

# Subsidence Management Plan Approval

I, the Executive Director, Energy, Resources and Compliance within the Department of Planning, Industry & 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 Schedules 3 and 4.



**Mike Young**  
**Executive Director**  
**Energy, Resources and Compliance**  
as nominee of the Secretary

Sydney

11 MARCH 2021

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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 19 in Area 3A of the Dendrobium Coal Mine.

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## SCHEDULE 3 – GENERAL CONDITIONS

### Definitions

1. BCS Biodiversity, Conservation and Science Directorate within the Department  
 Department of Planning, Industry 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  
 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 prepared by South32 Illawarra Metallurgical Coal and dated March 2021, including the following:
  - Watercourse Impact Monitoring, Management and Contingency Plan dated February 2021;
  - Swamp Impact Monitoring, Management and Contingency Plan dated February 2021; and the
  - Sandy Creek Waterfall Management Plan dated January 2021.
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 the Subsidence Management Plan (2010) issued by the Department under the provisions of the development consent DA 60-03-2001 continue to have effect for the monitoring, management and remediation of Longwalls 6 to 8 in Area 3A of the Dendrobium Coal Mine.

### Terms of Approval

4. The Applicant must carry out the development and extraction of Longwall 19 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 19 generally in accordance with the:
  - (a) Subsidence Management Plan (2021); 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 19 to a height greater than 3.9 metres, subject to approval from the NSW Resources Regulator to extract a greater height for identified mine safety reasons.
7. The Applicant must ensure that the installation road for Longwall 19 is set back at least 100 metres to the west from the location shown in Appendix 1 and in accordance with Appendix 2.

### Performance Measures for Longwall 19

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>• <i>negligible</i> erosion of the surface of the swamp;</li> <li>• <i>negligible</i> change in the size of the swamp;</li> <li>• <i>negligible</i> change in the ecosystem functionality of the swamp;</li> </ul>

	<ul style="list-style-type: none"> <li>• <i>negligible</i> change to the composition or distribution of species within the swamp; and</li> <li>• <i>maintenance or restoration</i> of the structural integrity of rockbar SC10-RB15A.</li> </ul>
<b>Watercourses</b>	
Waterfall SC-WF1	Negligible environmental consequences including: <ul style="list-style-type: none"> <li>• <i>no</i> rock fall occurs at the waterfall or from its overhang;</li> <li>• <i>no</i> impacts on the structural integrity of the waterfall, its overhang and/or its pool;</li> <li>• <i>negligible</i> cracking in Sandy Creek within 30 m of the waterfall; and</li> <li>• <i>negligible</i> 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>• <i>minor</i> fracturing, gas release and iron staining; and</li> <li>• <i>minor</i> impacts on water flows, water levels and water quality.</li> </ul>

*Notes: 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.  
The extent of Swamp 15a for the purposes of this condition are as shown in Appendix 1 and 2 as the 2020 mapping by Niche.  
The Applicant may meet the requirements of this condition either by avoidance, mitigation or remediation.*

### **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 19 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:
- include a suitable offset for all *predicted* environmental consequences of the development on upland swamps;
  - 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 (2021);
    - 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 BCS and WaterNSW; and
  - 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 (2021).

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

Following its approval, the Applicant must implement the 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 BCS, 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.

## **Watercourse Impact Monitoring, Management and Contingency Plan**

14. The Applicant must implement the most recently approved Watercourse Impact Monitoring, Management and Contingency Plan for Longwall 19 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 in consultation with WaterNSW and to the satisfaction of the Secretary.

## **Swamp Impact Monitoring, Management and Contingency Plan**

15. At least 12 months prior to commencing extraction of Longwall 19, the Applicant must revise the Swamp Impact Monitoring, Management and Contingency Plan dated February 2021 to include an additional water quality/chemistry site adjacent to the proposed water level site behind rockbar SC10-RB15A.
16. The Applicant must implement the most recently approved Swamp Impact Monitoring, Management and Contingency Plan for Longwall 19 prepared under condition 6 of Schedule 3 of development consent DA 60-03-2001 to provide for achievement of the performance measures listed in Table 1 in consultation with WaterNSW and BCS and to the satisfaction of the Secretary.

## **Sandy Creek Waterfall Management Plan**

17. The Applicant must implement the most recently approved Sandy Creek Waterfall Management Plan for Longwall 19 to provide for achievement of the performance measures listed in Table 1 to the satisfaction of the Secretary.

*Note: The condition requires that the Technical Committee and Steering Committee established under the Plan regularly advise the Applicant on any measures necessary to support continued compliance with condition 1 of Schedule 3 of development consent DA 60-03-2001.*

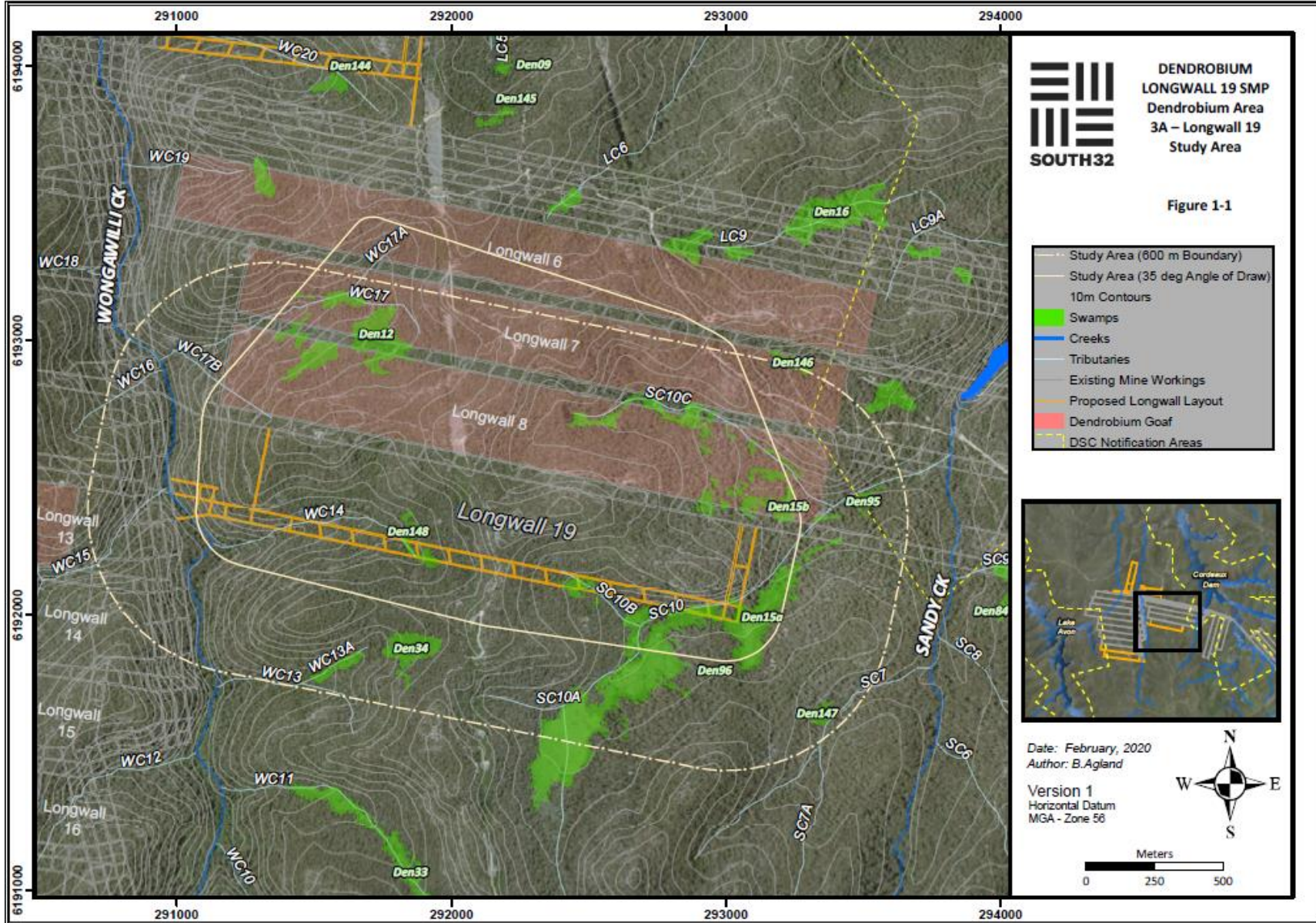
## **Regular Reporting**

18. 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) tracks compliance with the performance measures listed in Table 1;
  - (c) details any actions undertaken in the period to investigate any exceedances of predictions in the Subsidence Management Plan (2021) and any reported Level 2 or Level 3 Triggers in the Trigger Action Response Plans; and
  - (d) accurately records 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.

APPENDIX 1: MINING LAYOUT PLAN



APPENDIX 2: SET BACK FROM SWAMP 15a

