Department of Industry
Resources & Energy

BN16/7394

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Dear Mr Phillips

Amended Rocky Hill Coal Project

I refer to your email of 12 August 2016 requesting comments including recommended conditions of consent from the Division of Resources and Energy (the Division) in regard to the amended Environmental Impact Statement (EIS) for the Rocky Hill Coal Project (the Project).

A separate response to DPE's request for comments on the modified Stratford Mining Complex (Mod 1) will be provided to DPE (reference BN16/7210).

The *Amended Rocky Hill Project Environmental Impact Statement Development Application No. SSD 5156*, dated August 2016 has been reviewed and the Division provides the following response;

ECONOMIC IMPACTS

Mining has been successfully carried out in the Gloucester Valley for the past 20 years.

The Project, if approved, will continue coal production in the region for a further 16 years and provide 110 full time jobs.

Over the life of the Project, the value of coal product sold on the export metallurgical market would be in the region of $1.6 billion in current dollar terms.

From this production, the State will receive a projected $10 million per annum (approx.) in royalty revenue, representing a cumulative $128 million over the life of the Project.

A detailed Statement of Resource Assessment for the Project is enclosed with this letter.

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 Project area is within Mining Lease Application (MLA) 446 (for mining purposes) and Exploration Licence (EL) 6523 held by the Proponent. The Proponent will be required to lodge a second MLA with the Division for the mining area covered by EL 6523.

ENVIRONMENT AND REHABILITATION

The removal of the fourth mining pit, closest to the town of Gloucester, from the original proposal further reduces the total land areas disturbed by the project.

Sustainable mining is promoted by the reduction in the number of voids proposed, the minimisation of the remaining void areas by progressive filling of the open cut operations and maximising the extent of land for acceptable post-mining land uses.

The proposed modifications are supported in that the project minimises the impact on the environment by reducing the scale and extent of the surface disturbances by the utilisation of neighbouring existing coal processing and transport infrastructure.

The EIS lacks detail as to progressive rehabilitation objectives consistent with regional final land use strategies or integration with other mining operations in the region. As such, further information required from the proponent includes:

- further detail on the proposed mine layout and scheduling with the objective of maximising opportunities for progressive rehabilitation, including (as a minimum);
- mapping of the proposed rehabilitation schedule for each pit against production milestones
- the proposed final land uses in the context of broader (regional) strategic plans or policies
- identified potential to integrate the progressive rehabilitation strategy with other regional land use strategies, including opportunities to integrate with nearby mining operations.

The proponent intends to provide more detailed and specific post –mining land use objectives and strategies for inclusion in the detailed mine design following project consent. This approach is consistent with the current regulatory regime for sustainable mining in NSW.

A condition imposed on the Mining Lease requires companies to submit and comply with an approved Mining Operations Plan (MOP).

The Mining Operations Plan (MOP) includes the following components:

- objectives and criteria for rehabilitation, which are required to be met for rehabilitation before the Division will relinquish the mining lease and any associated rehabilitation security bond

- proposed rehabilitation plans including a progressive rehabilitation schedule for the entire life cycle of a mine

- defined key risks and opportunities that need to be addressed to achieve successful rehabilitation

- the range of risk-based rehabilitation controls and methodologies;

- detailed monitoring programs designed to measure performance and compliance against the criteria as well as promote adaptive management processes.

Mining companies must also lodge a rehabilitation security deposit with the Division, to cover the full cost of all rehabilitation and closure activities that may be required to be undertaken by the NSW Government should a former leaseholder default on their rehabilitation obligations.

The security deposit is required to be in place prior to the commencement of a mining operation and is continually adjusted to reflect the actual rehabilitation liability throughout the life of a mining operation. The rehabilitation security deposit is calculated on an approved rehabilitation plan on either the 'maximum disturbance/greatest rehabilitation liability at any one point in time' or a 'snapshot of current disturbance'.

The title holder is required to submit a new Rehabilitation Cost Estimate as part of the annual reporting process.

The release of the rehabilitation security deposit is contingent on the mining company demonstrating that the designated rehabilitation objectives and all completion criteria have been met.

There are also provisions under the *Mining Act 1992* for a former leaseholder to be directed to undertake further rehabilitation works, if required.

To enable the NSW integrated regulatory regime for sustainable mining, the Division recommends that the following conditions (objectives and commitments) be incorporated into the Development Consent, if granted:

1. Rehabilitation Objectives and Commitments

Rehabilitation must be substantially consistent with the Rehabilitation Objectives as described in the EIS and the Statement of Commitments outlined below.

Rehabilitation Feature	Objective
Mine site (as a whole)	Safe, stable and non-polluting, fit for the purpose of the intended post-mining land use(s).

	Post mining landforms are designed to be similar to the pre-mining landform, and incorporate micro-relief and reinstate the pre-mining hydrology. The post mining landform will be constructed generally in accordance with the EIS (Figure 2.19). The final landform will incorporate constructed drainage lines that mimic 'natural' drainage and, where reasonable and feasible, avoid straight run drainage drop structures and integrate with surrounding landforms. Water structures retained in the post-mining landscape are to be appropriately sized with regard to water licencing requirements of the post-mining land use.
Surface Infrastructure	All built infrastructure is to be decommissioned and removed.
Rehabilitation materials	Materials (including topsoils, substrates and seeds of the disturbed areas) are recovered, appropriately managed and used effectively as resources in the rehabilitation.
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 watercourses prior to mining disturbance. Water management is consistent with the regional catchment management strategy.
Post mining land use(s)	The post mining landform has a land capability comparable to the pre-mining landform. The post mining landform is rehabilitated to provide a mixture of open woodland, and grazing land that incorporates tree lots and fauna habitat corridors.
Open woodland and fauna habitat corridors	At least 185 hectares of areas disturbed by mining will be rehabilitated with open woodland native vegetation. At least 25 hectares of areas disturbed by mining will be rehabilitated to provide habitat corridors and native tree lots within pasture rehabilitation areas, generally in accordance with EIS (Figure 2.19): Indicative Final Landform. Native vegetation species are selected that re-establishes and complements regional and local biodiversity. The size, locations and species for native tree lots and habitat corridors are appropriate to establish and sustain local biodiversity values.

Agricultural Land	At least 287 hectares of land disturbed by mining will be rehabilitated to land capable of agricultural production. Agricultural land will achieve the pre-mining land and soil capability classifications and be self-sustaining within 5 years of land use establishment (first planting of vegetation.)

2. Progressive Rehabilitation

The proponent shall carry out all surface disturbing activities (e.g. pre-stripping in advance of mining operations) 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.

Rehabilitation Plan

The Proponent must prepare and implement a Rehabilitation Plan.

The Rehabilitation Plan must:

a. be submitted and approved by the Division or Environmental Sustainability prior to carrying out any surface disturbing activities of the development, unless otherwise agreed by the Secretary

b. be prepared in accordance with Division guidelines and in consultation with the Division, Office of Environment & Heritage, Environmental Protection Authority, Department of Primary Industry - Water, Council and the Community Consultation Committee

c. incorporate and be consistent with the rehabilitation objectives in the EIS, Summary of Environmental Management and Monitoring Measures (Section 8)

d. integrate and build on, to the maximum extent practicable, the other management plans required under this approval

e. address all aspects of mine closure and rehabilitation, including post mining land use domains, rehabilitation objectives, completion criteria and rehabilitation monitoring and management

f. Incorporate a rehabilitation monitoring program that identifies analogue locations representative of the 'open woodland' rehabilitation and 'agricultural production' rehabilitation areas, and baseline monitoring of the analogues required to develop detailed completion criteria to demonstrate rehabilitation success.

Subject to addressing these requirements, the Division supports the Project as a responsible utilisation of the State's coal resources that will continue to generate employment opportunities and bring economic benefits to the local region and the State as a whole.

Should you have any enquires regarding this matter please contact Steve Cozens, Senior Project Officer, Royalty & Advisory Services on 9842 8573.

Yours sincerely

K Hargreaves 16.9.16

Kylie Hargreaves
Deputy Secretary
Resources & Energy

Encl.: Significance of Resource Assessment (INT16/113871)

Tab A

Rocky Hill Coal Project
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 required the NSW Department of Industry, Division of Resources & Energy (the Division) 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 Rocky Hill Coal Project (the Project) and the Division makes the following assessment:

Size, quality and economic benefits of the resource

Approval is sought for a new open cut coal mine located 3.5km to 7km southeast of the town of Gloucester.

The Project is to be wholly owned and operated by Gloucester Resources Ltd (the Proponent). The owners and management of the Proponent and the Project have extensive coal mining experience, both as developers and operators, within Australia and internationally.

The Project has a potential operational mine life of 16 years and a further three years of mine rehabilitation, approval is being sought to produce up to 2 million tonnes per annum of run-of-mine (ROM) coal.

The Proponent has previously submitted an Environmental Impact Statement (EIS) in 2013 which has since been amended to address areas of concern identified through the submissions process, particularly with respect to visibility, hours of operation, noise, air and water management.

The Project is located directly to the north of the Yancoal's Stratford open cut coal mine and proposes to utilise the coal handling and preparation plant (CHPP), and the rail loop at the Stratford mine.
An agreement has been reached between the Proponent and Yancoal Australia Limited (the owners of the Stratford mine) whereby ROM coal will be transported from the Project to the Stratford mine via a private haul road for processing in the Stratford CHPP. This arrangement will lessen the environmental impact of the Project and also reduce upfront capital expenditure.

The Division has verified that the Project will provide approximately 21 million tonnes (Mt) of ROM coal and approximately 13 Mt of product coal. The Proponent has completed resource and reserve estimation for the Project in accordance with the

Australasian Code for Reporting Exploration results, Mineral Resources and Ore Reserves "the JORC Code".

The Project will be an open cut coal mine which will operate as a new operation to the north of the existing Stratford open cut mine. The productive life of the Project will be 16 years. Approval is being sought to extract at a rate of up to 2 million tonnes per annum (Mtpa) of run-of mine (ROM) coal that would produce a maximum of around 1.1 Mtpa of product coal.

Although the Project would be a standalone coal mine if approved, it is integrated to some extent with the adjacent Stratford mining complex in that all coal from the Project would be washed at Stratford thereby making optimum economic use of this facility. Using the Stratford plant substantially lowers the capital cost of the Project and also assists the Stratford mining complex as the Proponent would pay the owners of Stratford for its ongoing use.

The Project will produce one semi-hard coking coal product and one thermal coal product. Both products will be sold into export markets. Over 95% of the product will meet the export coking coal market as a 12% ash semi-hard coking coal product. The remaining product will meet export thermal coal markets as a high ash product.

A review of available coal quality information suggests this target is achievable. Raw ash levels necessitate processing by the Stratford Coal Handling and Preparation Plant to meet export market specifications. The Division considers that a total of approximately 13 Mt of product (saleable) coal from the Project is feasible.

Over the life of the Project, assuming production is sold mostly on the export metallurgical market, the value of the coal produced would be worth around $1.6 billion in current dollars. The net present value of this revenue stream has been estimated by the Division at approximately $870 million.

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 $14.4 billion (2014-15 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 Gloucester coalfield is the smallest in NSW and currently had only one mine producing coal as at June 2016, the Duralie open cut coal mine which produced 1.2 Mt of product coal in 2015-16. The only other coal mine in the Gloucester coalfield is the Stratford mine which has not produced coal for the last two years, Stratford may re-commence production possibly within the next few years. It is expected that the Duralie mine will cease production of coal within the next two to four years. Therefore, the Project is of particular importance to the Gloucester region in that if it is approved it will maintain coal production within the area for the next two decades, as other mines in the region are winding down.

The Project will continue the economic activity that the coal industry in the region has generated over the past 20 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.

At full production direct employment from the Project would be 110 employees and during the construction phase would be around 60 positions. Based on other mine projects, DRE believes the indirect employment within the region and in NSW as a whole from the Project could be around 450 positions. Capital investment from the Project would be of the order of $90 million.

From the Proponent's EIS on the Project, DRE also notes the following economic benefits have been calculated by Deloitte Access Economics Pty Ltd:

- Incremental benefits to NSW of $92.8 million (NPV)
- Incremental costs to NSW of $3.3 million (NPV)
- Overall net benefit to the NSW community of $89.5 million (NPV)
- Net local employment benefit of between $400,000 to $1,000,000
- Local share of expenditure on non-labour inputs would be $23 million during construction phase and $48 million/year during the operations phase

Resource Recovery

A large number of factors constrain extraction of resources in the Project mine plan. These include geological constraints and environmental constraints such as Waukivory Creek. The proponent has revised the Project to address community concerns about the Project particularly with respect to visibility. The revised Project will extract the same ROM resources as the original 2013 project but with a smaller footprint. The main pit is now proposed to be around 30m deeper and will mine to a maximum 220m depth, the Weismantel Pit (included in the original 2013 project) has been excluded from the Project mine plan.

Given the constraints outlined in the Proponent's EIS, the Division considers the Project mine plan for open cut operations to adequately recover coal resources within the mine footprint.

Coal Royalty Calculation

The Project is a proposed open cut mine and as such a royalty rate of 8.2% 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 mostly the export metallurgical market (97%) and the remaining 3% into the thermal export market.

The Proponent intends to sell all of its metallurgical coal as semi-hard coking coal, 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 the Project there will 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, indeed over the last three months spot coal prices have increased by between 30-50% in the metallurgical and thermal coal markets. While the consensus is that these short term increases are not sustainable it does indicate the unpredictability of coal prices going forward. For its royalty calculation, the Division uses medium to long term export prices (in real terms) in the range of A$110 to $A125 per tonne for the semi-hard coking coal from the Project and A$80 to A$95 per tonne for thermal coal from the Project.

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 13 Mtpa of product coal would be able to be economically mined from the Project area from 2019 to 2034. The maximum rate of extraction would be 1.1 Mtpa of product coal.

Using the above parameters the Division has calculated that in a typical full production year the State will receive around $10 million per annum in royalty and $128 million over the life of the Project. The net present value of this royalty stream would be $69 million using a 7% real discount rate.