

SPRINGVALE COAL MINE

LONGWALLS 428 - 432 EXTRACTION PLAN

Reasons For Decision

1. BACKGROUND

The development consent for Centennial Coal Company Pty Ltd's (Centennial's) Springvale Coal Mine was granted by the then Planning Assessment Commission in September 2015.

The consent permits the extraction of coal from twenty longwalls (LW416-432 and LW501-503). However, before longwall mining can proceed, the consent requires an Extraction Plan to be approved by the Planning Secretary. A series of Extraction Plans have been approved under the consent, with extraction approved up to the end of LW427.

2. EXTRACTION PLAN APPLICATION

On 22 March 2021, Centennial lodged an application for approval of a new Extraction Plan for five longwall panels, LW428 – LW432, in the Lithgow Seam. Extraction of these panels would occur between 2022 and 2026. The draft Extraction Plan included a series of detailed management plans and an updated Subsidence Predictions and Impact Assessment Report (Subsidence Report).

3. CONSIDERATION BY AGENCIES

The Department of Planning and Environment (the Department) sought comments on the draft Extraction Plan from relevant agencies. Advices were received from the Department's Biodiversity, Conservation and Science Directorate (BCS) and Water Group, the Department of Regional NSW's Division of Mining, Exploration and Geoscience (MEG), the NSW Resources Regulator, WaterNSW, Heritage NSW and the Forestry Commission of NSW.

Centennial provided the Department with a response to the advice received from agencies (principally BCS and the Water Group). This response (a 'Response to Submissions', or RTS) was forwarded to the relevant agencies for further comment and additional comments were received from BCS. These comments have been carefully considered by the Department.

4. CONSIDERATION BY INDEPENDENT MONITORING PANEL

The Department requested advice on the draft Extraction Plan from the Springvale Independent Monitoring Panel (the Panel), which was established under the consent to advise both Centennial and the Department with respect to subsidence impacts. The advice of the Panel was sought on two occasions during the Department's assessment of the draft Extraction Plan application. The Panel's advice is provided in **Attachments 1** and **2** with key points summarised below.

The Panel's initial advice concluded that the only reasonable and feasible measure available to either avoid or else significantly mitigate subsidence impacts and related environmental consequences on Newnes Plateau Shrub Swamps and/or Newnes Plateau Hanging Swamps is to shorten the length of one or more of the longwall panels such that they start further back from Marrangaroo Swamp, Marrangaroo Creek and the hanging swamps adjacent to these features.

The Panel recommended that the mine plan be changed at least to the extent that all hanging swamps lie outside the angle of draw of mining.

Centennial subsequently presented an amended mine plan as part of its RTS (refer to Section 5).

The Panel provided the following key recommendations regarding the amended mine plan:

- while the Panel did not endorse the methodology used by Centennial to arrive at its amended mine plan, it agreed that the proposed shortening of LW431 and LW432 would go some way to mitigating adverse environmental impacts on Marrangaroo Swamp and Marrangaroo Creek, subject to how the high permeability zone recently intersected immediately to the south of these panels behaves;
- the length of LW430 should be reduced so that, at the very least, Marrangaroo Swamp and Marrangaroo Creek fall outside the angle of draw of this longwall panel;
- the length of LW428 and LW429 should be determined on the basis of a cost-benefit analysis.

The Panel also recommended additional monitoring of the hydrological response within hanging swamps and of Giant Dragonfly habitat as mining progresses, consideration of a staged approval, revisions to Trigger-Action-Response-Plans to better align NSW and Commonwealth requirements and recommendations related to ongoing groundwater model verification and updates. The Department has carefully considered the Panel's advice and recommended conditions to address these concerns.

5. CENTENNIAL'S AMENDED MINE PLAN

Following the initial advice from the Panel, Centennial proposed shortening LW431 and LW432 by 595.1 m and 405.7 m, respectively. The amended longwalls would have a reduced void length of approximately 1,255 m (see **Figure 1**). Centennial's reasons for these reductions were to:

- reduce the risk of impact to two shrub swamps (Lost City and Lost City North);
- avoid undermining the rock pagodas located at the southern end of the original proposed length of LW432 to reduce the risk of mining-related impacts;
- avoid directly undermining a significant portion of Marrangaroo Swamp above LW431 and LW432, potentially reducing the extent of mining related impacts to the swamp; and
- avoid impacts occurring to mapped hanging swamps below the YS4 aquitard.

6. KEY ISSUES

The Panel considered that longwall length is the only reasonable and feasible control measure available to avoid or significantly reduce subsidence and associated hydrological impacts on swamps, in particular on Marrangaroo Shrub Swamp and Marrangaroo Hanging Swamps. The Department agrees.

The Department recognises that historical mining has intersected a network of inter-connected lineaments across the Springvale mining area, including lineaments connected to Marrangaroo Shrub Swamp. Based on experience elsewhere within the Springvale Mine, these impacted lineaments may already be drawing groundwater away from Marrangaroo Swamp. The Department notes however that monitoring data for Marrangaroo Swamp has, to date, not shown a strong lineament related response as a result of historical mining.

With this context in mind, the focus of the Department and the Panel has been on:

- avoiding impacts on hanging swamps, which may be less susceptible to lineament effects when they sit high in the Burrallow Formation;
- avoiding direct impacts on Marrangaroo Creek; and
- avoiding, to the greatest extent practicable, direct impacts on shrub swamps that may exacerbate the indirect lineament effects associated with historical and future mining.

Length of LW431 and LW432

Through the assessment process for this Extraction Plan, Centennial has proposed reducing the panel length of LW431 and LW432 (see **Section 5** and **Figure 1**). The Panel and BCS have endorsed these reductions, and the Department supports the reduced panel lengths.

Length of LW430

The Panel has recommended shortening the length of LW430 to mitigate adverse environmental impacts on Marrangaroo Swamp and Marrangaroo Creek. The Panel believes there is insufficient direct evidence in the vicinity of LW428 to LW432 to confirm that the YS4 aquitard will not be compromised by mining activities. The area overlying LW430 sits immediately above the YS4 aquitard and Marrangaroo Creek is located on/adjacent to known lineaments. Both the mid-section of this shrub swamp and adjacent hanging swamps could potentially be adversely impacted by these features.

Similarly, BCS has recommended shortening LW430 to reduce impacts to Marrangaroo Swamp, the Newnes Plateau Hanging Swamps near or supplied appreciably by flow from above LW430 (Marrangaroo Hanging Swamp 3 and Lower Marrangaroo Hanging Swamp), the aquifers that feed these swamps and the known population of Blue Mountains Water Skink and Giant Dragonfly.

The Department has considered the economic and social arguments advanced by Centennial for not shortening LW430 but considers that the views of the Panel and BCS that LW430 should be shortened carry greater weight. Given the proposed shortening of LW430, the Department does not consider a staged approval is warranted.

Length of LW428 and LW429

The Panel provided advice that the length of LW428 and LW429 should be determined on the basis of “all key social, economic and environmental factors”.

LW428 is not expected to impact on any Newnes Plateau Hanging Swamp, and would have limited direct impacts on Marrangaroo Shrub Swamp.

LW429 may impact the small Marrangaroo Hanging Swamps 1 and 2 located on the eastern flank of the upper reaches of Marrangaroo Creek. As these swamps are located above the YS3 aquitard, the Panel recommended they be monitored as validation sites for those hanging swamps located further west and south of Marrangaroo Creek. The greatest risk of impact is considered to come from LW429, which directly undermines the upper reaches of Marrangaroo Shrub Swamp. It is noted that Centennial proposes to offset impacts to this swamp, which is required under the consent.

Following careful consideration of these likely environmental impacts, the requirements of the consent, and the economic and social considerations associated with a substantial reduction in longwall length (see **Section 8**), the Department considers that no reduction in length is required.

7. RESIDUAL IMPACTS AND OFFSETS

While reducing the length of LW430, 431 and 432 is likely to significantly mitigate environmental impacts, the Department considers that the residual impacts on Marrangaroo Shrub Swamp are likely to constitute greater than “negligible” environmental consequences and will require offsetting in accordance with the development consent.

Similarly, residual impacts associated with the mining of longwalls 419 to 427 are now accepted to have resulted in greater than “negligible” environmental consequences, requiring offsetting.

A draft Springvale Mine Swamp Offset Strategy is being developed by Centennial in consultation with the Department and its Environment, Energy and Science Division, NSW National Parks and Wildlife Service (NPWS) and the Commonwealth Department of Agriculture, Water and Environment. The strategy seeks to compensate for mining-related impacts to all 14 shrub swamps within the Springvale development consent area, including Marrangaroo Shrub Swamp.

The strategy has been designed to support the recently announced transfer of land within the Newnes, Ben Bullen and Wolgan State Forests to the Gardens of Stone State Conservation Area (SCA). This land comprises the bulk of the remaining areas of Newnes Plateau Shrub Swamp and Newnes Plateau Hanging Swamp endangered ecological communities in NSW and would result in greater protections and conservation management outcomes for these swamps.

Centennial proposes a \$28 million contribution towards the management and protection of the new SCA, in addition to a range of ongoing management, monitoring and remediation measures required under the development consent and mining lease.

The proposed monetary contribution has been a key factor in the NSW Government's decision regarding the proposed gazettal of the Gardens of Stone SCA.

In the interim, the Department holds a series of swamp offset bonds required under conditions of previous EPs for longwalls LW419 to LW427. This includes a \$4 million bond for any adverse impacts on Marrangaroo Creek Swamp and Upper Marrangaroo Creek Swamp.

These bonds would continue to be held until such time as Centennial has satisfactorily met its offset requirements under the consent.

8. ECONOMIC AND SOCIAL CONSIDERATIONS

Centennial is the sole supplier of coal to Mt Piper Power Station, and Springvale provides the major portion of this supply. Centennial's other mines in the Western Coalfield have a limited ability to supply any shortfall in production from Springvale.

As part of its initial RTS, Centennial presented an analysis of the economic impacts of shortening LW431 and LW432. The analysis estimated that the reductions in panel length would amount to the loss of 3.75 million tonnes of coal, with an estimated current value of around \$200M, and lead to a reduction in mine life of 14 months. The economic implications include:

- loss of wages of \$63.64m;
- reduction in local employee spend of at least \$34M;
- reduction in supplier payments of about \$223.5M for all of NSW, of which \$42.2M would be a reduction in local spend; and
- reduction in State Government royalties of \$14.37M.

At the Department's request, Centennial provided additional economic effects analysis of the implications of shortening either or both LW430 and LW429.

Shortening LW429 and LW430 based on a 26.5-degree angle of draw setback from all Newnes Plateau Hanging Swamps would reduce planned coal reserves by a further 2.69 Mt (LW429 = 1.57 Mt and LW430 = 1.12 Mt). This is a 35% reduction in remaining coal reserves at Springvale, which would reduce the life of Springvale by a further 11 months.

As Springvale winds down towards 2026, Centennial's current plan is for most of its workforce to transfer to its proposed Angus Place West project, if approved, as it ramps up operations. If Springvale's mine life is shortened, continuity of employment for these workers would be threatened and continuity of coal supply to Mt Piper Power Station (which supplies 15% of NSW's energy) would likely be broken. Electricity supply from Mt Piper in providing dispatchable power and system security into the National Electricity Market has become increasingly important given recent announcements by Origin Energy for the early closure of Eraring Power Station by 2025 – 7 years earlier than planned. This would follow the closure of Liddell Power Station by 2023.

98% of Springvale's workforce reside in the Blue Mountains, Lithgow and Bathurst local government areas (LGAs), with nearly half (48%) living in Lithgow LGA. Because the workforce is regionally based, much of its social and economic activity takes place in these local and regional communities. Mining and power generation underpins the Lithgow community and its surrounds both economically and socially.

Over the 2017-2020 period, Springvale contributed approximately \$36.4 million, \$37.8 million, and \$192.7 million on average to the local, regional, and state economies, respectively. In a comparatively small and undiversified regional economy, these transactions represent a significant economic benefit.

The retention of mining employee incomes in the region is therefore economically beneficial and a catalyst for other beneficial socioeconomic outcomes. Should Springvale cease operations

prematurely, the ability for the workforce to obtain alternative skilled employment in the region is limited, which jeopardises the ability to retain this skilled workforce locally.

The Department accepts the economic and social analysis provided by Centennial.

9. EVALUATION AND CONCLUSIONS

The Department has assessed the application for approval of the Extraction Plan in accordance with the relevant requirements of Springvale's consent and has considered the potential impacts of the extraction of LW428 – LW432 on the surrounding environment.

Extraction of coal from LW428 – LW432 using longwall methods is already approved under the existing consent, subject to the performance measures listed in the consent and to the preparation and approval of an Extraction Plan.

The Department is not satisfied that the five longwalls can be extracted, as initially proposed in the draft Extraction Plan, with a low risk of exceedance of these performance measures.

The Department notes Centennial's acceptance of substantial reductions in the length of LW431 and LW432 to limit the predicted environmental impacts, particularly on hanging swamps. However, the Department considers that LW430 should be similarly shortened, to reduce predicted impacts on the western half of Marrangaroo Shrub Swamp.

The Department considers that the other two longwalls (LW428 and LW429) can be extracted to the full length proposed in the draft Extraction Plan, subject to monitoring now proposed by Centennial and the consent's requirement to offset impacts on Marrangaroo Shrub Swamp, as required under condition 5 of Schedule 3 of the mine's consent.

The Extraction Plan, as proposed to be approved, would continue to underpin the wide-ranging benefits for the local and State economies that flow from the continued operation of the Springvale Mine and the particular and critical role it plays in providing the majority of coal supply to the Mt Piper Power Station.

On balance, the Department considers that the extraction of the five longwalls as proposed to be approved is in the public interest and that the Extraction Plan application should be approved, subject to conditions.



15/3/2022

Clay Preshaw

Executive Director

Energy, Resources and Industry Assessments

as nominee of the Secretary

Attachments:

1. Advice from the Panel dated June 2021
2. Advice from the Panel dated November 2021

Refer Departments website for the Springvale Mine Extension Project under the folder Post Approval at:
<https://www.planningportal.nsw.gov.au/major-projects/project/4236>

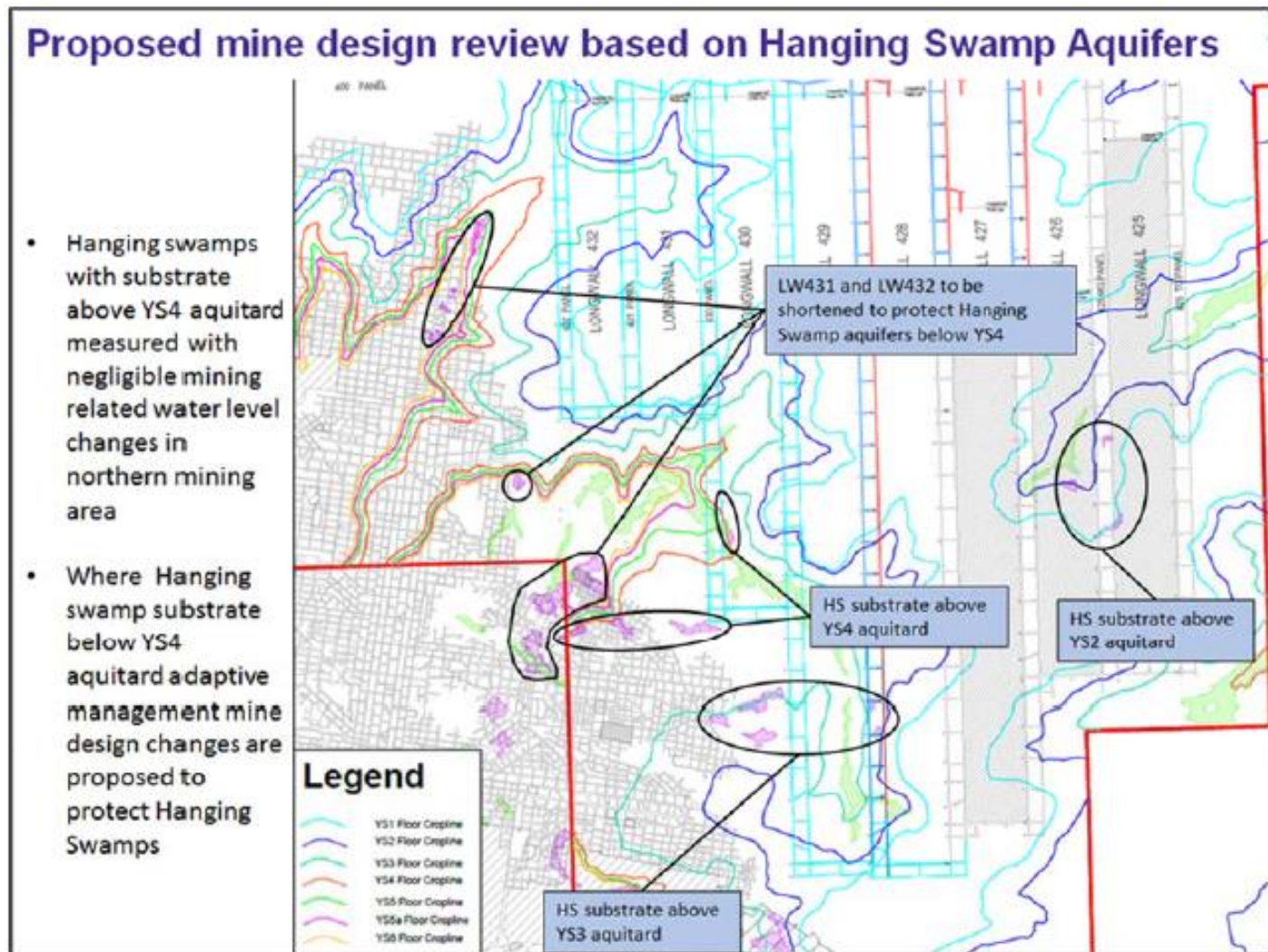


Figure 1: Centennial's Amended Mine Plan