

29 August 2019

Jack Murphy  
Environmental Assessment Officer  
Resource Assessments | Planning Services  
320 Pitt Street | GPO Box 39 | Sydney NSW 2001

Contact: Girja Sharma  
Telephone: 98652501  
Our ref: D2019/89368

Dear Mr Murphy

### **Russell Vale Colliery Revised Preferred Underground Expansion Project (09\_0013)**

I refer to your referral dated 30 July 2018 inviting WaterNSW to provide advice on the revised preferred project report and supporting documents and recommended conditions of consent for the above project. WaterNSW appreciates the opportunity to provide detailed comments on the revised preferred mining proposal.

#### **Context and Mining Principles**

The subject land is located in the declared Sydney Catchment Area, including Metropolitan Special Area. A legislative function of Water NSW is to protect and enhance the quality and quantity of water in this catchment.

WaterNSW has adopted a set of principles that establish the outcomes it considers essential to protect the drinking water supplies of the Greater Sydney region from mining impacts. The mining principles relevant to this project and considered in the assessment include:

1. Protection of water quantity
2. Protection of water quality
3. Protection of human health
4. Protection of water supply infrastructure
5. Protection of ecological integrity
6. Sound and robust evidence regarding environmental impacts

#### **Summary of assessment**

The revised project report addresses the issues raised in the Second PAC review, and considered both WaterNSW's Mining Principles and the recommendations of the 2018 IEPMC Initial Report. WaterNSW considers that:

- the first workings mining method is much safer than the previous proposal for longwall mining and is unlikely to cause significant surface subsidence or significant interaction with the overlying seams
- the mining method is likely to minimise the potential groundwater impacts by limiting depressurisation within and immediately above the mined coal seam, and
- the proposed first workings are likely to have negligible impacts on natural surface features including upland swamps, cliffs, steep slopes, drainage lines, creeks, Cataract Creek, Cataract River, and Cataract Reservoir.

Notwithstanding, WaterNSW has discussed a range of concerns below that should be addressed through the provision of additional information or the imposition of appropriate conditions of consent.

### **Subsidence in multi-seam environment**

WaterNSW notes that this is a unique mining proposal where a third coal seam is proposed to be undermined under already mined Bulli and Balgownie seams. One of the key uncertainties with the proposed mining area relates to the stability of the Bulli seam pillars, the potential for pillar run, and associated subsidence and environmental consequences including induced leakage.

Further, the proposed mining area is intersected by geological features such as the Corrimal fault, dyke D8, and an igneous sill intrusion. WaterNSW notes that the revised preferred mine plan is designed to avoid these intrusions where possible. However, the subsidence assessment report does not simulate geological structures due to the limitations and constraints inherent with the model set up and code, as well as uncertainty in the location, stratigraphic persistence and hydraulic properties.

While WaterNSW acknowledges that the revised mine plan is designed to minimise these concerns, a number of uncertainties remain. Consequently, WaterNSW recommends that:

- the subsidence assessment report is peer reviewed by a multi-seam mining expert within the NSW Government or an independent consultant acceptable to the Department, and
- subject to the findings of this expert peer review, the management of uncertainties is addressed through the approval conditions i.e. an extraction plan process (or equivalent) to allow the expert stakeholders to provide advice on an ongoing basis.

### **Water quantity and quality**

WaterNSW notes that the revised mining proposal predicts that the mining company will require a Water Access Licence for the annual (cumulative) take of approximately 10ML/year of stream baseflow and leakage from Cataract Creek and the upper Cataract River catchments. As no details are provided about how this will be achieved, further information is required.

The revised project report proposes that some reject materials from the coal processing plant and sizing and screening plant would be emplaced underground. Further details should be provided about the quantity of reject materials to be emplaced and the potential associated impacts on groundwater water quality.

Overall, WaterNSW considers that the project would not have any significant impacts on water quantity and has the potential to achieve a neutral or beneficial effect (NorBE) on water quality, subject to:

- the provision of sufficient additional information
- the imposition of performance measures for Cataract Creek, Cataract River, Bellambi Creek, Cataract Reservoir and upland swamps overlying the mining area (see WaterNSW's suggested measures in Attachment 1)
- a requirement that the mining company does not cause any exceedances of the performance measures, and
- requirements for a range of monitoring and management plans for subsidence, surface water, groundwater and upland swamps.

### **Master Agreement**

WaterNSW notes that a Master Agreement between the former SCA and the previous mine owner (GujaratNRE) was set up to recompense SCA for any damages to infrastructure and the catchment, as well as any disruptions to water supply caused by mining activities. WaterNSW requests an update on the status of the agreement given the change in mine ownership. WaterNSW requires that such an agreement is established, which should provide firm guarantees and requirements of a security deposit.

It is further requested that WaterNSW remain a stakeholder for the proposal and any updates to relevant plans.

If you wish to discuss this letter further, please contact Girja Sharma on 9865 2501 or e-mail at [environmental.assessments@waterNSW.com.au](mailto:environmental.assessments@waterNSW.com.au).

Yours sincerely

A handwritten signature in black ink that reads "Clay Preshaw". The signature is written in a cursive, flowing style.

**CLAY PRESHAW**  
**Manager Catchment Protection**

## Attachment 1 – Suggested Performance Measures

<b>Water Storages</b>	
Cataract Reservoir	<p>Negligible environmental consequences including:</p> <ul style="list-style-type: none"> <li>• negligible reduction in the quantity or quality of surface water inflows to the reservoir;</li> <li>• negligible reduction in the quantity or quality of groundwater inflows to the reservoir;</li> <li>• negligible increase in the quantity of water entering the groundwater system from the reservoir; and</li> <li>• negligible leakage from the reservoir to underground mine workings.</li> </ul> <p>No connective cracking between the reservoir surface and the mine.</p>
<b>Watercourses</b>	
Cataract Creek Cataract River Bellambi Creek	<p>Negligible environmental consequences including:</p> <ul style="list-style-type: none"> <li>• negligible diversion of flows or changes in the natural drainage behaviour of pools;</li> <li>• negligible gas releases and iron staining;</li> <li>• negligible increase in water cloudiness;</li> <li>• negligible increase in bank erosion; and</li> <li>• negligible increase in sediment load.</li> </ul>
<b>Swamps</b>	
Swamps of special significance	<p>Negligible environmental consequences including:</p> <ul style="list-style-type: none"> <li>• negligible change in the size of swamps;</li> <li>• negligible erosion of the surface of swamps;</li> <li>• negligible change in the functioning of swamps;</li> <li>• negligible change to the composition or distribution of species within swamps; and</li> <li>• negligible drainage of water from swamps, or redistribution of water within swamps.</li> </ul>
All other swamps	No significant environmental consequences beyond predictions in the EA.
<b>Land</b>	
Cliffs	Minor environmental consequences (that is occasional rockfalls, displacement or dislodgement of boulders or slabs, or fracturing, that in total do not impact more than 3% of the total face of such cliffs within any longwall mining domain).
<b>Biodiversity</b>	
Threatened species, threatened populations, or endangered ecological communities	Negligible environmental consequences