.

DA3C_LW22_084 is a Level 2 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture between 100mm and 300mm width;
- Crack or fracture between 10 and 50m length;
- A crack or fracture in the fire trail, which could result in significant erosion or impede vehicle access.

DA3C_LW22_085 (E 291719, N 6194711)

Impact *DA3C_LW22_085* consists of a singular rock fracture with associated vertical displacement on a rock outcrop over Longwall 22 (Figure 1). The fracture has a maximum continuous length of approximately 19m, a maximum width of 0.04m and a maximum measurable depth of 0.41m. The rock fracture extends beneath moss and a small tree for a length of 8.0m. The fracture runs beneath moss and vegetation in parts.

DA3C_LW22_085 is a Level 2 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture between 100mm and 300mm width;
- Crack or fracture between 10 and 50m length;

DA3C_LW22_086 (E 291705, N 6194721)

Impact *DA3C_LW22_086* consists of opening of an existing joint that leads into a rock fracture on a rock outcrop over Longwall 22 (Figure 1). The opened joint extends for 16.5m before continuing into a rock fracture for the remaining 2.5m. The void has a maximum continuous length of 19m, a maximum width of 0.06m and a maximum measurable depth of 0.84m.

DA3C_LW22_086 is a Level 2 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture between 100mm and 300mm width;
- Crack or fracture between 10 and 50m length;

DA3C_LW22_087 (E 291711, N 6194729)

Impact *DA3C_LW22_087* consists of a soil crack in bushland over Longwall 22 (Figure 1). The soil crack extends continuously for 16m then splits into two smaller cracks. The soil crack is covered in leaf litter in sections. The cracking has a maximum length of 20m, a maximum width of 0.07m and a maximum measurable depth of 0.2m. The crack is covered by leaf litter in sections.

DA3C_LW22_087 is a Level 2 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture between 100mm and 300mm width;

- Crack or fracture between 10 and 50m length;

DA3C_LW22_088 (E 291717, N 6194777)

Impact *DA3C_LW22_088* consists of a hairline fracture that extends out of a pre-existing joint on a rock outcrop over Longwall 22 (Figure 1). The fracturing has a maximum continuous length of 13m and a maximum width of 0.03m**.**

DA3C_LW22_088 is a Level 2 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture between 100mm and 300mm width;
- Crack or fracture between 10 and 50m length;

DA3C_LW22_089 (E 291831, N 6194703)

Impact *DA3C_LW22_089* consists of a soil crack adjacent to Fire Road 6F over Longwall 22 (Figure 1). The soil crack has a total discontinuous length of 4.7m, a maximum continuous length of 1.4m, a width of 0.015m and a maximum measurable depth of 0.75m. The impact does not impede vehicle access.

DA3C_LW22_089 is a Level 1 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture up to 100mm width
- Crack or fracture up to 10m length
- Crack at the surface, which should not result in any significant erosion or impede access

DA3C_LW22_090 (E 291834, N 6194702)

Impact *DA3C_LW22_090* consists of a soil crack on Fire Road 6F over Longwall 22 (Figure 1). The soil crack has a total discontinuous length of 4.6m, a maximum continuous length of 0.73m, width of 0.004m and a maximum measurable depth of 0.005m. The cracking is not hazardous and does not impede vehicle access.

DA3C_LW22_090 a Level 1 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture up to 100mm width
- Crack or fracture up to 10m length
- Crack at the surface, which should not result in any significant erosion or impede access

DA3C_LW22_091 (E 291703, N 6194734)

Impact *DA3C_LW22_091* consists of a rock movement with associated, soil displacement, rock fracturing and soil cracking on a rock outcrop which extends into bushland over Longwall 22 (Figure 1). The impact has a total discontinuous length of 39.5m, the rock fracturing has a maximum continuous length of 24m, width of 0.065m and a maximum measurable depth of 3.33m.

DA3C_LW22_091 a Level 2 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture between 10m or 50m length.

DA3C_LW22_092 (E 291703, N 6194750)

Impact *DA3C_LW22_092* consists of rock fracturing on the edge of an overhang, on the rock outcrop and extends into bushland over Longwall 22 (Figure 1). The fracture has a discontinuous and maximum length of 10.4m, a width of 0.052m and a maximum measurable depth of 2.4m. No rockfalls or other associated impacts have been identified on the overhang.

DA3C_LW22_092 a Level 2 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture between 10m or 50m length.

DA3C_LW22_093 (E 291616, N 6194737)

Impact *DA3C_LW22_093* consists of multiple soil cracks along a minor vehicle access track in an area of approximately 73m x 6m (438m²) (Figure 1). The impact has a discontinuous length of

22.7m, a maximum continuous length of 3.9m, width of 0.035m and a max measurable depth of 0.12m. The soil cracks do not impede vehicle access.

DA3C_LW22_093 a Level 1 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture up to 100mm width
- Crack or fracture up to 10m length
- Crack at the surface, which should not result in any significant erosion or impede access

DA3C_LW22_094 (E 291591, N 6194727)

Impact *DA3C_LW22_094* consists of a rock fracture on an outcrop with associated soil cracking over Longwall 22 (Figure 1). The fracture has a total discontinuous length of 23.2m, a maximum continuous length of 3.7m, a width of 0.034m and maximum measurable depth of 1.87m.

DA3C_LW22_094 a Level 1 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture up to 100mm width
- Crack or fracture up to 10m length

DA3C_LW22_095 (E 291597, N 6194643)

Impact *DA3C_LW22_095* consists of a horizontal rock fracture beneath a rock overhang above Longwall 22 (Figure 1). Measurements for this impact were estimated due to proximity to rock overhang and related safety considerations. The fracture has a maximum continuous length of approximately 4m, total discontinuous length of approximately 5m, a width of 0.001m, and depth unable to be measured.

DA3C_LW22_095 a Level 1 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture up to 100mm width
- Crack or fracture up to 10m length

DA3C_LW22_096 (E 291579, N 6194646)

Impact *DA3C_LW22_096* consists of a horizontal rock fracture beneath a rock overhang above Longwall 22 (Figure 1). Measurements for this impact were estimated due to proximity to rock overhang and related safety considerations. The fracture has a maximum continuous length of approximately 4m, total discontinuous length of approximately 5m, a width of 0.001m, and depth unable to be measured.

DA3C_LW22_096 a Level 1 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Rock fall from a cliff which is left mostly intact (<10% length), resulting in insignificant ground disturbance.

DA3C_LW22_097 (E 291561, N 6194719)

Impact *DA3C_LW22_097* consists of a rock fracture on a rock outcrop over Longwall 22 (Figure 1). The maximum continuous length is 23m, with a total discontinuous length of 38m, a maximum width of 0.065m, and maximum measurable depth of 0.97m. There are adjacent associated smaller fractures with a maximum width of 0.007m and maximum length of 8.3m.

DA3C_LW22_097 a Level 2 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture between 10 and 50m length.

DA3C_LW22_098 (E 291600, N 6194748)

Impact *DA3C_LW22_098* consists of soil cracking on a vehicle access track over Longwall 22 (Figure 1). There are two main soil cracks with some smaller cracks branching off. The soil cracks have maximum continuous length of 2.6m and a maximum discontinuous length of 12m, a maximum width of 0.055m and a maximum measurable depth of 1.1m.

DA3C_LW22_098 a Level 1 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture up to 100mm width
- Crack or fracture up to 10m length
- Crack at the surface, which should not result in any significant erosion or impede access

DA3C_LW22_099 (E 291551, N 6194744)

Impact *DA3C_LW22_099* consists of rock fracturing on a rock outcrop over Longwall 22 (Figure 1). The fracturing has a maximum length of 21m, continuous for the entire length. It has a maximum width of 0.025m and the depth was unmeasurable due to the thin nature of the fracture.

DA3C_LW22_099 a Level 2 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture between 10 and 50m length

DA3C_LW22_100 (E 291530, N 6194782)

Impact *DA3C_LW22_100* consists of soil cracking on a vehicle access track over Longwall 22 (Figure 1). The primary soil crack has a maximum continuous length of 3.92m, a maximum width of 0.02m and a maximum measurable depth of 0.09m, with some very minor associated soil cracks surrounding it.

DA3C_LW22_100 a Level 1 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture up to 100mm width
- Crack or fracture up to 10m length
- Crack at the surface, which should not result in any significant erosion or impede access

DA3C_LW22_101 (E 291566, N 6194765)

Impact *DA3C_LW22_101* consists of soil cracking on a vehicle access track over Longwall 22 (Figure 1). The soil cracking has a maximum continuous length of 2.9m, a maximum discontinuous length of 11m, a maximum width of 0.025m and a maximum depth of 0.4m

DA3C_LW22_101 a Level 1 trigger as per the Longwalls 22 and 23 Landscape TARP (Table 5)(Appendix G.2 of the Longwalls 22 and 23 WIMMCP), i.e.:

- Crack or fracture up to 100mm width
- Crack or fracture up to 10m length
- Crack at the surface, which should not result in any significant erosion or impede access

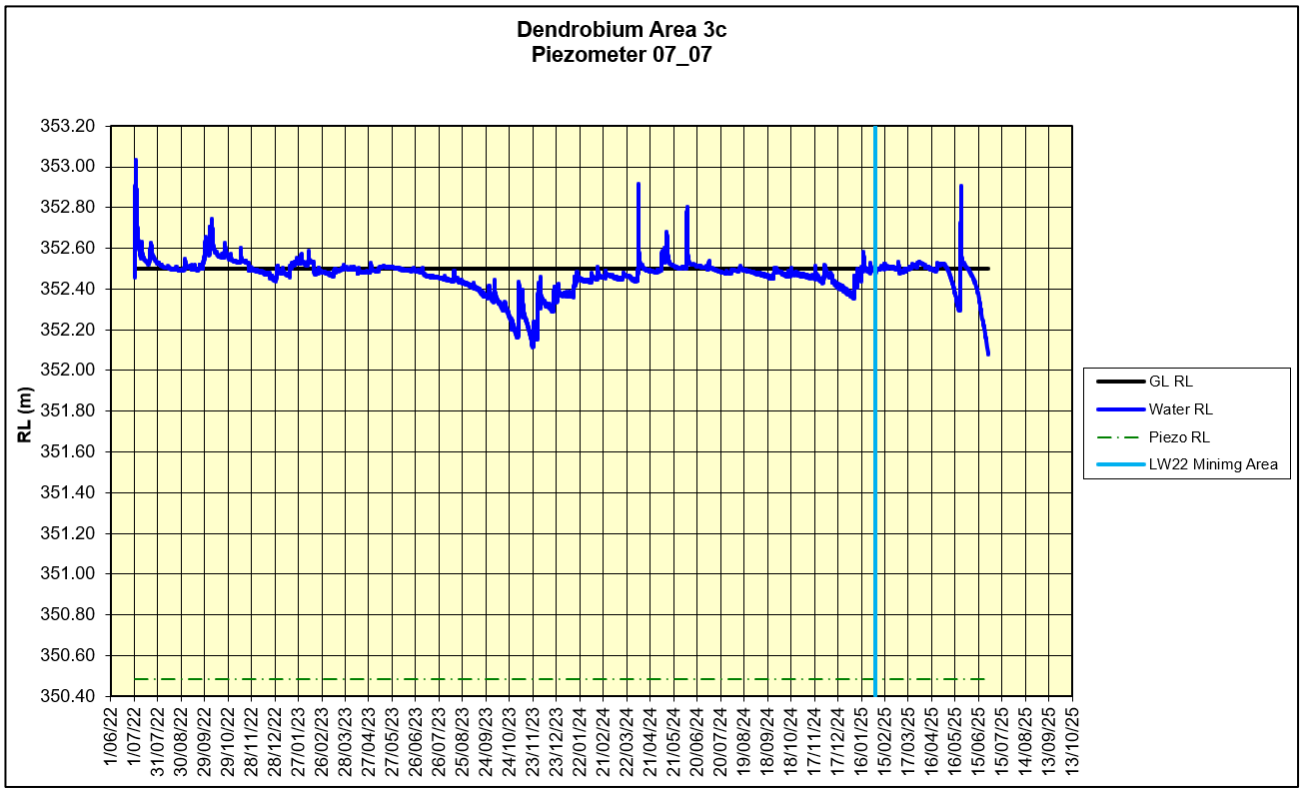
1.2 Triggers

Triggers outlined in the Longwall 22 and 23 Swamp Impact, Monitoring, Management and Contingency Plan (SIMMCP) and Watercourse Impact, Monitoring, Management and Contingency Plan (WIMMCP) include assessment of monitoring data that can be reported by the EFT in a timely manner. Assessment of the influence of climatic conditions and comparisons to reference features occur subsequent to this reporting trigger, typically as part of the End of Panel Report.

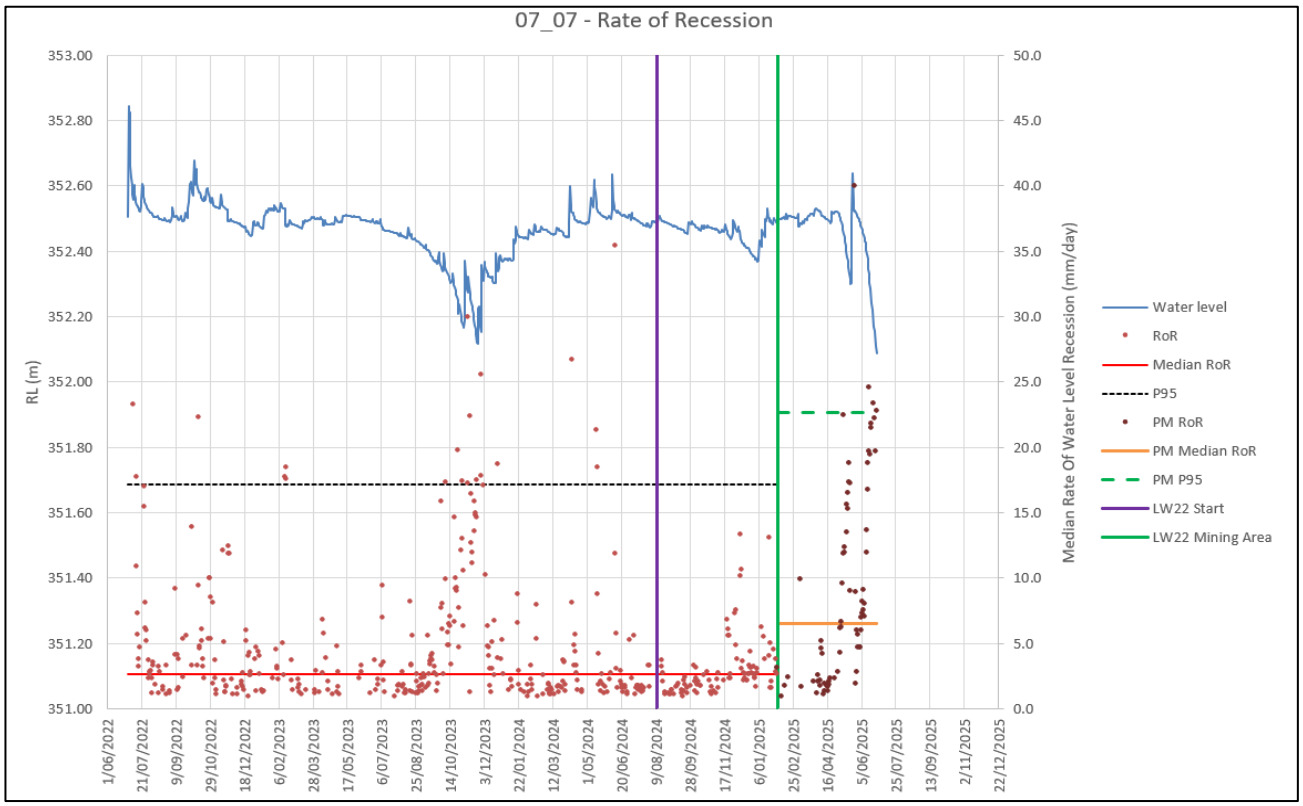
Swamp 07

Piezometer *07_07* is located 65m north of Longwall 22, measured at the closest point (Figure 1). Monitoring at site *07_07* commenced in July 2022, the site entered the Longwall 22 mining area on 3 February 2025 and was outside the mining area from 16 June 2025. Recent analysis of Swamp 7 groundwater data identified that water level at the piezometer dropped below the lowest level recorded in the baseline period (Graph 1) and the rate of water level recession at the site exceeded the baseline rate by 32.1% (Graph 2). This observation constitutes a Level 2 trigger according to the Longwalls 22 and 23 SIMMCP (Table 7), specifically:

- Groundwater or soil moisture level lower than baseline level at any monitoring site within the swamp; and
- Rate of groundwater level recession exceeds rate of groundwater level recession by >20 to 50% during baseline period at any monitoring site within the swamp (measured as average mm/day during the recession curve and where the 95%ile of pre- and post-mining recession rates are used for comparison).



Graph 1: Groundwater records at 07_07, logged hourly. Date range: 01/07/2022 to 27/06/2025.



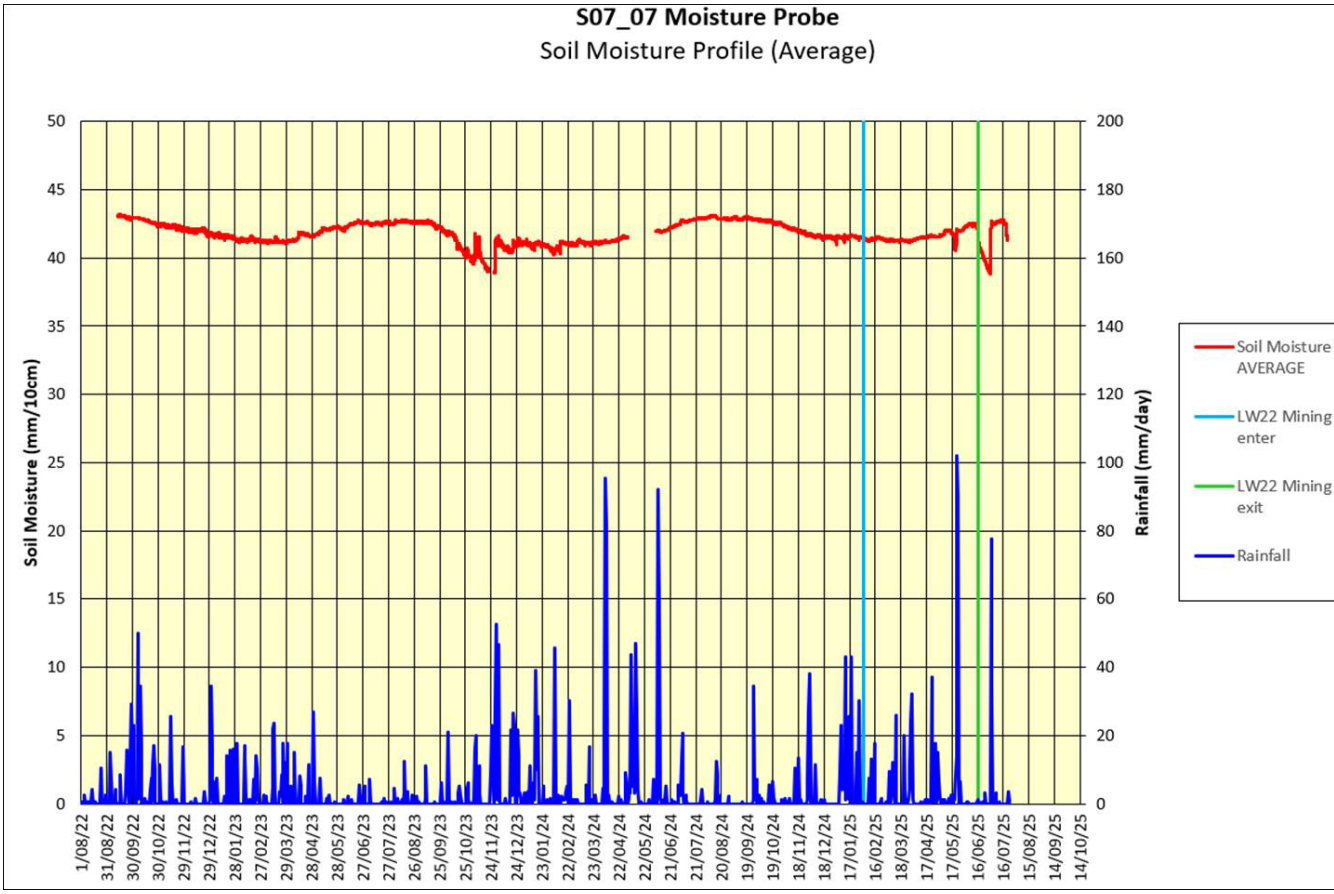
Graph 2: Rate of Recession records at 07_07. Date range 01/07/2022 to 27/06/2025.

Swamp 07

Soil moisture monitoring site *S07_07* is located approximately 70 m north of Longwall 22 and was passed by the longwall on 6 April 2025. The site entered the Longwall 22, 400m mining area on 3 February 2025 and exited the area on 16 June 2025. Recent analysis of soil moisture data identified that the average soil moisture at the site dropped below the lowest level recorded during the baseline period (Graph 3), thus contributing to Level 2 trigger as per the Longwalls 22 and 23 Swamp Impact, Monitoring, Management and Contingency Plan (SIMMCP) (Table 7), specifically:

> Level 2: Groundwater or soil moisture level lower than baseline level at any monitoring site within the swamp.

The soil moisture records recovered to above the baseline lowest levels following a rainfall event on 2 and 3 July 2025.



Graph 3: Soil moisture records at S07_07, logged hourly. Date range: 13/09/2022 to 21/07/2025.

2. Summary of Impacts and Triggers

Table 1: Summary of impacts and triggers recorded during the reporting period.

Site ID	Identification Date	Type	Trigger Level	Description
DA3C_LW22_063	2/06/2025	Rock Fracturing	1	Rock fracturing on outcrop over Longwall 22.
DA3C_LW22_064	2/06/2025	Rock Fracturing	1	Rock fracturing and fragmentation on rock outcrop over Longwall 22.
DA3C_LW22_065	10/06/2025	Rock Fracturing	2	Rock fracturing on LC5_Rockbar11.
DA3C_LW22_066	10/06/2025	Rock Fracturing	1	Rock fracturing, rock movement and soil cracking on/near an outcrop over Longwall 22.
DA3C_LW22_067	10/06/2025	Rock Fracturing	2	Rock fracturing to an outcrop over Longwall 22.
DA3C_LW22_068	10/06/2025	Rock Movement	1	Movement of soil away from rock outcrop over Longwall 22.
DA3C_LW22_069	16/06/2025	Rock Movement	1	Movement of soil away from rock outcrop over Longwall 22.
DA3C_LW22_070	16/06/2025	Rock Movement	1	Movement of soil away from rock outcrop over Longwall 22.
DA3C_LW22_071	23/06/2025	Rock Movement	1	Movement of soil away from rock outcrop over Longwall 22.
DA3C_LW22_072	23/06/2025	Rock Movement	1	Movement of soil away from rock outcrop over Longwall 22.
DA3C_LW22_073	30/06/2025	Rock Fracture	1	Rock fracturing across LC5_Channel7.
DA3C_LW22_074	30/06/2025	Rock Fracture	1	Rock fracturing to a step over Longwall 22.
DA3C_LW22_075	30/06/2025	Rock Fracture	1	Rock fracturing to a step over Longwall 22.
DA3C_LW22_076	30/06/2025	Iron Staining	1	Iron staining that originated in bushland flowing to LC6.
DA3C_LW22_008 (Update)	13/11/2024, 30/06/2025	Iron Staining	2	Increased iron staining in LC6.
07_07	30/06/2025	Groundwater Level	2	Groundwater level lower than baseline level and recession greater than baseline level.
DA3C_LW22_077	15/07/2025	Soil Cracking	1	Soil cracking in bushland over Longwall 22.
DA3C_LW22_078	15/07/2025	Rock Fracturing	1	Two rock fractures to an outcrop over Longwall 22.
DA3C_LW22_079	15/07/2025	Soil Cracking	1	Soil cracking along powerline easement over Longwall 22.

Site ID	Identification Date	Type	Trigger Level	Description
DA3C_LW22_080	15/07/2025	Rock Fracturing, Soil Cracking and associated Uplift	1	Rock fracturing, soil cracking and associated uplift on/near rock outcrop over Longwall 22.
DA3C_LW22_081	15/07/2025	Soil Cracking and Rock Fracturing	1	Soil cracking and rock fracturing along powerline easement over Longwall 22.
DA3C_LW22_082	22/07/2025	Soil Cracking, Rock Fracturing and associated uplift	1	Soil cracking, rock fracturing and associated uplift along powerline easement over Longwall 22.
DA3C_LW22_083	22/07/2025	Soil Cracking and associated uplift	1	Soil cracking and associated uplift along powerline easement over Longwall 22.
S07_07	22/07/2025	Soil Moisture	2	Soil Moisture level lower than baseline level.
DA3C_LW22_084	29/07/2025	Soil Cracking	2	Multiple soil cracks along Fire Road 6F over Longwall 22.
DA3C_LW22_085	18/08/2025	Rock Fracture	2	Singular rock fracture to a rock outcrop over Longwall 22.
DA3C_LW22_086	18/08/2025	Rock Displacement/ Rock Fracture	2	Rock displacement extending into a rock fracture on a rock outcrop over Longwall 22.
DA3C_LW22_087	18/08/2025	Soil Cracking	2	Soil cracking in bushland over Longwall 22.
DA3C_LW22_088	18/08/2025	Rock Fracture	2	Singular hairline rock fracture to a rock outcrop over Longwall 22.
DA3C_LW22_089	2/09/2025	Soil Cracking	1	Soil crack on vehicle access track adjacent to Fire Road 6F over Longwall 22.
DA3C_LW22_090	2/09/2025	Soil Cracking	1	Soil crack on Fire Road 6F over Longwall 22.
DA3C_LW22_091	2/09/2025	Rock Fracture	2	Rock fracture on rock outcrop and bushland over Longwall 22.
DA3C_LW22_092	2/09/2025	Rock Fracture	2	Rock fracture on a rock outcrop over Longwall 22.
DA3C_LW22_093	2/09/2025	Soil Cracking	1	Multiple soil cracks on vehicle access track over Longwall 22.
DA3C_LW22_094	2/09/2025	Rock Fracture	1	Rock fracture on a rock outcrop over Longwall 22.
DA3C_LW22_095	18/09/2025	Rock Fracture	1	Rock fracture beneath rock overhang over Longwall 22.
DA3C_LW22_096	18/09/2025	Rock Fall	1	Rock fall beneath rock overhang over Longwall 22.
DA3C_LW22_097	18/09/2025	Rock Fracture	2	Rock fracture on rock outcrop over Longwall 22.

Site ID	Identification Date	Type	Trigger Level	Description
DA3C_LW22_098	23/09/2025	Soil Cracking	1	Multiple soil cracks on a vehicle access track over Longwall 22.
DA3C_LW22_099	23/09/2025	Rock Fracture	2	Rock fracturing on a rock outcrop over Longwall 22.
DA3C_LW22_100	23/09/2025	Soil Cracking	1	Multiple soil cracks on a access track over Longwall 22.
DA3C_LW22_101	23/09/2025	Soil Cracking	1	Multiple soil cracks on a access track over Longwall 22.

3. Subsidence Impact Performance Measures

Table 2: Performance measures for Longwall 22 and 23.

Longwall 22 and 23		
Performance Measure		**Result**
Swamp 09, 144, 145 and 154	Minor environmental consequences including: • negligible erosion of the surface of the swamp; • minor changes to the hydrology of the swamp; • minor changes in the size of the swamp; • minor changes in the ecosystem functionality of the swamp; • maintenance or restoration of the structural integrity of the bedrock base of any significant permanent pool or controlling rockbar within the swamp.	This performance measure has been met to date. A detailed analysis of swamps, including assessments against performance measures, will be included in the Longwall 22 End of Panel Report. The need for an ecological survey will be assessed at this time.

Wongawilli Creek	Minor impacts and minor environmental consequences including: • minor fracturing, gas release and iron staining; and • minor impacts on water flows, water levels and water quality.	This performance measure has been met to date. A detailed analysis of Wongawilli Creek, including assessment against performance measures, will be included in the Longwall 22 End of Panel Report.

4. Actions taken to Address TARP Levels 2 and 3 or those Exceeding Predictions

During the reporting period, fourteen Level 2 TARPs were recorded and are in line with the predicted subsidence effects. An updated stakeholder consultation process has been undertaken since March 2023. In accordance with Schedule 2, Condition 4 of the Dendrobium Consent DA60-03-2001, the Planning Secretary requires GM[3] include the following information in all subsidence impact reports (SIRs):

- A summary of consultation undertaken in relation to the subsidence impact report;
- A summary of the comments received during consultation; and
- A summary of the actions taken by ICH in response to comments received during consultation.

This requires distribution of the SIRs to stakeholders including WaterNSW, BCS, Resources Regulator and the Department via email. Consultation is then undertaken with stakeholders and included in a revised SIR in accordance with the above requirement. The revised SIR is then uploaded to the Major Projects Planning Portal. As at the date of this Four-monthly Report, consultation for SIRs within this reporting period is still being undertaken. A summary of actions taken is provided in Table 3.

Table 3: Actions taken to address TARP Level 2 during the reporting period.

Site ID	Identification Date	Type	Trigger Level	Description	Actions Taken
DA3C_LW22_065	10/06/2025	Rock Fracturing	2	Rock fracturing on LC5_Rockbar11	GM³ will continue monitoring and reporting in line with relevant management plans. GM³ will reassess the site following the completion of Longwall 22. An update will be included in the LW22 End of Panel Report (EoP).
DA3C_LW22_067	10/06/2025	Rock Fracturing	2	Rock fracturing to an outcrop over Longwall 22.	GM³ will continue monitoring and reporting in line with relevant management plans. GM³ will reassess the site following the completion of Longwall 22. An update will be included in the LW22 End of Panel Report (EoP).
DA3C_LW22_008	13/11/2024, 30/06/2025	Iron Staining	2	Increased iron staining in LC6.	GM³ will continue monitoring and reporting in line with relevant management plans. GM³ will reassess the site following the completion of Longwall 22. An update will be included in the LW22 End of Panel Report (EoP).
07_07	30/06/2025	Groundwater Level	2	Groundwater level lower than baseline level and recession greater than baseline level.	GM3 will continue monitoring and reporting in line with relevant management plans. The Swamp 07 performance measure will be assessed as part of the LW22 EoP Report (Also recommended by technical specialist HGEO) and again following a year of average (or above) rainfall. The need for an ecological survey will be reviewed at this time.

Site ID	Identification Date	Type	Trigger Level	Description	Actions Taken
S07_07	22/07/2025	Soil Moisture	2	Soil Moisture level lower than baseline level.	GM3 will continue monitoring and reporting in line with relevant management plans. The Swamp 07 performance measure will be assessed as part of the LW22 EoP Report (Also recommended by technical specialist HGEO) and again following a year of average (or above) rainfall. The need for an ecological survey will be reviewed at this time.
DA3C_LW22_084	29/07/2025	Soil Cracking	2	Multiple soil cracks across Fire Road 6F.	GM³ will continue monitoring and reporting in line with relevant management plans. Rehabilitation will be undertaken soon. Rehabilitation has been postponed due to extended catchment closures. WaterNSW will be informed when this is completed. GM³ will reassess the site following the completion of Longwall 22. An update will be included in the LW22 End of Panel Report (EoP).
DA3C_LW22_085	18/08/2025	Rock Fracture	2	Singular rock fracture to a rock outcrop.	GM³ will continue monitoring and reporting in line with relevant management plans. GM³ will reassess the site following the completion of Longwall 22. An update will be included in the LW22 End of Panel Report (EoP).
DA3C_LW22_086	18/08/2025	Rock Displacement/ Rock Fracture	2	Rock displacement extending into a rock fracture on a rock outcrop.	GM³ will continue monitoring and reporting in line with relevant management plans. GM³ will reassess the site following the completion of Longwall 22. An update will be included in the LW22 End of Panel Report (EoP).

Site ID	Identification Date	Type	Trigger Level	Description	Actions Taken
DA3C_LW22_087	18/08/2025	Soil Cracking	2	Soil cracking in bushland.	GM³ will continue monitoring and reporting in line with relevant management plans. GM³ will reassess the site following the completion of Longwall 22. An update will be included in the LW22 End of Panel Report (EoP).
DA3C_LW22_088	18/08/2025	Rock Fracture	2	Singular hairline rock fracture to a rock outcrop.	GM³ will continue monitoring and reporting in line with relevant management plans. GM³ will reassess the site following the completion of Longwall 22. An update will be included in the LW22 End of Panel Report (EoP).
DA3C_LW22_091	2/09/2025	Rock Fracture	2	Rock fracture with associated rock movement and soil crack on rock outcrop and bushland.	GM³ will continue monitoring and reporting in line with relevant management plans. GM³ will reassess the site following the completion of Longwall 22. An update will be included in the LW22 End of Panel Report (EoP).
DA3C_LW22_092	2/09/2025	Rock Fracture	2	Rock fracture on a rock outcrop.	GM³ will continue monitoring and reporting in line with relevant management plans. GM³ will reassess the site following the completion of Longwall 22. An update will be included in the LW22 End of Panel Report (EoP).
DA3C_LW22_097	18/09/2025	Rock Fracture	2	Rock fracture on rock outcrop, with associated hairline fractures	GM³ will continue monitoring and reporting in line with relevant management plans. GM³ will reassess the site following the completion of Longwall 22. An update will be included in the LW22 End of Panel Report (EoP).

Site ID	Identification Date	Type	Trigger Level	Description	Actions Taken
DA3C_LW22_099	23/09/2025	Rock Fracture	2	Rock fracturing on a rock outcrop.	GM³ will continue monitoring and reporting in line with relevant management plans. GM³ will reassess the site following the completion of Longwall 22. An update will be included in the LW22 End of Panel Report (EoP).

A full summary of consultation and actions taken will be included in the Longwall 22 End of Panel Report.

5. Mining Seam Height Summary

Table 4: Monthly maximum mining seam heights for reporting period.

	June 2025	July 2025	August 2025	September 2025
Maximum Mining Height (m)	3.9	3.9	3.9	3.9

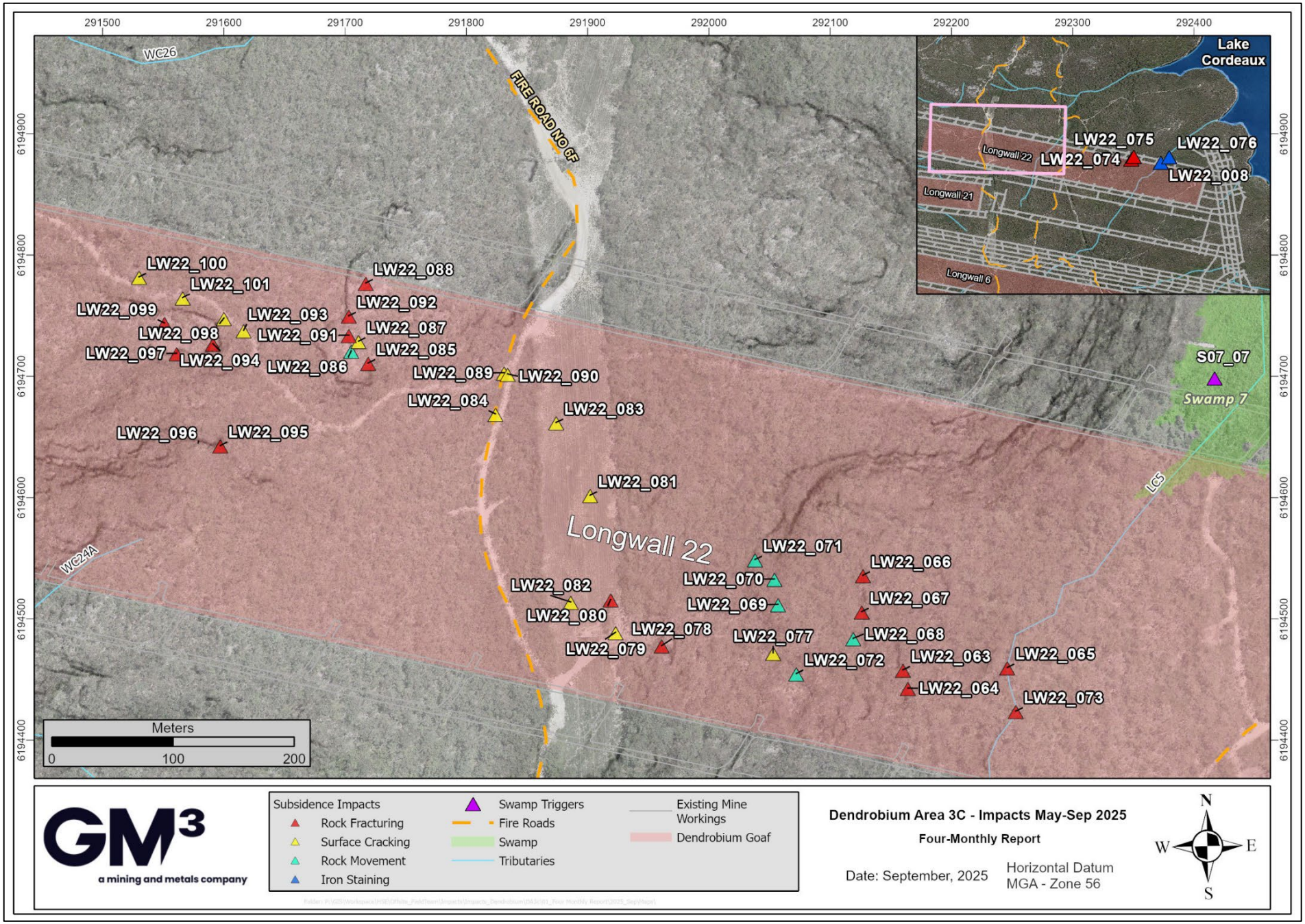


Figure 1: DA3C Longwall subsidence impacts and triggers recorded during the reporting period.

Table 5: Dendrobium Area 3C Landscape Impacts, Triggers and Response.

Landscape Feature	Reporting Trigger	Trigger Response
AREA 3C* **Cliffs** All mapped cliff sites in active mining area **Steep Slopes** Steep slopes in active mining area **Fire Trails** All fire trails and access tracks active mining area ** Refer to Figure 3-7*	***Level 1*** • Rock fall from a cliff which is left mostly intact (<10% length), resulting in insignificant ground disturbance • Surface movement or rock displacement with negligible soil surface exposed • Crack at the surface, which should not result in any significant erosion or impede access • Crack or fracture up to 100mm width • Crack or fracture up to 10m length • Erosion in a localised area which could be expected to naturally stabilise without CMA and within the period of monitoring	• Continue monitoring program • Report impacts to key stakeholders • Summarise actions and report in the End of Panel Report and Annual Review
	Level 2 • Rock fall or overhang collapse at a cliff site, where characteristics of the cliff have changed, and there has been significant ground disturbance • Surface movement or rock displacement that has exposed significant areas of soil • A crack at the surface, which could result in significant erosion or movement at the surface • A crack at the surface with potential risk to safety and/or fauna entrapment • A crack in the fire trail, which could result in significant erosion or impede vehicle access • Crack or fracture between 100 and 300mm width • Crack or fracture between 10 and 50m length • Significant erosion at any location, which is not likely to naturally stabilise within the period of monitoring, or is located in a sensitive area e.g. swamps, creek, lake shore, and may result in increased sediment transport to Cordeaux Dam or has been previously identified as Level 1, but is not likely to naturally stabilise within the monitoring period	• *Actions as stated for Level 1* • Review monitoring frequency • Notify technical specialists and seek advice on any CMA required • Provide safety signage and barricades as appropriate • Implement approved repairs to ensure safety and serviceability on fire trails • Implement agreed CMAs as approved (subject to agency feedback) *Note: CMAs are to be proposed based on appropriate management of environmental and other consequence of impacts i.e. cracking at the surface with insignificant consequences may not require specific CMAs other than ongoing monitoring to confirm there are no ongoing impacts*
	Level 3 • Major cliff collapse where the characteristics of the cliff change significantly and there is significant ground disturbance that is unlikely to naturally stabilise within the monitoring period • Crack or fracture over 300 mm width • Crack or fracture over 50 m length • Mass movement of a slope causing large areas of exposed soil with potential for further movement	• *Actions as stated for Level 2* • Immediately notify key stakeholders and relevant technical specialists and seek advice on any CMA required • Site visits with stakeholders if required

Note: "Key Stakeholders" include DPE, WaterNSW, the Biodiversity Conservation Division of BCS (BCD) and Resources Regulator and/or their Successor Agencies.

Table 6: Dendrobium Longwalls 22 And 23 Watercourse Impact, Monitoring, Management and Contingency Plan TARP.

OBSERVATIONAL MONITORING		
Wongawilli Creek *Primary Monitoring Site* **Relevant Performance Measure(s):** • Wongawilli Creek - minor environmental consequences General observation of streams in active mining areas when longwall is within 400m	***Level 1*** • Crack or fracture up to 100mm width at its widest point with no observable loss of surface water or erosion • Crack or fracture up to 10m length with no observable loss of surface water or erosion • Erosion in a localised area (not associated with cracking or fracturing) which would be expected to naturally stabilise without CMA and within the period of monitoring • Observable release of strata gas at the surface • Observable increase in iron staining within the mining area • Observation that a pool on a subject Creek is dry • Observation that the subject Creek has ceased to flow	• Continue monitoring program • Submit an Impact Report to key stakeholders • Report in the End of Panel Report • Summarise actions and monitoring in Annual Review
	Level 2 • Observation that a single pool on a subject Creek is dry in consecutive monitoring events • Observation that two or more pools on a subject Creek are dry in a single monitoring event • Observation that the subject Creek has ceased to flow in consecutive monitoring event • Crack or fracture between 100 and 300mm width at its widest point or any fracture which results in observable loss of surface water or erosion • Crack or fracture between 10 and 50m length • Soil surface crack that causes erosion that is likely to stabilise within the monitoring period without intervention • Observable increase in iron staining within the mining area continues to outside the mining area i.e. 400m from the longwall	• *Actions as stated for Level 1* • Carry out Water Flow Assessment Method D • Review monitoring frequency • Seek advice from key stakeholders on any CMA required • Implement agreed CMAs as approved (subject to agency feedback)
	• Level 3 • Crack or fracture over 300mm width at its widest point • Crack or fracture over 50m length • Fracturing observed in the bedrock base of any significant permanent pool which results in observable loss of surface water • Soil surface crack that causes erosion that is unlikely to stabilise within the monitoring period without intervention	• *Actions as stated for Level 2* • Offer site visit with key stakeholders • Implement additional monitoring or increase frequency if required • Develop site CMA (subject to agency feedback). This may include: grouting of rockbar and bedrock base of any significant pool where it is appropriate to do so in consultation with key stakeholders

	• Gas release results in vegetation dieback, mortality or loss of aquatic habitat • Observable increase in iron staining within the mining area continues more than 600m from the longwall	• Completion of works following approvals and at a time agreed between IMC, DPE and WaterNSW (i.e. may be after mining induced movements and impacts are complete), including monitoring and reporting on success • Review relevant TARP and Management Plan in consultation with key agencies
	Exceeding Prediction • Structural integrity of the bedrock base of any significant permanent pool or controlling rockbar cannot be restored i.e. pool water level within the pool after CMAs continues to be lower than baseline period • Gas release results in vegetation dieback that does not revegetate • Gas release results in mortality of threatened species or ongoing loss of aquatic habitat • Iron staining and associated increases in dissolved iron resulting from the mining is observed in water at the Donalds Castle Creek downstream monitoring site Donalds Castle Creek (FR6) • Iron staining and associated increases in dissolved iron resulting from the mining is observed in water at Wongawilli Creek downstream monitoring site Wongawilli Creek (FR6)	• *Actions as stated for Level 3* • Investigate reasons for the exceedance • Update future predictions based on the outcomes of the investigation • Provide residual environmental offset for any mining impact where CMAs are unsuccessful as required by Condition 14 Schedule 3 of the Development Consent
WC20, WC21, WC24, WC24A, WC26, WC26A, WC28, LC5, LC5A, LC5B, LC6, LC7, LC8, LC9 and CR36 *Secondary Monitoring Sites* General observation of streams in active mining areas when longwall is within 400m	***Level 1*** • Crack or fracture up to 100mm width at its widest point with no observable loss of surface water or erosion • Crack or fracture up to 10m length with no observable loss of surface water or erosion • Erosion in a localised area (not associated with cracking or fracturing) which would be expected to naturally stabilise without CMA and within the period of monitoring • Observable release of strata gas at the surface • Observable increase in iron staining within the mining area	• Continue monitoring program • Submit an Impact Report to key stakeholders • Report in the End of Panel Report • Summarise actions and monitoring in Annual Review
	Level 2 • Crack or fracture between 100 and 300mm width at its widest point or any fracture which results in observable loss of surface water or erosion • Crack or fracture between 10 and 50m length • Soil surface crack that causes erosion that is likely to stabilise within the monitoring period without intervention • Observable increase in iron staining within the mining area continues to outside the mining area i.e. 400m from the longwall	• *Actions as stated for Level 1* • Review monitoring frequency • Seek advice from key stakeholders on any CMA required • Implement agreed CMAs as approved (subject to agency feedback)
	Level 3	• *Actions as stated for Level 2*

	• Crack or fracture over 300mm width at its widest point • Crack or fracture over 50m length • Fracturing observed in the bedrock base of any significant permanent pool which results in observable loss of surface water • Soil surface crack that causes erosion that is unlikely to stabilise within the monitoring period without intervention • Gas release results in vegetation dieback, mortality or loss of aquatic habitat • Observable increase in iron staining within the mining area continues more than 600m from the longwall	• Offer site visit with key stakeholders • Implement additional monitoring or increase frequency if required • Develop site CMA (subject to agency feedback). This may include: grouting of rockbar and bedrock base of any significant pool where it is appropriate to do so in consultation with BCD, DPE, Resources Regulator and WaterNSW • Completion of works following approvals and at a time agreed between IMC and relevant stakeholders (i.e. may be after mining induced movements and impacts are complete), including monitoring and reporting on success • Review relevant TARP and Management Plan in consultation with key agencies
WATER QUALITY		
Wongawilli Creek *Primary Monitoring Site* **Relevant Performance Measure(s):** • Wongawilli Creek - minor environmental consequences Wongawilli Creek (FR6) Baseline means: • pH 5.98 • EC 98.8 uS/cm • DO 89.5%	***Level 1*** • One exceedance of the ±3 standard deviation level (positive for EC, negative for pH and DO) from the baseline mean within six months: – pH 4.45 – EC 154.1 uS/cm – DO 50.5%	• Continue monitoring program • Submit an Impact Report to key stakeholders • Report in the End of Panel Report • Summarise actions and monitoring in Annual Review
	Level 2 • Two non-consecutive exceedances of the ±3 standard deviation level (positive for EC, negative for pH and DO) from the baseline mean within six months: – pH 4.45 – EC 154.1 uS/cm – DO 50.5%	• *Actions as stated for Level 1* • Review monitoring frequency • Seek advice from key stakeholders on any CMA required • Implement agreed CMAs as approved (subject to agency feedback)
	Level 3 • Three exceedances of the ±3 standard deviation level (positive for EC, negative for pH and DO) from the baseline mean within six months: – pH 4.45 – EC 154.1 uS/cm – DO 50.5%	• *Actions as stated for Level 2* • Offer site visit with key stakeholders • Implement additional monitoring or increase frequency if required • Review relevant TARP and Management Plan in consultation with key agencies • Develop site CMA (subject to agency feedback). This may include: • Limestone emplacement to raise pH where it is appropriate to do so • Completion of works following approvals and at a time agreed between IMC and relevant stakeholders (i.e. may be after mining induced movements and impacts are complete), including monitoring and reporting on success
	Exceeding Prediction	• *Actions as stated for Level 3*

	• Mining results in two consecutive exceedances or three exceedances of the ±3 standard deviation level (positive for EC, negative for pH and DO) from the baseline mean within six months: – pH 4.45 – EC 154.1 uS/cm – DO 50.5%	• Investigate reasons for the exceedance • Update future predictions based on the outcomes of the investigation • Provide residual environmental offset for any mining impact where CMAs are unsuccessful as required by Condition 14 Schedule 3 of the Development Consent
Lake Cordeaux *Primary Monitoring Site* **Relevant Consent Condition(s):** • Lake Cordeaux - negligible reduction in the quality of surface water inflows to Lake Cordeaux LC5_S1 LC6_Rockbar 1 Baseline means*: *LC5_S1* • pH 5.54 • EC 102.4 uS/cm • DO 93.6% *LC6_Rockbar 1* • pH 5.1 • EC 97.2 uS/cm • DO 94.1% * *Baseline end date for LC5_S1 is 24/04/2023. LC6_Rockbar 1 is still in the baseline period at time of writing. The baseline mean values for LC6_Rockbar 1 may be recalculated prior to mining to capture additional data.*	***Level 1*** • One exceedance of the ±3 standard deviation level (positive for EC, negative for pH and DO) from the baseline mean within six months: **LC5_S1** – pH 4.16 – EC 254.9 uS/cm – DO 61.2% **LC6_Rockbar 1** – pH 4.3 – EC 161.8 uS/cm – DO 36.2%	• Continue monitoring program • Submit an Impact Report to key stakeholders • Report in the End of Panel Report • Summarise actions and monitoring in Annual Review
	Level 2 • Two non-consecutive exceedances of the ±3 standard deviation level (positive for EC, negative for pH and DO) from the baseline mean within six months: **LC5_S1** – pH 4.16 – EC 254.9 uS/cm – DO 61.2% **LC6_Rockbar 1** – pH 4.30 – EC 161.8 uS/cm – DO 36.2%	• *Actions as stated for Level 1* • Review monitoring frequency • Seek advice from key stakeholders on any CMA required • Implement agreed CMAs as approved (subject to agency feedback)
	Level 3 • Three exceedances of the ±3 standard deviation level (positive for EC, negative for pH and DO) from the baseline mean within six months:	• *Actions as stated for Level 2* • Offer site visit with key stakeholders • Implement additional monitoring or increase frequency if required

	LC5_S1 – pH 4.16 – EC 254.9 uS/cm – DO 61.2% **LC6_Rockbar 1** – pH 4.30 – EC 161.8 uS/cm – DO 36.2%	• Review relevant TARP and Management Plan in consultation with key agencies • Collect laboratory samples and analyse for: – pH, EC, major cations, major anions, Total Fe, Mn & Al – Filterable suite of metals • Develop site CMA (subject to agency feedback). This may include: – Limestone emplacement to raise pH where it is appropriate to do so – Grouting of fractures in rockbar and bedrock base of any significant pool where flow diversion results in pool water level lower than baseline period • Completion of works following approvals and at a time agreed between IMC and relevant stakeholders (i.e. may be after mining induced movements and impacts are complete), including monitoring and reporting on success
	Exceeding Prediction • Mining results in two consecutive exceedances or three exceedances of the ±3 standard deviation level (positive for EC, negative for pH and DO) from the baseline mean within six months (noting that LC5_S1 and LC6_Rockbar 1 are upstream of the confluence of the dam as safe access to the confluence is not available and therefore supplementary sampling will be conducted in the dam within proximity to the confluence): **LC5_S1** – pH 4.16 – EC 254.9 uS/cm – DO 61.2% **LC6_Rockbar 1** – pH 4.30 – EC 161.8 uS/cm – DO 36.2%	• *Actions as stated for Level 3* • Investigate reasons for the exceedance • Update future predictions based on the outcomes of the investigation • Provide residual environmental offset for any mining impact where CMAs are unsuccessful as required by Condition 14 Schedule 3 of the Development Consent
POOL WATER LEVEL		
Wongawilli Creek *Primary Monitoring Sites*	***Level 1*** • Single pool on a subject Creek is observed as dry. • End of Panel assessment indicates that up to three (i.e. 1-3) Subject Pools exhibit one or more of the following effects:	• Continue monitoring program • Carry out Water Flow Assessment Method D (i.e. comparison of apparent flow losses vs groundwater modelling) • Submit Impact Report to key stakeholders

Relevant Performance Measure(s): • Wongawilli Creek - minor environmental consequences "Subject Pools" = Area 3C Wongawilli Ck Pool sites with a level logger and within 600 m of an Area 3C longwall (this deliberately includes two sites closer to Areas 3A/3B). These are symbolised as 'Performance Measure Water Level Logger Site' on Figure 3.1 in the WIMMCP.	○ **1)** Pool water level below lowest baseline level; or ○ **2)** Pool level ratio, comparing Assessment site level each day with that at each nominated Reference Pool, is significantly different between pre- and post-mining periods; or ○ **3)** Pool level is at or below baseline level for increased duration (+5% of the relevant period) compared to Reference Pool(s); or ○ **4)** Rate of pool level recession (outside initial flood peak#) exceeds rate of pool level recession during baseline period (measured as average mm/day during the recession curve).	• Report in the End of Panel Report • Summarise actions and monitoring in Annual Review
	Level 2 • Single pool on a subject Creek is observed as dry in consecutive monitoring events • Two or more pools on a subject Creek are observed as dry in a single monitoring event • End of Panel assessment indicates that up to six (i.e. 4-6) Subject Pools exhibit one or more of the following effects: ○ **1)** Pool water level below lowest baseline level; or ○ **2)** Pool level ratio, when compared with Reference Pool(s), is significantly* different between pre- and post-mining periods; or ○ **3)** Pool level is at or below baseline level for increased duration (+5% of the relevant period) compared to Reference Pool(s); or ○ **4)** Rate of pool level recession (outside initial flood peak#) exceeds rate of pool level recession during baseline period (measured as average mm/day during the recession curve).	• *Actions as stated for Level 1* • Review monitoring frequency • Seek advice from key stakeholders on any CMA required • Implement agreed CMAs as approved (subject to agency feedback)
	Level 3 • Fracturing resulting in diversion of flow such that <10% of the pools have water levels lower than baseline period • End of Panel assessment indicates that 7 or more Subject Pools exhibit one or more of the following effects: ○ Effects 1, 2, 3, 4, as per Level 1 and 2 (above).	• *Actions as stated for Level 2* • Offer site visit with key stakeholders • Implement additional monitoring or increase frequency if required • Review relevant TARP and Management Plan in consultation with key agencies • Develop site CMA (subject to agency feedback). This may include: grouting of rockbar and bedrock base of any significant pool where it is appropriate to do so in consultation with key stakeholders • Completion of works following approvals and at a time agreed between IMC and relevant stakeholders (i.e. may be after mining induced

		movements and impacts are complete), including monitoring and reporting on success
	Exceeding Prediction • Fracturing resulting in diversion of flow such that >10% of the pools have water levels lower than baseline period • Result of **Assessment D** indicates that actual flow losses on Subject Creek exceed those simulated by contemporary groundwater modelling.	• *Actions as stated for Level 3* • Investigate reasons for the exceedance • Update future predictions based on the outcomes of the investigation • Provide residual environmental offset for any mining impact where CMAs are unsuccessful as required by Condition 14 Schedule 3 of the Development Consent
SURFACE WATER FLOW		
Wongawilli Creek, Lake Cordeaux and Cordeaux River *Primary Monitoring Sites* **Relevant Performance Measure(s):** • Wongawilli Creek - minor environmental consequences **Relevant Consent Condition(s)** • Lake Cordeaux - negligible reduction in the quantity of surface water inflows to Lake Cordeaux[1] • Cordeaux River - negligible reduction in the quantity of surface water inflow to the Cordeaux River at its confluence with Wongawilli Creek[2] **Surface Water Flow Reference Sites** (as in Table 1.1): • Wongawilli Creek - WWU (Wongawilli Creek upstream); • WC11S1 • O'Hares Creek at Wedderburn (213200); • (other such sites, if necessary, include Woronora River 2132101 and Bomaderry Creek 215016)	***Level 1*** • A) Lower flow than expected (additional 10-15% of days where Q% lower than Reference Q%) • B) 5-10% increase in cease-to-flow frequency beyond natural) • C) Reduction in Q50 (10-15% beyond natural)	• Continue monitoring program • Submit an Impact Report to key stakeholders • Report in the End of Panel Report • Summarise actions and monitoring in Annual Review
	Level 2 • A) Lower flow than expected (additional 15-20% of days where Q% lower than Reference Q%). • B) 10-20% increase in cease-to-flow frequency (beyond natural) • C) 15-20% reduction in Q50 (beyond natural) • D) Observation that the subject Creek has ceased to flow at spatially consecutive monitoring sites.	• *Actions as stated for Level 1* • Review monitoring frequency • D) → carry out Water Flow Assessment Method D • Seek advice from key stakeholders on any CMA required • Implement agreed CMAs as approved (subject to agency feedback)
	Level 3 • A) Lower flow than expected (additional >20% of days where Q% lower than Reference Q%) • B) >20% increase in cease-to-flow frequency (beyond natural) • C) >20% reduction in Q50 (beyond natural)	• *Actions as stated for Level 2* • Offer site visit with key stakeholders • Implement additional monitoring or increase frequency if required • Develop site CMA (subject to agency feedback). This may include: grouting of rockbar and bedrock base of any significant pool where it is appropriate to do so in consultation with key stakeholders • Completion of works following approvals and at a time agreed between IMC and relevant stakeholders (i.e. may be after mining induced movements and impacts are complete), including monitoring and reporting on success • Review relevant TARP and Management Plan in consultation with key agencies
	Exceeding Prediction	• *Actions as stated for Level 3*

[1] Surface water inflows calculation = [Impacts at gauged catchments (SCL2) + LCS + LC6 + estimated impacts at ungauged but undermined catchments] / [total estimated inflow to LC].
[2] Flow reduction as determined from measured at flow gauging station WWL_A.

NB. This section of the TARP contains four Water Flow Assessment Methods A-D. A step by step calculation procedure is detailed in Appendix F of the WIMMCP. Hydrological changes are assessed by comparing pre- and post-mining observed flows from impact or assessment sites to flow data from the reference sites. *Natural variability ('NV') will be defined as the 'average' change at the selected reference sites. Triggers may occur when the apparent impact at a site (NV + x% change) could be less than maximum observed variability at one of the reference sites.*	• Measured surface water flow reduction, based on Assessment Methods C, D, to be compared against predictions made in contemporary groundwater modelling conducted to the satisfaction of the Secretary to assess whether effects that cannot be explained by natural variability "exceed prediction".	• Investigate reasons for the exceedance • Update future predictions based on the outcomes of the investigation • Provide residual environmental offset for any mining impact where CMAs are unsuccessful as required by Condition 14 Schedule 3 of the Development Consent
Wongawilli Creek and other affected watercourses not subject to performance measures *Secondary Monitoring Sites* **Surface water flow Reference sites** (as in Table 1.1): • Wongawilli Creek - WWU (Wongawilli Creek upstream); • WC11S1 (Wongawilli Creek tributary site, south of DA3A) • O'Hares Creek and Wedderburn (213200); • (other such sites, if necessary, include Woronora River 2132101 and Bomaderry Creek 215016) NB. This section of the TARP contains four Water Flow Assessment Methods A-D, Refer to Appendix F. Hydrological changes are assessed by comparing pre- and post-mining observed flows from impact or assessment sites to flow data from the reference sites. *Natural variability ('NV') will be defined as the 'average' change at the selected reference sites. Triggers may occur when the apparent impact at a*	***Level 1*** • A) Lower flow than expected (additional 10-20% of days where Q% lower than Reference Q%) • B) 5-10% increase in cease-to-flow frequency (beyond natural) • C) 10-20% reduction in Q50 (beyond natural)	• Continue monitoring program • Submit an Impact Report to key stakeholders • Report in the End of Panel Report • Summarise actions and monitoring in Annual Review
	Level 2 • A) Lower flow than expected (additional 20-30% of days where Q% lower than Reference Q%) • B) 10-20% increase in cease-to-flow frequency (beyond natural) • C) 20-30% reduction in Q50 (beyond natural)	• Actions as stated for Level 1 • Review monitoring frequency • Seek advice from key stakeholders on any CMA required • Implement agreed CMAs as approved (subject to agency feedback)
	Level 3 • A) Lower flow than expected (additional >30% of days where Q% lower than Reference Q%) • B) >20% increase in cease-to-flow frequency (beyond natural) • C) >30% reduction in Q50 (beyond natural)	• *Actions as stated for Level 2* • Offer site visit with key stakeholders • Implement additional monitoring or increase frequency if required • Develop site CMA (subject to agency feedback). This may include: grouting of rockbar and bedrock base of any significant pool where it is appropriate to do so in consultation with key stakeholders • Completion of works following approvals and at a time agreed between IMC and relevant stakeholders (i.e. may be after mining induced movements and impacts are complete), including monitoring and reporting on success • Review relevant TARP and Management Plan in consultation with key agencies

site (NV + x% change) could be less than maximum observed variability at one of the reference sites.		
AQUATIC ECOLOGY		
Pool water level, interconnectivity between pools and loss of connectivity, noticeable alteration of habitat	***Level 1*** • Reduction in aquatic habitat for 1 year	• Continue monitoring program • Submit an Impact Report to key stakeholders • Report in the End of Panel Report • Summarise actions and monitoring in Annual Review
	Level 2 • Reduction in aquatic habitat for 2 years following the active subsidence period	• *Actions as stated for Level 1* • Review monitoring frequency • Seek advice from key stakeholders on any CMA required • Implement agreed CMAs as approved (subject to agency feedback)
	Level 3 • Reduction in aquatic habitat for >2 years following the active subsidence period	• *Actions as stated for Level 2* • Offer site visit with key stakeholders • Implement additional monitoring or increase frequency if required • Review relevant TARP and Management Plan in consultation with key agencies • Develop site CMA (subject to agency feedback). This may include: grouting of rockbar and bedrock base of any significant pool where it is appropriate to do so in consultation with key stakeholders • Completion of works following approvals and at a time agreed between IMC and relevant stakeholders (i.e. may be after mining induced movements and impacts are complete), including monitoring and reporting on success
TERRESTRIAL FAUNA – THREATENED FROG SPECIES		
Pool water level, interconnectivity between pools and loss of connectivity, noticeable alteration of habitat • Frog monitoring tributaries	***Level 1*** • Reduction in habitat for 1 year	• Continue monitoring program • Submit an Impact Report to key stakeholders • Report in the End of Panel Report • Summarise actions and monitoring in Annual Review
	Level 2 • Reduction in habitat for 2 years following the active subsidence period	• *Actions as stated for Level 1* • Review monitoring frequency • Seek advice from key stakeholders on any CMA required • Implement agreed CMAs as approved (subject to agency feedback)
	Level 3 • Reduction in habitat for > 2 years following the active subsidence period	• *Actions as stated for Level 2* • Offer site visit with key stakeholders • Implement additional monitoring or increase frequency if required

		• Review relevant TARP and Management Plan in consultation with key agencies • Develop site CMA (subject to agency feedback). This may include: grouting of rockbar and bedrock base of any significant pool where it is appropriate to do so in consultation with key stakeholders • Completion of works following approvals and at a time agreed between IMC and relevant stakeholders (i.e. may be after mining induced movements and impacts are complete), including monitoring and reporting on success

Key Stakeholders/Agencies include the following and their successor agencies:

- Department of Planning and Environment (DPE)
- Biodiversity and Conservation Division (BCD)
- Resources Regulator
- WaterNSW

Table 7: Dendrobium Longwalls 22 and 23 Swamp Impact Monitoring Management and Contingency Plan TARP.

Performance Measure[5]	Potential Impacts	Reporting Trigger	Trigger Response	Performance Indicator
EROSION				
Negligible erosion of the surface of the swamp	Gully erosion or similar	***Level 1*** The increase in length of erosion within the swamp (compared to its pre-mining length) is **2%** of the swamp length or area; and/or Erosion in a localised area (not associated with cracking or fracturing) which would be expected to naturally stabilise without CMA and within the period of monitoring.	• Continue monitoring program • Submit impact report to key stakeholders • Report in the End of Panel Report • Summarise actions and monitoring in Annual Review	Mining results in the total length of erosion within the swamp (compared to its pre-mining length) to increase **>5%** of the length or area of the swamp compared to any increase in total erosion length in a reference swamp (ie increase in length or area of erosion in an impact swamp less any increase in length or area in erosion in a reference swamp is **>5%**).
		Level 2 The increase in length of erosion within the swamp (compared to its pre-mining length) is **3%** of the swamp length or area; and/or Soil surface crack that causes erosion that is likely to stabilise within the monitoring period without intervention; and/or Gully knickpoint forms or an existing gully knickpoint becomes active.	• *Actions as stated for Level 1* • Review monitoring frequency • Seek expert and agency advice on any CMA required • Implement agreed CMAs as approved (subject to agency feedback) e.g. implement temporary erosion control (e.g., knickpoint control, coir logs)	
		Level 3 The increase in length of erosion within the swamp (compared to its pre-mining length) is **4%** of the swamp length or area; and/or Soil surface crack that causes erosion that is unlikely to stabilise within the monitoring period without intervention.	• *Actions as stated for Level 2* • Offer site visit with key stakeholders • Implement additional monitoring or increase frequency if required • Develop any additional CMA required in consultation with key stakeholders • Completion of works following approvals and at a time agreed between S32 and key stakeholders including monitoring and reporting on success	
ECOSYSTEM FUNCTION				
Minor changes in the size of the swamp	Area 3C mining induced hydrological changes in swamps result in decline in size of groundwater	***Level 1*** A trending decline in the extent of an upland swamp (combined area of groundwater dependent communities) for two consecutive monitoring periods, greater than observed in the Control Group, and exceeding the standard error (SE) of the Control Group.	• Continue monitoring program • Submit impact report to key stakeholders • Report in the End of Panel Report • Summarise actions and monitoring in Annual Review	Mining induced hydrological changes in swamps result in a trending decline in the extent of an upland swamp (combined area of groundwater dependent communities) for five consecutive monitoring periods, greater than observed in the Control Group, and exceeding the SE of the Control Group.

[5] The performance measures can be met by either avoidance, mitigation, remediation or offsetting or any combination of these measures.

Performance Measure[5]	Potential Impacts	Reporting Trigger	Trigger Response	Performance Indicator
	dependent communities	***Level 2*** A trending decline in the extent of an upland swamp (combined area of groundwater dependent communities) for three consecutive monitoring periods, greater than observed in the Control Group, and exceeding the SE of the Control Group.	• *Actions as stated for Level 1* • Review monitoring frequency • Obtain specialist advice on the need to undertake ground-truthing of swamp boundaries and the vegetation sub-communities	
		Level 3 A trending decline in the extent of an upland swamp (combined area of groundwater dependent communities) for four consecutive monitoring periods, greater than observed in the Control Group, and exceeding the SE of the Control Group.	• *Actions as stated for Level 2* • Offer site visit with key stakeholders	
ECOSYSTEM FUNCTION				
Minor changes in the ecosystem functionality of the swamp **Minor** changes to the hydrology of the swamp	Area 3C mining induced hydrological changes in swamps result in falls in surface or near-surface groundwater levels in the swamp Area 3C mining induced hydrological changes in swamps result in falls in soil moisture levels in the swamp	***Level 1*** Rate of groundwater level recession exceeds rate of groundwater level recession by 20% during baseline period at any monitoring site within the swamp (measured as average mm/day during the recession curve and where the 95%ile of pre- and post-mining recession rates are used for comparison); or 5-10% increase in period of time a borehole/pool is dry compared to baseline at any monitored groundwater level site within the swamp.	• Continue monitoring program • Submit impact report to key stakeholders • Report in the End of Panel Report • Summarise actions and monitoring in Annual Review	Mining induced hydrological changes within swamps (shallow groundwater) results in piezometer remaining dry and does not recover following the completion of mining and following a year of average (or above) rainfall[6].
		Level 2 Groundwater or soil moisture level lower than baseline level at any monitoring site within the swamp; or Rate of groundwater level recession exceeds rate of groundwater level recession by >20 to 50% during baseline period any monitoring site within the swamp (measured as average mm/day during the recession curve and where the 95%ile of pre- and post-mining recession rates are used for comparison); or 10-20% increase in period of time a borehole/pool is dry compared to baseline at any monitored groundwater level site within the swamp.	• *Actions as stated for Level 1* • Review monitoring frequency • Obtain specialist advice on the need to undertake an ecological survey	

[6] Average rainfall = (based on IMC Centroid rainfall data)

Performance Measure[5]	Potential Impacts	Reporting Trigger	Trigger Response	Performance Indicator
		Level 3 Rate of groundwater level recession exceeds rate of groundwater level recession by >50 to 100% during baseline period at any monitoring site within the swamp (measured as average mm/day during the recession curve and where the 95%ile of pre- and post-mining recession rates are used for comparison); or >20% increase in period of time a borehole/pool is dry compared to baseline at any monitored groundwater level site within the swamp.	• *Actions as stated for Level 2* • Offer site visit with key stakeholders	
STRUCTURAL INTEGRITY OF CONTROLLING ROCKBAR				
Maintenance or restoration of the structural integrity of bedrock base of any significant permanent pool or controlling rockbar within the swamp	Subsidence impacts (i.e. cracking) on bedrock base or controlling rockbar Loss of surface water in significant permanent pools	***Level 1*** Fracturing to rockbar base of any significant permanent pool or controlling rockbar within the swamp	• Continue monitoring program • Submit impact report to key stakeholders • Report in the End of Panel Report • Summarise actions and monitoring in Annual Review	Fracturing resulting in increased cease-to-flow or dry pool days at controlling rockbar within the swamp which cannot be restored via CMAs.
		Level 2 Fracturing to rockbar base of any significant permanent pool or controlling rockbar within the swamp results in cease-to-flow	• *Actions as stated for Level 1* • Review monitoring frequency	
		Level 3 Fracturing to rockbar base of any significant permanent pool or controlling rockbar within the swamp results in dry pool	• *Actions as stated for Level 2* • Offer site visit with key stakeholders • Undertake assessment to determine whether remediation is warranted and feasible to prevent changes to swamp ecosystem functionality	