

Ian Wiskin
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[REDACTED]6th March 2019**SUPPLEMENTARY SUBMISSION TO THE INDEPENDENT PLANNING COMMISSION PUBLIC HEARING ON THE HUME COAL PROJECT (SSD 7172) and BERRIMA RAIL (SSD 7171) PROJECTS**

This supplementary submission is in addition to my submission and presentation to the IPC Panel at the public hearing at Moss Vale on 27 February 2019.

Strategic Significance of the Hume Project and the Southern Coalfield

Section 4 of my submission canvassed several critical issues regarding the competitive supply of coking coal to the Australian steel industry, including an ACCC investigation of coal supply. Section 7 dealt with structural issues in the Southern Coalfield affecting future coal supply.

In its submission to the Independent Expert Panel for Mining in the Sydney Water Catchment, BlueScope Steel Limited (20 February 2019) made the following observations relevant to my submission and IPC consideration of the Hume project in accordance with the Mining SEPP.

“The purpose of this submission is to emphasise to the Panel the critical importance of coal mined in the Southern Coalfields to the ongoing viability of Port Kembla Steelworks, and therefore the economic health of the Illawarra region, including the 3,500 direct jobs and 5,400 indirect jobs that rely on the Steelworks.

BlueScope believes it is very important that policymakers such as the Department of Planning and Environment (DPE) and the NSW Government more broadly consider the economic benefits of metallurgical coal mining in the Illawarra region, and the connection between ongoing mining activities and the viability of a range of other businesses in the region. It is important that policymakers balance environmental and economic considerations when addressing the needs of different stakeholders in the region.

Put simply, the Port Kembla Steelworks relies on ongoing, competitive supplies from the Southern Coalfields for its continued viability. Indeed, the principal reasons the Steelworks was established at Port Kembla a little over 90 years ago, in 1928, were its ready access to rich seams of metallurgical coal and a deep-water port.

The Port Kembla Steelworks and Springhill Works together employ approximately 3,500 people directly and are responsible for a further 5,400 indirect jobs in the Illawarra region. These plants generate \$6.5 billion in regional economic output (24 per cent of the Illawarra’s total economic output), \$1.6 billion of gross regional product (11 per cent of the Illawarra’s gross regional product) and \$800 million of household income (13 per cent of total household income in the region).

BlueScope, like all other coke manufacturers, seeks to optimise the blend of coals its uses in order to reduce its manufacturing costs and remain internationally competitive. However, there are technical limits to the extent of this substitution, as a proportion of higher quality coals are needed to ensure efficient blast furnace performance and iron production.

There is a strong relationship between coke quality and blast furnace performance and determining the optimal blend of coking coal at the most efficient value-in-use price is a complex exercise.

The coking performance of a coal blend is complex, because it is not only dependent on the coking performance of each component coal, but also on possible interactions between coals.

This coal is transported to the Steelworks in daily deliveries by truck and rail transport. Local coal supplies are supplemented by coal shipped from other regions to berths at Port Kembla adjacent to the Steelworks. These primary raw materials berths are at a high utilisation level, and any significant increase in seaborne coal imports would require very substantial capital investment to expand the facilities. BlueScope has recently estimated such investment to be at least \$150 million”.

BlueScope estimates that replacing local coal supply with coal shipped from interstate (or overseas) would increase steel production costs by between \$50 million and \$100 million per annum, principally as a result of higher logistics costs”.

“The Port Kembla Steelworks will continue to rely on competitive sources of locally-mined coal for the foreseeable future. In fact, it is not an exaggeration to say that without access to the coal supply from the Southern Coalfields, the Steelworks would not have been built in the Illawarra region. Without this supply, steelmaking would struggle to remain viable at Port Kembla”.

“The importance of the local coal supply to BlueScope was also observed in the ACCC’s consideration of the proposal for South32 to acquire Peabody’s Metropolitan mine in 2016 (subsequently abandoned). The ACCC identified the effective existence of a “...narrower market for the supply of coking coal to Australian customers and suppliers in this market (that may be limited to coal producers in the Illawarra.

Given the just-in-time nature of supply, and the lack of cost-effective alternative sources of supply, it is very important that BlueScope has access to a stable local coal supply that is subject to the least possible interruption.

Unexpected variations to licensing conditions for existing longwalls, or restrictions on future extraction plans, have the potential to interrupt coal supply, make mining less viable, and curtail investment in mines. Any of these outcomes would be of particular concern to BlueScope and other local stakeholders, if they threatened the viability of the Steelworks”.

In addition, in other submissions to the IPC public hearing (Parker), it was claimed new technology using hydrogen could be used to replace coking coal in the blast furnace production process. On this matter, BlueScope made the following observation:

“While there is research being undertaken overseas that seeks to replace carbon sourced from coal in the iron and steelmaking process with other reductants (e.g. hydrogen), this work is embryonic and likely to be decades from commercialisation”.

Comparison of Mining and Agricultural Use of Licenced Water Entitlements

During my presentation to the IPC public hearing on 27 February 2019 I referred to the following graph.



What has been overlooked in the public debate, aided and abetted by misleading claims by the Battle for Berrima group, is that most of the licenced water acquired by Hume Coal from willing sellers in an open market stays in the ground and never extracted. Although the title remains with Hume Coal, it is available for other users.

The essential arithmetic is as follows:

- Volume of water from the Sydney Basin Nepean Groundwater Source is 2,066 ML (2059 ML in management Zone 1). This the maximum ‘water take’ in Year 17, although the maximum amount extracted from the mine sump in that year is 1,009 ML – less than half the licenced amount.
- However, the average water extracted from the mine sump in the Nepean groundwater source (Zone 1) is 482 ML. In fact, the average extraction each year over the life of the mine is 23 percent of the licenced amount. Notwithstanding that, water extraction varies (in blue) over the mine life.

In my submission, I adopted a conservative approach by suggesting one-third of the water was extracted and two-thirds remained in the groundwater system, never to be extracted. This level of conservatism provides a buffer for variances in extraction resulting from real time operations.

One of the unintended consequences of the NSW Government’s application of the Aquifer Interference Policy (AIP) is the potential market distortion for mining companies being required to purchase significantly more water licences than required. The evidence in the Wingecarribee area suggests there is little competition for acquisition of water licences from other parties. Although there are some speculative purchases, the lack of interest from existing landholders suggests an over allocation of entitlement for current requirements.

Notwithstanding, the level of willingness to sell water entitlements to Coal also suggests:

- Many landholders were holding entitlements considerably higher than their requirements. This is probably a result of licences, previously attached to land titles, when the Wingecaribee LGA had over 100 dairy farms, now reduced to less than 10.
- Once landholders became aware, they could monetise their water entitlement without selling land, it became obvious that the overall level of entitlements in Management Zone 1 were way in excess of requirements for the prevailing land use, being lifestyle rural retreats.
- It is understood that, during and since the IPC public hearing, further inquiries regarding sale of water licences have been made to Hume.
- The high level of willing sellers and the number of landholders who have entered into arrangements to commence 'make good' assessments is an indicator that not all landholders oppose approval of the Hume project.

In my experience in dealing with resource projects, the amount of water licences acquired by the Applicant, at this stage of the planning approval process, is unusual. The outcome, achieved to date, is contrary to initial advice from DI Water and the Coal Free Southern Highlands (CFSH). The latter purporting to represent landholders impacted by the Hume Coal proposal.

The key issue identified by government and landholders is the potential impact on neighbouring bores from the Hume project, despite Hume having a legal title to use its full entitlement, most stays in the ground.

The rationale used by government to purchase more water than is extracted is to account for the movement of any water that moves in the groundwater system caused by mining activities. This, of course, does not apply to agricultural users. The local area irrigation bore owners have no requirement to install metering and be subject to real-time monitoring, suggesting government is satisfied the local groundwater source is not over allocated or under threat from over pumping.

Interestingly, there is a counter convention, that should the project not be approved, or Hume Coal solely dedicated its water entitlements to large scale irrigation on its 1300 ha of land, it could legally extract 2GL of water each and every year for agricultural use. The consequences of such large extractions would have impacts on neighbouring water bores orders of magnitude greater than what is proposed for the Hume Coal project before the IPC for assessment.

There is a clear disconnect between the rules that attach to mining and agricultural use of water.

Given the value attributed to water by both landholders and others, it is worth considering the economic return per megalitre, both in terms of water licences and water extracted for use.

In 2017, the Division of Resources and Geoscience (DRG) made the following observation on the Hume project:

“Over the life of the project, assuming production is sold on the export coking market (54%) and the remainder on either the export or domestic thermal markets, the value of the coal produced would be around \$3.9 billion dollars. The net present value of this revenue stream has been estimated by DRG at approximately \$1.6 billion”.ⁱ

Based on the above and applied to the Sydney Nepean Basin Groundwater system (Zones 1 & 2) licenced amount (2,066 ML) and being the maximum ‘water take’ in Year 17, the revenue generated for each licenced ML is estimated at \$1.9million/ML (\$774 million/ML NPV).

When assessed against the actual water extracted, over the life of the mine, the revenue return for each megalitre extracted is \$426,000/ML (\$175,000/ML NPV).

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<https://majorprojects.accelo.com/public/a79ba2b36dd54dea712210f502279add/Division%20of%20Resources%20and%20Geoscience.pdf>