Trade & Investment
Resources & Energy

OUT15/4442

Mr Matthew Sprott
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Dear Mr Sprott

Mount Owen Continued Operations Project (SSD 5850)
Review of Environmental Impact Assessment

I refer to your email of 21 January 2014 regarding the Mount Owen Pty Ltd application for a major extension to its existing Mount Owen open cut coal mine in the Hunter Valley.

NSW Trade & Investment, Division of Resources & Energy (the Division) has reviewed the *Mount Owen Continued Operations Project Environmental Impact Statement* (EIS) dated January 2015 and provides the following comments which are directed at specific areas of the Division's responsibility for this proposal.

MINING TITLE

As coal is a prescribed mineral under the *Mining Act 1992*, the proponent is required to hold appropriate mining titles from the Division in order to mine this mineral. The Division understands the proposed mining activities are within existing mining titles held by the Proponent.

The Division notes the proponent's intention to convert Assessment Lease 8 to a mining title. This will require the submission of a mining lease application to the Division. As part of this application the Proponent will need to provide proof of native title extinguishment or go through the right to negotiate process.

MINE SAFETY

The Division understands that the Mount Owen North Pit and the Ravensworth East Resource Recovery Mining area overlie in part existing and proposed Intergra longwall panels.

The Intergra Mine is currently on care & maintenance, but it is possible that in the future open cut mining and longwall mining will be undertaken simultaneously in the same area.

The Division notes the proponent's commitment to maintain consultation with the Integra Underground management throughout the approvals and operational phase of the project.

Based on the information provided, the Division considers there will be no significant impact from Mt Owen blasting above Integra Underground, but a procedure should be established and implemented to communicate when Mt Owen blasting is scheduled so that Integra workers, supervisors and managers are able to observe any actual impacts such as noise transmission and possibly vibration sufficient to displace dust or small loose roof material or coal from the pillars and working faces. While these examples are identified they are not expected, given the thickness of interburden between the deepest level of the Mt Owen pit and the Integra workings.

The Division considers that there is potential for subsidence to affect the stability of open cut high-walls creating additional risks to safety in the open cut. This may result in business risks to either of the mining operations should there be insufficient time to implement adequate management measures to safely undermine the open-cut.

There is no indication in the EIS that the issue of subsidence impacts due to the Integra longwalls on the open-cut have been considered by either mining operation. It is important that both mining operations commence work early to manage their interactions to avoid unnecessary conflict that may arise during the active phases of the relevant mining due to lack of preparation. This should begin as soon as possible with a Joint Risk Assessment. Such interactions between open-cut and underground mining operations have been successfully managed in the past (e.g. Wambo and United).

It is also noted that the mining method at Mt Owen involves the use of buttresses of material in the pit to control wall stability and this will need to consider the impact of subsidence.

REHABILATION

The Division notes that the EIS has identified general rehabilitation strategies and objectives.

Under the *Mining Act 1992*, mining and rehabilitation are regulated by conditions included in the mining lease, including requirements for the submission of a Mining Operations Plan (MOP) prior to the commencement of operations, and subsequent Annual Environmental Management Reports (AEMR). The Division requires that the proponent submit a revised MOP to include the Mount Owen Continued Operations Project, if approved.

The proponent should be aware that ESG3: Mining Operations Plan (MOP) Guidelines dated September 2013 are available on the Division's website at: http://www.resources.nsw.gov.au/environment/pgf.

THE SIGNIFICANCE OF THE RESOURCE:

In considering the significance of the resource in comparison with other resources across the State, the Division has made the following assessments.

Size, quality and availability of the resource

The Mount Owen Continued Operations Project is owned by Mount Owen Pty Ltd which is a subsidiary of Glencore Coal Pty Ltd (Glencore), the largest producer of coal in NSW.

Approval is sought for extensions to the currently operating Mount Owen and Ravensworth East open cut coal mines located 25 km north-west of Singleton. Mount Owen and Ravensworth East are part of the Mount Owen Complex which also includes the Glendell Mine. The mining operations at the Mount Owen Complex include the integrated use of the Mount Owen coal handling and preparation plant (CHPP), coal stockpiles and the rail load-out facility. The Project does not include any aspect of the ongoing operations at the Glendell mine. The Project will extend the life of the currently operating Mount Owen Mine by 12 years through the extraction of an additional 74 million tonnes (Mt) of run-of mine (ROM) coal. Without Project approval the Mount Owen mine will cease operations in 2018.

Also approval is sought to extract an additional 18 Mt of ROM coal from the Ravensworth East Mine which will allow the mine to operate at its currently approved production rate of 4 Mtpa of ROM coal over a period of 12 years. Without Project approval the Ravensworth East Mine will close in 2021.

The Project also offers the opportunity to consolidate the existing development consents for Mount Owen and Ravensworth East Mines and provide for further compliance efficiency by providing a single development consent for continued operations.

The Division has verified that the Project will provide approximately 92 Mt of additional ROM coal, which is approximately 52 Mt product or saleable coal. The Proponent has completed a resource and reserve estimation for the Project in accordance with the Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves 2012 "the JORC Code".

Coal qualities in the Project area are comparable with coal currently produced at the Mount Owen Complex. Raw ash levels necessitate washing to meet export market specifications. Coal will be processed in accordance with current operational procedures at the Mount Owen CHPP prior to transport for export. The Mount Owen Complex currently sells its coal on the export thermal and metallurgical markets, in proportions of around 90% thermal and 10% metallurgical. The Proponent plans to sell coal from the Project into these same markets.

Given the constraints outlined in the EIS, the Division considers that the Project mine plan adequately recovers the in-situ coal resources.

The Hunter coalfield has 20 mines that produced coal during 2013-14, 15 are open cut mines and five are underground mines. The existing Mount Owen Mine commenced operations in 1993, whereas the Ravensworth East Mine commenced

in the early 1960's. The Mount Owen Complex produced slightly over 15 Mt of ROM coal in 2013-14, making it the fourth largest producing mine in the Hunter coalfield and the fifth largest of the 56 operating mines in NSW.

The Division considers the Project is vital to ensure production from the Mount Owen Complex is maintained at current levels. The Project, if approved will play a pivotal role in ensuring the Mount Owen Complex continues to produce at optimal levels and that existing mining equipment and associated coal handling, preparation and rail load-out facilities will be fully utilised. The Mount Owen Complex is considered a large mine when compared to other operating coal mines in NSW, i.e. the average size of currently operating coal mines in NSW in 2013-14 was around 4.7 Mtpa of ROM coal.

As well as the Project being pivotal to the continued operation of the Mount Owen Complex the Division also considers that the Project:

- maximises resource recovery;
- is the optimal and most efficient mine plan;
- does not sterilise other resources;
- is an effective use of existing resources, both within the Project area and also adds to the utilisation of the State's infrastructure;
- provides ongoing employment up to a maximum of around 900 employees, which is particularly important given the current trend of reducing coal mine employment in NSW.

Over the life of the Project assuming production is sold on the export market, the value of the coal produced would be worth nearly $6 billion in current dollars. The net present value of this revenue stream has been estimated by the Division at approximately $3.5 billion.

The resource is available to be mined, in that the Project is a logical extension of both the existing Mount Owen and Ravensworth East Mines. Over the first five years of the Project life the overburden to coal ratio remains close to current levels and hence the existing mining equipment can continue to be used to achieve the Project production rate.

Proximity to existing infrastructure

Coal from the existing Mount Owen Complex is processed at the Mount Owen CHPP and associated infrastructure which has an approved capacity of 17 Mtpa of ROM coal. Processed coal is primarily transported via the Main Northern Rail Line to the Port of Newcastle for export. The Project intends to continue to use the existing surface infrastructure at the Mount Owen Complex.

As well as utilising the existing infrastructure it is understood the Proponent is seeking approval to undertake additional infrastructure works as follows:

- an upgrade of the Hebden Road, which is the main primary employee and services access for the Project. The upgrade will include a road overpass over the Main northern Rail Line and a new dual lane road over Bowmans Creek, these upgrades will greatly improve road safety and reduce traffic delays on the Hebden Road;

- upgrade the existing Mount Owen rail line which will result in a reduction of unnecessary traffic flow on the rail line:
- extend and improve the existing CHPP and coal stockpile facilities;
- upgrade the existing heavy vehicle workshop and ancillary services.

The Division considers that the Project will continue to utilise the existing mine infrastructure at similar capacities to the existing Mount Owen Complex. The Project, if approved, would also enhance existing infrastructure and greatly improve it from both the safety and efficiency of use perspectives.

Relationship of the resource to any existing mine, petroleum production facility or extractive industry
The Project is integrated with the existing Mount Owen Complex, in that without Project approval the Mount Owen Complex would cease operations in 2022 or possibly in 2018 depending on future export coal prices.

In particular, the Mount Owen Mine provides the majority of tonnage for the Mount Owen Complex which allows efficient economic use of the CHPP and provides suitable quality coal feed to the CHPP and hence the traditional Mount Owen Complex export coal blends can be produced for Glencore's overseas customers.

The Division is of the opinion that without Project approval one of the Hunter Valley's largest operating mines has only a short term future.

Dependency of other industries on the resource project
Many local industries rely on the Mount Owen Complex, 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 either their continued existence or expansion.

As employment from the Project will not be increased from current levels at the operating Mount Owen Complex, indirect employment flowing from the project will be maintained for around an additional 12 years. Based on other mine projects, the Division believes the 3000 indirect positions within the region, and NSW as a whole, could also be maintained.

Mining Royalties
The Project is a proposed open cut mine and as such 8.2% of net disposal value is applicable. 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 coal from the Project will be subjected to the full washing cycle a deduction of $3.50 per tonne applies. A deduction for levies applies which would amount to around $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 projected to be sold into the export thermal and metallurgical markets on a 90% export thermal and 10% export metallurgical split basis.

For the 6 quarters from Dec 2012 to March 2014 (Coal Services data) export thermal coal prices were at or slightly below $A90 per tonne and had dropped to A$77 per tonne by the December 2014 quarter.

The bottom of the price cycle appears to have occurred in late 2014 as the Newcastle spot price has been reported to be around A$90 per tonne in mid February 2015, as a result of a slight rise in the commodity price and the fall in the Australian Dollar.

Coal price forecasting is inherently difficult and over the long term time frame of the Project there will be many variations in coal prices. There is a growing consensus in the coal industry that coal prices will improve in the medium to long term over the current five year lows. For its royalty calculation, the Division uses the current low short term coal prices and medium to long term export thermal prices in the range of A$97 to $A117 per tonne. A similar methodology has been used to arrive at future semi-soft metallurgical coal prices for the Project, traditionally this coal type receives around an additional A$20 per tonne over and above export thermal prices.

Another important aspect of future royalty calculation for a proposed coal project is estimation of future annual production. The Division has estimated that if the Project is approved, around 52 Mtpa of product coal would be able to be economically mined from the Project area from 2016 to 2030.

Using the above parameters the Division has calculated that in a typical full production year the State will receive around $32 million per annum, and in dollars of the day total royalty payable from the Project would be around $475 million. The net present value of this royalty stream would be around $280 million using a 7% real discount rate.

Other Factors

The Division also notes from the Economic Assessment prepared by the Proponent that the Project will:

- spend $153 million on construction;
- generate an estimated net economic benefit of $306 million (in NPV terms) to the Singleton community over its life;
- increase the Hunter region's gross regional product by $1.3 billion (in NPV terms) over its life;
- increase the NSW gross state product by $1.9 billion (in NPV terms) over its life.

RECOMMENDED CONDITIONS OF APPROVAL

The Division recommends that the following conditions be incorporated into the Development Consent, if granted:

Rehabilitation Objectives and Commitments

The Proponent must rehabilitate the site to the satisfaction of the Secretary of Department of Trade & Investment, Regional Infrastructure & Services (DTIRIS).

Rehabilitation must be substantially consistent with the Rehabilitation Objectives described in the EIS, the Statement of Commitments in Appendix 18 and the following objectives in Table 1:

Table 1

Rehabilitation Feature	Objective
Mine site (as a whole of the disturbed land and water)	Safe, stable and non-polluting, fit for the purpose of the intended post-mining land use(s).
Rehabilitation materials	Materials (including topsoils, substrates and seeds of the disturbed areas) are recovered, appropriately managed and used effectively as resources in the rehabilitation.
Landforms	Final landforms sustain the intended land use for the post–mining domain(s). Final landforms are consistent with and complement the topography of the surrounding region to minimise the visual prominence of the final landforms in the post mining landscape. Final landforms incorporate design relief patterns and principles for consistent with natural drainage.
Water Quality	Water retained on site is fit for the intended land use(s) for the post-mining domain(s). Water discharged from site is consistent with the baseline ecological, hydrological and geomorphic conditions of the creeks prior to mining disturbance. Water management is consistent with the regional catchment management strategy.
Native flora and fauna habitat and corridors	Size, locations and species of native tree lots and corridors are established to sustain biodiversity habitats. Species are selected that re-establishes and complements regional and local biodiversity. The Native Vegetation Belt / Fauna Corridor links with the existing vegetation along existing Creeks and biodiversity offsets areas.
Post-mining agricultural pursuits	The land capability classification for the relevant nominated agricultural pursuit for each domain is established and self-sustaining within 5 years of land use establishment (first planting of vegetation.)

Progressive Rehabilitation
The proponent must carry out all surface disturbing activities in a manner that, as far is reasonably practicable, minimises potential for dust emissions and shall carry out rehabilitation of disturbed areas progressively, as soon as reasonably practicable, to the satisfaction of the Secretary, DTIRIS.

Rehabilitation Plan
1. The Proponent must prepare and implement a Rehabilitation Plan to the satisfaction of the Secretary, DTIRIS.
2. Rehabilitation Plan must:
   a. be submitted and approved by the Secretary, DTIRIS prior to carrying out any surface disturbing activities of the development, unless otherwise agreed by the Secretary;
   b. be prepared in accordance with the Division guidelines; and in consultation with the Department, Office of Environment and Heritage, Environmental Protection Authority, Office of Water, Council and the mine Community Consultative Committee;
   c. incorporate and not be inconsistent with the rehabilitation objectives in the EIS and Table 1;
   d. integrate and build on, to the maximum extent practicable, the other management plans required under this approval and,
   e. address all aspects of mine closure and rehabilitation, including post mining land use domains, rehabilitation objectives, completion criteria and rehabilitation monitoring and management.

Blast Management Protocol
The proponent must prepare and implement a Blast Management Protocol detailing the procedure between the Mount Owen Open Cut Operations and the Interga Underground mine, which should be incorporated into the Blast Management Plan and submitted to the Division prior to the commencement of mining in the relevant area.

Subsidence Management
The proponent must prepare a Joint Risk Assessment detailing the procedures set out between the Mount Owen Open Cut Operations and the Interga Underground mine to address the effects, and potential safety implications, of subsidence on the stability of open cut high-walls. The Joint Risk Assessment must be submitted to the Division prior to the commencement of mining in the relevant area.

Should you have any enquires regarding this matter please contact Adrian Delany, Acting Director Industry Coordination on (02) 4931 6437.

Yours sincerely

K Hargreaves

Kylie Hargreaves 9-3-15
Deputy Secretary
Resources & Energy

Enclosed: Significance of the Resource Assessment

Mount Owen Continued Operations Project
Assessment of the Significance of the Resource:

In considering the significance of the resource in comparison with other resources across the State, NSW Trade & Investment – Division of Resources and Energy (the Division) has made the following assessments.

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As well as the Project being pivotal to the continued operation of the Mount Owen Complex the Division also considers that the Project:

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- is the optimal and most efficient mine plan;
- does not sterilise other resources;
- is an effective use of existing resources, both within the Project area and also adds to the utilisation of the State's infrastructure;
- provides ongoing employment up to a maximum of around 900 employees, which is particularly important given the current trend of reducing coal mine employment in NSW.

Over the life of the Project assuming production is sold in the export market, the value of the coal produced would be worth nearly $6 billion in current dollars. The net present value of this revenue stream has been estimated by the Division at approximately $3.5 billion.

The resource is available to be mined, in that the Project is a logical extension of both the Mount Owen Mine and the Ravensworth East Mine. Over the first five years of the Project life the overburden to coal ratio remains close to current levels and hence the existing mining equipment can continue to be used to achieve the Project production rate.

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Therefore, the Division considers that the Project will continue to utilise the existing mine infrastructure at similar capacities to the existing Mount Owen Complex. The Project, if approved, would also enhance existing infrastructure and greatly improve it from both the safety and efficiency of use perspectives.

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Using the above parameters the Division has calculated that in a typical full production year the State will receive around $32 million per annum, and in dollars of the day total royalty payable from the Project would be around $475 million. The net present value of this royalty stream would be around $280 million using a 7% real discount rate.

Other Factors

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