

## Wollongong Coal Ltd, Wongawilli Colliery

### Modification 2 of Project Approval PA-09 0161

Submission from Ann Brown, March 2nd 2021

I submit that Modification 2 should not be approved.

I am a member of the Community Consultative Committee (CCC). We have been informed, in broad terms, of this project at CCC meetings in 2020.

Modification 2 (MOD2) seeks approval for a further 5 years time extension, to enable tunnelling underground in the Metropolitan Special Area of the water catchment, a total distance of about 8 kms, extracting coal and rock. Various smaller proposals, mostly infrastructure, are also included in MOD2.

Wollongong Coal Ltd (WCL) do not yet have any permission to mine in the Western area, but obviously want to use the North West Mains Development (NWMD) as future leverage to get approval, as well as a source of income meanwhile. In its newsletter WCL states *"Approval of the modification will enable the NWMD to be completed, and during this period Wollongong Coal propose to seek separate approval to mine within the North West and South West Domain utilising the existing Wongawilli pit top infrastructure with a 30 year mine life."*

Note that the DPIE letter in Appendix A states  
"The Department also requests that a stability assessment of the proposed roadway configuration is included within the assessment of subsidence impacts..."  
but I am unable to find such a stability assessment.

### How much coal and rock will be extracted?

Neither I nor DPIE know, I have checked with DPIE. **It seems negligent to me, to have no clear estimate upfront.**

WCL seek permission to mine 2 million tonnes per annum (2Mtpa) over 5 years and the Main Report part 1, p12 states "Wollongong Coal propose to continue coal production at up to 2Mtpa, noting restricted production during the MOD2 approval given stone driveage requirements.

The Greenhouse gas assessment is based on 2 Mtpa.

But the Economic assessment (Appendix P, p. 9) is based on *"incremental ROM coking coal production of 385,000 tonnes over the MOD2 life"* What is the basis for this number?

Is 385,000 tonnes the total coal production?

I will ask how much coal will be extracted at the CCC, also on March 3 (I am a member), but that will be too late to inform submissions.

Other social impacts of the project, such as traffic, noise, air quality are dependent on the volume of coal to be extracted, so I will not address them here. However, I will note the recent increased number of residences in the area, right up against mining land. These residents will suffer negative impacts.

### Does the modification meet legal requirements?

WCL claim this new part of the driveage, which goes under the Avon Reservoir, meets the legal requirements that *"The development as modified must be substantially the same development as the development authorised by the consent"*

WCL have acquired legal advice from Minter Ellison that the modification meets the requirement above: despite their excellent legal reputation, I don't agree with Minter Ellison, for 2 reasons:

The first reason is that the length of the driveage has increased from 4990m to 7890m, adding more than half the original length. I therefore do not agree with Minter Ellison (below).

“3.3 Accordingly, the key test for the consent authority to determine whether it has the power to assess a modification application is to consider whether it is satisfied that the development is substantially the same development as the development authorised by the last modification made under section 75W (commonly referred to as the 'substantially the same test').”

The second reason is that the NWMD is now proposed to go under the Avon Dam, in an area which has been heavily mined in the past and the mining therefore poses considerable risk, so much so that drilling ahead is proposed in some areas, especially near dykes and close to the Ventilation shaft.

Minter Ellison state as below:

“6.4 (b) the carrying out of the Proposed Modification will not result in any significant qualitative and quantitative differences which would alter the essence of the development”

Both significant and quantitative differences exist. The previously approved driveage did not tunnel in this risky area. The case law examples given are from building developments with very different requirements to the sophisticated engineering necessary in coal mining.

In my opinion the statement in Table 5.1, found on p31 of Vol 1, is **misleading** with regard to the DPIE advice. The DPIE advice is only related to the process and does not express support.

“MOD2 is substantially the same development for which the Project Approval as modified by MOD1 was granted being an underground coal mine within the same PAA. MOD2 will optimise the productivity and efficiency of ongoing operations at the Wongawilli Colliery.

Again, this position is supported in both correspondence from DPIE and legal advice sought for MOD2. DPIE correspondence and legal advice is available in Appendix A and Appendix B respectively. “

### First workings or longwall mining?

WCL have made a commitment that there will be no longwall mining in the catchment in the future. What is the legality of this commitment? What happens to this commitment if Wollongong Coal is sold?

### Groundwater and surface water impacts

The Groundwater Impact Assessment (SLR Consulting Australia Pty Ltd, 2020) found that there would be **mine inflows of up to 37ML/yr** for which Groundwater Water Access Licences (WALs) will be required. Wollongong Coal already hold these WALs

The predicted groundwater impacts associated with the NWMD, as outlined by SLR (2020) are that more than 7 million litres of polluted mine water per day will be pumped out at Licensed Discharge Point 2 (LDP2) and ultimately head enter Lake Illawarra.

There is no plan for a water treatment plant, just the current settlement ponds. Maybe its time the EPA improved the requirements for mine water discharges. At present the pollutants are destroying our biodiversity.

Despite the voids and cracking created by the tunnelling, no significant impacts to surface water are predicted. There is one large coastal upland swamp near the Ventilation shaft but again WCL predict no impacts.

Main report part 2 p. 140 “Dam Safety NSW prohibit mining below stored waters at a depth of less than 60 m. Given that the proposed NW mains below the base of Avon Reservoir are close to this minimum, the modification will be referred to the Dams Safety NSW by DPIE for consideration.”

I've seen nothing in the WCL reports from Dams Safety NSW or Water NSW. Surely this should be public information **before submissions**. There is some brief information p46 of Report vol 1, agency consultation, which implies that WCL did not contact the Dams Safety Committee until Dec 2020.

With regard to groundwater monitoring data, it is concerning that the nearest monitoring to the proposed driveage is NWW GW01, which only has records for 2012-2016. **Only 4 years.**

See Appendix I page 42

There is no groundwater monitoring at all in the geographic area towards the Ventilation Shaft.



## Possible mining impacts and risks

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"The Southern Coalfields has a long history of mining, including mining in the vicinity of the proposed modification. Blue Panels 2 and 4 were mined approximately 125 m to the north of the proposed NWMD area. Coal was extracted using the bord and pillar method and partial pillar extraction secondary workings has since occurred, which typically results in the partial collapse of the roof structure over the mined void. This has resulted in an increase in void space within the mined areas, as well as increased hydraulic conductivity above the goaf (up to 2-3 orders of magnitude (HGEO 2019) and/or increased cracking.

Furthermore, a number of major dykes have been identified and mapped within the area of the proposed modification. They may provide conduit for groundwater to enter the former workings. It is also possible that inflows can increase where dykes provide a conduit between the workings and aquifer storage. "

Previous mining of the Blue Panels is studied by the Independent Expert Panel on Mining in the Catchment, (IEPMC) 2019 vol 2 p28 and unexpected inflows occurred there near to a sill, inflows of 2.4 ML/day. Although these are these known difficulties they are not revealed in the EMM report, only in Appendix K. The section on Potential for Inflow in Appendix K p.18 is quite concerning in terms of risk. It is hard to understand that DPIE would permit such a risky venture near the Avon Reservoir.

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"The main headings are planned to pass 90 m beneath the Moss Vale – Unanderra Railway, 215 m below a 330 kV powerline, twice below Gallagher's Creek (an arm of Avon Storage Reservoir) and once more below the Bellbird Creek arm of the reservoir.

The depth of the headings below the base of the reservoir is 60 m at the first approved NWMD crossing point, 113 m at the proposed second crossing point and 134 m at the third proposed crossing point. “

So some of the tunnelling is only 60m below the reservoir floor and WCL acknowledge that there will be cracking caused by the tunnelling and geotechnical problems in the area of the Ventilation shaft. If the Modification only requested an extension of time as per MOD1, and no extension to the driveage, then these mining difficulties and risks to catchment water would not occur.

The 2008 Southern Coalfield Inquiry report points out that “*The single most important land use in the Southern Coalfield is as water catchment.*”

The IEPMC expressed concern over the cumulative impacts of mining in the water catchment, especially in the Special Areas and reaffirmed inadequacies of data are such that it is not possible to reliably estimate the extent and, accordingly, significance of water losses and water contamination caused by mining in and around the Metropolitan and Woronora Special Areas.

### Greenhouse gases and Climate change impacts

“A GHG assessment was undertaken for the Colliery. Annual scope 1 and 2 GHG emissions generated by the Colliery represent approximately 0.291% of total GHG emissions for NSW and 0.071% of total GHG emissions for Australia, based on the National Greenhouse Gas Inventory for 2018. “

“The Air Quality and Greenhouse Gas Assessment (EMM, 2020) identified average **annual** Scope 1 and Scope 2 emissions of 361,297 t Co2-e and 22,029 t Co2-e, respectively. “

Comparing this to information from the Wollongong Coal Russell Vale IPC determination...

“The Commission notes that the Project would generate approximately 1,523,000 t CO2-e of Scope 1 and 2 emissions primarily from the combustion of diesel, release of fugitive emissions and the use of electricity over the five-year mine life and is also forecast to be associated with approximately 9,624,000 t CO2-e of Scope 3 emissions as stated in Table 12 of the Department’s FAR. “

My calculations for Scope 1 and 2 emissions for MOD2 for 2 Mtpa over 5 years therefore equates to a total of 1,916,630 t CO2, ie MORE than Russell Vale ((361,297+22,029) x 5. This is probably an overestimate because the GHG assessment is based on 2 Mtpa of coal, but it is calculated from what we are given as facts.

There is no plan to offset, which would move the costs from the community to the company.

There is no plan to use a Renewable energy Purchasing Power Agreement, which would minimise the Scope 2 impacts. .

This is despite NSW commitment to reduce GHG emissions by 35% by 2030, and Wollongong City Council’s targets for net zero emissions by 2030 for its own operations. We have to start now!

Australian policy is currently to ignore Scope 3 emissions when exported: but wherever the coal is burned the impacts on climate change will be global, including Australia. Penrith had extreme temperatures of 48 degrees in 2020, the Great Barrier Reef has had another bleaching event: every molecule of carbon dioxide (or methane) counts.

### Economic Assessment

The economic assessment is not a convincing document. It quotes the Treasury CBA guidelines but then uses the EP&A Act guidance to justify using a CBA for MOD2. The

author continually refers to the future benefits of a larger project which is not yet planned or assessed and may not be approved.

The conclusion of the CBA is that there may be a small net public value loss or gain. The externality costs of greenhouse gas emissions are underestimated and the water impacts neglected.

"A CBA of MOD2, indicates net production benefits to NSW at -\$1.6M to \$2.9M (present value at 7% discount rate) comprising royalties of \$2.9M (present value at 7% discount rate) and a company tax deduction of -\$4.5M, that can only be realised if there is positive taxable income from which it can be deducted. If it cannot be realised then the net production benefit to Australia is \$3M (present value at 7% discount rate). There will also be some additional externality costs of approximately \$0.1M associated with greenhouse gas emissions, biodiversity offsets and the opportunity cost of holding groundwater licences. Over MOD2 itself would have net social benefits to NSW of -\$1.7M to \$2.8M (present value at 7% discount rate), the lower figure assuming a tax deduction can be realised. "

WCL do not hide the fact that MOD2 is the first stage of a larger project involving mining in the North West Domain with an estimated 375 Mt of potential coal resource possibly available to the Wollongong Coal Wongawilli Colliery.

The Executive summary of the Independent Panel on Mining in the Catchment (IEPMC) report 2019 vol 1 piii, states

"all future applications to extract coal within Special Areas should be supported by independently facilitated and robust risk assessments that conform to ISO 31000 (the international standard for risk management subscribed to by Australia) "

No risk assessment has been provided for Modification 2.

If this larger project is envisaged, then MOD2 should be a part of it, not a separate modification. Currently it is a road to nowhere, and building it will cause significant voids, cracking and damage in the Sydney Water Catchment. Water will be used and degraded. We are losing reliable clean water to coal mining.

**I oppose the approval of this Modification.**

**Coal is valuable but water is precious.**

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