

MANGOOLA OPEN CUT

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11 September 2020

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Resource Assessments
Department of Planning, Industry and Environment

Provided via the Mangoola Coal Continued Operations Project (SSD-8642) Planning Portal

Dear Melanie,

Regarding your request for additional information (9 Sept 2020) please find below the responses to the clarifications.

1. **Please briefly describe the CHPP cladding and how it reduces noise emissions.**

The cladding on the CHPP at Mangoola Coal Mine consists of:

- double sided Colorbond 0.42mm steel sheeting on the walls and
- double sided Colorbond 0.48mm steel sheeting on the walls.

The underside of the roof sheeting also has Bradford CSR Anticon 50mm R1.2 fibreglass with double sided Thermofoil (713) insulation installed.

Cladding interrupts the path from internal noise sources to locations outside the CHPP. Some sound incident on the inside of the cladding will be reflected, contributing to reverberant internal levels, while some will be transmitted through. The insulation installed under the roof serves as an absorptive layer which will absorb some of the reverberant acoustic energy within the structure. Cladding as a form of noise control is common in situations where it is not feasible to modify the characteristics of the noise source, and is employed on many CHPP structures in the Hunter Valley where noise emission from them may impact private receivers.

There are a number of factors that affect the transmission loss characteristics of the cladding, including but not limited to material type, fixing methods and number of openings. Materials and installation methods used at the Mangoola CHPP are consistent with those applied at many other sites in the Hunter Valley, and are generally in line with industry best practise. Predicted contributions from the CHPP to site total noise emission in the Mangoola Coal Continued Operations Noise Impact Assessment were relatively low.

2. **It appears from the groundwater assessment that post-mining groundwater levels would reach equilibrium approximately 300 years after mining. Can you please confirm?**

No this is not correct. Based on the approach taken in the EIS the groundwater assessment did not model pit lakes water balance / equilibrium. This was covered in the surface water assessment. The groundwater

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assessment provided the groundwater inputs (based on the groundwater modelling) and then the surface water assessment considered the groundwater inputs with surface water inputs to model the final void water balance and final void salinity balance. This is best summarised in **Section 6.7.3.2** of the EIS.

I do note that within **Section 6.17.2** as part of the discussion on Final Landform and Final Voids that it was stated that *"Final pit lake salinity levels would increase slowly as a result of evapo-concentration. After approximately 300 years the salinity of the final voids will have an EC of less than 10,000 μ S/cm (or less than approximately 6400 mg/L assuming a factor of 0.64 to convert from μ S/cm to mg/L). At this water quality the voids would be available for a range of uses (if desired in the post mining landscape) as is discussed further in Section 6.17.5."*

Was this where the reference to 300 years came from? To confirm this is in relation to salinity and not water levels.

3. **The surface water assessment notes that the pit lakes would reach equilibrium more than 200 years post mining. Can you provide more detail on when equilibrium would be reached.**

That is correct. As described in **Section 6.7.3.2** of the EIS *'The final void modelling results indicate that both the final pit lakes would reach an equilibrium level more than 30 m below their respective spill levels (i.e. the lakes are contained). Equilibrium levels would be reached slowly over a period of more than two hundred years. Final pit lake salinity levels would increase slowly as a result of evapo-concentration.'* This is illustrated on Figure 6.16 for the approved mining void and Figure 6.17 for the MCCO Additional Mining Area void in the EIS.

4. **Please confirm the area (in hectares) of the out of pit emplacement and the approved final void.**

- MCCO Out of Pit Emplacement Area – Approx. 59 hectares
- Approved Void at Mangoola Coal Mine – Approx. 52 hectares

Yours sincerely,



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