



Mr Chris Armit
Approvals Coordinator
Chain Valley Colliery
Delta Coal Pty Limited
Off Construction Road (Off Rutleys Road)
Manning Park, NSW, 2259

22/06/2020

Dear Mr Armit,

**Chain Valley Colliery (SSD 5465)
Miniwall S4 Extraction Plan**

I refer to the Miniwall S4 Extraction Plan which was submitted on 11 March 2020 in accordance with Condition 7 of Schedule 4 of the consent for Chain Valley Colliery (SSD 5465).

The Department has carefully reviewed the document and is satisfied that it has addressed the issues identified in the Department's review of 05 May 2020 and now satisfies the requirements of the conditions of consent for Extraction Plans (see Attachment A).

Accordingly, the Planning Secretary has approved the Miniwall S4 Extraction Plan (Revision 1, dated 12 May 2020). Please ensure that the approved plan is placed on the project website at the earliest convenience.

If you wish to discuss the matter further, please contact Colin Phillips on 92746483.

Yours sincerely

A handwritten signature in black ink, appearing to read 'M Sprott'.

Matthew Sprott
Director
Resource Assessments (Coal & Quarries)
as nominee of the Planning Secretary

ATTACHMENT A

Consideration of Approval of Miniwall S4 Extraction Plan

1. As required by condition 7 of Schedule 4 of the consent for Chain Valley Colliery (SSD 5465), the Extraction Plan for proposed Miniwall S4 consists of an overarching document that describes the proposed mining operations and a series of specialist management plans (MPs) including a:
 - Public Safety MP;
 - Built Features MP;
 - Groundwater MP;
 - Rehabilitation MP;
 - Benthic Communities MP;
 - Seagrass MP;
 - Subsidence Monitoring MP;
 - Subsidence Prediction Report; and
 - Subsidence Management Trigger Action Response Plan (TARP).
2. Many of these MPs are little changed from when they were reviewed in July 2019 as part of the Extraction Plan approval process for Miniwalls S2 and S3.
3. In December 2019, Delta Coal forwarded its draft Extraction Plan to 10 government agencies, two Councils and members of its Community Consultative Committee, inviting comment on the Plan. It received four responses.
4. BCD indicated it had no comment and Transport for NSW indicated its satisfaction with the safety of the Pelican Rock Navigational Marker.
5. Lake Macquarie City Council provided minor comments on three of the MPs, which were incorporated by Delta Coal into revised versions of these MPs.
6. The Resource Regulator indicated it was satisfied with the resource recovery that was proposed and that a revision of the rehabilitation bond would be triggered by this Extraction Plan.
7. Proposed Miniwall S4 at Chain Valley Colliery (CVC) represents a minor increment in coal extraction at CVC. The proposed miniwall would recover approximately 590,000 tonnes of coal and take about five months to be mined.
8. Miniwall S4 would be a continuation of mining beneath Lake Macquarie. It would be located adjacent to, and to the north of Miniwalls S2 and S3.
9. Long-term vertical subsidence is predicted to be 300 mm, compared to the approved limit for subsidence of 780 mm beneath the waters of Lake Macquarie.
10. Monitoring to date, has demonstrated that similar predictions of the magnitude of subsidence for Miniwall S2 have been accurate and not been exceeded.
11. Miniwall S4 would be located so that no more than 20 mm of vertical subsidence would occur in either the:
 - High Water Mark Subsidence Protection Barrier (HWMSB); or
 - Seagrass Protection Barrier (SPB).

12. The parameters of the HWMSB were established in the 1990s, in response to unplanned subsidence of the Lake Macquarie foreshore. A zone was established in which underground mining operations must be designed so that no more than 20 mm of vertical subsidence (the practical limit for measurement of subsidence) would occur between the High Water Mark and the 2.44 m AHD land contour. A line is projected from the High Water Mark at angle of 35 degrees to the vertical. Where this line intersects with the coal seam marks the lakeside edge of the HWMSB, in which secondary extraction, such as miniwall mining, is not permitted.
13. The SPB is similar to the HWMSB, only that its purpose is to protect seagrass beds that fringe the foreshore and extend to a depth of two metres within the lake. The line from the lakeside edge of the SPB is projected at an angle of 26.5 degrees to its intersection with the target coal seam. No secondary coal extraction, such as miniwall mining, is permitted within this zone. The figure below shows that the 20 mm subsidence contour (in red) skirts the seagrass beds.

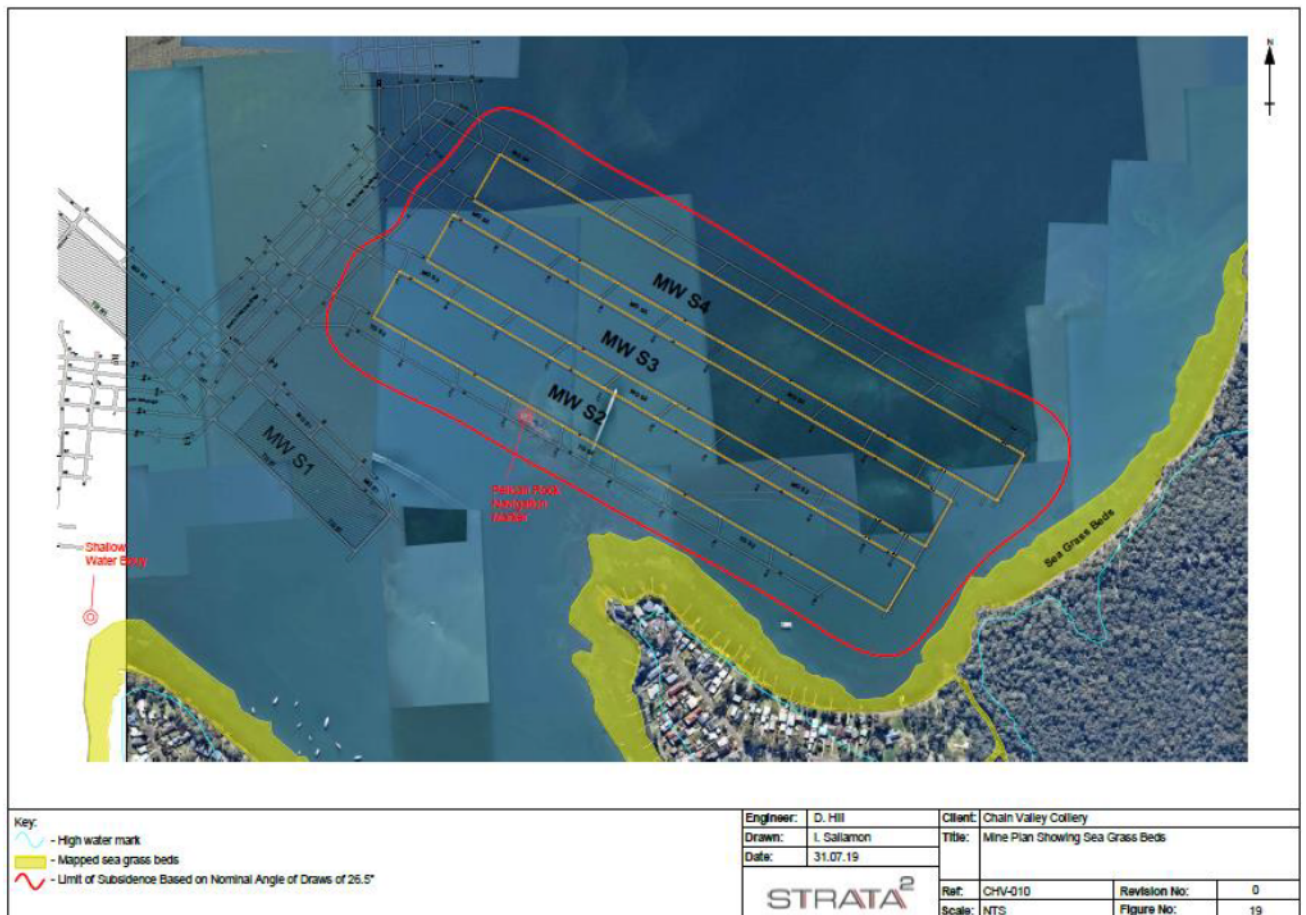


Figure 5: S2, S3 and S4 Miniwall (MWS2, MWS3 and MWS4) Surface Features (Strata2, 2019)

14. At CVC, for the assessment of the Extraction Plan for Miniwall S4, the SPB lies completely within the HWMSB. That is, if the HWMSB is protected from secondary extraction, the SPB is also protected.

15. Delta Coal has provided a mine plan for Miniwall S4 based on the avoidance of secondary extraction with in both the HWMSB and the SPB. Therefore, the proposed mining layout would comply with the requirements for the protection of these sensitive features.
16. Miniwall S4 is planned to be extracted from the Fassifern Seam which is overlain by the Great Northern and Wallarah Seams.
17. One of the potential risks faced by mining in the CVC is that of reactivation of mine subsidence in areas where coal has previously been extracted from overlying coal seams. In such circumstances, a potential risk is that large-scale subsidence events could occur that could impact areas such as the lake foreshore.
18. This risk was recognised at the time of the grant of consent for the current operations at CVC. Conditions of consent require that secondary extraction of coal from beneath Chain Valley Bay is not to be considered unless a Multi-Seam Mining Feasibility Investigation report has been prepared to the satisfaction of the Planning Secretary.
19. Proposed Miniwall S4 is not located beneath Chain Valley Bay.
20. The seams overlying Miniwall S4 have not been mined.
21. The nearest existing mine workings are in the uppermost Wallarah Seam, 85 m above and 210 m to the south of proposed Miniwall S4. There are no predicted interactions with these existing mine workings.
22. The proposed Miniwall S4 would be located 165 to 175 m below the solid bed of Lake Macquarie and there is no prediction of connective cracking.
23. The only built feature predicted to be impacted by Miniwall S4 is the Pelican Rock Navigational Marker within Lake Macquarie. It is located adjacent to Miniwall S2 and may only be marginally affected by subsidence from Miniwall S4, if at all. The Navigational Marker was predicted to experience a maximum of 130 mm of subsidence, a level which Transport for NSW – Maritime Division considered would not affect its functionality, nor reduce the safety of boat traffic. This marker has been regularly monitored from prior to the commencement of Miniwall S2 up to the present. Monitoring is planned to continue until after the completion of Miniwall S4.
24. The Extraction Plan is supported by a Subsidence Monitoring Plan consisting of land-based surveys of the lake foreshore and regular bathymetric surveys of the lakebed.
25. The collected subsidence monitoring data feeds into the Subsidence Monitoring TARP so that if greater than predicted subsidence were to be recorded appropriate actions would be taken.
26. The maximum subsidence permitted in the mining area of Miniwall S4 is 780 mm. However, as a maximum of 300 mmm of long-term subsidence is predicted, it is quite unlikely that the TARP would need to be enacted as this miniwall is designed very conservatively to comply with this condition of consent.
27. Considering the above matters, it is concluded that the Extraction Plan for Miniwall S4 should be approved.

