

**Submission to the IPC Hearing on the Hume Coal Project (SSD7172)**

**by**

**Derek White representing**

**Coal Free Southern Highlands and WinZero Inc**

**via Zoom on 12 July 2021**

Good afternoon. My name is Derek White and I live in Mittagong. I would like to thank the Commissioners for allowing me to make a presentation today, particularly in these difficult COVID times.

While I am listed as representing Coal Free Southern Highlands, I am actually wearing two hats today. The other one is as Chair of Wingecarribee Net Zero Emissions (WinZero) whose name reflects the fact that we are an umbrella organisation for a range of environmental and sustainability groups in the Southern Highlands with the primary objective of reducing greenhouse gas emissions in the area as much and as quickly as possible.

Therefore, it should come as no surprise to the Commissioners that WinZero strongly objects to this project. Given that we are all facing a true climate emergency, it is invidious that New South Wales is forcing us to endure a “death by a thousand cuts” as new coal mines and coal mine extensions are approved in complete isolation without any reference to the cumulative impact of such approvals. We must stop digging previously untouched fossil fuels out of the ground and burning them to the detriment of humanity. There are other options that can and should be implemented instead.

Now to don my other hat as a technical adviser to Coal Free Southern Highlands. I am a mining engineer with over 40 years experience in the industry. However, most of this has been in the hard rock mining area with little coal experience on my resume. I have however been closely involved in senior mine management roles in two major underground mines at the Mount Isa Mine in Queensland and the Endeavor Mine at Cobar in New South Wales.

In those two operations, pumped hydraulic fill systems were an integral part of the mine designs. Therefore, I feel eminently qualified to comment on what I see as a major potential fatal flaw in Hume Coal’s mining proposal – the contemporaneous placement of 100% of the waste materials from the processing plant back into mine openings on a continuous basis.

In my view this aspect of the mine plan has been grossly under-investigated by the independent experts who have been engaged to review it. I suspect that this may be because this type of fill system is rarely, if ever, used in the Australian Mining industry and to my knowledge never used in coal mining. I have not sighted an assessment from a recognised filling expert at any stage.

**I have grave doubts that the proposed waste disposal system will work effectively over the life of the mine and may not even work at all. My reasons for saying this are:**

- In the underground hard-rock mines I mentioned, the fill material was carefully engineered to make sure it could be pumped long distances through complex mine geometry without causing excessive pipe wear and blockages that could seriously interrupt fill placement.**
- This involved dividing the waste material into two size fractions – one fine one that was pumped to a waste storage dam, and a coarser fraction that was used in the hydraulic fill. Never would 100% of the waste material be used for this purpose.**
- Extensive laboratory and pilot-scale trials were carried out using a specialist engineering firm that had a track record in designing and constructing such fill systems. I have seen no evidence that Hume Coal has conducted such test work and to my knowledge has only carried out desk-top studies.**
- Hume studies have focussed on offshore operations in China and South Africa which would undoubtedly have different material specifications and operating environments to that prevailing with this project.**
- I have only been able to identify two other Australian coal mines that have considered such a 100% placement of waste material in underground openings – the Metropolitan Mine at Helensburgh (and this only after several years of extensive large-scale test work), and the other as an option at Centennial Coal's Lithgow mine, where it was rejected by a highly reputable engineering firm on the basis of complexity, cost and worker safety. Relevant papers on these were provided to the original IPC hearing.**
- Following my submission that drew attention to the worker safety issues involved in the original fill system proposal, Hume Coal went to the trouble of engaging a consultant to come up with a supposedly better option. My assessment of this option is that it depends on the successful introduction of unique crawler-mounted remote-controlled pieces of equipment that to my knowledge have never been used elsewhere. What could possibly go wrong?!**

**In conclusion, it is my firm opinion that there is a significant risk that the proposed waste disposal system will not work properly and may not even work at all. In my extensive project management life, such a high severity and high probability risk would usually demand that the proponent clearly set out what steps would be taken to mitigate such a risk. To my knowledge Hume Coal has done no such risk assessment.**

**In any case, the most likely mitigation step would have to be to establish a permanent waste storage (tailings) dam on the mining lease, which is expressly not allowed in the Secretary's Environmental Assessment Requirements. Hence my opening statement that I see this system as a potential fatal flaw in the mine design.**

**I THEREFORE URGE THE COMMISSIONERS TO ENDORSE THE RECOMMENDATION OF THE DEPARTMENT OF PLANNING, INDUSTRY & ENVIRONMENT AND NOT APPROVE THIS PROJECT.**