

Melanie Hollis  
Planning Officer  
Resource Assessments & Planning Services  
Department of Planning & Environment  
GPO Box 39  
SYDNEY NSW 2001

[Melanie.Hollis@planning.nsw.gov.au](mailto:Melanie.Hollis@planning.nsw.gov.au)

Dear Melanie

**Wambo Mine – Modification 17 (DA 305-7-2003) - South Bates Underground Extension  
Environmental Assessment (EA)**

I refer to your email dated 28 March 2017 inviting the Division of Resources & Geoscience (DRG) to provide comments on the Wambo Coal Mine – Modification 17 (DA 305-7-2003) – South Bates Underground Extension submitted by Wambo Coal Pty Limited (the Proponent).

DRG has reviewed and assessed the adequacy of information in relation to the *Wambo Coal Pty Limited South Bates Extension Modification* dated March 2017 and provides the following advice.

A Resource Assessment conducted by the DRG is designed to review the resource/reserve estimates stated in a Proponent's EIS and whether the project will deliver significant social and economic benefits to NSW from the efficient development of the resource and that resource recovery is optimised and waste minimised. It is also to ensure an appropriate return to the State from developing the resource. This assessment is enclosed as **Attachment A**.

As coal is a prescribed mineral under the *Mining Act 1992* (the Act), the Proponent is required to hold appropriate mining titles from the Division in order to mine this mineral. DRG understands the proposed mining activities are within existing Authorisation 444 (Act 1973), Coal Lease 397 (Act 1973) and Mining Leases 1572 & 1594 (Act 1992), each held by the Proponent.

DRG notes the proponent's intention to submit a mining lease application over part of Authorisation 444. As part of the mining lease application process the Proponent is required to provide proof of native title extinguishment or go through the right to negotiate process.

DRG has not identified any issue relating to resource sterilisation in regard to this proposal.

DRG has determined that sustainable rehabilitation outcomes can be achieved as a result of the project and that any identified risks or opportunities can be effectively regulated through the conditions of mining authorities issued under the Act.

DRG requests a review of the draft development consent conditions prior to finalisation and any granting of Development Consent.

It should be noted that this review does not represent DRG's endorsement of the proposed rehabilitation methodologies as presented in the EA. Under the conditions of a mining authority granted under the Act, DRG requires an authority holder to adopt a risk-based approach to achieving the required rehabilitation outcomes. The applicability of the controls to achieve effective and sustainable rehabilitation is to be determined based on the site specific risk assessments conducted by an authority holder. This risk assessment should be used to not only establish a basis for managing risk when planning an activity, but it should also be used and updated (as required) to continuously evaluate risk and the effectiveness of controls used to prevent or minimise impacts. An authority holder may also be directed by DRG to implement further measures, where it is considered that a risk assessment and associated controls are unlikely to result in effective rehabilitation outcomes.

Should you have any enquires regarding this matter please contact Adam Banister, Acting Senior Advisory Officer, Royalties & Advisory Services on 4931 6439.

Yours sincerely



Matt Gagan  
**Senior Advisory Officer (Royalties)**

for  
Zane West  
**Manager Royalties & Advisory Services**  
2 May 2017

## Resource Assessment – Wambo South Bates Extension Coal Project

### Introduction

State significant development is regulated under the *Environmental Planning and Assessment Act 1979*, which requires a proponent to apply to the Department of Planning and Environment for development consent, supported by an Environmental Impact Statement (EIS).

This Resource Assessment conducted by the Division of Resources and Geoscience (DRG) is designed to review the resource/reserve estimates stated in a proponent's EIS and whether the project will deliver significant social and economic benefits to NSW from the efficient development of the resource and that resource recovery is optimised and waste minimised. It is also to ensure an appropriate return to the State from developing the resource.

The objects of the *Mining Act 1992* are to encourage and facilitate the discovery and efficient development of coal resources in NSW. Of particular relevance to this resource assessment is:

Section 3A Objects:

- (a) to recognise and foster the significant social and economic benefits to New South Wales that result from the efficient development of coal resources, and
- (d) to ensure an appropriate return to the State from mineral resources.

The relevant section of the State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 is Part 3, Clause 15: Resource Recovery requires that resource recovery is efficient, optimised and minimises waste.

### Size and quality of the resource

The Wambo South Bates Extension Coal Project (the Project) is owned (75%) and operated by Wambo Coal Pty Ltd (the Proponent), a 100% owned subsidiary of Peabody Energy Australia Pty Ltd. Sumiseki Materials own the remaining 25% stake. The Proponent is a 100% owner of two other coal operations in NSW. These are the Wilpinjong open cut mine in the Western Coalfield and the Metropolitan underground mine in the Southern Coalfield. The Project is located in the Hunter Coalfield, on the eastern edge of the Permian-Triassic Sydney Basin near Singleton. The Hunter Coalfield is one of the Sydney-Gunnedah Basin's five major coalfields and is the largest producer of coal. There is a long history of underground coal mining in the Hunter Coalfield, with a number of mines currently in operation.

A range of open cut and underground mine operations have been conducted at Wambo since 1969. The Project is an extension of the existing South Bates operation and would leverage off existing mine infrastructure. Development of the extension has commenced and longwall mining at the Project would follow completion of mining at the South Bates operation. The location of the Project in the context of the Wambo mine complex can be seen in Figure 1.

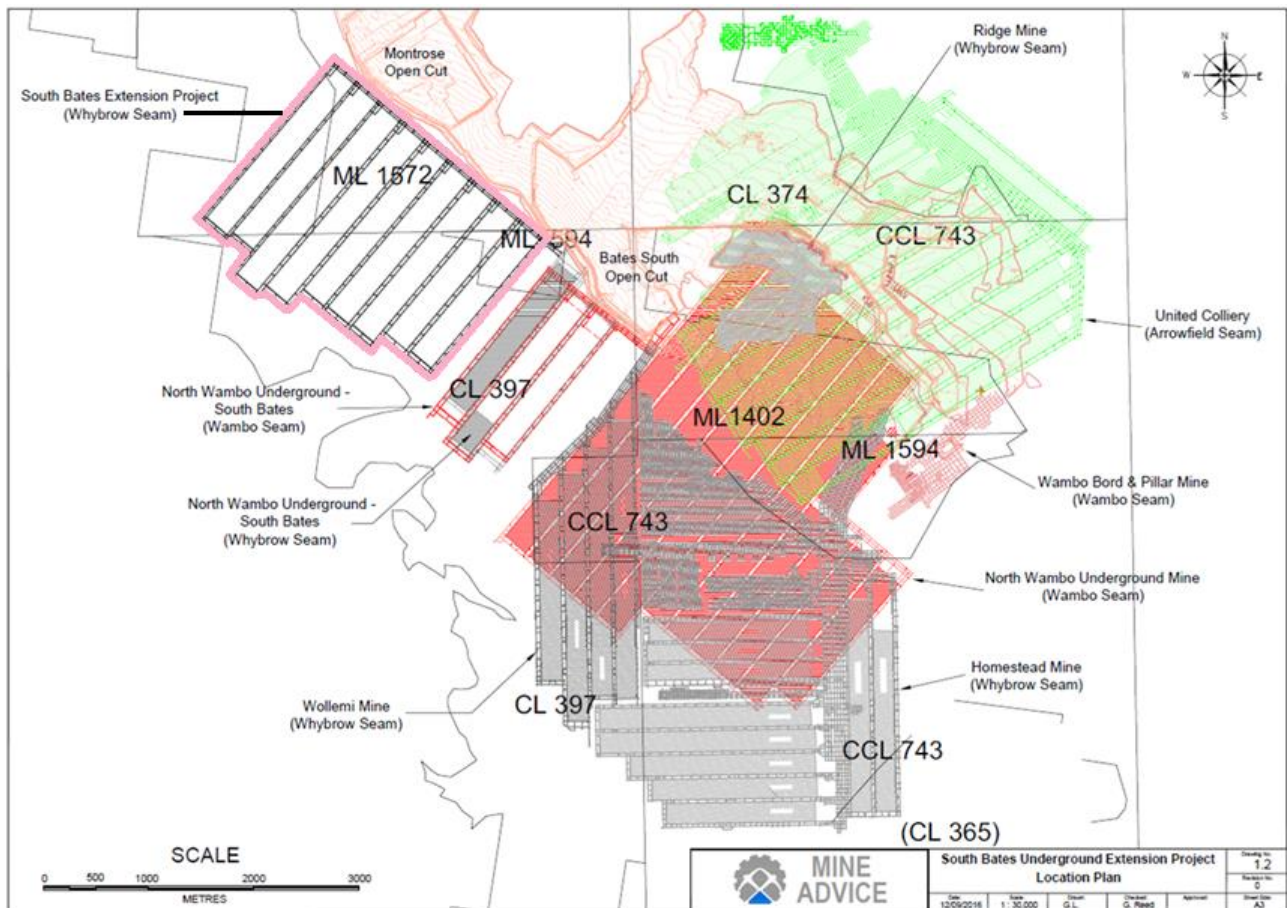


Figure 1. South Bates Extension and other projects comprising the Wambo mine complex

DRG has verified that the Project will provide approximately 18 million tonnes (Mt) of Run-of-Mine (ROM) coal, which will provide approximately 12Mt of product coal. The Proponent has completed coal resource estimation for the Project in accordance with the Australasian Code for Reporting Exploration results, Mineral Resources and Ore Reserves “the JORC Code”. The JORC Code is an industry-standard professional code of practice that sets minimum standards for Public Reporting of minerals Exploration Results, Mineral Resources and Ore Reserves.

The Project will leverage off existing infrastructure at the Wambo mine complex, particularly that of the South Bates operation. Development work has begun at the Project and longwall mining is anticipated to begin in 2018. The operational life of the Project will be 5 years. The project will extract coal at a rate of up to 4.8 million tonnes per annum (Mtpa) of run-of mine (ROM) coal and up to 3.3 Mtpa of product coal.

The Proponent has experience in extracting from the Whybrow Seam. The South Bates operation is currently extracting the Whybrow Seam via longwall methods. Conditions at the Project are expected to be similar to that in the current mining domain.

The Project will produce thermal coal to be sold into export thermal coal markets. The product will be blended with coal from the Wambo mine complex to produce a high energy low ash thermal coal product. The export product will receive a premium to the established 6,322 kcal/kg GAR Newcastle benchmark, on the basis of lower ash and/or higher specific energy specifications.

A review of available coal quality information suggests the proposed product quality, target market and yield are achievable. Raw ash levels necessitate all ROM coal to be processed by a Coal

Handling and Preparation Plant (CHPP) to meet the proposed market specifications. The Division considers that a total of 12Mt of product (saleable) coal from the Project is feasible.

### **Resource Recovery**

The Project will not materially sterilise coal resources amenable to extraction by underground or open cut mining methods. The Whybrow Seam is the uppermost seam of economic potential in the Project Area. Other deeper seams (Redbank Creek, Wambo and Whynot) are not currently considered viable targets for extraction due to insufficient working thicknesses, poor coal product or geotechnical constraints. The Project does not prohibit potential future extraction from these deeper coal seams.

The Project proposes to extract the full geological thickness of the Whybrow Seam.

A number of factors constrain extraction of resources proposed in the Project mine plan. These include geological constraints (faulting), subsidence of sensitive features such as the Wollemi escarpment, lease boundaries and open cut operations. Given the constraints outlined in the proponent's EIS, DRG considers the Project mine plan for underground operations to adequately recover coal resources.

### **Economic benefits of the resource**

Over the life of the Project, assuming production is sold on the export thermal market, the value of the coal produced would be worth around \$1.1 billion in current dollars. The net present value of this revenue stream has been estimated by DRG at approximately \$0.8 billion.

Export income is vital for the health of both the NSW and Australian economy, export income contributes to the Nation's balance of trade which provides positive benefits to both the NSW and Australian credit rating. This additional export income will contribute to the around \$13.2 billion (2015-16 total) of coal exports annually. Coal exports are by far the largest value export from NSW, representing around 25% of total NSW exports (both goods and services combined).

The Hunter coalfield is the largest in NSW and had 16 mines producing coal as at June 2016. In 2015-16 the Hunter coalfield produced nearly 103 million tonnes of product coal, which was 54% of the State's total. The additional around 18 million tonnes total of ROM coal to be produced for six years from the Project will assist in ensuring the Hunter remains a vital part of NSW coal industry. In 2015-16 the Wambo mining complex produced around 6 Mt of product coal, if approved the Project would add significantly to this total.

The Project will continue the economic activity that the coal industry in the region has generated over the past over 40 years. Many local industries have relied on the coal industry in the past, and hence Project approval would ensure that these businesses continue to operate, or new mine related businesses could commence. These industries include; mine equipment maintenance firms, mining equipment supply firms, coal handling plant maintenance and supply firms. These firms are mainly local industries which employ locally and would rely on the Project for their continued existence.

The Project would maintain the employment of around 200 underground employees and around 150 coal handling and preparation plant, management, administration and support personnel. Based on other mine projects, DRG believes the indirect employment within the region and in NSW as a whole from the Project could be the maintenance of around 1400 positions. Capital investment over the life of the Project would be of the order of \$50 million.

### **Coal royalty calculation**

The Project is a proposed underground mine and as such a royalty rate of 7.2% applies to all saleable production, this rate is applicable to the net disposal value. Net disposal value is the price received per tonne minus any allowable deductions. The main allowable deduction is for coal beneficiation which is either; \$3.50 per tonne for coal subjected to a full washing cycle, or \$2.00 per tonne for coal subjected to a simple washing process, or \$0.50 per tonne for coal that is washed and screened.

As all product coal from the Project will be subjected to a full washing cycle, a deduction of \$3.50 per tonne from the value of coal produced applies. A deduction for levies also applies which would amount to no more than \$1.00 per tonne. Hence allowable deductions for royalty for the Project would amount to \$4.50 per tonne.

One of the most important assumptions in the calculation of future Royalty for a coal proposal is the estimate of a future coal price over the life of a project. Coal from the Project is expected to be sold into the export thermal market (100%). A review of coal quality information by DRE suggests this is achievable.

Coal price forecasting is inherently difficult and over the long term time frame of coal projects there would be many variations in coal prices. However, as this Project will produce coal in the short to medium term there is more certainty attached to the coal prices forecasts used in DRG's royalty assessment. Coal Services P/L data for the 7 months of 2016-17 for which data is available indicate that NSW coal sold to Japan (the Project's main market) was A\$101 per tonne, for the month of January 2017 NSW thermal exports to all countries was A\$105 per tonne. For its royalty calculation, DRG uses export thermal prices (in real terms) in the range of A\$90 to A\$100 per tonne.

Another important aspect of future royalty calculation for a proposed coal project is estimation of future annual production. DRG has estimated that if the Project is approved, around 12 million tonnes of product coal would be able to be economically mined from the Project area from 2017 to 2022. The maximum rate of extraction would be over 3 Mtpa of product coal.

Using the above parameters DRG has calculated that in a typical full production year the State will receive around \$20 million per annum in royalty and \$73 million over the life of the Project. The net present value of this royalty stream would be \$56 million using a 7% real discount rate.