Department of Industry
Resources & Energy

BN16/1560

Mr Matthew Riley
Senior Planning Officer
Resource Assessments
Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

Email: matthew.riley@planning.nsw.gov.au

Dear Mr Riley

Wilpinjong Extension Project (SSD 6764)
Review of Environmental Impact Statement

I refer to your email of 25 January 2016 regarding Wilpinjong Coal Pty Ltd's application for the Wilpinjong Extension Project in the Mid-Western Regional Council Local Government Area.

The Department of Industry, Skills and Regional Development, Division of Resources & Energy (the Division) has reviewed the *Wilpinjong Extension Project Environmental Impact Statement* 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 that the extension area is wholly within existing Mining Lease 1573 and Exploration Licences 6169 and 7091 held by the Proponent, which satisfies the requirements of section 380AA of the *Mining Act 1992*.

The proponent has lodged two Mining Lease Applications over part of Exploration Licences 6169 and 7091. As part of the application process the proponent will need to provide proof of native title extinguishment or go through the right to negotiate process.

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).

ASSESSMENT OF THE RESOURCE

While amendments to the State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 (Mining SEPP) have removed the provision that made the economic significance of the resource the principle consideration when determining mining projects and requires the NSW Department of Industry to assess the significance of the resource, the Division considers that an analysis of the resource utilisation and its economics will assist the consent authority in considering the efficiency or otherwise of the development in terms of resource recovery (cl15(1) of the Mining SEPP).

This analysis concentrates on geological, mining and economic aspects of the project and the Division makes the following assessment:

Size, quality and availability of the resource

The Wilpinjong Extension Project (the Project) is owned and operated by Wilpinjong Coal Pty Ltd (the Proponent), a 100% owned subsidiary of Peabody Energy Australia Pty Ltd. The Project is an extension to the existing Wilpinjong open cut coal mine that is located 40 km north-east of Mudgee. Total life of the Project will be a seven year extension to the currently approved mine life. However, without approval of the Project, annual production from the operating Wilpinjong mine will drop significantly from the current rate of around 11 million tonnes of saleable coal to around 7.3 million tonnes in 2017.

The Division is of the opinion that the Proponent is genuine in its push to have the Project approved in order to maintain production at around current levels from its existing mine, and also to prolong the life of the mine for a further seven years until 2033.

The Proponent has completed resource estimation for the Project in accordance with the Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves 2012 "the JORC Code". The Division has verified that the Project will mine approximately 95 million tonnes (Mt) of ROM coal (excluding dilution) yielding approximately 65 Mt of product coal. The Project will continue to extract the Lidsdale/Ulan coal seam using open cut truck and shovel mining methods. The same stratigraphic sequence is also mined in the adjacent Moolarben and Ulan mines.

Three coal products will be produced:

1. Mid ash export thermal coal
2. High ash export thermal coal
3. Domestic quality thermal coal – to supply a long term contract

A combination of bypass and full wash beneficiation to produce three products is expected to continue in accordance with current operations. Raw ash levels necessitate washing the majority of ROM Project coal to meet export market specifications, with the majority of domestic coal bypassing the Coal Handling and Preparation Plant (CHPP). The Division considers that a total of 65 Mt of product (saleable) coal from the Project is feasible. A review of available coal quality information suggests this product mix is achievable and maximises product tonnages from the Project. All export coal product is expected to be sold into established export thermal coal markets.

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

An important assumption made in this resource assessment is that the existing AGL domestic thermal coal contract will be filled out to 2026 (expiration of the contract), even if the Project does not get approved. Hence, for the purposes of this assessment, all Project coal will be sold into the export thermal market.

The northern part of the Western coalfield had four coal mines that were producing coal as at June 2015, saleable production for 2014-15 from these mines was:
1. Moolarben 6.4Mt – open cut
2. Ulan underground 4.6Mt - underground
3. Ulan West 6.7Mt – underground
4. Wilpinjong 11.1Mt – open cut

Of the four mines that operate in the northern part of the Western coalfield, the Project (including the Wilpinjong mine) producing at its maximum ROM production rate of around 15 Mtpa, would be the largest producing coal mine in the region. If approved the Project (including the Wilpinjong mine) would be ranked fourth out of the 44 producing NSW coal mines in 2014-15 and considered a large mine. The average size of operating coal mines in NSW in 2014-15 was around 5 Mtpa of ROM coal.

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 $6.5 billion in current dollars. The net present value of this revenue stream has been estimated by the Division at approximately $3.9 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.

Proximity to existing infrastructure
The Proponent will utilise the existing infrastructure used by the Wilpinjong mine. Coal will be transported on the nearby Ulan to Denman railway line to the Port of Newcastle for export. The Project would utilise around 3% of the current Hunter Valley rail network and around 3% of the Port of Newcastle export coal facilities.

Relationship of the resource to any existing mine, petroleum production facility or extractive industry
The Project will be an extension to the Wilpinjong mine and if approved would enable the existing mine to maximise production rates until 2033. Without the Project the existing Wilpinjong mine will reduce saleable production from the current rate of around 11 Mt to 7 Mt in 2017 and continue operation until 2026. This substantial reduction in production would greatly reduce the throughput of all of the existing Wilpinjong mine's infrastructure.

The estimated capital expenditure for the Project is approximately $107 million over the life of the mine. In a period of continuing falling mining industry capital investment in NSW, this large proposed investment would be a significant boost to declining mining related capital expenditure in NSW.

Dependency of other industries on the resource project
Many local industries would benefit from the Project, including; mine equipment maintenance firms, mining equipment supply firms, coal preparation plant maintenance and supply firms. These firms are mainly local industries that employ locally and rely on continuing mining activity for their viability.

The Project is expected to directly employ an additional 75 people at full production, and continue to support a total of 625 ongoing jobs from the Wilpinjong mine. The Division believes the indirect employment from the Project (and the Wilpinjong mine) would be around 2,500 positions.

Coal Royalty
The Project is a proposed open cut mine and as such a royalty rate of 8.2% applies to the net disposal value. The net disposal value is the price received per tonne less 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. Export 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 that would amount to less 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.

The Division has assumed a price of around A$80 per tonne for the Project in the short term. Between June 2014 and June 2015 (Coal Services data) export thermal coal prices from NSW were approximately $A80 per tonne. Coal prices have declined significantly over the last three years and it appears that the bottom of the price cycle (in A$ terms at least) may have occurred over this period, the falling A$ has assisted in keeping NSW export thermal prices from falling further in A$ terms.

Coal price forecasting is inherently difficult and over the long term of the Project there will likely be many variations in coal prices. However, 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 as at June 2015. For its royalty calculation, the Division used the current low short term coal prices, and medium to long term export thermal prices (in real terms) in the range of A$75 to $A110 per tonne.

The Division has assumed that if the Project is approved, around 65 Mtpa of product coal would be economically mined from the Project area between 2017 and 2033.

Using the above assumptions the Division has calculated that in a typical full production year NSW will receive approximately $30 million per annum in royalty and $500 million over the life of the Project. The net present value of this royalty stream would be around $300 million using a 7% real discount rate.

Other Factors

The Division also notes from the Economic Assessment prepared by the Proponent that over its life the Project will contribute a net economic benefit to the region of $263.5 million (NPV), and a net economic benefit to the State of $873.5 million (NPV).

ENVIRONMENTAL REVIEW

Purpose of Review

The purpose of the review is to determine whether the applicant has provided sufficient information in the EIS to address the Secretary's Environmental Assessment Requirements (SEARs). Specifically, the Division's Environmental Sustainability Unit's (ESU) assessment has been undertaken to determine whether 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 condition of a Mining Lease (ML) issued under the *Mining Act 1992*.

It should be noted that this review does not represent the Division's endorsement of the proposed rehabilitation methodologies as presented in the EIS. Under the conditions of a ML, the Division requires a title 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 a title 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. A title holder may also be directed by the Division to implement further measures, where it is considered that a risk assessment and associated controls are unlikely to result in effective rehabilitation outcomes.

The Division-ESU Key Findings Rehabilitation and Mine Closure

Post-Mining Land Use

- The EIS specifies that rehabilitation would also satisfy part of the NSW Offset requirements, however the rehabilitation strategy lacks specificity in regards to target vegetation communities to be achieved by rehabilitation. Particularly as 3,230 Regent Honeyeater species credits are specified as being generated from rehabilitation. This information is required in order to further define rehabilitation objectives and completion criteria under the conditions of the mining lease.
- There are many references to retention of infrastructure for alternative post-mining uses subject to the agreement of the Division. It should be noted that any alternative final land uses will be subject to a modification to the consent.

Rehabilitation objectives and domains

- Completion criteria are very preliminary in nature and will need to be refined as part of the MOP process under the mining lease to be specific, measurable, achievable, realistic and time bound (SMART). As noted above, further information is required in the criteria in regards to the target vegetation community type to be achieved.

Rehabilitation Methodology

Mine Design

- Whilst the layout and scheduling are provided in Figures 2-8 to 2-12, the rehabilitation schedule has not been mapped against key production schedules for each of the mining areas. From a compliance point of view in regards to maximising progressive rehabilitation, it would be difficult to establish general compliance against the EIS schedule should production/mining be delayed.
- In addition it is noted that the existing project approval permits coal extraction from any one of 7 pits. To date extraction has been from pits 1, 2, 3, 4, 5, and 7. Further, under the current approval there is no limit on the number of extraction areas that may be open at any time and at the moment (Q1 – 2016), extraction areas are open in each of the above mentioned pits. To comply with project noise and dust limits there are practical limitations on how many pits are operational on any day, but this aside the existing Wilpinjong mine operates more or less concurrently in 7 extraction areas.
- Under the Wilpinjong Coal Mine Extension Proposal, there will be an additional Pit (Pit 8) in Slate Gully. Under this arrangement, in years 2 (for example) of the proposed extension project, there will be 9 extraction areas open – two in Pit 5, one in each of the other pits. For noise and dust compliance reasons, the mine may only be able to operate concurrently on any one day in 1, 2 or 3 extraction areas, while the others are idle. The point being made is that the number of extraction areas operating more or less concurrently, which will increase the disturbance footprint at any one time (much more than if extraction was from 1, 2 or 3 areas) and, therefore, the risk profile of the mine from a rehabilitation performance perspective.

Rehabilitation

- Rehabilitation methodologies as described in the EIS, whilst conceptual, are sufficiently detailed to demonstrate the case that sustainable rehabilitation can be achieved (with exception of landform design as noted below).
- The document appropriately describes the functional domains of the project and in turn proposes satisfactory rehabilitation strategies for these domains consistent with those employed since the Wilpinjong mine first commenced in 2006.
- In general other risks such as geochemical constraints, spontaneous combustion hazards, tailings management etc. have been well defined in the EIS and it is considered that they can be effectively managed by conventional mining and rehabilitation techniques as regulated by the Division under the mining lease.

Conceptual Final Landform Design

- The EIS lacks the level of specific detail to provide an adequate assessment as to whether the landform design presents a potential barrier or limitation to achieving a sustainable rehabilitation outcome.
- Post-mining landform drawing and cross-sections is not at an appropriate scale to identify key attributes of the final landform (Figures 5-2, 5-4 and 5-5). Contour intervals cannot be defined to establish whether final landform will be capable of supporting the intended final land use(s).

Options Analysis

- The options analysis outlined in Section 6.7.7 "Consideration of Project Alternatives" is limited in regards to final voids. It appears that the analysis is based on economics alone and it is apparent that there is limited analysis in regards to final void configuration/layout and shape (e.g. backfilling of void, partial

backfilling of void; battering back slopes; highwall treatments etc.) as well as number of final voids.

Summary of the Division-ESU Rehabilitation and Mine Closure Recommendations

Based on the review of the EIS, the Division recommends that further information be provided by Wilpinjong Coal Mines Pty Ltd in order for the Division to determine that sustainable rehabilitation outcomes can be achieved as a result of the project. In summary, the additional information will need to include the following:

1. Target vegetation communities to be achieved by rehabilitation, particularly where the rehabilitation will be used as part of the Biodiversity Offset package;
2. Further detail in regards to final landform design, including the provision of drawings and cross-sections at an appropriate scale. Key questions to be addressed include:
    - How have similar landscape features as evident in surrounding landscapes been incorporated into the post-mining landform design?
    - Are there any significant geotechnical risks associated with the final voids that may compromise the ability to achieve success closure?
    - Will there be any stability issues associated with the final landform in regards to its ability of sustaining the intended final land use (e.g. grazing)?
3. Further detail on the proposed mine layout and scheduling with the objective of maximising opportunities for progressive rehabilitation. This should include mapping the proposed rehabilitation schedule for each pit against production milestones in order to provide clear means of assessing future compliance with the mining lease / EIS in regards to progressive rehabilitation that is undertaken.
4. Provide further information in regards to the options analysis in Section 6.7.7 to justify the proposed final land form design as opposed to other alternatives considered (e.g. void backfilling, concave final slopes etc.).

Should you have any enquires regarding this matter please contact Bryan Whitlock, Acting Manager Royalty and Advisory Services on (02) 9842 8575.

Yours sincerely

K Hargreaves 8.3.2016

Kylie Hargreaves
Deputy Secretary
Resources & Energy