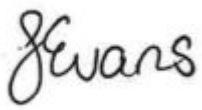
Subsidence Management Plan Approval

I, the Director, Energy and Resource Assessments within the Department of Planning, Housing and Infrastructure, under the provisions of the development consent referred to in Schedule 1, approve the development set out in Schedule 2, subject to the conditions set out in Schedule 3.



Jessie Evans
Director
Energy and Resource Assessments
as nominee of the Secretary

Sydney 10 June 2026

SCHEDULE 1

Condition 7 of Schedule 3 of the development consent granted by the Minister for Urban Affairs and Planning on 20 November 2001 for the development of the Dendrobium Coal Mine and the construction and operation of associated surface facilities (DA 60-03-2001), as modified.

SCHEDULE 2

Underground mining operations, and associated monitoring, management and remediation, in Area 3C of the Dendrobium Coal Mine.

SCHEDULE 3 – GENERAL CONDITIONS

Definitions

1.

Applicant	Illawarra Coal Holdings Pty Ltd
CPHR	Conservation Programs, Heritage and Regulation Group within the NSW Department of Climate Change, Energy, the Environment and Water
Department	Department of Planning, Housing and Infrastructure
Development	The development set out in Schedule 2
Harm	The same meaning as in the *National Parks and Wildlife Act 1974* (NSW)
Independent Expert Panel	Independent Expert Advisory Panel for Mining
Minor	Not very large, important or serious
Mitigation	Activities associated with reducing the impacts of mining operations prior to or during those impacts occurring
Negligible	Small and unimportant, such as to be not worth considering
Remediation	Activities associated with partially or fully repairing or rehabilitating the impacts of mining operations or controlling the environmental consequences of these impacts
Resources Regulator	NSW Resources Regulator
Secretary	Secretary of the Department, or nominee
Subsidence Management Plan	Area 3C Subsidence Management Plans and supporting documents including: • Longwalls 20 & 21 Subsidence Management Plan prepared by Illawarra Coal South32 dated November 2019, including its Appendices 1 – 4 • Longwalls 22 & 23 Subsidence Management Plan prepared by Illawarra Coal South32 dated September 2021, including its Appendices 1 – 4 • Longwalls 21A Subsidence Management Plan prepared by Illawarra Coal South32 dated November 2023, including its Appendices 1 – 3 • Longwall 23 Subsidence Management Plan Modification application dated 14 May 2024, including its appended letter reports • Longwalls 24 to 29 Subsidence Management Plan prepared by Illawarra Coal Holdings Pty Ltd trading as GM^3 dated May 2026, including its Appendices 1 - 5
SCWMP	Sandy Creek Waterfall Management Plan prepared by the Applicant and dated February 2024, or its latest approved version
SIMMCP	Area 3C Swamp Impact Monitoring, Management and Contingency Plan prepared by the Applicant and dated May 2026, or its latest approved version
SRRP	Swamp Rehabilitation and Research Program prepared by the Applicant and dated May 2023, or its latest approved version
TARPs	Trigger Action Response Plans
WaterNSW	Water NSW, as established under the *Water NSW Act 2014*
WIMMCP	Area 3C Watercourse Impact Monitoring, Management and Contingency Plan prepared by the Applicant and dated November 2025, or its latest approved version

2. Subject to the definitions above, the definitions set out in development consent DA 60-03-2001 apply to this approval.

Previous Subsidence Management Plan approvals

3. All previous approvals of Subsidence Management Plans issued in respect of the development set out in Schedule 2 under the provisions of the development consent set out in Schedule 1 cease to have effect from the date of this approval.

Terms of Approval

4. The Applicant must carry out the development generally in accordance with the:
   (a) conditions of development consent DA 60-03-2001;
   (b) conditions of this approval;

(c) Subsidence Management Plan; and
(d) Mining Layout Plan shown in Appendix 1 (as modified by the conditions of this approval).

5. If there is any inconsistency between the documents listed in condition 4, then the conditions of this approval and the development consent prevail to the extent of the inconsistency.

Limits on Approval

6. The Applicant must not extract the coal seam in Area 3C to a height greater than 3.9 metres, subject to approval from the Resources Regulator to extract a greater height for identified mine safety reasons.

Performance Measures for Area 3C

7. The Applicant must ensure that the development does not cause any exceedance of the performance measures in Table 1, to the satisfaction of the Secretary.

Table 1: Subsidence Impact Performance Measures

Feature	Performance Measure
Swamps	
Swamps 06, 07, 09, 16, 138 140, 141, 144, 145, 152, 153, 154, 155, 156, 157, 158	Minor environmental consequences including: • *minor* erosion of the surface of the swamp; • *minor* change in the size of the swamp; • *minor* change in the ecosystem functionality of the swamp; • *minor* change to the composition or distribution of species within the swamp; or • *maintenance or restoration* of the structural integrity of rockbar base of any significant permanent pool or controlling rockbar within the swamp.
Watercourses	
Sandy Creek Waterfall SC-WF1	Negligible environmental consequences including: • *no* rock fall occurs at the waterfall or from its overhang; • *no* impacts on the structural integrity of the waterfall, its overhang and/or its pool; • *negligible* cracking in Sandy Creek within 30 m of the waterfall; or • *negligible* diversion of water from the lip of the waterfall.
Wongawilli Creek Sandy Creek	Minor impacts and minor environmental consequences including: • *minor* fracturing, gas release and iron staining; or • *minor* impacts on water flows, water levels and water quality.
Infrastructure	
Avon-to-Macarthur 330 kV transmission line and associated transmission towers (including towers TWR17-18 to TWR17-28)	• Always safe and serviceable; and • Damage that does not affect safety or serviceability must be fully repairable, and must be fully investigated and repaired at the cost of the Applicant.
Aboriginal heritage	
Aboriginal objects/sites[3]	No harm, unless that harm is authorised by an Aboriginal Heritage Impact Permit issued under the *National Parks and Wildlife Act 1974*.

Notes:
1. *The performance measures in Table 1 are intended to provide further detail regarding appropriate interpretation of conditions 1 and 2 of Schedule 3 of development consent DA 60-03-2001, not to limit the effect or scope of those conditions in any way.*
2. *The Applicant may meet the requirements of this condition relating to swamps and watercourses by either avoidance, mitigation, remediation or offsetting, or a combination of these measures.*
3. *Schedule 4 includes additional site-specific performance measures for Aboriginal heritage sites. For the avoidance of doubt, these additional site-specific performance measures are required to be met regardless of whether harm is authorised by an Aboriginal Heritage Impact Permit.*

Rehabilitation

8. If the Applicant does not meet the performance measures in Table 1, then following consultation with CPHR, WaterNSW and Resources Regulator, the Secretary may issue the Applicant with a direction in writing to undertake actions or measures to mitigate or remediate subsidence impacts and/or associated environmental

consequences. The Applicant must implement the direction in accordance with its terms and requirements, in consultation with the relevant agencies and to the satisfaction of the Secretary.

Additional Offsets

9. If the Applicant exceeds the performance measures in Table 1 and the Secretary determined that:
   (a) it is not reasonable and feasible to remediate the subsidence impact or environmental consequence; or
   (b) remediation measures implemented by the Applicant have failed to satisfactorily remediate the subsidence impact or environmental consequence,

   then the Applicant must provide an offset to compensate for the subsidence impact or environmental consequence that is proportionate to the significance of the subsidence impact or environmental consequence, following consultation with WaterNSW, CPHR and/or Heritage NSW and to the satisfaction of the Secretary.

Surface Water Loss

10. The Applicant must account for surface water losses in accordance with the licensing regime for mines operating in Special Areas (under *Access Licence Dealing Principles (Special Areas) Amendment Order 2023).*

Groundwater Impact Monitoring

11. The Applicant must:
   (a) install groundwater monitoring boreholes containing multi-level piezometers along the centreline of each longwall proposed to be extracted within Area 3C (except Longwall 21A), each containing at least 5 transducers, at least 2 years prior to commencing extraction of that longwall;
   (b) use data from these boreholes and other investigations to develop a database for the Dendrobium Coal Mine for the height of complete drainage over longwalls;
   (c) monitor rainfall and mine water ingress from overlying and surrounding strata in Area 3C on a daily basis; and
   (d) use its best endeavours to identify the components of mine water make that derive from surface waters.

Watercourse Impact Monitoring, Management and Contingency Plan (WIMMCP)

12. The Applicant must implement the latest version of the Area 3C WIMMCP to provide for achievement of the performance measures listed in Table 1.

Swamp Impact Monitoring, Management and Contingency Plan (SIMMCP)

13. The Applicant must implement the latest version of the Area 3C SIMMCP to provide for achievement of the performance measures listed in Table 1.

Groundwater and Seepage Modelling

14. As part of the next Annual Water Take Report required by the 30th September 2026 as conditioned by Water Access Licence 45165, the Applicant must update the numerical groundwater and seepage models to address the specific recommendations of the Independent Expert Panel in its advice on the Subsidence Management Plan for Longwalls 24 to 29, dated 24 April 2026 (Recommendations 1-6), to the satisfaction of the Secretary.

15. As part of the Annual Water Take Report required by the 30th September each year as conditioned by Water Access Licence 45165, the Applicant must update the numerical groundwater and seepage models, including more extensive uncertainty analyses and, if groundwater level observations fall outside expected ranges, re-calibration, to:
   (a) incorporate new observations and trends from the investigations along the barrier zone between Area 3C longwalls and Cordeaux Reservoir, including groundwater levels and strata movements within and around dyke DD9 and fault DF14;
   (b) improve predictions of baseflow reductions to and seepage losses from Lake Cordeaux and baseflow reductions in Wongawilli Creek;
   (c) improve predictions of drawdown in the shallow and deep aquifers;
   (d) review mine water balance and water chemistry trends against numerical modelling predictions;
   (e) estimate the maximum water take from all water sources with reference to the Water Sharing Plans for the *Greater Metropolitan Region Groundwater Sources 2023* and the *Greater Metropolitan Region Unregulated River Water Sources 2023*;
   (f) provide a summary of ongoing updates, improvements and progressive groundwater simulations to the groundwater model in End of Panel Reports; and
   (g) inform adaptive management and further investigations, if required.

Cordeaux Reservoir Dam Wall

16. Prior to longwall extraction in the Dams Safety Notification Area, the Applicant must:
    (a) engage an expert(s) in mine subsidence and geotechnical/dam engineering to prepare a Dam Stability Assessment which:
        - uses 3D Finite Element Analysis to assess the current stability of the dam wall and impact of mining;
        - includes geological mapping focusing on faults, dykes and the clay seams that extend beneath the dam and the area between the dam and the mine;
        - includes the outcome of reviews monitoring data for the survey prisms already established in the Cordeaux dam wall;
        - provides geotechnical investigations of the potential impacts of mining on the dam wall, grout curtain, dam foundations and abutments;
        - includes results of a numerical analysis of the dam wall to determine the allowable/tolerable movements and extraction distances from the dam; and
    (b) establish a Technical Committee which comprises Applicant representatives and representatives from WaterNSW and experts in mine subsidence and geotechnical/dam engineering to:
        - review the Dam Stability Assessment and advise on an appropriate monitoring program;
        - regularly review the monitoring data for the early-warning lines and at the Cordeaux dam wall as the proposed longwalls are progressively mined towards the dam wall; and
        - advise on response actions in accordance with the TARP.
    (c) prepare and implement a Cordeaux Dam Wall Monitoring and Management Program in consultation with WaterNSW and Dams Safety NSW. The program must include details of:
        - a comprehensive monitoring program to support the implementation of the TARP and management strategies, including:
            - an early warning monitoring system;
            - monitoring of across valleys located south of the dam wall;
            - monitoring across the dam wall structure;
        - management strategies to ensure the dam and associated infrastructure remains safe and serviceable;
        - reporting requirements;
        - a TARP with the allowable movement triggers for the dam wall and the responses and actions; and
        - governance structure for endorsement, reporting, implementation and review of the program.

    The Applicant must not commence extraction in the Dams Safety Notification Area until the Dam Stability Assessment, Technical Committee and Cordeaux Dam Wall Monitoring and Management Program are approved by the Secretary.

Transmission Line Management Plan

17. Prior to commencing the extraction of longwalls in Area 3C, the Applicant must prepare and implement a Transmission Line Management Plan to manage potential impacts of the development on the Avon-to-Macarthur 330 kV transmission line and associated transmission towers. This plan must:
    (a) be prepared by a suitably qualified and experienced person/s in consultation with the Resource Regulator and Transgrid;
    (b) describe in detail appropriate pre-mining mitigation measures to be implemented to ensure compliance with the performance measures for the transmission line and associated transmission towers set out in Table 1;
    (c) recommend appropriate remedial measures and measures for damage that does not affect safety or serviceability to investigate, mitigate, repair, replace or compensate predicted impacts and associated cost responsibilities; and
    (d) recommend monitoring programs, TARPs and communication plans.

Regular Reporting

18. During the extraction of longwalls in Area 3C, the Applicant must submit a summary report to the Secretary every 4 months (unless some other period is agreed with the Secretary), which includes:
    (a) 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) the outcome of investigations into all exceedances of predictions in the Subsidence Management Plan and reported Level 2 and Level 3 Triggers in the TARPs;
    (d) a summary of any actions undertaken in the period in response to exceedances of predictions in the Subsidence Management Plan and reported Level 2 and Level 3 Triggers in the TARPs; and
    (e) an accurate record of the extraction height of mining during the period.

Independent Environmental Audit

19. The Applicant must ensure that the audit team for the Independent Environmental Audit, required under condition 6 of Schedule 8 of development consent DA 60-03-2001, includes suitable experts in the fields of mine subsidence impacts and remediation, upland swamps and stream hydrology; and carries out a detailed audit of the impacts of the development, and the efficacy of the Biodiversity Offset Strategy.

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SCHEDULE 4 – CONDITIONS GOVERNING INDIVIDUAL LONGWALLS

LONGWALL 20

1. The Applicant must not extract Longwall 20 as presented in Subsidence Management Plan 2019.

LONGWALLS 22 & 23

Seepage Validation Report

2. Deleted.

Transmission Line Management Plan

3. Deleted.

LONGWALL 21A

Sandy Creek Waterfall Management Plan (SCWMP)

4. The Applicant must implement the SCWMP for Longwall 21A to provide for achievement of the performance measures listed in Table 1.

5. The Applicant must continue to operate the Sandy Creek Waterfall Technical Committee and Steering Committee required under Appendix 3 (Commitment 6) of development consent DA 60-03-2001 for Longwall 21A, and implement the data monitoring, review and management processes required by the committees.

Threatened Species Offset Investigation

6. By 30 June 2026, the Applicant must submit to the Secretary a report detailing the results of threatened species offset investigations at the Maddens Plains offset area. This report must:
   (a) be prepared by a suitably qualified and experienced expert in consultation with CPHR;
   (b) include details of existing and future investigations into the occupancy of threatened fauna populations (including Littlejohn's Tree Frog, Giant Dragonfly, Giant Burrowing Frog and Red-crowned Toadlet) across the Maddens Plains offset area, which are sufficient to demonstrate whether the offset area provides suitable habitat to compensate any impacts to these species caused by the development; and
   (c) consideration and discussion of how the Applicant would compensate for any impacts to these species caused by the development, if they occur.

Aboriginal cultural heritage

7. The Applicant must ensure that the development does not cause any exceedance of the performance measures in **Table 2**, to the satisfaction of the Secretary.

Table 2: Performance measures for Aboriginal heritage sites

Aboriginal heritage sites	
AHIMS Site # 52-5-0276	Negligible change in site condition not attributable to natural weathering, including but not limited to: • no cracking or exfoliation of any art panel, • negligible movement of existing planes or joints at any art panel, • no block fall within shelter or overhang, or • no shelter or overhang collapse.
AHIMS Site # 52-5-0275 AHIMS Site # 52-2-5034	No impact greater than predicted unless authorised by an Aboriginal Cultural Heritage Permit

8. Prior to commencing secondary extraction of LW21A, the Applicant must submit an Adaptive Management Plan, that is designed to achieve the performance measures outlined in **Table 2** at AHIMS Site # 52-5-0276. The Adaptive Management Plan must:

(a) be prepared in consultation with a Technical Committee that includes a suitably qualified and experienced subsidence expert;

(b) include a TARP which contains quantitative triggers which are directly linked to achieving the performance measures outlined in **Table 2**;

(c) include details of a comprehensive subsidence monitoring program for AHIMS Site # 52-5-0276 that includes suitable baseline monitoring;

(d) include provision for regular review of monitoring data by the Technical Committee;

(e) include provisions to stop secondary extraction of LW21A where monitoring indicates the potential to exceed the performance measures outlined in **Table 2** and/or the quantitative triggers outlined in the TARP.

9. The Applicant must not undertake secondary extraction within 600 metres of AHIMS Site # 52-5-0276 until the Adaptive Management Plan is approved by the Secretary.

10. Prior to commencing secondary extraction of LW21A, the Applicant must implement a comprehensive subsidence monitoring program for AHIMS Sites # 52-2-5034 and # 52-5-0275, to the satisfaction of the Secretary.

LONGWALLS 24-29

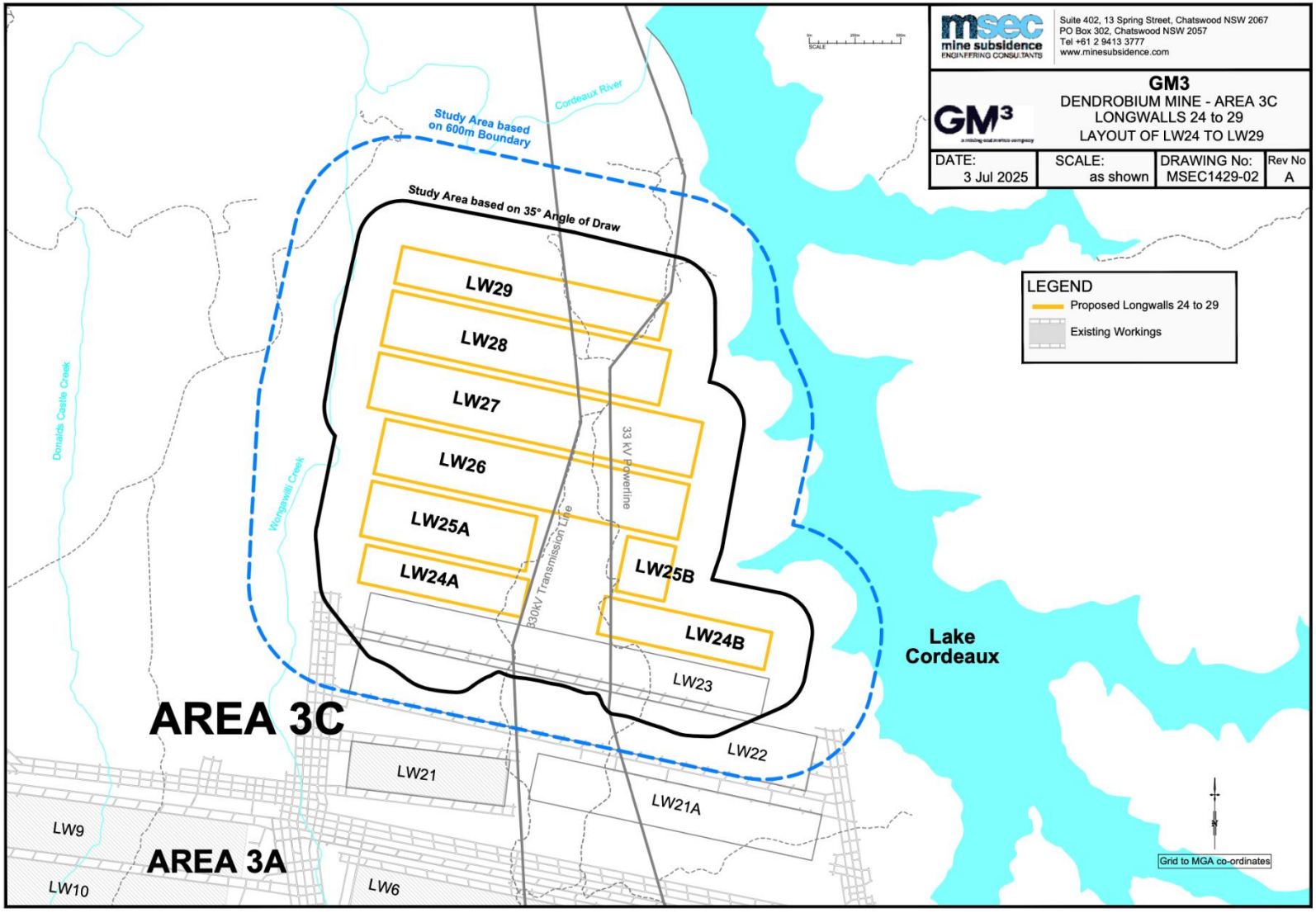
Aboriginal cultural heritage

11. The Applicant must ensure that the development does not cause any exceedance of the performance measures in **Table 2**, to the satisfaction of the Secretary.

Table 2: Performance measures for Aboriginal heritage sites

Aboriginal heritage sites	
AHIMS Site # 52-2-0535	Negligible change in site condition not attributable to natural weathering, including but not limited to: • negligible cracking or exfoliation on the rock platform, or • negligible movement of the stone arrangement relative to the rock platform.

12. Prior to commencing secondary extraction of LW 24, the Applicant must submit a subsidence monitoring program for AHIMS Site # 52-2-0535, which has been prepared in consultation with Heritage NSW and the Registered Aboriginal Parties.

13. The Applicant must not undertake secondary extraction of LW 24 until the subsidence monitoring program is approved by the Secretary.

APPENDIX 1: MINING LAYOUT PLAN