

The Department of Planning and Environment

GPO Box 39

Sydney NSW 2001

**Submission RE: Hume Coal Project; State Significant Development SSD 15\_7172**

**I Support the Hume Coal Project Being Approved**

**Executive Summary**

The proposed project is a low impact “first workings only” underground mine which will initially carry out operations beneath the Belanglo State Forest then, the Sutton Forest area. Surface infrastructure is located to the west of the Hume Highway and in close proximity to rail access via the Berrima Branch line at the Berrima Cement Works.

The Hume Coal Project, if approved, will generate \$2.4 Billion in operating expenditure over the life of the mine. Of this \$2.4 Billion, \$297M will be spent on royalties and payroll tax, \$600M on Wages and a further \$1,475M on goods and services.

Demographics and job opportunities are a significant issue in the local area with a significant number of people in the 19 to 34 age group forced to leave the area to look for work. The project will generate 400 jobs during construction, 300 full time jobs during operation and a further 60 flow on jobs with local businesses. All persons employed in operations will be required to live within 45 minutes of the mine. Apart from the health and safety aspects of a restricted commute this it will also benefit the local economies via people living and spending their money in the local communities.

Due to the type of mining system employed the two key issues of Subsidence impacts and, Water take are minimised. There will not be any subsidence impacts to surface structures, farm land or waterways. The total water take as per the AIP would be 2.2Gl peak in year 15 of the projects life. Of the total “take” over half of it is never removed from the ground. The average water pumped out from underground is 440MI per annum. Hume Coal currently holds 71% of the required water license and is confident it can obtain the balance of the required licenses from the active market.

The surface infrastructure has been designed and located in such a way on land owned by Hume Coal to minimise any environmental impacts outside the project area. The Mines surface infrastructure is not visible from the Berrima Village and the product stockpiles are located approximately 4.5km from the centre of Berrima. Noise impacts are restricted to properties immediately to the north and northwest of the project area. Currently 3 properties could be subject to acquisition and 8 properties subject to mitigation measures. Due to the project being located predominately underground dust impacts are minimised. Both the Annual TSP and Annual PM10 are well below the regulatory limit and considered so small they are nearly immeasurable.

I have 43 years of experience in the coal mining industry, the last 27 years predominately associated with new project developments. I consider this the lowest impact mine that I have ever been involved with and should be approved.

## **Introduction**

The Southern Highlands of NSW has a long history of coalmining in the region, coal mining dating back to 1867. Coal mining was undertaken in a number of areas within the Highlands from Bundanoon in the south, Medway in the west to Mittagong in the north. The last of these mines, Berrima Colliery was placed on “care and maintenance” in 2013 and is currently in the process of being sealed. The proposed Hume Coal Mine would extract coal from the same Wongawilli Seam but would employ a different mining process than has been used historically in previous mines in the Highlands.

## **POSCO**

POSCO is the 5<sup>th</sup> largest steel maker globally. POSCO has been established in Australia since 1981 and during that time has invested \$2.2B in projects (generally as a minor Joint Venture partner). The Hume Coal Project is the first project POSCO has owned 100% in its own right.

POSCO is also a large consumer of Australian raw materials for its steel works, buying between \$5B to \$7B worth of raw materials per year from Australia.

POSCO does not repatriate profits, rather it reinvests in Australian projects.

## **Hume Coal Project**

The project has been active in the Highlands since 2010 undertaking exploration under its Exploration License A349. The main activities have included drilling of exploration holes and associated works. This programme has brought the number of holes drilled (both historical and recent) to 345. Ultimately a prefeasibility was conducted on the project area in 2013.

Coupled with exploration there has been a number of environmental activities to collect baseline data as a precursor to preparing an EIS and lodging a Development Application. The most significant of these activities has been the installation of 23 piezometer nests for collection of information on ground water. No other organisation or individual has a better understanding of ground water in the Exeter, Sutton Forrest, Belanglo State Forest and Medway Areas.

Project to date, Hume Coal will have spent \$165M.

## **The Proposed Mine**

A number of mining options were considered from;

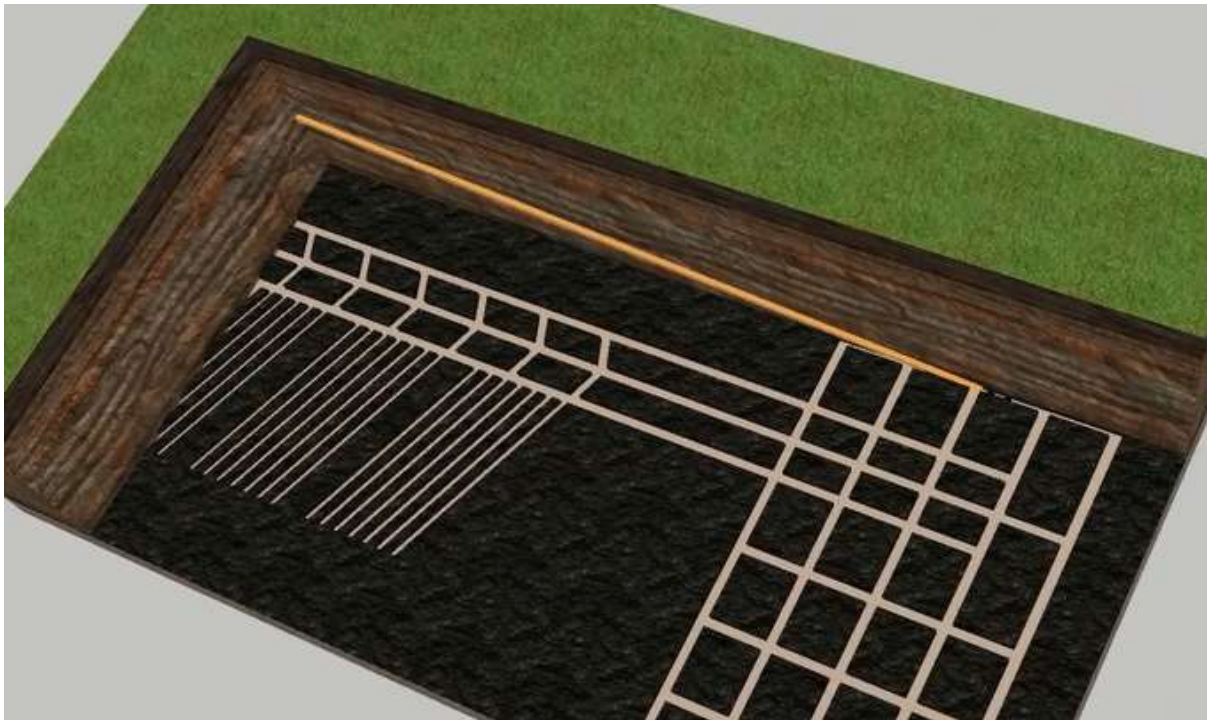
1. Longwall – 300m wide face
2. Mini Wall – 90m and 40m faces
3. Bord and Pillar with various forms of partial extraction.

All these options were discounted on the basis of subsidence and/or water impacts.

Currently there is approximately 12Gl of water licence in Zone 1. It was generally felt that the water “take” would have to be less than 4Gl per year. This restriction along with no subsidence impacts on surface structures were ultimately the key drivers for determining mine design and mining process.

The ultimate preferred mine design is a “first workings” mine, with a significant amount of the layout being similar to a majority of mines developments in both NSW and Qld. The blocks of coal in the formed panels will be partially extracted using a system of mining similar to that used for Highwall Mining in Opencuts or the Wongawilli method of pillar extraction with the long run outs minus the actual pillar extraction.

The technology and equipment required to support the two mining processes is already in existence and is expected to be further enhanced by the time mining operations commence.



The end result is a mine that has subsidence levels within normal ground movement and no impact on surface features. In terms the water “take’ which has to be licensed under the AIP is only 2.29GL or just 19% of the total water licences in the zone.

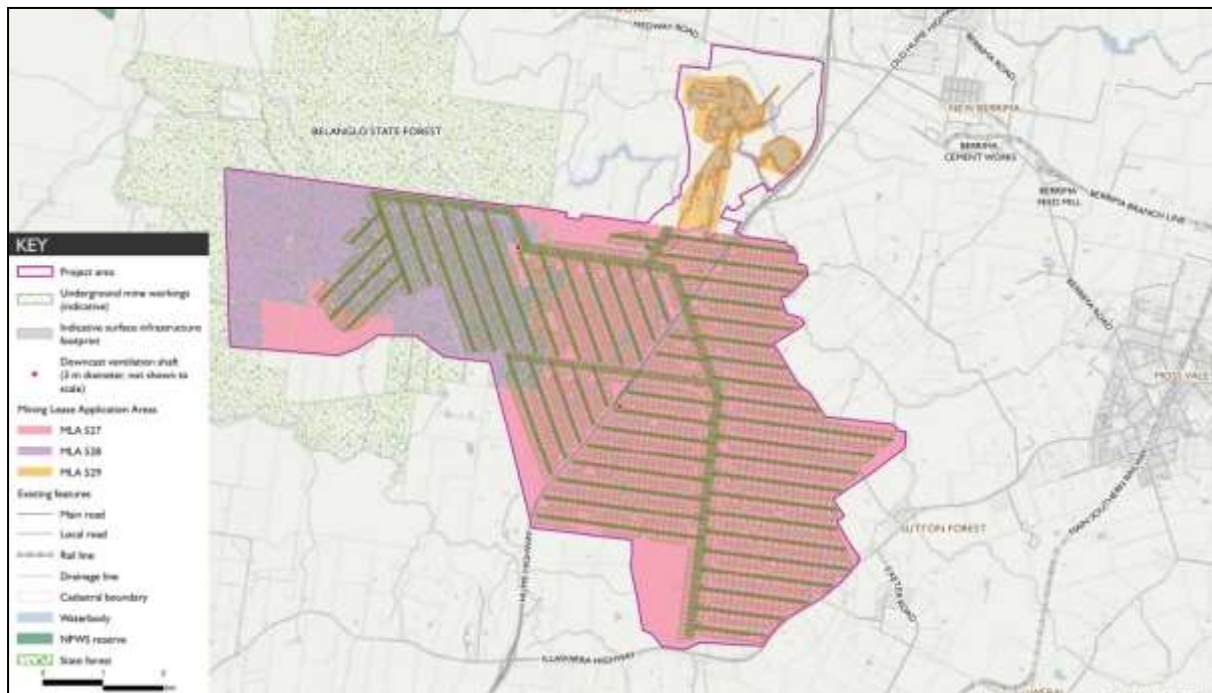
### **Surface Infrastructure**

The surface infrastructure has been located on the western side of the Hume Highway away from the towns and villages of the highlands. The location is also in close proximity to rail access via the Berrima Branch Line on the eastern side of the Berrima Cement Works.

All infrastructures are located on land owned by Hume Coal and are to the north of the actual mining areas (see the plan below).

Some of the criteria used for determining the specific location were;

1. Proximity to Hume Highway rail underpass
2. The use of tree lines and ridge line to block visual line of sight
3. The “watershed” towards Medway Dam
4. Road access via existing road infrastructure
5. Orientation of Product Coal Stockpile



In terms of the type of infrastructure to minimise noise, dust and visual impacts the following decisions were made;

1. Stacker/Reclaimers on product stockpiles to minimise noise and dust
2. Fully enclosed train loadout to minimise noise and dust
3. Conveyor systems to be enclosed on 3 sides and utilise the latest technology to minimise noise
4. Fully enclosed breaker station and CHPP to minimise noise and dust.

## Coal Markets

Hume Coal has been structured as a standalone business unit within POSCO. The coal will be marketed predominately within Australia.

Hume already has a commercial arrangement in place to supply Boral with thermal/industrial coal to the Berrima Cement Works, subject to gaining approval.

A significant market opportunity has developed due to POSCO's participation in the consortium buying the Arrium Steel Works at Whyalla. The introduction of POSCO's new FINEX process provides a market for both Hume's coking and thermal coal which are very suitable for the new steel making process.

Other potential markets are power generators – thermal coal, local steel works – coking and thermal coal.

Hume also has commercial arrangements in place with POSCO that in the event not all coal is sold locally then, POSCO will acquire the balance.

## **Environmental**

### *Water*

Extensive groundwater modelling has been undertaken on the project with the key outputs being;

- Water “take” and licencing requirements peaks in YR15 at 2.29GL
- The number of bores impacted over the life of the project is 91 averaging between 4 to 5 bores per year. Only 15 bores are irrigation bores and the remainder are stock and domestic bores.
- Make Good mitigation strategy has been determined for each impacted bore.

### *Noise*

The project area is located to the west of the Hume Highway away from villages and towns which are generally located on the eastern side of the highway. The Hume Highway is a major noise source within the area.

Noise modelling was undertaken around the infrastructure area and a total of 74 residences were considered. The results of the study identified 8 residences require mitigation and 3 would be subject to voluntary acquisition.

### *Air Quality*

The results of air quality modelling showed that the maximum impacted cases for TSP, PM10 and PM2.5 are well below the regulatory requirements and the increase on the background is so small it is nearly immeasurable.

### *Visual*

Hume Coal has developed a 3D Model of the surface and infrastructure area. With the aid of the model potential “line of sight” from outside the project area looking in has identified a small number of locations that require screening. To this end approximately 4,000 trees were planted over 12 months ago.

### *Agriculture*

Hume Coal has acquired over 1700Ha of properties for the project. The properties have been licensed out to a company, Princess Pastoral who runs an agricultural business. This arrangement will continue throughout the life of the mine. Only 8% of the land will be resumed for mining purposes.

## **Conclusion**

The health aspects, in terms of air quality and noise, of the project have been assessed by Dr David McKenzie (EIS submission) who found;

*Air quality.....modelling highest levels of PM2.5, PM10 and gaseous pollutants from the project.....show that the project emissions will be small compared with background.....cumulative levels will be well below the applicable regulatory criteria.*

*Noise the predicted worst case noise levels are not sufficient enough to cause measurable health impacts or sleep disturbance but breach the amenity criteria at 3 residences.....trigger acquisition.*

Coupled with the results of the ground water modelling I believe the design of the mine and its associated infrastructure will have minimal impact on the environment and associated villages.

The economic benefits are significant. Over the life of the project;

- \$297M payable in Royalties and payroll tax to the state of NSW
- \$600M payable in Wages of which a significant amount would be spent within the employment catchment area
- \$1,475M on goods and services.

Employment benefits are significant;

- 400 in construction
- 300 in operations
- 60 flow on jobs to other businesses within the area.

In consideration that the environmental impacts are minimal and the economic and employment benefits are significant I support the project and believe it is approvable.

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