

# Subsidence Management Plan Approval

I, the Executive Director, Energy, Resources and Industry within the Department of Planning and Environment, 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.



**Clay Preshaw**  
**Executive Director**  
**Energy, Resources and Industry**  
as nominee of the Secretary

Sydney

11 August 2023

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## 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).

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## SCHEDULE 2

Underground mining operations, and associated monitoring, management and remediation, of Longwall 19A in Area 3A of the Dendrobium Coal Mine.

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## SCHEDULE 3 – GENERAL CONDITIONS

### Definitions

1. Applicant South32 Illawarra Metallurgical Coal  
BCD Biodiversity and Conservation Division within the Department  
Department Department of Planning and Environment  
Development The development set out in Schedule 2  
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 Planning Secretary of the Department, or nominee  
Subsidence Management Plan (2010) Subsidence Management Plan for Area 3A prepared by BHP Billiton Illawarra Coal Holdings Pty Limited in 2009 and amended in 2010.  
Subsidence Management Plan (2021) Subsidence Management Plan for Longwall 19 prepared by the Applicant and dated March 2021.  
Subsidence Management Plan (2023) Subsidence Management Plan for Longwall 19A prepared by the Applicant and dated September 2022 and updated in March 2023  
SCWMP Sandy Creek Waterfall Management Plan prepared by the Applicant and dated October 2022  
SIMMCP Swamp Impact Monitoring, Management and Contingency Plan for Longwalls 19 and 19A prepared by the Applicant and dated September 2022  
  
TARPs Trigger Action Response Plans  
WaterNSW Water NSW, as established under the *Water NSW Act 2014*  
WIMMCP Watercourse Impact Monitoring, Management and Contingency Plan for Longwalls 19 and 19A prepared by the Applicant and dated September 2022
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 in Area 3A of the Dendrobium Coal Mine issued by the Department under the provisions of the development consent DA 60-03-2001 continue to have effect, including:
  - (a) Subsidence Management Plan (2010) for Longwalls 6 to 8; and
  - (b) Subsidence Management Plan (2021) for Longwall 19.

### Terms of Approval

4. The Applicant must carry out the development and extraction of Longwall 19A in accordance with the:
  - (a) conditions of development consent DA 60-03-2001; and
  - (b) conditions of this approval.
5. The Applicant must carry out the development and extraction of Longwall 19A generally in accordance with the:
  - (a) Subsidence Management Plan (2023); and
  - (b) Mining Layout Plan, except as otherwise required by condition 7 below.

*Note: The Mining Layout Plan is shown in Appendix 1.*

### Limits on Approval

6. The Applicant must not extract the coal seam in Longwall 19A 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.
7. The Applicant must ensure that Longwall 19A is set back at least 120 metres to the west of Swamp 15a.

*Notes:*

1. *This condition requires the longwall to be at least 59 metres shorter at its eastern end to that shown in Appendix 1.*

2. The extent of Swamp 15a for the purposes of this condition are as shown in Appendix 1 and 2 of the Subsidence Management Plan Approval for Longwall 19 dated 11 March 2021 (as the 2020 mapping by Niche).

### Performance Measures for Longwalls 19 and 19A

8. 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**

Swamps	
Swamp 15a	Negligible environmental consequences including: <ul style="list-style-type: none"> <li>• negligible erosion of the surface of the swamp;</li> <li>• negligible change in the size of the swamp;</li> <li>• negligible change in the ecosystem functionality of the swamp;</li> <li>• negligible change to the composition or distribution of species within the swamp; or</li> <li>• maintenance or restoration of the structural integrity of rockbar SC10-RB15A.</li> </ul>
Swamp 148	Minor environmental consequences including: <ul style="list-style-type: none"> <li>• minor erosion of the surface of the swamp;</li> <li>• minor change in the size of the swamp;</li> <li>• minor change in the ecosystem functionality of the swamp;</li> <li>• minor change to the composition or distribution of species within the swamp; or</li> <li>• maintenance or restoration of the structural integrity of rockbar base of any significant permanent pool or controlling rockbar within the swamp.</li> </ul>
Watercourses	
Sandy Creek Waterfall SC-WF1	Negligible environmental consequences including: <ul style="list-style-type: none"> <li>• no rock fall occurs at the waterfall or from its overhang;</li> <li>• no impacts on the structural integrity of the waterfall, its overhang and/or its pool;</li> <li>• negligible cracking in Sandy Creek within 30 m of the waterfall; and</li> <li>• negligible diversion of water from the lip of the waterfall.</li> </ul>
Wongawilli Creek Sandy Creek	Minor impacts and minor environmental consequences including: <ul style="list-style-type: none"> <li>• minor fracturing, gas release and iron staining; and</li> <li>• minor impacts on water flows, water levels and water quality.</li> </ul>

**Notes:**

1. The performance measures in Table 1 are intended to provide further detail regarding appropriate interpretation of conditions 1, 2 and 5 of development consent DA 60-03-2001, not to limit the effect or scope of those conditions in any way.
2. The extent of Swamp 15a for the purposes of this condition are as shown in Appendix 1 and 2 of the Subsidence Management Plan Approval for Longwall 19 dated 11 March 2021 (as the 2020 mapping by Niche).
3. The Applicant may meet the requirements of this condition relating to Swamp 148 either by avoidance, mitigation, remediation or offset.

### Biodiversity Offsets for Upland Swamps

9. The Applicant must offset the environmental consequences from the development in all affected upland swamps.

*Note: The locations and boundaries of upland swamps that may be affected by mining Longwall 19A are shown in Appendix 1.*

10. The Applicant must prepare, for the approval of the Secretary, a Biodiversity Offset Strategy to offset the environmental consequences of the development on upland swamps. This Strategy must:
- (a) include a suitable offset for all predicted environmental consequences of the development on upland swamps;
  - (b) propose a process whereby the actual environmental consequences of the development on upland swamps are regularly reviewed (at least every 2 years) against predicted impacts and reported to all affected agencies, including detailed consideration of the:
    - predictions in the Subsidence Management Plan (2023);
    - performance measures in Table 1;

- monitoring results;
  - application, success and predicted success of measures to mitigate or remediate subsidence impacts and/or associated environmental consequences;
  - predicted and actual long-term impacts; and
  - views of BCD and WaterNSW; and
- (c) propose a process whereby a suitable residual environmental offset is provided where the actual impacts of the development on upland swamps exceed those predicted in the Subsidence Management Plan (2023).

The Applicant must not commence longwall extraction of Longwall 19A until this Strategy is approved by the Secretary.

The Applicant must implement the approved Strategy.

11. The requirements of condition 10(a) and (c) above can be met through the Strategic Biodiversity Offset site established at Maddens Plains pursuant to condition 15 of Schedule 2 of consent DA 60-03-2001

*Note: The Applicant transferred its 'Maddens Plains' site into the National Parks estate in 2016 as a Strategic Biodiversity Offset for both the Dendrobium Mine and Bulli Seam Operations Project.*

12. Any offset required or provided under condition 9 for impacts on Swamp 15a does not constitute evidence establishing that a breach of the relevant performance measure has not taken place and does not prevent the Department from taking enforcement action in response to any such breach.

### **Rehabilitation**

13. If the Applicant does not meet the performance measures in Table 1, then following consultation with BCD, WaterNSW and the 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 Secretary and relevant agencies.

### **Longwall 19A SIMMCP**

14. The Applicant must submit a SIMMCP for Longwall 19A to the Secretary by 1 October 2023. The SIMMCP must:
- (a) be prepared by a suitably qualified and experienced person/s;
  - (b) be prepared in consultation with BCD and WaterNSW;
  - (c) include TARPs which contain quantitative triggers to provide for achievement of the relevant performance measures set out in Table 1; and
  - (d) address the recommendations contained in the advice of the Independent Expert Advisory Panel for Mining dated 1 August 2023.

The Applicant must not commence longwall extraction of Longwall 19A until the SIMMCP is approved by the Secretary.

The Applicant must implement the approved Longwall 19A SIMMCP.

### **Watercourse Impact Monitoring, Management and Contingency Plan (WIMMCP)**

15. The Applicant must implement the WIMMCP for Longwall 19A prepared under condition 4 of Schedule 3 of development consent DA 60-03-2001 to provide for achievement of the performance measures listed in Table 1.

### **Sandy Creek Waterfall Management Plan (SCWMP)**

16. The Applicant must implement the most recently approved SCWMP to provide for achievement of the performance measures listed in Table 1.
17. 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 19A, and implement the data monitoring, review and management processes required by the committees.

### **Swamp Rehabilitation and Research Program**

18. By 31 January 2024 and every 6 months thereafter, the Applicant must provide a report to the Secretary on its Swamp Rehabilitation and Research Project required under condition 20 and 21 of Schedule 3 of the Subsidence Management Plan approval for Area 3B. The report must include:
  - (a) discussion on the status of field trials, surveys, studies and other activities undertaken;
  - (b) review of the lessons learnt and summary of key findings;
  - (c) a summary of recommended rehabilitation actions arising from the program and the timeframe for implementation of those actions; and
  - (d) consideration and discussion of any ongoing or additional research opportunities and commitments.

### **Regular Reporting**

19. Four months from the commencement of the development, and every 4 months thereafter, the Applicant must submit a summary report for the Secretary which provides 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) report on the outcome of investigations into all exceedances of predictions in the Subsidence Management Plan (2023) and reported Level 2 and Level 3 Triggers in the TARPs;
  - (d) summary of any actions undertaken in the period in response to exceedances of predictions in the Subsidence Management Plan (2023) and reported Level 2 and Level 3 Triggers in the TARPs; and
  - (e) accurate record of the extraction height of mining during the period.

### **Independent Environmental Audit**

20. 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.

# APPENDIX 1: MINING LAYOUT PLAN

