

To: New South Wales Government Independent Planning Commission

Re: RUSSELL VALE REVISED UNDERGROUND EXPANSION: STATE SIGNIFICANT DEVELOPMENT (MP09\_0013)

I am writing to object to this Project.

I believe it poses unacceptable risks to the Sydney water catchment and to the fragile ecosystem of the Woronora Plateau. There are important Aboriginal sites across the Plateau, yet their lasting value is ignored. Also at risk are the health and wellbeing of Illawarra residents, due to noise, air particulate pollution and dust from the mine operations and increased traffic. The climate change impacts of the mine will not be negligible and will, of course, be felt across the planet not just in the vicinity of the mines.

Sydney's Special Areas were set up to preserve the city's main water catchment not to allow access for mining. Government planning needs to provide for a fast-growing population in a changing climate. We need to have clean reliable water for future generations, not limited quantities of treated water. Isn't it time for the government to prioritise water supply for future generations?

I am a local resident, living less than 4 kms from the mine. I have been a member of the CCC (Community Consultative Committee) for Wongawilli mine for 6 years. This experience means that I have good knowledge of the company, since the Wongawilli operations (which lie further south) are also owned and operated by Wollongong Coal. The company is also planning expansion at Wongawilli.

Is the Commission aware that 2 senior engineers with many years of experience in mining prior to Wollongong Coal, resigned earlier this year? This was Mitch Jakeman (CEO) and Ron Bush (Group Environment and Approvals Manager), who signed off on most of the documents from the company relating to the Project. These senior staff resignations, for unknown reasons, leave a large knowledge gap.

### Subsidence and old pillars

I spoke on Monday before the IPC Commissioners, on behalf of NPA (National Parks Association) and we have made a written submission. I find it concerning that apparently only one of the Commissioners has good knowledge of coal-mining. When reading the subsidence material and questions of collapsed pillars, I realised that it all depends on the expertise and modelling of Ken Mills and Professor Hebblewhite. They cite themselves or each other in all references.

The commissioners did send some excellent questions to the Resources Regulator in advance of their meeting.

The Meeting Transcript with the Resources Regulator states that Gang Li, is principal inspector (subsidence), and is overseeing mine subsidence related matters. A quick search shows me that he has worked for the NSW government

as a subsidence engineer for at least 5 years, and that he gained a PhD in Rock Mechanics at the University of Newcastle in 1991.

Dr Gang Li is obviously quite expert in mine subsidence and has read carefully the reports from SCT and Professor Hebblewhite. Dr Li defines “Marginally stable” and points out in detail that we should consider the whole wider picture of ground and groundwater movements in terms of collapsed pillars.

To quote Dr Li:

“Importantly, without a reasonable understanding of this key risk factor, we are in the dark in making decisions in relation to Russell Vale Colliery’s proposed revised underground expansion project. “

Also, to quote Dr Li

“I suggest the applicant be required to identify, as Bruce Hebblewhite commented, to identify the existence of the marginally-stable pillars in the overlying Bulli workings and to undertake investigations into the distribution of site’s marginally-stable pillars. “

Do we really want to take this risk with our water catchment and to the safety of mine workers? We appear to have a dissenting independent voice. The Resources Regulator very quickly issued a statement essentially saying its all OK. I note that there was a half hour private discussion by the commissioners et al, after Li’s evidence. This does not comply with the openness and transparency and the full capture of information as described by Professor Alice Clarke.

It is not sufficient to say that these marginally stable pillars can be identified after mining commences. We should be certain of the risks before mining.

Mining history is used in the Project report to support further mining. The argument goes that mining has occurred at this site for many decades, so it is therefore fine to continue. The company currently employs 5 workers at Wongawilli, where the mine is currently in care and maintenance, and less than 50 at Russell Vale, so the closing of operations would not have a big impact on current jobs. The company does not have a record of treating its workers well and there has been a poor safety record.

As a local resident, I believe the Department of Planning should be supporting innovative companies developing in the area, ones which are less polluting and have a likely longer future.

It is certainly an improvement that the Revised Preferred Project no longer seeks longwall mining, but rather a less destructive process which they describe in various ways including place-change mining. However, the mining process will still create underground cavities (voids) across a wide area, with extensive mining in 32 or so panels in the Wongawilli coal seam, mostly beneath the Bulli and Balgownie seams which have been previously mined. Multi-seam mining is a relatively untested method.

According to the Department Final Report “In accordance with the Mining SEPP, the Department considers that the coal resource associated with the Revised UEP is significant based on the high quality of the coal “

More than 3 million tonnes of stuff will be dug out from the catchment.

The Department final assessment fails to mention that the stuff extracted is only 50-60% coking coal, 30% thermal coal and the rest is rock. So why go ahead for such a small output? For the company, the answer has been clearly stated: they plan to mine further West in future. For the local residents and for NSW the advantages are not so clear. I find it quite shocking that the Department does not address this point but talks of the “high quality” of the coal.

### **Biodiversity and Water impacts**

It is difficult to conceive that this proposed project will have a neutral or beneficial effect on the water of the catchment.

There are 39 upland swamps in the Wonga East area. Climate change will cause more hot days, less rainfall and runoff and increased risk of bushfires. We know that the upland swamps are very important for the quality and quantity of the catchment water. They also provide habitats for a wealth of unique species. We do not know what the “negligible” impacts of mining will be and the problem of TARPs (Trigger Action Response Plans) is that once damage is done it is irreversible. We know that the swamps are very old, and that once their bedrock is cracked they will disappear. Ann Young (author of the book “Upland swamps in the Sydney region) has studied these swamps for 40 years and now describes the swamps as the “canaries above the mines” with their loss of water indicating dehydration of the catchment surface generally.

The revised mine plan will result in less subsidence than previous plans, but there is an increased impact on the surface area of the Woronora Plateau. A glance at the map of the proposed new workings shows that almost all of the ground area will have new mining underneath it, much more than previously proposed. Professor Hebblewhite observes that the total area of proposed mining is approximately 4,200,000m<sup>2</sup>. Within this total area, the area covered by recognised swamps is approximately 710,000m<sup>2</sup> (17% of the total proposed mining area) 17% is a large amount.

Many swamps will be undermined. These swamps have taken more than 10,000 years to form and are Endangered Ecological Communities.

Wolgan Swamp near Lithgow is an example of a swamp which was above a coal pillar, but which was destroyed by mining.

The increased footprint of mining means there will be a great deal more disturbance of the land and wildlife, due to workers driving and walking around and doing monitoring, boreholes, piezometer readings etc.

The biodiversity impacts partly result from the increase in groundwater inflows into the mine workings and the reduction in surface water flows. These have been modelled as “negligible” but still exist, and in times of future drought will

have more impact on fragile ecosystems. Geoterra estimates that the groundwater inflow will be 288ML/year. Over 5 years this will be 1440 ML, the equivalent of 576 Olympic sized swimming pools. I can't imagine that the tiny, rare, aquatic animals will adapt to this.

WCL is proposing to retrieve and sell the current longwall mining equipment, which would require the mining of a 25 m section of Longwall 6 (LW 6) to facilitate access and remove the equipment from the mine.

The conditions of consent allow "longwall mining of approximately 25 m required to retrieve existing longwall mining equipment."

I am concerned that I have seen no mention of the potential impacts on the coastal upland swamp CCUS4, which is directly in the path of the longwall mining. It is unclear from the maps exactly how closely the swamp will be undermined. We have no evidence regarding the previous impacts of the multiseam longwall mining in Longwall 6 because the company has refused to release any data publicly.

There is also the issue of the quality of water after mining, an issue not covered by the IEPMC, (Independent Panel for Mining in the Catchment) whose remit was water quantity. Mining creates permanent voids and these will slowly fill with groundwater when the pumps are turned off. Before mining the groundwater and the surface water are pure and clear: after mining the water contains iron, coming from cracked sandstone, as well as zinc, manganese, nickel and heavy metals.

I don't understand how discharge water from the mine adit on the Escarpment is likely to require treatment and yet the Department concludes the mine will have a neutral impact on water quality within the catchment. It seems like a contradiction.

## Impacts on the local community

The impacts from traffic remain very similar to previous proposals. There are still about 32 additional trucks per hour (loaded and unloaded) travelling along a residential street, the expressway and the freeway. Memorial Drive traffic has increased substantially since it was built. It varies a lot in volume, depending on time of day, but at peak times it is common to wait through 2 sets of traffic lights, breathing in diesel fumes from heavy vehicles.

Other serious problems will continue for the local community: noise, diesel fumes, and air particulate and dust pollution plus water pollution of Bellambi Creek and Lagoon. They have all been cited before and are not minor. Only recently, residents on Bellambi Lane have complained about noisy trucks, as the company removed material from the emplacement near the pit top.

The Project report states "Construction of the proposed Pit Top upgrades will commence at the same time as operations and the use of new and upgraded facilities will be phased in over approximately 12 - 24 months as construction is completed." Why should the residents wait suffer from noise and pollution from

coal being loaded? Why not build these improvements before mining commences.

In the past the company has failed to meet such commitments: the Bellambi Creek diversion for example. What action will the Department take if the upgrades are not made?

The new estimates for air quality and particulate pollution lie within EPA guidelines but some of the receptors, especially R1 and R2, are very close to residents and very high values of PM10 of 45 micrograms per 24 hour period are modelled. We know that particulate pollution is dangerous to human health, so why take this risk? We don't see it factored in to the economic analysis.

By far the greatest amount of air pollution at the pit top is caused by the old fashioned method of front end loaders dumping ROM or product coal into trucks or emplacements. The new plans do not alter this impact.

### Greenhouse gases and climate change

Another major concern is the quantity of greenhouse gases emitted by the mine and contributing to climate change. This is a relatively small mine. But every molecule of methane and carbon dioxide emitted to our atmosphere is important.

The world has already warmed by more than 1 degree. Climate experts agree that the world is likely to exceed 1.5 degrees C warming.

The IPCC special report Global warming of 1.5 degrees C details some very worrying impacts and states "Every extra bit of warming matters"

Globally, each of the last 4 decades has been warmer than the previous one.

Remember that this mine is classed as a "**gassy**" mine, with more methane than most underground coal mines.

Mining emissions result from the liberation of stored gas during the breakage of coal and the surrounding strata, during mining operations.

Post-mining emissions occur during handling, processing and transportation. And from the mine after mining has ceased.

When mining stops some of the remaining residual in-situ gas slowly travels through cracks and fissures to the surface. Finally the mine will fill with groundwater but not before the escape of greenhouse gases.

The greenhouse gas assessment detailed in the revised Project 2019 Appendix 8, specifically says:

"GHG and energy use estimates have only been calculated for the operational stage of the Revised Preferred Project." Although Umwelt assess fugitive emissions from the coal stockpile, processing and transportation and from the ventilation air, there is no mention of the fugitive emissions which will occur over time.

There are clear guidelines published by the Australian government Clean Energy Regulator, and titled “Estimating emissions and energy from coal mining guideline”. I would like the assessment to be re-investigated in light of the guideline above and take account of the fugitive emissions of greenhouse gases when the mine is decommissioned.

Also, it would be entirely possible for the company to reduce the GHG impacts of the Project by using green or renewable power. Wholesale retailers such as Flow Power can now supply reliable renewable electricity for large use industrial customers and manage 24hour operations.

We need to plan for future generations and to prioritise our natural resources of clean water and clean air. We need to transition to a more sustainable economy.

I ask you to reject this Project and recommend a process to close Russell Vale Colliery permanently.

Sincerely,

Ann B. Brown

BSc (Hons)